

ESTADOS UNIDOS MEXICANOS

SECRETARIA DE MARINA

DIRECCION GENERAL DE OCEANOGRAFIA

Y

SEÑALAMIENTO MARITIMO



ALMANAQUE NAUTICO

1977

MEXICO, D. F. 1976

PRECIO \$ 70.00

LCat-2010
R009124
Q38
M48

001625

~~EJ-2~~

EJ-2

EDICION MEXICANA

Disponible para la venta en la
Secretaría de Marina.

Dirección General de Oceanografía y
Señalamiento Marítimo.

Medellín # 10, México 7, D.F.

EL ALMANAQUE NAUTICO, 1977

LISTA DE CONTENIDOS

Pags.	
A ₂ - A ₃	Tablas de corrección de altura para el Sol, Estrellas y Planetas.
A ₄	Correcciones adicionales por refracción para condiciones no standard.
1-3	Título, Prefacio, etc.
4	Fases de la Luna.
4-5	Calendario.
5-7	Eclipses.
8-9	Notas de los planetas y diagrama.
10-253	Páginas Diarias: Efemérides del Sol, Luna, Aries y Planetas; ortos, ocasos y crepúsculos del Sol; ortos y ocasos de la Luna, etc.
257-265	Explicaciones.
266-269	Horas Legales
270-271	Cartas Celestes
272-277	Lista de Estrellas: A.H.S. y Dec. de 173 estrellas, en orden de s ₁ A.H.S. (exactitud de 0.1).
278-280	Tablas para la estrella polar . "Polaris".
i	Conversión de Arco a Tiempo.
ii-xxxi	Tablas de incrementos y correcciones para el Sol, Planetas, Aries y la Luna.
xxxii	Tablas para interpolar ortos, ocasos, y crepúsculos del Sol; ortos, ocasos y paso de la Luna, por el meridiano.
xxxiii	Indice de estrellas seleccionadas.
xxxiv-xxxv	Tablas de corrección de altura para la Luna.
Hojas sueltas	Lo mismo de la contraportada anterior A ₂ y la página xxxiii, y listas de contenidos.

LISTA DE CONTENIDOS

Pags.	
1-3	Título, Prefacio, etc.
4	Fases de la Luna
4-5	Calendario.
5-7	Eclipses.
8-9	Notas de los planetas y diagrama.
10-253	Páginas diarias: Efemérides del Sol, Luna, Aries y Planetas; ortos, ocasos y crepúsculos del Sol; ortos y ocasos de la Luna, etc.
257-265	Explicaciones.
266-269	Horas Legales.
270-271	Cartas Celestes
272-277	Lista de Estrellas: A.H.S. y Dec. de 173 estrellas, en orden de su A.H.S. (exactitud de 0.1).
278-280	Tablas para la Estrella Polar " <i>Polaris</i> "
i	Conversión de Arco a Tiempo.
ii-xxxi	Tablas de incrementos y correcciones para: El Sol, Planetas, Aries y la Luna.
xxxii	Tablas para interpolar: ortos, ocasos y crepúsculos del Sol; ortos, ocasos y paso de la Luna, por el meridiano.
xxxiii	Indice de estrellas seleccionadas.
xxxiv-xxxv	Tablas de corrección de altura para la Luna.
Páginas auxiliares: Contraportada anterior y siguientes.	
A ₂ - A ₃	Tablas de corrección de altura para el Sol, Estrellas y Planetas.
A ₄	Correcciones adicionales por refracción para condiciones no standard.
Hojas sueltas	Lo mismo de la contraportada anterior A ₂ y la página xxxiii, y Listas de Contenidos.

INDICE DE ESTRELLAS SELECCIONADAS, 1977

Nombres	No.	Mag.	A. H. S.	Dec.
<i>Acamar</i>	7	3.1	316	S. 40
<i>Achernar</i>	5	0.6	336	S. 57
<i>Acrux</i>	30	1.1	174	S. 63
<i>Adhara</i>	19	1.6	256	S. 29
<i>Aldebaran</i>	10	1.1	291	N. 16
<i>Alioth</i>	32	1.7	167	N. 56
<i>Alkaid</i>	34	1.9	153	N. 49
<i>Al Na'ir</i>	55	2.2	28	S. 47
<i>Alnilam</i>	15	1.8	276	S. 1
<i>Alphard</i>	25	2.2	218	S. 9
<i>Alphecca</i>	41	2.3	127	N. 27
<i>Alpheratz</i>	1	2.2	358	N. 29
<i>Altair</i>	51	0.9	63	N. 9
<i>Ankaa</i>	2	2.4	354	S. 42
<i>Antares</i>	42	1.2	113	S. 26
<i>Arcturus</i>	37	0.2	146	N. 19
<i>Atria</i>	43	1.9	108	S. 69
<i>Avior</i>	22	1.7	234	S. 59
<i>Bellatrix</i>	13	1.7	279	N. 6
<i>Betelgeuse</i>	16	Var.*	272	N. 7
<i>Canopus</i>	17	-0.9	264	S. 53
<i>Capella</i>	12	0.2	281	N. 46
<i>Deneb</i>	53	1.3	50	N. 45
<i>Denebola</i>	28	2.2	183	N. 15
<i>Diphda</i>	4	2.2	349	S. 18
<i>Dubhe</i>	27	2.0	194	N. 62
<i>Elnath</i>	14	1.8	279	N. 29
<i>Eltanin</i>	47	2.4	91	N. 51
<i>Enif</i>	54	2.5	34	N. 10
<i>Fomalhaut</i>	56	1.3	16	S. 30
<i>Gacrux</i>	31	1.6	173	S. 57
<i>Gienah</i>	29	2.8	176	S. 17
<i>Hadar</i>	35	0.9	149	S. 60
<i>Hamal</i>	6	2.2	329	N. 23
<i>Kaus Australis</i>	48	2.0	84	S. 34
<i>Kochab</i>	40	2.2	137	N. 74
<i>Markab</i>	57	2.6	14	N. 15
<i>Menkar</i>	8	2.8	315	N. 4
<i>Menkent</i>	36	2.3	149	S. 36
<i>Miaplacidus</i>	24	1.8	222	S. 70
<i>Mirfak</i>	9	1.9	309	N. 50
<i>Nunki</i>	50	2.1	77	S. 26
<i>Peacock</i>	52	2.1	54	S. 57
<i>Pollux</i>	21	1.2	244	N. 28
<i>Procyon</i>	20	0.5	245	N. 5
<i>Rasalhague</i>	46	2.1	97	N. 13
<i>Regulus</i>	26	1.3	208	N. 12
<i>Rigel</i>	11	0.3	282	S. 8
<i>Rigil Kentaurus</i>	38	0.1	140	S. 61
<i>Sabik</i>	44	2.6	103	S. 16
<i>Schedar</i>	3	2.5	350	N. 56
<i>Shaula</i>	45	1.7	97	S. 37
<i>Sirius</i>	18	-1.6	259	S. 17
<i>Spica</i>	33	1.2	159	S. 11
<i>Suhail</i>	23	2.2	223	S. 43
<i>Vega</i>	49	0.1	81	N. 39
<i>Zubenelgenubi</i>	39	2.9	138	S. 16

No.	Nombres	Mag.	A. H. S.	Dec.
1	<i>Alpheratz</i>	2.2	358	N. 29
2	<i>Ankaa</i>	2.4	354	S. 42
3	<i>Schedar</i>	2.5	350	N. 56
4	<i>Diphda</i>	2.2	349	S. 18
5	<i>Achernar</i>	0.6	336	S. 57
6	<i>Hamal</i>	2.2	329	N. 23
7	<i>Acamar</i>	3.1	316	S. 40
8	<i>Menkar</i>	2.8	315	N. 4
9	<i>Mirfak</i>	1.9	309	N. 50
10	<i>Aldebaran</i>	1.1	291	N. 16
11	<i>Rigel</i>	0.3	282	S. 8
12	<i>Capella</i>	0.2	281	N. 46
13	<i>Bellatrix</i>	1.7	279	N. 6
14	<i>Elnath</i>	1.8	279	N. 29
15	<i>Alnilam</i>	1.8	276	S. 1
16	<i>Betelgeuse</i>	Var.*	272	N. 7
17	<i>Canopus</i>	-0.9	264	S. 53
18	<i>Sirius</i>	-1.6	259	S. 17
19	<i>Adhara</i>	1.6	256	S. 29
20	<i>Procyon</i>	0.5	245	N. 5
21	<i>Pollux</i>	1.2	244	N. 28
22	<i>Avior</i>	1.7	234	S. 59
23	<i>Suhail</i>	2.2	223	S. 43
24	<i>Miaplacidus</i>	1.8	222	S. 70
25	<i>Alphard</i>	2.2	218	S. 9
26	<i>Regulus</i>	1.3	208	N. 12
27	<i>Dubhe</i>	2.0	194	N. 62
28	<i>Denebola</i>	2.2	183	N. 15
29	<i>Gienah</i>	2.8	176	S. 17
30	<i>Acrux</i>	1.1	174	S. 63
31	<i>Gacrux</i>	1.6	173	S. 57
32	<i>Alioth</i>	1.7	167	N. 56
33	<i>Spica</i>	1.2	159	S. 11
34	<i>Alkaid</i>	1.9	153	N. 49
35	<i>Hadar</i>	0.9	149	S. 60
36	<i>Menkent</i>	2.3	149	S. 36
37	<i>Arcturus</i>	0.2	146	N. 19
38	<i>Rigil Kentaurus</i>	0.1	140	S. 61
39	<i>Zubenelgenubi</i>	2.9	138	S. 16
40	<i>Kochab</i>	2.2	137	N. 74
41	<i>Alphecca</i>	2.3	127	N. 27
42	<i>Antares</i>	1.2	113	S. 26
43	<i>Atria</i>	1.9	108	S. 69
44	<i>Sabik</i>	2.6	103	S. 16
45	<i>Shaula</i>	1.7	97	S. 37
46	<i>Rasalhague</i>	2.1	97	N. 13
47	<i>Eltanin</i>	2.4	91	N. 51
48	<i>Kaus Australis</i>	2.0	84	S. 34
49	<i>Vega</i>	0.1	81	N. 39
50	<i>Nunki</i>	2.1	77	S. 26
51	<i>Altair</i>	0.9	63	N. 9
52	<i>Peacock</i>	2.1	54	S. 57
53	<i>Deneb</i>	1.3	50	N. 45
54	<i>Enif</i>	2.5	34	N. 10
55	<i>Al Na'ir</i>	2.2	28	S. 47
56	<i>Fomalhaut</i>	1.3	16	S. 30
57	<i>Markab</i>	2.6	14	N. 15

TABLAS DE CORRECCION DE ALTURAS DE 10° - 90°, DEL SOL, ESTRELLAS Y PLANETAS

OCT.—MAR. SOL			ABR.—SEP.			ESTRELLAS Y PLANETAS				DEPRESION			
Alt. Ap.	Limbo Inf.	Limbo Sup.	Alt. Ap.	Limbo Inf.	Limbo Sup.	Alt. Ap.	Corr.	Alt. Ap.	Corr. Adicional	Alt. del ojo	Corr.	Alt. del ojo	Corr.
9 34	+10.8	-21.5	9 39	+10.6	-21.2	9 56	-5.3	1977 VENUS		m		Pies	
9 45	+10.9	-21.4	9 51	+10.7	-21.1	10 08	-5.2			Ene. 1- Ene. 29	2.4	-2.8	8.0	1.0 - 1.8
9 56	+11.0	-21.3	10 03	+10.8	-21.0	10 20	-5.1	0		2.6	-2.9	8.6	1.5 - 2.2
10 08	+11.1	-21.2	10 15	+10.9	-20.9	10 33	-5.0	47 + 0.2		2.8	-3.0	9.2	2.0 - 2.5
10 21	+11.2	-21.1	10 27	+11.0	-20.8	10 46	-4.9			3.0	-3.1	9.8	2.5 - 2.8
10 34	+11.3	-21.0	10 40	+11.1	-20.7	11 00	-4.8			3.2	-3.2	10.5	3.0 - 3.0
10 47	+11.4	-20.9	10 54	+11.2	-20.6	11 14	-4.7			3.4	-3.3	11.2	
11 01	+11.5	-20.8	11 08	+11.3	-20.5	11 29	-4.6			3.6	-3.4	11.9	Ver tabla
11 15	+11.6	-20.7	11 23	+11.4	-20.4	11 45	-4.5			3.8	-3.5	12.6	←
11 30	+11.7	-20.6	11 38	+11.5	-20.3	12 01	-4.4			4.0	-3.6	13.3	m
11 46	+11.8	-20.5	11 54	+11.6	-20.2	12 18	-4.4			4.3	-3.7	14.1	20 - 7.9
12 02	+11.9	-20.4	12 10	+11.7	-20.1	12 35	-4.3			4.5	-3.8	14.9	22 - 8.3
12 19	+12.0	-20.3	12 28	+11.8	-20.0	12 54	-4.2			4.7	-3.9	15.7	24 - 8.6
12 37	+12.1	-20.2	12 46	+11.9	-19.9	13 13	-4.1			5.0	-4.0	16.5	26 - 9.0
12 55	+12.2	-20.1	13 05	+12.0	-19.8	13 33	-4.0			5.2	-4.1	17.4	28 - 9.3
13 14	+12.3	-20.0	13 24	+12.1	-19.7	13 54	-3.9			5.5	-4.2	18.3	
13 35	+12.4	-19.9	13 45	+12.2	-19.6	14 16	-3.8			5.8	-4.3	19.1	30 - 9.6
13 56	+12.5	-19.8	14 07	+12.3	-19.5	14 40	-3.7			6.1	-4.4	20.1	32 - 10.0
14 18	+12.6	-19.7	14 30	+12.4	-19.4	15 04	-3.6			6.3	-4.4	21.0	34 - 10.3
14 42	+12.7	-19.6	14 59	+12.5	-19.3	15 30	-3.5			6.6	-4.5	22.0	36 - 10.6
15 06	+12.8	-19.5	15 19	+12.6	-19.2	15 57	-3.4			6.9	-4.6	22.9	38 - 10.8
15 32	+12.9	-19.4	15 46	+12.7	-19.1	16 26	-3.3			7.2	-4.7	23.9	
15 59	+13.0	-19.3	16 14	+12.8	-19.0	16 56	-3.2			7.5	-4.8	24.9	40 - 11.1
16 28	+13.1	-19.2	16 44	+12.9	-18.9	17 28	-3.1			7.9	-4.9	26.0	42 - 11.4
16 59	+13.2	-19.1	17 15	+13.0	-18.8	18 02	-3.0			8.2	-5.0	27.1	44 - 11.7
17 32	+13.3	-19.0	17 48	+13.1	-18.7	18 38	-2.9			8.5	-5.1	28.1	46 - 11.9
18 06	+13.4	-18.9	18 24	+13.2	-18.6	19 17	-2.8			8.8	-5.2	29.2	48 - 12.2
18 42	+13.5	-18.8	19 01	+13.3	-18.5	19 58	-2.7			9.2	-5.3	30.4	Pies
19 21	+13.6	-18.7	19 42	+13.4	-18.4	20 42	-2.6			9.5	-5.4	31.5	2 - 1.4
20 03	+13.7	-18.6	20 25	+13.5	-18.3	21 28	-2.5			9.9	-5.5	32.7	4 - 1.9
20 48	+13.8	-18.5	21 11	+13.6	-18.2	22 19	-2.4			10.3	-5.6	33.9	6 - 2.4
21 35	+13.9	-18.4	22 00	+13.7	-18.1	23 13	-2.3			10.6	-5.7	35.1	8 - 2.7
22 26	+14.0	-18.3	22 54	+13.8	-18.0	24 11	-2.2			11.0	-5.8	36.3	10 - 3.1
23 22	+14.1	-18.2	23 51	+13.9	-17.9	25 14	-2.1			11.4	-5.9	37.6	Ver tabla
24 21	+14.2	-18.1	24 53	+14.0	-17.8	26 22	-2.0			11.8	-6.0	38.9	←
25 26	+14.3	-18.0	26 00	+14.1	-17.7	27 36	-1.9			12.2	-6.2	40.1	Pies
26 36	+14.4	-17.9	27 13	+14.2	-17.6	28 56	-1.8			12.6	-6.3	41.5	70 - 8.1
27 52	+14.5	-17.8	28 33	+14.3	-17.5	30 24	-1.7			13.0	-6.4	42.8	75 - 8.4
29 15	+14.6	-17.7	30 00	+14.4	-17.4	32 00	-1.6			13.4	-6.5	44.2	80 - 8.7
30 46	+14.7	-17.6	31 35	+14.5	-17.3	33 45	-1.5			13.8	-6.6	45.5	85 - 8.9
32 26	+14.8	-17.5	33 20	+14.6	-17.2	35 40	-1.4			14.2	-6.7	46.9	90 - 9.2
34 17	+14.9	-17.4	35 17	+14.7	-17.1	37 48	-1.3			14.7	-6.8	48.4	95 - 9.5
36 20	+15.0	-17.3	37 26	+14.8	-17.0	40 08	-1.2			15.1	-6.9	49.8	
38 36	+15.1	-17.2	39 50	+14.9	-16.9	42 44	-1.1			15.5	-7.0	51.3	100 - 9.7
41 08	+15.2	-17.1	42 31	+15.0	-16.8	45 36	-1.0			16.0	-7.1	52.8	105 - 9.9
43 59	+15.3	-17.0	45 31	+15.1	-16.7	48 47	-0.9			16.5	-7.2	54.3	110 - 10.2
47 10	+15.4	-16.9	48 55	+15.2	-16.6	52 18	-0.8			16.9	-7.3	55.8	115 - 10.4
50 46	+15.5	-16.8	52 44	+15.3	-16.5	56 11	-0.7			17.4	-7.4	57.4	120 - 10.6
54 49	+15.6	-16.7	57 02	+15.4	-16.4	60 28	-0.6			17.9	-7.5	58.9	125 - 10.8
59 23	+15.7	-16.6	61 51	+15.5	-16.3	65 08	-0.5			18.4	-7.6	60.5	
64 30	+15.8	-16.5	67 17	+15.6	-16.2	70 11	-0.4			18.8	-7.7	62.1	130 - 11.1
70 12	+15.9	-16.4	73 16	+15.7	-16.1	75 34	-0.3			19.3	-7.8	63.8	135 - 11.3
76 26	+16.0	-16.3	79 43	+15.8	-16.0	81 13	-0.2			19.8	-7.9	65.4	140 - 11.5
83 05	+16.1	-16.2	86 32	+15.9	-15.9	87 03	0.0			20.4	-8.0	67.1	145 - 11.7
90 00			90 00			90 00				20.9	-8.1	68.8	150 - 11.9
										21.4		70.5	155 - 12.1

Alt. Ap. = Altura aparente = Altura de sextante corregida por error de índice y depresión.

Para observaciones diurnas de Venus, ver página 262.

P R E F A C I O

LA PRESENTE PUBLICACION DE LA SECRETARIA DE MARINA, CONSTITUYE LA VERSION MEXICANA EN ESPAÑOL, DE "THE NAUTICAL ALMANAC" BRITANICO Y AMERICANO. ES IDENTICA EN CONTENIDO NUMERICO A ESTOS, QUE SON PRODUCIDOS RESPECTIVAMENTE, POR EL OBSERVATORIO DE GREENWICH EN LA GRAN BRETAÑA, Y POR EL OBSERVATORIO NAVAL EN LOS E.U.A.

LA DIRECCION GENERAL

ANIVERSARIOS 1977

Año Nuevo	Sábado	1o. de Enero
Promulgación de la Constitución Política de los	Sábado	5 de Febrero
Estados Unidos Mexicanos	Jueves	24 de Febrero
Día de la Bandera Nacional	Lunes	21 de Marzo
Natalicio del Lic. Dn. Benito Juárez	Jueves	21 de Abril
Defensa del Puerto de Veracruz	Domingo	1o. de Mayo
Día del Trabajo	Jueves	5 de Mayo
Batalla de Puebla	Miércoles	1o. de Junio
Día de la Marina Nacional	Lunes	18 de Julio
Muerte del Lic. Dn. Benito Juárez	Sábado	30 de Julio
Muerte de Dn. Miguel Hidalgo y Costilla	Viernes	16 de Septiembre
Independencia Nacional	Miércoles	12 de Octubre
Día de la Raza	Jueves	22 de Diciembre
Muerte de Dn. José Ma. Morelos y Pavón	Domingo	25 de Diciembre
Navidad		

FASES DE LA LUNA

LUNA NUEVA

	d	h	m
Ene.	19	14	11
Feb.	18	03	37
Mar.	19	18	33
Abr.	18	10	35
May.	18	02	51
Jun.	16	18	23
Jul.	16	08	37
Ago.	14	21	31
Sep.	13	09	23
Oct.	12	20	31
Nov.	11	07	09
Dic.	10	17	33

LUNA LLENA

	d	h	m
Ene.	5	12	10
Feb.	4	03	56
Mar.	5	17	13
Abr.	4	04	09
May.	3	13	03
Jun.	1	20	31
Jul.	1	03	24
Jul.	30	10	52
Ago.	28	20	10
Sep.	27	08	17
Oct.	26	23	35
Nov.	25	17	31
Dic.	25	12	49

CUARTO CRECIENTE

	d	h	m
Ene.	27	05	11
Feb.	26	02	50
Mar.	27	22	27
Abr.	26	14	42
May.	26	03	20
Jun.	24	12	44
Jul.	23	19	38
Ago.	22	01	04
Sep.	20	06	18
Oct.	19	12	46
Nov.	17	21	52
Dic.	17	10	37

CUARTO MENGUANTE

	d	h	m
Ene.	12	19	55
Feb.	11	04	07
Mar.	12	11	35
Abr.	10	19	15
May.	10	04	08
Jun.	8	15	07
Jul.	8	04	39
Ago.	6	20	40
Sep.	5	14	33
Oct.	5	09	21
Nov.	4	03	58
Dic.	3	21	16

CALENDARIO 1977

5

DIAS DE LA SEMANA Y DIAS DEL AÑO

Día del Mes	ENE.		FEB.		MAR.		ABR.		MAY.		JUN.		JUL.		AGO.		SEP.		OCT.		NOV.		DIC.	
	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año	Sem.	Año
1	S.	1	M.	32	M.	60	V.	91	D.	121	Mi.	152	V.	182	L.	213	J.	244	S.	274	M.	305	J.	335
2	D.	2	Mi.	33	Mi.	61	S.	92	L.	122	J.	153	S.	183	M.	214	V.	245	D.	275	Mi.	306	V.	336
3	L.	3	J.	34	J.	62	D.	93	M.	123	V.	154	D.	184	Mi.	215	S.	246	L.	276	J.	307	S.	337
4	M.	4	V.	35	V.	63	L.	94	Mi.	124	S.	155	L.	185	J.	216	D.	247	M.	277	V.	308	D.	338
5	Mi.	5	S.	36	S.	64	M.	95	J.	125	D.	156	M.	186	V.	217	L.	248	Mi.	278	S.	309	L.	339
6	J.	6	D.	37	D.	65	Mi.	96	V.	126	L.	157	Mi.	187	S.	218	M.	249	J.	279	D.	310	M.	340
7	V.	7	L.	38	L.	66	J.	97	S.	127	M.	158	J.	188	D.	219	Mi.	250	V.	280	L.	311	Mi.	341
8	S.	8	M.	39	M.	67	V.	98	D.	128	Mi.	159	V.	189	L.	220	J.	251	S.	281	M.	312	J.	342
9	D.	9	Mi.	40	Mi.	68	S.	99	L.	129	J.	160	S.	190	M.	221	V.	252	D.	282	Mi.	313	V.	343
10	L.	10	J.	41	J.	69	D.	100	M.	130	V.	161	D.	191	Mi.	222	S.	253	L.	283	J.	314	S.	344
11	M.	11	V.	42	V.	70	L.	101	Mi.	131	S.	162	L.	192	J.	223	D.	254	M.	284	V.	315	D.	345
12	Mi.	12	S.	43	S.	71	M.	102	J.	132	D.	163	M.	193	V.	224	L.	255	Mi.	285	S.	316	L.	346
13	J.	13	D.	44	D.	72	Mi.	103	V.	133	L.	164	Mi.	194	S.	225	M.	256	J.	286	D.	317	M.	347
14	V.	14	L.	45	L.	73	J.	104	S.	134	M.	165	J.	195	D.	226	Mi.	257	V.	287	L.	318	Mi.	348
15	S.	15	M.	46	M.	74	V.	105	D.	135	Mi.	166	V.	196	L.	227	J.	258	S.	288	M.	319	J.	349
16	D.	16	Mi.	47	Mi.	75	S.	106	L.	136	J.	167	S.	197	M.	228	V.	259	D.	289	Mi.	320	V.	350
17	L.	17	J.	48	J.	76	D.	107	M.	137	V.	168	D.	198	Mi.	229	S.	260	L.	290	J.	321	S.	351
18	M.	18	V.	49	V.	77	L.	108	Mi.	138	S.	169	L.	199	J.	230	D.	261	M.	291	V.	322	D.	352
19	Mi.	19	S.	50	S.	78	M.	109	J.	139	D.	170	M.	200	V.	231	L.	262	Mi.	292	S.	323	L.	353
20	J.	20	D.	51	D.	79	Mi.	110	V.	140	L.	171	Mi.	201	S.	232	M.	263	J.	293	D.	324	M.	354
21	V.	21	L.	52	L.	80	J.	111	S.	141	M.	172	J.	202	D.	233	Mi.	264	V.	294	L.	325	Mi.	355
22	S.	22	M.	53	M.	81	V.	112	D.	142	Mi.	173	V.	203	L.	234	J.	265	S.	295	M.	326	J.	356
23	D.	23	Mi.	54	Mi.	82	S.	113	L.	143	J.	174	S.	204	M.	235	V.	266	D.	296	Mi.	327	V.	357
24	L.	24	J.	55	J.	83	D.	114	M.	144	V.	175	D.	205	Mi.	236	S.	267	L.	297	J.	328	S.	358
25	M.	25	V.	56	V.	84	L.	115	Mi.	145	S.	176	L.	206	J.	237	D.	268	M.	298	V.	329	D.	359
26	Mi.	26	S.	57	S.	85	M.	116	J.	146	D.	177	M.	207	V.	238	L.	269	Mi.	299	S.	330	L.	360
27	J.	27	D.	58	D.	86	Mi.	117	V.	147	L.	178	Mi.	208	S.	239	M.	270	J.	300	D.	331	M.	361
28	V.	28	L.	59	L.	87	J.	118	S.	148	M.	179	J.	209	D.	240	Mi.	271	V.	301	L.	332	Mi.	362
29	S.	29			M.	88	V.	119	D.	149	Mi.	180	V.	210	L.	241	J.	272	S.	302	M.	333	J.	363
30	D.	30			Mi.	89	S.	120	L.	150	J.	181	S.	211	M.	242	V.	273	D.	303	Mi.	334	V.	364
31	L.	31			J.	90			M.	151			D.	212	Mi.	243			L.	304			S.	365

ECLIPSES

Acontecerán tres eclipses durante el año, dos de Sol y uno de Luna.

1.- *Un Eclipse parcial de Luna*, 4 de abril. El eclipse comenzará a las 03^h 30^m y terminará a las 05^h 06^m. Será visible en la parte occidental de Africa, en Europa Occidental, en el Océano Atlántico, parte de la Antártica, Sud América, Norte América excepto la parte nor-occidental, y en la parte media oriental del Océano Pacífico. Al momento del máximo eclipse, se cubrirá el 0.20 del diámetro lunar.

2.- *Un Eclipse Anular de Sol*, 18 de abril Véase el mapa de la página 6. El eclipse comenzará a las 07^h 33^m y terminará a las 13^h 29^m; la fase anular comenzará a las 08^h 43^m y terminará a las 12^h 19^m. La máxima duración de la fase anular será de 07^m 00^s.

3.- *Un Eclipse total de Sol*, 12 de octubre. Véase el mapa de la página 7. El eclipse comenzará a las 17^h 48^m y terminará a las 23^h 06^m; la fase total comenzará a las 18^h 49^m y terminará a las 22^h 05^m. La máxima duración de la fase total será de 02^m 37^s.

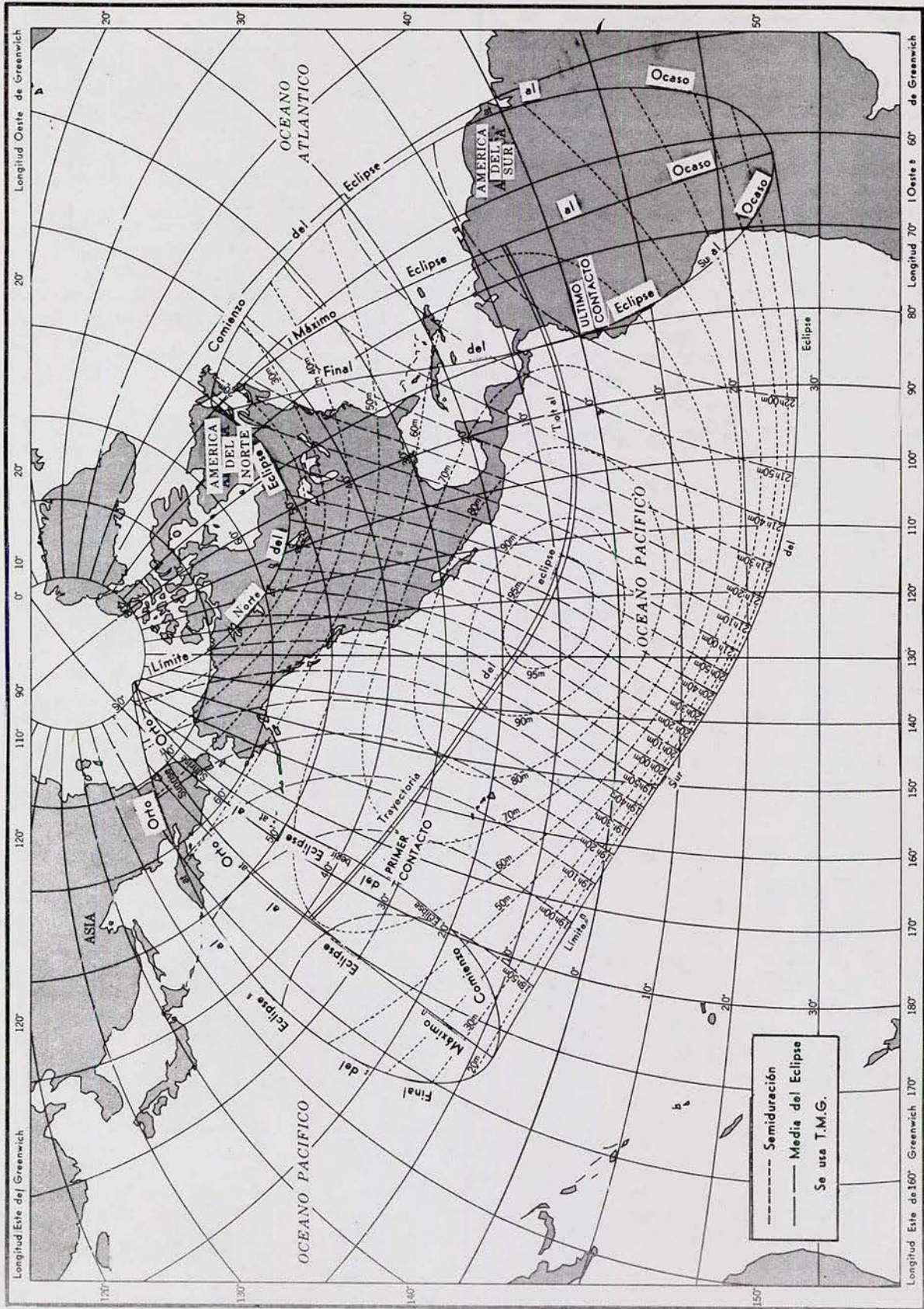


DIAGRAMA DEL ECLIPSE SOLAR

Para los eclipses total y anular, los tiempos medios de las fases correspondientes, se muestran generalmente dentro de los 5 minutos respecto de aquellos dados para la línea media del eclipse; las semiduraciones, dependientes de la posición precisa relativa a la trayectoria, no están dadas. Mayores detalles de las trayectorias y horas del eclipse central, se publican en las "Astronomical Ephemeris" y en el "American Ephemeris".

POSICIONES DE LOS PLANETAS

VENUS es fácilmente identificado por su notable brillantez, será un astro vespertino hasta fines de marzo, cuando llegará a estar demasiado cerca del Sol, para fines de observación. Desde mediados de abril será un astro matutino, hasta el principio de diciembre, cuando de nuevo volverá a estar demasiado cerca del Sol. Venus estará en conjunción con Marte, el 13 de mayo y el 3 de junio; con Júpiter el 30 de julio; y con Saturno el 18 de septiembre.

MARTE estará demasiado cerca del Sol, para fines de observación durante la primera mitad de enero; y será visible como un astro matutino para el resto del año. Marte estará en la constelación de Sagitario desde enero hasta la mitad de febrero, prosiguiendo hacia Capricornio, Acuario, Piscis, Aries, Tauro, (pasando 5° N. de *Aldebarán*, el 10. de agosto) Geminis (pasando 6° S. de *Pollux*, el 13 de octubre) y dentro de Cáncer en octubre, donde permanecerá por el resto del año. Marte estará en conjunción con Mercurio, el 12 de enero y el 12 de febrero; con Venus el 13 de mayo y el 3 de junio; y con Júpiter el 4 de septiembre.

JUPITER será un astro vespertino desde los comienzos del año hasta mediados de mayo, llegará a estar muy cerca del Sol impidiendo su observación. Desde la segunda mitad de junio, será un astro matutino, hasta que entre en oposición el 23 de diciembre, cuando se convertirá en un astro vespertino por el resto del año; Júpiter estará en conjunción con Venus el 30 de julio y con Marte el 4 de septiembre.

SATURNO será un astro matutino hasta estar en oposición el 2 de febrero, cuando se convertirá en un astro vespertino hasta fines de julio. Estará después muy cerca del Sol, impidiendo su observación, hasta fines de agosto, cuando comenzará a ser visible como un astro matutino por el resto del año. Saturno estará en Cáncer al comienzo del año, moviéndose dentro de Leo en julio donde permanecerá por el resto del año, (pasando a 0° 8' N. de *Regulus*, el 3 de noviembre). Saturno estará en conjunción con Mercurio el 20 de julio y con Venus el 18 de septiembre.

MERCURIO podrá observarse únicamente cerca del horizonte: al Oriente, antes del orto, o al Poniente después del ocaso (cerca de la hora en que se inicia y termina el crepúsculo civil). Será visible en las mañanas durante las siguientes fechas aproximadas: de enero 10 (+ 1.9), hasta marzo 4 (-0.7); de mayo 7 (+ 2.5), hasta junio 22 (-1.4); de septiembre 11 (+ 1.6) hasta octubre 5 (-1.1); de diciembre 26 (+ 2.2), hasta diciembre 31 (+ 0.6). El planeta será brillante hacia fines de cada período. Será visible en las tardes entre las siguientes fechas aproximadas: de marzo 26 (-1.3) hasta abril 24 (+ 2.5); de julio 9 (-1.0) hasta septiembre 1 (+ 2.4); de noviembre 4 (-0.5) hasta diciembre 17 (+ 1.7); el planeta es brillante hacia el comienzo de cada período. Los números entre paréntesis indican las magnitudes.

DIAGRAMA DE LOS PLANETAS

DESCRIPCION GENERAL. — El diagrama en la página opuesta muestra de manera gráfica, para cualquier fecha del año, la hora media local del paso del Sol y de los cinco planetas: Mercurio, Venus, Marte, Júpiter y Saturno, por el meridiano, para cada 30° de A.H.S.; si el usuario lo requiere, pueden trazarse líneas intermedias a las trazadas en el diagrama, para alguna estrella en particular. El propósito principal de este diagrama, es suministrar una información general de la disponibilidad de planetas y estrellas para su observación.

A cada lado de la línea que marca el paso del Sol por el meridiano, se muestra una banda sombreada de 45' de ancho, indicando que los planetas y estrellas que crucen el meridiano, a menos de 45' del cruce del Sol, estarán demasiado cercanos al mismo, para poder observarse.

METODO PARA SU USO E INTERPRETACION

Para cualquier fecha, el diagrama suministra inmediatamente las horas medias locales del paso por el meridiano, del Sol, planetas y estrellas y, en consecuencia, la siguiente información:

- Si un planeta o estrella está demasiado cerca del Sol para poder observarse.
- Si un planeta es matutino o vespertino.
- Una indicación de su posición durante el crepúsculo.
- Su proximidad a otros planetas.

Cuando el paso por el meridiano tiene lugar a media noche, el cuerpo celeste está en oposición, siendo visible toda la noche; los planetas pueden observarse en los crepúsculos matutino y vespertino. A medida que la hora de paso por el meridiano decrece, el cuerpo celeste deja de ser observable en la mañana pero, su altura sobre el horizonte hacia el Este, a la hora del crepúsculo vespertino, aumenta gradualmente; este proceso continúa hasta que el astro se encuentra en el meridiano durante el crepúsculo. De ahí en adelante el cuerpo celeste es observable sobre el horizonte Oeste y su altura en el crepúsculo vespertino disminuye gradualmente, hasta que llega a situarse tan cercano al Sol que imposibilita su observación. Cuando el cuerpo celeste en cuestión vuelve a ser visible, aparecerá como un astro matutino muy bajo en el Este; su altura durante el crepúsculo se irá incrementando hasta que su paso por el meridiano coincida con el crepúsculo matutino: entonces, y a medida que la hora del paso por el meridiano decrece hacia las 0^h, el cuerpo celeste es observable hacia el Oeste en el crepúsculo matutino, con alturas gradualmente menores hasta entrar de nuevo en oposición.

NO CONFUNDIR

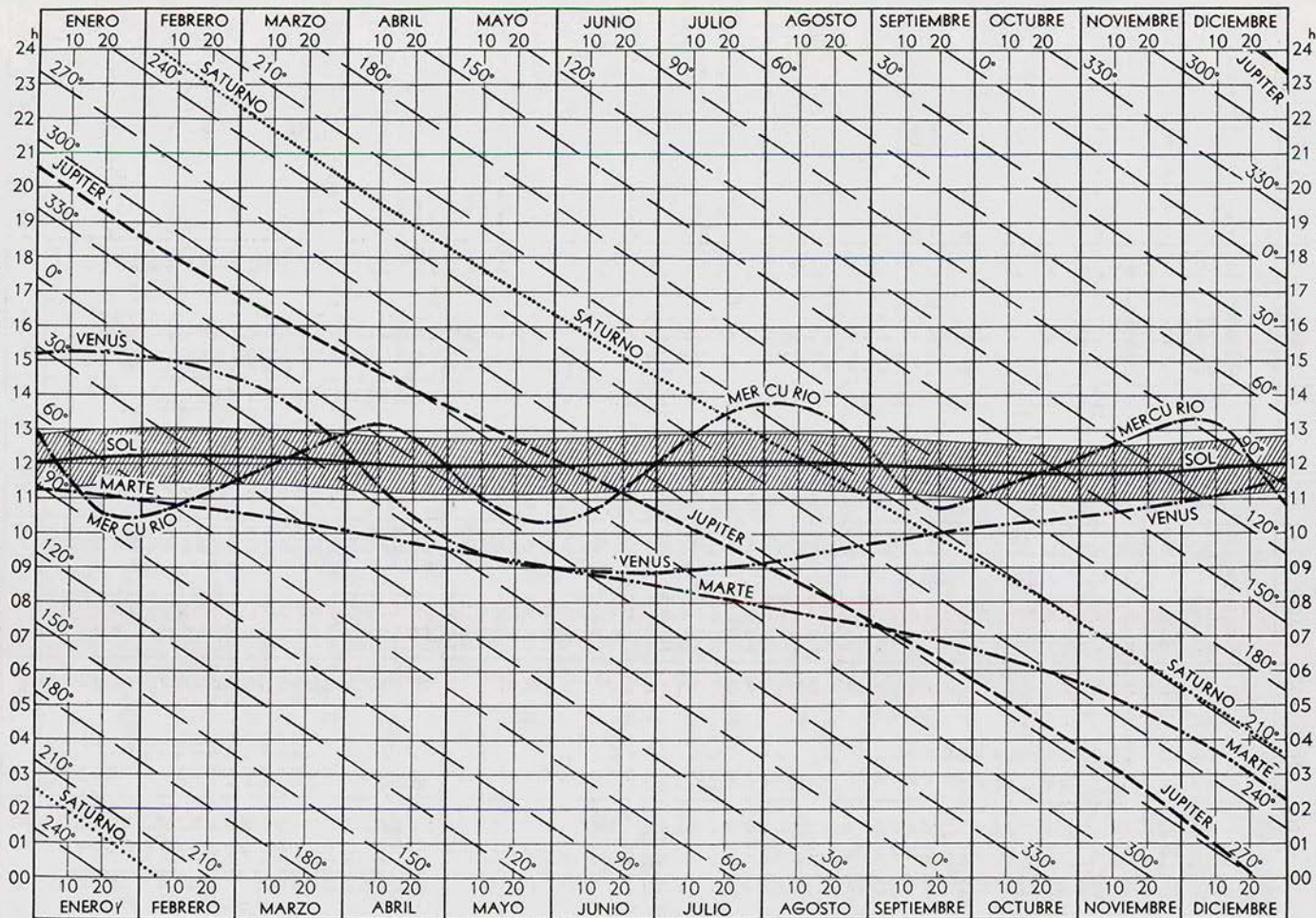
Mercurio con Marte a mediados de enero cuando ambos planetas tengan la misma magnitud, y otra vez al principiar febrero cuando Mercurio es el más brillante.

Venus con Marte a mediados de mayo y al principiar junio; con Júpiter hacia fines de julio, y con Saturno en la segunda mitad de septiembre; en toda ocasión Venus es el más brillante.

Mercurio con Saturno en la segunda mitad de julio cuando Mercurio es el más brillante.

Marte con Júpiter hacia el principio de septiembre cuando Júpiter es el más brillante.

TIEMPO MEDIO LOCAL DE PASO POR EL MERIDIANO



TIEMPO MEDIO LOCAL DE PASO POR EL MERIDIANO

PLANETAS, 1977

T. M. G.	ARIES		VENUS -3.8		MARTE +1.6		JUPITER -2.2		SATURNO +0.2		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
1 00	100 31.9	131 42.2	S14 21.4	190 33.4	S24 03.6	51 09.4	N17 12.1	321 58.2	N16 55.9	Acomar	315 38.9	S40 24.0		
01	115 34.4	146 42.0	20.3	205 33.8	03.6	66 12.0	12.0	337 00.8	55.9	Achernar	335 47.1	S57 21.5		
02	130 36.8	161 41.8	19.2	220 34.2	03.7	81 14.6	12.0	352 03.4	56.0	Acrux	173 39.8	S62 58.1		
03	145 39.3	176 41.5	18.1	235 34.6	03.7	96 17.2	12.0	7 06.0	56.0	Adhara	255 33.7	S28 56.6		
04	160 41.8	191 41.3	17.0	250 35.0	03.7	111 19.8	12.0	22 08.6	56.1	Aldebaran	291 20.5	N16 27.8		
05	175 44.2	206 41.1	15.9	265 35.5	03.7	126 22.4	12.0	37 11.2	56.1					
06	190 46.7	221 40.9	S14 14.8	280 35.9	S24 03.8	141 25.0	N17 11.9	52 13.8	N16 56.2	Alioth	166 44.8	N56 04.7		
07	205 49.2	236 40.6	13.8	295 36.3	03.8	156 27.5	11.9	67 6.4	56.2	Alkaid	153 20.7	N49 25.4		
08	220 51.6	251 40.4	12.7	310 36.7	03.8	171 30.1	11.9	82 19.0	56.3	Al Na'ir	28 18.4	S47 04.5		
S 09	235 54.1	266 40.2	11.6	325 37.1	03.8	186 32.7	11.9	97 21.6	56.3	Alnilam	276 13.9	S 1 13.1		
A 10	250 56.6	281 40.0	10.5	340 37.5	03.8	201 35.3	11.9	112 24.2	56.4	Alphard	218 22.7	S 8 33.6		
B 11	265 59.0	296 39.7	09.4	355 38.0	03.9	216 37.9	11.8	127 26.9	56.4					
A 12	281 01.5	311 39.5	S14 08.3	10 38.4	S24 03.9	231 40.5	N17 11.8	142 29.5	N16 56.5	Alphecca	126 34.5	N26 47.4		
D 13	296 04.0	326 39.3	07.2	25 38.8	03.9	246 43.1	11.8	157 32.1	56.5	Alpheratz	358 11.9	N28 58.0		
O 14	311 06.4	341 39.1	06.1	40 39.2	03.9	261 45.7	11.8	172 34.7	56.6	Althair	62 35.3	N 8 48.5		
15	326 08.9	356 38.9	05.0	55 39.6	03.9	276 48.2	11.8	187 37.3	56.6	Ankaa	353 42.8	S42 26.1		
16	341 11.3	11 38.7	03.9	70 40.0	03.9	291 50.8	11.7	202 39.9	56.7	Antares	113 00.2	S26 22.8		
17	356 13.8	26 38.4	02.8	85 40.5	04.0	306 53.4	11.7	217 42.5	56.7					
18	11 16.3	41 38.2	S14 01.7	100 40.9	S24 04.0	321 56.0	N17 11.7	232 45.1	N16 56.8	Arcturus	146 20.9	N19 18.0		
19	26 18.7	56 38.0	14 00.6	115 41.3	04.0	336 58.6	11.7	247 47.7	56.8	Atria	108 27.2	S68 59.0		
20	41 21.2	71 37.8	13 59.6	130 41.7	04.0	352 01.2	11.7	262 50.3	56.9	Avior	234 28.5	S59 26.2		
21	56 23.7	86 37.6	58.5	145 42.1	04.0	7 03.8	11.6	277 53.0	56.9	Bellatrix	279 01.1	N 6 19.7		
22	71 26.1	101 37.4	57.4	160 42.5	04.0	22 06.3	11.6	292 55.6	57.0	Betelgeuse	271 30.6	N 7 24.1		
23	86 28.6	116 37.2	56.3	175 43.0	04.0	37 08.9	11.6	307 58.2	57.0					
2 00	101 31.1	131 36.9	S13 55.2	190 43.4	S24 04.1	52 11.5	N17 11.6	323 00.8	N16 57.1	Canopus	264 07.7	S52 41.1		
01	116 33.5	146 36.7	54.1	205 43.8	04.1	67 14.1	11.6	338 03.4	57.2	Capella	281 14.5	N45 58.5		
02	131 36.0	161 36.5	53.0	220 44.2	04.1	82 16.7	11.5	353 06.0	57.2	Deneb	49 50.5	N45 12.1		
03	146 38.5	176 36.3	51.9	235 44.6	04.1	97 19.3	11.5	8 08.6	57.3	Denebola	183 01.5	N14 41.9		
04	161 40.9	191 36.1	50.8	250 45.0	04.1	112 21.8	11.5	23 11.2	57.3	Diphda	349 23.4	S18 06.9		
05	176 43.4	206 35.9	49.7	265 45.5	04.1	127 24.4	11.5	38 13.8	57.4					
06	191 45.8	221 35.7	S13 48.6	280 45.9	S24 04.1	142 27.0	N17 11.5	53 16.5	N16 57.4	Dubhe	194 25.0	N61 52.1		
07	206 48.3	236 35.5	47.5	295 46.3	04.1	157 29.6	11.4	68 19.1	57.5	Elnath	278 46.9	N28 35.3		
08	221 50.8	251 35.3	46.4	310 46.7	04.1	172 32.2	11.4	83 21.7	57.5	Eltanin	90 59.4	N51 29.5		
O 09	236 53.2	266 35.1	45.3	325 47.1	04.2	187 34.8	11.4	98 24.3	57.6	Enif	34 14.3	N 9 46.3		
10	251 55.7	281 34.9	44.2	340 47.5	04.2	202 37.3	11.4	113 26.9	57.6	Fomalhaut	15 54.4	S29 44.7		
11	266 58.2	296 34.7	43.1	355 48.0	04.2	217 39.9	11.4	128 29.5	57.7					
12	282 00.6	311 34.5	S13 42.0	10 48.4	S24 04.2	232 42.5	N17 11.4	143 32.1	N16 57.7	Gacrux	172 31.4	S56 58.8		
13	297 03.1	326 34.3	40.9	25 48.8	04.2	247 45.1	11.3	158 34.7	57.8	Gienah	176 20.5	S17 24.8		
14	312 05.6	341 34.1	39.7	40 49.2	04.2	262 47.6	11.3	173 37.3	57.8	Hadar	149 27.0	S60 15.5		
15	327 08.0	356 33.9	38.6	55 49.6	04.2	277 50.2	11.3	188 40.0	57.9	Hamal	328 31.6	N23 21.3		
16	342 10.5	11 33.7	37.5	70 50.0	04.2	292 52.8	11.3	203 42.6	57.9	Kaus Aust.	84 20.6	S34 23.7		
17	357 12.9	26 33.5	36.4	85 50.4	04.2	307 55.4	11.3	218 45.2	58.0					
18	12 15.4	41 33.3	S13 35.3	100 50.9	S24 04.2	322 58.0	N17 11.3	233 47.8	N16 58.0	Kochab	137 19.7	N74 14.7		
19	27 17.9	56 33.1	34.2	115 51.3	04.2	338 00.5	11.2	248 50.4	58.1	Markab	14 05.8	N15 05.0		
20	42 20.3	71 32.9	33.1	130 51.7	04.2	353 03.1	11.2	263 53.0	58.1	Menkar	314 43.5	N 4 00.0		
21	57 22.8	86 32.7	32.0	145 52.1	04.2	8 05.7	11.2	278 55.6	58.2	Menkent	148 40.1	S36 15.3		
22	72 25.3	101 32.5	30.9	160 52.5	04.2	23 08.3	11.2	293 58.3	58.2	Miaplacidus	221 44.6	S69 37.3		
23	87 27.7	116 32.3	29.8	175 52.9	04.2	38 10.8	11.2	309 00.9	58.3					
3 00	102 30.2	131 32.1	S13 28.7	190 53.4	S24 04.2	53 13.4	N17 11.2	324 03.5	N16 58.3	Mirfak	309 19.3	N49 46.9		
01	117 32.7	146 32.0	27.6	205 53.8	04.2	68 16.0	11.1	339 06.1	58.4	Nunki	76 32.6	S26 19.5		
02	132 35.1	161 31.8	26.5	220 54.2	04.2	83 18.6	11.1	354 08.7	58.4	Peacock	54 02.9	S56 48.6		
03	147 37.6	176 31.6	25.3	235 54.6	04.2	98 21.1	11.1	9 11.3	58.5	Pollux	244 00.8	N28 04.8		
04	162 40.1	191 31.4	24.2	250 55.0	04.2	113 23.7	11.1	24 13.9	58.5	Procyon	245 28.1	N 5 16.9		
05	177 42.5	206 31.2	23.1	265 55.4	04.2	128 26.3	11.1	39 16.6	58.6					
06	192 45.0	221 31.0	S13 22.0	280 55.8	S24 04.2	143 28.9	N17 11.1	54 19.2	N16 58.6	Rasalhague	96 32.2	N12 34.6		
07	207 47.4	236 30.8	20.9	295 56.2	04.2	158 31.4	11.0	69 21.8	58.7	Regulus	208 12.4	N12 04.6		
08	222 49.9	251 30.6	19.8	310 56.7	04.2	173 34.0	11.0	84 24.4	58.7	Rigel	281 38.1	S 8 13.8		
O 09	237 52.4	266 30.5	18.7	325 57.1	04.2	188 36.6	11.0	99 27.0	58.8	Rigil Kent.	140 29.4	S60 44.1		
10	252 54.8	281 30.3	17.6	340 57.5	04.2	203 39.2	11.0	114 29.6	58.9	Sabik	102 44.3	S15 41.7		
11	267 57.3	296 30.1	16.4	355 57.9	04.2	218 41.7	11.0	129 32.3	58.9					
12	282 59.8	311 29.9	S13 15.3	10 58.3	S24 04.2	233 44.3	N17 11.0	144 34.9	N16 59.0	Schedar	350 11.8	N56 25.0		
13	298 02.2	326 29.7	14.2	25 58.7	04.2	248 46.9	10.9	159 37.5	59.0	Shaula	96 59.5	S37 05.1		
14	313 04.7	341 29.6	13.1	40 59.1	04.2	263 49.4	10.9	174 40.1	59.1	Sirius	258 57.5	S16 41.2		
15	328 07.2	356 29.4	12.0	55 59.6	04.2	278 52.0	10.9	189 42.7	59.1	Spica	159 00.2	S11 02.5		
16	343 09.6	11 29.2	10.9	71 00.0	04.2	293 54.6	10.9	204 45.3	59.2	Suhail	223 12.2	S43 20.4		
17	358 12.1	26 29.0	09.7	86 00.4	04.2	308 57.1	10.9	219 47.9	59.2					
18	13 14.6	41 28.8	S13 08.6	101 00.8	S24 04.2	323 59.7	N17 10.9	234 50.6	N16 59.3	Vega	80 57.9	N38 45.8		
19	28 17.0	56 28.7	07.5	116 01.2	04.2	339 02.3	10.9	249 53.2	59.3	Zuben'ubi	137 36.0	S15 56.7		
20	43 19.5	71 28.5	06.4	131 01.6	04.2	354 04.9	10.8	264 55.8	59.4					
21	58 21.9	86 28.3	05.3	146 02.0	04.2	9 07.4	10.8	279 58.4	59.4					
22	73 24.4	101 28.2	04.1	161 02.4	04.2	24 10.0	10.8	295 01.0	59.5	Venus	30 05.9	15 14		
23	88 26.9	116 28.0	03.0	176 02.9	04.2	39 12.6	10.8	310 03.7	59.5	Marte	89 12.3	11 17		

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.		A.H.G.	v	Dec.		d	P. H.		Náut.	Civil	1	2	3	4
	° ' "	° ' "		° ' "	° ' "	° ' "		° ' "	° ' "	h m	h m	h m	h m	h m	h m	h m
I 00 01 02 03 04 05 06 07 08 S A B A D O 13 14 15 16 17 18 19 20 21 22 23	179 08.9	S23 01.7		52 14.7	13.1	N16 12.6	5.4	54.2	N 72	08 23	10 40	■	10 10	□	□	□
	194 08.6	01.5		66 46.8	13.1	16 18.0	5.3	54.2	N 70	08 04	09 48	■	11 02	11 10	11 35	12 36
	209 08.3	01.3		81 18.9	13.0	16 23.3	5.3	54.2	68	07 49	09 16	■	11 35	11 55	12 30	13 27
	224 08.0	01.1		95 50.9	13.1	16 28.6	5.1	54.2	66	07 37	08 52	10 26	11 58	12 24	13 03	13 59
	239 07.7	00.9		110 23.0	12.9	16 33.7	5.1	54.2	64	07 26	08 34	09 49	12 17	12 47	13 28	14 22
	254 07.5	00.6		124 54.9	13.0	16 38.8	5.1	54.2	62	07 17	08 18	09 22	12 33	13 04	13 47	14 41
	269 07.2	S23 00.4		139 26.9	12.9	N16 43.9	4.9	54.2	60	07 09	08 05	09 02	12 46	13 19	14 02	14 56
	284 06.9	00.2		153 58.8	12.9	16 48.8	4.9	54.2	N 58	07 02	07 54	08 45	12 57	13 32	14 16	15 09
	299 06.6	23 00.0		168 30.7	12.8	16 53.7	4.9	54.2	56	06 56	07 44	08 31	13 06	13 43	14 27	15 20
	314 06.3	22 59.8		183 02.5	12.8	16 58.6	4.7	54.2	54	06 50	07 36	08 19	13 15	13 53	14 37	15 30
	329 06.0	59.6		197 34.3	12.8	17 03.3	4.7	54.2	52	06 44	07 28	08 08	13 23	14 01	14 46	15 39
	344 05.7	59.4		212 06.1	12.7	17 08.0	4.6	54.2	50	06 39	07 20	07 59	13 30	14 09	14 54	15 47
	359 05.4	S22 59.2		226 37.8	12.7	N17 12.6	4.5	54.2	45	06 28	07 05	07 38	13 45	14 25	15 12	16 03
	14 05.1	59.0		241 09.5	12.7	17 17.1	4.4	54.2	N 40	06 18	06 52	07 22	13 57	14 39	15 26	16 17
	29 04.8	58.8		255 41.2	12.6	17 21.5	4.4	54.2	35	06 09	06 40	07 08	14 07	14 50	15 38	16 29
	44 04.5	58.6		270 12.8	12.6	17 25.9	4.3	54.2	30	06 00	06 30	06 56	14 17	15 00	15 48	16 39
	59 04.2	58.4		284 44.4	12.6	17 30.2	4.2	54.2	20	05 44	06 12	06 36	14 32	15 18	16 06	16 56
	74 03.9	58.1		299 16.0	12.5	17 34.4	4.1	54.2	N 10	05 28	05 55	06 17	14 46	15 33	16 21	17 12
	89 03.6	S22 57.9		313 47.5	12.5	N17 38.5	4.0	54.3	0	05 12	05 38	06 00	15 00	15 47	16 36	17 26
	104 03.3	57.7		328 19.0	12.4	17 42.5	4.0	54.3	S 10	04 53	05 20	05 43	15 13	16 01	16 51	17 40
	119 03.1	57.5		342 50.4	12.5	17 46.5	3.9	54.3	20	04 31	05 00	05 25	15 27	16 17	17 06	17 55
	134 02.8	57.3		357 21.9	12.3	17 50.4	3.8	54.3	30	04 03	04 36	05 03	15 43	16 34	17 24	18 13
	149 02.5	57.1		11 53.2	12.4	17 54.2	3.8	54.3	35	03 44	04 21	04 50	15 52	16 44	17 35	18 23
164 02.2	56.9		26 24.6	12.3	17 58.0	3.6	54.3	40	03 22	04 03	04 36	16 03	16 56	17 47	18 35	
								45	02 52	03 41	04 18	16 16	17 10	18 01	18 48	
2 00 01 02 03 04 05 06 07 D O M I N G O 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	179 01.9	S22 56.6		40 55.9	12.3	N18 01.6	3.6	54.3	S 50	02 09	03 12	03 56	16 31	17 27	18 18	19 05
	194 01.6	56.4		55 27.2	12.2	18 05.2	3.5	54.3	52	01 43	02 58	03 46	16 38	17 35	18 26	19 13
	209 01.3	56.2		69 58.4	12.2	18 08.7	3.4	54.3	54	01 03	02 41	03 34	16 46	17 44	18 36	19 21
	224 01.0	56.0		84 29.6	12.2	18 12.1	3.3	54.3	56	///	02 19	03 20	16 56	17 54	18 46	19 31
	239 00.7	55.7		99 00.8	12.2	18 15.4	3.2	54.3	58	///	01 52	03 04	17 06	18 05	18 57	19 42
	254 00.4	55.5		113 32.0	12.1	18 18.6	3.2	54.4	S 60	///	01 09	02 44	17 18	18 18	19 11	19 55
	269 00.1	S22 55.3		128 03.1	12.0	N18 21.8	3.1	54.4								
	283 59.8	55.1		142 34.1	12.1	18 24.9	3.0	54.4	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	298 59.6	54.9		157 05.2	12.0	18 27.9	2.9	54.4			Civil	Náut.	1	2	3	4
	313 59.3	54.6		171 36.2	12.0	18 30.8	2.8	54.4					h m	h m	h m	h m
	328 59.0	54.4		186 07.2	11.9	18 33.6	2.7	54.4	N 72	■	13 29	15 46	07 16	□	□	□
	343 58.7	54.2		200 38.1	11.9	18 36.3	2.7	54.4	N 70	■	14 20	16 04	06 24	07 55	09 11	09 53
	358 58.4	S22 53.9		215 09.0	11.9	N18 39.0	2.5	54.4	68	■	14 53	16 19	05 53	07 10	08 16	09 02
	13 58.1	53.7		229 39.9	11.9	18 41.5	2.5	54.4	66	13 42	15 16	16 32	05 29	06 41	07 43	08 30
	28 57.8	53.5		244 10.8	11.8	18 44.0	2.4	54.5	64	14 20	15 35	16 42	05 11	06 19	07 18	08 06
	43 57.5	53.3		258 41.6	11.8	18 46.4	2.3	54.5	62	14 46	15 50	16 51	04 56	06 01	06 59	07 47
	58 57.2	53.0		273 12.4	11.7	18 48.7	2.2	54.5	60	15 07	16 03	16 59	04 44	05 47	06 43	07 32
	73 56.9	52.8		287 43.1	11.8	18 50.9	2.1	54.5	N 58	15 23	16 14	17 06	04 33	05 34	06 30	07 19
	88 56.7	S22 52.6		302 13.9	11.7	N18 53.0	2.1	54.5	56	15 37	16 24	17 13	04 23	05 24	06 19	07 08
	103 56.4	52.3		316 44.6	11.6	18 55.1	1.9	54.5	54	15 50	16 33	17 19	04 15	05 14	06 09	06 58
	118 56.1	52.1		331 15.2	11.7	18 57.0	1.9	54.5	52	16 00	16 41	17 24	04 08	05 06	06 00	06 49
	133 55.8	51.9		345 45.9	11.6	18 58.9	1.8	54.5	50	16 10	16 48	17 29	04 01	04 58	05 52	06 41
	148 55.5	51.6		0 16.5	11.6	19 00.7	1.6	54.6	45	16 30	17 04	17 41	03 47	04 42	05 35	06 24
163 55.2	51.4		14 47.1	11.5	19 02.3	1.6	54.6	N 40	16 46	17 17	17 51	03 35	04 29	05 21	06 10	
3 00 01 02 03 04 05 06 07 08 L U N E S 12 13 14 15 16 17 18 19 20 21 22 23	178 54.9	S22 51.1		29 17.6	11.6	N19 03.9	1.5	54.6	35	17 00	17 28	18 00	03 25	04 17	05 09	05 58
	193 54.6	50.9		43 48.2	11.5	19 05.4	1.4	54.6	30	17 12	17 38	18 08	03 16	04 08	04 58	05 48
	208 54.4	50.7		58 18.7	11.4	19 06.8	1.4	54.6	20	17 33	17 57	18 24	03 01	03 51	04 41	05 30
	223 54.1	50.4		72 49.1	11.5	19 08.2	1.2	54.6	N 10	17 51	18 14	18 40	02 48	03 36	04 25	05 15
	238 53.8	50.2		87 19.6	11.4	19 09.4	1.1	54.6	0	18 08	18 30	18 56	02 35	03 22	04 11	05 00
	253 53.5	49.9		101 50.0	11.4	19 10.5	1.1	54.6	S 10	18 25	18 48	19 15	02 23	03 09	03 56	04 45
	268 53.2	S22 49.7		116 20.4	11.3	N19 11.6	0.9	54.7	20	18 43	19 08	19 37	02 10	02 54	03 41	04 30
	283 52.9	49.5		130 50.7	11.4	19 12.5	0.9	54.7	30	19 05	19 32	20 05	01 55	02 37	03 23	04 12
	298 52.6	49.2		145 21.1	11.3	19 13.4	0.8	54.7	35	19 18	19 47	20 23	01 46	02 27	03 12	04 02
	313 52.3	49.0		159 51.4	11.3	19 14.2	0.6	54.7	40	19 32	20 05	20 46	01 36	02 16	03 00	03 50
	328 52.1	48.7		174 21.7	11.3	19 14.8	0.6	54.7	45	19 50	20 27	21 15	01 25	02 03	02 46	03 36
	343 51.8	48.5		188 52.0	11.2	19 15.4	0.5	54.7	S 50	20 12	20 55	21 59	01 11	01 47	02 29	03 18
	358 51.5	S22 48.2		203 22.2	11.3	N19 15.9	0.4	54.7	52	20 22	21 10	22 24	01 04	01 40	02 21	03 10
	13 51.2	48.0		217 52.5	11.2	19 16.3	0.3	54.8	54	20 34	21 27	23 03	00 57	01 31	02 12	03 01
	28 50.9	47.7		232 22.7	11.1	19 16.6	0.2	54.8	56	20 47	21 48	///	00 49	01 22	02 02	02 51
	43 50.6	47.5		246 52.8	11.2	19 16.8	0.1	54.8	58	21 03	22 15	///	00 40	01 12	01 51	02 39
	58 50.3	47.2		261 23.0	11.1	19 16.9	0.1	54.8	S 60	21 23	22 57	///	00 30	00 59	01 38	02 26
	73 50.1	47.0		275 53.1	11.2	19 17.0	0.1	54.8								
	88 49.															

T. M. G.	ARIES			VENUS -3.9			MARTE +1.6			JUPITER -2.2			SATURNO +0.2			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.		
M A R T E S	4 00	103 29.3	131 27.8 S13	01.9	191 03.3 S24	04.2	54 15.1 N17	10.8	325 06.3 N16	59.6	Acamar	315 38.9 S40	24.0					
	01	118 31.8	146 27.6 13	00.8	206 03.7	04.2	69 17.7	10.8	340 08.9	59.6	Achernar	335 47.1 S57	21.5					
	02	133 34.3	161 27.5 12	59.7	221 04.1	04.1	84 20.3	10.8	355 11.5	59.7	Acrux	173 39.8 S62	58.1					
	03	148 36.7	176 27.3 ..	58.5	236 04.5 ..	04.1	99 22.8 ..	10.7	10 14.1 ..	59.7	Adhara	255 33.7 S28	56.6					
	04	163 39.2	191 27.1	57.4	251 04.9	04.1	114 25.4	10.7	25 16.7	59.8	Aldebaran	291 20.5 N16	27.8					
	05	178 41.7	206 27.0	56.3	266 05.3	04.1	129 28.0	10.7	40 19.4	59.8								
	06	193 44.1	221 26.8 S12	55.2	281 05.7 S24	04.1	144 30.5 N17	10.7	55 22.0 N16	59.9	Alioth	166 44.8 N56	04.7					
	07	208 46.6	236 26.6	54.0	296 06.2	04.1	159 33.1	10.7	70 24.6 17	00.0	Alkaid	153 20.6 N49	25.4					
	08	223 49.0	251 26.5	52.9	311 06.6	04.1	174 35.6	10.7	85 27.2	00.0	Al Na'ir	28 18.4 S47	04.5					
	09	238 51.5	266 26.3 ..	51.8	326 07.0 ..	04.1	189 38.2 ..	10.7	100 29.8 ..	00.1	Alnilam	276 13.9 S 1	13.1					
	10	253 54.0	281 26.1	50.7	341 07.4	04.1	204 40.8	10.6	115 32.4	00.1	Alphard	218 22.7 S 8	33.6					
	11	268 56.4	296 26.0	49.5	356 07.8	04.0	219 43.3	10.6	130 35.1	00.2								
	12	283 58.9	311 25.8 S12	48.4	11 08.2 S24	04.0	234 45.9 N17	10.6	145 37.7 N17	00.2	Alphecca	126 34.5 N26	47.4					
	13	299 01.4	326 25.7	47.3	26 08.6	04.0	249 48.5	10.6	160 40.3	00.3	Alpheratz	358 11.9 N28	58.0					
	14	314 03.8	341 25.5	46.2	41 09.0	04.0	264 51.0	10.6	175 42.9	00.3	Altair	62 35.3 N 8	48.5					
	15	329 06.3	356 25.3 ..	45.0	56 09.5 ..	04.0	279 53.6 ..	10.6	190 45.5 ..	00.4	Ankaa	353 42.8 S42	26.1					
	16	344 08.8	11 25.2	43.9	71 09.9	04.0	294 56.1	10.6	205 48.2	00.4	Antares	113 00.2 S26	22.8					
	17	359 11.2	26 25.0	42.8	86 10.3	03.9	309 58.7	10.5	220 50.8	00.5								
	18	14 13.7	41 24.9 S12	41.6	101 10.7 S24	03.9	325 01.3 N17	10.5	235 53.4 N17	00.5	Arcturus	146 20.9 N19	18.0					
	19	29 16.2	56 24.7	40.5	116 11.1	03.9	340 03.8	10.5	250 56.0	00.6	Atria	108 27.1 S68	59.0					
	20	44 18.6	71 24.6	39.4	131 11.5	03.9	355 06.4	10.5	265 58.6	00.6	Avior	234 28.5 S59	26.2					
	21	59 21.1	86 24.4 ..	38.3	146 11.9 ..	03.9	10 08.9 ..	10.5	281 01.3 ..	00.7	Bellatrix	279 01.1 N 6	19.6					
	22	74 23.5	101 24.2	37.1	161 12.3	03.9	25 11.5	10.5	296 03.9	00.7	Betelgeuse	271 30.6 N 7	24.1					
23	89 26.0	116 24.1	36.0	176 12.7	03.8	40 14.1	10.5	311 06.5	00.8									
M I E R C O L E S	5 00	104 28.5	131 23.9 S12	34.9	191 13.1 S24	03.8	55 16.6 N17	10.5	326 09.1 N17	00.9	Canopus	264 07.7 S52	41.2					
	01	119 30.9	146 23.8	33.7	206 13.6	03.8	70 19.2	10.4	341 11.7	00.9	Capella	281 14.5 N45	58.5					
	02	134 33.4	161 23.6	32.6	221 14.0	03.8	85 21.7	10.4	356 14.4	01.0	Deneb	49 50.5 N45	12.1					
	03	149 35.9	176 23.5 ..	31.5	236 14.4 ..	03.8	100 24.3 ..	10.4	11 17.0 ..	01.0	Denebola	183 01.5 N14	41.8					
	04	164 38.3	191 23.3	30.3	251 14.8	03.7	115 26.8	10.4	26 19.6	01.1	Diphda	349 23.4 S18	06.9					
	05	179 40.8	206 23.2	29.2	266 15.2	03.7	130 29.4	10.4	41 22.2	01.1								
	06	194 43.3	221 23.0 S12	28.1	281 15.6 S24	03.7	145 32.0 N17	10.4	56 24.9 N17	01.2	Dubhe	194 24.9 N61	52.1					
	07	209 45.7	236 22.9	26.9	296 16.0	03.7	160 34.5	10.4	71 27.5	01.2	Elnath	278 46.9 N28	35.3					
	08	224 48.2	251 22.8	25.8	311 16.4	03.7	175 37.1	10.4	86 30.1	01.3	Elnatan	90 59.4 N51	29.5					
	09	239 50.7	266 22.6 ..	24.6	326 16.8 ..	03.6	190 39.6 ..	10.4	101 32.7 ..	01.3	Enif	34 14.3 N 9	46.3					
	10	254 53.1	281 22.5	23.5	341 17.3	03.6	205 42.2	10.3	116 35.3	01.4	Fomalhaut	15 54.4 S29	44.7					
	11	269 55.6	296 22.3	22.4	356 17.7	03.6	220 44.7	10.3	131 38.0	01.4								
	12	284 58.0	311 22.2 S12	21.2	11 18.1 S24	03.6	235 47.3 N17	10.3	146 40.6 N17	01.5	Gacrux	172 31.3 S56	58.9					
	13	300 00.5	326 22.0	20.1	26 18.5	03.5	250 49.8	10.3	161 43.2	01.6	Gienah	176 20.4 S17	24.8					
	14	315 03.0	341 21.9	19.0	41 18.9	03.5	265 52.4	10.3	176 45.8	01.6	Hadar	149 27.0 S60	15.5					
	15	330 05.4	356 21.8 ..	17.8	56 19.3 ..	03.5	280 54.9 ..	10.3	191 48.5 ..	01.7	Hamal	328 31.6 N23	21.3					
	16	345 07.9	11 21.6	16.7	71 19.7	03.5	295 57.5	10.3	206 51.1	01.7	Kaus Aust.	84 20.5 S34	23.7					
	17	0 10.4	26 21.5	15.5	86 20.1	03.4	311 00.1	10.3	221 53.7	01.8								
	18	15 12.8	41 21.4 S12	14.4	101 20.5 S24	03.4	326 02.6 N17	10.3	236 56.3 N17	01.8	Kochab	137 19.6 N74	14.7					
	19	30 15.3	56 21.2	13.3	116 20.9	03.4	341 05.2	10.2	251 58.9	01.9	Markab	14 05.8 N15	05.0					
	20	45 17.8	71 21.1	12.1	131 21.3	03.3	356 07.7	10.2	267 01.6	01.9	Menkar	314 43.5 N 3	59.9					
	21	60 20.2	86 20.9 ..	11.0	146 21.8 ..	03.3	11 10.3 ..	10.2	282 04.2 ..	02.0	Menkent	148 40.0 S36	15.3					
	22	75 22.7	101 20.8	09.8	161 22.2	03.3	26 12.8	10.2	297 06.8	02.0	Miaplacidus	221 44.5 S69	37.3					
23	90 25.2	116 20.7	08.7	176 22.6	03.3	41 15.4	10.2	312 09.4	02.1									
J U E V E S	6 00	105 27.6	131 20.5 S12	07.6	191 23.0 S24	03.2	56 17.9 N17	10.2	327 12.1 N17	02.1	Mirfak	309 19.3 N49	47.0					
	01	120 30.1	146 20.4	06.4	206 23.4	03.2	71 20.5	10.2	342 14.7	02.2	Nunki	76 32.6 S26	19.5					
	02	135 32.5	161 20.3	05.3	221 23.8	03.2	86 23.0	10.2	357 17.3	02.3	Pecock	54 02.9 S56	48.6					
	03	150 35.0	176 20.2 ..	04.1	236 24.2 ..	03.1	101 25.6 ..	10.2	12 19.9 ..	02.3	Pollux	244 00.8 N28	04.8					
	04	165 37.5	191 20.0	03.0	251 24.6	03.1	116 28.1	10.2	27 22.6	02.4	Procyon	245 28.0 N 5	16.9					
	05	180 39.9	206 19.9	01.8	266 25.0	03.1	131 30.7	10.1	42 25.2	02.4								
	06	195 42.4	221 19.8 S12	00.7	281 25.4 S24	03.0	146 33.2 N17	10.1	57 27.8 N17	02.5	Rasalhague	96 32.2 N12	34.6					
	07	210 44.9	236 19.6 11	59.5	296 25.8	03.0	161 35.7	10.1	72 30.4	02.5	Regulus	208 12.4 N12	04.6					
	08	225 47.3	251 19.5	58.4	311 26.3	03.0	176 38.3	10.1	87 33.1	02.6	Rigel	281 38.1 S 8	13.8					
	09	240 49.8	266 19.4 ..	57.3	326 26.7 ..	02.9	191 40.8 ..	10.1	102 35.7 ..	02.6	Rigil Kent.	140 29.4 S60	44.1					
	10	255 52.3	281 19.3	56.1	341 27.1	02.9	206 43.4	10.1	117 38.3	02.7	Sabik	102 44.3 S15	41.7					
	11	270 54.7	296 19.1	55.0	356 27.5	02.9	221 45.9	10.1	132 40.9	02.7								
	12	285 57.2	311 19.0 S11	53.8	11 27.9 S24	02.8	236 48.5 N17	10.1	147 43.6 N17	02.8	Schedar	350 11.8 N56	25.0					
	13	300 59.6	326 18.9	52.7	26 28.3	02.8	251 51.0	10.1	162 46.2	02.9	Shaula	96 59.5 S37	05.1					
	14	316 02.1	341 18.8	51.5	41 28.7	02.8	266 53.6	10.1	177 48.8	02.9	Sirius	258 57.5 S16	41.2					
	15	331 04.6	356 18.7 ..	50.4	56 29.1 ..	02.7	281 56.1 ..	10.1	192 51.4 ..	03.0	Spica	159 00.2 S11	02.5					
	16	346 07.0	11 18.5	49.2	71 29.5	02.7	296 58.7	10.0	207 54.1	03.0	Suhail	223 12.2 S43	20.4					
	17	1 09.5	26 18.4	48.1	86 29.9	02.6	312 01.2	10.0	222 56.7	03.1								
	18	16 12.0	41 18.3 S11	46.9	101 30.3 S24	02.6	327 03.7 N17	10.0	237 59.3 N17	03.1	Vega	80 57.9 N38	45.8					
	19	31 14.4	56 18.2	45.8	116 30.7	02.6	342 06.3	10.0	253 01.9	03.2	Zuben'ubi	137 35.9 S15	56.7					
	20	46 16.9	71 18.1	44.6	131 31.2	02.5	357 08.8	10.0	268 04.6	03.2								
	21	61 19.4	86 18.0 ..	43.5	146 31.6 ..	02.5	12 11.4 ..	10.0	283 07.2 ..	03.3								
	22	76 21.8	101 17.8	42.3	161 32.0	02.5	27 13.9	10.0	298 09.8	03.3	Venus	26 55.5	15 15					
23	91 24.3	116 17.7	41.2	176 32.4	02.4	42 16.5	10.0	313 12.4	03.4	Marte	86 44.7	11 15						
										Júpiter	310 48.1	20 15						
										Saturno	221 40.7	2 15						

Pas. Mer. 16 59.3

v -0.1 d 1.1

v 0.4 d 0.0

v 2.6 d 0.0

v 2.6 d 0.1

A. H. S. Pas. Mer.
o / h m
h m
h m

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	v	Dec.	d	P.H.		Náut.	Civil		4	5	6	7		
											h m	h m	h m	h m	h m	h m
M A R T E S	4 00	178 48.1	S22 45.2	17 23.6	11.0	N19 14.4	0.7	54.9	N 72	08 20	10 30	12 36	14 06	15 09	17 06	
	01	193 47.8	45.0	31 53.6	11.0	19 13.7	0.8	55.0	N 70	08 02	09 43	12 36	14 06	15 46	17 28	
	02	208 47.5	44.7	46 23.6	10.9	19 12.9	1.0	55.0	68	07 47	09 12	11 30	13 27	14 43	16 11	17 44
	03	223 47.2	44.4	60 53.5	11.0	19 11.9	1.0	55.0	66	07 35	08 50	10 20	13 59	15 09	16 31	17 58
	04	238 46.9	44.2	75 23.5	10.9	19 10.9	1.1	55.0	64	07 25	08 32	09 45	14 22	15 30	16 47	18 09
	05	253 46.6	43.9	89 53.4	10.9	19 09.8	1.2	55.0	62	07 16	08 17	09 20	14 41	15 46	17 00	18 19
	06	268 46.4	S22 43.7	104 23.3	10.9	N19 08.6	1.3	55.0	60	07 08	08 04	09 00	14 56	16 00	17 11	18 27
	07	283 46.1	43.4	118 53.2	10.9	19 07.3	1.4	55.1	N 58	07 01	07 53	08 44	15 09	16 11	17 20	18 34
	08	298 45.8	43.1	133 23.1	10.9	19 05.9	1.5	55.1	56	06 55	07 43	08 30	15 20	16 21	17 29	18 40
	09	313 45.5	42.9	147 53.0	10.9	19 04.4	1.6	55.1	54	06 49	07 35	08 18	15 30	16 30	17 36	18 46
	10	328 45.2	42.6	162 22.9	10.9	19 02.8	1.7	55.1	52	06 44	07 27	08 07	15 39	16 38	17 43	18 51
	11	343 45.0	42.3	176 52.8	10.8	19 01.1	1.8	55.1	50	06 39	07 20	07 58	15 47	16 45	17 49	18 55
	12	358 44.7	S22 42.1	191 22.6	10.9	N18 59.3	1.9	55.1	45	06 28	07 05	07 38	16 03	17 00	18 01	19 05
	13	13 44.4	41.8	205 52.5	10.8	18 57.4	2.0	55.2	N 40	06 18	06 52	07 22	16 17	17 13	18 12	19 13
	14	28 44.1	41.5	220 22.3	10.8	18 55.4	2.1	55.2	35	06 09	06 41	07 09	16 29	17 24	18 21	19 20
	15	43 43.8	41.3	234 52.1	10.8	18 53.3	2.2	55.2	30	06 01	06 31	06 57	16 39	17 33	18 29	19 27
	16	58 43.5	41.0	249 21.9	10.8	18 51.1	2.2	55.2	20	05 45	06 12	06 36	16 56	17 49	18 43	19 37
	17	73 43.3	40.7	263 51.7	10.8	18 48.9	2.4	55.2	N 10	05 30	05 56	06 19	17 12	18 03	18 55	19 46
	18	88 43.0	S22 40.5	278 21.5	10.8	N18 46.5	2.5	55.2	0	05 13	05 39	06 02	17 26	18 16	19 06	19 55
	19	103 42.7	40.2	292 51.3	10.8	18 44.0	2.5	55.3	S 10	04 55	05 22	05 45	17 40	18 29	19 17	20 04
	20	118 42.4	39.9	307 21.1	10.8	18 41.5	2.7	55.3	20	04 33	05 02	05 27	17 55	18 43	19 29	20 13
	21	133 42.1	39.6	321 50.9	10.8	18 38.8	2.7	55.3	30	04 05	04 38	05 05	18 13	18 59	19 42	20 24
	22	148 41.9	39.4	336 20.7	10.7	18 36.1	2.9	55.3	35	03 47	04 23	04 53	18 23	19 08	19 50	20 30
23	163 41.6	39.1	350 50.4	10.8	18 33.2	2.9	55.3	40	03 25	04 06	04 38	18 35	19 19	19 59	20 36	
M I E R C O L E S	5 00	178 41.3	S22 38.8	5 20.2	10.8	N18 30.3	3.0	55.4	45	02 56	03 44	04 21	18 48	19 31	20 09	20 44
	01	193 41.0	38.5	19 50.0	10.7	18 27.3	3.2	55.4	S 50	02 14	03 16	04 00	19 05	19 46	20 22	20 54
	02	208 40.7	38.3	34 19.7	10.8	18 24.1	3.2	55.4	52	01 49	03 02	03 49	19 13	19 53	20 28	20 58
	03	223 40.5	38.0	48 49.5	10.8	18 20.9	3.3	55.4	54	01 12	02 45	03 38	19 21	20 01	20 34	21 03
	04	238 40.2	37.7	63 19.3	10.7	18 17.6	3.4	55.4	56	///	02 25	03 24	19 31	20 09	20 41	21 08
	05	253 39.9	37.4	77 49.0	10.8	18 14.2	3.5	55.4	58	///	01 58	03 09	19 42	20 19	20 49	21 14
	06	268 39.6	S22 37.2	92 18.8	10.7	N18 10.7	3.7	55.5	S 60	///	01 19	02 50	19 55	20 30	20 58	21 21
	07	283 39.3	36.9	106 48.5	10.8	18 07.0	3.7	55.5	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	08	298 39.1	36.6	121 18.3	10.7	18 03.3	3.7	55.5			Civil	Náut.	4	5	6	7
	09	313 38.8	36.3	135 48.0	10.8	17 59.6	3.9	55.5					h m	h m	h m	h m
	10	328 38.5	36.0	150 17.8	10.8	17 55.7	4.0	55.5	N 72	13 41	15 52	17 03	18 11	19 08	19 54	20 39
	11	343 38.2	35.7	164 47.6	10.7	17 51.7	4.1	55.6	N 70	14 29	16 10	17 10	18 11	19 07	19 54	20 39
	12	358 38.0	S22 35.5	179 17.3	10.8	N17 47.6	4.1	55.6	68	12 42	14 59	16 24	17 24	18 11	18 58	19 44
	13	13 37.7	35.2	193 47.1	10.8	17 43.5	4.3	55.6	66	12 42	14 59	16 24	17 24	18 11	18 58	19 44
	14	28 37.4	34.9	208 16.9	10.7	17 39.2	4.3	55.6	64	13 51	15 22	16 36	17 36	18 23	19 10	19 56
	15	43 37.1	34.6	222 46.6	10.8	17 34.9	4.5	55.6	62	14 26	15 40	16 46	17 46	18 33	19 20	19 56
	16	58 36.9	34.3	237 16.4	10.8	17 30.4	4.5	55.7	60	14 52	15 55	16 55	17 55	18 42	19 29	20 05
	17	73 36.6	34.0	251 46.2	10.8	17 25.9	4.7	55.7	N 58	15 11	16 07	17 03	18 03	18 50	19 37	20 13
	18	88 36.3	S22 33.7	266 16.0	10.8	N17 21.2	4.7	55.7	56	15 28	16 18	17 10	18 10	19 00	19 50	20 26
	19	103 36.0	33.4	280 45.8	10.8	17 16.5	4.8	55.7	54	15 41	16 28	17 16	18 16	19 08	19 58	20 34
	20	118 35.7	33.2	295 15.6	10.8	17 11.7	4.9	55.7	52	15 53	16 36	17 22	18 22	19 10	19 58	20 34
	21	133 35.5	32.9	309 45.4	10.8	17 06.8	5.0	55.8	50	16 04	16 44	17 27	18 26	19 14	19 58	20 34
	22	148 35.2	32.6	324 15.2	10.8	17 01.8	5.0	55.8	45	16 13	16 51	17 32	18 30	19 18	19 58	20 34
23	163 34.9	32.3	338 45.0	10.8	16 56.8	5.2	55.8	S 10	16 33	17 06	17 43	18 41	19 29	20 17	20 53	
J U E V E S	6 00	178 34.6	S22 32.0	353 14.8	10.8	N16 51.6	5.3	55.8	N 40	16 49	17 19	17 53	18 41	19 30	20 18	
	01	193 34.4	31.7	7 44.6	10.9	16 46.3	5.3	55.8	35	17 02	17 30	18 02	18 50	19 38	20 26	
	02	208 34.1	31.4	22 14.5	10.8	16 41.0	5.4	55.8	30	17 14	17 40	18 10	19 00	19 48	20 36	
	03	223 33.8	31.1	36 44.3	10.9	16 35.6	5.6	55.9	20	17 35	17 59	18 26	19 16	19 58	20 46	
	04	238 33.5	30.8	51 14.2	10.8	16 30.0	5.6	55.9	N 10	17 52	18 15	18 41	19 30	20 18	20 54	
	05	253 33.3	30.5	65 44.0	10.9	16 24.4	5.7	55.9	0	18 09	18 32	18 58	19 48	20 36	21 02	
	06	268 33.0	S22 30.2	80 13.9	10.9	N16 18.7	5.7	55.9	S 10	18 26	18 49	19 16	19 48	20 36	21 02	
	07	283 32.7	29.9	94 43.8	10.9	16 13.0	5.9	55.9	20	18 44	19 09	19 38	20 10	20 42	21 08	
	08	298 32.5	29.6	109 13.7	10.9	16 07.1	6.0	56.0	30	19 05	19 33	20 06	20 38	21 10	21 36	
	09	313 32.2	29.3	123 43.6	10.9	16 01.1	6.0	56.0	35	19 18	19 47	20 23	20 55	21 27	21 53	
	10	328 31.9	29.0	138 13.5	10.9	15 55.1	6.1	56.0	40	19 32	20 05	20 45	21 17	21 49	22 15	
	11	343 31.6	28.7	152 43.4	11.0	15 49.0	6.2	56.0	45	19 49	20 26	21 14	21 46	22 18	22 44	
	12	358 31.4	S22 28.4	167 13.4	10.9	N15 42.8	6.3	56.0	S 50	20 11	20 54	21 56	22 28	23 00	23 32	
	13	13 31.1	28.1	181 43.3	11.0	15 36.5	6.4	56.1	52	20 21	21 08	22 21	23 03	23 35	24 07	
	14	28 30.8	27.8	196 13.3	10.9	15 30.1	6.5	56.1	54	20 33	21 25	22 56	23 07	23 39	24 11	
	15	43 30.5	27.5	210 43.2	11.0	15 23.6	6.5	56.1	56	20 46	21 45	///	23 19	23 51	24 23	
	16	58 30.3	27.2	225 13.2	11.0	15 17.1	6.6	56.1	58	21 01	22 11	///	23 31	24 03	24 35	
	17	73 30.0	26.9	239 43.2	11.0	15 10.5	6.7	56.1	S 60	21 20	22 49	///	23 43	24 15	24 47	
	18	88 29.7	S22 26.6	254 13.2	11.0	N15 03.8	6.8	56.2	Día	SOL		LUNA				
	19	103 29.5	26.3	268 43.2	11.1	14 57.0	6.9	56.2		E.T. (-)	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase.	
	20	118 29.2	25.9	283 13.3	11.0	14 50.1	6.9	56.2								

T. M. G.	ARIES		VENUS -3.9		MARTE +1.5		JUPITER -2.2		SATURNO +0.2		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
V I E R N E S	7 00	106 26.8	131 17.6 S11	40.0	191 32.8 S24	02.4	57 19.0 N17	10.0	328 15.1 N17	03.5	Acamar	315 38.9 S40	24.1
	01	121 29.2	146 17.5	38.9	206 33.2	02.3	72 21.5	10.0	343 17.7	03.5	Achernar	335 47.1 S57	21.5
	02	136 31.7	161 17.4	37.7	221 33.6	02.3	87 24.1	10.0	358 20.3	03.6	Acrux	173 39.7 S62	58.1
	03	151 34.1	176 17.3	36.6	236 34.0	02.2	102 26.6	10.0	13 22.9	03.6	Adhara	255 33.7 S28	56.6
	04	166 36.6	191 17.2	35.4	251 34.4	02.2	117 29.2	09.9	28 25.6	03.7	Aldebaran	291 20.5 N16	27.8
	05	181 39.1	206 17.1	34.2	266 34.8	02.2	132 31.7	09.9	43 28.2	03.7			
	06	196 41.5	221 17.0 S11	33.1	281 35.2 S24	02.1	147 34.2 N17	09.9	58 30.8 N17	03.8	Alioth	166 44.7 N56	04.7
	07	211 44.0	236 16.8	31.9	296 35.6	02.1	162 36.8	09.9	73 33.5	03.8	Alkaid	153 20.6 N49	25.4
	08	226 46.5	251 16.7	30.8	311 36.0	02.0	177 39.3	09.9	88 36.1	03.9	Al Na'ir	28 18.4 S47	04.5
	09	241 48.9	266 16.6	29.6	326 36.4	02.0	192 41.8	09.9	103 38.7	04.0	Alnilam	276 13.9 S 1	13.1
	10	256 51.4	281 16.5	28.5	341 36.9	01.9	207 44.4	09.9	118 41.3	04.0	Alphard	218 22.7 S 8	33.7
	11	271 53.9	296 16.4	27.3	356 37.3	01.9	222 46.9	09.9	133 44.0	04.1			
	12	286 56.3	311 16.3 S11	26.2	11 37.7 S24	01.8	237 49.5 N17	09.9	148 46.6 N17	04.1	Alphecca	126 34.4 N26	47.4
	13	301 58.8	326 16.2	25.0	26 38.1	01.8	252 52.0	09.9	163 49.2	04.2	Alpheratz	358 11.9 N28	58.0
	14	317 01.3	341 16.1	23.8	41 38.5	01.8	267 54.5	09.9	178 51.9	04.2	Altair	62 35.3 N 8	48.5
	15	332 03.7	356 16.0	22.7	56 38.9	01.7	282 57.1	09.9	193 54.5	04.3	Ankaa	353 42.8 S42	26.1
	16	347 06.2	11 15.9	21.5	71 39.3	01.7	297 59.6	09.9	208 57.1	04.3	Antares	113 00.2 S26	22.8
	17	2 08.6	26 15.8	20.4	86 39.7	01.6	313 02.1	09.9	223 59.7	04.4			
	18	17 11.1	41 15.7 S11	19.2	101 40.1 S24	01.6	328 04.7 N17	09.9	239 02.4 N17	04.5	Arcturus	146 20.8 N19	18.0
	19	32 13.6	56 15.6	18.0	116 40.5	01.5	343 07.2	09.8	254 05.0	04.5	Atria	108 27.1 S68	59.0
	20	47 16.0	71 15.5	16.9	131 40.9	01.5	358 09.7	09.8	269 07.6	04.6	Avior	234 28.5 S59	26.2
	21	62 18.5	86 15.4	15.7	146 41.3	01.4	13 12.3	09.8	284 10.3	04.6	Bellatrix	279 01.1 N 6	19.6
	22	77 21.0	101 15.3	14.6	161 41.7	01.4	28 14.8	09.8	299 12.9	04.7	Betelgeuse	271 30.6 N 7	24.1
23	92 23.4	116 15.2	13.4	176 42.1	01.3	43 17.3	09.8	314 15.5	04.7				
S A B A D O	8 00	107 25.9	131 15.1 S11	12.2	191 42.5 S24	01.3	58 19.9 N17	09.8	329 18.1 N17	04.8	Canopus	264 07.7 S52	41.2
	01	122 28.4	146 15.0	11.1	206 42.9	01.2	73 22.4	09.8	344 20.8	04.8	Capella	281 14.5 N45	58.5
	02	137 30.8	161 15.0	09.9	221 43.4	01.1	88 24.9	09.8	359 23.4	04.9	Deneb	49 50.5 N45	12.1
	03	152 33.3	176 14.9	08.8	236 43.8	01.1	103 27.5	09.8	14 26.0	05.0	Denebola	183 01.5 N14	41.8
	04	167 35.7	191 14.8	07.6	251 44.2	01.0	118 30.0	09.8	29 28.7	05.0	Diphda	349 23.4 S18	06.9
	05	182 38.2	206 14.7	06.4	266 44.6	01.0	133 32.5	09.8	44 31.3	05.1			
	06	197 40.7	221 14.6 S11	05.3	281 45.0 S24	00.9	148 35.1 N17	09.8	59 33.9 N17	05.1	Dubhe	194 24.9 N61	52.1
	07	212 43.1	236 14.5	04.1	296 45.4	00.9	163 37.6	09.8	74 36.6	05.2	Elnath	278 46.9 N28	35.3
	08	227 45.6	251 14.4	02.9	311 45.8	00.8	178 40.1	09.8	89 39.2	05.2	Eltanin	90 59.4 N51	29.5
	09	242 48.1	266 14.3	01.8	326 46.2	00.8	193 42.6	09.8	104 41.8	05.3	Enif	34 14.3 N 9	46.3
	10	257 50.5	281 14.3	00.6	341 46.6	00.7	208 45.2	09.8	119 44.4	05.3	Fomalhaut	15 54.4 S29	44.7
	11	272 53.0	296 14.2	00.6	356 47.0	00.7	223 47.7	09.8	134 47.1	05.4			
	12	287 55.5	311 14.1 S10	58.3	11 47.4 S24	00.6	238 50.2 N17	09.8	149 49.7 N17	05.5	Gacrux	172 31.3 S56	58.9
	13	302 57.9	326 14.0	57.1	26 47.8	00.5	253 52.8	09.8	164 52.3	05.5	Gienah	176 20.4 S17	24.9
	14	318 00.4	341 13.9	55.9	41 48.2	00.5	268 55.3	09.8	179 55.0	05.6	Hadar	149 26.9 S60	15.5
	15	333 02.9	356 13.8	54.8	56 48.6	00.4	283 57.8	09.7	194 57.6	05.6	Hamal	328 31.6 N23	21.3
	16	348 05.3	11 13.8	53.6	71 49.0	00.4	299 00.3	09.7	210 00.2	05.7	Kaus Aust.	84 20.5 S34	23.7
	17	3 07.8	26 13.7	52.4	86 49.4	00.3	314 02.9	09.7	225 02.9	05.7			
	18	18 10.2	41 13.6 S10	51.3	101 49.8 S24	00.2	329 05.4 N17	09.7	240 05.5 N17	05.8	Kochab	137 19.6 N74	14.7
	19	33 12.7	56 13.5	50.1	116 50.2	00.2	344 07.9	09.7	255 08.1	05.8	Markab	14 05.8 N15	05.0
	20	48 15.2	71 13.4	48.9	131 50.7	00.1	359 10.4	09.7	270 10.8	05.9	Menkar	314 43.5 N 3	59.9
	21	63 17.6	86 13.4	47.8	146 51.1	00.1	14 13.0	09.7	285 13.4	06.0	Menkent	148 40.0 S36	15.3
	22	78 20.1	101 13.3	46.6	161 51.5	00.0	29 15.5	09.7	300 16.0	06.0	Miaplacidus	221 44.5 S69	37.3
23	93 22.6	116 13.2	45.4	176 51.9	23 59.9	44 18.0	09.7	315 18.7	06.1				
D O M I N G O	9 00	108 25.0	131 13.1 S10	44.2	191 52.3 S23	59.9	59 20.5 N17	09.7	330 21.3 N17	06.1	Mirfak	309 19.3 N49	47.0
	01	123 27.5	146 13.1	43.1	206 52.7	59.8	74 23.1	09.7	345 23.9	06.2	Nunki	76 32.6 S26	19.5
	02	138 30.0	161 13.0	41.9	221 53.1	59.7	89 25.6	09.7	0 26.6	06.2	Peacock	54 02.9 S56	48.6
	03	153 32.4	176 12.9	40.7	236 53.5	59.7	104 28.1	09.7	15 29.2	06.3	Pollux	244 00.8 N28	04.8
	04	168 34.9	191 12.8	39.6	251 53.9	59.6	119 30.6	09.7	30 31.8	06.4	Procyon	245 28.0 N 5	16.9
	05	183 37.4	206 12.8	38.4	266 54.3	59.6	134 33.2	09.7	45 34.5	06.4			
	06	198 39.8	221 12.7 S10	37.2	281 54.7 S23	59.5	149 35.7 N17	09.7	60 37.1 N17	06.5	Rasalhague	96 32.2 N12	34.6
	07	213 42.3	236 12.6	36.0	296 55.1	59.4	164 38.2	09.7	75 39.7	06.5	Regulus	208 12.4 N12	04.6
	08	228 44.7	251 12.6	34.9	311 55.5	59.4	179 40.7	09.7	90 42.4	06.6	Rigel	281 38.1 S 8	13.8
	09	243 47.2	266 12.5	33.7	326 55.9	59.3	194 43.2	09.7	105 45.0	06.6	Rigel Kent.	140 29.3 S60	44.1
	10	258 49.7	281 12.4	32.5	341 56.3	59.2	209 45.8	09.7	120 47.6	06.7	Sabik	102 44.3 S15	41.7
	11	273 52.1	296 12.4	31.3	356 56.7	59.2	224 48.3	09.7	135 50.3	06.7			
	12	288 54.6	311 12.3 S10	30.2	11 57.1 S23	59.1	239 50.8 N17	09.7	150 52.9 N17	06.8	Schedar	350 11.8 N56	25.0
	13	303 57.1	326 12.2	29.0	26 57.5	59.0	254 53.3	09.7	165 55.5	06.9	Shaula	96 59.5 S37	05.1
	14	318 59.5	341 12.2	27.8	41 57.9	59.0	269 55.8	09.7	180 58.2	06.9	Sirius	258 57.5 S16	41.3
	15	334 02.0	356 12.1	26.6	56 58.3	58.9	284 58.4	09.7	196 00.8	07.0	Spica	159 00.2 S11	02.5
	16	349 04.5	11 12.1	25.5	71 58.7	58.8	300 00.9	09.7	211 03.4	07.0	Suhail	223 12.2 S43	20.4
17	4 06.9	26 12.0	24.3	86 59.1	58.7	315 03.4	09.7	226 06.1	07.1				
18	19 09.4	41 11.9 S10	23.1	101 59.6 S23	58.7	330 05.9 N17	09.7	241 08.7 N17	07.1	Vega	80 57.9 N38	45.8	
19	34 11.8	56 11.9	21.9	117 00.0	58.6	345 08.4	09.7	256 11.3	07.2	Zuben'ubi	137 35.9 S15	56.7	
20	49 14.3	71 11.8	20.8	132 00.4	58.5	0 10.9	09.7	271 14.0	07.3				
21	64 16.8	86 11.8	19.6	147 00.8	58.5	15 13.5	09.7	286 16.6	07.3				
22	79 19.2	101 11.7	18.4	162 01.2	58.4	30 16.0	09.7	301 19.2	07.4	Venus	23 49.3 15 15		
23	94 21.7	116 11.6	17.2	177 01.6	58.3	45 18.5	09.7	316 21.9	07.4	Marte	84 16.7 11 13		
Pas. Mer. 16 47.5		v -0.1 d 1.2		v 0.4 d 0.1		v 2.5 d 0.0		v 2.6 d 0.1					
												A. H. S. Pas. Mer.	
												Júpiter 310 54.0 20 03	
												Saturno 221 52.3 2 02	

T.M.G.	SOL			LUNA			Lat.	Crepúsculo			Orto Sol	Orto Luna									
	A.H.G.	Dec.	d	A.H.G.	v	Dec.		d	Naut.	Civil		7	8	9	10						
															h	m					
V I E R N E S	7 00	178	28.1	S22	24.7	341	13.5	11.1	N14	21.8	7.2	56.3	N 72	08 15	10 19	h m	17 06	18 57	20 47	22 37	
	01	193	27.8		24.4	355	43.6	11.1	14	14.6	7.4	56.3	N 70	07 58	09 36	h m	17 28	19 10	20 52	22 35	
	02	208	27.6		24.1	10	13.7	11.2	14	07.2	7.4	56.3	68	07 44	09 08	h m	17 44	19 20	20 56	22 34	
	03	223	27.3	..	23.8	24	43.9	11.1	13	59.8	7.5	56.3	66	07 33	08 46	h m	17 58	19 28	21 00	22 33	
	04	238	27.0		23.4	39	14.0	11.1	13	52.3	7.5	56.4	64	07 23	08 29	h m	18 09	19 35	21 03	22 32	
	05	253	26.8		23.1	53	44.1	11.2	13	44.8	7.7	56.4	62	07 14	08 14	h m	18 19	19 41	21 05	22 31	
	06	268	26.5	S22	22.8	68	14.3	11.2	N13	37.1	7.7	56.4	60	07 07	08 02	h m	18 27	19 46	21 07	22 30	
	07	283	26.2		22.5	82	44.5	11.2	13	29.4	7.8	56.4	N 58	07 00	07 51	h m	18 34	19 51	21 09	22 29	
	08	298	25.9		22.2	97	14.7	11.2	13	21.6	7.8	56.4	56	06 54	07 42	h m	18 40	19 55	21 11	22 29	
	09	313	25.7	..	21.8	111	44.9	11.2	13	13.8	8.0	56.5	54	06 48	07 34	h m	18 46	19 58	21 13	22 28	
	10	328	25.4		21.5	126	15.1	11.2	13	05.8	8.0	56.5	52	06 43	07 26	h m	18 51	20 02	21 14	22 28	
	11	343	25.1		21.2	140	45.3	11.3	12	57.8	8.0	56.5	50	06 38	07 19	h m	18 55	20 05	21 15	22 27	
	12	358	24.9	S22	20.9	155	15.6	11.2	N12	49.8	8.2	56.5	45	06 28	07 04	h m	19 05	20 11	21 18	22 26	
	13	13	24.6		20.6	169	45.8	11.3	12	41.6	8.2	56.5	N 40	06 18	06 52	h m	19 13	20 16	21 20	22 25	
	14	28	24.3		20.2	184	16.1	11.3	12	33.4	8.3	56.6	35	06 09	06 41	h m	19 20	20 21	21 22	22 25	
	15	43	24.1	..	19.9	198	46.4	11.3	12	25.1	8.3	56.6	30	06 01	06 31	h m	19 27	20 25	21 24	22 24	
	16	58	23.8		19.6	213	16.7	11.3	12	16.8	8.5	56.6	20	05 46	06 13	h m	19 37	20 32	21 27	22 23	
	17	73	23.5		19.3	227	47.0	11.3	12	08.3	8.4	56.6	N 10	05 31	05 57	h m	19 46	20 38	21 30	22 22	
	18	88	23.3	S22	18.9	242	17.3	11.4	N11	59.9	8.6	56.6	0	05 15	05 41	h m	19 55	20 44	21 33	22 21	
	19	103	23.0		18.6	256	47.7	11.3	11	51.3	8.6	56.7	S 10	04 57	05 24	h m	20 04	20 50	21 35	22 21	
	20	118	22.7		18.3	271	18.0	11.4	11	42.7	8.7	56.7	20	04 35	05 04	h m	20 13	20 56	21 38	22 20	
	21	133	22.5	..	18.0	285	48.4	11.4	11	34.0	8.7	56.7	30	04 08	04 41	h m	20 24	21 03	21 41	22 19	
	22	148	22.2		17.6	300	18.8	11.4	11	25.3	8.9	56.7	35	03 50	04 26	h m	20 30	21 07	21 43	22 18	
23	163	21.9		17.3	314	49.2	11.4	11	16.4	8.8	56.7	40	03 28	04 09	h m	20 36	21 11	21 45	22 18		
S A B A D O	8 00	178	21.7	S22	17.0	329	19.6	11.4	N11	07.6	9.0	56.8	45	03 00	03 48	h m	20 44	21 17	21 47	22 17	
	01	193	21.4		16.6	343	50.0	11.4	10	58.6	9.0	56.8	S 50	02 19	03 20	h m	20 54	21 23	21 50	22 16	
	02	208	21.1		16.3	358	20.4	11.5	10	49.6	9.0	56.8	52	01 56	03 06	h m	20 58	21 26	21 51	22 16	
	03	223	20.9	..	16.0	12	50.9	11.4	10	40.6	9.1	56.8	54	01 22	02 50	h m	21 03	21 29	21 53	22 16	
	04	238	20.6		15.6	27	21.3	11.5	10	31.5	9.2	56.8	56	////	02 31	h m	21 08	21 32	21 54	22 15	
	05	253	20.4		15.3	41	51.8	11.5	10	22.3	9.2	56.9	58	////	02 05	h m	21 14	21 36	21 56	22 15	
	06	268	20.1	S22	15.0	56	22.3	11.4	N10	13.1	9.3	56.9	S 60	////	01 29	h m	21 21	21 40	21 58	22 14	
	07	283	19.8		14.6	70	52.7	11.5	10	03.8	9.4	56.9				h m	21 21	21 40	21 58	22 14	
	08	298	19.6		14.3	85	23.2	11.5	9	54.4	9.4	56.9	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
	09	313	19.3	..	14.0	99	53.7	11.6	9	45.0	9.4	56.9		h m	h m	h m	7	8	9	10	
	10	328	19.0		13.6	114	24.3	11.5	9	35.6	9.5	57.0	N 72	h m	13 55	15 59	10 35	10 26	10 17	10 10	
	11	343	18.8		13.3	128	54.8	11.5	9	26.1	9.6	57.0	N 70	h m	14 38	16 16	10 12	10 11	10 10	10 08	
	12	358	18.5	S22	12.9	143	25.3	11.6	N 9	16.5	9.6	57.0	68	h m	13 04	15 06	16 30	09 54	10 00	10 04	10 07
	13	13	18.2		12.6	157	55.9	11.5	9	06.9	9.7	57.0	66	h m	14 01	15 28	16 41	09 39	09 50	09 59	10 06
	14	28	18.0		12.3	172	26.4	11.6	8	57.2	9.7	57.0	64	h m	14 34	15 45	16 51	09 27	09 42	09 54	10 05
	15	43	17.7	..	11.9	186	57.0	11.6	8	47.5	9.8	57.1	62	h m	14 58	16 00	17 00	09 17	09 35	09 50	10 05
	16	58	17.5		11.6	201	27.6	11.5	8	37.7	9.8	57.1	60	h m	15 17	16 12	17 07	09 08	09 29	09 47	10 04
	17	73	17.2		11.2	215	58.1	11.6	8	27.9	9.9	57.1	N 58	h m	15 33	16 22	17 14	09 00	09 24	09 44	10 03
	18	88	16.9	S22	10.9	230	28.7	11.6	N 8	18.0	9.9	57.1	56	h m	15 46	16 32	17 20	08 54	09 19	09 41	10 03
	19	103	16.7		10.5	244	59.3	11.6	8	08.1	9.9	57.1	54	h m	15 58	16 40	17 26	08 47	09 15	09 39	10 02
	20	118	16.4		10.2	259	29.9	11.6	7	58.2	10.1	57.2	52	h m	16 08	16 48	17 31	08 42	09 11	09 37	10 02
	21	133	16.2	..	09.8	274	00.5	11.6	7	48.1	10.0	57.2	50	h m	16 17	16 55	17 35	08 37	09 07	09 35	10 01
	22	148	15.9		09.5	288	31.1	11.6	7	38.1	10.1	57.2	45	h m	16 36	17 09	17 46	08 26	08 59	09 30	10 01
23	163	15.6		09.2	303	01.7	11.7	7	28.0	10.2	57.2	N 40	h m	16 52	17 22	17 56	08 17	08 53	09 27	10 00	
D O M I N G O	9 00	178	15.4	S22	08.8	317	32.4	11.6	N 7	17.8	10.1	57.2	35	h m	17 05	17 33	18 04	08 09	08 47	09 24	09 59
	01	193	15.1		08.5	332	03.0	11.6	7	07.7	10.3	57.3	30	h m	17 17	17 43	18 12	08 02	08 42	09 21	09 59
	02	208	14.9		08.1	346	33.6	11.7	6	57.4	10.2	57.3	20	h m	17 37	18 00	18 28	07 50	08 33	09 16	09 58
	03	223	14.6	..	07.8	1	04.3	11.6	6	47.2	10.4	57.3	N 10	h m	17 54	18 17	18 43	07 39	08 26	09 11	09 57
	04	238	14.3		07.4	15	34.9	11.6	6	36.8	10.3	57.3	0	h m	18 10	18 33	18 59	07 30	08 19	09 07	09 56
	05	253	14.1		07.0	30	05.5	11.7	6	26.5	10.4	57.3	S 10	h m	18 27	18 50	19 17	07 20	08 11	09 03	09 55
	06	268	13.8	S22	06.7	44	36.2	11.6	N 6	16.1	10.4	57.4	20	h m	18 45	19 09	19 38	07 09	08 03	08 58	09 54
	07	283	13.6		06.3	59	06.8	11.7	6	05.7	10.5	57.4	30	h m	19 06	19 33	20 05	06 56	07 55	08 53	09 53
	08	298	13.3		06.0	73	37.5	11.6	5	55.2	10.5	57.4	35	h m	19 18	19 47	20 23	06 49	07 49	08 50	09 52
	09	313	13.0	..	05.6	88	08.1	11.7	5	44.7	10.5	57.4	40	h m	19 32	20 04	20 45	06 41	07 43	08 47	09 51
	10	328	12.8		05.3	102	38.8	11.6	5	34.2	10.6	57.4	45	h m	19 49	20 25	21 13	06 32	07 36	08 43	09 50
11	343	12.5		04.9	117	09.4	11.7	5	23.6												

T. M. G.	ARIES		VENUS -3.9		MARTE +1.5		JUPITER -2.2		SATURNO +0.2		ESTRELLAS		
	A.H.G.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	Nombre	A. H. S.	Dec.		
10 L U N E S	00	109 24.2	131 11.6 S10 16.1	192 02.0 S23 58.2	60 21.0 N17 09.7	331 24.5 N17 07.5	Acamar	315 39.0	S40 24.1				
	01	124 26.6	146 11.5 14.9	207 02.4 58.2	75 23.5 09.7	346 27.1 07.5	Achernar	335 47.1	S57 21.5				
	02	139 29.1	161 11.5 13.7	222 02.8 58.1	90 26.0 09.7	1 29.8 07.6	Acrux	173 39.7	S62 58.1				
	03	154 31.6	176 11.4 .. 12.5	237 03.2 .. 58.0	105 28.5 .. 09.7	16 32.4 .. 07.7	Adhara	255 33.7	S28 56.6				
	04	169 34.0	191 11.4 11.3	252 03.6 57.9	120 31.1 09.7	31 35.0 07.7	Aldebaran	291 20.6	N16 27.8				
	05	184 36.5	206 11.3 10.2	267 04.0 57.9	135 33.6 09.7	46 37.7 07.8							
	06	199 39.0	221 11.3 S10 09.0	282 04.4 S23 57.8	150 36.1 N17 09.7	61 40.3 N17 07.8	Alioth	166 44.7	N56 04.7				
	07	214 41.4	236 11.2 07.8	297 04.8 57.7	165 38.6 09.7	76 42.9 07.9	Alkaid	153 20.6	N49 25.4				
	08	229 43.9	251 11.2 06.6	312 05.2 57.6	180 41.1 09.7	91 45.6 07.9	Al Na'ir	28 18.5	S47 04.5				
	09	244 46.3	266 11.1 .. 05.4	327 05.6 .. 57.6	195 43.6 .. 09.7	106 48.2 .. 08.0	Alnilam	276 13.9	S 1 13.1				
	10	259 48.8	281 11.1 04.2	342 06.0 57.5	210 46.1 09.7	121 50.9 08.1	Alphard	218 22.7	S 8 33.7				
	11	274 51.3	296 11.0 03.1	357 06.4 57.4	225 48.6 09.7	136 53.5 08.1							
	12	289 53.7	311 11.0 S10 01.9	12 06.8 S23 57.3	240 51.2 N17 09.7	151 56.1 N17 08.2	Alphecca	126 34.4	N26 47.4				
	13	304 56.2	326 10.9 10 00.7	27 07.2 57.2	255 53.7 09.7	166 58.8 08.2	Alpheratz	358 12.0	N28 58.0				
	14	319 58.7	341 10.9 9 59.5	42 07.6 57.2	270 56.2 09.7	182 01.4 08.3	Altair	62 35.3	N 8 48.5				
	15	335 01.1	356 10.9 .. 58.3	57 08.0 .. 57.1	285 58.7 .. 09.7	197 04.0 .. 08.3	Ankaa	353 42.8	S42 26.1				
	16	350 03.6	11 10.8 57.1	72 08.4 57.0	301 01.2 09.7	212 06.7 08.4	Antares	113 00.1	S26 22.8				
	17	5 06.1	26 10.8 56.0	87 08.8 56.9	316 03.7 09.7	227 09.3 08.5							
	18	20 08.5	41 10.7 S 9 54.8	102 09.2 S23 56.8	331 06.2 N17 09.7	242 12.0 N17 08.5	Arcturus	146 20.8	N19 18.0				
	19	35 11.0	56 10.7 53.6	117 09.6 56.8	346 08.7 09.7	257 14.6 08.6	Atria	108 27.0	S68 59.0				
	20	50 13.5	71 10.7 52.4	132 10.0 56.7	1 11.2 09.7	272 17.2 08.6	Avior	234 28.5	S59 26.2				
	21	65 15.9	86 10.6 .. 51.2	147 10.4 .. 56.6	16 13.7 .. 09.7	287 19.9 .. 08.7	Bellatrix	279 01.1	N 6 19.6				
	22	80 18.4	101 10.6 50.0	162 10.8 56.5	31 16.2 09.7	302 22.5 08.7	Betelgeuse	271 30.6	N 7 24.1				
23	95 20.8	116 10.5 48.9	177 11.3 56.4	46 18.7 09.7	317 25.1 08.8								
11 M A R T E S	00	110 23.3	131 10.5 S 9 47.7	192 11.7 S23 56.3	61 21.3 N17 09.7	332 27.8 N17 08.9	Canopus	264 07.7	S52 41.2				
	01	125 25.8	146 10.5 46.5	207 12.1 56.3	76 23.8 09.7	347 30.4 08.9	Capella	281 14.5	N45 58.5				
	02	140 28.2	161 10.4 45.3	222 12.5 56.2	91 26.3 09.7	2 33.1 09.0	Deneb	49 50.6	N45 12.1				
	03	155 30.7	176 10.4 .. 44.1	237 12.9 .. 56.1	106 28.8 .. 09.7	17 35.7 .. 09.0	Denebola	183 01.4	N14 41.8				
	04	170 33.2	191 10.4 42.9	252 13.3 56.0	121 31.3 09.7	32 38.3 09.1	Diphda	349 23.4	S18 06.9				
	05	185 35.6	206 10.3 41.7	267 13.7 55.9	136 33.8 09.7	47 41.0 09.2							
	06	200 38.1	221 10.3 S 9 40.5	282 14.1 S23 55.8	151 36.3 N17 09.7	62 43.6 N17 09.2	Dubhe	194 24.9	N61 52.1				
	07	215 40.6	236 10.3 39.4	297 14.5 55.7	166 38.8 09.7	77 46.2 09.3	Elnath	278 46.9	N28 35.3				
	08	230 43.0	251 10.2 38.2	312 14.9 55.6	181 41.3 09.7	92 48.9 09.3	Eltanin	90 59.4	N51 29.5				
	09	245 45.5	266 10.2 .. 37.0	327 15.3 .. 55.6	196 43.8 .. 09.7	107 51.5 .. 09.4	Enif	34 14.3	N 9 46.3				
	10	260 47.9	281 10.2 35.8	342 15.7 55.5	211 46.3 09.7	122 54.2 09.4	Fomalhaut	15 54.4	S29 44.7				
	11	275 50.4	296 10.2 34.6	357 16.1 55.4	226 48.8 09.7	137 56.8 09.5							
	12	290 52.9	311 10.1 S 9 33.4	12 16.5 S23 55.3	241 51.3 N17 09.7	152 59.4 N17 09.6	Gacrux	172 31.3	S56 58.9				
	13	305 55.3	326 10.1 32.2	27 16.9 55.2	256 53.8 09.7	168 02.1 09.6	Gienah	176 20.4	S17 24.9				
	14	320 57.8	341 10.1 31.0	42 17.3 55.1	271 56.3 09.7	183 04.7 09.7	Hadar	149 26.9	S60 15.5				
	15	336 00.3	356 10.1 .. 29.8	57 17.7 .. 55.0	286 58.8 .. 09.7	198 07.4 .. 09.7	Hamal	328 31.6	N23 21.3				
	16	351 02.7	11 10.0 28.6	72 18.1 54.9	302 01.3 09.7	213 10.0 09.8	Kaus Aust.	84 20.5	S34 23.7				
	17	6 05.2	26 10.0 27.4	87 18.5 54.8	317 03.8 09.7	228 12.6 09.8							
	18	21 07.7	41 10.0 S 9 26.3	102 18.9 S23 54.7	332 06.3 N17 09.7	243 15.3 N17 09.9	Kochab	137 19.5	N74 14.7				
	19	36 10.1	56 10.0 25.1	117 19.3 54.6	347 08.8 09.7	258 17.9 10.0	Markab	14 05.8	N15 05.0				
	20	51 12.6	71 09.9 23.9	132 19.7 54.6	2 11.3 09.7	273 20.6 10.0	Menkar	314 43.6	N 3 59.9				
	21	66 15.1	86 09.9 .. 22.7	147 20.1 .. 54.5	17 13.8 .. 09.7	288 23.2 .. 10.1	Menkent	148 40.0	S36 15.3				
	22	81 17.5	101 09.9 21.5	162 20.5 54.4	32 16.3 09.7	303 25.8 10.1	Miaplacidus	221 44.5	S69 37.4				
23	96 20.0	116 09.9 20.3	177 20.9 54.3	47 18.8 09.7	318 28.5 10.2								
12 M I E R C O L E S	00	111 22.4	131 09.9 S 9 19.1	192 21.3 S23 54.2	62 21.3 N17 09.7	333 31.1 N17 10.3	Mirfak	309 19.3	N49 47.0				
	01	126 24.9	146 09.9 17.9	207 21.7 54.1	77 23.8 09.7	348 33.8 10.3	Nunki	76 32.6	S26 19.5				
	02	141 27.4	161 09.8 16.7	222 22.1 54.0	92 26.3 09.7	3 36.4 10.4	Peacock	54 02.9	S56 48.6				
	03	156 29.8	176 09.8 .. 15.5	237 22.5 .. 53.9	107 28.8 .. 09.7	18 39.0 .. 10.4	Pollux	244 00.8	N28 04.8				
	04	171 32.3	191 09.8 14.3	252 22.9 53.8	122 31.3 09.7	33 41.7 10.5	Procyon	245 28.0	N 5 16.9				
	05	186 34.8	206 09.8 13.1	267 23.3 53.7	137 33.8 09.7	48 44.3 10.5							
	06	201 37.2	221 09.8 S 9 11.9	282 23.7 S23 53.6	152 36.3 N17 09.7	63 47.0 N17 10.6	Rasalhague	96 32.2	N12 34.6				
	07	216 39.7	236 09.8 10.7	297 24.1 53.5	167 38.8 09.7	78 49.6 10.7	Regulus	208 12.4	N12 04.6				
	08	231 42.2	251 09.8 09.5	312 24.5 53.4	182 41.3 09.8	93 52.2 10.7	Rigel	281 38.1	S 8 13.8				
	09	246 44.6	266 09.8 .. 08.3	327 24.9 .. 53.3	197 43.8 .. 09.8	108 54.9 .. 10.8	Rigel Kent.	140 29.3	S60 44.1				
	10	261 47.1	281 09.7 07.1	342 25.3 53.2	212 46.2 09.8	123 57.5 10.8	Sabik	102 44.3	S15 41.7				
	11	276 49.6	296 09.7 06.0	357 25.7 53.1	227 48.7 09.8	139 00.2 10.9							
	12	291 52.0	311 09.7 S 9 04.8	12 26.1 S23 53.0	242 51.2 N17 09.8	154 02.8 N17 11.0	Schedar	350 11.8	N56 25.0				
	13	306 54.5	326 09.7 03.6	27 26.5 52.9	257 53.7 09.8	169 05.4 11.0	Shaula	96 59.5	S37 05.1				
	14	321 56.9	341 09.7 02.4	42 26.9 52.8	272 56.2 09.8	184 08.1 11.1	Sirius	258 57.5	S16 41.3				
	15	336 59.4	356 09.7 .. 01.2	57 27.3 .. 52.7	287 58.7 .. 09.8	199 10.7 .. 11.1	Spica	159 00.1	S11 02.5				
	16	352 01.9	11 09.7 9 00.0	72 27.7 52.6	303 01.2 09.8	214 13.4 11.2	Suhail	223 12.1	S43 20.4				
	17	7 04.3	26 09.7 8 58.8	87 28.1 52.5	318 03.7 09.8	229 16.0 11.2							
	18	22 06.8	41 09.7 S 8 57.6	102 28.5 S23 52.4	333 06.2 N17 09.8	244 18.7 N17 11.3	Vega	80 57.9	N38 45.8				
	19	37 09.3	56 09.7 56.4	117 28.9 52.3	348 08.7 09.8	259 21.3 11.4	Zuben'ubi	137 35.9	S15 56.7				
	20	52 11.7	71 09.7 55.2	132 29.4 52.2	3 11.2 09.8	274 23.9 11.4							
	21	67 14.2	86 09.7 .. 54.0	147 29.8 .. 52.1	18 13.7 .. 09.8	289 26.6 .. 11.5							
	22	82 16.7	101 09.7 52.8	162 30.2 52.0	33 16.1 09.8	304 29.2 11.5	Venus	20 47.2	15 15				
23	97 19.1	116 09.7 51.6	177 30.6 51.9	48 18.6 09.8	319 31.9 11.6	Marte	81 48.3	11 11					
						Júpiter	310 57.9	19 51					
						Saturno	222 04.5	1 50					
Pas. Mer.		h m	v 0.0 d 1.2	v 0.4 d 0.1	v 2.5 d 0.0	v 2.6 d 0.1							

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		10	11	12	13
	h m	°	°	°	°	°	h m	h m	h m	h m	h m	h m	h m	
LUNES	00	178 09.2 S22	00.2	305 47.5 11.6 N	3 03.4	10.9 57.7	N 72	08 10	10 08	■	22 37	24 30	00 30	02 28
	01	193 08.9	21 59.8	320 18.1 11.6	2 52.5	11.0 57.7	N 70	07 53	09 29	■	22 35	24 21	00 21	02 10
	02	208 08.7	59.5	334 48.7 11.6	2 41.5	11.0 57.8	68	07 40	09 02	10 53	22 34	24 13	00 13	01 55
	03	223 08.4	59.1	349 19.3 11.5	2 30.5	11.0 57.8	64	07 29	08 42	10 05	22 33	24 07	00 07	01 44
	04	238 08.2	58.7	3 49.8 11.6	2 19.5	11.1 57.8	62	07 20	08 25	09 34	22 32	24 02	00 02	01 34
	05	253 07.9	58.4	18 20.4 11.5	2 08.4	11.0 57.8	60	07 12	08 11	09 12	22 31	23 58	25 26	01 26
	06	268 07.7	S21 58.0	32 50.9 11.5 N	1 57.4	11.1 57.8	N 58	07 05	07 59	08 54	22 30	23 54	25 19	01 19
	07	283 07.4	57.6	47 21.4 11.5	1 46.3	11.1 57.9	56	06 58	07 49	08 38	22 29	23 51	25 13	01 13
	08	298 07.2	57.2	61 51.9 11.5	1 35.2	11.1 57.9	54	06 52	07 40	08 26	22 29	23 48	25 08	01 08
	09	313 06.9	56.9	76 22.4 11.5	1 24.1	11.1 57.9	52	06 47	07 32	08 14	22 28	23 45	25 03	01 03
	10	328 06.7	56.5	90 52.9 11.5	1 13.0	11.1 57.9	50	06 42	07 25	08 04	22 28	23 43	24 58	00 58
	11	343 06.4	56.1	105 23.4 11.4	1 01.9	11.2 57.9	45	06 37	07 18	07 55	22 27	23 40	24 54	00 54
	12	358 06.2	S21 55.7	119 53.8 11.5 N	0 50.7	11.1 57.9	N 40	06 27	07 04	07 37	22 26	23 36	24 46	00 46
	13	13 05.9	55.4	134 24.3 11.4	0 39.6	11.2 58.0	35	06 18	06 51	07 21	22 25	23 32	24 39	00 39
	14	28 05.7	55.0	148 54.7 11.4	0 28.4	11.2 58.0	30	06 09	06 41	07 08	22 25	23 28	24 33	00 33
	15	43 05.4	54.6	163 25.1 11.4	0 17.2	11.1 58.0	20	06 02	06 31	06 57	22 24	23 25	24 27	00 27
	16	58 05.2	54.2	177 55.5 11.3 N	0 06.1	11.2 58.0	N 10	05 47	06 14	06 38	22 23	23 20	24 18	00 18
	17	73 04.9	53.8	192 25.8 11.4 S	0 05.1	11.2 58.0	0	05 32	05 58	06 20	22 22	23 16	24 10	00 10
	18	88 04.7	S21 53.5	206 56.2 11.3 S	0 16.3	11.2 58.1	S 10	05 16	05 42	06 04	22 21	23 11	24 03	00 03
	19	103 04.4	53.1	221 26.5 11.3	0 27.5	11.2 58.1	20	04 59	05 25	05 48	22 21	23 07	23 56	24 46
	20	118 04.2	52.7	235 56.8 11.3	0 38.7	11.2 58.1	30	04 38	05 06	05 30	22 20	23 03	23 48	24 36
	21	133 03.9	52.3	250 27.1 11.3	0 49.9	11.2 58.1	35	04 11	04 43	05 10	22 19	22 58	23 39	24 23
	22	148 03.7	51.9	264 57.4 11.2	1 01.1	11.2 58.1	40	03 53	04 29	04 58	22 18	22 55	23 34	24 16
23	163 03.4	51.6	279 27.6 11.2	1 12.3	11.2 58.2	45	03 32	04 12	04 44	22 18	22 52	23 28	24 08	
MARTES	00	178 03.2	S21 51.2	293 57.8 11.2 S	1 23.5	11.3 58.2	S 50	03 04	03 25	04 07	22 17	22 48	23 21	23 58
	01	193 02.9	50.8	308 28.0 11.2	1 34.8	11.2 58.2	52	02 25	03 12	03 58	22 16	22 44	23 14	23 47
	02	208 02.7	50.4	322 58.2 11.1	1 46.0	11.2 58.2	54	02 03	03 12	03 58	22 16	22 42	23 10	23 42
	03	223 02.4	50.0	337 28.3 11.1	1 57.2	11.2 58.2	56	01 32	02 56	03 47	22 16	22 40	23 06	23 36
	04	238 02.2	49.6	351 58.4 11.1	2 08.4	11.1 58.3	58	00 31	02 37	03 34	22 15	22 37	23 02	23 30
	05	253 01.9	49.2	6 28.5 11.1	2 19.5	11.2 58.3	S 60	///	02 13	03 19	22 15	22 35	22 57	23 23
	06	268 01.7	S21 48.8	20 58.6 11.0 S	2 30.7	11.2 58.3	///	///	01 40	03 02	22 14	22 32	22 51	23 15
	07	283 01.4	48.5	35 28.6 11.0	2 41.9	11.2 58.3	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna			
	08	298 01.2	48.1	49 58.6 11.0	2 53.1	11.2 58.3	10	h m	h m	h m	10	11	12	13
	09	313 00.9	47.7	64 28.6 10.9	3 04.3	11.1 58.3	N 72	h m	h m	h m	h m	h m	h m	h m
	10	328 00.7	47.3	78 58.5 10.9	3 15.4	11.1 58.4	N 70	■	14 09	16 07	10 10	10 02	09 54	09 44
	11	343 00.4	46.9	93 28.4 10.9	3 26.5	11.2 58.4	68	■	14 48	16 23	10 08	10 06	10 05	10 04
	12	358 00.2	S21 46.5	107 58.3 10.8 S	3 37.7	11.1 58.4	66	13 23	15 14	16 36	10 07	10 10	10 14	10 19
	13	13 00.0	46.1	122 28.1 10.9	3 48.8	11.1 58.4	64	14 12	15 35	16 47	10 06	10 13	10 22	10 32
	14	27 59.7	45.7	136 58.0 10.7	3 59.9	11.1 58.4	62	14 42	15 51	16 57	10 05	10 16	10 28	10 43
	15	42 59.5	45.3	151 27.7 10.8	4 11.0	11.1 58.5	60	14 42	15 51	16 57	10 05	10 16	10 28	10 43
	16	57 59.2	44.9	165 57.5 10.7	4 22.1	11.0 58.5	58	15 05	16 05	17 05	10 05	10 18	10 34	10 52
	17	72 59.0	44.5	180 27.2 10.6	4 33.1	11.0 58.5	56	15 23	16 17	17 12	10 04	10 21	10 39	11 00
	18	87 58.7	S21 44.1	194 56.8 10.7 S	4 44.1	11.1 58.5	N 58	15 38	16 27	17 18	10 03	10 22	10 43	11 07
	19	102 58.5	43.7	209 26.5 10.6	4 55.2	11.0 58.5	56	15 51	16 36	17 24	10 03	10 24	10 47	11 13
	20	117 58.2	43.3	223 56.1 10.5	5 06.2	10.9 58.6	54	16 02	16 44	17 29	10 02	10 26	10 50	11 18
	21	132 58.0	42.9	238 25.6 10.6	5 17.1	11.0 58.6	52	16 12	16 52	17 34	10 02	10 27	10 54	11 23
	22	147 57.8	42.5	252 55.2 10.4	5 28.1	10.9 58.6	50	16 21	16 58	17 39	10 01	10 28	10 56	11 28
23	162 57.5	42.1	267 24.6 10.5	5 39.0	10.9 58.6	45	16 40	17 13	17 49	10 01	10 31	11 03	11 38	
MIÉRCOLES	00	177 57.3	S21 41.7	281 54.1 10.4 S	5 49.9	10.9 58.6	N 40	16 55	17 25	17 58	10 00	10 33	11 08	11 46
	01	192 57.0	41.3	296 23.5 10.3	6 00.8	10.8 58.6	35	17 08	17 35	18 07	09 59	10 35	11 13	11 53
	02	207 56.8	40.9	310 52.8 10.3	6 11.6	10.9 58.7	30	17 19	17 45	18 15	09 59	10 37	11 17	11 59
	03	222 56.5	40.5	325 22.1 10.3	6 22.5	10.8 58.7	20	17 39	18 02	18 29	09 58	10 40	11 24	12 10
	04	237 56.3	40.1	339 51.4 10.2	6 33.3	10.7 58.7	N 10	17 56	18 18	18 44	09 57	10 43	11 30	12 19
	05	252 56.1	39.7	354 20.6 10.2	6 44.0	10.8 58.7	0	18 12	18 34	19 00	09 56	10 45	11 36	12 28
	06	267 55.8	S21 39.3	8 49.8 10.2 S	6 54.8	10.7 58.7	S 10	18 28	18 51	19 17	09 55	10 48	11 41	12 37
	07	282 55.6	38.9	23 19.0 10.1	7 05.5	10.6 58.7	20	18 45	19 10	19 38	09 54	10 50	11 48	12 47
	08	297 55.3	38.5	37 48.1 10.0	7 16.1	10.7 58.8	30	19 06	19 32	20 05	09 53	10 53	11 55	12 58
	09	312 55.1	38.1	52 17.1 10.0	7 26.8	10.6 58.8	35	19 17	19 47	20 22	09 52	10 55	11 59	13 04
	10	327 54.9	37.6	66 46.1 10.0	7 37.4	10.5 58.8	40	19 31	20 03	20 43	09 51	10 57	12 03	13 11
	11	342 54.6	37.2	81 15.1 9.9	7 47.9	10.5 58.8	45	19 48	20 24	21 11	09 50	10 59	12 09	13 20
	12	357 54.4	S21 36.8	95 44.0 9.8 S	7 58.4	10.5 58.8	S 50	20 08	20 50	21 50	09 49	11 02	12 15	13 30
	13	12 54.1	36.4	110 12.8 9.9	8 08.9	10.5 58.9	52	20 18	21 03	22 11	09 49	11 03	12 18	13 34
	14	27 53.9	36.2	124 41.7 9.7	8 19.4	10.4 58.9	54	20 28	21 19	22 41	09 48	11 04	12 22	13 40
	15	42 53.7	35.6	139 10.4 9.7	8 29.8	10.3 58.9	56	20 41	21 37	23 36	09 48	11 06	12 25	13 45
	16	57 53.4	35.2	153 39.1 9.7	8 40.1	10.3 58.9	58	20 55	22 01	///	09 47	11 08	12 29	13 52
	17	72 53.2	34.8	168 07.8 9.6	8 50.4	10.3 58.9	S 60	21 13	22 33	///	09 46	11 09	12 34	13 59
	18	87 52.9	S21 34.3	182 36.4 9.6 S	9 00.7	10.2 58.9	Día	SOL E.T. (-)		LUNA				
	19	102 52.7	33.9	197 05.0 9.5	9 10.9	10.2 59.0	00 ^h	12 ^h	Pas. Mer.	Pas. Mer.		Edad.	Fase	
	20	117 52.5	33.5	211 33.5 9.4	9 21.1	10.1 59.0	m s	m s	h m	h m	h m	d		
	21	132 52.2	33.1	226 01.9 9.4	9 31.2	10.1 59.0	07 23	07 35	12 08	12 08	03 44	16 09	20	
	22	147 52.0	32.7	240 30.3 9.4	9 41.3	10.1 59.0	07 47	07 59	12 08	12 08	04 33	16 58	21	☾
23	162 51.8	32.3	254 58.7 9.3</											

T. M. G.	ARIES			VENUS -4.0			MARTE +1.5			JUPITER -2.2			SATURNO +0.1			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A. H. G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.				
13 ^h 01 02 03 04 05 06 07 08 J 09 U 10 E 11 V 12 S 13 14 15 16 17 18 19 20 21 22 23	112 21.6	131 09.7 S 8	50.4	192 31.0 S23	51.8		63 21.1 N17	09.8		334 34.5 N17	11.7		Acamar	315 39.0 S40	24.1				
	127 24.0	146 09.7	49.2	207 31.4	51.6		78 23.6	09.8		349 37.2	11.7		Achernar	335 47.2 S57	21.5				
	142 26.5	161 09.7	48.0	222 31.8	51.5		93 26.1	09.8		4 39.8	11.8		Acrux	173 39.7 S62	58.1				
	157 29.0	176 09.7	46.8	237 32.2	51.4		108 28.6	09.9		19 42.4	11.8		Adhara	255 33.7 S28	56.6				
	172 31.4	191 09.7	45.6	252 32.6	51.3		123 31.1	09.9		34 45.1	11.9		Aldebaran	291 20.6 N16	27.8				
	187 33.9	206 09.7	44.4	267 33.0	51.2		138 33.6	09.9		49 47.7	12.0								
	202 36.4	221 09.7 S 8	43.2	282 33.4 S23	51.1		153 36.0 N17	09.9		64 50.4 N17	12.0		Alioth	166 44.7 N56	04.7				
	217 38.8	236 09.7	42.0	297 33.8	51.0		168 38.5	09.9		79 53.0	12.1		Alkaid	153 20.5 N49	25.4				
	232 41.3	251 09.7	40.8	312 34.2	50.9		183 41.0	09.9		94 55.7	12.1		Al Na'ir	28 18.5 S47	04.4				
	247 43.8	266 09.7	39.6	327 34.6	50.8		198 43.5	09.9		109 58.3	12.2		Alnilam	276 13.9 S 1	13.1				
	262 46.2	281 09.8	38.4	342 35.0	50.7		213 46.0	09.9		125 00.9	12.3		Alphard	218 22.7 S 8	33.7				
	277 48.7	296 09.8	37.2	357 35.4	50.6		228 48.5	09.9		140 03.6	12.3								
	292 51.2	311 09.8 S 8	36.0	12 35.8 S23	50.4		243 51.0 N17	09.9		155 06.2 N17	12.4		Alphecca	126 34.4 N26	47.4				
	307 53.6	326 09.8	34.7	27 36.2	50.3		258 53.4	09.9		170 08.9	12.4		Alpheratz	358 12.0 N28	58.0				
	322 56.1	341 09.8	33.5	42 36.6	50.2		273 55.9	09.9		185 11.5	12.5		Altair	62 35.3 N 8	48.5				
	337 58.5	356 09.8	32.3	57 37.0	50.1		288 58.4	09.9		200 14.2	12.5		Ankaa	353 42.8 S42	26.1				
	353 01.0	11 09.8	31.1	72 37.4	50.0		304 00.9	09.9		215 16.8	12.6		Antares	113 00.1 S26	22.8				
	8 03.5	26 09.8	29.9	87 37.8	49.9		319 03.4	09.9		230 19.5	12.7								
	23 05.9	41 09.9 S 8	28.7	102 38.2 S23	49.8		334 05.9 N17	10.0		245 22.1 N17	12.7		Arcturus	146 20.8 N19	17.9				
	38 08.4	56 09.9	27.5	117 38.6	49.6		349 08.3	10.0		260 24.7	12.8		Atria	108 27.0 S68	59.0				
	53 10.9	71 09.9	26.3	132 39.0	49.5		4 10.8	10.0		275 27.4	12.8		Avior	234 28.5 S59	26.2				
	68 13.3	86 09.9	25.1	147 39.4	49.4		19 13.3	10.0		290 30.0	12.9		Bellatrix	279 01.1 N 6	19.6				
	83 15.8	101 09.9	23.9	162 39.8	49.3		34 15.8	10.0		305 32.7	13.0		Betelgeuse	271 30.6 N 7	24.1				
98 18.3	116 10.0	22.7	177 40.2	49.2		49 18.3	10.0		320 35.3	13.0									
14 ^h 00 01 02 03 04 05 06 07 08 V 09 I 10 R 11 N 12 E 13 S 14 15 16 17 18 19 20 21 22 23	113 20.7	131 10.0 S 8	21.5	192 40.6 S23	49.1		64 20.7 N17	10.0		335 38.0 N17	13.1		Canopus	264 07.8 S52	41.2				
	128 23.2	146 10.0	20.3	207 41.0	48.9		79 23.2	10.0		350 40.6	13.1		Capella	281 14.5 N45	58.5				
	143 25.7	161 10.0	19.1	222 41.4	48.8		94 25.7	10.0		5 43.3	13.2		Deneb	49 50.6 N45	12.0				
	158 28.1	176 10.0	17.9	237 41.8	48.7		109 28.2	10.0		20 45.9	13.3		Denebola	183 01.4 N14	41.8				
	173 30.6	191 10.1	16.7	252 42.2	48.6		124 30.7	10.0		35 48.5	13.3		Diphda	349 23.4 S18	06.9				
	188 33.0	206 10.1	15.5	267 42.6	48.5		139 33.1	10.0		50 51.2	13.4								
	203 35.5	221 10.1 S 8	14.3	282 43.0 S23	48.4		154 35.6 N17	10.0		65 53.8 N17	13.4		Dubhe	194 24.8 N61	52.2				
	218 38.0	236 10.1	13.0	297 43.4	48.2		169 38.1	10.1		80 56.5	13.5		Elnath	278 46.9 N28	35.3				
	233 40.4	251 10.2	11.8	312 43.8	48.1		184 40.6	10.1		95 59.1	13.6		Eltanin	90 59.4 N51	29.5				
	248 42.9	266 10.2	10.6	327 44.2	48.0		199 43.1	10.1		111 01.8	13.6		Enif	34 14.3 N 9	46.3				
	263 45.4	281 10.2	09.4	342 44.6	47.9		214 45.5	10.1		126 04.4	13.7		Fomalhaut	15 54.4 S29	44.7				
	278 47.8	296 10.3	08.2	357 45.0	47.7		229 48.0	10.1		141 07.1	13.7								
	293 50.3	311 10.3 S 8	07.0	12 45.4 S23	47.6		244 50.5 N17	10.1		156 09.7 N17	13.8		Gacrux	172 31.2 S56	58.9				
	308 52.8	326 10.3	05.8	27 45.8	47.5		259 53.0	10.1		171 12.4	13.9		Gienah	176 20.4 S17	24.9				
	323 55.2	341 10.4	04.6	42 46.2	47.4		274 55.4	10.1		186 15.0	13.9		Hadar	149 26.8 S60	15.5				
	338 57.7	356 10.4	03.4	57 46.6	47.3		289 57.9	10.1		201 17.6	14.0		Hamal	328 31.6 N23	21.3				
	354 00.1	11 10.4	02.2	72 47.0	47.1		305 00.4	10.1		216 20.3	14.0		Kaus Aust.	84 20.5 S34	23.7				
	9 02.6	26 10.5 S 8	01.0	87 47.4	47.0		320 02.9	10.1		231 22.9	14.1								
	24 05.1	41 10.5 S 7	59.7	102 47.8 S23	46.9		335 05.3 N17	10.2		246 25.6 N17	14.2		Kochab	137 19.5 N74	14.7				
	39 07.5	56 10.5	58.5	117 48.2	46.8		350 07.8	10.2		261 28.2	14.2		Markab	14 05.8 N15	05.0				
	54 10.0	71 10.6	57.3	132 48.6	46.6		5 10.3	10.2		276 30.9	14.3		Menkar	314 43.6 N 3	59.9				
	69 12.5	86 10.6	56.1	147 49.0	46.5		20 12.7	10.2		291 33.5	14.3		Menkent	148 39.9 S36	15.3				
	84 14.9	101 10.6	54.9	162 49.4	46.4		35 15.2	10.2		306 36.2	14.4		Miaplacidus	221 44.5 S69	37.4				
99 17.4	116 10.7	53.7	177 49.8	46.2		50 17.7	10.2		321 38.8	14.4									
15 ^h 00 01 02 03 04 05 06 07 08 S 09 A 10 B 11 A 12 D 13 O 14 15 16 17 18 19 20 21 22 23	114 19.9	131 10.7 S 7	52.5	192 50.2 S23	46.1		65 20.2 N17	10.2		336 41.5 N17	14.5		Mirfak	309 19.3 N49	47.0				
	129 22.3	146 10.8	51.3	207 50.6	46.0		80 22.6	10.2		351 44.1	14.6		Nunki	76 32.6 S26	19.5				
	144 24.8	161 10.8	50.1	222 51.0	45.9		95 25.1	10.2		6 46.8	14.6		Peacock	54 02.9 S56	48.5				
	159 27.3	176 10.8	48.8	237 51.4	45.7		110 27.6	10.2		21 49.4	14.7		Pollux	244 00.8 N28	04.8				
	174 29.7	191 10.9	47.6	252 51.8	45.6		125 30.0	10.3		36 52.1	14.7		Procyon	245 28.0 N 5	16.9				
	189 32.2	206 10.9	46.4	267 52.2	45.5		140 32.5	10.3		51 54.7	14.8								
	204 34.6	221 11.0 S 7	45.2	282 52.6 S23	45.3		155 35.0 N17	10.3		66 57.4 N17	14.9		Rasalhague	96 32.2 N12	34.6				
	219 37.1	236 11.0	44.0	297 53.0	45.2		170 37.4	10.3		82 00.0	14.9		Regulus	208 12.4 N12	04.6				
	234 39.6	251 11.1	42.8	312 53.4	45.1		185 39.9	10.3		97 02.7	15.0		Rigel	281 38.1 S 8	13.8				
	249 42.0	266 11.1	41.6	327 53.8	44.9		200 42.4	10.3		112 05.3	15.0		Rigel Kent.	140 29.3 S60	44.1				
	264 44.5	281 11.2	40.3	342 54.2	44.8		215 44.9	10.3		127 07.9	15.1		Sabik	102 44.2 S15	41.7				
	279 47.0	296 11.2	39.1	357 54.6	44.7		230 47.3	10.3		142 10.6	15.2								
	294 49.4	311 11.3 S 7	37.9	12 55.0 S23	44.5		245 49.8 N17	10.3		157 13.2 N17	15.2		Schedar	350 11.9 N56	25.0				
	309 51.9	326 11.3	36.7	27 55.4	44.4		260 52.3	10.4		172 15.9	15.3		Shaula	96 59.5 S37	05.1				
	324 54.4	341 11.4	35.5	42 55.8	44.3		275 54.7	10.4		187 18.5	15.3		Sirius	258 57.5 S16	41.3				
	339 56.8	3																	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	13		14		15		16	
												h	m	h	m	h	m	h	m
13 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	177	51.3	S21	31.8	269	27.0	9.2	S10	01.3	10.0	59.0	N 72	08 03	09 56	■	02 28	04 35	07 06	■
	192	51.3		31.4	283	55.2	9.2	10	11.3	9.8	59.1	N 70	07 48	09 21	■	02 10	04 03	05 59	07 49
	207	51.0		31.0	298	23.4	9.1	10	21.1	9.8	59.1	68	07 36	08 56	10 38	01 55	03 40	05 22	06 55
	222	50.8	..	30.6	312	51.5	9.1	10	30.9	9.8	59.1	66	07 25	08 36	09 56	01 44	03 22	04 57	06 22
	237	50.6		30.1	327	19.6	9.0	10	40.7	9.7	59.1	64	07 17	08 21	09 28	01 34	03 07	04 37	05 58
	252	50.3		29.7	341	47.6	9.0	10	50.4	9.7	59.1	62	07 09	08 08	09 07	01 26	02 55	04 21	05 39
	267	50.1	S21	29.3	356	15.6	8.9	S11	00.1	9.5	59.1	60	07 02	07 56	08 49	01 19	02 45	04 07	05 23
	282	49.9		28.9	10	43.5	8.9	11	09.6	9.6	59.2	N 58	06 56	07 46	08 35	01 13	02 36	03 56	05 10
	297	49.6		28.5	25	11.4	8.8	11	19.2	9.4	59.2	56	06 50	07 38	08 23	01 08	02 28	03 46	04 58
	312	49.4	..	28.0	39	39.2	8.7	11	28.6	9.4	59.2	54	06 45	07 30	08 12	01 03	02 21	03 37	04 48
	327	49.2		27.6	54	06.9	8.7	11	38.0	9.4	59.2	52	06 40	07 23	08 02	00 58	02 15	03 29	04 40
	342	48.9		27.2	68	34.6	8.6	11	47.4	9.2	59.2	50	06 36	07 17	07 54	00 54	02 09	03 22	04 32
	357	48.7	S21	26.7	83	02.2	8.6	S11	56.6	9.2	59.2	45	06 26	07 03	07 35	00 46	01 57	03 07	04 15
	12	48.5		26.3	97	29.8	8.5	12	05.8	9.2	59.2	N 40	06 17	06 51	07 21	00 39	01 47	02 55	04 01
	27	48.2		25.9	111	57.3	8.4	12	15.0	9.0	59.3	35	06 09	06 40	07 08	00 33	01 38	02 44	03 49
	42	48.0	..	25.5	126	24.7	8.4	12	24.0	9.0	59.3	30	06 02	06 31	06 57	00 27	01 31	02 35	03 39
	57	47.8		25.0	140	52.1	8.3	12	33.0	9.0	59.3	20	05 47	06 14	06 38	00 18	01 18	02 20	03 21
	72	47.5		24.6	155	19.4	8.3	12	42.0	8.8	59.3	N 10	05 33	05 59	06 21	00 10	01 07	02 06	03 06
	87	47.3	S21	24.2	169	46.7	8.2	S12	50.8	8.8	59.3	0	05 17	05 43	06 05	00 03	00 57	01 53	02 52
	102	47.1		23.7	184	13.9	8.2	12	59.6	8.7	59.3	S 10	05 00	05 27	05 50	24 46	00 46	01 41	02 38
	117	46.8		23.3	198	41.1	8.1	13	08.3	8.6	59.3	20	04 40	05 08	05 33	24 36	00 36	01 27	02 22
	132	46.6	..	22.9	213	08.2	8.0	13	16.9	8.6	59.4	30	04 13	04 46	05 13	24 23	00 23	01 12	02 05
	147	46.4		22.4	227	35.2	8.0	13	25.5	8.4	59.4	35	03 57	04 32	05 01	24 16	00 16	01 03	01 55
162	46.2		22.0	242	02.2	7.9	13	33.9	8.4	59.4	40	03 36	04 16	04 48	24 08	00 08	00 53	01 44	
177	45.9	S21	21.5	256	29.1	7.8	S13	42.3	8.4	59.4	45	03 09	03 56	04 32	23 58	24 41	00 41	01 30	
192	45.7		21.1	270	55.9	7.8	13	50.7	8.2	59.4	S 50	02 31	03 30	04 12	23 47	24 27	00 27	01 14	
207	45.5		20.7	285	22.7	7.8	13	58.9	8.1	59.4	52	02 10	03 17	04 02	23 42	24 20	00 20	01 06	
222	45.2	..	20.2	299	49.5	7.6	14	07.0	8.1	59.4	54	01 43	03 02	03 52	23 36	24 13	00 13	00 58	
237	45.0		19.8	314	16.1	7.6	14	15.1	8.0	59.5	56	00 56	02 44	03 40	23 30	24 05	00 05	00 48	
252	44.8		19.3	328	42.7	7.6	14	23.1	7.9	59.5	58	////	02 22	03 25	23 23	23 55	24 37	00 37	
267	44.5	S21	18.9	343	09.3	7.5	S14	31.0	7.8	59.5	S 60	////	01 52	03 09	23 15	23 45	24 25	00 25	
282	44.3		18.5	357	35.8	7.4	14	38.8	7.7	59.5	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
297	44.1		18.0	12	02.2	7.4	14	46.5	7.6	59.5	13	14	16	16	09 44	09 30	08 58	■	
312	43.9	..	17.6	26	28.6	7.3	14	54.1	7.6	59.5	N 72	h m	h m	h m	h m	h m	h m	h m	
327	43.6		17.1	40	54.9	7.3	15	01.7	7.4	59.5	N 70	■	14 23	16 16	10 04	10 03	10 06	10 19	
342	43.4		16.7	55	21.2	7.2	15	09.1	7.4	59.5	68	13 41	15 23	16 43	10 19	10 28	10 43	11 14	
357	43.2	S21	16.2	69	47.4	7.1	S15	16.5	7.2	59.6	66	14 23	15 42	16 53	10 32	10 47	11 09	11 47	
12	43.0		15.8	84	13.5	7.1	15	23.7	7.2	59.6	64	14 51	15 58	17 02	10 43	11 02	11 30	12 11	
27	42.7		15.3	98	39.6	7.1	15	30.9	7.0	59.6	62	15 12	16 11	17 10	10 52	11 15	11 46	12 30	
42	42.5	..	14.9	113	05.7	6.9	15	37.9	7.0	59.6	60	15 29	16 22	17 17	11 00	11 26	12 00	12 46	
57	42.3		14.5	127	31.6	6.9	15	44.9	6.9	59.6	N 58	15 44	16 32	17 23	11 07	11 35	12 12	12 59	
72	42.1		14.0	141	57.5	6.9	15	51.8	6.8	59.6	56	15 56	16 41	17 28	11 13	11 44	12 22	13 11	
87	41.8	S21	13.6	156	23.4	6.8	S15	58.6	6.6	59.6	54	16 07	16 49	17 33	11 18	11 51	12 31	13 21	
102	41.6		13.1	170	49.2	6.8	16	05.2	6.6	59.6	52	16 16	16 56	17 38	11 23	11 58	12 40	13 30	
117	41.4		12.6	185	15.0	6.6	16	11.8	6.5	59.6	50	16 25	17 02	17 43	11 28	12 04	12 47	13 38	
132	41.2	..	12.2	199	40.6	6.7	16	18.3	6.3	59.6	45	16 43	17 16	17 52	11 38	12 17	13 03	13 55	
147	40.9		11.7	214	06.3	6.6	16	24.6	6.3	59.7	N 40	16 58	17 28	18 01	11 46	12 28	13 16	14 10	
162	40.7		11.3	228	31.9	6.5	16	30.9	6.2	59.7	35	17 11	17 38	18 09	11 53	12 37	13 27	14 22	
177	40.5	S21	10.8	242	57.4	6.5	S16	37.1	6.0	59.7	30	17 22	17 47	18 17	11 59	12 45	13 36	14 32	
192	40.3		10.4	257	22.9	6.4	16	43.1	5.9	59.7	20	17 41	18 04	18 31	12 10	12 59	13 53	14 50	
207	40.0		09.9	271	48.3	6.4	16	49.0	5.9	59.7	N 10	17 57	18 20	18 46	12 19	13 12	14 07	15 06	
222	39.8	..	09.5	286	13.7	6.3	16	54.9	5.7	59.7	0	18 13	18 35	19 01	12 28	13 23	14 21	15 20	
237	39.6		09.0	300	39.0	6.3	17	00.6	5.6	59.7	S 10	18 29	18 51	19 18	12 37	13 35	14 34	15 35	
252	39.4		08.6	315	04.3	6.2	17	06.2	5.5	59.7	20	18 46	19 10	19 38	12 47	13 47	14 49	15 50	
267	39.1	S21	08.1	329	29.5	6.2	S17	11.7	5.4	59.7	30	19 05	19 32	20 04	12 58	14 02	15 06	16 08	
282	38.9		07.6	343	54.7	6.1	17	17.1	5.3	59.7	35	19 17	19 46	20 21	13 04	14 10	15 15	16 18	
297	38.7		07.2	358	19.8	6.1	17	22.4	5.2	59.7	40	19 30	20 02	20 42	13 11	14 19	15 26	16 30	
312	38.5	..	06.7	12	44.9	6.0	17	27.6	5.0	59.7	45	19 46	20 22	21 08	13 20	14 30	15 39	16 44	
327	38.3		06.3	27	09.9	6.0	17	32.6	4.9	59.8	S 50	20 06	20 47	21 45	13 30	14 44	15 55	17 01	
342	38.0		05.8	41	34.9	6.0	17	37.5	4.9	59.8	52	20 15	21 00	22 06	13 34	14 50	16 03	17 09	
357	37.8	S21	05.3	55	59.9	5.9	S17	42.4	4.7	59.8	54	20 26	21 15	22 33	13 40	14 57	16 11	17 18	
12	37.6		04.9	70	24.8	5.8	17	47.1	4.5	59.8	56	20 38	21 33	23 16	13 45	15 05	16 20	17 28	
27	37.4		04.4	84	49.6	5.8	17	51.6	4.5	59.8	58	20 52	21 55	///	13 52	15 13	16 31	17 40	
42	37.2	..	03.9	99	14.4	5.8	17	56.1	4.3	59.8	S 60	21 08	22 24	///	13 59	15 23	16 43	17 53	
57	36.9		03.5	113	39.2	5.7	18	00.4	4.3	59.8	Día	SOL E.T. (-)		Pas. Mer.	LUNA Pas. Mer.		Edad.	Fase	
72	36.7		03.0	128	03.9	5.7	18	04.7	4.1	59.8	00 ^h	12 ^h	h m	h m	h m	d			
87	36.5	S21	02.5	142	28.6	5.7	S18	08.8	3.9	59.8	m s	m s	h m	h m	h m				
102	36.3		02.1	156	53.3	5.6	18	12.7	3.9	59.8	08 33	08 45	12 09	06 16	18 42	23			
117	36.1		01.6	171	17.9	5.6													

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		16		17		18		19	
											h m	h m	h m	h m	h m	h m	h m	h m
DOMINGO	16 00	177 35.2 S20	59.7	228 56.1	5.4	S18 30.8	3.2	59.8	N 72	07 56	09 44	■	■	■	■	10 05		
	01	192 35.0	59.3	243 20.5	5.4	18 34.0	3.1	59.8	N 70	07 42	09 12	11 43	07 49	09 00	09 21	09 25		
	02	207 34.8	58.8	257 44.9	5.4	18 37.1	3.0	59.8	68	07 31	08 49	10 24	06 55	08 02	08 39	08 58		
	03	222 34.6	58.3	272 09.3	5.4	18 40.1	2.9	59.8	66	07 21	08 31	09 47	06 22	07 27	08 10	08 37		
	04	237 34.3	57.8	286 33.7	5.3	18 43.0	2.7	59.8	64	07 13	08 16	09 21	05 58	07 03	07 49	08 20		
	05	252 34.1	57.4	300 58.0	5.4	18 45.7	2.6	59.8	62	07 05	08 03	09 01	05 39	06 43	07 31	08 06		
	06	267 33.9 S20	56.9	315 22.4	5.3	S18 48.3	2.5	59.8	60	06 59	07 53	08 45	05 23	06 27	07 17	07 54		
	07	282 33.7	56.4	329 46.7	5.2	18 50.8	2.3	59.8	N 58	06 53	07 43	08 31	05 10	06 13	07 04	07 44		
	08	297 33.5	55.9	344 10.9	5.3	18 53.1	2.3	59.8	56	06 48	07 35	08 19	04 58	06 02	06 53	07 34		
	09	312 33.3	55.5	358 35.2	5.2	18 55.4	2.0	59.8	54	06 43	07 27	08 09	04 48	05 51	06 44	07 26		
	10	327 33.1	55.0	12 59.4	5.2	18 57.4	2.0	59.8	52	06 39	07 21	07 59	04 40	05 42	06 35	07 19		
	11	342 32.8	54.5	27 23.6	5.2	18 59.4	1.8	59.8	50	06 34	07 15	07 51	04 32	05 34	06 28	07 13		
	12	357 32.6 S20	54.0	41 47.8	5.2	S19 01.2	1.7	59.8	45	06 25	07 01	07 34	04 15	05 17	06 12	06 59		
	13	12 32.4	53.5	56 12.0	5.2	19 02.9	1.6	59.8	N 40	06 16	06 50	07 19	04 01	05 02	05 58	06 47		
	14	27 32.2	53.1	70 36.2	5.1	19 04.5	1.4	59.8	35	06 09	06 40	07 07	03 49	04 50	05 47	06 37		
	15	42 32.0	52.6	85 00.3	5.1	19 05.9	1.3	59.8	30	06 01	06 31	06 56	03 39	04 40	05 37	06 29		
	16	57 31.8	52.1	99 24.4	5.2	19 07.2	1.2	59.8	20	05 47	06 14	06 38	03 21	04 22	05 20	06 14		
	17	72 31.6	51.6	113 48.6	5.1	19 08.4	1.0	59.8	N 10	05 33	05 59	06 22	03 06	04 06	05 05	06 01		
	18	87 31.4 S20	51.1	128 12.7	5.1	S19 09.4	0.9	59.8	0	05 19	05 44	06 07	02 52	03 51	04 51	05 48		
	19	102 31.1	50.6	142 36.8	5.1	19 10.3	0.8	59.8	S 10	05 02	05 29	05 51	02 38	03 37	04 37	05 36		
	20	117 30.9	50.2	157 00.9	5.1	19 11.1	0.6	59.8	20	04 42	05 11	05 35	02 22	03 21	04 22	05 23		
	21	132 30.7	49.7	171 25.0	5.1	19 11.7	0.5	59.8	30	04 16	04 49	05 15	02 05	03 03	04 05	05 08		
	22	147 30.5	49.2	185 49.1	5.1	19 12.2	0.4	59.8	35	04 00	04 35	05 04	01 55	02 53	03 55	04 59		
23	162 30.3	48.7	200 13.2	5.1	19 12.6	0.2	59.8	40	03 40	04 19	04 51	01 44	02 41	03 43	04 49			
LUNES	17 00	177 30.1 S20	48.2	214 37.3	5.1	S19 12.8	0.1	59.8	45	03 14	04 00	04 35	01 30	02 27	03 30	04 37		
	01	192 29.9	47.7	229 01.4	5.1	19 12.9	0.0	59.8	S 50	02 38	03 35	04 16	01 14	02 10	03 14	04 23		
	02	207 29.7	47.2	243 25.5	5.1	19 12.9	0.2	59.8	52	02 18	03 23	04 07	01 06	02 02	03 06	04 16		
	03	222 29.5	46.7	257 49.6	5.2	19 12.7	0.2	59.8	54	01 53	03 08	03 57	00 58	01 53	02 57	04 09		
	04	237 29.3	46.3	272 13.8	5.1	19 12.5	0.5	59.8	56	01 14	02 51	03 45	00 48	01 43	02 48	04 01		
	05	252 29.1	45.8	286 37.9	5.1	19 12.0	0.5	59.8	58	////	02 30	03 32	00 37	01 31	02 37	03 51		
	06	267 28.8 S20	45.3	301 02.0	5.2	S19 11.5	0.7	59.8	S 60	////	02 03	03 16	00 25	01 18	02 24	03 41		
	07	282 28.6	44.8	315 26.2	5.1	19 10.8	0.8	59.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna					
	08	297 28.4	44.3	329 50.3	5.2	19 10.0	1.0	59.8			Civil	Náut.	16	17	18	19		
	09	312 28.2	43.8	344 14.5	5.2	19 09.0	1.1	59.8	N 72	■	14 38	16 25	■	■	■	■	14 11	
	10	327 28.0	43.3	358 38.7	5.2	19 07.9	1.2	59.7	N 70	12 38	15 09	16 39	10 19	11 13	12 56	14 50		
	11	342 27.8	42.8	13 02.9	5.2	19 06.7	1.3	59.7	68	13 57	15 32	16 51	11 14	12 12	13 37	15 17		
	12	357 27.6 S20	42.3	27 27.1	5.2	S19 05.4	1.5	59.7	66	14 34	15 50	17 00	11 47	12 46	14 05	15 37		
	13	12 27.4	41.8	41 51.3	5.3	19 03.9	1.6	59.7	64	15 00	16 05	17 08	12 11	13 10	14 27	15 53		
	14	27 27.2	41.3	56 15.6	5.2	19 02.3	1.7	59.7	62	15 20	16 18	17 16	12 30	13 30	14 44	16 07		
	15	42 27.0	40.8	70 39.8	5.3	19 00.6	1.9	59.7	60	15 36	16 28	17 22	12 46	13 46	14 58	16 18		
	16	57 26.8	40.3	85 04.1	5.4	18 58.7	2.0	59.7	N 58	15 50	16 38	17 28	12 59	13 59	15 10	16 28		
	17	72 26.6	39.8	99 28.5	5.3	18 56.7	2.1	59.7	56	16 02	16 46	17 33	13 11	14 11	15 21	16 36		
	18	87 26.4 S20	39.3	113 52.8	5.4	S18 54.6	2.3	59.7	54	16 12	16 53	17 38	13 21	14 21	15 30	16 44		
	19	102 26.2	38.8	128 17.2	5.4	18 52.3	2.4	59.7	52	16 21	17 00	17 42	13 30	14 30	15 38	16 51		
	20	117 26.0	38.3	142 41.6	5.4	18 49.9	2.5	59.7	50	16 30	17 06	17 46	13 38	14 38	15 45	16 57		
	21	132 25.8	37.8	157 06.0	5.5	18 47.4	2.6	59.6	45	16 47	17 20	17 56	13 55	14 56	16 01	17 10		
	22	147 25.6	37.3	171 30.5	5.5	18 44.8	2.8	59.6	N 40	17 01	17 31	18 04	14 10	15 10	16 14	17 21		
23	162 25.4	36.8	185 55.0	5.6	18 42.0	2.8	59.6	35	17 13	17 41	18 12	14 22	15 22	16 25	17 30			
MARTES	18 00	177 25.2 S20	36.3	200 19.6	5.5	S18 39.2	3.1	59.6	30	17 24	17 50	18 19	14 32	15 32	16 35	17 38		
	01	192 25.0	35.8	214 44.1	5.6	18 36.1	3.1	59.6	20	17 43	18 06	18 33	14 50	15 50	16 51	17 52		
	02	207 24.8	35.3	229 08.7	5.7	18 33.0	3.3	59.6	N 10	17 59	18 21	18 47	15 06	16 05	17 05	18 04		
	03	222 24.6	34.8	243 33.4	5.7	18 29.7	3.3	59.6	0	18 14	18 36	19 02	15 20	16 20	17 19	18 15		
	04	237 24.4	34.3	257 58.1	5.7	18 26.4	3.5	59.6	S 10	18 29	18 52	19 18	15 35	16 34	17 32	18 26		
	05	252 24.2	33.8	272 22.8	5.8	18 22.9	3.7	59.5	20	18 46	19 10	19 38	15 50	16 50	17 46	18 38		
	06	267 24.0 S20	33.3	286 47.6	5.8	S18 19.2	3.7	59.5	30	19 05	19 31	20 03	16 08	17 07	18 02	18 51		
	07	282 23.8	32.8	301 12.4	5.9	18 15.5	3.9	59.5	35	19 16	19 45	20 20	16 18	17 18	18 11	18 59		
	08	297 23.6	32.2	315 37.3	5.9	18 11.6	4.0	59.5	40	19 29	20 00	20 39	16 30	17 29	18 22	19 08		
	09	312 23.4	31.7	330 02.2	5.9	18 07.6	4.1	59.5	45	19 44	20 20	21 05	16 44	17 43	18 34	19 18		
	10	327 23.2	31.2	344 27.1	6.0	18 03.5	4.2	59.5	S 50	20 03	20 44	21 41	17 01	18 00	18 49	19 30		
	11	342 23.0	30.7	358 52.1	6.1	17 59.3	4.4	59.5	52	20 12	20 56	22 00	17 09	18 08	18 56	19 36		
	12	357 22.8 S20	30.2	13 17.2	6.1	S17 54.9	4.4	59.4	54	20 22	21 11	22 25	17 18	18 16	19 04	19 42		
	13	12 22.6	29.7	27 42.3	6.1	17 50.5	4.6	59.4	56	20 34	21 27	23 01	17 28	18 26	19 13	19 49		
	14	27 22.4	29.2	42 07.4	6.2	17 45.9	4.7	59.4	58	20 47	21 48	///	17 40	18 37	19 22	19 57		
	15	42 22.2	28.7	56 32.6	6.3	17 41.2	4.8	59.4	S 60	21 03	22 15	///	17 53	18 50	19 33	20 06		
	16	57 22.0	28.1	70 57.9	6.3	17 36.4	4.9	59.4	Día	SOL E.T. (-)		LUNA						
	17	72 21.8	27.6	85 23.2	6.3	17 31.5	5.0	59.3		00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase		
	18	87 21.6 S20	27.1	99 48.5	6.5	S17 26.5	5.2	59.3	16	m s	m s	h m	h m	h m	d			
	19	102 21.4	26.6	114 14.0	6.4	17 21.3	5.2	59.3										

T. M. G.	ARIES			VENUS -4.0			MARTE +1.5			JUPITER -2.1			SATURNO +0.1			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
M I E R C O L E S	19 00	118 16.4	131 18.2 S 5	55.3	193 28.7 S23	31.7	69 15.7 N17	11.6	340 56.0 N17	20.3	Acamar	315 39.0	S40 24.1					
	01	133 18.9	146 18.3	54.1	208 29.1	31.6	84 18.1	11.7	355 58.7	20.4	Achernar	335 47.2	S57 21.5					
	02	148 21.3	161 18.4	52.8	223 29.5	31.4	99 20.6	11.7	11 01.3	20.5	Acrux	173 39.6	S62 58.1					
	03	163 23.8	176 18.6	51.6	238 29.9	31.2	114 23.0	11.7	26 04.0	20.5	Adhara	255 33.6	S28 56.7					
	04	178 26.3	191 18.7	50.4	253 30.3	31.0	129 25.4	11.7	41 06.6	20.6	Aldebaran	291 20.6	N16 27.8					
	05	193 28.7	206 18.8	49.2	268 30.7	30.9	144 27.9	11.7	56 09.3	20.6								
	06	208 31.2	221 18.9 S 5	47.9	283 31.1 S23	30.7	159 30.3 N17	11.7	71 11.9 N17	20.7	Alioth	166 44.6	N56 04.7					
	07	223 33.7	236 19.0	46.7	298 31.5	30.5	174 32.8	11.8	86 14.6	20.8	Alkaid	153 20.5	N49 25.3					
	08	238 36.1	251 19.2	45.5	313 31.9	30.3	189 35.2	11.8	101 17.2	20.8	Al Na'ir	28 18.5	S47 04.4					
	09	253 38.6	266 19.3	44.2	328 32.3	30.2	204 37.6	11.8	116 19.9	20.9	Alnilam	276 13.9	S 1 13.1					
	10	268 41.1	281 19.4	43.0	343 32.7	30.0	219 40.1	11.8	131 22.6	21.0	Alphard	218 22.6	S 8 33.7					
	11	283 43.5	296 19.5	41.8	358 33.1	29.8	234 42.5	11.8	146 25.2	21.0								
	12	298 46.0	311 19.7 S 5	40.5	13 33.5 S23	29.6	249 44.9 N17	11.9	161 27.9 N17	21.1	Alphecca	126 34.4	N26 47.3					
	13	313 48.5	326 19.8	39.3	28 33.9	29.5	264 47.3	11.9	176 30.5	21.1	Alpheratz	358 12.0	N28 58.0					
	14	328 50.9	341 19.9	38.1	43 34.3	29.3	279 49.8	11.9	191 33.2	21.2	Altair	62 35.2	N 8 48.5					
	15	343 53.4	356 20.0	36.9	58 34.7	29.1	294 52.2	11.9	206 35.8	21.3	Ankaa	353 42.9	S42 26.0					
	16	358 55.8	11 20.2	35.6	73 35.1	28.9	309 54.6	12.0	221 38.5	21.3	Antares	113 00.1	S26 22.8					
	17	13 58.3	26 20.3	34.4	88 35.5	28.8	324 57.1	12.0	236 41.1	21.4								
	18	29 00.8	41 20.4 S 5	33.2	103 35.9 S23	28.6	339 59.5 N17	12.0	251 43.8 N17	21.4	Arcturus	146 20.7	N19 17.9					
	19	44 03.2	56 20.6	31.9	118 36.3	28.4	355 01.9	12.0	266 46.5	21.5	Atria	108 26.9	S68 58.9					
	20	59 05.7	71 20.7	30.7	133 36.7	28.2	10 04.4	12.0	281 49.1	21.6	Avior	234 28.5	S59 26.3					
	21	74 08.2	86 20.8	29.5	148 37.1	28.0	25 06.8	12.1	296 51.8	21.6	Bellatrix	279 01.1	N 6 19.6					
	22	89 10.6	101 21.0	28.2	163 37.5	27.8	40 09.2	12.1	311 54.4	21.7	Betelgeuse	271 30.6	N 7 24.1					
23	104 13.1	116 21.1	27.0	178 37.9	27.7	55 11.6	12.1	326 57.1	21.8									
J U E V E S	20 00	119 15.6	131 21.2 S 5	25.8	193 38.3 S23	27.5	70 14.1 N17	12.1	341 59.7 N17	21.8	Canopus	264 07.8	S52 41.2					
	01	134 18.0	146 21.4	24.6	208 38.7	27.3	85 16.5	12.1	357 02.4	21.9	Capella	281 14.5	N45 58.6					
	02	149 20.5	161 21.5	23.3	223 39.2	27.1	100 18.9	12.2	12 05.1	21.9	Deneb	49 50.6	N45 12.0					
	03	164 22.9	176 21.6	22.1	238 39.6	26.9	115 21.4	12.2	27 07.7	22.0	Denebola	183 01.4	N14 41.8					
	04	179 25.4	191 21.8	20.9	253 40.0	26.8	130 23.8	12.2	42 10.4	22.1	Diphda	349 23.4	S18 06.9					
	05	194 27.9	206 21.9	19.6	268 40.4	26.6	145 26.2	12.2	57 13.0	22.1								
	06	209 30.3	221 22.1 S 5	18.4	283 40.8 S23	26.4	160 28.6 N17	12.2	72 15.7 N17	22.2	Dubhe	194 24.7	N61 52.2					
	07	224 32.8	236 22.2	17.2	298 41.2	26.2	175 31.1	12.3	87 18.3	22.2	Elnath	278 46.9	N28 35.3					
	08	239 35.3	251 22.3	15.9	313 41.6	26.0	190 33.5	12.3	102 21.0	22.3	Eltanin	90 59.3	N51 29.4					
	09	254 37.7	266 22.5	14.7	328 42.0	25.8	205 35.9	12.3	117 23.7	22.4	Enif	34 14.3	N 9 46.2					
	10	269 40.2	281 22.6	13.5	343 42.4	25.6	220 38.3	12.3	132 26.3	22.4	Fomalhaut	15 54.4	S29 44.7					
	11	284 42.7	296 22.8	12.2	358 42.8	25.5	235 40.8	12.4	147 29.0	22.5								
	12	299 45.1	311 22.9 S 5	11.0	13 43.2 S23	25.3	250 43.2 N17	12.4	162 31.6 N17	22.6	Gacrux	172 31.2	S56 58.9					
	13	314 47.6	326 23.1	09.8	28 43.6	25.1	265 45.6	12.4	177 34.3	22.6	Gienah	176 20.3	S17 24.9					
	14	329 50.1	341 23.2	08.5	43 44.0	24.9	280 48.0	12.4	192 36.9	22.7	Hadar	149 26.7	S60 15.5					
	15	344 52.5	356 23.3	07.3	58 44.4	24.7	295 50.4	12.5	207 39.6	22.7	Hamal	328 31.6	N23 21.3					
	16	359 55.0	11 23.5	06.1	73 44.8	24.5	310 52.9	12.5	222 42.3	22.8	Kaus Aust.	84 20.5	S34 23.7					
	17	14 57.4	26 23.6	04.8	88 45.2	24.3	325 55.3	12.5	237 44.9	22.9								
	18	29 59.9	41 23.8 S 5	03.6	103 45.6 S23	24.1	340 57.7 N17	12.5	252 47.6 N17	22.9	Kochab	137 19.3	N74 14.7					
	19	45 02.4	56 23.9	02.4	118 46.0	23.9	356 00.1	12.5	267 50.2	23.0	Markab	14 05.8	N15 05.0					
	20	60 04.8	71 24.1	01.2	133 46.4	23.7	11 02.6	12.6	282 52.9	23.1	Menkar	314 43.6	N 3 59.9					
	21	75 07.3	86 24.2	00.0	148 46.8	23.6	26 05.0	12.6	297 55.5	23.1	Menkent	148 39.9	S36 15.3					
	22	90 09.8	101 24.4	58.7	163 47.2	23.4	41 07.4	12.6	312 58.2	23.2	Miaplacidus	221 44.4	S69 37.4					
23	105 12.2	116 24.6	57.5	178 47.6	23.2	56 09.8	12.6	328 00.9	23.2									
V I E R N E S	21 00	120 14.7	131 24.7 S 4	56.2	193 48.0 S23	23.0	71 12.2 N17	12.7	343 03.5 N17	23.3	Mirfak	309 19.3	N49 47.0					
	01	135 17.2	146 24.9	55.0	208 48.4	22.8	86 14.6	12.7	358 06.2	23.4	Nunki	76 32.6	S26 19.5					
	02	150 19.6	161 25.0	53.8	223 48.8	22.6	101 17.1	12.7	13 08.8	23.4	Peacock	54 02.9	S56 48.5					
	03	165 22.1	176 25.2	52.5	238 49.2	22.4	116 19.5	12.7	28 11.5	23.5	Pollux	244 00.8	N28 04.8					
	04	180 24.6	191 25.3	51.3	253 49.6	22.2	131 21.9	12.8	43 14.2	23.6	Procyon	245 28.0	N 5 16.9					
	05	195 27.0	206 25.5	50.1	268 50.0	22.0	146 24.3	12.8	58 16.8	23.6								
	06	210 29.5	221 25.7 S 4	48.8	283 50.4 S23	21.8	161 26.7 N17	12.8	73 19.5 N17	23.7	Rasalhague	96 32.1	N12 34.6					
	07	225 31.9	236 25.8	47.6	298 50.8	21.6	176 29.2	12.8	88 22.1	23.7	Regulus	208 12.3	N12 04.6					
	08	240 34.4	251 26.0	46.4	313 51.2	21.4	191 31.6	12.9	103 24.8	23.8	Rigel	281 38.1	S 8 13.9					
	09	255 36.9	266 26.1	45.1	328 51.6	21.2	206 34.0	12.9	118 27.5	23.9	Rigel Kent.	140 29.2	S60 44.1					
	10	270 39.3	281 26.3	43.9	343 52.0	21.0	221 36.4	12.9	133 30.1	23.9	Sabik	102 44.2	S15 41.7					
	11	285 41.8	296 26.5	42.7	358 52.4	20.8	236 38.8	12.9	148 32.8	24.0								
	12	300 44.3	311 26.6 S 4	41.4	13 52.8 S23	20.6	251 41.2 N17	12.9	163 35.4 N17	24.0	Schedar	350 11.9	N56 25.0					
	13	315 46.7	326 26.8	40.2	28 53.2	20.4	266 43.6	13.0	178 38.1	24.1	Shaula	96 59.4	S37 05.1					
	14	330 49.2	341 27.0	39.0	43 53.6	20.2	281 46.1	13.0	193 40.7	24.2	Sirius	258 57.5	S16 41.3					
	15	345 51.7	356 27.1	37.7	58 54.0	20.0	296 48.5	13.0	208 43.4	24.2	Spica	159 00.1	S11 02.5					
	16	0 54.1	11 27.3	36.5	73 54.5	19.8	311 50.9	13.0	223 46.1	24.3	Suhail	223 12.1	S43 20.5					
	17	15 56.6	26 27.5	35.3	88 54.9	19.6	326 53.3	13.1	238 48.7	24.4								
	18	30 59.0	41 27.6 S 4	34.0	103 55.3 S23	19.4	341 55.7 N17	13.1	253 51.4 N17	24.4	Vega	80 57.9	N38 45.7					
	19	46 01.5	56 27.8	32.8	118 55.7	19.2	356 58.1	13.1	268 54.0	24.5	Zuben'ubi	137 35.8	S15 56.8					
	20	61 04.0	71 28.0	31.5	133 56.1	19.0	12 00.5	13.1	283 56.7	24.5								
	21	76 06.4	86 28.1	30.3	148 56.5	18.8	27 02.9	13.2	298 59.4	24.6								
	22	91 08.9	101 28.3	29.1	163 56.9	18.6	42 05.4	13.2	314 02.0	24.7	Venus	12 05.7	15 14					
23	106 11.4	116 28.5	27.8	178 57.3	18.4	57 07.8	13.2	329 04.7	24.7	Marte	74 22.8	11 05						
										Júpiter	310 58.5	19 16						
										Saturno	222 44.2	1 12						

Pas. Mer. 16 00.3

v 0.1 d 1.2

v 0.4 d 0.2

v 2.4 d 0.0

v 2.7 d 0.1

	A. H. S.	Pas. Mer.
Venus	12 05.7	15 14
Marte	74 22.8	11 05
Júpiter	310 58.5	19 16
Saturno	222 44.2	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	19	20	21	22					
																h	m	h	m	h	m	h	m
19 M I E R C O L E S	177	20.4	S20	24.0	186	21.9	6.8	S16	54.0	5.8	59.2	N 72	07 48	09 31	■	10 05	09 49	09 39	09 30	
	01	192	20.2	23.5	200	47.7	6.8	16	48.2	5.8	59.2	N 70	07 35	09 03	11 06	09 25	09 26	09 25	09 23	
	02	207	20.0	23.0	215	13.5	7.0	16	42.4	6.0	59.2	68	07 25	08 41	10 10	08 58	09 08	09 13	09 17	
	03	222	19.8	22.4	229	39.5	6.9	16	36.4	6.1	59.2	66	07 16	08 24	09 38	08 37	08 53	09 04	09 12	
	04	237	19.6	21.9	244	05.4	7.0	16	30.3	6.2	59.1	64	07 08	08 10	09 14	08 20	08 41	08 56	09 08	
	05	252	19.4	21.4	258	31.4	7.1	16	24.1	6.3	59.1	62	07 01	07 58	08 55	08 06	08 31	08 49	09 05	
	06	267	19.2	S20	20.9	272	57.5	7.2	S16	17.8	6.4	59.1	60	06 55	07 48	08 39	07 54	08 22	08 43	09 01
	07	282	19.1	20.3	287	23.7	7.2	16	11.4	6.5	59.1	N 58	06 50	07 39	08 26	07 44	08 14	08 38	08 58	
	08	297	18.9	19.8	301	49.9	7.3	16	04.9	6.6	59.0	56	06 45	07 32	08 15	07 34	08 07	08 33	08 56	
	09	312	18.7	19.3	316	16.2	7.4	15	58.3	6.6	59.0	54	06 40	07 24	08 05	07 26	08 01	08 29	08 54	
	10	327	18.5	18.8	330	42.6	7.4	15	51.7	6.8	59.0	52	06 36	07 18	07 56	07 19	07 55	08 25	08 52	
	11	342	18.3	18.2	345	09.0	7.5	15	44.9	6.9	59.0	50	06 32	07 12	07 48	07 13	07 50	08 22	08 50	
	12	357	18.1	S20	17.7	359	35.5	7.6	S15	38.0	6.9	59.0	45	06 23	06 59	07 32	06 59	07 39	08 14	08 45
	13	12	17.9	17.2	14	02.1	7.6	15	31.1	7.1	58.9	N 40	06 15	06 48	07 18	06 47	07 30	08 08	08 42	
	14	27	17.7	16.7	28	28.7	7.7	15	24.0	7.1	58.9	35	06 08	06 39	07 06	06 37	07 22	08 02	08 39	
	15	42	17.5	16.1	42	55.4	7.8	15	16.9	7.2	58.9	30	06 01	06 30	06 56	06 29	07 15	07 58	08 36	
	16	57	17.3	15.6	57	22.2	7.8	15	09.7	7.3	58.9	20	05 48	06 14	06 38	06 14	07 03	07 49	08 32	
	17	72	17.1	15.1	71	49.0	7.9	15	02.4	7.4	58.8	N 10	05 34	06 00	06 22	06 01	06 53	07 42	08 28	
	18	87	17.0	S20	14.5	86	15.9	8.0	S14	55.0	7.5	58.8	0	05 20	05 45	06 07	05 48	06 43	07 35	08 24
	19	102	16.8	14.0	100	42.9	8.1	14	47.5	7.6	58.8	S 10	05 04	05 30	05 53	05 36	06 33	07 28	08 20	
	20	117	16.6	13.5	115	10.0	8.1	14	39.9	7.6	58.8	20	04 44	05 13	05 37	05 23	06 23	07 20	08 16	
	21	132	16.4	12.9	129	37.1	8.2	14	32.3	7.8	58.7	30	04 19	04 51	05 18	05 08	06 11	07 12	08 11	
	22	147	16.2	12.4	144	04.3	8.3	14	24.5	7.8	58.7	35	04 04	04 38	05 07	04 59	06 04	07 07	08 08	
23	162	16.0	11.9	158	31.6	8.3	14	16.7	7.8	58.7	40	03 44	04 23	04 54	04 49	05 56	07 02	08 05		
2000	177	15.8	S20	11.3	172	58.9	8.4	S14	08.9	8.0	58.7	45	03 20	04 04	04 39	04 37	05 46	06 55	08 02	
01	192	15.6	10.8	187	26.3	8.5	14	00.9	8.0	58.6	S 50	02 45	03 40	04 21	04 23	05 35	06 47	07 58		
02	207	15.5	10.3	201	53.8	8.6	13	52.9	8.2	58.6	52	02 27	03 29	04 12	04 16	05 30	06 44	07 56		
03	222	15.3	09.7	216	21.4	8.6	13	44.7	8.1	58.6	54	02 03	03 15	04 03	04 09	05 24	06 40	07 53		
04	237	15.1	09.2	230	49.0	8.7	13	36.6	8.3	58.5	56	01 30	02 59	03 51	04 01	05 18	06 35	07 51		
05	252	14.9	08.6	245	16.7	8.8	13	28.3	8.3	58.5	58	////	02 39	03 39	03 51	05 10	06 30	07 48		
06	267	14.7	S20	08.1	259	44.5	8.9	S13	20.0	8.4	58.5	S 60	////	02 14	03 24	03 41	05 02	06 25	07 46	
07	282	14.5	07.6	274	12.4	8.9	13	11.6	8.5	58.5	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna					
08	297	14.3	07.0	288	40.3	9.0	13	03.1	8.5	58.4	Civil	Náut.	19	20	21	22				
09	312	14.2	06.5	303	08.3	9.1	12	54.6	8.6	58.4	N 72	h m	h m	h m	h m	h m	h m	h m		
10	327	14.0	05.9	317	36.4	9.1	12	46.0	8.7	58.4	N 70	13 17	15 21	16 48	14 11	16 20	18 16	20 04		
11	342	13.8	05.4	332	04.5	9.3	12	37.3	8.7	58.4	68	14 13	15 42	16 58	15 17	16 59	18 38	20 13		
12	357	13.6	S20	04.8	346	32.8	9.3	S12	28.6	8.8	58.3	66	14 45	15 59	17 07	15 37	17 12	18 46	20 16	
13	12	13.4	04.3	1	01.1	9.3	12	19.8	8.9	58.3	64	15 09	16 13	17 15	15 53	17 23	18 52	20 19		
14	27	13.3	03.8	15	29.4	9.5	12	10.9	8.9	58.3	62	15 28	16 24	17 22	16 07	17 33	18 58	20 21		
15	42	13.1	03.2	29	57.9	9.5	12	02.0	8.9	58.2	60	15 43	16 35	17 28	16 18	17 41	19 03	20 23		
16	57	12.9	02.7	44	26.4	9.6	11	53.1	9.1	58.2	N 58	15 56	16 43	17 33	16 28	17 48	19 08	20 25		
17	72	12.7	02.1	58	55.0	9.7	11	44.0	9.0	58.2	56	16 08	16 51	17 38	16 36	17 54	19 11	20 26		
18	87	12.5	S20	01.6	73	23.7	9.7	S11	35.0	9.2	58.1	54	16 18	16 58	17 42	16 44	18 00	19 15	20 28	
19	102	12.3	01.0	87	52.4	9.8	11	25.8	9.2	58.1	52	16 26	17 05	17 47	16 51	18 05	19 18	20 29		
20	117	12.2	20	00.5	102	21.2	9.9	11	16.6	9.2	58.1	50	16 34	17 11	17 50	16 57	18 09	19 21	20 30	
21	132	12.0	19	59.9	116	50.1	9.9	11	07.4	9.3	58.1	45	16 51	17 23	17 59	17 10	18 19	19 27	20 33	
22	147	11.8	59.4	131	19.0	10.1	10	58.1	9.4	58.0	N 40	17 05	17 34	18 07	17 21	18 27	19 32	20 35		
23	162	11.6	58.8	145	48.1	10.1	10	48.7	9.4	58.0	35	17 16	17 44	18 15	17 30	18 34	19 37	20 37		
00	177	11.4	S19	58.3	160	17.2	10.1	S10	39.3	9.4	58.0	30	17 27	17 52	18 22	17 38	18 40	19 41	20 39	
01	192	11.3	57.7	174	46.3	10.3	10	29.9	9.5	57.9	20	17 44	18 08	18 35	17 52	18 51	19 47	20 41		
02	207	11.1	57.2	189	15.6	10.3	10	20.4	9.5	57.9	N 10	18 00	18 22	18 48	18 04	19 00	19 53	20 44		
03	222	10.9	56.6	203	44.9	10.3	10	10.9	9.6	57.9	0	18 15	18 37	19 02	18 15	19 08	19 59	20 46		
04	237	10.7	56.1	218	14.2	10.5	10	01.3	9.6	57.8	S 10	18 30	18 52	19 18	18 26	19 17	20 04	20 48		
05	252	10.6	55.5	232	43.7	10.5	9	51.7	9.7	57.8	20	18 45	19 09	19 38	18 38	19 26	20 10	20 51		
06	267	10.4	S19	54.9	247	13.2	10.6	S 9	42.0	9.7	57.8	30	19 04	19 30	20 02	18 51	19 36	20 16	20 53	
07	282	10.2	54.4	261	42.8	10.6	9	32.3	9.8	57.7	35	19 15	19 43	20 18	18 59	19 41	20 20	20 55		
08	297	10.0	53.8	276	12.4	10.8	9	22.5	9.8	57.7	40	19 27	19 58	20 37	19 08	19 48	20 24	20 57		
09	312	09.8	53.3	290	42.2	10.8	9	12.7	9.8	57.7	45	19 42	20 17	21 02	19 18	19 56	20 29	20 59		
10	327	09.7	52.7	305	12.0	10.8	9	02.9	9.8	57.7	S 50	20 00	20 41	21 35	19 30	20 05	20 34	21 01		
11	342	09.5	52.2	319	41.8	10.9	8	53.1	9.9	57.6	52	20 09	20 52	21 54	19 36	20 09	20 37	21 02		
12	357	09.3	S19	51.6	334	11.7	11.0	S 8	43.2	10.0	57.6	54	20 19	21 06	22 16	19 42	20 14	20 40	21 03	
13	12	09.1	51.0	348	41.7	11.1	8	33.2	9.9	57.6	56	20 29	21 22	22 48	19 49	20 19	20 43	21 05		
14	27	09.0	50.5	3	11.8	11.1	8	23.3	10.0	57.5	58	20 42	21 41	///	19 57	20 24	20 47	21 06		
15	42	08.8	49.9	17	41.9	11.2	8	13.3	10.0	57.5	S 60	20 57	22 05	///	20 06	20 31	20 51	21 08		
16	57	08.6	49.4	32	12.1	11.2	8	03.3	10.1	57.5	Día	SOL E.T. (-)		Pas. Mer.		Pas. Mer.		Edad.	Fase	
17	72	08.5	48.8	46	42.3	11.3	7	53.2	10.1	57.4	00 ^a	12 ^b	Mer.	Sup.	Inf.	Edad.	Fase			
18	87	08.3	S19	48.2	61	12.6	11.4	S 7	43.1	10.1	57.4	m s	m s	h m	h m	h m	d			
19	102	08.1	47.7	75	43.0	11.5	7	33.0	10.1	57.4	19	10 38	10 47	12 11	12 02	24 29	29			
20	117	07.9	47.1	90																

T. M. G.	ARIES			VENUS -4.1			MARTE +1.5			JUPITER -2.1			SATURNO +0.1			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.		
22 ^d 00	121 13.8	131 28.7 S 4	26.6	193 57.7 S23	18.2	72 10.2 N17	13.3	344 07.3 N17	24.8	Acamar	315 39.0 S40	24.1						
01	136 16.3	146 28.8	25.4	208 58.1	18.0	87 12.6	13.3	359 10.0	24.9	Achernar	335 47.2 S57	21.5						
02	151 18.8	161 29.0	24.1	223 58.5	17.8	102 15.0	13.3	14 12.7	24.9	Acrux	173 39.5 S62	58.1						
03	166 21.2	176 29.2 ..	22.9	238 58.9 ..	17.6	117 17.4 ..	13.3	29 15.3 ..	25.0	Adhara	255 33.6 S28	56.7						
04	181 23.7	191 29.4	21.7	253 59.3	17.4	132 19.8	13.4	44 18.0	25.0	Aldebaran	291 20.6 N16	27.8						
05	196 26.2	206 29.5	20.4	268 59.7	17.2	147 22.2	13.4	59 20.6	25.1									
06	211 28.6	221 29.7 S 4	19.2	284 00.1 S23	17.0	162 24.6 N17	13.4	74 23.3 N17	25.2	Alioth	166 44.5 N56	04.7						
07	226 31.1	236 29.9	18.0	299 00.5	16.8	177 27.0	13.4	89 26.0	25.2	Alkaid	153 20.4 N49	25.3						
08	241 33.5	251 30.1	16.7	314 00.9	16.6	192 29.5	13.5	104 28.6	25.3	Al Na'ir	28 18.5 S47	04.4						
S 09	256 36.0	266 30.3 ..	15.5	329 01.3 ..	16.4	207 31.9 ..	13.5	119 31.3 ..	25.4	Alnilam	276 13.9 S 1	13.1						
A 10	271 38.5	281 30.4	14.3	344 01.7	16.2	222 34.3	13.5	134 33.9	25.4	Alphard	218 22.6 S 8	33.7						
B 11	286 40.9	296 30.6	13.0	359 02.1	15.9	237 36.7	13.5	149 36.6	25.5									
A 12	301 43.4	311 30.8 S 4	11.8	14 02.5 S23	15.7	252 39.1 N17	13.6	164 39.3 N17	25.5	Alphecca	126 34.3 N26	47.3						
D 13	316 45.9	326 31.0	10.6	29 02.9	15.5	267 41.5	13.6	179 41.9	25.6	Alpheratz	358 12.0 N28	58.0						
O 14	331 48.3	341 31.2	09.3	44 03.3	15.3	282 43.9	13.6	194 44.6	25.7	Altair	62 35.2 N 8	48.5						
15	346 50.8	356 31.4 ..	08.1	59 03.7 ..	15.1	297 46.3 ..	13.6	209 47.2 ..	25.7	Ankaa	353 42.9 S42	26.0						
16	1 53.3	11 31.6	06.9	74 04.1	14.9	312 48.7	13.7	224 49.9	25.8	Antares	113 00.1 S26	22.8						
17	16 55.7	26 31.7	05.6	89 04.5	14.7	327 51.1	13.7	239 52.6	25.9									
18	31 58.2	41 31.9 S 4	04.4	104 04.9 S23	14.5	342 53.5 N17	13.7	254 55.2 N17	25.9	Arcturus	146 20.7 N19	17.9						
19	47 00.7	56 32.1	03.1	119 05.4	14.3	357 55.9	13.8	269 57.9	26.0	Atria	108 26.8 S68	58.9						
20	62 03.1	71 32.3	01.9	134 05.8	14.1	12 58.3	13.8	285 00.5	26.0	Avior	234 28.5 S59	26.3						
21	77 05.6	86 32.5	4 00.7	149 06.2 ..	13.8	28 00.7 ..	13.8	300 03.2 ..	26.1	Bellatrix	279 01.1 N 6	19.6						
22	92 08.0	101 32.7	3 59.4	164 06.6	13.6	43 03.1	13.8	315 05.9	26.2	Betelgeuse	271 30.6 N 7	24.1						
23	107 10.5	116 32.9	58.2	179 07.0	13.4	58 05.5	13.9	330 08.5	26.2									
23 ^d 00	122 13.0	131 33.1 S 3	57.0	194 07.4 S23	13.2	73 07.9 N17	13.9	345 11.2 N17	26.3	Canopus	264 07.8 S52	41.3						
01	137 15.4	146 33.3	55.7	209 07.8	13.0	88 10.3	13.9	0 13.9	26.4	Capella	281 14.5 N45	58.6						
02	152 17.9	161 33.5	54.5	224 08.2	12.8	103 12.7	14.0	15 16.5	26.4	Deneb	49 50.6 N45	12.0						
03	167 20.4	176 33.7 ..	53.3	239 08.6 ..	12.6	118 15.1 ..	14.0	30 19.2 ..	26.5	Denebola	183 01.3 N14	41.8						
04	182 22.8	191 33.9	52.0	254 09.0	12.3	133 17.5	14.0	45 21.8	26.5	Diphda	349 23.5 S18	06.9						
05	197 25.3	206 34.1	50.8	269 09.4	12.1	148 19.9	14.0	60 24.5	26.6									
06	212 27.8	221 34.3 S 3	49.6	284 09.8 S23	11.9	163 22.3 N17	14.1	75 27.2 N17	26.7	Dubhe	194 24.7 N61	52.2						
07	227 30.2	236 34.5	48.3	299 10.2	11.7	178 24.7	14.1	90 29.8	26.7	Elnath	278 46.9 N28	35.3						
D 08	242 32.7	251 34.7	47.1	314 10.6	11.5	193 27.1	14.1	105 32.5	26.8	Eltanin	90 59.3 N51	29.4						
09	257 35.1	266 34.9 ..	45.8	329 11.0 ..	11.2	208 29.5 ..	14.2	120 35.1 ..	26.9	Enif	34 14.3 N 9	46.2						
I 10	272 37.6	281 35.1	44.6	344 11.4	11.0	223 31.9	14.2	135 37.8	26.9	Fomalhaut	15 54.4 S29	44.7						
M 11	287 40.1	296 35.3	43.4	359 11.8	10.8	238 34.3	14.2	150 40.5	27.0									
N 12	302 42.5	311 35.5 S 3	42.1	14 12.2 S23	10.6	253 36.7 N17	14.2	165 43.1 N17	27.0	Gacrux	172 31.1 S56	58.9						
O 13	317 45.0	326 35.7	40.9	29 12.6	10.4	268 39.1	14.3	180 45.8	27.1	Gienah	176 20.3 S17	24.9						
14	332 47.5	341 35.9	39.7	44 13.0	10.1	283 41.5	14.3	195 48.5	27.2	Hadar	149 26.7 S60	15.5						
15	347 49.9	356 36.1 ..	38.4	59 13.4 ..	09.9	298 43.9 ..	14.3	210 51.1 ..	27.2	Hamal	328 31.6 N23	21.3						
16	2 52.4	11 36.3	37.2	74 13.9	09.7	313 46.3	14.4	225 53.8	27.3	Kaus Aust.	84 20.4 S34	23.7						
17	17 54.9	26 36.5	36.0	89 14.3	09.5	328 48.7	14.4	240 56.4	27.4									
18	32 57.3	41 36.7 S 3	34.7	104 14.7 S23	09.3	343 51.1 N17	14.4	255 59.1 N17	27.4	Kochab	137 19.3 N74	14.7						
19	47 59.8	56 36.9	33.5	119 15.1	09.0	358 53.5	14.4	271 01.8	27.5	Markab	14 05.8 N15	05.0						
20	63 02.3	71 37.1	32.3	134 15.5	08.8	13 55.9	14.5	286 04.4	27.5	Menkar	314 43.6 N 3	59.9						
21	78 04.7	86 37.4 ..	31.0	149 15.9 ..	08.6	28 58.3 ..	14.5	301 07.1 ..	27.6	Menkent	148 39.8 S36	15.3						
22	93 07.2	101 37.6	29.8	164 16.3	08.4	44 00.7	14.5	316 09.8	27.7	Miaplacidus	221 44.4 S69	37.4						
23	108 09.6	116 37.8	28.5	179 16.7	08.1	59 03.1	14.6	331 12.4	27.7									
24 ^d 00	123 12.1	131 38.0 S 3	27.3	194 17.1 S23	07.9	74 05.5 N17	14.6	346 15.1 N17	27.8	Mirfak	309 19.4 N49	47.0						
01	138 14.6	146 38.2	26.1	209 17.5	07.7	89 07.9	14.6	1 17.7	27.9	Nunki	76 32.5 S26	19.5						
02	153 17.0	161 38.4	24.8	224 17.9	07.5	104 10.2	14.7	16 20.4	27.9	Peacock	54 02.9 S56	48.5						
03	168 19.5	176 38.6 ..	23.6	239 18.3 ..	07.2	119 12.6 ..	14.7	31 23.1 ..	28.0	Pollux	244 00.8 N28	04.8						
04	183 22.0	191 38.9	22.4	254 18.7	07.0	134 15.0	14.7	46 25.7	28.0	Procyon	245 28.0 N 5	16.9						
05	198 24.4	206 39.1	21.1	269 19.1	06.8	149 17.4	14.7	61 28.4	28.1									
06	213 26.9	221 39.3 S 3	19.9	284 19.5 S23	06.6	164 19.8 N17	14.8	76 31.1 N17	28.2	Rasalhague	96 32.1 N12	34.6						
07	228 29.4	236 39.5	18.7	299 19.9	06.3	179 22.2	14.8	91 33.7	28.2	Regulus	208 12.3 N12	04.6						
08	243 31.8	251 39.7	17.4	314 20.3	06.1	194 24.6	14.8	106 36.4	28.3	Rigel	281 38.1 S 8	13.9						
09	258 34.3	266 40.0 ..	16.2	329 20.7 ..	05.9	209 27.0 ..	14.9	121 39.0 ..	28.4	Rigil Kent.	140 29.1 S60	44.1						
L 10	273 36.8	281 40.2	15.0	344 21.2	05.6	224 29.4	14.9	136 41.7	28.4	Sabik	102 44.2 S15	41.8						
11	288 39.2	296 40.4	13.7	359 21.6	05.4	239 31.8	14.9	151 44.4	28.5									
S 12	303 41.7	311 40.6 S 3	12.5	14 22.0 S23	05.2	254 34.2 N17	15.0	166 47.0 N17	28.5	Schedar	350 11.9 N56	25.0						
13	318 44.1	326 40.9	11.2	29 22.4	05.0	269 36.5	15.0	181 49.7	28.6	Shaula	96 59.4 S37	05.1						
14	333 46.6	341 41.1	10.0	44 22.8	04.7	284 38.9	15.0	196 52.4	28.7	Sirius	258 57.5 S16	41.3						
15	348 49.1	356 41.3 ..	08.8	59 23.2 ..	04.5	299 41.3 ..	15.1	211 55.0 ..	28.7	Spica	159 00.0 S11	02.5						
16	3 51.5	11 41.5	07.5	74 23.6	04.3	314 43.7	15.1	226 57.7	28.8	Suhail	223 12.1 S43	20.5						
17	18 54.0	26 41.8	06.3	89 24.0	04.0	329 46.1	15.1	242 00.3	28.9									
18	33 56.5	41 42.0 S 3	05.1	104 24.4 S23	03.8	344 48.5 N17	15.2	257 03.0 N17	28.9	Vega	80 57.9 N38	45.7						
19	48 58.9	56 42.2	03.8	119 24.8	03.6	359 50.9	15.2	272 05.7	29.0	Zuben'ubi	137 35.8 S15	56.8						
20	64 01.4	71 42.4	02.6	134 25.2	03.3	14 53.3	15.2	287 08.3	29.1									
21	79 03.9	86 42.7 ..	01.4	149 25.6 ..	03.1	29 55.6 ..	15.2	302 11.0 ..	29.1									
22	94 06.3	101 42.9	3 00.1	164 26.0	02.9	44 58.0	15.3	317 13.7	29.2	Venus	9 20.1	15 14						
23	109 08.8	116 43.1	2 58.9	179 26.4	02.6	60 00.4	15.3	332 16.3	29.2	Marte	71 54.4	11 03						
										Júpiter	310 55.0	19 04						
										Saturno	222 58.2	0 59						
Pas. Mer.	h m	v 0.2	d 1.2	v 0.4	d 0.2	v 2.4	d 0.0	v 2.7	d 0.1									

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	22	23	24	25	
	° ' "	°	° ' "	' "	°	' "		' "	h m	h m	h m	h m	h m	h m	h m	
22 ^d 00	177 07.2	S19 44.8	148 15.8	11.8	S 6	42.1	10.3	57.2	N 72	07 39	09 18	09 30	09 23	09 15	09 08	
01	192 07.1	44.3	162 46.6	11.8	6	31.8	10.2	57.2	N 70	07 28	08 53	09 23	09 21	09 20	09 18	
02	207 06.9	43.7	177 17.4	11.9	6	21.6	10.3	57.1	68	07 18	08 33	09 17	09 20	09 23	09 26	
03	222 06.7	43.1	191 48.3	11.9	6	11.3	10.4	57.1	66	07 10	08 17	09 28	09 12	09 19	09 26	
04	237 06.6	42.6	206 19.2	12.0	6	00.9	10.3	57.1	64	07 03	08 04	09 06	09 08	09 19	09 28	
05	252 06.4	42.0	220 50.2	12.0	5	50.6	10.3	57.0	62	06 57	07 53	08 48	09 05	09 18	09 31	
06	267 06.2	S19 41.4	235 21.2	12.1	S 5	40.3	10.4	57.0	60	06 51	07 44	08 34	09 01	09 17	09 32	
07	282 06.1	40.8	249 52.3	12.2	5	29.9	10.4	57.0	N 58	06 46	07 35	08 21	08 58	09 17	09 34	
08	297 05.9	40.3	264 23.5	12.2	5	19.5	10.4	57.0	56	06 42	07 28	08 11	08 56	09 16	09 36	
09	312 05.7	39.7	278 54.7	12.2	5	09.1	10.4	56.9	54	06 37	07 21	08 01	08 54	09 16	09 37	
S 10	327 05.6	39.1	293 25.9	12.3	4	58.7	10.4	56.9	52	06 33	07 15	07 53	08 52	09 15	09 38	
A 11	342 05.4	38.6	307 57.2	12.4	4	48.3	10.4	56.9	50	06 30	07 09	07 45	08 50	09 15	09 39	
A 12	357 05.2	S19 38.0	322 28.6	12.4	S 4	37.9	10.4	56.8	45	06 21	06 57	07 29	08 45	09 14	09 42	
D 13	12 05.1	37.4	337 00.0	12.5	4	27.5	10.5	56.8	N 40	06 14	06 47	07 16	08 42	09 14	09 44	
O 14	27 04.9	36.8	351 31.5	12.5	4	17.0	10.4	56.8	35	06 07	06 38	07 05	08 39	09 13	09 46	
15	42 04.7	36.3	6 03.0	12.6	4	06.6	10.5	56.7	30	06 00	06 29	06 55	08 36	09 13	09 47	
16	57 04.6	35.7	20 34.6	12.6	3	56.1	10.4	56.7	20	05 47	06 14	06 38	08 32	09 12	09 50	
17	72 04.4	35.1	35 06.2	12.7	3	45.7	10.5	56.7	N 10	05 35	06 00	06 23	08 28	09 11	09 53	
18	87 04.2	S19 34.5	49 37.9	12.7	S 3	35.2	10.5	56.6	0	05 21	05 46	06 08	08 24	09 10	09 55	
19	102 04.1	33.9	64 09.6	12.8	3	24.7	10.5	56.6	S 10	05 05	05 32	05 54	08 20	09 10	09 58	
20	117 03.9	33.4	78 41.4	12.8	3	14.2	10.4	56.6	20	04 47	05 15	05 38	08 16	09 09	10 00	
21	132 03.7	32.8	93 13.2	12.8	3	03.8	10.5	56.5	30	04 23	04 54	05 21	08 11	09 08	10 03	
22	147 03.6	32.2	107 45.0	13.0	2	53.3	10.5	56.5	35	04 07	04 42	05 10	08 08	09 08	10 05	
23	162 03.4	31.6	122 17.0	12.9	2	42.8	10.5	56.5	40	03 49	04 27	04 58	08 05	09 07	10 07	
23 00	177 03.2	S19 31.0	136 48.9	13.0	S 2	32.3	10.5	56.4	45	03 25	04 09	04 44	08 02	09 06	10 09	
01	192 03.1	30.5	151 20.9	13.0	2	21.8	10.4	56.4	S 50	02 52	03 46	04 26	07 58	09 06	10 12	
02	207 02.9	29.9	165 52.9	13.1	2	11.4	10.5	56.4	52	02 35	03 35	04 18	07 56	09 05	10 13	
03	222 02.8	29.3	180 25.0	13.1	2	00.9	10.5	56.4	54	02 13	03 22	04 08	07 53	09 05	10 15	
04	237 02.6	28.7	194 57.1	13.2	1	50.4	10.5	56.3	56	01 44	03 07	03 58	07 51	09 05	10 16	
05	252 02.4	28.1	209 29.3	13.2	1	39.9	10.4	56.3	58	00 54	02 48	03 46	07 48	09 04	10 18	
06	267 02.3	S19 27.5	224 01.5	13.3	S 1	29.5	10.5	56.3	S 60	///	02 25	03 32	07 46	09 04	10 20	
07	282 02.1	26.9	238 33.8	13.3	1	19.0	10.4	56.2	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
08	297 02.0	26.4	253 06.1	13.3	1	08.6	10.5	56.2			Civil	Náut.	22	23	24	25
09	312 01.8	25.8	267 38.4	13.3	0	58.1	10.4	56.2					h m	h m	h m	h m
10	327 01.6	25.2	282 10.7	13.4	0	47.7	10.4	56.1	N 72	13 43	15 07	16 46	20 04	21 47	23 27	25 06
11	342 01.5	24.6	296 43.1	13.5	0	37.3	10.5	56.1	N 70	14 28	15 32	16 57	20 09	21 45	23 19	24 51
12	357 01.3	S19 24.0	311 15.6	13.5	S 0	26.8	10.4	56.1	68	14 57	16 02	17 07	20 13	21 44	23 12	24 39
13	12 01.2	23.4	325 48.1	13.5	0	16.4	10.4	56.1	66	15 19	16 20	17 22	20 19	21 42	23 02	24 21
14	27 01.0	22.8	340 20.6	13.5	S 0	06.0	10.4	56.0	64	15 36	16 31	17 28	20 21	21 41	22 58	24 14
15	42 00.8	22.2	354 53.1	13.6	N 0	04.4	10.3	56.0	62	15 51	16 41	17 33	20 23	21 40	22 55	24 08
16	57 00.7	21.6	9 25.7	13.6	0	14.7	10.4	56.0	60	15 31	16 41	17 33	20 23	21 40	22 55	24 08
17	72 00.5	21.0	23 58.3	13.6	0	25.1	10.3	55.9	N 58	16 03	16 49	17 38	20 25	21 40	22 52	24 03
18	87 00.4	S19 20.4	38 30.9	13.7	N 0	35.4	10.4	55.9	56	16 14	16 57	17 43	20 26	21 39	22 49	23 58
19	102 00.2	19.9	53 03.6	13.7	0	45.8	10.3	55.9	54	16 23	17 03	17 47	20 28	21 39	22 47	23 54
20	117 00.1	19.3	67 36.3	13.7	0	56.1	10.3	55.8	52	16 31	17 09	17 51	20 29	21 38	22 45	23 50
21	131 59.9	18.7	82 09.0	13.8	1	06.4	10.3	55.8	50	16 39	17 15	17 55	20 30	21 38	22 43	23 46
22	146 59.8	18.1	96 41.8	13.8	1	16.7	10.2	55.8	45	16 55	17 27	18 03	20 33	21 37	22 39	23 39
23	161 59.6	17.5	111 14.6	13.8	1	26.9	10.3	55.8	N 40	17 08	17 37	18 10	20 35	21 36	22 35	23 33
24 00	176 59.4	S19 16.9	125 47.4	13.8	N 1	37.2	10.2	55.7	35	17 19	17 47	18 17	20 37	21 35	22 32	23 27
01	191 59.3	16.3	140 20.2	13.9	1	47.4	10.2	55.7	30	17 29	17 55	18 24	20 39	21 35	22 29	23 22
02	206 59.1	15.7	154 53.1	13.9	1	57.6	10.2	55.7	20	17 46	18 10	18 36	20 41	21 34	22 24	23 14
03	221 59.0	15.1	169 26.0	13.9	2	07.8	10.2	55.7	N 10	18 01	18 24	18 49	20 44	21 33	22 20	23 07
04	236 58.8	14.5	183 58.9	14.0	2	18.0	10.1	55.6	0	18 16	18 37	19 03	20 46	21 32	22 16	23 00
05	251 58.7	13.9	198 31.9	13.9	2	28.1	10.2	55.6	S 10	18 30	18 52	19 18	20 48	21 31	22 13	22 54
06	266 58.5	S19 13.3	213 04.8	14.0	N 2	38.3	10.1	55.6	20	18 45	19 09	19 37	20 51	21 30	22 08	22 47
07	281 58.4	12.7	227 37.8	14.0	2	48.4	10.1	55.5	30	19 03	19 29	20 01	20 53	21 29	22 04	22 39
08	296 58.2	12.1	242 10.8	14.1	2	58.5	10.0	55.5	35	19 13	19 42	20 16	20 55	21 28	22 01	22 34
09	311 58.1	11.5	256 43.9	14.0	3	08.5	10.1	55.5	40	19 25	19 56	20 34	20 57	21 28	21 58	22 29
L 10	326 57.9	10.9	271 16.9	14.1	3	18.6	10.0	55.5	45	19 39	20 14	20 58	20 59	21 27	21 54	22 23
U 11	341 57.8	10.3	285 50.0	14.1	3	28.6	10.0	55.4	S 50	19 57	20 37	21 30	21 01	21 26	21 50	22 15
E 12	356 57.6	S19 09.7	300 23.1	14.1	N 3	38.6	9.9	55.4	52	20 05	20 48	21 47	21 02	21 25	21 48	22 12
S 13	11 57.5	09.1	314 56.2	14.1	3	48.5	10.0	55.4	54	20 14	21 00	22 08	21 03	21 25	21 46	22 08
14	26 57.3	08.5	329 29.3	14.1	3	58.5	9.9	55.4	56	20 25	21 15	22 36	21 05	21 24	21 44	22 04
15	41 57.2	07.8	344 02.4	14.2	4	08.4	9.8	55.3	58	20 37	21 33	23 21	21 06	21 24	21 41	22 00
16	56 57.0	07.2	358 35.6	14.2	4	18.2	9.8	55.3	S 60	20 51	21 56	///	21 08	21 23	21 38	21 55
17	71 56.9	06.6	13 08.8	14.2	4	28.1	9.8	55.3	Lat.	SOL		LUNA				
18	86 56.7	S19 06.0	27 42.0	14.2	N 4	37.9	9.8	55.3		E.T. (-)	Pas. Mer.	Pas. Mer.	Mer. Inf.	Edad.	Fase	
19	101 56.6	05														

T. M. G.	ARIES		VENUS -4.1		MARTE +1.5		JUPITER -2.1		SATURNO +0.1		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
25	00	124 11.2	131 43.4 S	2 57.6	194 26.8 S	23 02.4	75 02.8 N	17 15.3	347 19.0 N	17 29.3	Acomar	315 39.0 S	40 24.1
	01	139 13.7	146 43.6	56.4	209 27.3	02.2	90 05.2	15.4	2 21.7	29.4	Achernar	335 47.3 S	57 21.5
	02	154 16.2	161 43.9	55.2	224 27.7	01.9	105 07.6	15.4	17 24.3	29.4	Acrux	173 39.5 S	62 58.2
	03	169 18.6	176 44.1	53.9	239 28.1	01.7	120 09.9	15.4	32 27.0	29.5	Adhara	255 33.7 S	28 56.7
	04	184 21.1	191 44.3	52.7	254 28.5	01.4	135 12.3	15.5	47 29.6	29.6	Aldebaran	291 20.6 N	16 27.8
	05	199 23.6	206 44.6	51.5	269 28.9	01.2	150 14.7	15.5	62 32.3	29.6			
	06	214 26.0	221 44.8 S	2 50.2	284 29.3 S	23 01.0	165 17.1 N	17 15.5	77 35.0 N	17 29.7	Alioth	166 44.5 N	56 04.7
	07	229 28.5	236 45.0	49.0	299 29.7	00.7	180 19.5	15.6	92 37.6	29.7	Alkaid	153 20.4 N	49 25.3
	08	244 31.0	251 45.3	47.8	314 30.1	00.5	195 21.9	15.6	107 40.3	29.8	Al Na'ir	28 18.5 S	47 04.4
	M 09	259 33.4	266 45.5	46.5	329 30.5	00.2	210 24.2	15.6	122 43.0	29.9	Alnilam	276 13.9 S	1 13.1
	A 10	274 35.9	281 45.8	45.3	344 30.9	23 00.0	225 26.6	15.7	137 45.6	29.9	Alphard	218 22.6 S	8 33.7
	R 11	289 38.4	296 46.0	44.1	359 31.3	22 59.8	240 29.0	15.7	152 48.3	30.0			
	T 12	304 40.8	311 46.3 S	2 42.8	14 31.7 S	22 59.5	255 31.4 N	17 15.7	167 51.0 N	17 30.1	Alphecca	126 34.3 N	26 47.3
	E 13	319 43.3	326 46.5	41.6	29 32.1	59.3	270 33.8	15.8	182 53.6	30.1	Alpheratz	358 12.0 N	28 58.0
	S 14	334 45.7	341 46.8	40.3	44 32.5	59.0	285 36.1	15.8	197 56.3	30.2	Altair	62 35.2 N	8 48.5
	15	349 48.2	356 47.0	39.1	59 33.0	58.8	300 38.5	15.8	212 58.9	30.2	Ankaa	353 42.9 S	42 26.0
	16	4 50.7	11 47.2	37.9	74 33.4	58.6	315 40.9	15.9	228 01.6	30.3	Antares	113 00.0 S	26 22.8
	17	19 53.1	26 47.5	36.6	89 33.8	58.3	330 43.3	15.9	243 04.3	30.4			
	18	34 55.6	41 47.7 S	2 35.4	104 34.2 S	58.1	345 45.7 N	17 15.9	258 06.9 N	17 30.4	Arcturus	146 20.7 N	19 17.9
	19	49 58.1	56 48.0	34.2	119 34.6	57.8	0 48.0	16.0	273 09.6	30.5	Atria	108 26.8 S	68 58.9
	20	65 00.5	71 48.2	32.9	134 35.0	57.6	15 50.4	16.0	288 12.3	30.6	Avior	234 28.5 S	59 26.3
	21	80 03.0	86 48.5	31.7	149 35.4	57.3	30 52.8	16.0	303 14.9	30.6	Bellatrix	279 01.1 N	6 19.6
	22	95 05.5	101 48.8	30.5	164 35.8	57.1	45 55.2	16.1	318 17.6	30.7	Betelgeuse	271 30.6 N	7 24.0
23	110 07.9	116 49.0	29.2	179 36.2	56.8	60 57.5	16.1	333 20.3	30.8				
26	00	125 10.4	131 49.3 S	2 28.0	194 36.6 S	22 56.6	75 59.9 N	17 16.1	348 22.9 N	17 30.8	Canopus	264 07.8 S	52 41.3
	01	140 12.9	146 49.5	26.8	209 37.0	56.4	91 02.3	16.2	3 25.6	30.9	Capella	281 14.5 N	45 58.6
	02	155 15.3	161 49.8	25.5	224 37.4	56.1	106 04.7	16.2	18 28.3	30.9	Deneb	49 50.6 N	45 12.0
	03	170 17.8	176 50.0	24.3	239 37.9	55.9	121 07.0	16.2	33 30.9	31.0	Denebola	183 01.3 N	14 41.8
	04	185 20.2	191 50.3	23.1	254 38.3	55.6	136 09.4	16.3	48 33.6	31.1	Diphda	349 23.5 S	18 06.9
	05	200 22.7	206 50.5	21.8	269 38.7	55.4	151 11.8	16.3	63 36.2	31.1			
	06	215 25.2	221 50.8 S	2 20.6	284 39.1 S	55.1	166 14.2 N	17 16.4	78 38.9 N	17 31.2	Dubhe	194 24.7 N	61 52.2
	07	230 27.6	236 51.1	19.3	299 39.5	54.9	181 16.5	16.4	93 41.6	31.3	Elnath	278 46.9 N	28 35.3
	08	245 30.1	251 51.3	18.1	314 39.9	54.6	196 18.9	16.4	108 44.2	31.3	Eltanin	90 59.3 N	51 29.4
	M 09	260 32.6	266 51.6	16.9	329 40.3	54.4	211 21.3	16.5	123 46.9	31.4	Enif	34 14.3 N	9 46.2
	A 10	275 35.0	281 51.9	15.6	344 40.7	54.1	226 23.7	16.5	138 49.6	31.4	Fomalhaut	15 54.4 S	29 44.7
	R 11	290 37.5	296 52.1	14.4	359 41.1	53.9	241 26.0	16.5	153 52.2	31.5			
	12	305 40.0	311 52.4 S	2 13.2	14 41.5 S	53.6	256 28.4 N	17 16.6	168 54.9 N	17 31.6	Gacrux	172 31.1 S	56 58.9
	13	320 42.4	326 52.7	11.9	29 41.9	53.4	271 30.8	16.6	183 57.6	31.6	Gienah	176 20.3 S	17 24.9
	14	335 44.9	341 52.9	10.7	44 42.4	53.1	286 33.2	16.6	199 00.2	31.7	Hadar	149 26.7 S	60 15.5
	15	350 47.4	356 53.2	09.5	59 42.8	52.9	301 35.5	16.7	214 02.9	31.8	Hamal	328 31.7 N	23 21.3
	16	5 49.8	11 53.5	08.2	74 43.2	52.6	316 37.9	16.7	229 05.6	31.8	Kaus Aust.	84 20.4 S	34 23.6
	17	20 52.3	26 53.7	07.0	89 43.6	52.3	331 40.3	16.7	244 08.2	31.9			
	18	35 54.7	41 54.0 S	2 05.8	104 44.0 S	52.1	346 42.6 N	17 16.8	259 10.9 N	17 31.9	Kochab	137 19.2 N	74 14.7
	19	50 57.2	56 54.3	04.5	119 44.4	51.8	1 45.0	16.8	274 13.6	32.0	Markab	14 05.8 N	15 05.0
	20	65 59.7	71 54.5	03.3	134 44.8	51.6	16 47.4	16.8	289 16.2	32.1	Menkar	314 43.6 N	3 59.9
	21	81 02.1	86 54.8	02.1	149 45.2	51.3	31 49.7	16.9	304 18.9	32.1	Menkent	148 39.8 S	36 15.3
	22	96 04.6	101 55.1	2 00.8	164 45.6	51.1	46 52.1	16.9	319 21.6	32.2	Miaplacidus	221 44.4 S	69 37.4
23	111 07.1	116 55.4	1 59.6	179 46.0	50.8	61 54.5	17.0	334 24.2	32.3				
27	00	126 09.5	131 55.6 S	1 58.4	194 46.4 S	22 50.6	76 56.8 N	17 17.0	349 26.9 N	17 32.3	Mirfak	309 19.4 N	49 47.0
	01	141 12.0	146 55.9	57.1	209 46.9	50.3	91 59.2	17.0	4 29.6	32.4	Nunki	76 32.5 S	26 19.5
	02	156 14.5	161 56.2	55.9	224 47.3	50.0	107 01.6	17.1	19 32.2	32.5	Peacock	54 02.9 S	56 48.5
	03	171 16.9	176 56.5	54.7	239 47.7	49.8	122 03.9	17.1	34 34.9	32.5	Pollux	244 00.8 N	28 04.8
	04	186 19.4	191 56.7	53.4	254 48.1	49.5	137 06.3	17.1	49 37.5	32.6	Procyon	245 28.0 N	5 16.9
	05	201 21.8	206 57.0	52.2	269 48.5	49.3	152 08.7	17.2	64 40.2	32.6			
	06	216 24.3	221 57.3 S	1 51.0	284 48.9 S	49.0	167 11.0 N	17.2	79 42.9 N	17 32.7	Rasalhague	96 32.1 N	12 34.5
	07	231 26.8	236 57.6	49.7	299 49.3	48.8	182 13.4	17.3	94 45.5	32.8	Regulus	208 12.3 N	12 04.6
	08	246 29.2	251 57.9	48.5	314 49.7	48.5	197 15.8	17.3	109 48.2	32.8	Rigel	281 38.1 S	8 13.9
	J 09	261 31.7	266 58.2	47.3	329 50.1	48.2	212 18.1	17.3	124 50.9	32.9	Rigel Kent.	140 29.1 S	60 44.1
	U 10	276 34.2	281 58.4	46.0	344 50.5	48.0	227 20.5	17.4	139 53.5	33.0	Sabik	102 44.2 S	15 41.8
	E 11	291 36.6	296 58.7	44.8	359 51.0	47.7	242 22.9	17.4	154 56.2	33.0			
	12	306 39.1	311 59.0 S	1 43.6	14 51.4 S	47.4	257 25.2 N	17.4	169 58.9 N	17 33.1	Schedar	350 11.9 N	56 25.0
	13	321 41.6	326 59.3	42.3	29 51.8	47.2	272 27.6	17.5	185 01.5	33.1	Shaula	96 59.4 S	37 05.1
	S 14	336 44.0	341 59.6	41.1	44 52.2	46.9	287 30.0	17.5	200 04.2	33.2	Sirius	258 57.5 S	16 41.3
	15	351 46.5	356 59.9	39.9	59 52.6	46.7	302 32.3	17.6	215 06.9	33.3	Spica	159 00.0 S	11 02.6
	16	6 49.0	12 00.2	38.6	74 53.0	46.4	317 34.7	17.6	230 09.5	33.3	Suhail	223 12.1 S	43 20.5
	17	21 51.4	27 00.5	37.4	89 53.4	46.1	332 37.0	17.6	245 12.2	33.4			
	18	36 53.9	42 00.8 S	1 36.2	104 53.8 S	45.9	347 39.4 N	17.7	260 14.9 N	17 33.5	Vega	80 57.9 N	38 45.7
	19	51 56.3	57 01.0	34.9	119 54.2	45.6	2 41.8	17.7	275 17.5	33.5	Zuben'ubi	137 35.8 S	15 56.8
	20	66 58.8	72 01.3	33.7	134 54.7	45.3	17 44.1	17.7	290 20.2	33.6			
	21	82 01.3	87 01.6	32.5	149 55.1	45.1	32 46.5	17.8	305 22.9	33.7			
	22	97 03.7	102 01.9	31.2	164 55.5	44.8	47 48.9	17.8	320 25.5	33.7			
23	112 06.2	117 02.2	30.0	179 55.9	44.5	62 51.2	17.9	335 28.2	33.8				
Pas. Mer.		h m		v 0.3 d 1.2		v 0.4 d 0.3		v 2.4 d 0.0		v 2.7 d 0.1		A. H. S. Pas. Mer.	
												o r h m	
												Venus 6 38.9 15 12	
												Marte 69 26.2 11 01	
												Júpiter 310 49.5 18 53	
												Saturno 223 12.5 0 46	

T. M. G.	ARIES		VENUS -4.1		MARTE +1.5		JUPITER -2.1		SATURNO +0.1		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
28 ^d 00	127 08.7	132 02.5 S	1 28.8	194 56.3 S	22 44.3	77 53.6 N	17 17.9	350 30.9 N	17 33.8	Acamar	315 39.1 S	40 24.1	
01	142 11.1	147 02.8	27.5	209 56.7	44.0	92 55.9	17.9	5 33.5	33.9	Achernar	335 47.3 S	57 21.5	
02	157 13.6	162 03.1	26.3	224 57.1	43.7	107 58.3	18.0	20 36.2	34.0	Acrux	173 39.5 S	62 58.2	
03	172 16.1	177 03.4	25.1	239 57.5	43.5	123 00.6	18.0	35 38.9	34.0	Adhara	255 33.7 S	28 56.7	
04	187 18.5	192 03.7	23.8	254 58.0	43.2	138 03.0	18.0	50 41.5	34.1	Aldebaran	291 20.6 N	16 27.8	
05	202 21.0	207 04.0	22.6	269 58.4	42.9	153 05.4	18.1	65 44.2	34.2				
06	217 23.5	222 04.3 S	1 21.4	284 58.8 S	22 42.7	168 07.7 N	17 18.1	80 46.9 N	17 34.2	Alioth	166 44.5 S	56 04.7	
07	232 25.9	237 04.6	20.1	299 59.2	42.4	183 10.1	18.2	95 49.5	34.3	Alkaid	153 20.4 S	49 25.3	
08	247 28.4	252 04.9	18.9	314 59.6	42.1	198 12.4	18.2	110 52.2	34.3	Al Na'ir	28 18.5 S	47 04.4	
Y 09	262 30.8	267 05.2	17.7	330 00.0	41.8	213 14.8	18.2	125 54.9	34.4	Alnilam	276 13.9 S	1 13.2	
I 10	277 33.3	282 05.5	16.5	345 00.4	41.6	228 17.1	18.3	140 57.5	34.5	Alphard	218 22.6 S	8 33.7	
E 11	292 35.8	297 05.8	15.2	0 00.8	41.3	243 19.5	18.3	156 00.2	34.5				
R 12	307 38.2	312 06.2 S	1 14.0	15 01.2 S	22 41.0	258 21.9 N	17 18.4	171 02.9 N	17 34.6	Alphecca	126 34.3 S	26 47.3	
N 13	322 40.7	327 06.5	12.8	30 01.7	40.8	273 24.2	18.4	186 05.5	34.7	Alpheratz	358 12.0 N	28 58.0	
E 14	337 43.2	342 06.8	11.5	45 02.1	40.5	288 26.6	18.4	201 08.2	34.7	Altair	62 35.2 N	8 48.5	
S 15	352 45.6	357 07.1	10.3	60 02.5	40.2	303 28.9	18.5	216 10.9	34.8	Ankaa	353 42.9 S	42 26.0	
16	7 48.1	12 07.4	09.1	75 02.9	39.9	318 31.3	18.5	231 13.5	34.9	Antares	113 00.0 S	26 22.8	
17	22 50.6	27 07.7	07.8	90 03.3	39.7	333 33.6	18.6	246 16.2	34.9				
18	37 53.0	42 08.0 S	1 06.6	105 03.7 S	22 39.4	348 36.0 N	17 18.6	261 18.9 N	17 35.0	Arcturus	146 20.7 N	19 17.9	
19	52 55.5	57 08.3	05.4	120 04.1	39.1	3 38.3	18.6	276 21.5	35.0	Atria	108 26.7 S	68 58.9	
20	67 57.9	72 08.6	04.1	135 04.6	38.8	18 40.7	18.7	291 24.2	35.1	Avior	234 28.5 S	59 26.3	
21	83 00.4	87 09.0	02.9	150 05.0	38.6	33 43.0	18.7	306 26.9	35.2	Bellatrix	279 01.1 N	6 19.6	
22	98 02.9	102 09.3	01.7	165 05.4	38.3	48 45.4	18.8	321 29.5	35.2	Betelgeuse	271 30.6 N	7 24.0	
23	113 05.3	117 09.6	1 00.5	180 05.8	38.0	63 47.7	18.8	336 32.2	35.3				
29 ^d 00	128 07.8	132 09.9 S	0 59.2	195 06.2 S	22 37.7	78 50.1 N	17 18.8	351 34.9 N	17 35.4	Canopus	264 07.8 S	52 41.3	
01	143 10.3	147 10.2	58.0	210 06.6	37.4	93 52.4	18.9	6 37.5	35.4	Capella	281 14.6 N	45 58.6	
02	158 12.7	162 10.6	56.8	225 07.0	37.2	108 54.8	18.9	21 40.2	35.5	Deneb	49 50.5 N	45 12.0	
03	173 15.2	177 10.9	55.5	240 07.4	36.9	123 57.1	19.0	36 42.9	35.5	Denebola	183 01.3 N	14 41.8	
04	188 17.7	192 11.2	54.3	255 07.9	36.6	138 59.5	19.0	51 45.5	35.6	Diphda	349 23.5 S	18 06.9	
05	203 20.1	207 11.5	53.1	270 08.3	36.3	154 01.8	19.0	66 48.2	35.7				
06	218 22.6	222 11.8 S	0 51.8	285 08.7 S	22 36.1	169 04.2 N	17 19.1	81 50.9 N	17 35.7	Duhhe	194 24.7 N	61 52.2	
07	233 25.1	237 12.2	50.6	300 09.1	35.8	184 06.5	19.1	96 53.5	35.8	Elnath	278 46.9 N	28 35.3	
08	248 27.5	252 12.5	49.4	315 09.5	35.5	199 08.9	19.2	111 56.2	35.9	Eltanin	90 59.3 S	51 29.4	
S 09	263 30.0	267 12.8	48.2	330 09.9	35.2	214 11.2	19.2	126 58.9	35.9	Enif	34 14.3 N	9 46.2	
A 10	278 32.4	282 13.2	46.9	345 10.3	34.9	229 13.6	19.3	142 01.5	36.0	Fomalhaut	15 54.4 S	29 44.7	
B 11	293 34.9	297 13.5	45.7	0 10.8	34.6	244 15.9	19.3	157 04.2	36.1				
A 12	308 37.4	312 13.8 S	0 44.5	15 11.2 S	22 34.4	259 18.3 N	17 19.3	172 06.9 N	17 36.1	Gacrux	172 31.1 S	56 58.9	
D 13	323 39.8	327 14.1	43.2	30 11.6	34.1	274 20.6	19.4	187 09.5	36.2	Gienah	176 20.3 S	17 24.9	
O 14	338 42.3	342 14.5	42.0	45 12.0	33.8	289 23.0	19.4	202 12.2	36.2	Hadar	149 26.6 S	60 15.5	
15	353 44.8	357 14.8	40.8	60 12.4	33.5	304 25.3	19.5	217 14.9	36.3	Hamal	328 31.7 N	23 21.3	
16	8 47.2	12 15.1	39.6	75 12.8	33.2	319 27.7	19.5	232 17.5	36.4	Kaus Aust.	84 20.4 S	34 23.6	
17	23 49.7	27 15.5	38.3	90 13.2	32.9	334 30.0	19.5	247 20.2	36.4				
18	38 52.2	42 15.8 S	0 37.1	105 13.7 S	22 32.7	349 32.4 N	17 19.6	262 22.9 N	17 36.5	Kochab	137 19.2 N	74 14.7	
19	53 54.6	57 16.1	35.9	120 14.1	32.4	4 34.7	19.6	277 25.5	36.6	Markab	14 05.8 N	15 05.0	
20	68 57.1	72 16.5	34.6	135 14.5	32.1	19 37.0	19.7	292 28.2	36.6	Menkar	314 43.6 N	3 59.9	
21	83 59.6	87 16.8	33.4	150 14.9	31.8	34 39.4	19.7	307 30.9	36.7	Menkent	148 39.8 S	36 15.3	
22	99 02.0	102 17.2	32.2	165 15.3	31.5	49 41.7	19.8	322 33.5	36.7	Miaplacidus	221 44.4 S	69 37.5	
23	114 04.5	117 17.5	31.0	180 15.7	31.2	64 44.1	19.8	337 36.2	36.8				
30 ^d 00	129 06.9	132 17.8 S	0 29.7	195 16.1 S	22 30.9	79 46.4 N	17 19.8	352 38.9 N	17 36.9	Mirfak	309 19.4 N	49 47.0	
01	144 09.4	147 18.2	28.5	210 16.6	30.6	94 48.8	19.9	7 41.5	36.9	Nunki	76 32.5 S	26 19.5	
02	159 11.9	162 18.5	27.3	225 17.0	30.4	109 51.1	19.9	22 44.2	37.0	Peacock	54 02.9 S	56 48.5	
03	174 14.3	177 18.9	26.1	240 17.4	30.1	124 53.4	20.0	37 46.9	37.1	Pollux	244 00.8 N	28 04.8	
04	189 16.8	192 19.2	24.8	255 17.8	29.8	139 55.8	20.0	52 49.5	37.1	Procyon	245 28.0 N	5 16.9	
05	204 19.3	207 19.6	23.6	270 18.2	29.5	154 58.1	20.1	67 52.2	37.2				
06	219 21.7	222 19.9 S	0 22.4	285 18.6 S	22 29.2	170 00.5 N	17 20.1	82 54.9 N	17 37.2	Rasalhague	96 32.1 N	12 34.5	
07	234 24.2	237 20.2	21.2	300 19.1	28.9	185 02.8	20.1	97 57.5	37.3	Regulus	208 12.3 N	12 04.6	
D 08	249 26.7	252 20.6	19.9	315 19.5	28.6	200 05.1	20.2	113 00.2	37.4	Rigel	281 38.1 S	8 13.9	
O 09	264 29.1	267 20.9	18.7	330 19.9	28.3	215 07.5	20.2	128 02.9	37.4	Rigil Kent.	140 29.0 S	60 44.1	
M 10	279 31.6	282 21.3	17.5	345 20.3	28.0	230 09.8	20.3	143 05.5	37.5	Sabik	102 44.1 S	15 41.8	
I 11	294 34.0	297 21.6	16.3	0 20.7	27.7	245 12.2	20.3	158 08.2	37.6				
N 12	309 36.5	312 22.0 S	0 15.0	15 21.1 S	22 27.4	260 14.5 N	17 20.4	173 10.9 N	17 37.6	Schedar	350 12.0 N	56 25.0	
G 13	324 39.0	327 22.3	13.8	30 21.6	27.2	275 16.8	20.4	188 13.6	37.7	Shaula	96 59.3 S	37 05.1	
O 14	339 41.4	342 22.7	12.6	45 22.0	26.9	290 19.2	20.5	203 16.2	37.8	Sirius	258 57.5 S	16 41.3	
15	354 43.9	357 23.1	11.4	60 22.4	26.6	305 21.5	20.5	218 18.9	37.8	Spica	159 00.0 S	11 02.6	
16	9 46.4	12 23.4	10.1	75 22.8	26.3	320 23.9	20.5	233 21.6	37.9	Suhail	223 12.1 S	43 20.5	
17	24 48.8	27 23.8	08.9	90 23.2	26.0	335 26.2	20.6	248 24.2	37.9				
18	39 51.3	42 24.1 S	0 07.7	105 23.6 S	22 25.7	350 28.5 N	17 20.6	263 26.9 N	17 38.0	Vega	80 57.8 N	38 45.7	
19	54 53.8	57 24.5	06.5	120 24.1	25.4	5 30.9	20.7	278 29.6	38.1	Zuben'ubi	137 35.7 S	15 56.8	
20	69 56.2	72 24.8	05.2	135 24.5	25.1	20 33.2	20.7	293 32.2	38.1				
21	84 58.7	87 25.2	04.0	150 24.9	24.8	35 35.5	20.8	308 34.9	38.2				
22	100 01.2	102 25.6	02.8	165 25.3	24.5	50 37.9	20.8	323 37.6	38.3	Venus	4 02.1 S	15 11	
23	115 03.6	117 25.9	01.6	180 25.7	24.2	65 40.2	20.8	338 40.2	38.3	Marte	66 58.4 S	10 59	
										Júpiter	310 42.3 S	18 42	
										Saturno	223 27.1 S	0 34	
Pas. Mer.	15 24.9	v 0.3	d 1.2	v 0.4	d 0.3	v 2.3	d 0.0	v 2.7	d 0.1				

T.M.G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		28	29	30	31					
											h m	h m	h m	h m	h m	h m			
28 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	176	46.3	S18	16.8	82	43.8	13.4	N15	13.0	6.0	54.2	N 72	07 20	08 52	10 56	08 39	08 10	09 40	10 24
	191	46.1		16.1	97	16.2	13.4	15	19.0	5.9	54.2	N 70	07 11	08 31	10 03	09 18	09 24	10 29	11 16
	206	46.0		15.4	111	48.6	13.4	15	24.9	5.8	54.2	68	07 03	08 15	09 31	09 46	10 02	10 29	11 16
	221	45.9	..	14.8	126	21.0	13.4	15	30.7	5.8	54.2	66	06 57	08 02	09 07	10 06	10 28	11 01	11 48
	236	45.8		14.1	140	53.4	13.3	15	36.5	5.7	54.2	64	06 51	07 51	08 49	10 23	10 49	11 24	12 12
	251	45.7		13.5	155	25.7	13.3	15	42.2	5.6	54.2	62	06 46	07 41	08 34	10 37	11 05	11 42	12 31
	266	45.5	S18	12.8	169	58.0	13.3	N15	47.8	5.6	54.2	60	06 42	07 33	08 21	10 49	11 19	11 58	12 46
	281	45.4		12.2	184	30.3	13.2	15	53.4	5.5	54.2	N 58	06 37	07 26	08 10	10 59	11 31	12 11	12 59
	296	45.3		11.5	199	02.5	13.2	15	58.9	5.4	54.2	56	06 34	07 19	08 01	11 08	11 41	12 22	13 11
	311	45.2	..	10.8	213	34.7	13.2	16	04.3	5.3	54.2	54	06 30	07 13	07 52	11 16	11 50	12 32	13 21
	326	45.1		10.2	228	06.9	13.2	16	09.6	5.3	54.2	52	06 27	07 08	07 45	11 23	11 59	12 40	13 29
	341	44.9		09.5	242	39.1	13.1	16	14.9	5.2	54.2	50	06 24	07 03	07 38	11 29	12 06	12 48	13 37
	356	44.8	S18	08.9	257	11.2	13.1	N16	20.1	5.2	54.2	45	06 17	06 52	07 23	11 43	12 22	13 05	13 54
	11	44.7		08.2	271	43.3	13.1	16	25.3	5.0	54.2	N 40	06 10	06 43	07 11	11 55	12 35	13 19	14 08
	26	44.6		07.5	286	15.4	13.0	16	30.3	5.0	54.2	35	06 04	06 34	07 01	12 04	12 46	13 31	14 20
	41	44.5	..	06.9	300	47.4	13.0	16	35.3	5.0	54.2	30	05 58	06 27	06 52	12 13	12 55	13 41	14 30
	56	44.4		06.2	315	19.4	13.0	16	40.3	4.8	54.2	20	05 47	06 13	06 36	12 28	13 12	13 58	14 48
	71	44.3		05.5	329	51.4	12.9	16	45.1	4.8	54.2	N 10	05 35	06 01	06 23	12 41	13 26	14 14	15 03
	86	44.1	S18	04.9	344	23.3	12.9	N16	49.9	4.7	54.2	0	05 23	05 48	06 10	12 53	13 40	14 28	15 17
	101	44.0		04.2	358	55.2	12.9	16	54.6	4.6	54.3	S 10	05 08	05 34	05 56	13 06	13 54	14 43	15 32
	116	43.9		03.6	13	27.1	12.9	16	59.2	4.6	54.3	20	04 51	05 19	05 42	13 19	14 08	14 58	15 47
	131	43.8	..	02.9	27	59.0	12.8	17	03.8	4.4	54.3	30	04 29	05 00	05 26	13 34	14 25	15 16	16 05
	146	43.7		02.2	42	30.8	12.8	17	08.2	4.4	54.3	35	04 15	04 48	05 16	13 43	14 35	15 26	16 15
161	43.6		01.6	57	02.6	12.7	17	12.6	4.4	54.3	40	03 58	04 35	05 05	13 53	14 46	15 38	16 27	
176	43.5	S18	00.9	71	34.3	12.7	N17	17.0	4.2	54.3	45	03 36	04 18	04 52	14 05	15 00	15 52	16 41	
191	43.4	18	00.2	86	06.0	12.7	17	21.2	4.2	54.3	S 50	03 07	03 58	04 36	14 19	15 16	16 09	16 58	
206	43.2	17	59.6	100	37.7	12.7	17	25.4	4.1	54.3	52	02 52	03 47	04 29	14 26	15 23	16 17	17 06	
221	43.1	..	58.9	115	09.4	12.6	17	29.5	4.0	54.3	54	02 33	03 36	04 20	14 33	15 32	16 26	17 14	
236	43.0		58.2	129	41.0	12.6	17	33.5	3.9	54.3	56	02 10	03 23	04 11	14 42	15 41	16 36	17 24	
251	42.9		57.5	144	12.6	12.6	17	37.4	3.9	54.3	58	01 38	03 07	04 00	14 51	15 52	16 48	17 36	
266	42.8	S17	56.9	158	44.2	12.5	N17	41.3	3.7	54.3	S 60	///	02 47	03 48	15 02	16 05	17 01	17 49	
281	42.7		56.2	173	15.7	12.5	17	45.0	3.7	54.3	Lat.	Ocaso Sol	Crepúsculo Civil		Ocaso Luna				
296	42.6		55.5	187	47.2	12.4	17	48.7	3.7	54.3					28	29	30	31	
311	42.5	..	54.9	202	18.6	12.5	17	52.4	3.5	54.3					h m	h m	h m	h m	
326	42.4		54.2	216	50.1	12.4	17	55.9	3.5	54.3	N 72	13 31	15 35	17 08	04 34	06 39	08 48	10 46	
341	42.3		53.5	231	21.5	12.4	17	59.4	3.3	54.4	N 70	14 25	15 56	17 17	03 55	05 25	06 48	07 46	
356	42.2	S17	52.8	245	52.9	12.3	N18	02.7	3.3	54.4	68	14 57	16 12	17 24	03 28	04 48	05 59	06 54	
11	42.0		52.2	260	24.2	12.3	18	06.0	3.2	54.4	66	15 20	16 26	17 31	03 08	04 22	05 28	06 22	
26	41.9		51.5	274	55.5	12.3	18	09.2	3.2	54.4	64	15 38	16 37	17 36	02 52	04 02	05 05	05 58	
41	41.8	..	50.8	289	26.8	12.2	18	12.4	3.0	54.4	62	15 53	16 46	17 41	02 39	03 46	04 47	05 39	
56	41.7		50.1	303	58.0	12.2	18	15.4	3.0	54.4	60	16 06	16 54	17 46	02 27	03 32	04 32	05 24	
71	41.6		49.5	318	29.2	12.2	18	18.4	2.9	54.4	N 58	16 17	17 02	17 50	02 17	03 21	04 19	05 11	
86	41.5	S17	48.8	333	00.4	12.1	N18	21.3	2.8	54.4	56	16 26	17 08	17 54	02 09	03 10	04 08	04 59	
101	41.4		48.1	347	31.5	12.2	18	24.1	2.7	54.4	54	16 35	17 14	17 57	02 01	03 02	03 58	04 49	
116	41.3		47.4	2	02.7	12.0	18	26.8	2.6	54.4	52	16 42	17 19	18 00	01 55	02 54	03 49	04 40	
131	41.2	..	46.7	16	33.7	12.1	18	29.4	2.6	54.5	50	16 49	17 24	18 03	01 48	02 46	03 41	04 32	
146	41.1		46.1	31	04.8	12.0	18	32.0	2.4	54.5	45	17 03	17 35	18 10	01 35	02 31	03 25	04 15	
161	41.0		45.4	45	35.8	12.0	18	34.4	2.4	54.5	N 40	17 15	17 44	18 17	01 24	02 19	03 11	04 02	
176	40.9	S17	44.7	60	06.8	12.0	N18	36.8	2.3	54.5	35	17 26	17 52	18 23	01 15	02 08	03 00	03 50	
191	40.8		44.0	74	37.8	11.9	18	39.1	2.2	54.5	30	17 35	18 00	18 29	01 07	01 59	02 50	03 39	
206	40.7		43.3	89	08.7	11.9	18	41.3	2.1	54.5	20	17 50	18 13	18 40	00 53	01 43	02 32	03 22	
221	40.6	..	42.7	103	39.6	11.9	18	43.4	2.0	54.5	N 10	18 04	18 26	18 51	00 41	01 29	02 17	03 06	
236	40.5		42.0	118	10.5	11.8	18	45.4	2.0	54.5	0	18 17	18 38	19 04	00 30	01 16	02 03	02 52	
251	40.4		41.3	132	41.3	11.8	18	47.4	1.8	54.6	S 10	18 30	18 52	19 18	00 18	01 03	01 49	02 37	
266	40.3	S17	40.6	147	12.1	11.8	N18	49.2	1.8	54.6	20	18 44	19 07	19 35	00 06	00 49	01 34	02 22	
281	40.2		39.9	161	42.9	11.7	18	51.0	1.7	54.6	30	19 00	19 26	19 57	24 33	00 33	01 17	02 04	
296	40.1		39.2	176	13.6	11.8	18	52.7	1.6	54.6	35	19 10	19 37	20 11	24 24	00 24	01 06	01 54	
311	40.0	..	38.5	190	44.4	11.7	18	54.3	1.5	54.6	40	19 21	19 51	20 28	24 13	00 13	00 55	01 42	
326	39.9		37.9	205	15.1	11.6	18	55.8	1.4	54.6	45	19 33	20 07	20 49	24 01	00 01	00 41	01 28	
341	39.8		37.2	219	45.7	11.7	18	57.2	1.3	54.6	S 50	19 49	20 28	21 18	23 46	24 25	00 25	01 11	
356	39.7	S17	36.5	234	16.4	11.6	N18	58.5	1.2	54.6	52	19 57	20 38	21 33	23 39	24 17	00 17	01 02	
11	39.6		35.8	248	47.0	11.5	18	59.7	1.2	54.7	54	20 05	20 49	21 51	23 31	24 09	00 09	00 53	
26	39.5		35.1	263	17.5	11.6	19	00.9	1.0	54.7	56	20 14	21 02	22 13	23 22	23 59	24 43	00 43	
41	39.4	..	34.4	277	48.1	11.5	19	01.9	1.0	54.7	58	20 25	21 18	22 44	23 12	23 48	24 32	00 32	
56	39.3		33.7	292	18.6	11.5	19	02.9	0.9	54.7	S 60	20 37	21 36	23 42	23 01	23 35	24 18	00 18	
71	39.2		33.0	306	49.1	11.5	19	03.8	0.8	54.7	Día	SOL E.T. (-)		Pas. Mer.		LUNA Pas. Mer.		Edad.	Fase
86	39.1	S17	32.3	321	19.6	11.4	N19	04.6	0.7	54.7		00 ^h	12 ^h	Pas. Mer.	Sup.	Inf.	Edad.		
101	39.0		31.7	335	50.0	11.4	19	05.3	0.6	54.8	28	12 55	13 00	12 13	19 04	06 41	09		
116	38.9		31.0	350	20.4	11.4	19	0											

T. M. G.	ARIES			VENUS -4.1			MARTE +1.5			JUPITER -2.0			SATURNO +0.1			ESTRELLAS				
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.		
31 L U N E S	00	130 06.1	132 26.3 S 0 00.3	195 26.1 S22 23.9	80 42.5 N17 20.9	353 42.9 N17 38.4	Acomar	315 39.1 S40 24.1												
	01	145 08.5	147 26.7 N 0 00.9	210 26.6 23.6	95 44.9 20.9	8 45.6 38.4	Achernar	335 47.3 S57 21.5												
	02	160 11.0	162 27.0 02.1	225 27.0 23.3	110 47.2 21.0	23 48.2 38.5		Acrux	173 39.4 S62 58.2											
	03	175 13.5	177 27.4 .. 03.3	240 27.4 .. 23.0	125 49.5 .. 21.0	38 50.9 .. 38.6		Adhara	255 33.7 S28 56.7											
	04	190 15.9	192 27.8 04.6	255 27.8 22.7	140 51.9 21.1	53 53.6 38.6		Aldebaran	291 20.6 N16 27.8											
	05	205 18.4	207 28.1 05.8	270 28.2 22.4	155 54.2 21.1	68 56.2 38.7														
	06	220 20.9	222 28.5 N 0 07.0	285 28.6 S22 22.1	170 56.5 N17 21.2	83 58.9 N17 38.8		Alioth	166 44.4 N56 04.7											
	07	235 23.3	237 28.9 08.2	300 29.1 21.8	185 58.9 21.2	99 01.6 38.8		Alkaid	153 20.3 N49 25.3											
	08	250 25.8	252 29.2 09.4	315 29.5 21.5	201 01.2 21.3	114 04.2 38.9		Al Na'ir	28 18.5 S47 04.4											
	09	265 28.3	267 29.6 .. 10.7	330 29.9 .. 21.2	216 03.5 .. 21.3	129 06.9 .. 39.0		Alnilam	276 13.9 S 1 13.2											
	10	280 30.7	282 30.0 11.9	345 30.3 20.9	231 05.9 21.3	144 09.6 39.0		Alphard	218 22.6 S 8 33.7											
	11	295 33.2	297 30.3 13.1	0 30.7 20.6	246 08.2 21.4	159 12.2 39.1														
	12	310 35.7	312 30.7 N 0 14.3	15 31.1 S22 20.3	261 10.5 N17 21.4	174 14.9 N17 39.1		Alphecca	126 34.3 N26 47.3											
	13	325 38.1	327 31.1 15.6	30 31.6 20.0	276 12.9 21.5	189 17.6 39.2		Alpheratz	358 12.0 N28 57.9											
	14	340 40.6	342 31.5 16.8	45 32.0 19.7	291 15.2 21.5	204 20.2 39.3		Altair	62 35.2 N 8 48.5											
	15	355 43.0	357 31.8 .. 18.0	60 32.4 .. 19.4	306 17.5 .. 21.6	219 22.9 .. 39.3		Ankaa	353 42.9 S42 26.0											
	16	10 45.5	12 32.2 19.2	75 32.8 19.1	321 19.9 21.6	234 25.6 39.4		Antares	113 00.0 S26 22.8											
	17	25 48.0	27 32.6 20.4	90 33.2 18.8	336 22.2 21.7	249 28.3 39.5														
	18	40 50.4	42 33.0 N 0 21.7	105 33.7 S22 18.5	351 24.5 N17 21.7	264 30.9 N17 39.5		Arcturus	146 20.6 N19 17.9											
	19	55 52.9	57 33.4 22.9	120 34.1 18.1	6 26.8 21.8	279 33.6 39.6		Atria	108 26.7 S68 58.9											
	20	70 55.4	72 33.7 24.1	135 34.5 17.8	21 29.2 21.8	294 36.3 39.6		Avior	234 28.5 S59 26.3											
	21	85 57.8	87 34.1 .. 25.3	150 34.9 .. 17.5	36 31.5 .. 21.9	309 38.9 .. 39.7		Bellatrix	279 01.1 N 6 19.6											
	22	101 00.3	102 34.5 26.5	165 35.3 17.2	51 33.8 21.9	324 41.6 39.8		Betelgeuse	271 30.6 N 7 24.0											
23	116 02.8	117 34.9 27.8	180 35.8 16.9	66 36.1 21.9	339 44.3 39.8															
1 M A R T E S	00	131 05.2	132 35.3 N 0 29.0	195 36.2 S22 16.6	81 38.5 N17 22.0	354 46.9 N17 39.9	Canopus	264 07.8 S52 41.3												
	01	146 07.7	147 35.7 30.2	210 36.6 16.3	96 40.8 22.0	9 49.6 40.0	Capella	281 14.6 N45 58.6												
	02	161 10.1	162 36.1 31.4	225 37.0 16.0	111 43.1 22.1	24 52.3 40.0		Deneb	49 50.5 N45 12.0											
	03	176 12.6	177 36.4 .. 32.6	240 37.4 .. 15.7	126 45.4 .. 22.1	39 54.9 .. 40.1		Denebola	183 01.3 N14 41.8											
	04	191 15.1	192 36.8 33.9	255 37.9 15.4	141 47.8 22.2	54 57.6 40.1		Diphda	349 23.5 S18 06.9											
	05	206 17.5	207 37.2 35.1	270 38.3 15.1	156 50.1 22.2	70 00.3 40.2														
	06	221 20.0	222 37.6 N 0 36.3	285 38.7 S22 14.7	171 52.4 N17 22.3	85 02.9 N17 40.3		Dubhe	194 24.6 N61 52.2											
	07	236 22.5	237 38.0 37.5	300 39.1 14.4	186 54.7 22.3	100 05.6 40.3		Elnath	278 46.9 N28 35.3											
	08	251 24.9	252 38.4 38.7	315 39.5 14.1	201 57.1 22.4	115 08.3 40.4		Eltanin	90 59.3 N51 29.4											
	09	266 27.4	267 38.8 .. 39.9	330 40.0 .. 13.8	216 59.4 .. 22.4	130 10.9 .. 40.5		Enif	34 14.3 N 9 46.2											
	10	281 29.9	282 39.2 41.2	345 40.4 13.5	232 01.7 22.5	145 13.6 40.5		Fomalhaut	15 54.4 S29 44.7											
	11	296 32.3	297 39.6 42.4	0 40.8 13.2	247 04.0 22.5	160 16.3 40.6														
	12	311 34.8	312 40.0 N 0 43.6	15 41.2 S22 12.9	262 06.4 N17 22.6	175 18.9 N17 40.6		Gacrux	172 31.0 S56 59.0											
	13	326 37.3	327 40.4 44.8	30 41.6 12.6	277 08.7 22.6	190 21.6 40.7		Gienah	176 20.2 S17 25.0											
	14	341 39.7	342 40.8 46.0	45 42.1 12.2	292 11.0 22.7	205 24.3 40.8		Hadar	149 26.6 S60 15.5											
	15	356 42.2	357 41.2 .. 47.3	60 42.5 .. 11.9	307 13.3 .. 22.7	220 27.0 .. 40.8		Hamal	328 31.7 N23 21.3											
	16	11 44.6	12 41.6 48.5	75 42.9 11.6	322 15.6 22.7	235 29.6 40.9		Kaus Aust.	84 20.4 S34 23.6											
	17	26 47.1	27 42.0 49.7	90 43.3 11.3	337 18.0 22.8	250 32.3 41.0														
	18	41 49.6	42 42.4 N 0 50.9	105 43.7 S22 11.0	352 20.3 N17 22.8	265 35.0 N17 41.0		Kochab	137 19.1 N74 14.7											
	19	56 52.0	57 42.8 52.1	120 44.2 10.7	7 22.6 22.9	280 37.6 41.1		Markab	14 05.8 N15 05.0											
	20	71 54.5	72 43.2 53.3	135 44.6 10.3	22 24.9 22.9	295 40.3 41.2		Menkar	314 43.6 N 3 59.9											
	21	86 57.0	87 43.6 .. 54.5	150 45.0 .. 10.0	37 27.2 .. 23.0	310 43.0 .. 41.2		Menkent	148 39.8 S36 15.3											
	22	101 59.4	102 44.0 55.8	165 45.4 09.7	52 29.6 23.0	325 45.6 41.3		Miaplacidus	221 44.4 S69 37.5											
23	117 01.9	117 44.4 57.0	180 45.8 09.4	67 31.9 23.1	340 48.3 41.3															
2 M I E R C U R O S	00	132 04.4	132 44.8 N 0 58.2	195 46.3 S22 09.1	82 34.2 N17 23.1	355 51.0 N17 41.4	Mirfak	309 19.4 N49 47.0												
	01	147 06.8	147 45.2 0 59.4	210 46.7 08.8	97 36.5 23.2	10 53.6 41.5	Nunki	76 32.5 S26 19.5												
	02	162 09.3	162 45.7 1 00.6	225 47.1 08.4	112 38.8 23.2	25 56.3 41.5		Peacock	54 02.8 S56 48.5											
	03	177 11.8	177 46.1 .. 01.8	240 47.5 .. 08.1	127 41.2 .. 23.3	40 59.0 .. 41.6		Pollux	244 00.8 N28 04.8											
	04	192 14.2	192 46.5 03.0	255 48.0 07.8	142 43.5 23.3	56 01.6 41.7		Procyon	245 28.0 N 5 16.9											
	05	207 16.7	207 46.9 04.3	270 48.4 07.5	157 45.8 23.4	71 04.3 41.7														
	06	222 19.1	222 47.3 N 1 05.5	285 48.8 S22 07.2	172 48.1 N17 23.4	86 07.0 N17 41.8		Rasalhague	96 32.1 N12 34.5											
	07	237 21.6	237 47.7 06.7	300 49.2 06.8	187 50.4 23.5	101 09.6 41.8		Regulus	208 12.3 N12 04.5											
	08	252 24.1	252 48.1 07.9	315 49.6 06.5	202 52.7 23.5	116 12.3 41.9		Rigel	281 38.1 S 8 13.9											
	09	267 26.5	267 48.6 .. 09.1	330 50.1 .. 06.2	217 55.1 .. 23.6	131 15.0 .. 42.0		Rigil Kent.	140 29.0 S60 44.1											
	10	282 29.0	282 49.0 10.3	345 50.5 05.9	232 57.4 23.6	146 17.7 42.0		Sabik	102 44.1 S15 41.8											
	11	297 31.5	297 49.4 11.5	0 50.9 05.5	247 59.7 23.7	161 20.3 42.1														
	12	312 33.9	312 49.8 N 1 12.8	15 51.3 S22 05.2	263 02.0 N17 23.7	176 23.0 N17 42.2		Schedar	350 12.0 N56 24.9											
	13	327 36.4	327 50.2 14.0	30 51.8 04.9	278 04.3 23.8	191 25.7 42.2		Shaula	96 59.3 S37 05.1											
	14	342 38.9	342 50.7 15.2	45 52.2 04.6	293 06.6 23.8	206 28.3 42.3		Sirius	258 57.5 S16 41.3											
	15	357 41.3	357 51.1 .. 16.4	60 52.6 .. 04.2</																

T.M.G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	v	Dec.	d	P.H.		Naut.	Civil		31		1		2		3	
										h	m	h	m	h	m	h	m	h	m	h	m
LUNES	31 ^d 00	176 38.5	S17 28.2	48 21.9	11.2	N19 07.3	0.2	54.8	N 72	07 10	08 39	10 28	□	□	12 32	14 32		
	01	191 38.4	27.5	62 52.1	11.3	19 07.5	0.0	54.9	N 70	07 02	08 20	09 46	10 24	11 42	13 18	14 59		
	02	206 38.3	26.8	77 22.4	11.2	19 07.5	0.0	54.9	68	06 55	08 06	09 18	11 16	12 24	13 47	15 19		
	03	221 38.2	26.1	91 52.6	11.3	19 07.5	0.2	54.9	66	06 50	07 53	08 57	11 48	12 52	14 09	15 35		
	04	236 38.1	25.4	106 22.9	11.2	19 07.3	0.2	54.9	64	06 45	07 43	08 40	12 12	13 14	14 27	15 48		
	05	251 38.1	24.7	120 53.1	11.1	19 07.1	0.3	54.9	62	06 40	07 34	08 26	12 31	13 31	14 41	15 59		
	06	266 38.0	S17 24.0	135 23.2	11.2	N19 06.8	0.5	55.0	60	06 36	07 27	08 14	12 46	13 45	14 53	16 09		
	07	281 37.9	23.3	149 53.4	11.1	19 06.3	0.5	55.0	N 58	06 32	07 20	08 04	12 59	13 57	15 04	16 17		
	08	296 37.8	22.6	164 23.5	11.1	19 05.8	0.6	55.0	56	06 29	07 14	07 55	13 11	14 08	15 13	16 24		
	09	311 37.7	21.9	178 53.6	11.1	19 05.2	0.7	55.0	54	06 26	07 09	07 47	13 21	14 17	15 21	16 30		
	10	326 37.6	21.2	193 23.7	11.1	19 04.5	0.8	55.0	52	06 23	07 04	07 40	13 29	14 26	15 28	16 36		
	11	341 37.5	20.5	207 53.8	11.0	19 03.7	0.9	55.0	50	06 20	06 59	07 34	13 37	14 33	15 35	16 41		
	12	356 37.4	S17 19.8	222 23.8	11.0	N19 02.8	1.0	55.1	45	06 14	06 49	07 20	13 54	14 49	15 49	16 52		
	13	11 37.3	19.1	236 53.8	11.0	19 01.8	1.1	55.1	N 40	06 08	06 40	07 09	14 08	15 02	16 00	17 01		
	14	26 37.2	18.4	251 23.8	11.0	19 00.7	1.1	55.1	35	06 02	06 32	06 59	14 20	15 13	16 10	17 09		
	15	41 37.1	17.7	265 53.8	11.0	18 59.6	1.3	55.1	30	05 57	06 25	06 50	14 30	15 23	16 18	17 16		
	16	56 37.1	17.0	280 23.8	10.9	18 58.3	1.4	55.1	20	05 46	06 13	06 36	14 48	15 39	16 33	17 28		
	17	71 37.0	16.3	294 53.7	11.0	18 56.9	1.4	55.2	N 10	05 35	06 01	06 23	15 03	15 54	16 46	17 38		
	18	86 36.9	S17 15.6	309 23.7	10.9	N18 55.5	1.6	55.2	0	05 23	05 48	06 10	15 17	16 07	16 58	17 48		
	19	101 36.8	14.9	323 53.6	10.9	18 53.9	1.7	55.2	S 10	05 10	05 36	05 58	15 32	16 21	17 10	17 58		
	20	116 36.7	14.2	338 23.5	10.8	18 52.2	1.7	55.2	20	04 53	05 21	05 44	15 47	16 36	17 23	18 08		
	21	131 36.6	13.5	352 53.3	10.9	18 50.5	1.9	55.3	30	04 32	05 03	05 29	16 05	16 52	17 37	18 20		
	22	146 36.5	12.8	7 23.2	10.8	18 48.6	1.9	55.3	35	04 18	04 52	05 19	16 15	17 02	17 46	18 27		
23	161 36.4	12.1	21 53.0	10.9	18 46.7	2.0	55.3	40	04 02	04 39	05 09	16 27	17 13	17 55	18 35			
MARTES	1 00	176 36.4	S17 11.4	36 22.9	10.8	N18 44.7	2.2	55.3	S 50	03 14	04 03	04 42	16 58	17 41	18 20	18 54		
	01	191 36.3	10.7	50 52.7	10.8	18 42.5	2.2	55.3	52	03 00	03 54	04 34	17 06	17 49	18 26	18 59		
	02	206 36.2	10.0	65 22.5	10.8	18 40.3	2.3	55.4	54	02 43	03 43	04 27	17 14	17 57	18 33	19 05		
	03	221 36.1	09.3	79 52.3	10.7	18 38.0	2.4	55.4	56	02 22	03 30	04 18	17 24	18 06	18 41	19 11		
	04	236 36.0	08.5	94 22.0	10.8	18 35.6	2.6	55.4	58	01 54	03 16	04 08	17 36	18 16	18 50	19 18		
	05	251 35.9	07.8	108 51.8	10.7	18 33.0	2.6	55.4	S 60	01 09	02 58	03 56	17 49	18 28	19 00	19 26		
	06	266 35.9	S17 07.1	123 21.5	10.8	N18 30.4	2.7	55.5										
	07	281 35.8	06.4	137 51.3	10.7	18 27.7	2.8	55.5										
	08	296 35.7	05.7	152 21.0	10.7	18 24.9	2.9	55.5	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna					
	09	311 35.6	05.0	166 50.7	10.7	18 22.0	3.0	55.5					31	1	2	3		
	10	326 35.5	04.3	181 20.4	10.7	18 19.0	3.1	55.5										
	11	341 35.4	03.6	195 50.1	10.7	18 15.9	3.2	55.6										
	12	356 35.4	S17 02.9	210 19.8	10.6	N18 12.7	3.2	55.6	N 72	14 01	15 50	17 19	□	□	09 08	08 53		
	13	11 35.3	02.1	224 49.4	10.7	18 09.5	3.4	55.6	N 70	14 43	16 08	17 27	07 46	08 12	08 21	08 24		
	14	26 35.2	01.4	239 19.1	10.7	18 06.1	3.5	55.6	68	15 11	16 23	17 33	06 54	07 30	07 51	08 03		
	15	41 35.1	00.7	253 48.8	10.6	18 02.6	3.6	55.7	66	15 32	16 35	17 39	06 22	07 01	07 28	07 47		
	16	56 35.0	00.0	268 18.4	10.6	17 59.0	3.6	55.7	64	15 48	16 45	17 44	05 58	06 39	07 10	07 33		
	17	71 35.0	16 59.3	282 48.0	10.7	17 55.4	3.8	55.7	62	16 02	16 54	17 48	05 39	06 22	06 55	07 21		
	18	86 34.9	S16 58.6	297 17.7	10.6	N17 51.6	3.8	55.7	60	16 14	17 01	17 52	05 24	06 07	06 43	07 11		
	19	101 34.8	57.8	311 47.3	10.6	17 47.8	4.0	55.8	N 58	16 24	17 08	17 56	05 11	05 55	06 32	07 02		
	20	116 34.7	57.1	326 16.9	10.6	17 43.8	4.0	55.8	56	16 33	17 14	17 59	04 59	05 44	06 22	06 55		
	21	131 34.6	56.4	340 46.5	10.6	17 39.8	4.2	55.8	54	16 41	17 19	18 02	04 49	05 35	06 14	06 48		
	22	146 34.6	55.7	355 16.1	10.6	17 35.6	4.2	55.8	52	16 48	17 24	18 05	04 40	05 26	06 07	06 42		
23	161 34.5	55.0	9 45.7	10.6	17 31.4	4.3	55.9	50	16 54	17 29	18 08	04 32	05 19	06 00	06 36			
MIÉRCOLES	2 00	176 34.4	S16 54.3	24 15.3	10.6	N17 27.1	4.4	55.9	45	17 08	17 39	18 14	04 15	05 02	05 45	06 24		
	01	191 34.3	53.5	38 44.9	10.5	17 22.7	4.5	55.9	N 40	17 19	17 48	18 20	04 02	04 49	05 33	06 14		
	02	206 34.3	52.8	53 14.4	10.6	17 18.2	4.6	55.9	35	17 29	17 55	18 26	03 50	04 38	05 23	06 05		
	03	221 34.2	52.1	67 44.0	10.6	17 13.6	4.7	55.9	30	17 37	18 02	18 31	03 39	04 28	05 14	05 58		
	04	236 34.1	51.4	82 13.6	10.6	17 08.9	4.8	56.0	20	17 52	18 15	18 41	03 22	04 11	04 58	05 45		
	05	251 34.0	50.7	96 43.2	10.5	17 04.1	4.9	56.0	N 10	18 05	18 27	18 52	03 06	03 56	04 45	05 33		
	06	266 33.9	S16 49.9	111 12.7	10.6	N16 59.2	5.0	56.0	0	18 17	18 39	19 04	02 52	03 41	04 32	05 22		
	07	281 33.9	49.2	125 42.3	10.6	16 54.2	5.1	56.0	S 10	18 30	18 52	19 17	02 37	03 27	04 19	05 11		
	08	296 33.8	48.5	140 11.9	10.5	16 49.1	5.1	56.1	20	18 43	19 06	19 34	02 22	03 12	04 05	04 59		
	09	311 33.7	47.8	154 41.4	10.6	16 44.0	5.3	56.1	30	18 58	19 24	19 55	02 04	02 55	03 49	04 46		
	10	326 33.7	47.0	169 11.0	10.5	16 38.7	5.3	56.1	35	19 07	19 35	20 08	01 54	02 45	03 40	04 38		
	11	341 33.6	46.3	183 40.5	10.6	16 33.4	5.4	56.1	40	19 18	19 48	20 24	01 42	02 33	03 29	04 29		
	12	356 33.5	S16 45.6	198 10.1	10.6	N16 28.0	5.6	56.2	45	19 30	20 03	20 45	01 28	02 20	03 17	04 18		
	13	11 33.4	44.9	212 39.7	10.5	16 22.4	5.6	56.2	S 50	19 45	20 23	21 12	01 11	02 03	03 02	04 06		
	14	26 33.4	44.1	227 09.2	10.6	16 16.8	5.7	56.2	52	19 52	20 32	21 26	01 02	01 55	02 54	04 00		
	15	41 33.3	43.4	241 38.8	10.5	16 11.1	5.8	56.2	54	19 59	20 43	21 42	00 53	01 46	02 47	03 53		

T. M. G.	ARIES			VENUS -4.2			MARTE +1.5			JUPITER -2.0			SATURNO +0.1			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
M I E R C O L E S	9 ^d 00	138 58.3	134 08.3 N 4	18.6	196 58.6 S21	09.6	88 59.0 N17	32.4		3 19.2 N17	51.8		Acamar	315 39.1 S40	24.1				
	01	154 00.8	149 08.9	19.8	211 59.0	09.2	104 01.2	32.5		18 21.8	51.9		Achernar	335 47.4 S57	21.5				
	02	169 03.3	164 09.5	20.9	226 59.5	08.8	119 03.5	32.6		33 24.5	51.9		Acrux	173 39.3 S62	58.2				
	03	184 05.7	179 10.1	22.1	241 59.9	08.4	134 05.8	32.6		48 27.2	52.0		Adhara	255 33.7 S28	56.7				
	04	199 08.2	194 10.6	23.3	257 00.4	08.1	149 08.0	32.7		63 29.8	52.1		Aldebaran	291 20.6 N16	27.7				
	05	214 10.7	209 11.2	24.4	272 00.8	07.7	164 10.3	32.7		78 32.5	52.1								
	06	229 13.1	224 11.8 N 4	25.6	287 01.2 S21	07.3	179 12.5 N17	32.8		93 35.2 N17	52.2		Alioth	166 44.4 N56	04.7				
	07	244 15.6	239 12.4	26.8	302 01.7	06.9	194 14.8	32.9		108 37.8	52.2		Alkaid	153 20.3 N49	25.3				
	08	259 18.0	254 13.0	27.9	317 02.1	06.5	209 17.1	32.9		123 40.5	52.3		Al Na'ir	28 18.5 S47	04.4				
	09	274 20.5	269 13.6	29.1	332 02.6	06.1	224 19.3	33.0		138 43.2	52.4		Alnilam	276 13.9 S 1	13.2				
	10	289 23.0	284 14.2	30.2	347 03.0	05.7	239 21.6	33.1		153 45.8	52.4		Alphard	218 22.6 S 8	33.8				
	11	304 25.4	299 14.8	31.4	2 03.5	05.3	254 23.8	33.1		168 48.5	52.5								
	12	319 27.9	314 15.4 N 4	32.6	17 03.9 S21	04.9	269 26.1 N17	33.2		183 51.2 N17	52.5		Alphecca	126 34.2 N26	47.3				
	13	334 30.4	329 16.0	33.7	32 04.3	04.5	284 28.4	33.2		198 53.8	52.6		Alpheratz	358 12.0 N28	57.9				
	14	349 32.8	344 16.6	34.9	47 04.8	04.1	299 30.6	33.3		213 56.5	52.7		Altair	62 35.2 N 8	48.4				
	15	4 35.3	359 17.2	36.1	62 05.2	03.7	314 32.9	33.4		228 59.2	52.7		Ankaa	353 43.0 S42	26.0				
	16	19 37.8	14 17.9	37.2	77 05.7	03.3	329 35.1	33.4		244 01.8	52.8		Antares	112 59.9 S26	22.8				
	17	34 40.2	29 18.5	38.4	92 06.1	03.0	344 37.4	33.5		259 04.5	52.9								
	18	49 42.7	44 19.1 N 4	39.5	107 06.5 S21	02.6	359 39.6 N17	33.6		274 07.2 N17	52.9		Arcturus	146 20.6 N19	17.9				
	19	64 45.1	59 19.7	40.7	122 07.0	02.2	14 41.9	33.6		289 09.8	53.0		Atria	108 26.5 S68	58.9				
	20	79 47.6	74 20.3	41.9	137 07.4	01.8	29 44.2	33.7		304 12.5	53.0		Avior	234 28.5 S59	26.4				
	21	94 50.1	89 20.9	43.0	152 07.9	01.4	44 46.4	33.8		319 15.2	53.1		Bellatrix	279 01.2 N 6	19.6				
	22	109 52.5	104 21.5	44.2	167 08.3	01.0	59 48.7	33.8		334 17.8	53.2		Betelgeuse	271 30.7 N 7	24.0				
23	124 55.0	119 22.1	45.3	182 08.8	00.6	74 50.9	33.9		349 20.5	53.2									
J U E V E S	10 00	139 57.5	134 22.8 N 4	46.5	197 09.2 S21	00.2	89 53.2 N17	33.9		4 23.2 N17	53.3		Canopus	264 07.9 S52	41.3				
	01	154 59.9	149 23.4	47.6	212 09.7	20 59.8	104 55.4	34.0		19 25.8	53.3		Capella	281 14.6 N45	58.6				
	02	170 02.4	164 24.0	48.8	227 10.1	59.4	119 57.7	34.1		34 28.5	53.4		Deneb	49 50.5 N45	11.9				
	03	185 04.9	179 24.6	50.0	242 10.5	59.0	135 00.0	34.1		49 31.1	53.5		Denebola	183 01.2 N14	41.8				
	04	200 07.3	194 25.2	51.1	257 11.0	58.6	150 02.2	34.2		64 33.8	53.5		Diphda	349 23.5 S18	06.9				
	05	215 09.8	209 25.9	52.3	272 11.4	58.2	165 04.5	34.3		79 36.5	53.6								
	06	230 12.3	224 26.5 N 4	53.4	287 11.9 S20	57.8	180 06.7 N17	34.3		94 39.1 N17	53.6		Dubhe	194 24.6 N61	52.2				
	07	245 14.7	239 27.1	54.6	302 12.3	57.4	195 09.0	34.4		109 41.8	53.7		Elnath	278 47.0 N28	35.3				
	08	260 17.2	254 27.7	55.7	317 12.8	57.0	210 11.2	34.5		124 44.5	53.8		Eltanin	90 59.2 N51	29.3				
	09	275 19.6	269 28.4	56.9	332 13.2	56.6	225 13.5	34.5		139 47.1	53.8		Enif	34 14.3 N 9	46.2				
	10	290 22.1	284 29.0	58.0	347 13.6	56.2	240 15.7	34.6		154 49.8	53.9		Fomalhaut	15 54.4 S29	44.7				
	11	305 24.6	299 29.6	59.2	2 14.1	55.8	255 18.0	34.6		169 52.5	53.9								
	12	320 27.0	314 30.2 N 5	00.3	17 14.5 S20	55.4	270 20.2 N17	34.7		184 55.1 N17	54.0		Gacrux	172 30.9 S56	59.0				
	13	335 29.5	329 30.9	01.5	32 15.0	55.0	285 22.5	34.8		199 57.8	54.1		Gienah	146 20.2 S17	25.0				
	14	350 32.0	344 31.5	02.6	47 15.4	54.6	300 24.7	34.8		215 00.5	54.1		Hadar	149 26.5 S60	15.6				
	15	5 34.4	359 32.1	03.8	62 15.9	54.2	315 27.0	34.9		230 03.1	54.2		Hamal	328 31.7 N23	21.3				
	16	20 36.9	14 32.8	04.9	77 16.3	53.8	330 29.2	35.0		245 05.8	54.2		Kaus Aust.	84 20.3 S34	23.6				
	17	35 39.4	29 33.4	06.1	92 16.8	53.4	345 31.5	35.0		260 08.5	54.3								
	18	50 41.8	44 34.1 N 5	07.2	107 17.2 S20	53.0	0 33.7 N17	35.1		275 11.1 N17	54.4		Kochab	137 18.9 N74	14.6				
	19	65 44.3	59 34.7	08.4	122 17.7	52.5	15 36.0	35.2		290 13.8	54.4		Markab	14 05.8 N15	04.9				
	20	80 46.8	74 35.3	09.5	137 18.1	52.1	30 38.2	35.2		305 16.5	54.5		Menkar	314 43.7 N 3	59.9				
	21	95 49.2	89 36.0	10.7	152 18.5	51.7	45 40.5	35.3		320 19.1	54.5		Menkent	148 39.7 S36	15.4				
	22	110 51.7	104 36.6	11.8	167 19.0	51.3	60 42.7	35.4		335 21.8	54.6		Miaplacidus	221 44.4 S69	37.5				
23	125 54.1	119 37.3	13.0	182 19.4	50.9	75 45.0	35.4		350 24.5	54.7									
V I E R N E S	11 00	140 56.6	134 37.9 N 5	14.1	197 19.9 S20	50.5	90 47.2 N17	35.5		5 27.1 N17	54.7		Mirfak	309 19.5 N49	47.0				
	01	155 59.1	149 38.6	15.3	212 20.3	50.1	105 49.5	35.6		20 29.8	54.8		Nunki	76 32.4 S26	19.5				
	02	171 01.5	164 39.2	16.4	227 20.8	49.7	120 51.7	35.6		35 32.4	54.8		Peacock	54 02.8 S56	48.4				
	03	186 04.0	179 39.9	17.6	242 21.2	49.3	135 54.0	35.7		50 35.1	54.9		Pollux	244 00.8 N28	04.8				
	04	201 06.5	194 40.5	18.7	257 21.7	48.9	150 56.2	35.7		65 37.8	55.0		Procyon	245 28.0 N 5	16.8				
	05	216 08.9	209 41.2	19.9	272 22.1	48.5	165 58.5	35.8		80 40.4	55.0								
	06	231 11.4	224 41.8 N 5	21.0	287 22.6 S20	48.1	181 00.7 N17	35.9		95 43.1 N17	55.1		Rasalhague	96 32.0 N12	34.5				
	07	246 13.9	239 42.5	22.2	302 23.0	47.7	196 02.9	35.9		110 45.8	55.1		Regulus	208 12.2 N12	04.5				
	08	261 16.3	254 43.1	23.3	317 23.5	47.2	211 05.2	36.0		125 48.4	55.2		Rigel	281 38.2 S 8	13.9				
	09	276 18.8	269 43.8	24.4	332 23.9	46.8	226 07.4	36.1		140 51.1	55.3		Rigil Kent.	140 28.9 S60	44.2				
	10	291 21.2	284 44.4	25.6	347 24.4	46.4	241 09.7	36.1		155 53.8	55.3		Sabik	102 44.0 S15	41.8				
	11	306 23.7	299 45.1	26.7	2 24.8	46.0	256 11.9	36.2		170 56.4	55.4								
	12	321 26.2	314 45.8 N 5	27.9	17 25.2 S20	45.6	271 14.2 N17	36.3		185 59.1 N17	55.4		Schedar	350 12.0 N56	24.9				
	13	336 28.6	329 46.4	29.0	32 25.7	45.2	286 16.4	36.3		201 01.8	55.5		Shaula	96 59.2 S37	05.1				
	14	351 31.1	344 47.1	30.2	47 26.1	44.8	301 18.7	36.4		216 04.4	55.6		Sirius	258 57.6 S16	41.4				
	15	6 33.6	359 47.8	31.3	62 26.6	44.4	316 20.9	36.5		231 07.1	55.6		Spica	158 59.9 S11	02.6				
	16	21 36.0	14 48.4	32.4	77 27.0	43.9	331 23.1	36.5		246 09.7	55.7		Suhail	223 12.1 S43	20.6				
	17																		

T. M. G.	SOL			LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	S14	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		9	10	11	12
M I E R C O L E S	9 00	176 26.4	46.5	299 00.4	9.4 S	8 52.7	10.2 59.0	N 72	06 36	07 58	09 24	00 01	02 03	04 17	■
	01	191 26.4	45.7	313 28.8	9.3	9 02.9	10.2 59.0	N 70	06 32	07 45	08 59	25 38	01 38	03 30	05 19
	02	206 26.4	44.9	327 57.1	9.3	9 13.1	10.1 59.1	68	06 28	07 35	08 40	25 18	01 18	03 00	04 34
	03	221 26.4	44.1	342 25.4	9.2	9 23.2	10.0 59.1	66	06 25	07 26	08 24	25 03	01 03	02 37	04 04
	04	236 26.3	43.3	356 53.6	9.3	9 33.2	10.0 59.1	64	06 22	07 19	08 12	24 50	00 50	02 20	03 42
	05	251 26.3	42.5	11 21.9	9.1	9 43.2	10.0 59.1	62	06 20	07 13	08 01	24 39	00 39	02 05	03 24
	06	266 26.3	41.7	25 50.0	9.2 S	9 53.2	9.9 59.1	60	06 18	07 07	07 52	24 30	00 30	01 53	03 10
	07	281 26.3	40.9	40 18.2	9.0	10 03.1	9.8 59.1	N 58	06 15	07 02	07 44	24 22	00 22	01 42	02 57
	08	296 26.3	40.1	54 46.2	9.1	10 12.9	9.7 59.1	56	06 13	06 57	07 37	24 15	00 15	01 33	02 46
	09	311 26.3	39.3	69 14.3	9.0	10 22.6	9.7 59.1	54	06 11	06 53	07 31	24 09	00 09	01 25	02 37
	10	326 26.2	38.5	83 42.3	9.0	10 32.3	9.7 59.1	52	06 10	06 49	07 25	24 04	00 04	01 18	02 28
	11	341 26.2	37.7	98 10.3	8.9	10 42.0	9.6 59.1	50	06 08	06 46	07 20	23 59	25 11	01 11	02 21
	12	356 26.2	36.9	112 38.2	8.9 S10	51.6	9.5 59.1	45	06 03	06 38	07 09	23 48	24 57	00 57	02 05
	13	11 26.2	36.1	127 06.1	8.8	11 01.1	9.4 59.1	N 40	05 59	06 31	06 59	23 39	24 46	00 46	01 51
	14	26 26.2	35.3	141 33.9	8.8	11 10.5	9.4 59.1	35	05 55	06 25	06 51	23 31	24 36	00 36	01 40
	15	41 26.2	34.5	156 01.7	8.8	11 19.9	9.3 59.1	30	05 51	06 20	06 44	23 24	24 28	00 28	01 30
	16	56 26.2	33.7	170 29.5	8.7	11 29.2	9.3 59.1	20	05 43	06 09	06 32	23 13	24 13	00 13	01 13
	17	71 26.1	32.9	184 57.2	8.7	11 38.5	9.2 59.1	N 10	05 34	05 59	06 21	23 03	24 00	00 00	00 59
	18	86 26.1	32.1	199 24.9	8.6 S11	47.7	9.1 59.1	0	05 25	05 49	06 11	22 54	23 49	24 45	00 45
	19	101 26.1	31.2	213 52.5	8.6	11 56.8	9.0 59.1	S 10	05 13	05 39	06 00	22 44	23 37	24 32	00 32
	20	116 26.1	30.4	228 20.1	8.6	12 05.8	9.0 59.2	20	04 59	05 26	05 49	22 34	23 24	24 17	00 17
	21	131 26.1	29.6	242 47.7	8.5	12 14.8	8.9 59.2	30	04 41	05 11	05 36	22 23	23 10	24 01	00 01
	22	146 26.1	28.8	257 15.2	8.4	12 23.7	8.8 59.2	35	04 29	05 02	05 29	22 17	23 02	23 51	24 45
23	161 26.1	28.0	271 42.6	8.5	12 32.5	8.8 59.2	40	04 15	04 51	05 20	22 10	22 52	23 40	24 33	
10 00	176 26.1	27.2	286 10.1	8.3 S12	41.3	8.7 59.2	45	03 58	04 38	05 10	22 01	22 41	23 27	24 20	
01	191 26.0	26.4	300 37.4	8.4	12 50.0	8.6 59.2	S 50	03 35	04 21	04 57	21 51	22 28	23 12	24 03	
02	206 26.0	25.6	315 04.8	8.3	12 58.6	8.5 59.2	52	03 24	04 13	04 52	21 46	22 22	23 04	23 55	
03	221 26.0	24.8	329 32.1	8.2	13 07.1	8.4 59.2	54	03 10	04 04	04 45	21 41	22 15	22 56	23 46	
04	236 26.0	24.0	343 59.3	8.2	13 15.5	8.4 59.2	56	02 55	03 54	04 38	21 36	22 08	22 47	23 36	
05	251 26.0	23.2	358 26.5	8.2	13 23.9	8.3 59.2	58	02 35	03 43	04 30	21 29	21 59	22 37	23 25	
06	266 26.0	22.3	12 53.7	8.1 S13	32.2	8.2 59.2	S 60	02 10	03 29	04 21	21 22	21 50	22 26	23 12	
07	281 26.0	21.5	27 20.8	8.1	13 40.4	8.1 59.2	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
08	296 26.0	20.7	41 47.9	8.0	13 48.5	8.0 59.2	9	10	11	12	h	m	h	m	
09	311 26.0	19.9	56 14.9	8.0	13 56.5	7.9 59.2	N 72	15 06	16 32	17 55	08 04	07 53	07 35	■	
10	326 26.0	19.1	70 41.9	8.0	14 04.4	7.9 59.2	N 70	15 31	16 45	17 59	08 20	08 20	08 23	08 33	
11	341 26.0	18.3	85 08.9	7.9	14 12.3	7.8 59.2	68	15 50	16 55	18 02	08 33	08 41	08 54	09 19	
12	356 25.9	17.5	99 35.8	7.8 S14	20.1	7.7 59.2	66	16 05	17 03	18 05	08 44	08 58	09 17	09 49	
13	11 25.9	16.7	114 02.6	7.9	14 27.8	7.6 59.2	64	16 18	17 11	18 07	08 53	09 11	09 36	10 11	
14	26 25.9	15.8	128 29.5	7.7	14 35.4	7.5 59.2	62	16 29	17 17	18 10	09 01	09 23	09 51	10 29	
15	41 25.9	15.0	142 56.2	7.8	14 42.9	7.4 59.2	60	16 38	17 23	18 12	09 08	09 32	10 03	10 44	
16	56 25.9	14.2	157 23.0	7.7	14 50.3	7.3 59.2	N 58	16 46	17 28	18 14	09 14	09 41	10 14	10 57	
17	71 25.9	13.4	171 49.7	7.6	14 57.6	7.2 59.2	56	16 53	17 32	18 16	09 19	09 48	10 24	11 08	
18	86 25.9	12.6	186 16.3	7.6 S15	04.8	7.2 59.2	54	16 59	17 36	18 18	09 24	09 55	10 32	11 18	
19	101 25.9	11.8	200 42.9	7.6	15 12.0	7.0 59.2	52	17 04	17 40	18 20	09 28	10 01	10 40	11 26	
20	116 25.9	10.9	215 09.5	7.6	15 19.0	6.9 59.2	50	17 10	17 43	18 22	09 32	10 07	10 47	11 34	
21	131 25.9	10.1	229 36.1	7.4	15 25.9	6.9 59.2	45	17 21	17 51	18 26	09 41	10 19	11 02	11 51	
22	146 25.9	09.3	244 02.5	7.5	15 32.8	6.7 59.2	N 40	17 30	17 58	18 30	09 48	10 29	11 14	12 04	
23	161 25.9	08.5	258 29.0	7.4	15 39.5	6.7 59.2	35	17 38	18 04	18 34	09 54	10 37	11 24	12 16	
11 00	176 25.9	07.7	272 55.4	7.4 S15	46.2	6.5 59.2	30	17 45	18 09	18 38	10 00	10 45	11 33	12 26	
01	191 25.9	06.8	287 21.8	7.3	15 52.7	6.5 59.2	20	17 57	18 19	18 46	10 09	10 58	11 49	12 43	
02	206 25.9	06.0	301 48.1	7.3	15 59.2	6.4 59.2	N 10	18 08	18 29	18 54	10 18	11 09	12 02	12 58	
03	221 25.9	05.2	316 14.4	7.3	16 05.6	6.2 59.2	0	18 18	18 39	19 04	10 25	11 20	12 15	13 13	
04	236 25.9	04.4	330 40.7	7.2	16 11.8	6.2 59.2	S 10	18 28	18 50	19 15	10 33	11 30	12 28	13 27	
05	251 25.9	03.6	345 06.9	7.2	16 18.0	6.0 59.2	20	18 39	19 02	19 29	10 42	11 42	12 42	13 42	
06	266 25.9	02.7	359 33.1	7.1 S16	24.0	6.0 59.2	30	18 52	19 17	19 47	10 51	11 55	12 58	13 59	
07	281 25.9	01.9	13 59.2	7.1	16 30.0	5.8 59.2	35	18 59	19 26	19 58	10 57	12 02	13 07	14 09	
08	296 25.9	01.1	28 25.3	7.1	16 35.8	5.7 59.2	40	19 08	19 37	20 12	11 03	12 11	13 17	14 21	
09	311 25.9	00.3	42 51.4	7.0	16 41.5	5.6 59.2	45	19 18	19 50	20 29	11 10	12 21	13 29	14 34	
10	326 25.9	00.3	57 17.4	7.0	16 47.1	5.6 59.2	S 50	19 30	20 06	20 52	11 19	12 33	13 44	14 51	
11	341 25.9	00.3	71 43.4	7.0	16 52.7	5.4 59.2	52	19 36	20 14	21 03	11 23	12 39	13 51	14 59	
12	356 25.9	00.3	86 09.4	6.9 S16	58.1	5.3 59.2	54	19 42	20 23	21 16	11 28	12 45	13 59	15 07	
13	11 25.9	00.3	100 35.3	6.9	17 03.4	5.2 59.2	56	19 49	20 33	21 31	11 33	12 52	14 08	15 17	
14	26 25.9	00.3	115 01.2	6.9	17 08.6	5.1 59.2	58	19 57	20 44	21 50	11 39	13 00	14 18	15 28	
15	41 25.9	00.3	129 27.1	6.8	17 13.7	4.9 59.2	S 60	20 06	20 57	22 14	11 45	13 09	14 29	15 41	
16	56 25.9	00.3	143 52.9	6.8	17 18.6	4.9 59.2	Día	SOL E.T. (-)			LUNA				
17	71 25.9	00.3	158 18.7	6.8	17 23.5	4.8 59.2	9	00 ^a	12 ^a	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
18	86 25.9	00.3	172 44.5	6.7 S17	28.3	4.6 59.2	10	m s	m s	h m	h m	h m	d		
19	101 25.9	00.3	187 10.2	6.7	17 32.9	4.5 59.2	11	14 14	14 15	12 14	04 13	16 39	21		
20	116 25.9	00.3	201 35.9	6.7	17 37.4	4.4 59.2	11	14 16	14 16	12 14	05 06	17 34	22	(
21	131 25.9	00.3	216 01.6	6.7	17 41.8	4.3 59.2	11	14 16	14 1						

T. M. G.	SOL			LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	S12	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	15		16		17		18	
													h	m	h	m	h	m	h	m
M A R T E S	15 ^d 00	176	27.1	S12	47.2	217	54.2	7.3	S17	29.5	4.7	58.6	N 72	06 11	07 30	08 48	08 25	08 06	07 55	07 47
	01	191	27.1		46.4	232	20.5	7.4	17	24.8	4.7	58.6	N 70	06 09	07 21	08 29	07 34	07 37	07 38	07 37
	02	206	27.2		45.5	246	46.9	7.4	17	20.1	4.9	58.6	68	06 08	07 13	08 14	07 02	07 15	07 23	07 29
	03	221	27.2	..	44.7	261	13.3	7.4	17	15.2	4.9	58.6	66	06 07	07 07	08 02	06 38	06 58	07 12	07 22
	04	236	27.2		43.8	275	39.7	7.5	17	10.3	5.1	58.6	64	06 06	07 01	07 52	06 19	06 44	07 02	07 16
	05	251	27.2		42.9	290	06.2	7.5	17	05.2	5.2	58.6	62	06 05	06 56	07 43	06 04	06 32	06 54	07 10
	06	266	27.3	S12	42.1	304	32.7	7.6	S17	00.0	5.3	58.6	60	06 04	06 52	07 36	05 51	06 22	06 46	07 06
	07	281	27.3		41.2	318	59.3	7.7	16	54.7	5.3	58.5	N 58	06 02	06 48	07 29	05 40	06 13	06 40	07 02
	08	296	27.3		40.4	333	26.0	7.6	16	49.4	5.5	58.5	56	06 01	06 45	07 23	05 30	06 05	06 34	06 58
	09	311	27.4	..	39.5	347	52.6	7.8	16	43.9	5.6	58.5	54	06 00	06 42	07 18	05 21	05 58	06 29	06 55
	10	326	27.4		38.6	2	19.4	7.7	16	38.3	5.7	58.5	52	05 59	06 39	07 13	05 14	05 52	06 24	06 52
	11	341	27.4		37.8	16	46.1	7.9	16	32.6	5.7	58.5	50	05 58	06 36	07 09	05 07	05 46	06 20	06 50
	12	356	27.5	S12	36.9	31	13.0	7.9	S16	26.9	5.9	58.5	45	05 55	06 30	07 00	04 52	05 34	06 11	06 44
	13	11	27.5		36.1	45	39.9	7.9	16	21.0	6.0	58.4	N 40	05 53	06 24	06 52	04 40	05 24	06 03	06 39
	14	26	27.5		35.2	60	06.8	8.0	16	15.0	6.0	58.4	35	05 50	06 19	06 45	04 29	05 15	05 57	06 35
	15	41	27.6	..	34.3	74	33.8	8.0	16	09.0	6.2	58.4	30	05 47	06 15	06 39	04 20	05 08	05 51	06 31
	16	56	27.6		33.5	89	00.8	8.1	16	02.8	6.2	58.4	20	05 40	06 06	06 29	04 04	04 54	05 41	06 25
	17	71	27.6		32.6	103	27.9	8.2	15	56.6	6.4	58.4	N 10	05 33	05 58	06 20	03 50	04 43	05 32	06 19
	18	86	27.7	S12	31.8	117	55.1	8.2	S15	50.2	6.4	58.4	0	05 25	05 50	06 11	03 37	04 32	05 24	06 14
	19	101	27.7		30.9	132	22.3	8.2	15	43.8	6.5	58.4	S 10	05 15	05 40	06 02	03 24	04 21	05 16	06 08
	20	116	27.7		30.0	146	49.5	8.3	15	37.3	6.7	58.3	20	05 03	05 29	05 52	03 10	04 09	05 07	06 03
	21	131	27.8	..	29.2	161	16.8	8.4	15	30.6	6.7	58.3	30	04 47	05 16	05 41	02 54	03 56	04 57	05 56
	22	146	27.8		28.3	175	44.2	8.4	15	23.9	6.8	58.3	35	04 36	05 08	05 35	02 45	03 48	04 51	05 52
23	161	27.8		27.4	190	11.6	8.5	15	17.1	6.8	58.3	40	04 24	04 59	05 27	02 34	03 39	04 44	05 48	
M I E R C O L E S	16 ^d 00	176	27.9	S12	26.6	204	39.1	8.6	S15	10.3	7.0	58.3	45	04 09	04 47	05 19	02 22	03 29	04 36	05 43
	01	191	27.9		25.7	219	06.7	8.6	15	03.3	7.0	58.3	S 50	03 49	04 33	05 08	02 07	03 16	04 27	05 37
	02	206	27.9		24.8	233	34.3	8.6	14	56.3	7.2	58.2	52	03 39	04 26	05 03	02 00	03 10	04 22	05 34
	03	221	28.0	..	24.0	248	01.9	8.7	14	49.1	7.2	58.2	54	03 28	04 18	04 58	01 52	03 04	04 18	05 31
	04	236	28.0		23.1	262	29.6	8.8	14	41.9	7.3	58.2	56	03 14	04 10	04 52	01 43	02 56	04 12	05 28
	05	251	28.0		22.3	276	57.4	8.8	14	34.6	7.4	58.2	58	02 59	04 00	04 45	01 33	02 48	04 06	05 24
	06	266	28.1	S12	21.4	291	25.2	8.9	S14	27.2	7.4	58.2	S 60	02 39	03 48	04 37	01 22	02 39	04 00	05 20
	07	281	28.1		20.5	305	53.1	8.9	14	19.8	7.6	58.1	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna				
	08	296	28.1		19.7	320	21.0	9.0	14	12.2	7.6	58.1	Naut.	15	16	17	18			
	09	311	28.2	..	18.8	334	49.0	9.1	14	04.6	7.7	58.1	h m	h m	h m	h m	h m	h m	h m	
	10	326	28.2		17.9	349	17.1	9.1	13	56.9	7.7	58.1	N 72	15 41	17 00	18 20	11 26	13 38	15 36	17 26
	11	341	28.3		17.0	3	45.2	9.2	13	49.2	7.9	58.1	N 70	16 00	17 09	18 21	12 16	14 06	15 52	17 34
	12	356	28.3	S12	16.2	18	13.4	9.2	S13	41.3	7.9	58.0	68	16 15	17 16	18 22	12 48	14 26	16 05	17 40
	13	11	28.3		15.3	32	41.6	9.3	13	33.4	8.0	58.0	66	16 27	17 23	18 23	13 11	14 43	16 15	17 46
	14	26	28.4		14.4	47	09.9	9.4	13	25.4	8.0	58.0	64	16 37	17 28	18 24	13 29	14 56	16 24	17 51
	15	41	28.4	..	13.6	61	38.3	9.4	13	17.4	8.1	58.0	62	16 46	17 33	18 25	13 44	15 07	16 31	17 55
	16	56	28.5		12.7	76	06.7	9.5	13	09.3	8.2	58.0	60	16 53	17 37	18 26	13 57	15 17	16 38	17 58
	17	71	28.5		11.8	90	35.2	9.5	13	01.1	8.3	57.9	N 58	17 00	17 41	18 27	14 07	15 25	16 43	18 01
	18	86	28.5	S12	11.0	105	03.7	9.6	S12	52.8	8.3	57.9	56	17 06	17 44	18 28	14 17	15 32	16 48	18 04
	19	101	28.6		10.1	119	32.3	9.7	12	44.5	8.4	57.9	54	17 11	17 48	18 29	14 25	15 38	16 53	18 06
	20	116	28.6		09.2	134	01.0	9.7	12	36.1	8.5	57.9	52	17 16	17 51	18 30	14 32	15 44	16 57	18 08
	21	131	28.7	..	08.3	148	29.7	9.7	12	27.6	8.5	57.9	50	17 20	17 53	18 31	14 39	15 49	17 00	18 10
	22	146	28.7		07.5	162	58.4	9.9	12	19.1	8.6	57.8	45	17 29	17 59	18 34	14 53	16 01	17 08	18 15
23	161	28.7		06.6	177	27.3	9.9	12	10.5	8.6	57.8	N 40	17 37	18 05	18 36	15 05	16 10	17 15	18 18	
J U E V E S	17 ^d 00	176	28.8	S12	05.7	191	56.2	9.9	S12	01.9	8.8	57.8	35	17 44	18 09	18 39	15 15	16 18	17 20	18 21
	01	191	28.8		04.9	206	25.1	10.0	11	53.1	8.7	57.8	30	17 49	18 14	18 42	15 24	16 25	17 25	18 24
	02	206	28.9		04.0	220	54.1	10.1	11	44.4	8.9	57.8	20	18 00	18 22	18 48	15 38	16 37	17 34	18 29
	03	221	28.9	..	03.1	235	23.2	10.1	11	35.5	8.8	57.7	N 10	18 09	18 30	18 55	15 51	16 47	17 41	18 33
	04	236	29.0		02.2	249	52.3	10.2	11	26.7	9.0	57.7	0	18 18	18 39	19 03	16 03	16 57	17 48	18 37
	05	251	29.0		01.4	264	21.5	10.2	11	17.7	9.0	57.7	S 10	18 26	18 48	19 13	16 16	17 07	17 55	18 40
	06	266	29.0	S12	00.5	278	50.7	10.3	S11	08.7	9.0	57.7	20	18 36	18 58	19 25	16 28	17 17	18 02	18 44
	07	281	29.1	11	59.6	293	20.0	10.4	10	59.7	9.1	57.7	30	18 47	19 12	19 41	16 43	17 29	18 10	18 49
	08	296	29.1		58.7	307	49.4	10.4	10	50.6	9.2	57.6	35	18 53	19 19	19 51	16 51	17 35	18 15	18 52
	09	311	29.2	..	57.9	322	18.8	10.5	10	41.4	9.2	57.6	40	19 00	19 29	20 03	17 01	17 43	18 20	18 54
	10	326	29.2		57.0	336	48.3	10.5	10	32.2	9.2	57.6	45	19 09	19 40	20 18	17 12	17 52	18 26	18 58
	11	341	29.3		56.1	351	17.8	10.6	10	23.0	9.3	57.6	S 50							

T.M.G.	ARIES			VENUS -4.3			MARTE +1.5			JUPITER -1.9			SATURNO +0.1			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
18 V I E R N E S	00	147 50.6	136 45.5 N 8 20.0	198 36.8 S19 36.7	97 00.5 N17 47.4		12 54.1 N18 04.5			Acamar	315 39.2 S40 24.1							
	01	162 53.0	151 46.4 21.0	213 37.3 36.2	112 02.7 47.5		27 56.8 04.6			Achernar	335 47.4 S57 21.4							
	02	177 55.5	166 47.2 22.1	228 37.8 35.7	127 04.9 47.6		42 59.4 04.6			Acrux	173 39.2 S62 58.3							
	03	192 58.0	181 48.1 .. 23.1	243 38.2 .. 35.2	142 07.1 .. 47.6		58 02.1 .. 04.7			Adhara	255 33.7 S28 56.8							
	04	208 00.4	196 49.0 24.2	258 38.7 34.8	157 09.3 47.7		73 04.7 04.7			Aldebaran	291 20.7 N16 27.7							
	05	223 02.9	211 49.9 25.2	273 39.2 34.3	172 11.5 47.8		88 07.4 04.8											
	06	238 05.4	226 50.8 N 8 26.3	288 39.7 S19 33.8	187 13.7 N17 47.9		103 10.0 N18 04.8			Alioth	166 44.3 N56 04.7							
	07	253 07.8	241 51.7 27.4	303 40.1 33.3	202 15.9 48.0		118 12.7 04.9			Alkaid	153 20.2 N49 25.3							
	08	268 10.3	256 52.6 28.4	318 40.6 32.9	217 18.1 48.0		133 15.3 05.0			Al Na'ir	28 18.4 S47 04.3							
	09	283 12.8	271 53.5 .. 29.5	333 41.1 .. 32.4	232 20.3 .. 48.1		148 18.0 .. 05.0			Alnilam	276 13.9 S 1 13.2							
	10	298 15.2	286 54.4 30.5	348 41.5 31.9	247 22.5 48.2		163 20.7 05.1			Alphard	218 22.6 S 8 33.8							
	11	313 17.7	301 55.3 31.6	3 42.0 31.5	262 24.7 48.3		178 23.3 05.1											
	12	328 20.1	316 56.2 N 8 32.6	18 42.5 S19 31.0	277 26.9 N17 48.3		193 26.0 N18 05.2			Alphecca	126 34.1 N26 47.3							
	13	343 22.6	331 57.1 33.7	33 43.0 30.5	292 29.0 48.4		208 28.6 05.2			Alpheratz	358 12.1 N28 57.9							
	14	358 25.1	346 58.0 34.7	48 43.4 30.0	307 31.2 48.5		223 31.3 05.3			Altair	62 35.1 N 8 48.4							
	15	13 27.5	1 58.9 .. 35.8	63 43.9 .. 29.5	322 33.4 .. 48.6		238 33.9 .. 05.3			Ankaa	353 43.0 S42 26.0							
	16	28 30.0	16 59.8 36.8	78 44.4 29.1	337 35.6 48.7		253 36.6 05.4			Antares	112 59.8 S26 22.8							
	17	43 32.5	32 00.7 37.9	93 44.9 28.6	352 37.8 48.7		268 39.2 05.5											
	18	58 34.9	47 01.6 N 8 38.9	108 45.3 S19 28.1	7 40.0 N17 48.8		283 41.9 N18 05.5			Arcturus	146 20.5 N19 17.9							
	19	73 37.4	62 02.5 40.0	123 45.8 27.6	22 42.2 48.9		298 44.5 05.6			Atria	108 26.3 S68 58.9							
	20	88 39.9	77 03.4 41.0	138 46.3 27.2	37 44.4 49.0		313 47.2 05.6			Avior	234 28.5 S59 26.4							
	21	103 42.3	92 04.3 .. 42.1	153 46.7 .. 26.7	52 46.6 .. 49.0		328 49.9 .. 05.7			Bellatrix	279 01.2 N 6 19.6							
	22	118 44.8	107 05.3 43.1	168 47.2 26.2	67 48.8 49.1		343 52.5 05.7			Betelgeuse	271 30.7 N 7 24.0							
23	133 47.3	122 06.2 44.2	183 47.7 25.7	82 51.0 49.2		358 55.2 05.8												
19 S A B A D O	00	148 49.7	137 07.1 N 8 45.2	198 48.2 S19 25.2	97 53.2 N17 49.3		13 57.8 N18 05.8			Canopus	264 07.9 S52 41.4							
	01	163 52.2	152 08.0 46.2	213 48.6 24.8	112 55.3 49.4		29 00.5 05.9			Capella	281 14.7 N45 58.6							
	02	178 54.6	167 08.9 47.3	228 49.1 24.3	127 57.5 49.4		44 03.1 06.0			Deneb	49 50.5 N45 11.9							
	03	193 57.1	182 09.9 .. 48.3	243 49.6 .. 23.8	142 59.7 .. 49.5		59 05.8 .. 06.0			Denebola	183 01.2 N14 41.8							
	04	208 59.6	197 10.8 49.4	258 50.1 23.3	158 01.9 49.6		74 08.4 06.1			Diphda	349 23.5 S18 06.9							
	05	224 02.0	212 11.7 50.4	273 50.5 22.8	173 04.1 49.7		89 11.1 06.1											
	06	239 04.5	227 12.7 N 8 51.4	288 51.0 S19 22.4	188 06.3 N17 49.7		104 13.7 N18 06.2			Dubhe	194 24.5 N61 52.2							
	07	254 07.0	242 13.6 52.5	303 51.5 21.9	203 08.5 49.8		119 16.4 06.2			Elnath	278 47.0 N28 35.3							
	08	269 09.4	257 14.5 53.5	318 52.0 21.4	218 10.7 49.9		134 19.0 06.3			Eltanin	90 59.1 N51 29.3							
	09	284 11.9	272 15.5 .. 54.6	333 52.4 .. 20.9	233 12.9 .. 50.0		149 21.7 .. 06.3			Enif	34 14.2 N 9 46.2							
	10	299 14.4	287 16.4 55.6	348 52.9 20.4	248 15.0 50.1		164 24.3 06.4			Fomalhaut	15 54.4 S29 44.7							
	11	314 16.8	302 17.3 56.6	3 53.4 19.9	263 17.2 50.1		179 27.0 06.5											
	12	329 19.3	317 18.3 N 8 57.7	18 53.9 S19 19.5	278 19.4 N17 50.2		194 29.7 N18 06.5			Gacrux	172 30.9 S56 59.1							
	13	344 21.7	332 19.2 58.7	33 54.3 19.0	293 21.6 50.3		209 32.3 06.6			Gienah	176 20.1 S17 25.0							
	14	359 24.2	347 20.2 8 59.7	48 54.8 18.5	308 23.8 50.4		224 35.0 06.6			Hadar	149 26.4 S60 15.6							
	15	14 26.7	2 21.1 9 00.8	63 55.3 .. 18.0	323 26.0 .. 50.5		239 37.6 .. 06.7			Hamal	328 31.8 N23 21.3							
	16	29 29.1	17 22.0 01.8	78 55.8 17.5	338 28.2 50.5		254 40.3 06.7			Kaus Aust.	84 20.2 S34 23.6							
	17	44 31.6	32 23.0 02.8	93 56.2 17.0	353 30.3 50.6		269 42.9 06.8											
	18	59 34.1	47 23.9 N 9 03.9	108 56.7 S19 16.5	8 32.5 N17 50.7		284 45.6 N18 06.8			Kochab	137 18.7 N74 14.7							
	19	74 36.5	62 24.9 04.9	123 57.2 16.1	23 34.7 50.8		299 48.2 06.9			Markab	14 05.8 N15 04.9							
	20	89 39.0	77 25.8 05.9	138 57.7 15.6	38 36.9 50.8		314 50.9 07.0			Menkar	314 43.7 N 3 59.9							
	21	104 41.5	92 26.8 .. 07.0	153 58.2 .. 15.1	53 39.1 .. 50.9		329 53.5 .. 07.0			Menkent	148 39.6 S36 15.4							
	22	119 43.9	107 27.8 08.0	168 58.6 14.6	68 41.3 51.0		344 56.2 07.1			Miaplacidus	221 44.4 S69 37.6							
23	134 46.4	122 28.7 09.0	183 59.1 14.1	83 43.4 51.1		359 58.8 07.1												
20 D O M I N G O	00	149 48.9	137 29.7 N 9 10.1	198 59.6 S19 13.6	98 45.6 N17 51.2		15 01.5 N18 07.2			Mirfak	309 19.5 N49 47.0							
	01	164 51.3	152 30.6 11.1	214 00.1 13.1	113 47.8 51.2		30 04.1 07.2			Nunki	76 32.4 S26 19.4							
	02	179 53.8	167 31.6 12.1	229 00.5 12.6	128 50.0 51.3		45 06.8 07.3			Peacock	54 02.7 S56 48.4							
	03	194 56.2	182 32.6 .. 13.1	244 01.0 .. 12.2	143 52.2 .. 51.4		60 09.4 .. 07.3			Pollux	244 00.8 N28 04.8							
	04	209 58.7	197 33.5 14.2	259 01.5 11.7	158 54.4 51.5		75 12.1 07.4			Procyon	245 28.0 N 5 16.8							
	05	225 01.2	212 34.5 15.2	274 02.0 11.2	173 56.5 51.6		90 14.7 07.4											
	06	240 03.6	227 35.5 N 9 16.2	289 02.5 S19 10.7	188 58.7 N17 51.6		105 17.4 N18 07.5			Rasalhague	96 31.9 N12 34.5							
	07	255 06.1	242 36.5 17.2	304 02.9 10.2	204 00.9 51.7		120 20.0 07.6			Regulus	208 12.2 N12 04.5							
	08	270 08.6	257 37.4 18.3	319 03.4 09.7	219 03.1 51.8		135 22.7 07.6			Rigel	281 38.2 S 8 13.9							
	09	285 11.0	272 38.4 .. 19.3	334 03.9 .. 09.2	234 05.3 .. 51.9		150 25.3 .. 07.7			Rigil Kent.	140 28.8 S60 44.2							
	10	300 13.5	287 39.4 20.3	349 04.4 08.7	249 07.4 52.0		165 28.0 07.7			Sabik	102 44.0 S15 41.8							
	11	315 16.0	302 40.4 21.3	4 04.9 08.2	264 09.6 52.0		180 30.6 07.8											
	12	330 18.4	317 41.3 N 9 22.3	19 05.3 S19 07.7	279 11.8 N17 52.1		195 33.3 N18 07.8			Schedar	350 12.1 N56 24.9							
	13	345 20.9	332 42.3 23.4	34 05.8 07.2	294 14.0 52.2		210 35.9 07.9			Shaula	96 59.2 S37 05.1							
	14	0 23.4	347 43.3 24.4	49 06.3 06.8	309 16.2 52.3		225 38.6 07.9			Sirius	258 57.6 S16 41.4							
15	15 25.8	2 44.3 .. 25.4	64 06.8 .. 06.3	324 18.3 .. 52.4		240 41.2 .. 08.0			Spica	158 59.8 S11 02.6								
16	30 28.3	17 45.3 26.4	79 07.3 05.8	339 20.5 52.4		255 43.9 08.0			Suhail	223 12.1 S43 20.6								
17	45 30.7	32 46.3 27.4	94 07.7 05.3	354 22.7 52.5		270 46.6 08.1												
18	60 33.2	47 47.3 N 9 28.4	109 08.2 S19 04.8	9 24.9 N17 52.6		285 49.2 N18 08.2			Vega	80 57.7 N38 45.6								
19	75 35.7	62 48.3 29.5	124 08.7 04.3	24 27.1 52.7		300 51.9 08.2			Zuben'ubi	137 35.6 S15 56.8								
20	90 38.1	77 49.3 30.5	139 09.2 03.8	39 29.2 52.8		315 54.5 08.3												
21	105 40.6	92 50.3 .. 31.5	154 09.7 .. 03.3	54 31.4 .. 52.8		330 57.2 .. 08.3												
22	120 43.1	107 51.3 32.5	169 10.1 02.8	69 33.6 52.9		345 59.8 08.4												
23	135 45.5	122 52.3 33.5	184 10.6 02.3	84 35.8 53.0		1 02.5 08.4												
Pas. Mer.	h m 14 02.4	v 0.9 d 1.0	v 0.5 d 0.5	v 2.2 d 0.1	v 2.7 d 0.1													
											A. H. S. Pas. Mer. o / h m							
											Venus 348 17.4 14 51							
											Marte 49 58.5 10 44							
											Júpiter 309 03.4 17 26							
											Saturno 225 08.1 23 00							

T.M.G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol		Orto Luna															
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.	Civil	18		19		20		21										
											h	m	h	m	h	m	h	m	h	m	h	m					
18 V I E R N E S	176	29.9	S11	44.7	179	46.8	11.3	S	8	18.7	9.9	57.3	N 72	05	58	07	16	08	32	07	47	07	40	07	33	07	26
	191	29.9		43.8	194	17.1	11.3		8	08.8	9.8	57.2	N 70	05	58	07	09	08	15	07	37	07	36	07	34	07	33
	206	30.0		42.9	208	47.4	11.5		7	59.0	9.9	57.2	68	05	58	07	02	08	02	07	29	07	32	07	36	07	39
	221	30.0	..	42.1	223	17.9	11.4		7	49.1	10.0	57.2	66	05	57	06	57	07	51	07	22	07	30	07	37	07	44
	236	30.1		41.2	237	48.3	11.5		7	39.1	9.9	57.2	64	05	57	06	52	07	42	07	16	07	27	07	38	07	48
	251	30.1		40.3	252	18.8	11.6		7	29.2	10.0	57.1	62	05	57	06	48	07	34	07	10	07	25	07	38	07	52
	266	30.2	S11	39.4	266	49.4	11.6	S	7	19.2	10.0	57.1	60	05	56	06	44	07	28	07	06	07	23	07	39	07	55
	281	30.2		38.5	281	20.0	11.7		7	09.2	10.1	57.1	N 58	05	55	06	41	07	22	07	02	07	21	07	40	07	58
	296	30.3		37.6	295	50.7	11.7		6	59.1	10.1	57.1	56	05	55	06	38	07	16	06	58	07	20	07	40	08	00
	311	30.4	..	36.8	310	21.4	11.8		6	49.0	10.1	57.1	54	05	54	06	35	07	12	06	55	07	19	07	41	08	02
	326	30.4		35.9	324	52.2	11.8		6	38.9	10.1	57.0	52	05	54	06	33	07	07	06	52	07	17	07	41	08	04
	341	30.5		35.0	339	23.0	11.8		6	28.8	10.1	57.0	50	05	53	06	30	07	04	06	50	07	16	07	41	08	06
	356	30.5	S11	34.1	353	53.8	11.9	S	6	18.7	10.2	57.0	45	05	51	06	25	06	55	06	44	07	14	07	42	08	10
	11	30.6		33.2	8	24.7	12.0		6	08.5	10.2	57.0	N 40	05	49	06	20	06	48	06	39	07	12	07	43	08	14
	26	30.6		32.3	22	55.7	12.0		5	58.3	10.2	56.9	35	05	47	06	16	06	42	06	35	07	10	07	44	08	17
	41	30.7	..	31.5	37	26.7	12.1		5	48.1	10.2	56.9	30	05	44	06	12	06	36	06	31	07	09	07	44	08	20
	56	30.7		30.6	51	57.8	12.1		5	37.9	10.3	56.9	20	05	39	06	05	06	27	06	25	07	06	07	45	08	24
	71	30.8		29.7	66	28.9	12.1		5	27.6	10.2	56.9	N 10	05	32	05	57	06	19	06	19	07	03	07	46	08	28
	86	30.8	S11	28.8	81	00.0	12.2	S	5	17.4	10.3	56.8	0	05	25	05	49	06	11	06	14	07	01	07	47	08	32
	101	30.9		27.9	95	31.2	12.2		5	07.1	10.3	56.8	S 10	05	16	05	41	06	02	06	08	06	59	07	48	08	36
	116	30.9		27.0	110	02.4	12.3		4	56.8	10.3	56.8	20	05	04	05	31	05	54	06	03	06	57	07	49	08	40
	131	31.0	..	26.1	124	33.7	12.3		4	46.5	10.4	56.8	30	04	49	05	19	05	43	05	56	06	54	07	50	08	45
	146	31.1		25.2	139	05.0	12.4		4	36.1	10.3	56.7	35	04	40	05	11	05	38	05	52	06	52	07	51	08	48
161	31.1		24.4	153	36.4	12.4		4	25.8	10.4	56.7	40	04	28	05	02	05	31	05	48	06	51	07	52	08	51	
176	31.2	S11	23.5	168	07.8	12.5	S	4	15.4	10.3	56.7	45	04	14	04	52	05	23	05	43	06	49	07	53	08	55	
191	31.2		22.6	182	39.3	12.4		4	05.1	10.4	56.7	S 50	03	55	04	38	05	13	05	37	06	46	07	54	08	59	
206	31.3		21.7	197	10.7	12.6		3	54.7	10.4	56.6	52	03	46	04	32	05	09	05	34	06	45	07	54	09	01	
221	31.3	..	20.8	211	42.3	12.6		3	44.3	10.4	56.6	54	03	36	04	25	05	04	05	31	06	44	07	55	09	04	
236	31.4		19.9	226	13.9	12.6		3	33.9	10.4	56.6	56	03	24	04	17	04	58	05	28	06	43	07	55	09	06	
251	31.5		19.0	240	45.5	12.6		3	23.5	10.4	56.6	58	03	09	04	08	04	52	05	24	06	41	07	56	09	09	
266	31.5	S11	18.1	255	17.1	12.7	S	3	13.1	10.4	56.5	S 60	02	52	03	58	04	45	04	55	05	20	06	39	07	57	
281	31.6		17.2	269	48.8	12.7		3	02.7	10.4	56.5	lat.	Ocaso	Crepúsculo		Ocaso Luna											
296	31.6		16.4	284	20.5	12.8		2	52.3	10.4	56.5	Sol	Civil	Náut.	18	19	20	21									
311	31.7	..	15.5	298	52.3	12.8		2	41.9	10.4	56.5	h	h	h	h	h	h	h	h	h	h	h	h	h	h		
326	31.7		14.6	313	24.1	12.9		2	31.5	10.5	56.4	m	m	m	m	m	m	m	m	m	m	m	m	m	m		
341	31.8		13.7	327	56.0	12.8		2	21.0	10.4	56.4	N 72	15	58	17	13	18	32	17	26	19	11	20	52	22	32	
356	31.9	S11	12.8	342	27.8	13.0	S	2	10.6	10.4	56.4	N 70	16	14	17	21	18	32	17	34	19	12	20	47	22	21	
11	31.9		11.9	356	59.8	12.9		2	00.2	10.4	56.4	68	16	27	17	27	18	32	17	40	19	13	20	43	22	11	
26	32.0		11.0	11	31.7	13.0		1	49.8	10.4	56.3	66	16	38	17	32	18	32	17	46	19	14	20	40	22	04	
41	32.1	..	10.1	26	03.7	13.0		1	39.4	10.5	56.3	64	16	47	17	37	18	32	17	51	19	15	20	37	21	57	
56	32.1		09.2	40	35.7	13.1		1	28.9	10.4	56.3	62	16	55	17	41	18	33	17	55	19	16	20	35	21	52	
71	32.2		08.3	55	07.8	13.0		1	18.5	10.4	56.3	60	17	01	17	45	18	33	17	58	19	16	20	33	21	47	
86	32.2	S11	07.4	69	39.8	13.2	S	1	08.1	10.4	56.2	N 58	17	07	17	48	18	33	18	01	19	17	20	31	21	43	
101	32.3		06.5	84	12.0	13.1		0	57.7	10.4	56.2	56	17	12	17	51	18	34	18	04	19	18	20	29	21	39	
116	32.4		05.6	98	44.1	13.2		0	47.3	10.4	56.2	54	17	17	17	53	18	35	18	06	19	18	20	28	21	36	
131	32.4	..	04.8	113	16.3	13.2		0	36.9	10.4	56.2	52	17	21	17	56	18	35	18	08	19	18	20	27	21	33	
146	32.5		03.9	127	48.5	13.2		0	26.5	10.4	56.1	50	17	25	17	58	18	36	18	10	19	19	20	25	21	30	
161	32.5		03.0	142	20.7	13.3		0	16.1	10.3	56.1	45	17	33	18	03	18	38	18	15	19	20	20	23	21	24	
176	32.6	S11	02.1	156	53.0	13.3	S	0	05.8	10.4	56.1	N 40	17	40	18	08	18	40	18	18	19	20	20	20	21	19	
191	32.7		01.2	171	25.3	13.3	N	0	04.6	10.3	56.1	35	17	46	18	12	18	42	18	21	19	21	20	19	21	15	
206	32.7	1.	00.3	185	57.6	13.4		0	14.9	10.4	56.0	30	17	52	18	16	18	44	18	24	19	21	20	17	21	11	
221	32.8	10	59.4	200	30.0	13.3		0	25.3	10.3	56.0	20	18	01	18	23	18	49	18	29	19	22	20	14	21	05	
236	32.9		58.5	215	02.3	13.5		0	35.6	10.3	56.0	N 10	18	09	18	31	18	55	18	33	19	23	20	11	20	59	
251	32.9		57.6	229	34.8	13.4		0	45.9	10.3	56.0	0	18	17	18	38	19	03	18	37	19	23	20	09	20	54	
266	33.0	S10	56.7	244	07.2	13.4	N	0	56.2	10.3	55.9	S 10	18	25	18	47	19	12	18	40	19	24	20	07	20	48	
281	33.1		55.8	258	39.6	13.5		1	06.5	10.3	55.9	20	18	34	18	56	19	23	18	44	19	25	20	04	20	43	
296	33.1		54.9	273	12.1	13.5		1	16.8	10.2	55.9	30	18	44	19	09	19	38	18	49	19	26	20	01	20	36	
311	33.2	..	54.0	287	44.6	13.6		1	27.0	10.3	55.9	35	18	50	19	16	19	47	18	52	19	26	19	59	20	32	
326	33.3		53.1	302	17.2	13.5		1	3																		

T. M. G.	ARIES			VENUS -4.3			MARTE +1.5			JUPITER -1.9			SATURNO +0.1			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
LUNES	21 00	150 48.0	137 53.3 N 9	34.5	199 11.1 S19	01.8	99 37.9 N17	53.1	16 05.1 N18	08.5		16 05.1 N18	08.5		Acamar	315 39.2 S40	24.1	
	01	165 50.5	152 54.3	35.5	214 11.6	01.3	114 40.1	53.2	31 07.8	08.5		31 07.8	08.5		Achernar	335 47.5 S57	21.4	
	02	180 52.9	167 55.3	36.5	229 12.1	00.8	129 42.3	53.2	46 10.4	08.6		46 10.4	08.6		Acrux	173 39.2 S62	58.3	
	03	195 55.4	182 56.3	37.6	244 12.5	19 00.3	144 44.5	53.3	61 13.1	08.6		61 13.1	08.6		Adhara	255 33.7 S28	56.8	
	04	210 57.8	197 57.3	38.6	259 13.0	18 59.8	159 46.6	53.4	76 15.7	08.7		76 15.7	08.7		Aldebaran	291 20.7 N16	27.7	
	05	226 00.3	212 58.3	39.6	274 13.5	59.3	174 48.8	53.5	91 18.4	08.7		91 18.4	08.7					
	06	241 02.8	227 59.3 N 9	40.6	289 14.0 S18	58.8	189 51.0 N17	53.6	106 21.0 N18	08.8		106 21.0 N18	08.8		Alioth	166 44.2 N56	04.7	
	07	256 05.2	243 00.3	41.6	304 14.5	58.3	204 53.2	53.7	121 23.6	08.9		121 23.6	08.9		Alkaid	153 20.1 N49	25.3	
	08	271 07.7	258 01.3	42.6	319 15.0	57.8	219 55.3	53.7	136 26.3	08.9		136 26.3	08.9		Al Na'ir	28 18.4 S47	04.3	
	09	286 10.2	273 02.4	43.6	334 15.4	57.3	234 57.5	53.8	151 28.9	09.0		151 28.9	09.0		Alnilam	276 14.0 S 1	13.2	
	10	301 12.6	288 03.4	44.6	349 15.9	56.8	249 59.7	53.9	166 31.6	09.0		166 31.6	09.0		Alphard	218 22.6 S 8	33.8	
	11	316 15.1	303 04.4	45.6	4 16.4	56.3	265 01.9	54.0	181 34.2	09.1		181 34.2	09.1					
	12	331 17.6	318 05.4 N 9	46.6	19 16.9 S18	55.8	280 04.0 N17	54.1	196 36.9 N18	09.1		196 36.9 N18	09.1		Alphecca	126 34.1 N26	47.3	
	13	346 20.0	333 06.5	47.6	34 17.4	55.3	295 06.2	54.1	211 39.5	09.2		211 39.5	09.2		Alpheratz	358 12.1 N28	57.9	
	14	1 22.5	348 07.5	48.6	49 17.9	54.8	310 08.4	54.2	226 42.2	09.2		226 42.2	09.2		Altair	62 35.1 N 8	48.4	
	15	16 25.0	3 08.5	49.6	64 18.3	54.3	325 10.5	54.3	241 44.8	09.3		241 44.8	09.3		Ankaa	353 43.0 S42	26.0	
	16	31 27.4	18 09.5	50.6	79 18.8	53.8	340 12.7	54.4	256 47.5	09.3		256 47.5	09.3		Antares	112 59.8 S26	22.8	
	17	46 29.9	33 10.6	51.6	94 19.3	53.3	355 14.9	54.5	271 50.1	09.4		271 50.1	09.4					
	18	61 32.3	48 11.6 N 9	52.6	109 19.8 S18	52.8	10 17.1 N17	54.5	286 52.8 N18	09.4		286 52.8 N18	09.4		Arcturus	146 20.5 N19	17.9	
	19	76 34.8	63 12.7	53.6	124 20.3	52.3	25 19.2	54.6	301 55.4	09.5		301 55.4	09.5		Atria	108 26.3 S68	58.9	
	20	91 37.3	78 13.7	54.6	139 20.8	51.8	40 21.4	54.7	316 58.1	09.6		316 58.1	09.6		Avior	234 28.6 S59	26.5	
	21	106 39.7	93 14.7	55.6	154 21.2	51.3	55 23.6	54.8	332 00.7	09.6		332 00.7	09.6		Bellatrix	279 01.2 N 6	19.6	
	22	121 42.2	108 15.8	56.6	169 21.7	50.8	70 25.7	54.9	347 03.4	09.7		347 03.4	09.7		Betelgeuse	271 30.7 N 7	24.0	
23	136 44.7	123 16.8	57.6	184 22.2	50.3	85 27.9	55.0	2 06.0	09.7		2 06.0	09.7						
MARTES	22 00	151 47.1	138 17.9 N 9	58.6	199 22.7 S18	49.8	100 30.1 N17	55.0	17 08.7 N18	09.8		17 08.7 N18	09.8		Canopus	264 08.0 S52	41.4	
	01	166 49.6	153 18.9	59.6	214 23.2	49.3	115 32.2	55.1	32 11.3	09.8		32 11.3	09.8		Capella	281 14.7 N45	58.6	
	02	181 52.1	168 20.0	10 00.6	229 23.7	48.8	130 34.4	55.2	47 14.0	09.9		47 14.0	09.9		Deneb	49 50.5 N45	11.9	
	03	196 54.5	183 21.0	01.5	244 24.2	48.3	145 36.6	55.3	62 16.6	09.9		62 16.6	09.9		Denebola	183 01.2 N14	41.8	
	04	211 57.0	198 22.1	02.5	259 24.6	47.7	160 38.8	55.4	77 19.3	10.0		77 19.3	10.0		Diphda	349 23.5 S18	06.9	
	05	226 59.5	213 23.1	03.5	274 25.1	47.2	175 40.9	55.5	92 21.9	10.0		92 21.9	10.0					
	06	242 01.9	228 24.2 N10	04.5	289 25.6 S18	46.7	190 43.1 N17	55.5	107 24.6 N18	10.1		107 24.6 N18	10.1		Dubhe	194 24.5 N61	52.3	
	07	257 04.4	243 25.2	05.5	304 26.1	46.2	205 45.3	55.6	122 27.2	10.1		122 27.2	10.1		Elnath	278 47.0 N28	35.3	
	08	272 06.8	258 26.3	06.5	319 26.6	45.7	220 47.4	55.7	137 29.9	10.2		137 29.9	10.2		Eltanin	90 59.1 N51	29.3	
	09	287 09.3	273 27.4	07.5	334 27.1	45.2	235 49.6	55.8	152 32.5	10.2		152 32.5	10.2		Enif	34 14.2 N 9	46.2	
	10	302 11.8	288 28.4	08.5	349 27.6	44.7	250 51.8	55.9	167 35.1	10.3		167 35.1	10.3		Fomalhaut	15 54.4 S29	44.7	
	11	317 14.2	303 29.5	09.4	4 28.1	44.2	265 53.9	55.9	182 37.8	10.4		182 37.8	10.4					
	12	332 16.7	318 30.6 N10	10.4	19 28.5 S18	43.7	280 56.1 N17	56.0	197 40.4 N18	10.4		197 40.4 N18	10.4		Gacrux	172 30.8 S56	59.1	
	13	347 19.2	333 31.6	11.4	34 29.0	43.2	295 58.3	56.1	212 43.1	10.5		212 43.1	10.5		Gienah	176 20.1 S17	25.0	
	14	2 21.6	348 32.7	12.4	49 29.5	42.7	311 00.4	56.2	227 45.7	10.5		227 45.7	10.5		Hadar	149 26.3 S60	15.6	
	15	17 24.1	3 33.8	13.4	64 30.0	42.2	326 02.6	56.3	242 48.4	10.6		242 48.4	10.6		Hamal	328 31.8 N23	21.3	
	16	32 26.6	18 34.9	14.4	79 30.5	41.6	341 04.8	56.4	257 51.0	10.6		257 51.0	10.6		Kaus Aust.	84 20.2 S34	23.6	
	17	47 29.0	33 36.0	15.3	94 31.0	41.1	356 06.9	56.4	272 53.7	10.7		272 53.7	10.7					
	18	62 31.5	48 37.0 N10	16.3	109 31.5 S18	40.6	11 09.1 N17	56.5	287 56.3 N18	10.7		287 56.3 N18	10.7		Kochab	137 18.6 N74	14.7	
	19	77 34.0	63 38.1	17.3	124 32.0	40.1	26 11.2	56.6	302 59.0	10.8		302 59.0	10.8		Markab	14 05.8 N15	04.9	
	20	92 36.4	78 39.2	18.3	139 32.4	39.6	41 13.4	56.7	318 01.6	10.8		318 01.6	10.8		Menkar	314 43.7 N 3	59.9	
	21	107 38.9	93 40.3	19.3	154 32.9	39.1	56 15.6	56.8	333 04.3	10.9		333 04.3	10.9		Menkent	148 39.6 S36	15.4	
	22	122 41.3	108 41.4	20.2	169 33.4	38.6	71 17.7	56.9	348 06.9	10.9		348 06.9	10.9		Miaplacidus	221 44.5 S69	37.6	
23	137 43.8	123 42.5	21.2	184 33.9	38.1	86 19.9	56.9	3 09.6	11.0		3 09.6	11.0						
MIÉRCOLES	23 00	152 46.3	138 43.6 N10	22.2	199 34.4 S18	37.5	101 22.1 N17	57.0	18 12.2 N18	11.0		18 12.2 N18	11.0		Mirfak	309 19.6 N49	47.0	
	01	167 48.7	153 44.7	23.2	214 34.9	37.0	116 24.2	57.1	33 14.8	11.1		33 14.8	11.1		Nunki	76 32.4 S26	19.4	
	02	182 51.2	168 45.8	24.1	229 35.4	36.5	131 26.4	57.2	48 17.5	11.1		48 17.5	11.1		Pollux	54 02.7 S56	48.4	
	03	197 53.7	183 46.8	25.1	244 35.9	36.0	146 28.6	57.3	63 20.1	11.2		63 20.1	11.2		Peacock	244 00.8 N28	04.8	
	04	212 56.1	198 47.9	26.1	259 36.4	35.5	161 30.7	57.4	78 22.8	11.2		78 22.8	11.2		Procyon	245 28.0 N 5	16.8	
	05	227 58.6	213 49.1	27.0	274 36.9	35.0	176 32.9	57.4	93 25.4	11.3		93 25.4	11.3					
	06	243 01.1	228 50.2 N10	28.0	289 37.3 S18	34.5	191 35.0 N17	57.5	108 28.1 N18	11.4		108 28.1 N18	11.4		Rasalhague	96 31.9 N12	34.5	
	07	258 03.5	243 51.3	29.0	304 37.8	33.9	206 37.2	57.6	123 30.7	11.4		123 30.7	11.4		Regulus	208 12.2 N12	04.5	
	08	273 06.0	258 52.4	29.9	319 38.3	33.4	221 39.4	57.7	138 33.4	11.5		138 33.4	11.5		Rigel	281 38.2 S 8	13.9	
	09	288 08.4	273 53.5	30.9	334 38.8	32.9	236 41.5	57.8	153 36.0	11.5		153 36.0	11.5		Rigel Kent.	140 28.7 S60	44.2	
	10	303 10.9	288 54.6	31.9	349 39.3	32.4	251 43.7	57.9	168 38.6	11.6		168 38.6	11.6		Sabik	102 44.0 S15	41.8	
	11	318 13.4	303 55.7	32.8	4 39.8	31.9	266 45.8	58.0	183 41.3	11.6		183 41.3	11.6					
	12	333 15.8	318 56.8 N10	33.8	19 40.3 S18	31.4	281 48.0 N17	58.0	198 43.9 N18	11.7		198 43.9 N18	11.7		Schedar	350 12.1 N56	24.9	
	13	348 18.3	333 57.9	34.8	34 40.8	30.8	296 50.2	58.1	213 46.6	11.7		213 46.6	11.7		Shaula	96 59.1 S37	05.1	

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna											
	A.H.G.	Dec.	°	A.H.G.	v	Dec.		d	P.H.		Naut.	Civil	21	22	23	24						
													h m	h m	h m	h m	h m	h m				
LUNES	21 00	176	34.2	S10	40.5	145	54.7	13.8	N	3	58.5	9.9	55.5	N 72	05 44	07 02	08 15	07 26	07 19	07 12	07 03	
	01	191	34.3		39.6	160	27.5	13.8		4	08.4	9.9	55.5	N 70	05 46	06 56	08 01	07 33	07 32	07 32	07 34	
	02	206	34.4		38.7	175	00.3	13.9		4	18.3	9.8	55.5	68	05 47	06 51	07 49	07 39	07 43	07 49	07 57	
	03	221	34.4	..	37.8	189	33.2	13.8		4	28.1	9.8	55.4	66	05 47	06 47	07 40	07 44	07 52	08 02	08 15	
	04	236	34.5		36.9	204	06.0	13.9		4	37.9	9.8	55.4	64	05 48	06 43	07 32	07 48	07 59	08 13	08 30	
	05	251	34.6		36.0	218	38.9	13.9		4	47.7	9.8	55.4	62	05 48	06 39	07 25	07 52	08 06	08 22	08 42	
	06	266	34.7	S10	35.1	233	11.8	13.8	N	4	57.5	9.7	55.4	60	05 48	06 36	07 19	07 55	08 12	08 30	08 53	
	07	281	34.7		34.2	247	44.6	13.9		5	07.2	9.7	55.3	N 58	05 48	06 34	07 14	07 58	08 16	08 37	09 02	
	08	296	34.8		33.3	262	17.5	14.0		5	16.9	9.7	55.3	56	05 48	06 31	07 09	08 00	08 21	08 44	09 10	
	09	311	34.9	..	32.4	276	50.5	13.9		5	26.6	9.6	55.3	54	05 48	06 29	07 05	08 02	08 25	08 49	09 17	
	10	326	34.9		31.5	291	23.4	13.9		5	36.2	9.6	55.3	52	05 48	06 27	07 01	08 04	08 29	08 55	09 24	
	11	341	35.0		30.6	305	56.3	13.9		5	45.8	9.6	55.3	50	05 47	06 25	06 58	08 06	08 32	08 59	09 30	
	MARTES	12	356	35.1	S10	29.6	320	29.2	14.0	N	5	55.4	9.5	55.2	45	05 46	06 20	06 50	08 10	08 39	09 09	09 42
		13	11	35.2		28.7	335	02.2	13.9		6	04.9	9.5	55.2	N 40	05 45	06 16	06 44	08 14	08 45	09 18	09 53
		14	26	35.2		27.8	349	35.1	14.0		6	14.4	9.5	55.2	35	05 43	06 13	06 38	08 17	08 50	09 25	10 02
		15	41	35.3	..	26.9	4	08.1	14.0		6	23.9	9.4	55.2	30	05 41	06 09	06 34	08 20	08 55	09 31	10 10
		16	56	35.4		26.0	18	41.1	13.9		6	33.3	9.4	55.2	20	05 37	06 03	06 25	08 24	09 03	09 42	10 23
		17	71	35.5		25.1	33	14.0	14.0		6	42.7	9.3	55.1	N 10	05 31	05 56	06 17	08 28	09 10	09 52	10 35
		18	86	35.5	S10	24.2	47	47.0	14.0	N	6	52.0	9.4	55.1	0	05 25	05 49	06 10	08 32	09 17	10 01	10 47
		19	101	35.6		23.3	62	20.0	14.0		7	01.4	9.2	55.1	S 10	05 17	05 41	06 03	08 36	09 24	10 11	10 58
		20	116	35.7		22.4	76	53.0	14.0		7	10.6	9.3	55.1	20	05 06	05 32	05 55	08 40	09 31	10 21	11 10
		21	131	35.8	..	21.5	91	26.0	14.0		7	19.9	9.2	55.1	30	04 52	05 21	05 46	08 45	09 39	10 32	11 24
		22	146	35.8		20.6	105	59.0	13.9		7	29.1	9.1	55.0	35	04 43	05 14	05 40	08 48	09 44	10 39	11 32
23	161	35.9		19.7	120	31.9	14.0		7	38.2	9.1	55.0	40	04 32	05 06	05 34	08 51	09 49	10 46	11 42		
MIÉRCOLES	00	176	36.0	S10	18.8	135	04.9	14.0	N	7	47.3	9.1	55.0	45	04 19	04 56	05 27	08 55	09 56	10 55	11 53	
	01	191	36.1		17.8	149	37.9	14.0		7	56.4	9.0	55.0	S 50	04 02	04 44	05 18	08 59	10 03	11 06	12 06	
	02	206	36.2		16.9	164	10.9	14.0		8	05.4	9.0	55.0	52	03 53	04 38	05 14	09 01	10 07	11 10	12 12	
	03	221	36.2	..	16.0	178	43.9	14.0		8	14.4	9.0	54.9	54	03 44	04 32	05 10	09 04	10 11	11 16	12 19	
	04	236	36.3		15.1	193	16.9	14.0		8	23.4	8.9	54.9	56	03 33	04 25	05 05	09 06	10 15	11 22	12 26	
	05	251	36.4		14.2	207	49.9	14.0		8	32.3	8.8	54.9	S 60	03 04	04 07	04 53	09 12	10 25	11 37	12 45	
	06	266	36.5	S10	13.3	222	22.9	14.0	N	8	41.1	8.9	54.9									
	07	281	36.5		12.4	236	55.9	14.0		8	50.0	8.7	54.9									
	08	296	36.6		11.5	251	28.9	14.0		8	58.7	8.7	54.8									
	09	311	36.7	..	10.6	266	01.9	14.0		9	07.4	8.7	54.8									
	10	326	36.8		09.7	280	34.9	14.0		9	16.1	8.7	54.8									
11	341	36.9		08.7	295	07.9	14.0		9	24.8	8.5	54.8										
JUEVES	12	356	36.9	S10	07.8	309	40.9	14.0	N	9	33.3	8.6	54.8									
	13	11	37.0		06.9	324	13.9	14.0		9	41.9	8.5	54.8									
	14	26	37.1		06.0	338	46.9	13.9		9	50.4	8.4	54.7									
	15	41	37.2	..	05.1	353	19.8	14.0		9	58.8	8.4	54.7									
	16	56	37.3		04.2	7	52.8	13.9		10	07.2	8.3	54.7									
	17	71	37.4		03.3	22	25.7	14.0		10	15.5	8.3	54.7									
	18	86	37.4	S10	02.3	36	58.7	13.9	N10	23.8	8.3	54.7										
	19	101	37.5		01.4	51	31.6	14.0		10	32.1	8.2	54.7									
	20	116	37.6	10	00.5	66	04.6	13.9		10	40.3	8.1	54.7									
	21	131	37.7	9	59.6	80	37.5	13.9		10	48.4	8.1	54.6									
	22	146	37.8		58.7	95	10.4	14.0		10	56.5	8.0	54.6									
23	161	37.8		57.8	109	43.4	13.9		11	04.5	8.0	54.6										
VIERNES	00	176	37.9	S 9	56.9	124	16.3	13.8	N11	12.5	7.9	54.6										
	01	191	38.0		55.9	138	49.1	13.9		11	20.4	7.9	54.6									
	02	206	38.1		55.0	153	22.0	13.9		11	28.3	7.8	54.6									
	03	221	38.2	..	54.1	167	54.9	13.9		11	36.1	7.8	54.6									
	04	236	38.3		53.2	182	27.8	13.8		11	43.9	7.7	54.5									
	05	251	38.4		52.3	197	00.6	13.9		11	51.6	7.7	54.5									
	06	266	38.4	S 9	51.4	211	33.5	13.8	N11	59.3	7.6	54.5										
	07	281	38.5		50.4	226	06.3	13.8		12	06.9	7.5	54.5									
	08	296	38.6		49.5	240	39.1	13.8		12	14.4	7.5	54.5									
	09	311	38.7	..	48.6	255	11.9	13.8		12	21.9	7.4	54.5									
	10	326	38.8		47.7	269	44.7	13.8		12	29.3	7.4	54.5									
11	341	38.9		46.8	284	17.5	13.7		12	36.7	7.3	54.5										
SÁBADO	12	356	39.0	S 9	45.9	298	50.2	13.8	N12	44.0	7.2	54.4										
	13	11	39.0		44.9	313	23.0	13.7		12	51.2	7.2	54.4									
	14	26	39.1		44.0	327	55.7	13.8		12	58.4	7.2	54.4									
	15	41	39.2	..	43.1	342	28.5	13.7		13	05.6	7.0	54.4									
	16	56	39.3		42.2	357	01.2	13.6		13	12.6	7.0	54.4									
	17	71	39.4		41.3	11	33.8	13.7		13	19.6	7.0	54.4									
	18	86	39.5	S 9	40.3	26	06.5	13.7	N13	26.6	6.9	54.4										
	19	101	39.6		39.4	40	39.2	13.6		13	33.5	6.8	54.4									
	20																					

T. M. G.	ARIES		VENUS -4.3		MARTE +1.5		JUPITER -1.9		SATURNO +0.1		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A. H. G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.		
24	00	153 45.4	139 10.4 N10	45.3	199 46.2 S18	25.1	102 13.9 N17	59.1	19 15.7 N18	12.3	Acamar	315 39.2 S40	24.1	
	01	168 47.9	154 11.5	46.3	214 46.7	24.6	117 16.0	59.1	34 18.3	12.3	Achernar	335 47.5 S57	21.4	
	02	183 50.3	169 12.7	47.2	229 47.2	24.1	132 18.2	59.2	49 21.0	12.4	Acrux	173 39.2 S62	58.3	
	03	198 52.8	184 13.8	48.2	244 47.7	23.6	147 20.4	59.3	64 23.6	12.4	Adhara	255 33.7 S28	56.8	
	04	213 55.3	199 15.0	49.1	259 48.2	23.0	162 22.5	59.4	79 26.2	12.5	Aldebaran	291 20.7 N16	27.7	
	05	228 57.7	214 16.1	50.1	274 48.7	22.5	177 24.7	59.5	94 28.9	12.5				
	06	244 00.2	229 17.3 N10	51.0	289 49.2 S18	22.0	192 26.8 N17	59.6	109 31.5 N18	12.6	Alioth	166 44.2 N56	04.8	
	07	259 02.7	244 18.4	52.0	304 49.7	21.5	207 29.0	59.6	124 34.2	12.7	Alkaid	153 20.1 N49	25.4	
	08	274 05.1	259 19.6	52.9	319 50.1	20.9	222 31.1	59.7	139 36.8	12.7	Al Na'ir	28 18.4 S47	04.3	
	J 09	289 07.6	274 20.7	53.9	334 50.6	20.4	237 33.3	59.8	154 39.5	12.8	Alnilam	276 14.0 S 1	13.2	
	U 10	304 10.1	289 21.9	54.8	349 51.1	19.9	252 35.4	17 59.9	169 42.1	12.8	Alphard	218 22.6 S 8	33.8	
	11	319 12.5	304 23.1	55.8	4 51.6	19.4	267 37.6	18 00.0	184 44.7	12.9				
	V 12	334 15.0	319 24.2 N10	56.7	19 52.1 S18	18.8	282 39.7 N18	00.1	199 47.4 N18	12.9	Alphecca	126 34.1 N26	47.3	
	E 13	349 17.4	334 25.4	57.7	34 52.6	18.3	297 41.9	00.2	214 50.0	13.0	Alpheratz	358 12.1 N28	57.9	
	S 14	4 19.9	349 26.6	58.6	49 53.1	17.8	312 44.0	00.2	229 52.7	13.0	Altair	62 35.1 N 8	48.4	
	15	19 22.4	4 27.7	10 59.5	64 53.6	17.3	327 46.2	00.3	244 55.3	13.1	Ankaa	353 43.0 S42	26.0	
	16	34 24.8	19 28.9	11 00.5	79 54.1	16.7	342 48.3	00.4	259 57.9	13.1	Antares	112 59.8 S26	22.8	
	17	49 27.3	34 30.1	01.4	94 54.6	16.2	357 50.5	00.5	275 00.6	13.2				
	18	64 29.8	49 31.3 N11	02.4	109 55.1 S18	15.7	12 52.7 N18	00.6	290 03.2 N18	13.2	Arcturus	146 20.5 N19	17.9	
	19	79 32.2	64 32.4	03.3	124 55.6	15.2	27 54.8	00.7	305 05.9	13.3	Atria	108 26.2 S68	58.9	
	20	94 34.7	79 33.6	04.2	139 56.1	14.6	42 57.0	00.8	320 08.5	13.3	Avior	234 28.6 S59	26.5	
	21	109 37.2	94 34.8	05.2	154 56.6	14.1	57 59.1	00.8	335 11.2	13.4	Bellatrix	279 01.2 N 6	19.6	
	22	124 39.6	109 36.0	06.1	169 57.1	13.6	73 01.3	00.9	350 13.8	13.4	Betelgeuse	271 30.7 N 7	24.0	
23	139 42.1	124 37.2	07.0	184 57.6	13.0	88 03.4	01.0	5 16.4	13.5					
25	00	154 44.5	139 38.4 N11	08.0	199 58.1 S18	12.5	103 05.6 N18	01.1	20 19.1 N18	13.5	Canopus	264 08.0 S52	41.4	
	01	169 47.0	154 39.6	08.9	214 58.6	12.0	118 07.7	01.2	35 21.7	13.6	Capella	281 14.7 N45	58.6	
	02	184 49.5	169 40.8	09.8	229 59.1	11.4	133 09.9	01.3	50 24.4	13.6	Deneb	49 50.5 N45	11.8	
	03	199 51.9	184 42.0	10.8	244 59.6	10.9	148 12.0	01.4	65 27.0	13.7	Denebola	183 01.2 N14	41.8	
	04	214 54.4	199 43.2	11.7	260 00.1	10.4	163 14.2	01.4	80 29.6	13.7	Diphda	349 23.5 S18	06.9	
	05	229 56.9	214 44.4	12.6	275 00.6	09.9	178 16.3	01.5	95 32.3	13.8				
	06	244 59.3	229 45.6 N11	13.6	290 01.1 S18	09.3	193 18.4 N18	01.6	110 34.9 N18	13.8	Dubhe	194 24.5 N61	52.3	
	07	260 01.8	244 46.8	14.5	305 01.6	08.8	208 20.6	01.7	125 37.6	13.9	Elnath	278 47.0 N28	35.3	
	08	275 04.3	259 48.0	15.4	320 02.1	08.3	223 22.7	01.8	140 40.2	13.9	Eltanin	90 59.0 N51	29.3	
	V 09	290 06.7	274 49.2	16.4	335 02.6	07.7	238 24.9	01.9	155 42.8	14.0	Enif	34 14.2 N 9	46.2	
	10	305 09.2	289 50.4	17.3	350 03.1	07.2	253 27.0	02.0	170 45.5	14.0	Fomalhaut	15 54.4 S29	44.7	
	11	320 11.7	304 51.6	18.2	5 03.6	06.7	268 29.2	02.1	185 48.1	14.1				
	12	335 14.1	319 52.8 N11	19.1	20 04.1 S18	06.1	283 31.3 N18	02.1	200 50.8 N18	14.1	Gacrux	172 30.8 S56	59.1	
	N 13	350 16.6	334 54.0	20.0	35 04.6	05.6	298 33.5	02.2	215 53.4	14.2	Gienah	176 20.1 S17	25.0	
	14	5 19.0	349 55.3	21.0	50 05.1	05.1	313 35.6	02.3	230 56.0	14.2	Hadar	149 26.3 S60	15.6	
	S 15	20 21.5	4 56.5	21.9	65 05.6	04.5	328 37.8	02.4	245 58.7	14.3	Hamal	328 31.8 N23	21.3	
	16	35 24.0	19 57.7	22.8	80 06.1	04.0	343 39.9	02.5	261 01.3	14.3	Kaus Aust.	84 20.2 S34	23.6	
	17	50 26.4	34 58.9	23.7	95 06.6	03.5	358 42.1	02.6	276 04.0	14.4				
	18	65 28.9	50 00.2 N11	24.6	110 07.1 S18	02.9	13 44.2 N18	02.7	291 06.6 N18	14.4	Kochab	137 18.6 N74	14.7	
	19	80 31.4	65 01.4	25.6	125 07.6	02.4	28 46.3	02.7	306 09.2	14.5	Markab	14 05.8 N15	04.9	
	20	95 33.8	80 02.6	26.5	140 08.1	01.8	43 48.5	02.8	321 11.9	14.5	Menkar	314 43.7 N 3	59.9	
	21	110 36.3	95 03.9	27.4	155 08.6	01.3	58 50.6	02.9	336 14.5	14.6	Menkent	148 39.6 S36	15.4	
	22	125 38.8	110 05.1	28.3	170 09.1	00.8	73 52.8	03.0	351 17.2	14.6	Miaplacidus	221 44.5 S69	37.6	
23	140 41.2	125 06.4	29.2	185 09.6	18 00.2	88 54.9	03.1	6 19.8	14.7					
26	00	155 43.7	140 07.6 N11	30.1	200 10.1 S17	59.7	103 57.1 N18	03.2	21 22.4 N18	14.7	Mirfak	309 19.6 N49	47.0	
	01	170 46.2	155 08.8	31.0	215 10.6	59.2	118 59.2	03.3	36 25.1	14.8	Nunki	76 32.3 S26	19.4	
	02	185 48.6	170 10.1	32.0	230 11.1	58.6	134 01.4	03.4	51 27.7	14.8	Peacock	54 02.7 S56	48.4	
	03	200 51.1	185 11.3	32.9	245 11.6	58.1	149 03.5	03.4	66 30.3	14.9	Pollux	244 00.8 N28	04.8	
	04	215 53.5	200 12.6	33.8	260 12.1	57.5	164 05.6	03.5	81 33.0	14.9	Procyon	245 28.0 N 5	16.8	
	05	230 56.0	215 13.8	34.7	275 12.6	57.0	179 07.8	03.6	96 35.6	15.0				
	06	245 58.5	230 15.1 N11	35.6	290 13.1 S17	56.5	194 09.9 N18	03.7	111 38.3 N18	15.0	Rasalhague	96 31.9 N12	34.5	
	07	261 00.9	245 16.4	36.5	305 13.6	55.9	209 12.1	03.8	126 40.9	15.1	Regulus	208 12.2 N12	04.5	
	08	276 03.4	260 17.6	37.4	320 14.1	55.4	224 14.2	03.9	141 43.5	15.1	Rigel	281 38.2 S 8	13.9	
	S 09	291 05.9	275 18.9	38.3	335 14.6	54.8	239 16.3	04.0	156 46.2	15.2	Rigil Kent.	140 28.7 S60	44.2	
	A 10	306 08.3	290 20.1	39.2	350 15.1	54.3	254 18.5	04.1	171 48.8	15.2	Sabik	102 43.9 S15	41.8	
	B 11	321 10.8	305 21.4	40.1	5 15.6	53.8	269 20.6	04.1	186 51.4	15.3				
	A 12	336 13.3	320 22.7 N11	41.0	20 16.1 S17	53.2	284 22.8 N18	04.2	201 54.1 N18	15.3	Schedar	350 12.1 N56	24.9	
	D 13	351 15.7	335 24.0	41.9	35 16.6	52.7	299 24.9	04.3	216 56.7	15.4	Shaula	96 59.1 S37	05.1	
	O 14	6 18.2	350 25.2	42.8	50 17.1	52.1	314 27.0	04.4	231 59.4	15.4	Sirius	258 57.6 S16	41.4	
	15	21 20.6	5 26.5	43.7	65 17.6	51.6	329 29.2	04.5	247 02.0	15.5	Spica	158 59.8 S11	02.6	
	16	36 23.1	20 27.8	44.6	80 18.1	51.1	344 31.3	04.6	262 04.6	15.5	Suhail	223 12.1 S43	20.7	
	17	51 25.6	35 29.1	45.5	95 18.6	50.5	359 33.5	04.7	277 07.3	15.6				
	18	66 28.0	50 30.3 N11	46.4	110 19.1 S17	50.0	14 35.6 N18	04.8	292 09.9 N18	15.6	Vega	80 57.7 N38	45.6	
	19	81 30.5	65 31.6	47.3	125 19.6	49.4	29 37.7	04.9	307 12.5	15.7	Zuben'ubi	137 35.5 S15	56.9	
	20	96 33.0	80 32.9	48.2	140 20.1	48.9	44 39.9	04.9	322 15.2	15.7				
	21	111 35.4	95 34.2	49.1	155 20.6	48.3	59 42.0	05.0	337 17.8	15.8				
	22	126 37.9	110 35.5	50.0	170 21.1	47.8	74 44.1	05.1	352 20.5	15.8	Venus	344 53.8	14 40	
23	141 40.4	125 36.8	50.9	185 21.6	47.2	89 46.3	05.2	7 23.1	15.9	Marte	45 13.5	10 40		
										Júpiter	308 21.0	17 05		
										Saturno	225 34.5	22 35		
Pas. Mer.	13 38.8	v 1.2	d 0.9	v 0.5	d 0.5	v 2.1	d 0.1	v 2.6	d 0.1					

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	v	A.H.G.	v	Dec.		d	P.H.		Náut.	Civil	24	25	26	27
										h m	h m	h m	h m	h m	h m	h m
24	00	176 40.0 S	9 34.8	113 22.2	13.6 N	14 07.0	6.5	54.3	N 72	05 30	06 48	07 59	07 03	06 49	□	□
	01	191 40.1	33.9	127 54.8	13.5	14 13.5	6.4	54.3	N 70	05 33	06 43	07 47	07 34	07 39	07 51	08 21
	02	206 40.2	33.0	142 27.3	13.5	14 19.9	6.4	54.3	68	05 35	06 39	07 37	07 57	08 10	08 33	09 10
	03	221 40.3	32.0	156 59.8	13.5	14 26.3	6.3	54.3	66	05 37	06 36	07 29	08 15	08 34	09 01	09 41
	04	236 40.4	31.1	171 32.3	13.5	14 32.6	6.3	54.3	64	05 38	06 33	07 22	08 30	08 52	09 23	10 05
	05	251 40.5	30.2	186 04.8	13.4	14 38.9	6.2	54.3	62	05 39	06 31	07 16	08 42	09 07	09 40	10 23
	06	266 40.6 S	9 29.3	200 37.2	13.5 N	14 45.1	6.1	54.3	60	05 40	06 28	07 11	08 53	09 20	09 55	10 38
	07	281 40.7	28.4	215 09.7	13.4	14 51.2	6.0	54.3	N 58	05 41	06 26	07 06	09 02	09 31	10 07	10 51
	08	296 40.8	27.4	229 42.1	13.4	14 57.2	6.0	54.3	56	05 41	06 24	07 02	09 10	09 41	10 18	11 02
	09	311 40.8	26.5	244 14.5	13.4	15 03.2	5.9	54.3	54	05 42	06 22	06 58	09 17	09 49	10 27	11 12
	J	326 40.9	25.6	258 46.9	13.3	15 09.1	5.9	54.3	52	05 42	06 21	06 55	09 24	09 57	10 36	11 21
	U	341 41.0	24.7	273 19.2	13.4	15 15.0	5.8	54.3	50	05 42	06 19	06 52	09 30	10 04	10 43	11 29
	E	356 41.1 S	9 23.7	287 51.6	13.3 N	15 20.8	5.7	54.3	45	05 42	06 16	06 45	09 42	10 19	11 00	11 46
	V	371 41.2	22.8	302 23.9	13.3	15 26.5	5.6	54.3	N 40	05 41	06 12	06 40	09 53	10 31	11 13	11 59
	E	386 41.3	21.9	316 56.2	13.2	15 32.1	5.6	54.3	35	05 40	06 09	06 35	10 02	10 41	11 24	12 11
	S	401 41.4	21.0	331 28.4	13.3	15 37.7	5.5	54.2	30	05 39	06 06	06 30	10 10	10 50	11 34	12 21
	15	416 41.5	20.0	346 00.7	13.2	15 43.2	5.4	54.2	20	05 35	06 01	06 23	10 23	11 06	11 51	12 39
	16	431 41.6	19.1	0 32.9	13.2	15 48.6	5.4	54.2	N 10	05 30	05 55	06 16	10 35	11 20	12 06	12 54
	17	446 41.7 S	9 18.2	15 05.1	13.2 N	15 54.0	5.3	54.2	0	05 25	05 49	06 10	10 47	11 33	12 20	13 08
	18	461 41.8	17.3	29 37.3	13.2	15 59.3	5.2	54.2	S 10	05 17	05 42	06 03	10 58	11 46	12 34	13 22
	19	476 41.9	16.3	44 09.5	13.1	16 04.5	5.2	54.2	20	05 07	05 34	05 56	11 10	12 00	12 49	13 38
	20	491 42.0	15.4	58 41.6	13.1	16 09.7	5.0	54.2	30	04 55	05 23	05 48	11 24	12 16	13 06	13 55
	21	506 42.1	14.5	73 13.7	13.1	16 14.7	5.0	54.2	35	04 46	05 17	05 43	11 32	12 25	13 16	14 06
22	521 42.2	13.5	87 45.8	13.1	16 19.7	5.0	54.2	40	04 36	05 10	05 38	11 42	12 36	13 28	14 17	
23	536 42.3 S	9 12.6	102 17.9	13.0 N	16 24.7	4.8	54.2	45	04 24	05 01	05 31	11 53	12 48	13 41	14 31	
25	00	176 42.3 S	9 12.6	102 17.9	13.0 N	16 24.7	4.8	54.2	S 50	04 08	04 50	05 24	12 06	13 03	13 58	14 48
	01	191 42.4	11.7	116 49.9	13.0	16 29.5	4.8	54.2	52	04 00	04 44	05 20	12 12	13 11	14 06	14 56
	02	206 42.5	10.8	131 21.9	13.0	16 34.3	4.7	54.2	54	03 51	04 38	05 16	12 19	13 19	14 14	15 05
	03	221 42.6	9.8	145 53.9	13.0	16 39.0	4.6	54.2	56	03 41	04 32	05 12	12 26	13 28	14 24	15 15
	04	236 42.7	8.9	160 25.9	12.9	16 43.6	4.6	54.2	58	03 29	04 24	05 07	12 35	13 38	14 35	15 26
	05	251 42.8	8.0	174 57.8	13.0	16 48.2	4.5	54.2	S 60	03 15	04 16	05 01	12 45	13 49	14 48	15 39
	06	266 42.9 S	9 07.1	189 29.8	12.9 N	16 52.7	4.4	54.2								
	07	281 43.0	06.1	204 01.7	12.8	16 57.1	4.3	54.2	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	24	25	26	27
	08	296 43.1	05.2	218 33.5	12.9	17 01.4	4.3	54.2								
	09	311 43.1	04.3	233 05.4	12.8	17 05.7	4.2	54.2								
	10	326 43.2	03.3	247 37.2	12.8	17 09.9	4.1	54.2								
	11	341 43.3	02.4	262 09.0	12.8	17 14.0	4.0	54.2								
	12	356 43.4 S	9 01.5	276 40.8	12.8 N	17 18.0	4.0	54.2	N 72	16 29	17 41	18 59	01 55	03 45	□	□
	13	371 43.5	00.5	291 12.6	12.7	17 22.0	3.8	54.2	N 70	16 41	17 45	18 56	01 25	02 55	04 20	05 29
	14	386 43.6	00.5	305 44.3	12.7	17 25.8	3.8	54.2	68	16 51	17 49	18 53	01 03	02 24	03 39	04 40
	15	401 43.7	58.7	320 16.0	12.7	17 29.6	3.7	54.3	66	16 59	17 52	18 51	00 45	02 01	03 10	04 09
	16	416 43.8	57.8	334 47.7	12.6	17 33.3	3.7	54.3	64	17 06	17 55	18 50	00 31	01 43	02 49	03 46
	17	431 43.9	56.8	349 19.3	12.6	17 37.0	3.5	54.3	62	17 12	17 57	18 48	00 19	01 28	02 32	03 28
	18	446 44.1 S	55.9	3 50.9	12.6 N	17 40.5	3.5	54.3	60	17 17	17 59	18 47	00 09	01 16	02 17	03 12
	19	461 44.2	55.0	18 22.5	12.6	17 44.0	3.4	54.3	N 58	17 21	18 01	18 47	00 01	01 05	02 05	03 00
	20	476 44.3	54.0	32 54.1	12.6	17 47.4	3.3	54.3	56	17 25	18 03	18 46	24 56	00 56	01 55	02 48
	21	491 44.4	53.1	47 25.7	12.5	17 50.7	3.3	54.3	54	17 29	18 05	18 46	24 48	00 48	01 45	02 39
	22	506 44.5	52.2	61 57.2	12.5	17 54.0	3.1	54.3	52	17 32	18 06	18 45	24 40	00 40	01 37	02 30
23	521 44.6	51.2	76 28.7	12.5	17 57.1	3.1	54.3	50	17 35	18 08	18 45	24 34	00 34	01 30	02 22	
26	00	176 44.7 S	9 50.3	91 00.2	12.4 N	18 00.2	3.0	54.3	45	17 42	18 11	18 45	24 19	00 19	01 14	02 05
	01	191 44.8	49.4	105 31.6	12.5	18 03.2	2.9	54.3	N 40	17 47	18 15	18 46	24 08	00 08	01 01	01 52
	02	206 44.9	48.4	120 03.1	12.4	18 06.1	2.8	54.3	35	17 52	18 17	18 47	23 58	24 50	00 50	01 40
	03	221 45.0	47.5	134 34.5	12.3	18 08.9	2.8	54.3	30	17 56	18 20	18 48	23 49	24 40	00 40	01 30
	04	236 45.1	46.6	149 05.8	12.4	18 11.7	2.6	54.3	20	18 04	18 26	18 51	23 34	24 24	00 24	01 13
	05	251 45.2	45.6	163 37.2	12.3	18 14.3	2.6	54.3	N 10	18 10	18 31	18 56	23 21	24 09	00 09	00 57
	06	266 45.3 S	9 44.7	178 08.5	12.3 N	18 16.9	2.5	54.3	0	18 16	18 37	19 02	23 09	23 55	24 43	00 43
	07	281 45.4	43.8	192 39.8	12.3	18 19.4	2.4	54.3	S 10	18 23	18 44	19 09	22 57	23 42	24 29	00 29
	08	296 45.5	42.8	207 11.1	12.3	18 21.8	2.4	54.4	20	18 30	18 52	19 18	22 44	23 27	24 14	00 14
	09	311 45.6	41.9	221 42.4	12.2	18 24.2	2.2	54.4	30	18 38	19 02	19 31	22 29	23 11	23 56	24 45
	S	326 45.7	41.0	236 13.6	12.2	18 26.4	2.2	54.4	35	18 42	19 08	19 39	22 20	23 01	23 46	24 35
	A	341 45.8	40.0	250 44.8	12.2	18 28.6	2.0	54.4	40	18 48	19 16	19 49	22 10	22 50	23 34	24 23
	B	356 45.9 S	9 39.1	265 16.0	12.1 N	18 30.6	2.0	54.4	45	18 54	19 24	20 01	21 59	22 37	23 21	24 09
	D	381 46.0	38.1	279 47.1	12.2	18 32.6	1.9	54.4	S 50	19 02	19 35	20 17	21 45	22 22	23 04	23 53
	14	406 46.1	37.2	294 18.3	12.1	18 34.5	1.9	54.4	52	19 05	19 41	20 24	21 38	22 14	22 56	23 45
	15	431 46.2	36.3	308 49.4	12.0	18 36.4	1.7	54.4	54	19 09	19 46	20 33	21 31	22 06	22 47	23 36
	16	456 46.3	35.3	323 20.4	12.1	18 38.1	1.6	54.4	56	19 13	19 53	20 43	21 23	21 57	22 37	23 26
	17	481 46.4	34.4	337 51.5	12.0	18 39.7	1.6	54.5	58	19 18	20 00	20 54	21 14	21 47	22 26	23 15
	18	506 46.6 S	9 33.5	352 22.5	12.0 N	18 41.3	1									

T. M. G.	ARIES		VENUS -4.3		MARTE +1.4		JUPITER -1.8		SATURNO +0.2		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
DOMINGO	27 ^d 00	156 42.8	140 38.1 N11	51.8	200 22.2 S17	46.7	104 48.4 N18	05.3	22 25.7 N18	15.9	Acamar	315 39.2 S40	24.1
	01	171 45.3	155 39.4	52.6	215 22.7	46.2	119 50.6	05.4	37 28.4	16.0	Achernar	335 47.5 S57	21.4
	02	186 47.8	170 40.7	53.5	230 23.2	45.6	134 52.7	05.5	52 31.0	16.0	Acrux	173 39.2 S62	58.3
	03	201 50.2	185 42.0	54.4	245 23.7	45.1	149 54.8	05.6	67 33.6	16.1	Adhara	255 33.8 S28	56.8
	04	216 52.7	200 43.3	55.3	260 24.2	44.5	164 57.0	05.6	82 36.3	16.1	Aldebaran	291 20.7 N16	27.7
	05	231 55.1	215 44.6	56.2	275 24.7	44.0	179 59.1	05.7	97 38.9	16.2			
	06	246 57.6	230 45.9 N11	57.1	290 25.2 S17	43.4	195 01.2 N18	05.8	112 41.5 N18	16.2	Alioth	166 44.2 N56	04.8
	07	262 00.1	245 47.2	58.0	305 25.7	42.9	210 03.4	05.9	127 44.2	16.3	Alkaid	153 20.1 N49	25.4
	08	277 02.5	260 48.6	58.8	320 26.2	42.3	225 05.5	06.0	142 46.8	16.3	Al Na'ir	28 18.4 S47	04.3
	09	292 05.0	275 49.9	59.7	335 26.7	41.8	240 07.6	06.1	157 49.4	16.4	Alnilam	276 14.0 S 1	13.2
	10	307 07.5	290 51.2	00.6	350 27.2	41.2	255 09.8	06.2	172 52.1	16.4	Alphard	218 22.6 S 8	33.8
	11	322 09.9	305 52.5	01.5	5 27.7	40.7	270 11.9	06.3	187 54.7	16.5			
	12	337 12.4	320 53.8 N12	02.4	20 28.2 S17	40.1	285 14.0 N18	06.4	202 57.3 N18	16.5	Alphecca	126 34.0 N26	47.3
	13	352 14.9	335 55.2	03.2	35 28.7	39.6	300 16.2	06.4	218 00.0	16.6	Alpheratz	358 12.1 N28	57.9
	14	7 17.3	350 56.5	04.1	50 29.2	39.0	315 18.3	06.5	233 02.6	16.6	Altair	62 35.1 N 8	48.4
	15	22 19.8	5 57.8	05.0	65 29.8	38.5	330 20.4	06.6	248 05.3	16.7	Ankaa	353 43.0 S42	25.9
	16	37 22.3	20 59.2	05.9	80 30.3	37.9	345 22.6	06.7	263 07.9	16.7	Antares	112 59.8 S26	22.8
	17	52 24.7	36 00.5	06.7	95 30.8	37.4	0 24.7	06.8	278 10.5	16.8			
	18	67 27.2	51 01.8 N12	07.6	110 31.3 S17	36.8	15 26.8 N18	06.9	293 13.2 N18	16.8	Arcturus	146 20.5 N19	17.9
	19	82 29.6	66 03.2	08.5	125 31.8	36.3	30 29.0	07.0	308 15.8	16.9	Atria	108 26.2 S68	58.9
	20	97 32.1	81 04.5	09.3	140 32.3	35.7	45 31.1	07.1	323 18.4	16.9	Avior	234 28.6 S59	26.5
	21	112 34.6	96 05.9	10.2	155 32.8	35.2	60 33.2	07.2	338 21.1	16.9	Bellatrix	279 01.2 N 6	19.6
	22	127 37.0	111 07.2	11.1	170 33.3	34.6	75 35.4	07.3	353 23.7	17.0	Betelgeuse	271 30.7 N 7	24.0
23	142 39.5	126 08.6	11.9	185 33.8	34.1	90 37.5	07.3	8 26.3	17.0				
LUNES	28 ⁰⁰	157 42.0	141 09.9 N12	12.8	200 34.3 S17	33.5	105 39.6 N18	07.4	23 29.0 N18	17.1	Canopus	264 08.0 S52	41.4
	01	172 44.4	156 11.3	13.7	215 34.8	33.0	120 41.8	07.5	38 31.6	17.1	Capella	281 14.7 N45	58.6
	02	187 46.9	171 12.6	14.5	230 35.4	32.4	135 43.9	07.6	53 34.2	17.2	Deneb	49 50.4 N45	11.8
	03	202 49.4	186 14.0	15.4	245 35.9	31.9	150 46.0	07.7	68 36.9	17.2	Denebola	183 01.2 N14	41.8
	04	217 51.8	201 15.4	16.3	260 36.4	31.3	165 48.1	07.8	83 39.5	17.3	Diphda	349 23.5 S18	06.8
	05	232 54.3	216 16.7	17.1	275 36.9	30.8	180 50.3	07.9	98 42.1	17.3			
	06	247 56.7	231 18.1 N12	18.0	290 37.4 S17	30.2	195 52.4 N18	08.0	113 44.8 N18	17.4	Dubhe	194 24.5 N61	52.3
	07	262 59.2	246 19.5	18.8	305 37.9	29.6	210 54.5	08.1	128 47.4	17.4	Elnath	278 47.0 N28	35.3
	08	278 01.7	261 20.8	19.7	320 38.4	29.1	225 56.7	08.2	143 50.0	17.5	Eltanin	90 59.0 N51	29.3
	09	293 04.1	276 22.2	20.6	335 38.9	28.5	240 58.8	08.2	158 52.6	17.5	Enif	34 14.2 N 9	46.2
	10	308 06.6	291 23.6	21.4	350 39.4	28.0	256 00.9	08.3	173 55.3	17.6	Fomalhaut	15 54.4 S29	44.7
	11	323 09.1	306 25.0	22.3	5 39.9	27.4	271 03.0	08.4	188 57.9	17.6			
	12	338 11.5	321 26.4 N12	23.1	20 40.5 S17	26.9	286 05.2 N18	08.5	204 00.5 N18	17.7	Gacrux	172 30.8 S56	59.1
	13	353 14.0	336 27.7	24.0	35 41.0	26.3	301 07.3	08.6	219 03.2	17.7	Gienah	176 20.1 S17	25.0
	14	8 16.5	351 29.1	24.8	50 41.5	25.7	316 09.4	08.7	234 05.8	17.8	Hadar	149 26.2 S60	15.6
	15	23 18.9	6 30.5	25.7	65 42.0	25.2	331 11.6	08.8	249 08.4	17.8	Hamal	328 31.8 N23	21.3
	16	38 21.4	21 31.9	26.5	80 42.5	24.6	346 13.7	08.9	264 11.1	17.9	Kaus Aust.	84 20.2 S34	23.6
	17	53 23.9	36 33.3	27.4	95 43.0	24.1	1 15.8	09.0	279 13.7	17.9			
	18	68 26.3	51 34.7 N12	28.2	110 43.5 S17	23.5	16 17.9 N18	09.1	294 16.3 N18	18.0	Kochab	137 18.5 N74	14.7
	19	83 28.8	66 36.1	29.1	125 44.0	23.0	31 20.1	09.1	309 19.0	18.0	Markab	14 05.8 N15	04.9
	20	98 31.2	81 37.5	29.9	140 44.6	22.4	46 22.2	09.2	324 21.6	18.1	Menkar	314 43.7 N 3	59.9
	21	113 33.7	96 38.9	30.8	155 45.1	21.8	61 24.3	09.3	339 24.2	18.1	Menkent	148 39.5 S36	15.4
	22	128 36.2	111 40.3	31.6	170 45.6	21.3	76 26.4	09.4	354 26.9	18.1	Miaplacidus	221 44.5 S69	37.7
23	143 38.6	126 41.7	32.4	185 46.1	20.7	91 28.6	09.5	9 29.5	18.2				
MARTES	1 ⁰⁰	158 41.1	141 43.1 N12	33.3	200 46.6 S17	20.2	106 30.7 N18	09.6	24 32.1 N18	18.2	Mirfak	309 19.6 N49	47.0
	01	173 43.6	156 44.6	34.1	215 47.1	19.6	121 32.8	09.7	39 34.7	18.3	Nunki	76 32.3 S26	19.4
	02	188 46.0	171 46.0	35.0	230 47.6	19.0	136 34.9	09.8	54 37.4	18.3	Pecock	54 02.7 S56	48.4
	03	203 48.5	186 47.4	35.8	245 48.2	18.5	151 37.1	09.9	69 40.0	18.4	Pollux	244 00.8 N28	04.8
	04	218 51.0	201 48.8	36.6	260 48.7	17.9	166 39.2	10.0	84 42.6	18.4	Procyon	245 28.0 N 5	16.8
	05	233 53.4	216 50.2	37.5	275 49.2	17.3	181 41.3	10.1	99 45.3	18.5			
	06	248 55.9	231 51.7 N12	38.3	290 49.7 S17	16.8	196 43.4 N18	10.1	114 47.9 N18	18.5	Rasalhague	96 31.9 N12	34.5
	07	263 58.4	246 53.1	39.1	305 50.2	16.2	211 45.5	10.2	129 50.5	18.6	Regulus	208 12.2 N12	04.5
	08	279 00.8	261 54.5	40.0	320 50.7	15.7	226 47.7	10.3	144 53.2	18.6	Rigel	281 38.2 S 8	13.9
	09	294 03.3	276 56.0	40.8	335 51.2	15.1	241 49.8	10.4	159 55.8	18.7	Rigil Kent.	140 28.6 S60	44.2
	10	309 05.7	291 57.4	41.6	350 51.8	14.5	256 51.9	10.5	174 58.4	18.7	Sabik	102 43.9 S15	41.8
	11	324 08.2	306 58.8	42.5	5 52.3	14.0	271 54.0	10.6	190 01.0	18.8			
	12	339 10.7	322 00.3 N12	43.3	20 52.8 S17	13.4	286 56.2 N18	10.7	205 03.7 N18	18.8	Schedar	350 12.1 N56	24.8
	13	354 13.1	337 01.7	44.1	35 53.3	12.8	301 58.3	10.8	220 06.3	18.9	Shaula	96 59.1 S37	05.1
	14	9 15.6	352 03.2	45.0	50 53.8	12.3	317 00.4	10.9	235 08.9	18.9	Sirius	258 57.6 S16	41.4
	15	24 18.1	7 04.6	45.8	65 54.3	11.7	332 02.5	11.0	250 11.6	18.9	Spica	158 59.8 S11	02.6
	16	39 20.5	22 06.1	46.6	80 54.9	11.1	347 04.6	11.1	265 14.2	19.0	Suhail	223 12.1 S43	20.7
	17	54 23.0	37 07.5	47.4	95 55.4	10.6	2 06.8	11.1	280 16.8	19.0			
	18	69 25.5	52 09.0 N12	48.2	110 55.9 S17	10.0	17 08.9 N18	11.2	295 19.4 N18	19.1	Vega	80 57.6 N38	45.6
	19	84 27.9	67 10.5	49.1	125 56.4	09.4	32 11.0	11.3	310 22.1	19.1	Zuben'ubi	137 35.5 S15	56.9
	20	99 30.4	82 11.9	49.9	140 56.9	08.9	47 13.1	11.4	325 24.7	19.2			
	21	114 32.8	97 13.4	50.7	155 57.4	08.3	62 15.2	11.5	340 27.3	19.2			
	22	129 35.3	112 14.9	51.5	170 58.0	07.7	77 17.4	11.6	355 30.0	19.3			
23	144 37.8	127 16.3	52.3	185 58.5	07.2	92 19.5	11.7	10 32.6	19.3				
Pas. Mer.		h m		v 1.4 d 0.9		v 0.5 d 0.6		v 2.1 d 0.1		v 2.6 d 0.0			
										A. H. S.		Pas. Mer.	
										o / h m		h m	
										Venus		343 28.0 14 34	
										Marte		42 52.4 10 37	
										Júpiter		307 57.7 16 55	
										Saturno		225 47.0 22 22	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo			Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.	Civil		27	28	1	2	
27 00	176 47.2 S 8	27.8	79 28.2 11.9	N18	48.9	0.9	54.5	N 72	05 16	06 33	07 43	□	□	09 50	11 53	
01	191 47.3	26.9	93 59.1 11.9	18	49.8	0.9	54.6	N 70	05 20	06 30	07 33	08 21	09 23	10 49	12 26	
02	206 47.4	26.0	108 30.0 11.8	18	50.7	0.8	54.6	68	05 24	06 28	07 24	09 10	10 07	11 23	12 50	
03	221 47.5	25.0	123 00.8 11.8	18	51.5	0.6	54.6	66	05 26	06 25	07 17	09 41	10 37	11 47	13 08	
04	236 47.6	24.1	137 31.6 11.8	18	52.1	0.6	54.6	64	05 29	06 23	07 11	10 05	10 59	12 06	13 23	
05	251 47.8	23.1	152 02.4 11.7	18	52.7	0.5	54.6	62	05 30	06 22	07 06	10 23	11 17	12 22	13 36	
06	266 47.9 S 8	22.2	166 33.1 11.7	N18	53.2	0.5	54.6	60	05 32	06 20	07 02	10 38	11 32	12 35	13 46	
07	281 48.0	21.3	181 03.8 11.8	18	53.7	0.3	54.6	N 58	05 33	06 18	06 58	10 51	11 44	12 46	13 55	
08	296 48.1	20.3	195 34.6 11.6	18	54.0	0.2	54.7	56	05 34	06 17	06 54	11 02	11 55	12 56	14 03	
09	311 48.2	19.4	210 05.2 11.7	18	54.2	0.2	54.7	54	05 35	06 16	06 51	11 12	12 05	13 04	14 10	
10	326 48.3	18.4	224 35.9 11.7	18	54.4	0.1	54.7	52	05 36	06 15	06 48	11 21	12 13	13 12	14 17	
11	341 48.4	17.5	239 06.6 11.6	18	54.5	0.1	54.7	50	05 36	06 13	06 46	11 29	12 21	13 19	14 23	
12	356 48.5 S 8	16.6	253 37.2 11.6	N18	54.4	0.1	54.7	45	05 37	06 11	06 40	11 46	12 37	13 34	14 35	
13	11 48.6	15.6	268 07.8 11.6	18	54.3	0.2	54.7	N 40	05 37	06 08	06 35	11 59	12 50	13 46	14 45	
14	26 48.8	14.7	282 38.4 11.5	18	54.1	0.3	54.8	35	05 36	06 06	06 31	12 11	13 02	13 56	14 54	
15	41 48.9	13.7	297 08.9 11.6	18	53.8	0.4	54.8	30	05 36	06 03	06 27	12 21	13 12	14 05	15 02	
16	56 49.0	12.8	311 39.5 11.5	18	53.4	0.5	54.8	20	05 33	05 59	06 21	12 39	13 29	14 21	15 15	
17	71 49.1	11.9	326 10.0 11.5	18	52.9	0.6	54.8	N 10	05 29	05 54	06 15	12 54	13 43	14 34	15 26	
18	86 49.2 S 8	10.9	340 40.5 11.5	N18	52.3	0.6	54.8	0	05 24	05 48	06 09	13 08	13 57	14 47	15 37	
19	101 49.3	10.0	355 11.0 11.5	18	51.7	0.8	54.9	S 10	05 18	05 42	06 04	13 22	14 11	15 00	15 48	
20	116 49.4	09.0	9 41.5 11.4	18	50.9	0.8	54.9	20	05 09	05 35	05 57	13 38	14 26	15 13	15 59	
21	131 49.5	08.1	24 11.9 11.4	18	50.1	1.0	54.9	30	04 57	05 26	05 50	13 55	14 43	15 29	16 12	
22	146 49.7	07.1	38 42.3 11.4	18	49.1	1.0	54.9	35	04 49	05 20	05 46	14 06	14 53	15 38	16 20	
23	161 49.8	06.2	53 12.7 11.4	18	48.1	1.1	54.9	40	04 40	05 13	05 41	14 17	15 04	15 48	16 28	
28 00	176 49.9 S 8	05.3	67 43.1 11.4	N18	47.0	1.2	55.0	45	04 29	05 05	05 36	14 31	15 17	16 00	16 38	
01	191 50.0	04.3	82 13.5 11.3	18	45.8	1.4	55.0	S 50	04 14	04 55	05 29	14 48	15 34	16 14	16 51	
02	206 50.1	03.4	96 43.8 11.4	18	44.4	1.4	55.0	52	04 07	04 50	05 26	14 56	15 41	16 21	16 56	
03	221 50.2	02.4	111 14.2 11.3	18	43.0	1.4	55.0	54	03 59	04 45	05 22	15 05	15 50	16 28	17 02	
04	236 50.4	01.5	125 44.5 11.3	18	41.6	1.6	55.0	56	03 50	04 39	05 18	15 15	15 59	16 37	17 09	
05	251 50.5	00.5	140 14.8 11.3	18	40.0	1.7	55.1	58	03 39	04 32	05 14	15 26	16 10	16 46	17 17	
06	266 50.6 S 7	59.6	154 45.1 11.2	N18	38.3	1.8	55.1	S 60	03 26	04 24	05 09	15 39	16 22	16 57	17 25	
07	281 50.7	58.6	169 15.3 11.3	18	36.5	1.8	55.1	Lat.	Ocaso Sol	Crepúsculo			Ocaso Luna			
08	296 50.8	57.7	183 45.6 11.2	18	34.7	2.0	55.1			Civil	Náut.	27	28	1	2	
09	311 50.9	56.8	198 15.8 11.2	18	32.7	2.1	55.1									
10	326 51.0	55.8	212 46.0 11.2	18	30.6	2.1	55.2	N 72	16 44	17 54	19 12	□	□	07 25	07 08	
11	341 51.2	54.9	227 16.2 11.2	18	28.5	2.2	55.2	N 70	16 54	17 57	19 08	05 29	06 10	06 27	06 33	
12	356 51.3 S 7	53.9	241 46.4 11.2	N18	26.3	2.4	55.2	68	17 03	17 59	19 04	04 40	05 24	05 52	06 09	
13	11 51.4	53.0	256 16.6 11.2	18	23.9	2.4	55.2	66	17 09	18 01	19 01	04 09	04 55	05 27	05 49	
14	26 51.5	52.0	270 46.8 11.1	18	21.5	2.5	55.3	64	17 15	18 03	18 58	03 46	04 32	05 08	05 34	
15	41 51.6	51.1	285 16.9 11.1	18	19.0	2.6	55.3	62	17 20	18 05	18 56	03 28	04 14	04 52	05 21	
16	56 51.8	50.1	299 47.0 11.1	18	16.4	2.7	55.3	60	17 24	18 07	18 55	03 12	03 59	04 38	05 10	
17	71 51.9	49.2	314 17.1 11.1	18	13.7	2.8	55.3	N 58	17 28	18 08	18 53	03 00	03 47	04 27	05 00	
18	86 52.0 S 7	48.2	328 47.2 11.1	N18	10.9	2.9	55.4	56	17 32	18 09	18 52	02 48	03 36	04 17	04 52	
19	101 52.1	47.3	343 17.3 11.1	18	08.0	3.0	55.4	54	17 35	18 10	18 51	02 39	03 26	04 08	04 44	
20	116 52.2	46.3	357 47.4 11.0	18	05.0	3.0	55.4	52	17 38	18 12	18 51	02 30	03 18	04 00	04 37	
21	131 52.4	45.4	12 17.4 11.1	18	02.0	3.2	55.4	50	17 40	18 13	18 50	02 22	03 10	03 53	04 31	
22	146 52.5	44.5	26 47.5 11.0	17	58.8	3.2	55.5	45	17 46	18 15	18 49	02 05	02 53	03 38	04 18	
23	161 52.6	43.5	41 17.5 11.0	17	55.6	3.4	55.5	N 40	17 51	18 18	18 49	01 52	02 40	03 25	04 07	
1 00	176 52.7 S 7	42.6	55 47.5 11.0	N17	52.2	3.4	55.5	35	17 55	18 20	18 49	01 40	02 28	03 14	03 58	
01	191 52.8	41.6	70 17.5 11.0	17	48.8	3.6	55.5	30	17 58	18 22	18 50	01 30	02 18	03 05	03 50	
02	206 53.0	40.7	84 47.5 11.0	17	45.2	3.6	55.6	20	18 05	18 27	18 53	01 13	02 01	02 49	03 35	
03	221 53.1	39.7	99 17.5 11.0	17	41.6	3.7	55.6	N 10	18 10	18 32	18 56	00 57	01 46	02 34	03 23	
04	236 53.2	38.8	113 47.5 11.0	17	37.9	3.8	55.6	0	18 16	18 37	19 01	00 43	01 32	02 21	03 11	
05	251 53.3	37.8	128 17.5 10.9	17	34.1	3.9	55.6	S 10	18 21	18 43	19 07	00 29	01 18	02 08	02 59	
06	266 53.4 S 7	36.9	142 47.4 10.9	N17	30.2	4.0	55.7	20	18 28	18 50	19 16	00 14	01 02	01 53	02 46	
07	281 53.6	35.9	157 17.3 11.0	17	26.2	4.1	55.7	30	18 35	18 59	19 27	24 45	00 45	01 37	02 32	
08	296 53.7	35.0	171 47.3 10.9	17	22.1	4.2	55.7	35	18 39	19 04	19 35	24 35	00 35	01 27	02 23	
09	311 53.8	34.0	186 17.2 10.9	17	17.9	4.3	55.8	40	18 43	19 11	19 44	24 23	00 23	01 16	02 14	
10	326 53.9	33.1	200 47.1 10.9	17	13.6	4.3	55.8	45	18 49	19 19	19 55	24 09	00 09	01 03	02 02	
11	341 54.1	32.1	215 17.0 10.9	17	09.3	4.5	55.8	S 50	18 55	19 29	20 10	23 53	24 48	00 48	01 48	
12	356 54.2 S 7	31.2	229 46.9 10.8	N17	04.8	4.6	55.8	52	18 58	19 34	20 17	23 45	24 40	00 40	01 42	
13	11 54.3	30.2	244 16.7 10.9	17	00.2	4.6	55.9	54	19 02	19 39	20 25	23 36	24 32	00 32	01 35	
14	26 54.4	29.3	258 46.6 10.9	16	55.6	4.7	55.9	56	19 05	19 45	20 34	23 26	24 23	00 23	01 27	
15	41 54.5	28.3	273 16.5 10.8	16	50.9	4.8	55.9	58	19 10	19 51	20 44	23 15	24 12	00 12	01 18	
16	56 54.7	27.4	287 46.3 10.9	16	46.1	5.0	56.0	S 60	19 14	19 59	20 56	23 02	24 00	00 00	01 07	
17	71 54.8	26.4	302 16.2 10.8	16	41.1	5.0	56.0	Día	SOL E.T. (-)			LUNA				
18	86 54.9 S 7	25.5	316 46.0 10.8	N16	36.1	5.1	56.0		00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
19	101 55.0	24.5	331 15.8 10.8	16	31.0	5.1	56.0	27	m s	m s	h m	h m	h m	d		

T. M. G.	ARIES			VENUS -4.3			MARTE +1.4			JUPITER -1.8			SATURNO +0.2			ESTRELLAS									
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.											
5 00 01 02 03 04 05 06 07 08 S A B A D O 14 15 16 17 18 19 20 21 22 23	162	37.7		144	11.0	N13	48.7	201	36.7	S16	24.9	109	53.4	N18	18.5	28	44.1	N18	22.6	Acamar	315	39.3	S40	24.1	
	177	40.1		159	12.7		49.5	216	37.3		24.3	124	55.5		18.6	43	46.7		22.6	Achernar	335	47.5	S57	21.4	
	192	42.6		174	14.4		50.2	231	37.8		23.7	139	57.6		18.7	58	49.3		22.7	Acrux	173	39.1	S62	58.4	
	207	45.0		189	16.1	..	50.9	246	38.3	..	23.2	154	59.7	..	18.8	73	51.9	..	22.7	Adhara	255	33.8	S28	56.8	
	222	47.5		204	17.7		51.6	261	38.8		22.6	170	01.8		18.9	88	54.6		22.8	Aldebaran	291	20.7	N16	27.7	
	237	50.0		219	19.4		52.4	276	39.4		22.0	185	03.9		19.0	103	57.2		22.8						
	252	52.4		234	21.1	N13	53.1	291	39.9	S16	21.4	200	06.0	N18	19.1	118	59.8	N18	22.9	Alioth	166	44.2	N56	04.8	
	267	54.9		249	22.8		53.8	306	40.4		20.8	215	08.1		19.2	134	02.4		22.9	Alkaid	153	20.1	N49	25.4	
	282	57.4		264	24.5		54.5	321	41.0		20.2	230	10.2		19.3	149	05.0		23.0	Al Na'ir	28	18.4	S47	04.3	
	297	59.8		279	26.2	..	55.2	336	41.5	..	19.6	245	12.3	..	19.4	164	07.6	..	23.0	Alnilam	276	14.0	S 1	13.2	
	313	02.3		294	27.9		55.9	351	42.0		19.0	260	14.4		19.5	179	10.3		23.0	Alphard	218	22.6	S 8	33.8	
	328	04.8		309	29.6		56.7	6	42.6		18.4	275	16.5		19.6	194	12.9		23.1						
	343	07.2		324	31.3	N13	57.4	21	43.1	S16	17.8	290	18.6	N18	19.7	209	15.5	N18	23.1	Alphecca	126	34.0	N26	47.3	
	358	09.7		339	33.0		58.1	36	43.6		17.2	305	20.7		19.8	224	18.1		23.2	Alpheratz	358	12.1	N28	57.9	
	13	13	12.2		354	34.7		58.8	51	44.2		16.6	320	22.8		19.9	239	20.7		23.2	Altair	62	35.1	N 8	48.4
	28	14.6		9	36.5	13	59.5	66	44.7	..	16.1	335	24.9	..	19.9	254	23.3	..	23.3	Ankaa	353	43.0	S42	25.9	
	43	17.1		24	38.2	14	00.2	81	45.2		15.5	350	27.0		20.0	269	26.0		23.3	Antares	112	59.7	S26	22.8	
	58	19.5		39	39.9		00.9	96	45.8		14.9	5	29.1		20.1	284	28.6		23.3						
	73	22.0		54	41.6	N14	01.6	111	46.3	S16	14.3	20	31.2	N18	20.2	299	31.2	N18	23.4	Arcturus	146	20.4	N19	17.9	
	88	24.5		69	43.4		02.3	126	46.8		13.7	35	33.3		20.3	314	33.8		23.4	Atria	108	26.0	S68	58.9	
	103	26.9		84	45.1		03.0	141	47.4		13.1	50	35.4		20.4	329	36.4		23.5	Avior	234	28.6	S59	26.5	
	118	29.4		99	46.8	..	03.7	156	47.9	..	12.5	65	37.5	..	20.5	344	39.0	..	23.5	Bellatrix	279	01.2	N 6	19.6	
	133	31.9		114	48.6		04.4	171	48.4		11.9	80	39.6		20.6	359	41.7		23.6	Betelgeuse	271	30.8	N 7	24.0	
148	34.3		129	50.3		05.1	186	49.0		11.3	95	41.7		20.7	14	44.3		23.6							
6 00 01 02 03 04 05 06 07 D O M I N G O 14 15 16 17 18 19 20 21 22 23	163	36.8		144	52.0	N14	05.8	201	49.5	S16	10.7	110	43.8	N18	20.8	29	46.9	N18	23.6	Canopus	264	08.1	S52	41.4	
	178	39.3		159	53.8		06.5	216	50.0		10.1	125	45.9		20.9	44	49.5		23.7	Capella	281	14.8	N45	58.6	
	193	41.7		174	55.5		07.2	231	50.6		09.5	140	48.0		21.0	59	52.1		23.7	Deneb	49	50.4	N45	11.8	
	208	44.2		189	57.3	..	07.9	246	51.1	..	08.9	155	50.1	..	21.1	74	54.7	..	23.8	Denebola	183	01.1	N14	41.8	
	223	46.7		204	59.0		08.6	261	51.6		08.3	170	52.2		21.2	89	57.3		23.8	Diphda	349	23.6	S18	06.8	
	238	49.1		220	00.8		09.3	276	52.2		07.7	185	54.2		21.3	105	00.0		23.8						
	253	51.6		235	02.6	N14	10.0	291	52.7	S16	07.1	200	56.3	N18	21.4	120	02.6	N18	23.9	Dubhe	194	24.4	N61	52.3	
	268	54.0		250	04.3		10.7	306	53.2		06.5	215	58.4		21.5	135	05.2		23.9	Elnath	278	47.1	N28	35.3	
	283	56.5		265	06.1		11.3	321	53.8		05.9	231	00.5		21.6	150	07.8		24.0	Eltanin	90	59.0	N51	29.3	
	298	59.0		280	07.9	..	12.0	336	54.3	..	05.3	246	02.6	..	21.7	165	10.4	..	24.0	Enif	34	14.2	N 9	46.2	
	314	01.4		295	09.6		12.7	351	54.9		04.7	261	04.7		21.8	180	13.0		24.1	Fomalhaut	15	54.4	S29	44.6	
	329	03.9		310	11.4		13.4	6	55.4		04.1	276	06.8		21.9	195	15.6		24.1						
	344	06.4		325	13.2	N14	14.1	21	55.9	S16	03.5	291	08.9	N18	22.0	210	18.3	N18	24.1	Gacrux	172	30.8	S56	59.1	
	359	08.8		340	15.0		14.8	36	56.5		02.9	306	11.0		22.1	225	20.9		24.2	Gienah	176	20.1	S17	25.1	
	14	11.3		355	16.8		15.4	51	57.0		02.3	321	13.1		22.2	240	23.5		24.2	Hadar	149	26.2	S60	15.7	
	29	13.8		10	18.6	..	16.1	66	57.5	..	01.7	336	15.2	..	22.3	255	26.1	..	24.3	Hamal	328	31.8	N23	21.3	
	44	16.2		25	20.3		16.8	81	58.1		01.1	351	17.3		22.4	270	28.7		24.3	Kaus Aust.	84	20.1	S34	23.6	
	59	18.7		40	22.1		17.5	96	58.6	16	00.5	6	19.3		22.4	285	31.3		24.4						
	74	21.1		55	23.9	N14	18.1	111	59.1	S15	59.9	21	21.4	N18	22.5	300	33.9	N18	24.4	Kochab	137	18.4	N74	14.7	
	89	23.6		70	25.7		18.8	126	59.7		59.3	36	23.5		22.6	315	36.5		24.4	Markab	14	05.8	N15	04.9	
	104	26.1		85	27.5		19.5	142	00.2		58.7	51	25.6		22.7	330	39.2		24.5	Menkar	314	43.8	N 3	59.9	
	119	28.5		100	29.4	..	20.1	157	00.8	..	58.1	66	27.7	..	22.8	345	41.8	..	24.5	Menkent	148	39.5	S36	15.5	
	134	31.0		115	31.2		20.8	172	01.3		57.5	81	29.8		22.9	0	44.4		24.6	Miaplacidus	221	44.5	S69	37.7	
149	33.5		130	33.0		21.5	187	01.8		56.9	96	31.9		23.0	15	47.0		24.6							
7 00 01 02 03 04 05 06 07 08 09 L U N E S 12 13 14 15 16 17 18 19 20 21 22 23	164	35.9		145	34.8	N14	22.1	202	02.4	S15	56.3	111	34.0	N18	23.1	30	49.6	N18	24.6	Mirfak	309	19.6	N49	46.9	
	179	38.4		160	36.6		22.8	217	02.9		55.7	126	36.1		23.2	45	52.2		24.7	Nunki	76	32.3	S26	19.4	
	194	40.9		175	38.4		23.5	232	03.5		55.1	141	38.1		23.3	60	54.8		24.7	Peacock	54	02.6	S56	48.3	
	209	43.3		190	40.3	..	24.1	247	04.0	..	54.5	156	40.2	..	23.4	75	57.4	..	24.8	Pollux	244	00.8	N28	04.8	
	224	45.8		205	42.1		24.8	262	04.5		53.9	171	42.3		23.5	91	00.1		24.8	Procyon	245	28.1	N 5	16.8	
	239	48.3		220	43.9		25.4	277	05.1		53.3	186	44.4		23.6	106	02.7		24.8						
	254	50.7		235	45.8	N14	26.1	292	05.6	S15	52.7	201	46.5	N18	23.7	121	05.3	N18	24.9	Rasalhague	96	31.8	N12	34.5	
	269	53.2		250	47.6		26.7	307	06.1		52.1	216	48.6		23.8	136	07.9		24.9	Regulus	208	12.2	N12	04.5	
	284	55.6		265	49.4		27.4	322	06.7		51.5	231	50.7		23.9	151	10.5		25.0	Rigel	281	38.3	S 8	13.9	
	299	58.1		280	51.3	..	28.0	337	07.2	..	50.9	246	52.8	..	24.0	166	13.1	..	25.0	Rigel Kent.	140	28.6	S60	44.3	
	315	00.6		295	53.1		28.7	352	07.8		50.2	261	54.8		24.1	181	15.7		25.1	Sabik	102	43.9	S15	41.8	
	330	03.0		310	55.0		29.3	7	08.3		49.6	276	56.9		24.2	196	18.3		25.1						
	345	05.5		325	56.8	N14	30.0																		

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	5	6	7	8
												h	m	h	m
S A B A D O	5 00	177 05.3 S 6 10.7	7 14.7 10.3 N 5 59.6 10.6 58.4					N 72	04 45	06 04	07 11	17 35	19 30	21 28	23 30
	01	192 05.4 09.8	21 44.0 10.3 5 49.0 10.8 58.4					N 70	04 53	06 04	07 05	17 39	19 26	21 17	23 09
	02	207 05.6 08.8	36 13.3 10.3 5 38.2 10.7 58.5					68	04 59	06 04	06 59	17 42	19 24	21 08	22 53
	03	222 05.7 07.8	50 42.6 10.3 5 27.5 10.8 58.5					66	05 04	06 04	06 55	17 44	19 22	21 01	22 40
	04	237 05.8 06.9	65 11.9 10.3 5 16.7 10.9 58.5					64	05 08	06 03	06 51	17 46	19 20	20 54	22 29
	05	252 06.0 05.9	79 41.2 10.2 5 05.8 10.9 58.6					62	05 12	06 03	06 47	17 48	19 18	20 49	22 20
	06	267 06.1 S 6 04.9	94 10.4 10.3 N 4 54.9 10.9 58.6					60	05 15	06 03	06 44	17 50	19 17	20 44	22 12
	07	282 06.3 04.0	108 39.7 10.2 4 44.0 11.0 58.6					N 58	05 17	06 03	06 42	17 51	19 15	20 40	22 05
	08	297 06.4 03.0	123 08.9 10.3 4 33.0 11.0 58.6					56	05 19	06 02	06 39	17 53	19 14	20 37	21 59
	09	312 06.6 02.0	137 38.2 10.2 4 22.0 11.0 58.7					54	05 21	06 02	06 37	17 54	19 13	20 34	21 54
	10	327 06.7 01.1	152 07.4 10.2 4 11.0 11.0 58.7					52	05 23	06 02	06 35	17 55	19 12	20 31	21 49
	11	342 06.8 6 00.1	166 36.6 10.1 4 00.0 11.1 58.7					50	05 24	06 01	06 33	17 56	19 11	20 28	21 45
	12	357 07.0 S 5 59.1	181 05.7 10.2 N 3 48.9 11.2 58.7					45	05 26	06 00	06 29	17 58	19 10	20 22	21 35
	13	12 07.1 58.2	195 34.9 10.2 3 37.7 11.1 58.8					N 40	05 28	05 59	06 26	18 00	19 08	20 18	21 27
	14	27 07.3 57.2	210 04.1 10.1 3 26.6 11.2 58.8					35	05 29	05 58	06 23	18 01	19 07	20 13	21 21
	15	42 07.4 56.2	224 33.2 10.1 3 15.4 11.2 58.8					30	05 29	05 57	06 21	18 03	19 06	20 10	21 15
	16	57 07.6 55.3	239 02.3 10.1 3 04.2 11.3 58.8					20	05 28	05 54	06 16	18 05	19 04	20 04	21 05
	17	72 07.7 54.3	253 31.4 10.1 2 52.9 11.2 58.9					N 10	05 26	05 51	06 12	18 07	19 02	19 58	20 56
	18	87 07.8 S 5 53.3	268 00.5 10.1 N 2 41.7 11.3 58.9					0	05 23	05 47	06 08	18 09	19 01	19 53	20 48
	19	102 08.0 52.4	282 29.6 10.0 2 30.4 11.3 58.9					S 10	05 18	05 43	06 04	18 11	18 59	19 48	20 39
	20	117 08.1 51.4	296 58.6 10.0 2 19.1 11.3 58.9					20	05 11	05 37	05 59	18 13	18 57	19 43	20 31
	21	132 08.3 50.4	311 27.6 10.1 2 07.8 11.4 59.0					30	05 02	05 30	05 54	18 15	18 56	19 37	20 21
	22	147 08.4 49.5	325 56.7 10.0 1 56.4 11.4 59.0					35	04 55	05 26	05 51	18 17	18 55	19 34	20 15
23	162 08.6 48.5	340 25.7 9.9 1 45.0 11.4 59.0					40	04 48	05 20	05 48	18 18	18 54	19 30	20 09	
6 00	177 08.7 S 5 47.5	354 54.6 10.0 N 1 33.6 11.4 59.0					45	04 38	05 14	05 44	18 20	18 52	19 26	20 02	
01	192 08.9 46.6	9 23.6 9.9 1 22.2 11.4 59.0					S 50	04 26	05 06	05 39	18 22	18 51	19 21	19 53	
02	207 09.0 45.6	23 52.5 9.9 1 10.8 11.4 59.1					52	04 20	05 02	05 37	18 23	18 50	19 18	19 49	
03	222 09.1 44.6	38 21.4 9.9 0 59.4 11.5 59.1					54	04 13	04 58	05 34	18 24	18 49	19 16	19 44	
04	237 09.3 43.7	52 50.3 9.9 0 47.9 11.5 59.1					56	04 05	04 53	05 31	18 25	18 49	19 13	19 40	
05	252 09.4 42.7	67 19.2 9.9 0 36.4 11.4 59.1					58	03 57	04 47	05 28	18 27	18 48	19 10	19 34	
06	267 09.6 S 5 41.7	81 48.1 9.8 N 0 25.0 11.5 59.2					S 60	03 46	04 41	05 25	18 28	18 47	19 06	19 28	
07	282 09.7 40.8	96 16.9 9.8 0 13.5 11.5 59.2					Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	297 09.9 39.8	110 45.7 9.8 N 0 02.0 11.5 59.2						Sol	Civil	Náut.	5	6	7	8	
09	312 10.0 38.8	125 14.5 9.8 S 0 09.5 11.5 59.2					N 72	h m	h m	h m	h m	h m	h m	h m	
10	327 10.2 37.9	139 43.3 9.7 0 21.0 11.5 59.2					N 70	17 13	18 21	19 41	06 43	06 36	06 29	06 22	
11	342 10.3 36.9	154 12.0 9.7 0 32.5 11.6 59.3					68	17 20	18 21	19 33	06 36	06 36	06 35	06 35	
12	357 10.5 S 5 35.9	168 40.7 9.7 S 0 44.1 11.5 59.3					66	17 25	18 21	19 26	06 31	06 35	06 40	06 45	
13	12 10.6 34.9	183 09.4 9.7 0 55.6 11.5 59.3					64	17 30	18 21	19 21	06 27	06 35	06 44	06 54	
14	27 10.8 34.0	197 38.1 9.7 1 07.1 11.5 59.3					62	17 33	18 21	19 16	06 23	06 35	06 48	07 02	
15	42 10.9 33.0	212 06.8 9.6 1 18.6 11.5 59.3					60	17 37	18 21	19 13	06 20	06 35	06 51	07 08	
16	57 11.1 32.0	226 35.4 9.6 1 30.1 11.6 59.4					N 58	17 40	18 21	19 09	06 17	06 35	06 53	07 14	
17	72 11.2 31.1	241 04.0 9.5 1 41.7 11.5 59.4					56	17 42	18 21	19 07	06 14	06 35	06 56	07 19	
18	87 11.4 S 5 30.1	255 32.5 9.6 S 1 53.2 11.5 59.4					54	17 44	18 22	19 05	06 12	06 35	06 58	07 23	
19	102 11.5 29.1	270 01.1 9.5 2 04.7 11.5 59.4					52	17 46	18 22	19 03	06 10	06 35	07 00	07 27	
20	117 11.7 28.2	284 29.6 9.5 2 16.2 11.5 59.4					50	17 48	18 22	19 01	06 08	06 35	07 02	07 31	
21	132 11.8 27.2	298 58.1 9.5 2 27.7 11.5 59.4					45	17 50	18 22	19 00	06 06	06 35	07 03	07 34	
22	147 12.0 26.2	313 26.6 9.4 2 39.2 11.4 59.5					N 40	17 54	18 23	18 57	06 02	06 34	07 07	07 41	
23	162 12.1 25.2	327 55.0 9.4 2 50.6 11.5 59.5					35	17 57	18 24	18 56	05 59	06 34	07 10	07 48	
7 00	177 12.3 S 5 24.3	342 23.4 9.4 S 3 02.1 11.5 59.5					30	18 00	18 25	18 55	05 56	06 34	07 13	07 53	
01	192 12.4 23.3	356 51.8 9.3 3 13.6 11.4 59.5					20	18 02	18 26	18 54	05 54	06 34	07 15	07 57	
02	207 12.6 22.3	11 20.1 9.4 3 25.0 11.4 59.5					N 10	18 07	18 29	18 54	05 50	06 34	07 19	08 05	
03	222 12.7 21.4	25 48.5 9.3 3 36.4 11.4 59.5					0	18 11	18 32	18 56	05 46	06 34	07 22	08 12	
04	237 12.9 20.4	40 16.8 9.2 3 47.8 11.4 59.5					S 10	18 15	18 35	18 59	05 42	06 33	07 26	08 19	
05	252 13.0 19.4	54 45.0 9.3 3 59.2 11.4 59.6					20	18 19	18 40	19 04	05 38	06 33	07 29	08 26	
06	267 13.2 S 5 18.4	69 13.3 9.2 S 4 10.6 11.3 59.6					30	18 23	18 45	19 11	05 35	06 33	07 32	08 33	
07	282 13.3 17.5	83 41.5 9.1 4 21.9 11.4 59.6					40	18 28	18 52	19 20	05 30	06 33	07 36	08 41	
08	297 13.5 16.5	98 09.6 9.2 4 33.3 11.3 59.6					50	18 31	18 56	19 26	05 27	06 32	07 38	08 45	
09	312 13.6 15.5	112 37.8 9.1 4 44.6 11.2 59.6					60	18 34	19 02	19 34	05 24	06 32	07 41	08 51	
10	327 13.8 14.6	127 05.9 9.1 4 55.8 11.3 59.6					S 50	18 38	19 08	19 43	05 21	06 32	07 44	08 57	
11	342 13.9 13.6	141 34.0 9.0 5 07.1 11.2 59.6					52	18 43	19 16	19 55	05 17	06 31	07 48	09 04	
12	357 14.1 S 5 12.6	156 02.0 9.0 S 5 18.3 11.2 59.6					54	18 45	19 19	20 01	05 15	06 31	07 49	09 08	
13	12 14.2 11.6	170 30.0 9.0 5 29.5 11.2 59.7					56	18 47	19 24	20 08	05 13	06 31	07 51	09 12	
14	27 14.4 10.7	184 58.0 9.0 5 40.7 11.1 59.7					58	18 50	19 28	20 15	05 10	06 31	07 53	09 16	
15	42 14.5 09.7	199 26.0 8.9 5 51.8 11.1 59.7					S 60	18 53	19 34	20 24	05 08	06 31	07 55	09 20	
16	57 14.7 08.7	213 53.9 8.9 6 02.9 11.1 59.7					Lat.	SOL		LUNA					
17	72 14.8 07.8	228 21.8 8.8 6 14.0 11.0 59.7						E.T. (-)	Pas. Mer.	Pas. Mer.		Edad.	Fase		
18	87 15.0 S 5 06.8	242 49.6 8.8 S 6 25.0 11.0 59.7						00 ^h	Mer.	Sup.	Inf.				
19	102 15.1 05.8	257 17.4 8.8 6 36.0 11.0 59.7						m s	m s	h m	h m	h m	d		
20	117 15.3 04.8	271 45.2 8.8 6 47.0 10.9 59.7						11 39	11 32	12 12	24 21	11 55	15		
21	132 15.4 03.9	286 13.0 8.7 6 57.9 10.9 59.7						11 25	11 18	12 11	00 21	12 47			

T. M. G.	ARIES			VENUS -4.3			MARTE +1.4			JUPITER -1.8			SATURNO +0.2			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
8	00	165 35.1	146 19.3 N14	37.6	202 15.3 S15	41.7	112 24.0 N18	25.5	31 52.3 N18	25.6	Acamar	315 39.3 S40	24.1					
	01	180 37.5	161 21.2	38.3	217 15.9	41.1	127 26.1	25.6	46 54.9	25.7	Achernar	335 47.6 S57	21.4					
	02	195 40.0	176 23.1	38.9	232 16.4	40.5	142 28.2	25.7	61 57.5	25.7	Acrux	173 39.1 S62	58.4					
	03	210 42.5	191 25.0	39.5	247 17.0	39.9	157 30.3	25.8	77 00.1	25.7	Adhara	255 33.8 S28	56.8					
	04	225 44.9	206 26.9	40.1	262 17.5	39.3	172 32.4	25.9	92 02.7	25.8	Aldebaran	291 20.8 N16	27.7					
	05	240 47.4	221 28.8	40.8	277 18.1	38.7	187 34.4	25.9	107 05.3	25.8								
	06	255 49.9	236 30.7 N14	41.4	292 18.6 S15	38.1	202 36.5 N18	26.0	122 07.9 N18	25.9	Alioth	166 44.1 N56	04.8					
	07	270 52.3	251 32.7	42.0	307 19.2	37.5	217 38.6	26.1	137 10.5	25.9	Alkaid	153 20.0 N49	25.4					
	08	285 54.8	266 34.6	42.6	322 19.7	36.8	232 40.7	26.2	152 13.1	25.9	Al Na'ir	28 18.4 S47	04.2					
	M 09	300 57.2	281 36.5	43.2	337 20.2	36.2	247 42.8	26.3	167 15.7	26.0	Alnilam	276 14.0 S 1	13.2					
	A 10	315 59.7	296 38.4	43.8	352 20.8	35.6	262 44.8	26.4	182 18.3	26.0	Alphard	218 22.6 S 8	33.8					
	R 11	331 02.2	311 40.4	44.5	7 21.3	35.0	277 46.9	26.5	197 20.9	26.1								
	T 12	346 04.6	326 42.3 N14	45.1	22 21.9 S15	34.4	292 49.0 N18	26.6	212 23.6 N18	26.1	Alphecca	126 34.0 N26	47.3					
	E 13	1 07.1	341 44.2	45.7	37 22.4	33.8	307 51.1	26.7	227 26.2	26.1	Alpheratz	358 12.1 N28	57.8					
	S 14	16 09.6	356 46.2	46.3	52 23.0	33.2	322 53.2	26.8	242 28.8	26.2	Altair	62 35.0 N 8	48.4					
	15	31 12.0	11 48.1	46.9	67 23.5	32.6	337 55.2	26.9	257 31.4	26.2	Ankaa	353 43.0 S42	25.9					
	16	46 14.5	26 50.0	47.5	82 24.1	31.9	352 57.3	27.0	272 34.0	26.3	Antares	112 59.7 S26	22.8					
	17	61 17.0	41 52.0	48.1	97 24.6	31.3	7 59.4	27.1	287 36.6	26.3								
	18	76 19.4	56 53.9 N14	48.7	112 25.1 S15	30.7	23 01.5 N18	27.2	302 39.2 N18	26.3	Arcturus	146 20.4 N19	17.9					
	19	91 21.9	71 55.9	49.3	127 25.7	30.1	38 03.6	27.3	317 41.8	26.4	Atria	108 26.0 S68	58.9					
	20	106 24.4	86 57.9	49.9	142 26.2	29.5	53 05.6	27.4	332 44.4	26.4	Avior	234 28.7 S59	26.5					
	21	121 26.8	101 59.8	50.5	157 26.8	28.9	68 07.7	27.5	347 47.0	26.5	Bellatrix	279 01.3 N 6	19.6					
	22	136 29.3	117 01.8	51.1	172 27.3	28.2	83 09.8	27.6	2 49.6	26.5	Betelgeuse	271 30.8 N 7	24.0					
23	151 31.7	132 03.7	51.7	187 27.9	27.6	98 11.9	27.7	17 52.2	26.5									
9	00	166 34.2	147 05.7 N14	52.3	202 28.4 S15	27.0	113 14.0 N18	27.8	32 54.8 N18	26.6	Canopus	264 08.1 S52	41.4					
	01	181 36.7	162 07.7	52.9	217 29.0	26.4	128 16.0	27.9	47 57.4	26.6	Capella	281 14.8 N45	58.6					
	02	196 39.1	177 09.7	53.5	232 29.5	25.8	143 18.1	28.0	63 00.0	26.7	Deneb	49 50.4 N45	11.8					
	03	211 41.6	192 11.6	54.0	247 30.1	25.2	158 20.2	28.1	78 02.6	26.7	Denebola	83 01.1 N14	41.8					
	04	226 44.1	207 13.6	54.6	262 30.6	24.5	173 22.3	28.2	93 05.2	26.7	Diphda	349 23.6 S18	06.8					
	05	241 46.5	222 15.6	55.2	277 31.2	23.9	188 24.3	28.3	108 07.8	26.8								
	06	256 49.0	237 17.6 N14	55.8	292 31.7 S15	23.3	203 26.4 N18	28.4	123 10.5 N18	26.8	Dubhe	194 24.4 N61	52.3					
	07	271 51.5	252 19.6	56.4	307 32.3	22.7	218 28.5	28.5	138 13.1	26.9	Elnath	278 47.1 N28	35.3					
	08	286 53.9	267 21.6	57.0	322 32.8	22.1	233 30.6	28.6	153 15.7	26.9	Eltanin	90 58.9 N51	29.3					
	M 09	301 56.4	282 23.6	57.5	337 33.3	21.5	248 32.6	28.7	168 18.3	26.9	Enif	34 14.2 N 9	46.2					
	A 10	316 58.9	297 25.6	58.1	352 33.9	20.8	263 34.7	28.8	183 20.9	27.0	Fomalhaut	15 54.4 S29	44.6					
	R 11	332 01.3	312 27.6	58.7	7 34.4	20.2	278 36.8	28.9	198 23.5	27.0								
	T 12	347 03.8	327 29.6 N14	59.3	22 35.0 S15	19.6	293 38.9 N18	29.0	213 26.1 N18	27.0	Gacrux	172 30.8 S56	59.2					
	E 13	2 06.2	342 31.6 14	59.8	37 35.5	19.0	308 40.9	29.1	228 28.7	27.1	Gienah	176 20.1 S17	25.1					
	S 14	17 08.7	357 33.6 15	00.4	52 36.1	18.4	323 43.0	29.2	243 31.3	27.1	Hadar	149 26.2 S60	15.7					
	15	32 11.2	12 35.7	01.0	67 36.6	17.7	338 45.1	29.3	258 33.9	27.2	Hamal	328 31.8 N23	21.3					
	16	47 13.6	27 37.7	01.6	82 37.2	17.1	353 47.2	29.4	273 36.5	27.2	Kaus Aust.	84 20.1 S34	23.6					
	17	62 16.1	42 39.7	02.1	97 37.7	16.5	8 49.2	29.5	288 39.1	27.2								
	18	77 18.6	57 41.7 N15	02.7	112 38.3 S15	15.9	23 51.3 N18	29.6	303 41.7 N18	27.3	Kochab	137 18.3 N74	14.7					
	19	92 21.0	72 43.8	03.2	127 38.8	15.3	38 53.4	29.7	318 44.3	27.3	Markab	14 05.8 N15	04.9					
	20	107 23.5	87 45.8	03.8	142 39.4	14.6	53 55.5	29.8	333 46.9	27.4	Menkar	314 43.8 N 3	59.9					
	21	122 26.0	102 47.9	04.4	157 39.9	14.0	68 57.5	29.9	348 49.5	27.4	Menkent	148 39.5 S36	15.5					
	22	137 28.4	117 49.9	04.9	172 40.5	13.4	83 59.6	30.0	3 52.1	27.4	Miaplacidus	221 44.6 S69	37.7					
23	152 30.9	132 51.9	05.5	187 41.0	12.8	99 01.7	30.1	18 54.7	27.5									
10	00	167 33.3	147 54.0 N15	06.0	202 41.6 S15	12.1	114 03.7 N18	30.2	33 57.3 N18	27.5	Mirfak	309 19.7 N49	46.9					
	01	182 35.8	162 56.0	06.6	217 42.1	11.5	129 05.8	30.3	48 59.9	27.5	Nunki	76 32.3 S26	19.4					
	02	197 38.3	177 58.1	07.1	232 42.7	10.9	144 07.9	30.4	64 02.5	27.6	Peacock	54 02.6 S56	48.3					
	03	212 40.7	193 00.2	07.7	247 43.2	10.3	159 10.0	30.5	79 05.1	27.6	Pollux	244 00.8 N28	04.8					
	04	227 43.2	208 02.2	08.2	262 43.8	09.7	174 12.0	30.6	94 07.7	27.7	Procyon	245 28.1 N 5	16.8					
	05	242 45.7	223 04.3	08.8	277 44.3	09.0	189 14.1	30.7	109 10.3	27.7								
	06	257 48.1	238 06.4 N15	09.3	292 44.9 S15	08.4	204 16.2 N18	30.8	124 12.9 N18	27.7	Rasalhague	96 31.8 N12	34.5					
	07	272 50.6	253 08.4	09.9	307 45.5	07.8	219 18.2	30.9	139 15.5	27.8	Regulus	208 12.2 N12	04.5					
	08	287 53.1	268 10.5	10.4	322 46.0	07.2	234 20.3	31.0	154 18.1	27.8	Rigel	281 38.3 S 8	13.9					
	J 09	302 55.5	283 12.6	11.0	337 46.6	06.5	249 22.4	31.1	169 20.7	27.9	Rigil Kent.	140 28.6 S60	44.3					
	U 10	317 58.0	298 14.7	11.5	352 47.1	05.9	264 24.4	31.2	184 23.3	27.9	Sabik	102 43.8 S15	41.8					
	E 11	333 00.5	313 16.8	12.0	7 47.7	05.3	279 26.5	31.3	199 25.9	27.9								
	V 12	348 02.9	328 18.9 N15	12.6	22 48.2 S15	04.6	294 28.6 N18	31.4	214 28.5 N18	28.0	Schedar	350 12.2 N56	24.8					
	E 13	3 05.4	343 21.0	13.1	37 48.8	04.0	309 30.7	31.5	229 31.1	28.0	Shaula	96 59.0 S37	05.1					
	S 14	18 07.8	358 23.1	13.6	52 49.3	03.4	324 32.7	31.6	244 33.7	28.0	Sirius	258 57.7 S16	41.4					
	15	33 10.3	13 25.2	14.2	67 49.9	02.8	339 34.8	31.7	259 36.3	28.1	Spica	158 59.8 S11	02.7					
	16	48 12.8	28 27.3	14.7	82 50.4	02.1	354 36.9	31.8	274 38.9	28.1	Suhail	223 12.1 S43	20.7					
	17	63 15.2	43 29.4	15.2	97 51.0	01.5	9 38.9	31.9	289 41.5	28.2								
	18	78 17.7	58 31.5 N15	15.7	112 51.5 S15	00.9	24 41.0 N18	32.0	304 44.1 N18	28.2	Vega	80 57.6 N38	45.5					
	19	93 20.2	73 33.6	16.3	127 52.1	15 00.3	39 43.1	32.1	319 46.7	28.2	Zuben'ubi	137 35.5 S15	56.9					
	20	108 22.6	88 35.7	16.8	142 52.6	14 59.6	54 45.1	32.2	334 49.3	28.3								
	21	123 25.1	103 37.8	17.3	157 53.2	59.0	69 47.2	32.3	349 51.9	28.3								
	22	138 27.6	118 40.0	17.8	172 53.7	58.4	84 49.3	32.4	4 54.5	28.3	Venus	340 31.5 14	10					
23	153 30.0	133 42.1	18.3	187 54.3	57.7	99 51.3	32.5	19 57.1	28.4	Marte	35 54.2 10	30						
																Júpiter	306 39.7 16	25
																Saturno	226 20.6 21	45
Pas. Mer. 12 51.6																A. H. S. Pas. Mer.		
v 2.0 d 0.6																o h m		
v 0.5 d 0.6																o h m		
v 2.1 d 0.1																o h m		
v 2.6 d 0.0																o h m		

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		8	9	10	11	
															h
8 00	177 15.9 S	5 00.9	329 36.0	8.6 S	7 30.5	10.7 59.8	N 72	04 29	05 49	06 56	23 30	25 40	01 40	04 16	
01	192 16.0	5 00.0	344 03.6	8.6	7 41.2	10.7 59.8	N 70	04 39	05 50	06 51	23 09	25 03	01 03	02 54	
02	207 16.2	4 59.0	358 31.2	8.5	7 51.9	10.7 59.8	68	04 46	05 51	06 47	22 53	24 38	00 38	02 16	
03	222 16.4	4 58.0	12 58.7	8.5	8 02.6	10.6 59.8	66	04 53	05 52	06 43	22 40	24 18	00 18	01 49	
04	237 16.5	4 57.0	27 26.2	8.5	8 13.2	10.6 59.8	64	04 58	05 53	06 40	22 29	24 02	00 02	01 29	
05	252 16.7	4 56.1	41 53.7	8.4	8 23.8	10.5 59.8	62	05 02	05 54	06 38	22 20	23 49	25 12	01 12	
06	267 16.8 S	4 55.1	56 21.1	8.4 S	8 34.3	10.5 59.8	60	05 06	05 54	06 35	22 12	23 38	24 58	00 58	
07	282 17.0	54.1	70 48.5	8.3	8 44.8	10.4 59.8	N 58	05 09	05 54	06 33	22 05	23 29	24 46	00 46	
08	297 17.1	53.1	85 15.8	8.4	8 55.2	10.3 59.8	56	05 11	05 55	06 32	21 59	23 20	24 36	00 36	
M 09	312 17.3	52.2	99 43.2	8.2	9 05.5	10.3 59.8	54	05 14	05 55	06 30	21 54	23 13	24 27	00 27	
A 10	327 17.4	51.2	114 10.4	8.3	9 15.8	10.3 59.8	52	05 16	05 55	06 28	21 49	23 06	24 19	00 19	
R 11	342 17.6	50.2	128 37.7	8.2	9 26.1	10.2 59.8	50	05 17	05 55	06 27	21 45	23 00	24 12	00 12	
T 12	357 17.7 S	4 49.2	143 04.9	8.2 S	9 36.3	10.1 59.8	45	05 21	05 55	06 24	21 35	22 47	23 56	25 01	
E 13	12 17.9	48.3	157 32.1	8.1	9 46.4	10.1 59.8	N 40	05 23	05 54	06 21	21 27	22 37	23 44	24 47	
S 14	27 18.1	47.3	171 59.2	8.1	9 56.5	10.0 59.8	35	05 25	05 54	06 19	21 21	22 28	23 33	24 35	
15	42 18.2	46.3	186 26.3	8.1	10 06.5	9.9 59.8	30	05 26	05 53	06 17	21 15	22 20	23 24	24 25	
16	57 18.4	45.3	200 53.4	8.0	10 16.4	9.9 59.8	20	05 26	05 52	06 14	21 05	22 06	23 08	24 08	
17	72 18.5	44.4	215 20.4	8.0	10 26.3	9.8 59.8	N 10	05 25	05 49	06 10	20 56	21 54	22 54	23 53	
18	87 18.7 S	4 43.4	229 47.4	7.9 S10	10 36.1	9.8 59.8	0	05 22	05 47	06 07	20 48	21 43	22 41	23 38	
19	102 18.8	42.4	244 14.3	7.9	10 45.9	9.6 59.8	S 10	05 18	05 43	06 04	20 39	21 33	22 28	23 24	
20	117 19.0	41.4	258 41.2	7.9	10 55.5	9.6 59.8	20	05 13	05 38	06 00	20 31	21 21	22 14	23 09	
21	132 19.1	40.5	273 08.1	7.9	11 05.1	9.6 59.8	30	05 04	05 32	05 56	20 21	21 08	21 58	22 52	
22	147 19.3	39.5	287 35.0	7.8	11 14.7	9.5 59.8	35	04 58	05 28	05 54	20 15	21 00	21 49	22 42	
23	162 19.5	38.5	302 01.8	7.7	11 24.2	9.3 59.8	40	04 51	05 24	05 51	20 09	20 52	21 39	22 31	
9 00	177 19.6 S	4 37.5	316 28.5	7.7 S11	11 33.5	9.4 59.8	45	04 43	05 18	05 48	20 02	20 42	21 26	22 17	
01	192 19.8	36.6	330 55.2	7.7	11 42.9	9.2 59.8	S 50	04 31	05 11	05 44	19 53	20 29	21 12	22 01	
02	207 19.9	35.6	345 21.9	7.7	11 52.1	9.2 59.8	52	04 26	05 08	05 42	19 49	20 24	21 05	21 53	
03	222 20.1	34.6	359 48.6	7.6	12 01.3	9.1 59.8	54	04 20	05 04	05 40	19 44	20 18	20 57	21 45	
04	237 20.2	33.6	14 15.2	7.6	12 10.4	9.0 59.8	56	04 13	05 00	05 38	19 40	20 11	20 49	21 35	
05	252 20.4	32.7	28 41.8	7.5	12 19.4	8.9 59.8	58	04 05	04 55	05 35	19 34	20 03	20 39	21 24	
06	267 20.6 S	4 31.7	43 08.3	7.5 S12	12 28.3	8.9 59.8	S 60	03 56	04 49	05 32	19 28	19 55	20 28	21 12	
07	282 20.7	30.7	57 34.8	7.5	12 37.2	8.8 59.8	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna	8	9	10	11
M 08	297 20.9	29.7	72 01.3	7.5	12 46.0	8.6 59.8	N 72	h m	h m	h m	h m	h m	h m	h m	h m
A 09	312 21.0	28.7	86 27.8	7.4	12 54.6	8.6 59.8	N 70	17 28	18 35	19 56	06 22	06 13	06 00	05 25	
R 10	327 21.2	27.8	100 54.2	7.3	13 03.2	8.6 59.8	68	17 32	18 33	19 46	06 35	06 35	06 38	06 47	
T 11	342 21.4	26.8	115 20.5	7.4	13 11.8	8.4 59.8	66	17 36	18 32	19 37	06 45	06 53	07 05	07 26	
E 12	357 21.5 S	4 25.8	129 46.9	7.3 S13	13 20.2	8.4 59.8	64	17 40	18 31	19 31	06 54	07 07	07 25	07 53	
S 13	12 21.7	24.8	144 13.2	7.2	13 28.6	8.2 59.8	62	17 42	18 30	19 25	07 02	07 19	07 42	08 14	
14	27 21.8	23.9	158 39.4	7.2	13 36.8	8.2 59.8	60	17 45	18 29	19 21	07 08	07 29	07 56	08 31	
15	42 22.0	22.9	173 05.6	7.2	13 45.0	8.1 59.8	N 58	17 47	18 29	19 17	07 14	07 38	08 07	08 45	
16	57 22.2	21.9	187 31.8	7.2	13 53.1	7.9 59.8	56	17 49	18 28	19 14	07 19	07 45	08 17	08 58	
17	72 22.3	20.9	201 58.0	7.1	14 01.0	7.9 59.8	54	17 51	18 28	19 11	07 23	07 52	08 26	09 08	
18	87 22.5 S	4 19.9	216 24.1	7.1 S14	14 08.9	7.8 59.8	52	17 52	18 28	19 09	07 27	07 58	08 34	09 17	
19	102 22.6	19.0	230 50.2	7.1	14 16.7	7.8 59.8	50	17 54	18 27	19 07	07 31	08 03	08 41	09 26	
20	117 22.8	18.0	245 16.3	7.0	14 24.5	7.6 59.8	45	17 55	18 27	19 05	07 34	08 08	08 48	09 33	
21	132 23.0	17.0	259 42.3	7.0	14 32.1	7.5 59.8	N 40	17 58	18 27	19 01	07 41	08 19	09 01	09 49	
22	147 23.1	16.0	274 08.3	7.0	14 39.6	7.4 59.8	35	18 00	18 27	18 59	07 48	08 28	09 13	10 02	
23	162 23.3	15.1	288 34.3	6.9	14 47.0	7.3 59.8	30	18 02	18 28	18 57	07 53	08 36	09 22	10 13	
10 00	177 23.4 S	4 14.1	303 00.2	6.9 S14	14 54.3	7.3 59.8	20	18 04	18 28	18 56	07 57	08 42	09 31	10 23	
01	192 23.6	13.1	317 26.1	6.9	15 01.6	7.1 59.7	N 10	18 08	18 30	18 55	08 05	08 54	09 46	10 40	
02	207 23.8	12.1	331 52.0	6.9	15 08.7	7.0 59.7	0	18 11	18 32	18 56	08 12	09 04	09 58	10 54	
03	222 23.9	11.1	346 17.9	6.8	15 15.7	6.9 59.7	S 10	18 14	18 35	18 59	08 19	09 14	10 11	11 08	
04	237 24.1	10.2	0 43.7	6.8	15 22.6	6.8 59.7	20	18 17	18 38	19 03	08 26	09 24	10 23	11 22	
05	252 24.2	09.2	15 09.5	6.7	15 29.4	6.8 59.7	30	18 20	18 42	19 08	08 33	09 34	10 36	11 36	
06	267 24.4 S	4 08.2	29 35.2	6.8 S15	15 36.2	6.6 59.7	40	18 24	18 48	19 17	08 41	09 46	10 50	11 53	
07	282 24.6	07.2	44 01.0	6.7	15 42.8	6.5 59.7	50	18 27	18 52	19 22	08 45	09 53	10 59	12 03	
08	297 24.7	06.2	58 26.7	6.7	15 49.3	6.4 59.7	60	18 29	18 57	19 29	08 51	10 00	11 09	12 14	
M 09	312 24.9	05.3	72 52.4	6.6	15 55.7	6.3 59.7	45	18 33	19 02	19 37	08 57	10 10	11 20	12 27	
A 10	327 25.0	04.3	87 18.0	6.6	16 02.0	6.2 59.7	S 50	18 36	19 09	19 48	09 04	10 21	11 34	12 43	
R 11	342 25.2	03.3	101 43.6	6.6	16 08.2	6.0 59.7	52	18 38	19 12	19 54	09 08	10 26	11 41	12 51	
E 12	357 25.4 S	4 02.3	116 09.2	6.6 S16	16 14.2	6.0 59.7	54	18 40	19 16	20 00	09 12	10 31	11 48	12 59	
S 13	12 25.5	01.3	130 34.8	6.6	16 20.2	5.9 59.6	56	18 42	19 20	20 06	09 16	10 38	11 56	13 09	
14	27 25.7	00.4	145 00.4	6.5	16 26.1	5.7 59.6	58	18 45	19 25	20 14	09 20	10 45	12 05	13 19	
15	42 25.9	3 59.4	159 25.9	6.6	16 31.8	5.7 59.6	S 60	18 47	19 30	20 23	09 26	10 53	12 16	13 31	
16	57 26.0	58.4	173 51.5	6.4	16 37.5	5.5 59.6	Día	SOL E.T. (-)		LUNA					
17	72 26.2	57.4	188 16.9	6.5	16 43.0	5.4 59.6	8	00 ^h	12 ^h	Pas. Mer.	Pas. Mer. Sup.	Mer. Inf.	Edad.	Fase	
18	87 26.3 S	3 56.4	202 42.4	6.5 S16	16 48.4	5.3 59.6	9	m s	m s	h m	h m	h m	d		
19	102 26.5	55.5	217 07.9	6.4	16 53.7	5.2 59.6	10	10 57	10 49	12 11	02 06	14 33	18		
20	117 26.7	54.5	231 33.3	6.4	16 58.9	5.1 59.6	8	10 42	10 34	12 11	03 01	15 29	19	☾	

T. M. G.	ARIES			VENUS -4.2			MARTE +1.4			JUPITER -1.8			SATURNO +0.2			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.				
11 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	168 32.5	148 44.2	N15 18.9	202 54.9	S14 57.1		114 53.4	N18 32.6		34 59.7	N18 28.4		Acamar	315 39.3	S40 24.0				
	183 35.0	163 46.4	19.4	217 55.4	56.5		129 55.5	32.7		50 02.3	28.5		Achernar	335 47.6	S57 21.4				
	198 37.4	178 48.5	19.9	232 56.0	55.9		144 57.5	32.8		65 04.9	28.5		Acrux	173 39.1	S62 58.4				
	213 39.9	193 50.6	20.4	247 56.5	55.2		159 59.6	32.9		80 07.5	28.5		Adhara	255 33.8	S28 56.8				
	228 42.3	208 52.8	20.9	262 57.1	54.6		175 01.7	33.0		95 10.1	28.6		Aldebaran	291 20.8	N16 27.7				
	243 44.8	223 54.9	21.4	277 57.6	54.0		190 03.7	33.1		110 12.7	28.6								
	258 47.3	238 57.1	N15 21.9	292 58.2	S14 53.3		205 05.8	N18 33.2		125 15.3	N18 28.6		Alioth	166 44.1	N56 04.8				
	273 49.7	253 59.2	22.4	307 58.7	52.7		220 07.9	33.3		140 17.9	28.7		Alkaid	153 20.0	N49 25.4				
	288 52.2	269 01.4	22.9	322 59.3	52.1		235 09.9	33.4		155 20.5	28.7		Al Na'ir	28 18.4	S47 04.2				
	303 54.7	284 03.6	23.4	337 59.9	51.4		250 12.0	33.5		170 23.1	28.7		Alnilam	276 14.0	S 1 13.2				
	318 57.1	299 05.7	23.9	353 00.4	50.8		265 14.1	33.6		185 25.7	28.8		Alphard	218 22.6	S 8 33.8				
	333 59.6	314 07.9	24.4	8 01.0	50.2		280 16.1	33.7		200 28.3	28.8								
	349 02.1	329 10.1	N15 24.9	23 01.5	S14 49.5		295 18.2	N18 33.8		215 30.9	N18 28.9		Alphecca	126 34.0	N26 47.3				
	4 04.5	344 12.3	25.4	38 02.1	48.9		310 20.2	33.9		230 33.5	28.9		Alpheratz	358 12.1	N28 57.8				
	19 07.0	359 14.4	25.9	53 02.6	48.3		325 22.3	34.0		245 36.1	28.9		Altair	62 35.0	N 8 48.4				
	34 09.5	14 16.6	26.4	68 03.2	47.7		340 24.4	34.1		260 38.7	29.0		Ankaa	353 43.0	S42 25.9				
	49 11.9	29 18.8	26.9	83 03.8	47.0		355 26.4	34.2		275 41.3	29.0		Antares	112 59.7	S26 22.8				
	64 14.4	44 21.0	27.4	98 04.3	46.4		10 28.5	34.3		290 43.8	29.0								
	79 16.8	59 23.2	N15 27.8	113 04.9	S14 45.8		25 30.6	N18 34.4		305 46.4	N18 29.1		Arcturus	146 20.4	N19 17.9				
	94 19.3	74 25.4	28.3	128 05.4	45.1		40 32.6	34.5		320 49.0	29.1		Atria	108 25.9	S68 58.9				
	109 21.8	89 27.6	28.8	143 06.0	44.5		55 34.7	34.6		335 51.6	29.1		Avior	234 28.7	S59 26.5				
	124 24.2	104 29.8	29.3	158 06.5	43.8		70 36.7	34.7		350 54.2	29.2		Bellatrix	279 01.3	N 6 19.6				
	139 26.7	119 32.0	29.8	173 07.1	43.2		85 38.8	34.8		5 56.8	29.2		Betelgeuse	271 30.8	N 7 24.0				
154 29.2	134 34.2	30.2	188 07.7	42.6		100 40.9	34.9		20 59.4	29.3									
12 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	169 31.6	149 36.5	N15 30.7	203 08.2	S14 41.9		115 42.9	N18 35.0		36 02.0	N18 29.3		Canopus	264 08.1	S52 41.4				
	184 34.1	164 38.7	31.2	218 08.8	41.3		130 45.0	35.1		51 04.6	29.3		Capella	281 14.8	N45 58.6				
	199 36.6	179 40.9	31.7	233 09.3	40.7		145 47.1	35.2		66 07.2	29.4		Deneb	49 50.4	N45 11.8				
	214 39.0	194 43.1	32.1	248 09.9	40.0		160 49.1	35.3		81 09.8	29.4		Denebola	183 01.1	N14 41.8				
	229 41.5	209 45.4	32.6	263 10.5	39.4		175 51.2	35.4		96 12.4	29.4		Diphda	349 23.6	S18 06.8				
	244 43.9	224 47.6	33.1	278 11.0	38.8		190 53.2	35.5		111 15.0	29.5								
	259 46.4	239 49.8	N15 33.5	293 11.6	S14 38.1		205 55.3	N18 35.6		126 17.6	N18 29.5		Dubhe	194 24.4	N61 52.3				
	274 48.9	254 52.1	34.0	308 12.1	37.5		220 57.4	35.7		141 20.2	29.5		Elnath	278 47.1	N28 35.3				
	289 51.3	269 54.3	34.4	323 12.7	36.9		235 59.4	35.8		156 22.8	29.6		Eltanin	90 58.9	N51 29.3				
	304 53.8	284 56.6	34.9	338 13.3	36.2		251 01.5	35.9		171 25.4	29.6		Enif	34 14.2	N 9 46.2				
	319 56.3	299 58.8	35.4	353 13.8	35.6		266 03.5	36.0		186 28.0	29.7		Fomalhaut	15 54.4	S29 44.6				
	334 58.7	315 01.1	35.8	8 14.4	34.9		281 05.6	36.1		201 30.5	29.7								
	350 01.2	330 03.3	N15 36.3	23 14.9	S14 34.3		296 07.6	N18 36.2		216 33.1	N18 29.7		Gacrux	172 30.7	S56 59.2				
	5 03.7	345 05.6	36.7	38 15.5	33.7		311 09.7	36.3		231 35.7	29.8		Gienah	176 20.1	S17 25.1				
	20 06.1	0 07.9	37.2	53 16.1	33.0		326 11.8	36.4		246 38.3	29.8		Hadar	149 26.1	S60 15.7				
	35 08.6	15 10.1	37.6	68 16.6	32.4		341 13.8	36.5		261 40.9	29.8		Hamal	328 31.8	N23 21.3				
	50 11.1	30 12.4	38.1	83 17.2	31.7		356 15.9	36.6		276 43.5	29.9		Kaus Aust.	84 20.1	S34 23.6				
	65 13.5	45 14.7	38.5	98 17.7	31.1		11 17.9	36.7		291 46.1	29.9								
	80 16.0	60 17.0	N15 38.9	113 18.3	S14 30.5		26 20.0	N18 36.8		306 48.7	N18 29.9		Kochab	137 18.3	N74 14.7				
	95 18.4	75 19.3	39.4	128 18.9	29.8		41 22.0	36.9		321 51.3	30.0		Markab	14 05.8	N15 04.9				
	110 20.9	90 21.5	39.8	143 19.4	29.2		56 24.1	37.0		336 53.9	30.0		Menkar	314 43.8	N 3 59.9				
	125 23.4	105 23.8	40.3	158 20.0	28.5		71 26.2	37.1		351 56.5	30.0		Menkent	148 39.5	S36 15.5				
	140 25.8	120 26.1	40.7	173 20.6	27.9		86 28.2	37.2		6 59.1	30.1		Miaplacidus	221 44.6	S69 37.7				
155 28.3	135 28.4	41.1	188 21.1	27.3		101 30.3	37.3		22 01.6	30.1									
13 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	170 30.8	150 30.7	N15 41.6	203 21.7	S14 26.6		116 32.3	N18 37.4		37 04.2	N18 30.1		Mirfak	309 19.7	N49 46.9				
	185 33.2	165 33.0	42.0	218 22.2	26.0		131 34.4	37.5		52 06.8	30.2		Nunki	76 32.2	S26 19.4				
	200 35.7	180 35.4	42.4	233 22.8	25.3		146 36.4	37.6		67 09.4	30.2		Peacock	54 02.6	S56 48.3				
	215 38.2	195 37.7	42.8	248 23.4	24.7		161 38.5	37.7		82 12.0	30.3		Pollux	244 00.9	N28 04.8				
	230 40.6	210 40.0	43.3	263 23.9	24.1		176 40.6	37.8		97 14.6	30.3		Procyon	245 28.1	N 5 16.8				
	245 43.1	225 42.3	43.7	278 24.5	23.4		191 42.6	37.9		112 17.2	30.3								
	260 45.6	240 44.6	N15 44.1	293 25.1	S14 22.8		206 44.7	N18 38.0		127 19.8	N18 30.4		Rasalhague	96 31.8	N12 34.5				
	275 48.0	255 47.0	44.5	308 25.6	22.1		221 46.7	38.2		142 22.4	30.4		Regulus	208 12.2	N12 04.5				
	290 50.5	270 49.3	44.9	323 26.2	21.5		236 48.8	38.3		157 25.0	30.4		Rigel	281 38.3	S 8 13.9				
	305 52.9	285 51.6	45.3	338 26.7	20.8		251 50.8	38.4		172 27.5	30.5		Rigel Kent.	140 28.5	S60 44.3				
	320 55.4	300 54.0	45.8	353 27.3	20.2		266 52.9	38.5		187 30.1	30.5		Sabik	102 43.8	S15 41.8				
	335 57.9	315 56.3	46.2	8 27.9	19.6		281 54.9	38.6		202 32.7	30.5								
	351 00.3	330 58.7	N15 46.6	23 28.4	S14 18.9		296 57.0	N18 38.7		217 35.3	N18 30.6		Schedar	350 12.2	N56 24.8				
	6 02.8	346 01.0	47.0	38 29.0	18.3		311 59.0	38.8		232 37.9	30.6		Shaula	96 59.0	S37 05.1				
	21 05.3	1 03.4	47.4	53 29.6	17.6		327 01.1	38.9		247 40.5	30.6		Sirius	258 57.7	S16 41.4				
	36 07.7	16 05.7	47.8	68 30.1	17.0		342 03.1	39.0		262 43.1	30.7		Spica	158 59.7	S11 02.7				
	51 10.2	31 08.1	48.2																

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	11	12	13	14
												h m	h m	h m	h m
11 V I E R N E S	177 27.3 S 3	50.6	289 14.9	6.4	S17 18.5	4.7	59.5	N 72	04 12	05 33	06 40	04 16	■	■	06 42
	192 27.5	49.6	303 40.3	6.3	17 23.2	4.5	59.5	N 70	04 24	05 37	06 37	02 54	04 29	05 22	05 40
	207 27.7	48.6	318 05.6	6.3	17 27.7	4.4	59.5	68	04 33	05 39	06 34	02 16	03 38	04 34	05 05
	222 27.8	47.6	332 30.9	6.3	17 32.1	4.2	59.5	66	04 41	05 41	06 32	01 49	03 06	04 03	04 40
	237 28.0	46.6	346 56.2	6.3	17 36.3	4.2	59.5	64	04 47	05 43	06 30	01 29	02 42	03 39	04 20
	252 28.2	45.7	1 21.5	6.3	17 40.5	4.0	59.5	62	04 52	05 44	06 28	01 12	02 24	03 21	04 04
	267 28.3 S 3	44.7	15 46.8	6.3	S17 44.5	3.9	59.5	60	04 57	05 45	06 26	00 58	02 08	03 06	03 50
	282 28.5	43.7	30 12.1	6.3	17 48.4	3.8	59.4	N 58	05 00	05 46	06 25	00 46	01 55	02 53	03 39
	297 28.6	42.7	44 37.4	6.3	17 52.2	3.7	59.4	56	05 04	05 47	06 24	00 36	01 44	02 42	03 28
	312 28.8	41.7	59 02.7	6.2	17 55.9	3.5	59.4	54	05 06	05 47	06 23	00 27	01 34	02 32	03 20
	327 29.0	40.8	73 27.9	6.3	17 59.4	3.5	59.4	52	05 09	05 48	06 22	00 19	01 25	02 23	03 12
	342 29.1	39.8	87 53.2	6.2	18 02.9	3.3	59.4	50	05 11	05 49	06 21	00 12	01 17	02 15	03 04
	357 29.3 S 3	38.8	102 18.4	6.3	S18 06.2	3.2	59.4	45	05 15	05 49	06 19	25 01	01 01	01 58	02 49
	12 29.5	37.8	116 43.7	6.2	18 09.4	3.1	59.4	N 40	05 18	05 50	06 17	24 47	00 47	01 45	02 36
	27 29.6	36.8	131 08.9	6.2	18 12.5	2.9	59.3	35	05 21	05 50	06 15	24 35	00 35	01 33	02 25
	42 29.8	35.8	145 34.1	6.3	18 15.4	2.8	59.3	30	05 22	05 50	06 14	24 25	00 25	01 23	02 16
	57 30.0	34.9	159 59.4	6.2	18 18.2	2.8	59.3	20	05 24	05 49	06 11	24 08	00 08	01 05	02 00
	72 30.1	33.9	174 24.6	6.3	18 21.0	2.5	59.3	N 10	05 23	05 48	06 09	23 53	24 50	00 50	01 45
	87 30.3 S 3	32.9	188 49.9	6.2	S18 23.5	2.5	59.3	0	05 22	05 46	06 07	23 38	24 36	00 36	01 32
	102 30.5	31.9	203 15.1	6.2	18 26.0	2.3	59.3	S 10	05 19	05 43	06 04	23 24	24 22	00 22	01 19
	117 30.6	30.9	217 40.3	6.3	18 28.3	2.3	59.3	20	05 14	05 39	06 01	23 09	24 06	00 06	01 04
	132 30.8	29.9	232 05.6	6.2	18 30.6	2.1	59.2	30	05 06	05 34	05 58	22 52	23 49	24 48	00 48
	147 31.0	29.0	246 30.8	6.3	18 32.7	1.9	59.2	35	05 01	05 31	05 56	22 42	23 39	24 39	00 39
162 31.1	28.0	260 56.1	6.2	18 34.6	1.9	59.2	40	04 55	05 27	05 54	22 31	23 27	24 28	00 28	
12 S A B A D O	177 31.3 S 3	27.0	275 21.3	6.3	S18 36.5	1.7	59.2	45	04 47	05 22	05 52	22 17	23 14	24 15	00 15
	192 31.5	26.0	289 46.6	6.3	18 38.2	1.6	59.2	S 50	04 37	05 16	05 49	22 01	22 57	23 59	25 06
	207 31.6	25.0	304 11.9	6.2	18 39.8	1.5	59.2	52	04 32	05 13	05 47	21 53	22 49	23 52	25 00
	222 31.8	24.1	318 37.1	6.3	18 41.3	1.4	59.1	54	04 27	05 10	05 46	21 45	22 41	23 44	24 53
	237 32.0	23.1	333 02.4	6.3	18 42.7	1.2	59.1	56	04 20	05 06	05 44	21 35	22 31	23 35	24 45
	252 32.1	22.1	347 27.7	6.3	18 43.9	1.1	59.1	58	04 13	05 02	05 42	21 24	22 20	23 25	24 36
	267 32.3 S 3	21.1	1 53.0	6.4	S18 45.0	1.0	59.1	S 60	04 05	04 57	05 40	21 12	22 07	23 13	24 26
	282 32.5	20.1	16 18.4	6.3	18 46.0	0.9	59.1	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna				
	297 32.6	19.1	30 43.7	6.4	18 46.9	0.7	59.1	N 72	17 42	18 49	19 11	05 25	■	■	08 57
	312 32.8	18.2	45 09.1	6.3	18 47.6	0.7	59.1	N 70	17 45	18 45	19 59	06 47	07 14	08 21	09 58
	327 33.0	17.2	59 34.4	6.4	18 48.3	0.5	59.0	68	17 47	18 43	19 49	07 26	08 05	09 08	10 33
	342 33.1	16.2	73 59.8	6.4	18 48.8	0.3	59.0	66	17 50	18 41	19 41	07 53	08 37	09 39	10 58
	357 33.3 S 3	15.2	88 25.2	6.4	S18 49.1	0.3	59.0	64	17 51	18 39	19 35	08 14	09 00	10 02	11 17
	12 33.5	14.2	102 50.6	6.5	18 49.4	0.1	59.0	62	17 53	18 37	19 29	08 31	09 19	10 20	11 33
	27 33.6	13.2	117 16.1	6.4	18 49.5	0.1	59.0	60	17 54	18 36	19 25	08 45	09 35	10 35	11 46
	42 33.8	12.3	131 41.5	6.5	18 49.6	0.2	59.0	N 58	17 56	18 35	19 21	08 58	09 48	10 48	11 57
	57 34.0	11.3	146 07.0	6.5	18 49.4	0.2	58.9	56	17 57	18 34	19 17	09 08	09 59	10 59	12 07
	72 34.2	10.3	160 32.5	6.6	18 49.2	0.3	58.9	54	17 58	18 33	19 14	09 17	10 09	11 09	12 16
	87 34.3 S 3	09.3	174 58.1	6.5	S18 48.9	0.5	58.9	52	17 59	18 33	19 12	09 26	10 18	11 18	12 23
	102 34.5	08.3	189 23.6	6.6	18 48.4	0.6	58.9	50	18 00	18 32	19 10	09 33	10 26	11 25	12 30
	117 34.7	07.3	203 49.2	6.6	18 47.8	0.7	58.9	45	18 02	18 31	19 05	09 49	10 43	11 42	12 45
	132 34.8	06.3	218 14.8	6.6	18 47.1	0.8	58.8	N 40	18 03	18 30	19 02	10 02	10 57	11 55	12 57
	147 35.0	05.4	232 40.4	6.7	18 46.3	1.0	58.8	35	18 05	18 30	19 00	10 13	11 08	12 07	13 08
162 35.2	04.4	247 06.1	6.7	18 45.3	1.1	58.8	30	18 06	18 30	18 58	10 23	11 19	12 17	13 17	
13 D O M I N G O	177 35.3 S 3	C3.4	261 31.8	6.7	S18 44.2	1.1	58.8	20	18 09	18 31	18 56	10 40	11 36	12 34	13 32
	192 35.5	C2.4	275 57.5	6.7	18 43.1	1.3	58.8	N 10	18 11	18 32	18 56	10 54	11 52	12 49	13 46
	207 35.7	C1.4	290 23.2	6.8	18 41.8	1.5	58.8	0	18 13	18 34	18 58	11 08	12 06	13 03	13 58
	222 35.8	3 C0.4	304 49.0	6.8	18 40.3	1.5	58.7	S 10	18 15	18 36	19 01	11 22	12 20	13 17	14 11
	237 36.0	2 59.5	319 14.8	6.9	18 38.8	1.7	58.7	20	18 18	18 40	19 06	11 36	12 36	13 32	14 24
	252 36.2	58.5	333 40.7	6.8	18 37.1	1.8	58.7	30	18 21	18 45	19 13	11 53	12 53	13 49	14 39
	267 36.4 S 2	57.5	348 06.5	7.0	S18 35.3	1.8	58.7	35	18 23	18 48	19 18	12 03	13 03	13 58	14 48
	282 36.5	56.5	2 32.5	6.9	18 33.5	2.1	58.7	40	18 25	18 52	19 24	12 14	13 15	14 10	14 58
	297 36.7	55.5	16 58.4	7.0	18 31.4	2.1	58.7	45	18 27	18 57	19 31	12 27	13 28	14 23	15 10
	312 36.9	54.5	31 24.4	7.0	18 29.3	2.2	58.6	S 50	18 30	19 02	19 41	12 43	13 45	14 39	15 24
	327 37.0	53.5	45 50.4	7.1	18 27.1	2.4	58.6	52	18 31	19 05	19 46	12 51	13 53	14 46	15 30
	342 37.2	52.6	60 16.5	7.1	18 24.7	2.4	58.6	54	18 33	19 08	19 51	12 59	14 02	14 54	15 38
	357 37.4 S 2	51.6	74 42.6	7.1	S18 22.3	2.6	58.6	56	18 34	19 12	19 58	13 09	14 12	15 04	15 46
	12 37.6	50.6	89 08.7	7.2	18 19.7	2.7	58.6	58	18 36	19 16	20 04	13 19	14 23	15 14	15 55
	27 37.7	49.6	103 34.9	7.2	18 17.0	2.8	58.5	S 60	18 38	19 21	20 13	13 31	14 36	15 26	16 05
	42 37.9	48.6	118 01.1	7.2	18 14.2	2.9	58.5	Día	SOL E.T. (-)	LUNA					
	57 38.1	47.6	132 27.3	7.3	18 11.3	3.1	58.5	00 ⁿ	12 ⁿ	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
	72 38.2	46.7	146 53.6	7.4	18 08.2	3.1	58.5	m s	m s	h m	h m	h m	d		
	87 38.4 S 2	45.7	161 20.0	7.4	S18 05.1	3.3	58.5	11	10 11	10 03	12 10	04 54	17 23	21	
	102 38.6	44.7	175 46.4	7.4	18 01.8	3.3	58.5	12	09 55	09 47	12 10	05 52	18 21	22	
	117 38.8	43.7	190 12.8	7.5	17 58.5	3.5	58.4	13	09 39	09 31	12 10	06 49	19 18	23	
	132 38.9	42.7	204 39.3	7.5	17 55.0	3.6	58.4								
	147 39.1	41.7	219 05.8	7.6	17 51.4	3.7	58.4								

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.	Dec.	v	Dec.	d	P.H.		Náut.	Civil		14	15	16	17						
											h m	h m	h m	h m	h m	h m				
14 LUNES	177	39.4	S 2	39.8	247	59.0	7.6	S17	44.0	3.9	58.4	N 72	03 54	05 18	06 25	06 42	06 20	06 09	06 01	
	192	39.6		38.8	262	25.6	7.7	17	40.1	4.0	58.3	N 70	04 08	05 23	06 23	05 40	05 47	05 49	05 49	
	207	39.8		37.8	276	52.3	7.8	17	36.1	4.2	58.3	68	04 19	05 26	06 22	05 05	05 22	05 32	05 38	
	222	40.0		36.8	291	19.1	7.8	17	31.9	4.2	58.3	66	04 28	05 29	06 20	04 40	05 03	05 19	05 30	
	237	40.1		35.8	305	45.9	7.8	17	27.7	4.3	58.3	64	04 36	05 32	06 19	04 20	04 48	05 08	05 23	
	252	40.3		34.8	320	12.7	7.9	17	23.4	4.4	58.3	62	04 42	05 34	06 18	04 04	04 35	04 58	05 16	
	267	40.5	S 2	33.8	334	39.6	8.0	S17	19.0	4.5	58.2	60	04 47	05 36	06 17	03 50	04 24	04 50	05 11	
	282	40.6		32.9	349	06.6	8.0	17	14.5	4.6	58.2	N 58	04 52	05 38	06 17	03 39	04 14	04 43	05 06	
	297	40.8		31.9	3	33.6	8.0	17	09.9	4.7	58.2	56	04 55	05 39	06 16	03 28	04 06	04 36	05 02	
	312	41.0		30.9	18	00.6	8.1	17	05.2	4.9	58.2	54	04 59	05 40	06 15	03 20	03 58	04 31	04 58	
	327	41.2		29.9	32	27.7	8.2	17	00.3	4.9	58.2	52	05 02	05 41	06 15	03 12	03 52	04 25	04 54	
	342	41.3		28.9	46	54.9	8.2	16	55.4	5.0	58.1	50	05 04	05 42	06 14	03 04	03 46	04 21	04 51	
	357	41.5	S 2	27.9	61	22.1	8.3	S16	50.4	5.1	58.1	45	05 10	05 44	06 13	02 49	03 33	04 10	04 44	
	12	12	41.7	26.9	75	49.4	8.3	16	45.3	5.2	58.1	N 40	05 14	05 45	06 12	02 36	03 22	04 02	04 38	
	14	27	41.9	26.0	90	16.7	8.3	16	40.1	5.3	58.1	35	05 16	05 46	06 11	02 25	03 12	03 55	04 33	
	15	42	42.0	25.0	104	44.0	8.5	16	34.8	5.4	58.1	30	05 19	05 46	06 10	02 16	03 04	03 48	04 29	
	16	57	42.2	24.0	119	11.5	8.4	16	29.4	5.5	58.1	20	05 21	05 47	06 09	02 00	02 50	03 37	04 21	
	17	72	42.4	23.0	133	38.9	8.6	16	23.9	5.6	58.0	N 10	05 22	05 46	06 07	01 45	02 38	03 27	04 14	
	18	87	42.6	S 2	22.0	148	06.5	8.5	S16	18.3	5.7	58.0	0	05 21	05 45	06 06	01 32	02 26	03 18	04 08
	19	102	42.7		21.0	162	34.0	8.7	16	12.6	5.7	58.0	S 10	05 19	05 43	06 04	01 19	02 15	03 09	04 01
	20	117	42.9		20.0	177	01.7	8.7	16	06.9	5.9	58.0	20	05 15	05 40	06 02	01 04	02 02	02 59	03 54
	21	132	43.1		19.0	191	29.4	8.7	16	01.0	5.9	58.0	30	05 08	05 36	06 00	00 48	01 48	02 48	03 46
	22	147	43.3		18.1	205	57.1	8.8	15	55.1	6.1	57.9	35	05 04	05 34	05 59	00 39	01 40	02 41	03 42
23	162	43.4		17.1	220	24.9	8.9	15	49.0	6.1	57.9	40	04 58	05 30	05 57	00 28	01 30	02 34	03 37	
15	177	43.6	S 2	16.1	234	52.8	8.9	S15	42.9	6.2	57.9	45	04 51	05 26	05 56	00 15	01 19	02 25	03 31	
01	192	43.8		15.1	249	20.7	8.9	15	36.7	6.3	57.9	S 50	04 42	05 21	05 53	25 06	01 06	02 15	03 24	
02	207	44.0		14.1	263	48.6	9.1	15	30.4	6.4	57.9	52	04 38	05 19	05 52	25 00	01 00	02 10	03 20	
03	222	44.1		13.1	278	16.7	9.0	15	24.0	6.4	57.8	54	04 33	05 16	05 51	24 53	00 53	02 04	03 17	
04	237	44.3		12.1	292	44.7	9.2	15	17.6	6.6	57.8	56	04 27	05 13	05 50	24 45	00 45	01 58	03 12	
05	252	44.5		11.1	307	12.9	9.2	15	11.0	6.6	57.8	58	04 21	05 09	05 49	24 36	00 36	01 52	03 08	
06	267	44.7	S 2	10.2	321	41.1	9.2	S15	04.4	6.7	57.8	S 60	04 14	05 05	05 47	24 26	00 26	01 44	03 03	
07	282	44.8		09.2	336	09.3	9.3	14	57.7	6.8	57.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	297	45.0		08.2	350	37.6	9.4	14	50.9	6.9	57.7		Sol	Civil	Náut.	14	15	16	17	
09	312	45.2		07.2	5	06.0	9.4	14	44.0	6.9	57.7									
10	327	45.4		06.2	19	34.4	9.5	14	37.1	7.1	57.7									
11	342	45.5		05.2	34	02.9	9.5	14	30.0	7.1	57.7									
12	357	45.7	S 2	04.2	48	31.4	9.6	S14	22.9	7.2	57.7	N 72	17 55	19 03	20 28	08 57	11 11	13 08	14 57	
13	12	45.9		03.3	63	00.0	9.7	14	15.7	7.2	57.6	N 70	17 57	18 58	20 13	09 58	11 43	13 27	15 08	
14	27	46.1		02.3	77	28.7	9.7	14	08.5	7.3	57.6	68	17 58	18 54	20 01	10 33	12 07	13 43	15 17	
15	42	46.2		01.3	91	57.4	9.7	14	01.2	7.4	57.6	66	17 59	18 50	19 52	10 58	12 25	13 55	15 24	
16	57	46.4		00.3	106	26.1	9.8	13	53.8	7.5	57.6	64	18 00	18 48	19 44	11 17	12 40	14 05	15 30	
17	72	46.6		1 59.3	120	54.9	9.9	13	46.3	7.6	57.6	62	18 01	18 45	19 38	11 33	12 52	14 14	15 35	
18	87	46.8	S 1	58.3	135	23.8	9.9	S13	38.7	7.6	57.5	60	18 02	18 43	19 33	11 46	13 02	14 21	15 40	
19	102	46.9		57.3	149	52.7	10.0	13	31.1	7.7	57.5	N 58	18 03	18 42	19 28	11 57	13 11	14 28	15 44	
20	117	47.1		56.3	164	21.7	10.1	13	23.4	7.7	57.5	56	18 03	18 40	19 24	12 07	13 19	14 33	15 48	
21	132	47.3		55.4	178	50.8	10.1	13	15.7	7.8	57.5	54	18 04	18 39	19 20	12 16	13 26	14 39	15 51	
22	147	47.5		54.4	193	19.9	10.1	13	07.9	7.9	57.5	52	18 04	18 38	19 17	12 23	13 33	14 43	15 54	
23	162	47.6		53.4	207	49.0	10.2	13	00.0	8.0	57.4	50	18 05	18 37	19 15	12 30	13 38	14 47	15 56	
16	177	47.8	S 1	52.4	222	18.2	10.3	S12	52.0	8.0	57.4	45	18 06	18 35	19 09	12 45	13 51	14 56	16 02	
01	192	48.0		51.4	236	47.5	10.3	12	44.0	8.1	57.4	N 40	18 07	18 34	19 05	12 57	14 01	15 04	16 07	
02	207	48.2		50.4	251	16.8	10.4	12	35.9	8.1	57.4	35	18 07	18 33	19 02	13 08	14 09	15 10	16 11	
03	222	48.4		49.4	265	46.2	10.4	12	27.8	8.2	57.4	30	18 08	18 32	19 00	13 17	14 17	15 16	16 14	
04	237	48.5		48.4	280	15.6	10.5	12	19.6	8.3	57.3	20	18 10	18 32	18 57	13 32	14 30	15 26	16 20	
05	252	48.7		47.5	294	45.1	10.6	12	11.3	8.3	57.3	N 10	18 11	18 32	18 56	13 46	14 41	15 34	16 26	
06	267	48.9	S 1	46.5	309	14.7	10.5	S12	03.0	8.4	57.3	0	18 12	18 33	18 57	13 58	14 51	15 42	16 31	
07	282	49.1		45.5	323	44.2	10.7	11	54.6	8.5	57.3	S 10	18 14	18 35	18 59	14 11	15 02	15 50	16 35	
08	297	49.2		44.5	338	13.9	10.7	11	46.1	8.5	57.3	20	18 15	18 37	19 03	14 24	15 13	15 58	16 41	
09	312	49.4		43.5	352	43.6	10.8	11	37.6	8.5	57.2	30	18 17	18 41	19 09	14 39	15 25	16 08	16 47	
10	327	49.6		42.5	7	13.4	10.8	11	29.1	8.7	57.2	35	18 18	18 44	19 13	14 48	15 33	16 13	16 50	
11	342	49.8		41.5	21	43.2	10.8	11	20.4	8.6	57.2	40	18 20	18 47	19 19	14 58	15 41	16 19	16 54	
12	357	50.0	S 1	40.5	36	13.0	10.9	S11	11.8	8.7	57.2	45	18 21	18 51	19 26	15 10	15 51	16 26	16 58	
13	12	50.1		39.5	50	42.9	11.0	11	03.1	8.8	57.2	S 50	18 23	18 56	19 34	15 24	16 02	16 35	17 03	
14	27	50.3		38.6	65	12.9	11.0	10	54.3	8.8	57.1	52	18 24	18 58	19 39	15 30	16 07	16 39	17 06	
15	42	50.5		37.6	79	42.9	11.1	10	45.5	8.9	57.1	54	18 25	19 01	19 43	15 38	16 13	16 43	17 08	
16	57	50.7		36.6	94	13.0	11.1	10	36.6	8.9	57.1	56	18 27	19 04	19 49	15 46	16 20	16 48	17 11	
17	72	50.8		35.6	108	43.1	11.2	10	27.7	9.0	57.1	58	18 28	19 07	19 55	15 55	16 27	16 53	17 14	
18	87	51.0	S 1	34.6	123	13.3	11.2	S10	18.7	9.0	57.1	S 60	18 29	19 11	20 02	16 05	16 35	16 59	17 18	
19	102	51.2		33.6	137	43.5	11.3	10	09.7	9.1	57.0									
20	117	51.4																		

T. M. G.	ARIES		VENUS -4.0		MARTE +1.4		JUPITER -1.7		SATURNO +0.3		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
DOMINGO	20 ^h 00	177 24.7	157 50.8	N16 25.3	204 58.5	S12 35.6	122 14.7	N18 54.9	44 17.2	N18 35.4	Acamar	315 39.3	S40 24.0
	01	192 27.2	172 53.8	25.4	219 59.1	34.9	137 16.7	55.0	59 19.8	35.4	Achernar	335 47.6	S57 21.3
	02	207 29.7	187 56.7	25.4	234 59.6	34.2	152 18.7	55.1	74 22.3	35.4	Acruz	173 39.1	S62 58.5
	03	222 32.1	202 59.7	25.5	250 00.2	33.5	167 20.8	55.2	89 24.9	35.4	Adhara	255 33.9	S28 56.8
	04	237 34.6	218 02.6	25.6	265 00.8	32.8	182 22.8	55.3	104 27.5	35.5	Aldebaran	291 20.8	N16 27.7
	05	252 37.1	233 05.6	25.6	280 01.4	32.2	197 24.8	55.4	119 30.0	35.5			
	06	267 39.5	248 08.5	N16 25.7	295 02.0	S12 31.5	212 26.8	N18 55.5	134 32.6	N18 35.5	Alioth	166 44.1	N56 04.8
	07	282 42.0	263 11.5	25.8	310 02.6	30.8	227 28.8	55.6	149 35.2	35.5	Alkaid	153 20.0	N49 25.4
	08	297 44.4	278 14.5	25.8	325 03.2	30.1	242 30.9	55.8	164 37.7	35.6	Al Na'ir	28 18.3	S47 04.2
	09	312 46.9	293 17.4	25.9	340 03.8	29.4	257 32.9	55.9	179 40.3	35.6	Alnilam	276 14.1	S 1 13.2
	10	327 49.4	308 20.4	25.9	355 04.4	28.7	272 34.9	56.0	194 42.8	35.6	Alphard	218 22.6	S 8 33.8
	11	342 51.8	323 23.4	26.0	10 05.0	28.1	287 36.9	56.1	209 45.4	35.6			
	12	357 54.3	338 26.4	N16 26.0	25 05.5	S12 27.4	302 38.9	N18 56.2	224 48.0	N18 35.7	Alphecca	126 33.9	N26 47.3
	13	12 56.8	353 29.4	26.1	40 06.1	26.7	317 41.0	56.3	239 50.5	35.7	Alpheratz	358 12.1	N28 57.8
	14	27 59.2	8 32.4	26.1	55 06.7	26.0	332 43.0	56.4	254 53.1	35.7	Altair	62 35.0	N 8 48.4
	15	43 01.7	23 35.4	26.2	70 07.3	25.3	347 45.0	56.5	269 55.6	35.8	Ankaa	353 43.0	S42 25.9
	16	58 04.2	38 38.4	26.2	85 07.9	24.6	2 47.0	56.6	284 58.2	35.8	Antares	112 59.6	S26 22.9
	17	73 06.6	53 41.4	26.2	100 08.5	24.0	17 49.0	56.7	300 00.8	35.8			
	18	88 09.1	68 44.4	N16 26.3	115 09.1	S12 23.3	32 51.0	N18 56.8	315 03.3	N18 35.8	Arcturus	146 20.3	N19 17.9
	19	103 11.6	83 47.4	26.3	130 09.7	22.6	47 53.1	56.9	330 05.9	35.9	Atria	108 25.8	S68 58.9
	20	118 14.0	98 50.4	26.3	145 10.3	21.9	62 55.1	57.0	345 08.4	35.9	Avior	234 28.8	S59 26.6
	21	133 16.5	113 53.4	26.4	160 10.9	21.2	77 57.1	57.1	0 11.0	35.9	Bellatrix	279 01.3	N 6 19.6
	22	148 18.9	128 56.4	26.4	175 11.5	20.5	92 59.1	57.2	15 13.6	35.9	Betelgeuse	271 30.8	N 7 24.0
23	163 21.4	143 59.5	26.4	190 12.1	19.9	108 01.1	57.3	30 16.1	36.0				
LUNES	21 00	178 23.9	159 02.5	N16 26.4	205 12.7	S12 19.2	123 03.1	N18 57.5	45 18.7	N18 36.0	Canopus	264 08.2	S52 41.4
	01	193 26.3	174 05.5	26.4	220 13.2	18.5	138 05.2	57.6	60 21.2	36.0	Capella	281 14.9	N45 58.6
	02	208 28.8	189 08.6	26.5	235 13.8	17.8	153 07.2	57.7	75 23.8	36.0	Deneb	49 50.3	N45 11.8
	03	223 31.3	204 11.6	26.5	250 14.4	17.1	168 09.2	57.8	90 26.4	36.1	Denebola	183 01.1	N14 41.8
	04	238 33.7	219 14.6	26.5	265 15.0	16.4	183 11.2	57.9	105 28.9	36.1	Diphda	349 23.6	S18 06.8
	05	253 36.2	234 17.7	26.5	280 15.6	15.8	198 13.2	58.0	120 31.5	36.1			
	06	268 38.7	249 20.7	N16 26.5	295 16.2	S12 15.1	213 15.2	N18 58.1	135 34.0	N18 36.1	Dubhe	194 24.5	N61 52.4
	07	283 41.1	264 23.8	26.5	310 16.8	14.4	228 17.2	58.2	150 36.6	36.2	Elnath	278 47.2	N28 35.3
	08	298 43.6	279 26.9	26.5	325 17.4	13.7	243 19.3	58.3	165 39.2	36.2	Eltanin	90 58.8	N51 29.3
	09	313 46.1	294 29.9	26.5	340 18.0	13.0	258 21.3	58.4	180 41.7	36.2	Enif	34 14.1	N 9 46.1
	10	328 48.5	309 33.0	26.5	355 18.6	12.3	273 23.3	58.5	195 44.3	36.2	Fomalhaut	15 54.4	S29 44.6
	11	343 51.0	324 36.1	26.5	10 19.2	11.6	288 25.3	58.6	210 46.8	36.3			
	12	358 53.4	339 39.1	N16 26.5	25 19.8	S12 10.9	303 27.3	N18 58.7	225 49.4	N18 36.3	Gacrux	172 30.7	S56 59.2
	13	13 55.9	354 42.2	26.4	40 20.4	10.3	318 29.3	58.8	240 51.9	36.3	Gienah	176 20.0	S17 25.1
	14	28 58.4	9 45.3	26.4	55 21.0	09.6	333 31.3	58.9	255 54.5	36.3	Hadar	149 26.1	S60 15.7
	15	44 00.8	24 48.4	26.4	70 21.6	08.9	348 33.4	59.1	270 57.1	36.4	Hamal	328 31.8	N23 21.2
	16	59 03.3	39 51.5	26.4	85 22.2	08.2	3 35.4	59.2	285 59.6	36.4	Kaus Aust.	84 20.0	S34 23.6
	17	74 05.8	54 54.6	26.4	100 22.8	07.5	18 37.4	59.3	301 02.2	36.4			
	18	89 08.2	69 57.7	N16 26.3	115 23.4	S12 06.8	33 39.4	N18 59.4	316 04.7	N18 36.4	Kochab	137 18.2	N74 14.7
	19	104 10.7	85 00.8	26.3	130 24.0	06.1	48 41.4	59.5	331 07.3	36.5	Markab	14 05.8	N15 04.9
	20	119 13.2	100 03.9	26.3	145 24.6	05.4	63 43.4	59.6	346 09.8	36.5	Menkar	314 43.8	N 3 59.9
	21	134 15.6	115 07.0	26.2	160 25.2	04.8	78 45.4	59.7	1 12.4	36.5	Menkent	148 39.4	S36 15.5
	22	149 18.1	130 10.1	26.2	175 25.8	04.1	93 47.4	59.8	16 14.9	36.5	Miaplacidus	221 44.7	S69 37.8
23	164 20.5	145 13.2	26.2	190 26.3	03.4	108 49.5	18 59.9	31 17.5	36.6				
MARTES	22 00	179 23.0	160 16.3	N16 26.1	205 26.9	S12 02.7	123 51.5	N19 00.0	46 20.1	N18 36.6	Mirfak	309 19.7	N49 46.9
	01	194 25.5	175 19.5	26.1	220 27.5	02.0	138 53.5	00.1	61 22.6	36.6	Nunki	76 32.2	S26 19.4
	02	209 27.9	190 22.6	26.0	235 28.1	01.3	153 55.5	00.2	76 25.2	36.6	Peacock	54 02.5	S56 48.3
	03	224 30.4	205 25.7	26.0	250 28.7	12 00.6	168 57.5	00.3	91 27.7	36.7	Pollux	244 00.9	N28 04.8
	04	239 32.9	220 28.8	25.9	265 29.3	11 59.9	183 59.5	00.4	106 30.3	36.7	Procyon	245 28.1	N 5 16.8
	05	254 35.3	235 32.0	25.9	280 29.9	59.2	199 01.5	00.6	121 32.8	36.7			
	06	269 37.8	250 35.1	N16 25.8	295 30.5	S11 58.5	214 03.5	N19 00.7	136 35.4	N18 36.7	Rasalhague	96 31.7	N12 34.5
	07	284 40.3	265 38.3	25.8	310 31.1	57.9	229 05.5	00.8	151 37.9	36.8	Regulus	208 12.2	N12 04.5
	08	299 42.7	280 41.4	25.7	325 31.7	57.2	244 07.5	00.9	166 40.5	36.8	Rigel	281 38.3	S 8 13.9
	09	314 45.2	295 44.6	25.7	340 32.3	56.5	259 09.6	01.0	181 43.0	36.8	Rigel Kent.	140 28.4	S60 44.3
	10	329 47.7	310 47.7	25.6	355 32.9	55.8	274 11.6	01.1	196 45.6	36.8	Sabik	102 43.7	S15 41.8
	11	344 50.1	325 50.9	25.5	10 33.5	55.1	289 13.6	01.2	211 48.2	36.9			
	12	359 52.6	340 54.0	N16 25.4	25 34.1	S11 54.4	304 15.6	N19 01.3	226 50.7	N18 36.9	Schedar	350 12.2	N56 24.8
	13	14 55.0	355 57.2	25.4	40 34.7	53.7	319 17.6	01.4	241 53.3	36.9	Shaula	96 58.9	S37 05.1
	14	29 57.5	11 00.4	25.3	55 35.3	53.0	334 19.6	01.5	256 55.8	36.9	Sirius	258 57.7	S16 41.4
	15	45 00.0	26 03.6	25.2	70 35.9	52.3	349 21.6	01.6	271 58.4	37.0	Spica	158 59.7	S11 02.7
	16	60 02.4	41 06.7	25.1	85 36.5	51.6	4 23.6	01.7	287 00.9	37.0	Suhail	223 12.2	S43 20.8
	17	75 04.9	56 09.9	25.0	100 37.1	50.9	19 25.6	01.8	302 03.5	37.0			
	18	90 07.4	71 13.1	N16 25.0	115 37.7	S11 50.2	34 27.6	N19 01.9	317 06.0	N18 37.0	Vega	80 57.5	N38 45.5
	19	105 09.8	86 16.3	24.9	130 38.3	49.5	49 29.6	02.1	332 08.6	37.1	Zuben'ubi	137 35.4	S15 56.9
	20	120 12.3	101 19.5	24.8	145 38.9	48.9	64 31.6	02.2	347 11.1	37.1			
	21	135 14.8	116 22.7	24.7	160 39.5	48.2	79 33.7	02.3	2 13.7	37.1			
	22	150 17.2	131 25.9	24.6	175 40.1	47.5	94 35.7	02.4	17 16.2	37.1	Venus	340 38.6	13 21
23	165 19.7	146 29.1	24.5	190 40.7	46.8	109 37.7	02.5	32 18.8	37.1	Marte	26 48.8	10 19	
										Júpiter	304 39.3	15 46	
										Saturno	226 54.8	20 55	
Pas. Mer.	12 04.4	v 3.1	d 0.0	v 0.6	d 0.7	v 2.0	d 0.1	v 2.6	d 0.0				

T. M. G.	SOL		LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna						
	A.H.G.	Dec.	A.H.G.	v	Dec.		d	P.H.		Naut.	Civil	20	21	22	23	
												h m	h m	h m	h m	h m
DOMINGO	00	178 05.2 S 0	17.5	176 28.9 13.8 N	2 35.6	10.0	55.5	N 72	03 16	04 46	05 54	05 42	05 36	05 29	05 21	
	01	193 05.4	16.5	191 01.7 13.8	2 45.6	9.9	55.5	68	03 35	04 54	05 55	05 47	05 46	05 46	05 47	
	02	208 05.5	15.5	205 34.5 13.7	2 55.5	10.0	55.5	66	04 03	05 06	05 57	05 54	06 02	06 11	06 23	
	03	223 05.7	14.5	220 07.2 13.8	3 05.5	9.9	55.4	64	04 12	05 11	05 58	05 56	06 08	06 20	06 36	
	04	238 05.9	13.5	234 40.0 13.9	3 15.4	9.9	55.4	62	04 21	05 14	05 59	05 59	06 13	06 28	06 47	
	05	253 06.1	12.6	249 12.9 13.8	3 25.3	9.9	55.4	60	04 28	05 18	05 59	06 01	06 17	06 36	06 57	
	06	268 06.3 S	11.6	263 45.7 13.8 N	3 35.2	9.8	55.4	N 58	04 34	05 21	06 00	06 03	06 21	06 42	07 05	
	07	283 06.5	10.6	278 18.5 13.9	3 45.0	9.9	55.4	56	04 39	05 23	06 00	06 04	06 25	06 47	07 12	
	08	298 06.7	09.6	292 51.4 13.8	3 54.9	9.8	55.3	54	04 43	05 25	06 01	06 06	06 28	06 52	07 19	
	09	313 06.8	08.6	307 24.2 13.9	4 04.7	9.8	55.3	52	04 47	05 27	06 01	06 07	06 31	06 57	07 25	
	10	328 07.0	07.6	321 57.1 13.9	4 14.5	9.7	55.3	50	04 51	05 29	06 01	06 09	06 34	07 01	07 30	
	11	343 07.2	06.6	336 30.0 13.8	4 24.2	9.8	55.3	45	04 58	05 33	06 02	06 11	06 40	07 10	07 42	
	12	358 07.4 S	05.6	351 02.8 13.9 N	4 34.0	9.7	55.3	N 40	05 04	05 35	06 02	06 14	06 45	07 17	07 51	
	13	13 07.6	04.6	5 35.7 13.9	4 43.7	9.6	55.3	35	05 08	05 37	06 03	06 16	06 49	07 23	07 59	
	14	28 07.8	03.7	20 08.6 13.9	4 53.3	9.7	55.2	30	05 11	05 39	06 03	06 18	06 53	07 29	08 07	
	15	43 08.0	02.7	34 41.5 13.9	5 03.0	9.6	55.2	20	05 16	05 41	06 03	06 21	06 59	07 39	08 19	
	16	58 08.1	01.7	49 14.4 13.9	5 12.6	9.6	55.2	N 10	05 18	05 43	06 04	06 24	07 05	07 47	08 30	
	17	73 08.3 S	00.7	63 47.3 13.9	5 22.2	9.6	55.2	0	05 19	05 43	06 04	06 26	07 11	07 56	08 41	
	18	88 08.5 N	00.3	78 20.2 13.9 N	5 31.8	9.5	55.2	S 10	05 19	05 43	06 04	06 29	07 16	08 04	08 51	
	19	103 08.7	01.3	92 53.1 13.9	5 41.3	9.5	55.1	20	05 16	05 42	06 04	06 32	07 22	08 13	09 02	
	20	118 08.9	02.3	107 26.0 14.0	5 50.8	9.4	55.1	30	05 12	05 40	06 04	06 35	07 29	08 23	09 15	
	21	133 09.1	03.3	121 59.0 13.9	6 00.2	9.5	55.1	35	05 09	05 39	06 04	06 37	07 33	08 28	09 23	
	22	148 09.3	04.2	136 31.9 13.9	6 09.7	9.4	55.1	40	05 05	05 37	06 04	06 39	07 38	08 35	09 31	
23	163 09.4	05.2	151 04.8 13.9	6 19.1	9.3	55.1	45	05 00	05 34	06 03	06 42	07 43	08 43	09 41		
LUNES	00	178 09.6 N	06.2	165 37.7 14.0 N	6 28.4	9.4	55.1	S 50	04 53	05 31	06 03	06 45	07 49	08 52	09 53	
	01	193 09.8	07.2	180 10.7 13.9	6 37.8	9.3	55.0	52	04 49	05 29	06 03	06 46	07 52	08 57	09 59	
	02	208 10.0	08.2	194 43.6 13.9	6 47.1	9.2	55.0	54	04 46	05 27	06 03	06 48	07 55	09 01	10 05	
	03	223 10.2	09.2	209 16.5 14.0	6 56.3	9.2	55.0	56	04 41	05 25	06 03	06 49	07 59	09 07	10 12	
	04	238 10.4	10.2	223 49.5 13.9	7 05.5	9.2	55.0	58	04 36	05 23	06 02	06 51	08 03	09 13	10 20	
	05	253 10.6	11.2	238 22.4 13.9	7 14.7	9.2	55.0	S 60	04 30	05 20	06 02	06 53	08 07	09 19	10 29	
	06	268 10.7 N	12.1	252 55.3 13.9 N	7 23.9	9.1	55.0									
	07	283 10.9	13.1	267 28.2 14.0	7 33.0	9.0	54.9									
	08	298 11.1	14.1	282 01.2 13.9	7 42.0	9.1	54.9	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
	09	313 11.3	15.1	296 34.1 13.9	7 51.1	9.0	54.9									
	10	328 11.5	16.1	311 07.0 13.9	8 00.1	8.9	54.9	N 72	18 23	19 32	21 04	20 03	21 42	23 23	25 08	
	11	343 11.7	17.1	325 39.9 14.0	8 09.0	8.9	54.9	N 70	18 21	19 23	20 43	19 54	21 26	22 58	24 29	
	12	358 11.9 N	18.1	340 12.9 13.9 N	8 17.9	8.9	54.9	68	18 20	19 16	20 27	19 47	21 14	22 39	24 02	
	13	13 12.0	19.1	354 45.8 13.9	8 26.8	8.8	54.8	66	18 19	19 11	20 15	19 41	21 04	22 24	23 42	
	14	28 12.2	20.0	9 18.7 13.9	8 35.6	8.8	54.8	64	18 18	19 06	20 04	19 37	20 55	22 12	23 26	
	15	43 12.4	21.0	23 51.6 13.9	8 44.4	8.7	54.8	62	18 17	19 02	19 56	19 32	20 48	22 02	23 12	
	16	58 12.6	22.0	38 24.5 13.9	8 53.1	8.7	54.8	60	18 17	18 58	19 49	19 29	20 42	21 53	23 01	
	17	73 12.8	23.0	52 57.4 13.9	9 01.8	8.6	54.8	N 58	18 16	18 55	19 43	19 26	20 36	21 45	22 51	
	18	88 13.0 N	24.0	67 30.3 13.8 N	9 10.4	8.6	54.8	56	18 15	18 53	19 37	19 23	20 31	21 38	22 43	
	19	103 13.2	25.0	82 03.1 13.9	9 19.0	8.6	54.8	54	18 15	18 50	19 32	19 20	20 27	21 32	22 35	
	20	118 13.4	26.0	96 36.0 13.9	9 27.6	8.5	54.7	52	18 15	18 48	19 28	19 18	20 23	21 27	22 28	
	21	133 13.5	27.0	111 08.9 13.9	9 36.1	8.5	54.7	50	18 14	18 47	19 25	19 16	20 20	21 22	22 22	
	22	148 13.7	27.9	125 41.8 13.8	9 44.6	8.4	54.7	45	18 13	18 43	19 17	19 11	20 12	21 11	22 09	
23	163 13.9	28.9	140 14.6 13.9	9 53.0	8.3	54.7	N 40	18 13	18 40	19 12	19 07	20 05	21 02	21 58		
MARTES	00	178 14.1 N	29.9	154 47.5 13.8 N	10 01.3	8.3	54.7	35	18 12	18 38	19 07	19 04	20 00	20 55	21 49	
	01	193 14.3	30.9	169 20.3 13.8	10 09.6	8.3	54.7	30	18 12	18 36	19 04	19 01	19 55	20 48	21 40	
	02	208 14.5	31.9	183 53.1 13.9	10 17.9	8.2	54.7	20	18 11	18 33	18 59	18 56	19 47	20 37	21 26	
	03	223 14.7	32.9	198 26.0 13.8	10 26.1	8.2	54.6	N 10	18 11	18 32	18 56	18 52	19 39	20 27	21 14	
	04	238 14.8	33.9	212 58.8 13.8	10 34.3	8.1	54.6	0	18 10	18 31	18 55	18 48	19 32	20 17	21 03	
	05	253 15.0	34.9	227 31.6 13.8	10 42.4	8.1	54.6	S 10	18 10	18 31	18 56	18 44	19 25	20 08	20 51	
	06	268 15.2 N	35.8	242 04.4 13.8 N	10 50.5	8.0	54.6	20	18 10	18 32	18 58	18 39	19 18	19 58	20 39	
	07	283 15.4	36.8	256 37.2 13.7	10 58.5	7.9	54.6	30	18 10	18 34	19 02	18 34	19 10	19 47	20 25	
	08	298 15.6	37.8	271 09.9 13.8	11 06.4	7.9	54.6	35	18 10	18 35	19 05	18 31	19 05	19 40	20 17	
	09	313 15.8	38.8	285 42.7 13.8	11 14.3	7.9	54.6	40	18 10	18 37	19 09	18 28	19 00	19 33	20 08	
	10	328 16.0	39.8	300 15.5 13.7	11 22.2	7.8	54.5	45	18 10	18 39	19 14	18 24	18 53	19 24	19 57	
	11	343 16.2	40.8	314 48.2 13.7	11 30.0	7.7	54.5	S 50	18 10	18 43	19 20	18 20	18 46	19 14	19 45	
	12	358 16.3 N	41.8	329 20.9 13.8 N	11 37.7	7.7	54.5	52	18 10	18 44	19 24	18 18	18 42	19 09	19 39	
	13	13 16.5	42.8	343 53.7 13.7	11 45.4	7.6	54.5	54	18 11	18 46	19 27	18 16	18 39	19 04	19 32	
	14	28 16.7	43.7	358 26.4 13.7	11 53.0	7.6	54.5	56	18 11	18 48	19 32	18 13	18 34	18 58	19 25	
	15	43 16.9	44.7	12 59.1 13.7	12 00.6	7.5	54.5	58	18 11	18 50	19 37	18 10	18 30	18 51	19 16	
	16	58 17.1	45.7	27 31.8 13.6	12 08.1	7.5	54.5	S 60	18 11	18 52	19 42	18 07	18 24	18 44	19 07	
	17	73 17.3	46.7	42 04.4 13.7	12 15.6	7.4	54.5									
	18	88 17.5 N	47.7	56 37.1 13.6 N	12 23.0	7.3	54.4									
	19	103 17.7	48.7	71 09.7 13.7	12 30.3	7.3	54.4									
	20	118 17.8	49.7	85 42.4 13.6	12 37.6	7.3	54.4	Día	SOL E.T. (-)		Pas. Mer.	LUNA Pas. Mer.		Edad.	Fase	
	21	133 18.0	50.6	100 15.0 13.6	12 44.9	7.1	54.4		00 ^h	12 ^h		Sup.	Inf.			
	22	148 18.2														

T. M. G.	ARIES		VENUS -3.8		MARTE +1.4		JUPITER -1.7		SATURNO +0.3		ESTRELLAS													
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre.	A. H. S.	Dec.												
23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	180	22.2	161	32.3	N16	24.4	205	41.3	S11	46.1	124	39.7	N19	02.6	47	21.3	N18	37.2	Acamar	315	39.4	S40	24.0	
	195	24.6	176	35.5		24.3	220	41.9		45.4	139	41.7		02.7	62	23.9		37.2	Achernar	335	47.6	S57	21.3	
	210	27.1	191	38.7		24.2	235	42.5		44.7	154	43.7		02.8	77	26.4		37.2	Acruz	173	39.1	S62	58.5	
	225	29.5	206	41.9	..	24.1	250	43.1	..	44.0	169	45.7	..	02.9	92	29.0	..	37.2	Adhara	255	33.9	S28	56.8	
	240	32.0	221	45.2		24.0	265	43.7		43.3	184	47.7		03.0	107	31.5		37.3	Aldebaran	291	20.8	N16	27.7	
	255	34.5	236	48.4		23.8	280	44.3		42.6	199	49.7		03.1	122	34.1		37.3						
	270	36.9	251	51.6	N16	23.7	295	44.9	S11	41.9	214	51.7	N19	03.2	137	36.6	N18	37.3	Alioth	166	44.1	N56	04.9	
	285	39.4	266	54.8		23.6	310	45.5		41.2	229	53.7		03.3	152	39.2		37.3	Alkaid	153	20.0	N49	25.4	
	300	41.9	281	58.1		23.5	325	46.1		40.5	244	55.7		03.4	167	41.7		37.4	Al Na'ir	28	18.3	S47	04.2	
	315	44.3	297	01.3	..	23.4	340	46.8	..	39.8	259	57.7	..	03.6	182	44.3	..	37.4	Alnilam	276	14.1	S 1	13.2	
	330	46.8	312	04.6		23.2	355	47.4		39.1	274	59.7		03.7	197	46.8		37.4	Alphard	218	22.6	S 8	33.8	
	345	49.3	327	07.8		23.1	10	48.0		38.4	290	01.7		03.8	212	49.4		37.4						
	0	51.7	342	11.1	N16	23.0	25	48.6	S11	37.7	305	03.7	N19	03.9	227	51.9	N18	37.4	Alphecca	126	33.9	N26	47.3	
	15	54.2	357	14.3		22.8	40	49.2		37.0	320	05.7		04.0	242	54.5		37.5	Alpheratz	358	12.1	N28	57.8	
	30	56.6	12	17.6		22.7	55	49.8		36.3	335	07.7		04.1	257	57.0		37.5	Altair	62	34.9	N 8	48.4	
	45	59.1	27	20.8	..	22.5	70	50.4	..	35.6	350	09.8	..	04.2	272	59.6	..	37.5	Ankaa	353	43.0	S42	25.9	
	61	01.6	42	24.1		22.4	85	51.0		34.9	5	11.8		04.3	288	02.1		37.5	Antares	112	59.6	S26	22.9	
	76	04.0	57	27.4		22.3	100	51.6		34.2	20	13.8		04.4	303	04.7		37.6						
	91	06.5	72	30.6	N16	22.1	115	52.2	S11	33.5	35	15.8	N19	04.5	318	07.2	N18	37.6	Arcturus	146	20.3	N19	17.9	
	106	09.0	87	33.9		21.9	130	52.8		32.8	50	17.8		04.6	333	09.8		37.6	Atria	108	25.7	S68	58.9	
	121	11.4	102	37.2		21.8	145	53.4		32.1	65	19.8		04.7	348	12.3		37.6	Avior	234	28.8	S59	26.6	
	136	13.9	117	40.5	..	21.6	160	54.0	..	31.5	80	21.8	..	04.8	3	14.9	..	37.7	Bellatrix	279	01.3	N 6	19.6	
	151	16.4	132	43.7		21.5	175	54.6		30.8	95	23.8		05.0	18	17.4		37.7	Betelgeuse	271	30.8	N 7	24.0	
166	18.8	147	47.0		21.3	190	55.2		30.1	110	25.8		05.1	33	20.0		37.7							
24 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	181	21.3	162	50.3	N16	21.2	205	55.8	S11	29.4	125	27.8	N19	05.2	48	22.5	N18	37.7	Canopus	264	08.2	S52	41.4	
	196	23.8	177	53.6		21.0	220	56.4		28.7	140	29.8		05.3	63	25.0		37.7	Capella	281	14.9	N45	58.6	
	211	26.2	192	56.9		20.8	235	57.0		28.0	155	31.8		05.4	78	27.6		37.8	Deneb	49	50.3	N45	11.8	
	226	28.7	208	00.2	..	20.6	250	57.6	..	27.3	170	33.8	..	05.5	93	30.1	..	37.8	Denebola	183	01.1	N14	41.8	
	241	31.1	223	03.5		20.5	265	58.2		26.6	185	35.8		05.6	108	32.7		37.8	Diphda	349	23.6	S18	06.8	
	256	33.6	238	06.8		20.3	280	58.8		25.9	200	37.8		05.7	123	35.2		37.8						
	271	36.1	253	10.2	N16	20.1	295	59.5	S11	25.2	215	39.8	N19	05.8	138	37.8	N18	37.9	Dubhe	194	24.5	N61	52.4	
	286	38.5	268	13.5		19.9	311	00.1		24.5	230	41.8		05.9	153	40.3		37.9	Elnath	278	47.2	N28	35.3	
	301	41.0	283	16.8		19.7	326	00.7		23.8	245	43.8		06.0	168	42.9		37.9	Eltanin	90	58.8	N51	29.3	
	316	43.5	298	20.1	..	19.5	341	01.3	..	23.1	260	45.8	..	06.1	183	45.4	..	37.9	Enif	34	14.1	N 9	46.1	
	331	45.9	313	23.4		19.4	356	01.9		22.4	275	47.8		06.3	198	48.0		37.9	Fomalhaut	15	54.4	S29	44.6	
	346	48.4	328	26.8		19.2	11	02.5		21.7	290	49.8		06.4	213	50.5		38.0						
	1	50.9	343	30.1	N16	19.0	26	03.1	S11	21.0	305	51.8	N19	06.5	228	53.1	N18	38.0	Gacrux	172	30.7	S56	59.2	
	16	53.3	358	33.4		18.8	41	03.7		20.3	320	53.8		06.6	243	55.6		38.0	Gienah	176	20.0	S17	25.1	
	31	55.8	13	36.8		18.6	56	04.3		19.6	335	55.8		06.7	258	58.1		38.0	Hadar	149	26.0	S60	15.8	
	46	58.3	28	40.1	..	18.4	71	04.9	..	18.8	350	57.8	..	06.8	274	00.7	..	38.1	Hamal	328	31.9	N23	21.2	
	62	00.7	43	43.5		18.1	86	05.5		18.1	5	59.8		06.9	289	03.2		38.1	Kaus Aust.	84	20.0	S34	23.6	
	77	03.2	58	46.8		17.9	101	06.1		17.4	21	01.8		07.0	304	05.8		38.1						
	92	05.6	73	50.2	N16	17.7	116	06.8	S11	16.7	36	03.8	N19	07.1	319	08.3	N18	38.1	Kochab	137	18.1	N74	14.7	
	107	08.1	88	53.5		17.5	131	07.4		16.0	51	05.8		07.2	334	10.9		38.1	Markab	14	05.8	N15	04.9	
	122	10.6	103	56.9		17.3	146	08.0		15.3	66	07.8		07.3	349	13.4		38.2	Menkar	314	43.8	N 3	59.9	
	137	13.0	119	00.2	..	17.1	161	08.6	..	14.6	81	09.8	..	07.4	4	15.9	..	38.2	Menkent	148	39.4	S36	15.5	
	152	15.5	134	03.6		16.8	176	09.2		13.9	96	11.8		07.5	19	18.5		38.2	Miaplacidus	221	44.7	S69	37.8	
167	18.0	149	07.0		16.6	191	09.8		13.2	111	13.8		07.7	34	21.0		38.2							
25 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	182	20.4	164	10.4	N16	16.4	206	10.4	S11	12.5	126	15.8	N19	07.8	49	23.6	N18	38.2	Mirfak	309	19.8	N49	46.9	
	197	22.9	179	13.7		16.2	221	11.0		11.8	141	17.8		07.9	64	26.1		38.2	Nunki	76	32.1	S26	19.4	
	212	25.4	194	17.1		15.9	236	11.6		11.1	156	19.8		08.0	79	28.6		38.3	Peacock	54	02.4	S56	48.3	
	227	27.8	209	20.5	..	15.7	251	12.2	..	10.4	171	21.8	..	08.1	94	31.2	..	38.3	Pollux	244	00.9	N28	04.8	
	242	30.3	224	23.9		15.5	266	12.8		09.7	186	23.8		08.2	109	33.7		38.3	Procyon	245	28.1	N 5	16.8	
	257	32.7	239	27.3		15.2	281	13.4		09.0	201	25.7		08.3	124	36.3		38.3						
	272	35.2	254	30.7	N16	15.0	296	14.1	S11	08.3	216	27.7	N19	08.4	139	38.8	N18	38.3	Rasalhague	96	31.7	N12	34.5	
	287	37.7	269	34.1		14.7	311	14.7		07.6	231	29.7		08.5	154	41.3		38.4	Regulus	208	12.2	N12	04.5	
	302	40.1	284	37.4		14.5	326	15.3		06.9	246	31.7		08.6	169									

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol †	Orto Luna						
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		23		24		25		26
											h	m	h	m	h	m		h	m
M I E R C O L E S	23 ^d 00 ^h	178 18.6 N 0	53.6	143 52.8	13.5	N13 06.2	7.0	54.4	N 72	02 54	04 29	05 39	05 21	05 12	04 52	□	
	01	193 18.8	54.6	158 25.3	13.6	13 13.2	6.9	54.4	N 70	03 17	04 39	05 41	05 47	05 51	06 01	06 23	
	02	208 19.0	55.6	172 57.9	13.5	13 20.1	6.9	54.4	68	03 35	04 47	05 44	06 07	06 19	06 37	07 08	
	03	223 19.2	56.6	187 30.4	13.5	13 27.0	6.8	54.3	66	03 49	04 54	05 46	06 23	06 40	07 03	07 38	
	04	238 19.4	57.5	202 02.9	13.5	13 33.8	6.7	54.3	64	04 00	05 00	05 47	06 36	06 56	07 24	08 00	
	05	253 19.5	58.5	216 35.4	13.5	13 40.5	6.7	54.3	62	04 10	05 04	05 49	06 47	07 10	07 40	08 18	
	06	268 19.7 N 0	59.5	231 07.9	13.5	N13 47.2	6.6	54.3	60	04 18	05 08	05 50	06 57	07 22	07 54	08 33	
	07	283 19.9	1 00.5	245 40.4	13.4	13 53.8	6.6	54.3	N 58	04 24	05 12	05 51	07 05	07 32	08 05	08 46	
	08	298 20.1	01.5	260 12.8	13.5	14 00.4	6.4	54.3	56	04 30	05 15	05 52	07 12	07 41	08 16	08 57	
	09	313 20.3	02.5	274 45.3	13.4	14 06.8	6.5	54.3	54	04 35	05 18	05 53	07 19	07 49	08 25	09 06	
	10	328 20.5	03.5	289 17.7	13.4	14 13.3	6.3	54.3	52	04 40	05 20	05 54	07 25	07 56	08 33	09 15	
	11	343 20.7	04.4	303 50.1	13.4	14 19.6	6.3	54.3	50	04 44	05 22	05 55	07 30	08 03	08 40	09 23	
	12	358 20.9 N 1	05.4	318 22.5	13.4	N14 25.9	6.2	54.3	45	04 52	05 27	05 56	07 42	08 17	08 56	09 39	
	13	13 21.0	06.4	332 54.9	13.3	14 32.1	6.2	54.3	N 40	04 59	05 30	05 57	07 51	08 28	09 08	09 53	
	14	28 21.2	07.4	347 27.2	13.4	14 38.3	6.1	54.3	35	05 04	05 33	05 58	07 59	08 38	09 19	10 04	
	15	43 21.4	08.4	1 59.6	13.3	14 44.4	6.0	54.2	30	05 08	05 35	05 59	08 07	08 46	09 29	10 14	
	16	58 21.6	09.4	16 31.9	13.3	14 50.4	6.0	54.2	20	05 13	05 39	06 01	08 19	09 01	09 45	10 31	
	17	73 21.8	10.4	31 04.2	13.3	14 56.4	5.8	54.2	N 10	05 17	05 41	06 02	08 30	09 14	10 00	10 47	
	18	88 22.0 N 1	11.3	45 36.5	13.3	N15 02.2	5.9	54.2	0	05 18	05 42	06 03	08 41	09 27	10 13	11 01	
	19	103 22.2	12.3	60 08.8	13.2	15 08.1	5.7	54.2	S 10	05 19	05 43	06 04	08 51	09 39	10 27	11 15	
	20	118 22.4	13.3	74 41.0	13.3	15 13.8	5.7	54.2	20	05 17	05 43	06 05	09 02	09 52	10 41	11 30	
	21	133 22.5	14.3	89 13.3	13.2	15 19.5	5.6	54.2	30	05 14	05 42	06 06	09 15	10 07	10 58	11 47	
	22	148 22.7	15.3	103 45.5	13.2	15 25.1	5.5	54.2	35	05 12	05 41	06 06	09 23	10 16	11 08	11 57	
23	163 22.9	16.3	118 17.7	13.2	15 30.6	5.5	54.2	40	05 08	05 40	06 07	09 31	10 26	11 19	12 09		
24	00	178 23.1 N 1	17.2	132 49.9	13.1	N15 36.1	5.4	54.2	45	05 04	05 38	06 07	09 41	10 38	11 32	12 23	
01	193 23.3	18.2	147 22.0	13.2	15 41.5	5.3	54.2	S 50	04 58	05 36	06 08	09 53	10 52	11 48	12 39		
02	208 23.5	19.2	161 54.2	13.1	15 46.8	5.3	54.2	52	04 55	05 34	06 08	09 59	10 59	11 55	12 47		
03	223 23.7	20.2	176 26.3	13.1	15 52.1	5.2	54.2	54	04 52	05 33	06 08	10 05	11 07	12 04	12 56		
04	238 23.9	21.2	190 58.4	13.1	15 57.3	5.1	54.2	56	04 48	05 32	06 09	10 12	11 15	12 13	13 06		
05	253 24.1	22.2	205 30.5	13.1	16 02.4	5.0	54.2	58	04 43	05 30	06 09	10 20	11 24	12 24	13 17		
06	268 24.2 N 1	23.2	220 02.6	13.0	N16 07.4	5.0	54.2	S 60	04 38	05 28	06 09	10 29	11 35	12 36	13 30		
07	283 24.4	24.1	234 34.6	13.1	16 12.4	4.9	54.2	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna					
08	298 24.6	25.1	249 06.7	13.0	16 17.3	4.8	54.2			Civil	Naut.	23	24	25	26		
09	313 24.8	26.1	263 38.7	13.0	16 22.1	4.8	54.2										
10	328 25.0	27.1	278 10.7	13.0	16 26.9	4.6	54.1										
11	343 25.2	28.1	292 42.7	12.9	16 31.5	4.6	54.1	N 72	18 37	19 47	21 24	25 08	01 08	03 04	□		
12	358 25.4 N 1	29.1	307 14.6	13.0	N16 36.1	4.5	54.1	N 70	18 34	19 36	21 00	24 29	00 29	01 56	03 12		
13	13 25.6	30.0	321 46.6	12.9	16 40.6	4.5	54.1	68	18 31	19 28	20 41	24 02	00 02	01 20	02 27		
14	28 25.7	31.0	336 18.5	12.9	16 45.1	4.4	54.1	66	18 29	19 21	20 27	23 42	24 54	00 54	01 57		
15	43 25.9	32.0	350 50.4	12.9	16 49.5	4.3	54.1	64	18 27	19 15	20 15	23 26	24 34	00 34	01 35		
16	58 26.1	33.0	5 22.3	12.9	16 53.8	4.2	54.1	62	18 25	19 10	20 05	23 12	24 18	00 18	01 17		
17	73 26.3	34.0	19 54.2	12.8	16 58.0	4.1	54.1	60	18 24	19 06	19 57	23 01	24 05	00 05	01 02		
18	88 26.5 N 1	35.0	34 26.0	12.8	N17 02.1	4.1	54.1	N 58	18 23	19 02	19 50	22 51	23 53	24 49	00 49		
19	103 26.7	35.9	48 57.8	12.9	17 06.2	4.0	54.1	56	18 22	18 59	19 44	22 43	23 43	24 39	00 39		
20	118 26.9	36.9	63 29.7	12.8	17 10.2	3.9	54.1	54	18 21	18 56	19 39	22 35	23 34	24 29	00 29		
21	133 27.1	37.9	78 01.5	12.7	17 14.1	3.8	54.1	52	18 20	18 54	19 34	22 28	23 26	24 21	00 21		
22	148 27.2	38.9	92 33.2	12.8	17 17.9	3.8	54.1	50	18 19	18 51	19 30	22 22	23 19	24 13	00 13		
23	163 27.4	39.9	107 05.0	12.7	17 21.7	3.6	54.1	45	18 17	18 47	19 21	22 09	23 04	23 57	24 46		
25	00	178 27.6 N 1	40.9	121 36.7	12.7	N17 25.3	3.6	54.1	N 40	18 16	18 43	19 15	21 58	22 52	23 43	24 32	
01	193 27.8	41.8	136 08.4	12.7	17 28.9	3.5	54.1	35	18 15	18 40	19 10	21 49	22 41	23 32	24 20		
02	208 28.0	42.8	150 40.1	12.7	17 32.4	3.5	54.1	30	18 14	18 38	19 06	21 40	22 32	23 22	24 10		
03	223 28.2	43.8	165 11.8	12.7	17 35.9	3.3	54.1	20	18 12	18 34	19 00	21 26	22 16	23 05	23 53		
04	238 28.4	44.8	179 43.5	12.6	17 39.2	3.3	54.1	N 10	18 11	18 32	18 56	21 14	22 02	22 50	23 38		
05	253 28.6	45.8	194 15.1	12.7	17 42.5	3.2	54.1	0	18 10	18 30	18 54	21 03	21 49	22 36	23 24		
06	268 28.8 N 1	46.8	208 46.8	12.6	N17 45.7	3.1	54.1	S 10	18 09	18 29	18 54	20 51	21 36	22 22	23 10		
07	283 29.0	47.7	223 18.4	12.6	17 48.8	3.1	54.1	20	18 07	18 29	18 55	20 39	21 22	22 07	22 54		
08	298 29.2	48.7	237 50.0	12.5	17 51.9	2.9	54.1	30	18 06	18 30	18 58	20 25	21 06	21 50	22 37		
09	313 29.3	49.7	252 21.5	12.6	17 54.8	2.9	54.1	35	18 06	18 31	19 00	20 17	20 57	21 40	22 27		
10	328 29.5	50.7	266 53.1	12.5	17 57.7	2.8	54.1	40	18 05	18 32	19 04	20 08	20 47	21 29	22 15		
11	343 29.7	51.7	281 24.6	12.5	18 00.5	2.7	54.2	45	18 05	18 34	19 08	19 57	20 34	21 16	22 02		
12	358 29.9 N 1	52.6	295 56.1	12.6	N18 03.2	2.6	54.2	S 50	18 04	18 36	19 14	19 45	20 19	20 59	21 45		
13	13 30.1	53.6	310 27.7	12.4	18 05.8	2.6	54.2	52	18 04	18 37	19 17	19 39	20 12	20 52	21 37		
14	28 30.3	54.6	324 59.1	12.5	18 08.4	2.4	54.2	54	18 03	18 38	19 20	19 32	20 05	20 43	21 28		
15	43 30.5	55.6	339 30.6	12.4	18 10.8	2.4	54.2	56	18 03	18 40	19 23	19 25	19 56	20 34	21 18		
16	58 30.7	56.6	354 02.0	12.5	18 13.2	2.3	54.2	58	18 02	18 41	19 28	19 16	19 46	20 23	21 07		
17	73 30.9	57.6	8 33.5	12.4	18 15.5	2.2	54.2	S 60	18 02	18 43	19 32	19 07	19 35	20 10	20 54		
18	88 31.0 N 1	58.5	23 04.9	12.4	N18 17.7	2.2	54.2	Día	SOL		LUNA						
19	103 31.2	1 59.															

T. M. G.	SOL				LUNA				Lat.	Crepúsculo			Orto Sol	Orto Luna					
	A.H.G.		Dec.	A.H.G.		v	Dec.	d		P.H.	Naut.	Civil		h m	26	27	28	29	
	°	'		°	'										°	'	h m	h m	h m
26 ^d 00	178	32.2	N 2	04.4	110	13.0	12.3	N18	29.3	1.6	54.2	N 72	02 30	04 12	05 23	□	□	07 08	09 14
01	193	32.4		05.4	124	44.3	12.3	18	30.9	1.5	54.2	N 70	02 58	04 24	05 27	06 23	07 10	08 25	09 55
02	208	32.6		06.4	139	15.6	12.3	18	32.4	1.5	54.2	68	03 19	04 34	05 31	07 08	07 56	09 03	10 23
03	223	32.8	..	07.4	153	46.9	12.2	18	33.9	1.4	54.2	66	03 35	04 42	05 34	07 38	08 26	09 29	10 44
04	238	32.9		08.4	168	18.1	12.2	18	35.3	1.2	54.3	64	03 48	04 48	05 37	08 00	08 49	09 49	11 01
05	253	33.1		09.3	182	49.3	12.2	18	36.5	1.2	54.3	62	03 58	04 54	05 39	08 18	09 07	10 06	11 14
06	268	33.3	N 2	10.3	197	20.5	12.2	N18	37.7	1.2	54.3	60	04 07	04 59	05 41	08 33	09 22	10 20	11 26
07	283	33.5		11.3	211	51.7	12.2	18	38.9	1.0	54.3	N 58	04 15	05 03	05 43	08 46	09 34	10 31	11 36
08	298	33.7		12.3	226	22.9	12.2	18	39.9	0.9	54.3	56	04 22	05 07	05 44	08 57	09 45	10 42	11 45
S 09	313	33.9	..	13.3	240	54.1	12.2	18	40.8	0.9	54.3	54	04 27	05 10	05 46	09 06	09 55	10 50	11 52
A 10	328	34.1		14.2	255	25.3	12.1	18	41.7	0.8	54.3	52	04 32	05 13	05 47	09 15	10 04	10 58	11 59
B 11	343	34.3		15.2	269	56.4	12.1	18	42.5	0.6	54.3	50	04 37	05 16	05 48	09 23	10 11	11 06	12 06
A 12	358	34.5	N 2	16.2	284	27.5	12.1	N18	43.1	0.6	54.3	45	04 46	05 21	05 51	09 39	10 28	11 21	12 19
D 13	13	34.7		17.2	298	58.6	12.1	18	43.7	0.6	54.3	N 40	04 54	05 25	05 53	09 53	10 41	11 34	12 30
O 14	28	34.8		18.2	313	29.7	12.1	18	44.3	0.4	54.4	35	04 59	05 29	05 54	10 04	10 53	11 44	12 39
15	43	35.0	..	19.1	328	00.8	12.1	18	44.7	0.3	54.4	30	05 04	05 32	05 56	10 14	11 02	11 54	12 48
16	58	35.2		20.1	342	31.9	12.0	18	45.0	0.3	54.4	20	05 10	05 36	05 58	10 31	11 20	12 10	13 02
17	73	35.4		21.1	357	02.9	12.1	18	45.3	0.1	54.4	N 10	05 15	05 39	06 00	10 47	11 35	12 24	13 14
18	88	35.6	N 2	22.1	11	34.0	12.0	N18	45.4	0.1	54.4	0	05 17	05 41	06 02	11 01	11 49	12 37	13 26
19	103	35.8		23.1	26	05.0	12.0	18	45.5	0.0	54.4	S 10	05 19	05 43	06 04	11 15	12 03	12 50	13 38
20	118	36.0		24.0	40	36.0	12.0	18	45.5	0.1	54.4	20	05 18	05 44	06 06	11 30	12 18	13 04	13 50
21	133	36.2	..	25.0	55	07.0	12.0	18	45.4	0.2	54.4	30	05 16	05 44	06 08	11 47	12 35	13 21	14 04
22	148	36.4		26.0	69	38.0	11.9	18	45.2	0.3	54.5	35	05 14	05 43	06 09	11 57	12 45	13 30	14 12
23	163	36.5		27.0	84	08.9	12.0	18	44.9	0.4	54.5	40	05 11	05 43	06 10	12 09	12 56	13 41	14 22
					45	05 08	12.0	18	44.9	0.4	54.5	45	05 08	05 42	06 11	12 23	13 10	13 53	14 33
27 ^d 00	178	36.7	N 2	28.0	98	39.9	11.9	N18	44.5	0.4	54.5	S 50	05 03	05 40	06 13	12 39	13 26	14 08	14 46
01	193	36.9		28.9	113	10.8	12.0	18	44.1	0.5	54.5	52	05 00	05 40	06 13	12 47	13 34	14 15	14 52
02	208	37.1		29.9	127	41.8	11.9	18	43.6	0.7	54.5	54	04 57	05 39	06 14	12 56	13 43	14 23	14 59
03	223	37.3	..	30.9	142	12.7	11.9	18	42.9	0.7	54.5	56	04 54	05 38	06 15	13 06	13 52	14 32	15 06
04	238	37.5		31.9	156	43.6	11.9	18	42.2	0.8	54.5	58	04 50	05 37	06 16	13 17	14 03	14 42	15 14
05	253	37.7		32.9	171	14.5	11.9	18	41.4	0.9	54.5	S 60	04 46	05 35	06 17	13 30	14 16	14 53	15 24
06	268	37.9	N 2	33.8	185	45.4	11.8	N18	40.5	1.0	54.6								
07	283	38.1		34.8	200	16.2	11.9	18	39.5	1.1	54.6	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna				
08	298	38.3		35.8	214	47.1	11.8	18	38.4	1.1	54.6				26	27	28	29	
09	313	38.4	..	36.8	229	17.9	11.9	18	37.3	1.3	54.6				h m	h m	h m	h m	
10	328	38.6		37.8	243	48.8	11.8	18	36.0	1.3	54.6	N 72	18 51	20 02	21 48	□	□	05 47	05 22
11	343	38.8		38.7	258	19.6	11.8	18	34.7	1.4	54.7	N 70	18 46	19 50	21 17	03 12	04 04	04 30	04 41
12	358	39.0	N 2	39.7	272	50.4	11.8	N18	33.3	1.5	54.7	68	18 42	19 40	20 56	02 27	03 18	03 51	04 12
13	13	39.2		40.7	287	21.2	11.8	18	31.8	1.7	54.7	66	18 39	19 31	20 39	01 57	02 47	03 25	03 51
14	28	39.4		41.7	301	52.0	11.8	18	30.1	1.6	54.7	64	18 36	19 24	20 26	01 35	02 25	03 04	03 34
15	43	39.6	..	42.6	316	22.8	11.7	18	28.5	1.8	54.7	62	18 33	19 19	20 15	01 17	02 07	02 47	03 19
16	58	39.8		43.6	330	53.5	11.8	18	26.7	1.9	54.7	60	18 31	19 14	20 06	01 02	01 52	02 33	03 07
17	73	40.0		44.6	345	24.3	11.7	18	24.8	2.0	54.8	N 58	18 29	19 09	19 58	00 49	01 39	02 21	02 57
18	88	40.2	N 2	45.6	359	55.0	11.8	N18	22.8	2.0	54.8	56	18 28	19 05	19 51	00 39	01 28	02 11	02 48
19	103	40.3		46.6	14	25.8	11.7	18	20.8	2.2	54.8	54	18 26	19 02	19 45	00 29	01 18	02 02	02 40
20	118	40.5		47.5	28	56.5	11.7	18	18.6	2.2	54.8	52	18 25	18 59	19 40	00 21	01 10	01 54	02 33
21	133	40.7	..	48.5	43	27.2	11.7	18	16.4	2.3	54.8	50	18 24	18 56	19 35	00 13	01 02	01 46	02 26
22	148	40.9		49.5	57	57.9	11.7	18	14.1	2.4	54.9	45	18 21	18 51	19 26	00 06	00 46	01 31	02 12
23	163	41.1		50.5	72	28.6	11.7	18	11.7	2.5	54.9	N 40	18 19	18 46	19 18	24 32	00 32	01 18	02 00
28 ^d 00	178	41.3	N 2	51.4	86	59.3	11.7	N18	09.2	2.6	54.9	35	18 17	18 43	19 12	24 20	00 20	01 07	01 50
01	193	41.5		52.4	101	30.0	11.7	18	06.6	2.7	54.9	30	18 16	18 40	19 08	24 10	00 10	00 57	01 42
02	208	41.7		53.4	116	00.7	11.6	18	03.9	2.7	54.9	20	18 13	18 35	19 01	23 53	24 40	00 40	01 26
03	223	41.9	..	54.4	130	31.3	11.7	18	01.2	2.9	55.0	N 10	18 11	18 32	18 56	23 38	24 26	00 26	01 13
04	238	42.0		55.3	145	02.0	11.6	17	58.3	2.9	55.0	0	18 09	18 29	18 53	23 24	24 12	00 12	01 01
05	253	42.2		56.3	159	32.6	11.7	17	55.4	3.0	55.0	S 10	18 07	18 28	18 52	23 10	23 58	24 48	00 48
06	268	42.4	N 2	57.3	174	03.3	11.6	N17	52.4	3.2	55.0	20	18 05	18 27	18 52	22 54	23 44	24 35	00 35
07	283	42.6		58.3	188	33.9	11.6	17	49.2	3.2	55.1	30	18 03	18 27	18 54	22 37	23 27	24 19	00 19
08	298	42.8	2	59.3	203	04.5	11.6	17	46.0	3.3	55.1	35	18 02	18 27	18 56	22 27	23 17	24 10	00 10
09	313	43.0	3	00.2	217	35.1	11.6	17	42.7	3.3	55.1	40	18 00	18 27	18 59	22 15	23 06	24 00	00 00
10	328	43.2		01.2	232	05.7	11.6	17	39.4	3.5	55.1	45	17 59	18 28	19 02	22 02	22 52	23 48	24 48
11	343</																		

T. M. G.	ARIES		VENUS -3.5		MARTE +1.4		JUPITER -1.7		SATURNO +0.3		ESTRELLAS														
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.											
29 00 01 02 03 04 05 06 07 08 M A R T E S 12 13 14 15 16 17 18 19 20 21 22 23	186	17.0	169	48.3	N15	42.3	207	09.5	S10	04.3	129	26.7	N19	18.2	53	26.8	N18	40.0	Acamar	315	39.4	S40	24.0		
	201	19.4	184	52.0		41.8	222	10.1		03.5	144	28.7		18.3	68	29.3		40.0	Achernar	335	47.6	S57	21.3		
	216	21.9	199	55.6		41.3	237	10.8		02.8	159	30.7		18.4	83	31.8		40.0	Acrux	173	39.1	S62	58.5		
	231	24.4	214	59.3	..	40.8	252	11.4	..	02.1	174	32.7	..	18.5	98	34.3	..	40.1	Adhara	255	33.9	S28	56.8		
	246	26.8	230	02.9		40.4	267	12.0		01.4	189	34.6		18.6	113	36.9		40.1	Aldebaran	291	20.8	N16	27.7		
	261	29.3	245	06.6		39.9	282	12.6	10	00.7	204	36.6		18.7	128	39.4		40.1							
	276	31.8	260	10.3	N15	39.4	297	13.3	S	9	59.9	219	38.6	N19	18.8	143	41.9	N18	40.1	Alioth	166	44.1	N56	04.9	
	291	34.2	275	13.9		38.9	312	13.9		59.2	234	40.6		19.0	158	44.4		40.1	Alkaid	153	19.9	N49	25.4		
	306	36.7	290	17.6		38.4	327	14.5		58.5	249	42.6		19.1	173	47.0		40.1	Al Na'ir	28	18.3	S47	04.2		
	321	39.2	305	21.3	..	37.9	342	15.1	..	57.8	264	44.5	..	19.2	188	49.5	..	40.1	Alnilam	276	14.1	S	1	13.2	
	336	41.6	320	24.9		37.4	357	15.8		57.1	279	46.5		19.3	203	52.0		40.2	Alphard	218	22.6	S	8	33.8	
	351	44.1	335	28.6		36.9	12	16.4		56.3	294	48.5		19.4	218	54.5		40.2							
	6	46.6	350	32.3	N15	36.3	27	17.0	S	9	55.6	309	50.5	N19	19.5	233	57.0	N18	40.2	Alphecca	126	33.8	N26	47.3	
	21	49.0	5	36.0		35.8	42	17.6		54.9	324	52.4		19.6	248	59.6		40.2	Alpheratz	358	12.1	N28	57.8		
	36	51.5	20	39.6		35.3	57	18.3		54.2	339	54.4		19.7	264	02.1		40.2	Altair	62	34.9	N	8	48.4	
	51	53.9	35	43.3	..	34.8	72	18.9	..	53.5	354	56.4	..	19.8	279	04.6	..	40.2	Ankaa	353	43.0	S42	25.8		
	66	56.4	50	47.0		34.3	87	19.5		52.7	9	58.4		19.9	294	07.1		40.3	Antares	112	59.5	S26	22.9		
	81	58.9	65	50.7		33.8	102	20.1		52.0	25	00.4		20.0	309	09.7		40.3							
	97	01.3	80	54.4	N15	33.2	117	20.8	S	9	51.3	40	02.3	N19	20.2	324	12.2	N18	40.3	Arcturus	146	20.3	N19	17.9	
	112	03.8	95	58.1		32.7	132	21.4		50.6	55	04.3		20.3	339	14.7		40.3	Atria	108	25.6	S68	59.0		
	127	06.3	111	01.8		32.2	147	22.0		49.8	70	06.3		20.4	354	17.2		40.3	Avior	234	28.8	S59	26.6		
	142	08.7	126	05.5	..	31.6	162	22.6	..	49.1	85	08.3	..	20.5	9	19.7	..	40.3	Bellatrix	279	01.4	N	6	19.6	
	157	11.2	141	09.2		31.1	177	23.3		48.4	100	10.2		20.6	24	22.3		40.3	Betelgeuse	271	30.9	N	7	24.0	
172	13.7	156	12.9		30.6	192	23.9		47.7	115	12.2		20.7	39	24.8		40.4								
30 00 01 02 03 04 05 06 07 M I E R O L E S 12 13 14 15 16 17 18 19 20 21 22 23	187	16.1	171	16.6	N15	30.0	207	24.5	S	9	47.0	130	14.2	N19	20.8	54	27.3	N18	40.4	Canopus	264	08.3	S52	41.4	
	202	18.6	186	20.3		29.5	222	25.1		46.2	145	16.2		20.9	69	29.8		40.4	Capella	281	14.9	N45	58.6		
	217	21.0	201	24.0		28.9	237	25.8		45.5	160	18.2		21.0	84	32.3		40.4	Deneb	49	50.2	N45	11.8		
	232	23.5	216	27.7	..	28.4	252	26.4	..	44.8	175	20.1	..	21.1	99	34.9	..	40.4	Denebola	183	01.1	N14	41.8		
	247	26.0	231	31.4		27.8	267	27.0		44.1	190	22.1		21.2	114	37.4		40.4	Diphda	349	23.6	S18	06.8		
	262	28.4	246	35.1		27.3	282	27.7		43.3	205	24.1		21.4	129	39.9		40.5							
	277	30.9	261	38.8	N15	26.7	297	28.3	S	9	42.6	220	26.1	N19	21.5	144	42.4	N18	40.5	Dubhe	194	24.5	N61	52.4	
	292	33.4	276	42.5		26.2	312	28.9		41.9	235	28.0		21.6	159	44.9		40.5	Elnath	278	47.2	N28	35.3		
	307	35.8	291	46.3		25.6	327	29.5		41.2	250	30.0		21.7	174	47.5		40.5	Eltanin	90	58.7	N51	29.3		
	322	38.3	306	50.0	..	25.0	342	30.2	..	40.4	265	32.0	..	21.8	189	50.0	..	40.5	Enif	34	14.1	N	9	46.1	
	337	40.8	321	53.7		24.5	357	30.8		39.7	280	34.0		21.9	204	52.5		40.5	Fomalhaut	15	54.3	S29	44.6		
	352	43.2	336	57.4		23.9	12	31.4		39.0	295	35.9		22.0	219	55.0		40.5							
	7	45.7	352	01.2	N15	23.3	27	32.0	S	9	38.3	310	37.9	N19	22.1	234	57.5	N18	40.6	Gacrux	172	30.7	S56	59.3	
	22	48.2	7	04.9		22.8	42	32.7		37.5	325	39.9		22.2	250	00.0		40.6	Gienah	176	20.0	S17	25.1		
	37	50.6	22	08.6		22.2	57	33.3		36.8	340	41.9		22.3	265	02.6		40.6	Hadar	149	26.0	S60	15.8		
	52	53.1	37	12.3	..	21.6	72	33.9	..	36.1	355	43.8	..	22.5	280	05.1	..	40.6	Hamal	328	31.9	N23	21.2		
	67	55.5	52	16.1		21.0	87	34.6		35.4	10	45.8		22.6	295	07.6		40.6	Kaus Aust.	84	19.9	S34	23.6		
	82	58.0	67	19.8		20.5	102	35.2		34.6	25	47.8		22.7	310	10.1		40.6							
	98	00.5	82	23.5	N15	19.9	117	35.8	S	9	33.9	40	49.8	N19	22.8	325	12.6	N18	40.6	Kochab	137	18.0	N74	14.8	
	113	02.9	97	27.3		19.3	132	36.5		33.2	55	51.7		22.9	340	15.1		40.6	Markab	14	05.8	N15	04.9		
	128	05.4	112	31.0		18.7	147	37.1		32.5	70	53.7		23.0	355	17.7		40.7	Menkar	314	43.8	N	3	59.9	
	143	07.9	127	34.8	..	18.1	162	37.7	..	31.7	85	55.7	..	23.1	10	20.2	..	40.7	Menkent	148	39.4	S36	15.5		
	158	10.3	142	38.5		17.5	177	38.3		31.0	100	57.7		23.2	25	22.7		40.7	Miaplacidus	221	44.8	S69	37.8		
173	12.8	157	42.3		16.9	192	39.0		30.3	115	59.6		23.3	40	25.2		40.7								
31 00 01 02 03 04 05 06 07 08 J U E V E S 12 13 14 15 16 17 18 19 20 21 22 23	188	15.3	172	46.0	N15	16.3	207	39.6	S	9	29.6	131	01.6	N19	23.4	55	27.7	N18	40.7	Mirfak	309	19.8	N49	46.9	
	203	17.7	187	49.8		15.7	222	40.2		28.8	146	03.6		23.5	70	30.2		40.7	Nunki	76	32.1	S26	19.4		
	218	20.2	202	53.5		15.1	237	40.9		28.1	161	05.5		23.7	85	32.8		40.7	Peacock	54	02.4	S56	48.3		
	233	22.7	217	57.3	..	14.5	252	41.5	..	27.4	176	07.5	..	23.8	100	35.3	..	40.8	Pollux	244	00.9	N28	04.8		
	248	25.1	233	01.0		13.9	267	42.1		26.7	191	09.5		23.9	115	37.8		40.8	Procyon	245	28.2	N	5	16.8	
	263	27.6	248	04.8		13.3	282	42.8		25.9	206	11.5		24.0	130	40.3		40.8							
	278	30.0	263	08.5	N15	12.7	297	43.4	S	9	25.2	221	13.4	N19	24.1	145	42.8	N18	40.8	Rasalhague	96	31.7	N12	34.5	
	293	32.5	278	12.3		12.0	312	44.0		24.5	236	15.4		24.2	160	45.3		40.8	Regulus	208	12.2	N12	04.5		
	308	35.0	293	16.0		11.4	327	44.6		23.7	251	17.4		24.3	175	47.8		40.8	Rigel	281	38.4	S	8	13.9	
	323	37.4	308	19.8	..	10.8	342	45.3	..	23.0	266	19.3	..	24.4	190	50.4	..	40.8	Rigil Kent.	140	28.4	S60	44.4		
	338	39.9	323	23.6		10.2	357	45.9		22.3	281	21.3		24.5	205	52.9		40.9	Sabik	102	43.7	S15	41.8		
	353	42.4	338	27.3		09.5	12	46.5		21.6	296	23.3		24.6	220	55.4		40.9							
	8	44.8	353	31.1	N15	08.9	27	47.2	S	9	20.8	311	25.3	N19	24.8	235	57.9	N18	40.9	Schedar	350	12.2	N56	24.7	
	23	47.3	8	34.9		08.3	42	47.8		20.1	326	27.2		24.9	251	00.4		40.9	Shaula	96	58.8	S37	05.1		
	38	49.8	23	38.6		07.7	57	48.4		19.4	341	29.2		25.0	266										

T. M. G.	ARIES		VENUS -3.4		MARTE +1.4		JUPITER -1.7		SATURNO +0.3		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
I 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	189 14.4	174 16.4	N15 01.2	207 54.8	S 9 12.1	131 48.9	N19 26.1	56 28.0	N18 41.0	Acamar	315 39.4	S40 24.0	
	204 16.9	189 20.2	15 00.5	222 55.4	11.4	146 50.9	26.2	71 30.6	41.0	Achernar	335 47.6	S57 21.2	
	219 19.3	204 24.0	14 59.9	237 56.0	10.6	161 52.8	26.3	86 33.1	41.1	Acrux	173 39.1	S62 58.5	
	234 21.8	219 27.8	.. 59.2	252 56.7	.. 09.9	176 54.8	.. 26.4	101 35.6	.. 41.1	Adhara	255 33.9	S28 56.8	
	249 24.3	234 31.6	58.5	267 57.3	09.2	191 56.8	26.5	116 38.1	41.1	Aldebaran	291 20.9	N16 27.7	
	264 26.7	249 35.4	57.9	282 57.9	08.4	206 58.7	26.6	131 40.6	41.1				
	279 29.2	264 39.2	N14 57.2	297 58.6	S 9 07.7	222 00.7	N19 26.7	146 43.1	N18 41.1	Alioth	166 44.1	N56 04.9	
	294 31.6	279 42.9	56.5	312 59.2	07.0	237 02.7	26.8	161 45.6	41.1	Alkaid	153 19.9	N49 25.5	
	309 34.1	294 46.7	55.9	327 59.8	06.2	252 04.6	26.9	176 48.1	41.1	Al Na'ir	28 18.3	S47 04.1	
	324 36.6	309 50.5	.. 55.2	343 00.5	.. 05.5	267 06.6	.. 27.1	191 50.6	.. 41.1	Anilam	276 14.1	S 1 13.2	
	339 39.0	324 54.3	54.5	358 01.1	04.8	282 08.6	27.2	206 53.1	41.1	Alphard	218 22.7	S 8 33.8	
	354 41.5	339 58.1	53.8	13 01.7	04.1	297 10.5	27.3	221 55.7	41.2				
	9 44.0	355 01.9	N14 53.1	28 02.4	S 9 03.3	312 12.5	N19 27.4	236 58.2	N18 41.2	Alphecca	126 33.8	N26 47.3	
	24 46.4	10 05.7	52.4	43 03.0	02.6	327 14.5	27.5	252 00.7	41.2	Alpheratz	358 12.1	N28 57.8	
	39 48.9	25 09.5	51.8	58 03.6	01.9	342 16.4	27.6	267 03.2	41.2	Altair	62 34.9	N 8 48.4	
	54 51.4	40 13.3	.. 51.1	73 04.3	.. 01.1	357 18.4	.. 27.7	282 05.7	.. 41.2	Ankaa	353 43.0	S42 25.8	
	69 53.8	55 17.1	50.4	88 04.9	9 00.4	12 20.4	27.8	297 08.2	41.2	Antares	112 59.5	S26 22.9	
	84 56.3	70 20.9	49.7	103 05.5	8 59.7	27 22.3	27.9	312 10.7	41.2				
	99 58.8	85 24.7	N14 49.0	118 06.2	S 8 58.9	42 24.3	N19 28.0	327 13.2	N18 41.2	Arcturus	146 20.3	N19 17.9	
	115 01.2	100 28.6	48.3	133 06.8	58.2	57 26.3	28.2	342 15.7	41.3	Atria	108 25.6	S68 59.0	
	130 03.7	115 32.4	47.6	148 07.5	57.5	72 28.2	28.3	357 18.2	41.3	Avior	234 28.9	S59 26.6	
	145 06.1	130 36.2	.. 46.9	163 08.1	.. 56.7	87 30.2	.. 28.4	12 20.7	.. 41.3	Bellatrix	279 01.4	N 6 19.6	
	160 08.6	145 40.0	46.2	178 08.7	56.0	102 32.2	28.5	27 23.2	41.3	Betelgeuse	271 30.9	N 7 24.0	
175 11.1	160 43.8	45.5	193 09.4	55.3	117 34.1	28.6	42 25.8	41.3					
2 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	190 13.5	175 47.6	N14 44.7	208 10.0	S 8 54.5	132 36.1	N19 28.7	57 28.3	N18 41.3	Canopus	264 08.3	S52 41.4	
	205 16.0	190 51.4	44.0	223 10.6	53.8	147 38.1	28.8	72 30.8	41.3	Capella	281 14.9	N45 58.6	
	220 18.5	205 55.2	43.3	238 11.3	53.1	162 40.0	28.9	87 33.3	41.3	Deneb	49 50.2	N45 11.7	
	235 20.9	220 59.0	.. 42.6	253 11.9	.. 52.3	177 42.0	.. 29.0	102 35.8	.. 41.3	Denebola	183 01.1	N14 41.8	
	250 23.4	236 02.9	41.9	268 12.5	51.6	192 44.0	29.1	117 38.3	41.3	Diphda	349 23.6	S18 06.8	
	265 25.9	251 06.7	41.2	283 13.2	50.9	207 45.9	29.2	132 40.8	41.4				
	280 28.3	266 10.5	N14 40.4	298 13.8	S 8 50.1	222 47.9	N19 29.4	147 43.3	N18 41.4	Dubhe	194 24.5	N61 52.4	
	295 30.8	281 14.3	39.7	313 14.5	49.4	237 49.8	29.5	162 45.8	41.4	Elnath	278 47.2	N28 35.3	
	310 33.3	296 18.1	39.0	328 15.1	48.7	252 51.8	29.6	177 48.3	41.4	Eltanin	90 58.7	N51 29.3	
	325 35.7	311 22.0	.. 38.3	343 15.7	.. 47.9	267 53.8	.. 29.7	192 50.8	.. 41.4	Enif	34 14.1	N 9 46.1	
	340 38.2	326 25.8	37.5	358 16.4	47.2	282 55.7	29.8	207 53.3	41.4	Fomalhaut	15 54.3	S29 44.5	
	355 40.6	341 29.6	36.8	13 17.0	46.5	297 57.7	29.9	222 55.8	41.4				
	10 43.1	356 33.4	N14 36.1	28 17.6	S 8 45.7	312 59.7	N19 30.0	237 58.3	N18 41.4	Gacrux	172 30.7	S56 59.3	
	25 45.6	11 37.2	35.3	43 18.3	45.0	328 01.6	30.1	253 00.8	41.4	Gienah	176 20.0	S17 25.1	
	40 48.0	26 41.1	34.6	58 18.9	44.3	343 03.6	30.2	268 03.3	41.5	Hadar	149 26.0	S60 15.8	
	55 50.5	41 44.9	.. 33.8	73 19.6	.. 43.5	358 05.6	.. 30.3	283 05.8	.. 41.5	Hamal	328 31.9	N23 21.2	
	70 53.0	56 48.7	33.1	88 20.2	42.8	13 07.5	30.5	298 08.3	41.5	Kaus Aust.	84 19.9	S34 23.6	
	85 55.4	71 52.5	32.3	103 20.8	42.0	28 09.5	30.6	313 10.8	41.5				
	100 57.9	86 56.4	N14 31.6	118 21.5	S 8 41.3	43 11.4	N19 30.7	328 13.3	N18 41.5	Kochab	137 18.0	N74 14.8	
	116 00.4	102 00.2	30.8	133 22.1	40.6	58 13.4	30.8	343 15.8	41.5	Markab	14 05.8	N15 04.9	
	131 02.8	117 04.0	30.1	148 22.8	39.8	73 15.4	30.9	358 18.3	41.5	Menkar	314 43.8	N 3 59.9	
	146 05.3	132 07.9	.. 29.3	163 23.4	.. 39.1	88 17.3	.. 31.0	13 20.9	.. 41.5	Menkent	148 39.4	S36 15.5	
	161 07.7	147 11.7	28.6	178 24.0	38.4	103 19.3	31.1	28 23.4	41.5	Miaplacidus	221 44.8	S69 37.8	
176 10.2	162 15.5	27.8	193 24.7	37.6	118 21.2	31.2	43 25.9	41.5					
3 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	191 12.7	177 19.3	N14 27.1	208 25.3	S 8 36.9	133 23.2	N19 31.3	58 28.4	N18 41.6	Mirfak	309 19.8	N49 46.9	
	206 15.1	192 23.2	26.3	223 25.9	36.2	148 25.2	31.4	73 30.9	41.6	Nunki	76 32.1	S26 19.4	
	221 17.6	207 27.0	25.5	238 26.6	35.4	163 27.1	31.6	88 33.4	41.6	Peacock	54 02.3	S56 48.3	
	236 20.1	222 30.8	.. 24.8	253 27.2	.. 34.7	178 29.1	.. 31.7	103 35.9	.. 41.6	Pollux	244 00.9	N28 04.8	
	251 22.5	237 34.7	24.0	268 27.9	33.9	193 31.1	31.8	118 38.4	41.6	Procyon	245 28.2	N 5 16.8	
	266 25.0	252 38.5	23.2	283 28.5	33.2	208 33.0	31.9	133 40.9	41.6				
	281 27.5	267 42.3	N14 22.4	298 29.1	S 8 32.5	223 35.0	N19 32.0	148 43.4	N18 41.6	Rasalhague	96 31.6	N12 34.5	
	296 29.9	282 46.2	21.7	313 29.8	31.7	238 36.9	32.1	163 45.9	41.6	Regulus	208 12.3	N12 04.5	
	311 32.4	297 50.0	20.9	328 30.4	31.0	253 38.9	32.2	178 48.4	41.6	Rigel	281 38.4	S 8 13.9	
	326 34.9	312 53.8	.. 20.1	343 31.1	.. 30.3	268 40.9	.. 32.3	193 50.9	.. 41.6	Rigil Kent.	140 28.3	S60 44.4	
	341 37.3	327 57.7	19.3	358 31.7	29.5	283 42.8	32.4	208 53.4	41.6	Sabik	102 43.7	S15 41.8	
	356 39.8	343 01.5	18.5	13 32.4	28.8	298 44.8	32.5	223 55.9	41.7				
	11 42.2	358 05.4	N14 17.8	28 33.0	S 8 28.1	313 46.7	N19 32.7	238 58.4	N18 41.7	Schedar	350 12.2	N56 24.7	
	26 44.7	13 09.2	17.0	43 33.6	27.3	328 48.7	32.8	254 00.9	41.7	Shaula	96 58.8	S37 05.1	
	41 47.2	28 13.0	16.2	58 34.3	26.6	343 50.6	32.9	269 03.4	41.7	Sirius	258 57.8	S16 41.4	
	56 49.6	43 16.9	.. 15.4	73 34.9	.. 25.8	358 52.6	.. 33.0	284 05.9	.. 41.7	Spica	158 59.7	S11 02.7	
	71 52.1	58 20.7	14.6	88 35.6	25.1	13 54.6	33.1	299 08.4	41.7	Suhail	223 12.2	S43 20.8	
	86 54.6	73 24.5	13.8	103 36.2	24.4	28 56.5	33.2	314 10.9	41.7				
	101 57.0	88 28.4	N14 13.0	118 36.8	S 8 23.6	43 58.5	N19 33.3	329 13.4	N18 41.7	Vega	80 57.4	N38 45.5	
	116 59.5	103 32.2	12.2	133 37.5	22.9	59 00.4	33.4	344 15.9	41.7	Zuben'ubi	137 35.3	S15 56.9	
	132 02.0	118 36.1	11.4	148 38.1	22.1	74 02.4	33.5	359 18.4	41.7				
	147 04.4	133 39.9	.. 10.6	163 38.8	.. 21.4	89 04.4	.. 33.6	14 20.9	.. 41.7				
	162 06.9	148 43.7	09.8	178 39.4	20.7	104 06.3	33.8	29 23.4	41.8				
177 09.4	163 47.6	09.0	193 40.0	19.9	119 08.3	33.9	44 25.9	41.8					
										A. H. S.	Pas. Mer.		
										h m	h m		
										Venus	345 34.1	12 14	
										Marte	17 56.5	10 07	
										Júpiter	302 22.6	15 08	
										Saturno	227 14.7	20 07	
Pas. Mer.	11 17.2	v 3.8	d 0.7	v 0.6	d 0.7	v 2.0	d 0.1	v 2.5	d 0.0				

T. M. G.	ARIES			VENUS -3.2			MARTE +1.4			JUPITER -1.6			SATURNO +0.4			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
L U N E S	4 00	192 11.8	178 51.4 N14	08.2	208 40.7 S	8 19.2	134 10.2 N19	34.0	59 28.4 N18	41.8	Acomar	315 39.4 S40	24.0						
	01	207 14.3	193 55.3	07.4	223 41.3	18.4	149 12.2	34.1	74 30.8	41.8	Achernar	335 47.6 S57	21.2						
	02	222 16.7	208 59.1	06.6	238 42.0	17.7	164 14.1	34.2	89 33.3	41.8	Acrux	173 39.1 S62	58.5						
	03	237 19.2	224 02.9	05.8	253 42.6	17.0	179 16.1	34.3	104 35.8	41.8	Adhara	255 34.0 S28	56.8						
	04	252 21.7	239 06.8	04.9	268 43.3	16.2	194 18.1	34.4	119 38.3	41.8	Aldebaran	291 20.9 N16	27.7						
	05	267 24.1	254 10.6	04.1	283 43.9	15.5	209 20.0	34.5	134 40.8	41.8									
	06	282 26.6	269 14.5 N14	03.3	298 44.5 S	8 14.7	224 22.0 N19	34.6	149 43.3 N18	41.8	Alioth	166 44.1 N56	04.9						
	07	297 29.1	284 18.3	02.5	313 45.2	14.0	239 23.9	34.7	164 45.8	41.8	Alkaid	153 19.9 N49	25.5						
	08	312 31.5	299 22.1	01.7	328 45.8	13.3	254 25.9	34.9	179 48.3	41.8	Al Na'ir	28 18.2 S47	04.1						
	09	327 34.0	314 26.0	00.8	343 46.5	12.5	269 27.8	35.0	194 50.8	41.8	Alnilam	276 14.2 S 1	13.2						
	10	342 36.5	329 29.8	00.0	358 47.1	11.8	284 29.8	35.1	209 53.3	41.9	Alphard	218 22.7 S 8	33.9						
	11	357 38.9	344 33.7	13 59.2	13 47.8	11.0	299 31.8	35.2	224 55.8	41.9									
	12	12 41.4	359 37.5 N13	58.4	28 48.4 S	8 10.3	314 33.7 N19	35.3	239 58.3 N18	41.9	Alphecca	126 33.8 N26	47.3						
	13	27 43.8	14 41.3	57.5	43 49.1	09.6	329 35.7	35.4	255 00.8	41.9	Alpheratz	358 12.1 N28	57.8						
	14	42 46.3	29 45.2	56.7	58 49.7	08.8	344 37.6	35.5	270 03.3	41.9	Altair	62 34.9 N 8	48.4						
	15	57 48.8	44 49.0	55.9	73 50.3	08.1	359 39.6	35.6	285 05.8	41.9	Ankaa	353 43.0 S42	25.8						
	16	72 51.2	59 52.9	55.0	88 51.0	07.3	14 41.5	35.7	300 08.3	41.9	Antares	112 59.5 S26	22.9						
	17	87 53.7	74 56.7	54.2	103 51.6	06.6	29 43.5	35.8	315 10.8	41.9									
	18	102 56.2	90 00.5 N13	53.3	118 52.3 S	8 05.9	44 45.4 N19	36.0	330 13.3 N18	41.9	Arcturus	146 20.3 N19	17.9						
	19	117 58.6	105 04.4	52.5	133 52.9	05.1	59 47.4	36.1	345 15.8	41.9	Atria	108 25.5 S68	59.0						
	20	133 01.1	120 08.2	51.7	148 53.6	04.4	74 49.3	36.2	0 18.3	41.9	Avior	234 28.9 S59	26.6						
	21	148 03.6	135 12.1	50.8	163 54.2	03.6	89 51.3	36.3	15 20.8	41.9	Bellatrix	279 01.4 N 6	19.6						
	22	163 06.0	150 15.9	50.0	178 54.9	02.9	104 53.3	36.4	30 23.2	41.9	Betelgeuse	271 30.9 N 7	24.0						
23	178 08.5	165 19.7	49.1	193 55.5	02.2	119 55.2	36.5	45 25.7	42.0										
M A R T E S	5 00	193 11.0	180 23.6 N13	48.3	208 56.1 S	8 01.4	134 57.2 N19	36.6	60 28.2 N18	42.0	Canopus	264 08.3 S52	41.4						
	01	208 13.4	195 27.4	47.4	223 56.8	8 00.7	149 59.1	36.7	75 30.7	42.0	Capella	281 14.9 N45	58.6						
	02	223 15.9	210 31.3	46.6	238 57.4	7 59.9	165 01.1	36.8	90 33.2	42.0	Deneb	49 50.2 N45	11.7						
	03	238 18.3	225 35.1	45.7	253 58.1	7 59.2	180 03.0	36.9	105 35.7	42.0	Denebola	183 01.1 N14	41.8						
	04	253 20.8	240 38.9	44.9	268 58.7	58.4	195 05.0	37.1	120 38.2	42.0	Diphda	349 23.6 S18	06.8						
	05	268 23.3	255 42.8	44.0	283 59.4	57.7	210 06.9	37.2	135 40.7	42.0									
	06	283 25.7	270 46.6 N13	43.1	299 00.0 S	7 57.0	225 08.9 N19	37.3	150 43.2 N18	42.0	Dubhe	194 24.5 N61	52.4						
	07	298 28.2	285 50.4	42.3	314 00.7	56.2	240 10.8	37.4	165 45.7	42.0	El Nath	278 47.2 N28	35.3						
	08	313 30.7	300 54.3	41.4	329 01.3	55.5	255 12.8	37.5	180 48.2	42.0	Eltanin	90 58.7 N51	29.3						
	09	328 33.1	315 58.1	40.6	344 02.0	54.7	270 14.7	37.6	195 50.7	42.0	Enif	34 14.1 N 9	46.2						
	10	343 35.6	331 02.0	39.7	359 02.6	54.0	285 16.7	37.7	210 53.2	42.0	Fomalhaut	15 54.3 S29	44.5						
	11	358 38.1	346 05.8	38.8	14 03.2	53.2	300 18.6	37.8	225 55.6	42.0									
	12	13 40.5	1 09.6 N13	38.0	29 03.9 S	7 52.5	315 20.6 N19	37.9	240 58.1 N18	42.0	Gacrux	172 30.7 S56	59.3						
	13	28 43.0	16 13.5	37.1	44 04.5	51.7	330 22.5	38.0	256 00.6	42.0	Gienah	176 20.0 S17	25.1						
	14	43 45.5	31 17.3	36.2	59 05.2	51.0	345 24.5	38.1	271 03.1	42.1	Hadar	149 26.0 S60	15.8						
	15	58 47.9	46 21.1	35.3	74 05.8	50.3	0 26.5	38.3	286 05.6	42.1	Hamal	328 31.9 N23	21.2						
	16	73 50.4	61 25.0	34.5	89 06.5	49.5	15 28.4	38.4	301 08.1	42.1	Kaus Aust.	84 19.9 S34	23.6						
	17	88 52.8	76 28.8	33.6	104 07.1	48.8	30 30.4	38.5	316 10.6	42.1									
	18	103 55.3	91 32.6 N13	32.7	119 07.8 S	7 48.0	45 32.3 N19	38.6	331 13.1 N18	42.1	Kochab	137 18.0 N74	14.8						
	19	118 57.8	106 36.5	31.8	134 08.4	47.3	60 34.3	38.7	346 15.6	42.1	Markab	14 05.8 N15	04.9						
	20	134 00.2	121 40.3	30.9	149 09.1	46.5	75 36.2	38.8	1 18.1	42.1	Menkar	314 43.8 N 3	59.9						
	21	149 02.7	136 44.1	30.1	164 09.7	45.8	90 38.2	38.9	16 20.5	42.1	Menkent	148 39.4 S36	15.6						
	22	164 05.2	151 47.9	29.2	179 10.4	45.1	105 40.1	39.0	31 23.0	42.1	Miaplacidus	221 44.9 S69	37.8						
23	179 07.6	166 51.8	28.3	194 11.0	44.3	120 42.1	39.1	46 25.5	42.1										
M I E R C O L E S	6 00	194 10.1	181 55.6 N13	27.4	209 11.7 S	7 43.6	135 44.0 N19	39.2	61 28.0 N18	42.1	Mirfak	309 19.8 N49	46.9						
	01	209 12.6	196 59.4	26.5	224 12.3	42.8	150 46.0	39.4	76 30.5	42.1	Nunki	76 32.0 S26	19.4						
	02	224 15.0	212 03.3	25.6	239 13.0	42.1	165 47.9	39.5	91 33.0	42.1	Peacock	54 02.3 S56	48.2						
	03	239 17.5	227 07.1	24.7	254 13.6	41.3	180 49.9	39.6	106 35.5	42.1	Pollux	244 01.0 N28	04.8						
	04	254 19.9	242 10.9	23.9	269 14.3	40.6	195 51.8	39.7	121 38.0	42.1	Procyon	245 28.2 N 5	16.8						
	05	269 22.4	257 14.7	23.0	284 14.9	39.8	210 53.8	39.8	136 40.4	42.1									
	06	284 24.9	272 18.6 N13	22.1	299 15.6 S	7 39.1	225 55.7 N19	39.9	151 42.9 N18	42.2	Rasalhague	96 31.6 N12	34.5						
	07	299 27.3	287 22.4	21.2	314 16.2	38.3	240 57.7	40.0	166 45.4	42.2	Regulus	208 12.3 N12	04.6						
	08	314 29.8	302 26.2	20.3	329 16.9	37.6	255 59.6	40.1	181 47.9	42.2	Rigel	281 38.4 S 8	13.9						
	09	329 32.3	317 30.0	19.4	344 17.5	36.9	271 01.6	40.2	196 50.4	42.2	Rigel Kent.	140 28.3 S60	44.4						
	10	344 34.7	332 33.8	18.5	359 18.1	36.1	286 03.5	40.3	211 52.9	42.2	Sabik	102 43.6 S15	41.8						
	11	359 37.2	347 37.7	17.6	14 18.8	35.4	301 05.4	40.5	226 55.4	42.2									
	12	14 39.7	2 41.5 N13	16.7	29 19.4 S	7 34.6	316 07.4 N19	40.6	241 57.9 N18	42.2	Schedar	350 12.2 N56	24.7						
	13	29 42.1	17 45.3	15.8	44 20.1	33.9	331 09.3	40.7	257 00.3	42.2	Shaula	96 58.8 S37	05.1						
	14	44 44.6	32 49.1	14.9	59 20.7	33.1	346 11.3	40.8	272 02.8	42.2	Sirius	258 57.8 S16	41.4						
	15	59 47.1	47 52.9	14.0	74 21.4	32.4	1 13.2	40.9	287 05.3	42.2	Spica	158 59.7 S11	02.7						
	16	74 49.5	62 56.8	13.0	89 22.0	31.6	16 15.2	41.0	302 07.8	42.2	Suhail	223 12.2 S43	20.8						

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	4		5		6		7	
												h	m	h	m	h	m	h	m
LUNES	4 00	179 12.8 N 5 33.8	1 51.3	8.2	S 5 42.3	11.3	60.2	N 72	00 20	03 17	04 36	20 45	22 55	25 17	01 17				
	01	194 13.0 34.8	16 18.5	8.2	5 53.6	11.2	60.3	N 70	01 47	03 36	04 45	20 29	22 26	24 23	00 23				
	02	209 13.2 35.7	30 45.7	8.2	6 04.8	11.2	60.3	68	02 24	03 52	04 53	20 16	22 05	23 50	25 22				
	03	224 13.4 36.7	45 12.9	8.1	6 16.0	11.2	60.3	66	02 49	04 04	04 59	20 06	21 48	23 26	24 52				
	04	239 13.6 37.6	59 40.0	8.0	6 27.2	11.2	60.3	64	03 08	04 14	05 05	19 57	21 34	23 07	24 29				
	05	254 13.8 38.6	74 07.0	8.0	6 38.4	11.1	60.3	62	03 23	04 23	05 10	19 50	21 23	22 52	24 11				
	06	269 14.0 N 5 39.5	88 34.0	8.0	6 49.5	11.1	60.4	60	03 35	04 30	05 14	19 44	21 13	22 39	23 56				
	07	284 14.1 40.5	103 01.0	7.9	7 00.6	11.1	60.4	N 58	03 46	04 37	05 17	19 38	21 05	22 28	23 43				
	08	299 14.3 41.5	117 27.9	7.9	7 11.7	11.0	60.4	56	03 55	04 42	05 21	19 33	20 58	22 19	23 33				
	09	314 14.5 42.4	131 54.8	7.8	7 22.7	10.9	60.4	54	04 03	04 47	05 24	19 29	20 51	22 10	23 23				
	10	329 14.7 43.4	146 21.6	7.7	7 33.6	11.0	60.4	52	04 10	04 52	05 26	19 25	20 45	22 03	23 14				
	11	344 14.9 44.3	160 48.3	7.7	7 44.6	10.9	60.4	50	04 16	04 56	05 29	19 21	20 40	21 56	23 07				
	12	359 15.1 N 5 45.3	175 15.0	7.7	7 55.5	10.8	60.5	45	04 28	05 04	05 34	19 13	20 28	21 42	22 50				
	13	14 15.2 46.2	189 41.7	7.6	8 06.3	10.8	60.5	N 40	04 38	05 11	05 38	19 07	20 19	21 30	22 37				
	14	29 15.4 47.2	204 08.3	7.6	8 17.1	10.7	60.5	35	04 46	05 16	05 42	19 01	20 11	21 20	22 25				
	15	44 15.6 48.1	218 34.9	7.5	8 27.8	10.7	60.5	30	04 52	05 21	05 45	18 57	20 04	21 11	22 16				
	16	59 15.8 49.1	233 01.4	7.4	8 38.5	10.7	60.5	20	05 02	05 28	05 50	18 48	19 52	20 56	21 58				
	17	74 16.0 50.0	247 27.8	7.4	8 49.2	10.5	60.5	N 10	05 09	05 34	05 55	18 41	19 41	20 42	21 44				
	18	89 16.2 N 5 51.0	261 54.2	7.4	8 59.7	10.6	60.5	0	05 15	05 39	05 59	18 34	19 31	20 30	21 30				
	19	104 16.3 51.9	276 20.6	7.3	9 10.3	10.5	60.6	S 10	05 18	05 43	06 04	18 28	19 22	20 18	21 16				
	20	119 16.5 52.9	290 46.9	7.3	9 20.8	10.4	60.6	20	05 20	05 46	06 08	18 21	19 11	20 05	21 01				
	21	134 16.7 53.8	305 13.2	7.2	9 31.2	10.3	60.6	30	05 21	05 49	06 13	18 13	18 59	19 50	20 45				
	22	149 16.9 54.8	319 39.4	7.2	9 41.5	10.3	60.6	35	05 21	05 50	06 16	18 08	18 53	19 42	20 35				
23	164 17.1 55.7	334 05.6	7.1	9 51.8	10.3	60.6	40	05 20	05 52	06 19	18 03	18 45	19 32	20 24					
							45	05 19	05 53	06 22	17 57	18 36	19 20	20 11					
MARTES	5 00	179 17.2 N 5 56.7	348 31.7	7.0	S10 02.1	10.2	60.6	S 50	05 17	05 54	06 27	17 50	18 26	19 07	19 55				
	01	194 17.4 57.6	2 57.7	7.1	10 12.3	10.1	60.6	52	05 16	05 55	06 28	17 46	18 21	19 00	19 48				
	02	209 17.6 58.6	17 23.8	6.9	10 22.4	10.0	60.6	54	05 14	05 55	06 31	17 43	18 15	18 53	19 39				
	03	224 17.8 59.5	31 49.7	6.9	10 32.4	10.0	60.6	56	05 13	05 56	06 33	17 39	18 09	18 46	19 30				
	04	239 18.0 60.5	46 15.6	6.9	10 42.4	9.9	60.6	58	05 11	05 56	06 35	17 35	18 03	18 37	19 20				
	05	254 18.2 61.4	60 41.5	6.8	10 52.3	9.9	60.7	S 60	05 08	05 57	06 38	17 30	17 55	18 27	19 08				
	06	269 18.3 N 6 02.4	75 07.3	6.8	S11 02.2	9.7	60.7												
	07	284 18.5 03.3	89 33.1	6.7	11 11.9	9.7	60.7												
	08	299 18.7 04.3	103 58.8	6.7	11 21.6	9.6	60.7												
	09	314 18.9 05.2	118 24.5	6.6	11 31.2	9.6	60.7												
	10	329 19.1 06.2	132 50.1	6.6	11 40.8	9.5	60.7												
	11	344 19.2 07.1	147 15.7	6.6	11 50.3	9.3	60.7												
	12	359 19.4 N 6 08.1	161 41.3	6.5	S11 59.6	9.4	60.7	N 72	19 33	20 54	///	04 37	04 30	04 20	04 02				
	13	14 19.6 09.0	176 06.8	6.4	12 09.0	9.2	60.7	N 70	19 23	20 33	22 27	04 47	04 47	04 50	04 57				
	14	29 19.8 10.0	190 32.2	6.4	12 18.2	9.1	60.7	68	19 15	20 17	21 47	04 55	05 02	05 12	05 30				
	15	44 20.0 10.9	204 57.6	6.4	12 27.3	9.1	60.7	66	19 08	20 04	21 21	05 01	05 13	05 30	05 55				
	16	59 20.2 11.9	219 23.0	6.3	12 36.4	9.0	60.7	64	19 02	19 53	21 01	05 07	05 23	05 44	06 14				
	17	74 20.3 12.8	233 48.3	6.2	12 45.4	8.9	60.7	62	18 57	19 45	20 45	05 12	05 31	05 56	06 29				
	18	89 20.5 N 6 13.8	248 13.5	6.3	S12 54.3	8.8	60.7	60	18 53	19 37	20 33	05 16	05 39	06 07	06 43				
	19	104 20.7 14.7	262 38.8	6.1	13 03.1	8.7	60.7	N 58	18 49	19 30	20 22	05 20	05 45	06 16	06 54				
	20	119 20.9 15.7	277 03.9	6.2	13 11.8	8.6	60.7	56	18 46	19 25	20 12	05 23	05 51	06 24	07 04				
	21	134 21.1 16.6	291 29.1	6.1	13 20.4	8.5	60.7	54	18 43	19 20	20 04	05 26	05 56	06 31	07 13				
	22	149 21.2 17.5	305 54.2	6.0	13 28.9	8.5	60.7	52	18 40	19 15	19 57	05 29	06 01	06 37	07 21				
23	164 21.4 18.5	320 19.2	6.0	13 37.4	8.3	60.7	50	18 38	19 11	19 51	05 31	06 05	06 43	07 28					
							45	18 33	19 02	19 38	05 37	06 14	06 55	07 43					
MIÉRCOLES	6 00	179 21.6 N 6 19.4	334 44.2	6.0	S13 45.7	8.3	60.7	N 40	18 28	18 56	19 28	05 41	06 22	07 06	07 55				
	01	194 21.8 20.4	349 09.2	5.9	13 54.0	8.1	60.7	35	18 24	18 50	19 20	05 45	06 28	07 15	08 06				
	02	209 22.0 21.3	3 34.1	5.9	14 02.1	8.1	60.7	30	18 21	18 45	19 14	05 49	06 34	07 23	08 15				
	03	224 22.1 22.3	17 59.0	5.9	14 10.2	7.9	60.7	20	18 15	18 38	19 03	05 55	06 44	07 36	08 31				
	04	239 22.3 23.2	32 23.9	5.8	14 18.1	7.9	60.7	N 10	18 10	18 32	18 56	06 00	06 53	07 48	08 45				
	05	254 22.5 24.2	46 48.7	5.8	14 26.0	7.7	60.7	0	18 06	18 27	18 51	06 05	07 01	07 59	08 58				
	06	269 22.7 N 6 25.1	61 13.5	5.7	S14 33.7	7.7	60.7	S 10	18 02	18 23	18 47	06 10	07 09	08 10	09 12				
	07	284 22.9 26.1	75 38.2	5.7	14 41.4	7.5	60.7	20	17 57	18 19	18 45	06 16	07 18	08 22	09 26				
	08	299 23.0 27.0	90 02.9	5.7	14 48.9	7.5	60.7	30	17 52	18 16	18 44	06 22	07 29	08 36	09 42				
	09	314 23.2 27.9	104 27.6	5.6	14 56.4	7.3	60.7	35	17 49	18 15	18 44	06 25	07 34	08 44	09 51				
	10	329 23.4 28.9	118 52.2	5.6	15 03.7	7.3	60.7	40	17 46	18 13	18 44	06 29	07 41	08 53	10 02				
	11	344 23.6 29.8	133 16.8	5.6	15 11.0	7.1	60.7	45	17 42	18 12	18 46	06 34	07 49	09 03	10 14				
	12	359 23.8 N 6 30.8	147 41.4	5.5	S15 18.1	7.0	60.7	S 50	17 38	18 10	18 48	06 40	07 58	09 16	10 30				
	13	14 23.9 31.7	162 05.9	5.5	15 25.1	6.9	60.7	52	17 36	18 10	18 49	06 42	08 03	09 22	10 37				
	14	29 24.1 32.7	176 30.4	5.5	15 32.0	6.8	60.6	54	17 34	18 09	18 50	06 45	08 07	09 29	10 45				
	15	44 24.3 33.6	190 54.9	5.5	15 38.8	6.7	60.6	56	17 32	18 09	18 52	06 48	08 13	09 36	10 54				
	16	59 24.5 34.5	205 19.4	5.4	1														

T. M. G.	ARIES		VENUS -3.2		MARTE +1.4		JUPITER -1.6		SATURNO +0.4		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
7 00	195 09.2	183 27.2	N13 05.7	209 27.3	S 7 25.6	136 30.8	N19 41.9	62 27.7	N18 42.2			Acamar	315 39.4	S40 24.0
01	210 11.7	198 31.1	04.8	224 27.9	24.9	151 32.7	42.0	77 30.2	42.2			Achernar	335 47.7	S57 21.2
02	225 14.2	213 34.9	03.9	239 28.6	24.2	166 34.7	42.1	92 32.6	42.3			Acru	173 39.1	S62 58.6
03	240 16.6	228 38.7	03.0	254 29.2	23.4	181 36.6	42.2	107 35.1	42.3			Adhara	255 34.0	S28 56.8
04	255 19.1	243 42.5	02.1	269 29.9	22.7	196 38.6	42.3	122 37.6	42.3			Aldebaran	291 20.9	N16 27.7
05	270 21.6	258 46.3	01.1	284 30.5	21.9	211 40.5	42.4	137 40.1	42.3					
06	285 24.0	273 50.1	N13 00.2	299 31.2	S 7 21.2	226 42.4	N19 42.5	152 42.6	N18 42.3			Alioth	166 44.1	N56 04.9
07	300 26.5	288 53.9	12 59.3	314 31.8	20.4	241 44.4	42.7	167 45.0	42.3			Alkaid	153 19.9	N49 25.5
08	315 28.9	303 57.7	58.4	329 32.5	19.7	256 46.3	42.8	182 47.5	42.3			Al Na'ir	28 18.2	S47 04.1
J 09	330 31.4	319 01.5	57.4	344 33.1	18.9	271 48.3	42.9	197 50.0	42.3			Alnilam	276 14.2	S 1 13.2
U 10	345 33.9	334 05.3	56.5	359 33.8	18.2	286 50.2	43.0	212 52.5	42.3			Alphard	218 22.7	S 8 33.9
E 11	0 36.3	349 09.1	55.6	14 34.4	17.4	301 52.2	43.1	227 55.0	42.3					
V 12	15 38.8	4 12.9	N12 54.6	29 35.1	S 7 16.7	316 54.1	N19 43.2	242 57.5	N18 42.3			Alphecca	126 33.8	N26 47.3
E 13	30 41.3	19 16.6	53.7	44 35.7	15.9	331 56.1	43.3	257 59.9	42.3			Alpheratz	358 12.0	N28 57.8
S 14	45 43.7	34 20.4	52.8	59 36.4	15.2	346 58.0	43.4	273 02.4	42.3			Altair	62 34.8	N 8 48.4
15	60 46.2	49 24.2	51.8	74 37.0	14.4	1 59.9	43.5	288 04.9	42.3			Ankaa	353 43.0	S42 25.8
16	75 48.7	64 28.0	50.9	89 37.7	13.7	17 01.9	43.6	303 07.4	42.3			Antares	112 59.5	S26 22.9
17	90 51.1	79 31.8	50.0	104 38.3	12.9	32 03.8	43.8	318 09.9	42.3					
18	105 53.6	94 35.6	N12 49.0	119 39.0	S 7 12.2	47 05.8	N19 43.9	333 12.3	N18 42.3			Arcturus	146 20.3	N19 17.9
19	120 56.0	109 39.4	48.1	134 39.6	11.4	62 07.7	44.0	348 14.8	42.3			Atria	108 25.5	S68 59.0
20	135 58.5	124 43.2	47.1	149 40.3	10.7	77 09.7	44.1	3 17.3	42.3			Avior	234 28.9	S59 26.6
21	151 01.0	139 46.9	46.2	164 40.9	09.9	92 11.6	44.2	18 19.8	42.3			Bellatrix	279 01.4	N 6 19.6
22	166 03.4	154 50.7	45.3	179 41.6	09.2	107 13.6	44.3	33 22.3	42.3			Betelgeuse	271 30.9	N 7 24.0
23	181 05.9	169 54.5	44.3	194 42.2	08.4	122 15.5	44.4	48 24.7	42.3					
8 00	196 08.4	184 58.3	N12 43.4	209 42.9	S 7 07.7	137 17.4	N19 44.5	63 27.2	N18 42.3			Canopus	264 08.4	S52 41.4
01	211 10.8	200 02.1	42.4	224 43.6	06.9	152 19.4	44.6	78 29.7	42.3			Capella	281 15.0	N45 58.6
02	226 13.3	215 05.8	41.5	239 44.2	06.2	167 21.3	44.7	93 32.2	42.3			Deneb	49 50.2	N45 11.7
03	241 15.8	230 09.6	40.5	254 44.9	05.4	182 23.3	44.9	108 34.7	42.4			Denebola	183 01.1	N14 41.8
04	256 18.2	245 13.4	39.6	269 45.5	04.7	197 25.2	45.0	123 37.1	42.4			Diphda	349 23.5	S18 06.8
05	271 20.7	260 17.2	38.6	284 46.2	03.9	212 27.2	45.1	138 39.6	42.4					
06	286 23.2	275 20.9	N12 37.7	299 46.8	S 7 03.2	227 29.1	N19 45.2	153 42.1	N18 42.4			Dubhe	194 24.5	N61 52.5
07	301 25.6	290 24.7	36.7	314 47.5	02.4	242 31.0	45.3	168 44.6	42.4			Elnath	278 47.2	N28 35.3
08	316 28.1	305 28.5	35.8	329 48.1	01.7	257 33.0	45.4	183 47.0	42.4			Eltanin	90 58.6	N51 29.3
V 09	331 30.5	320 32.2	34.8	344 48.8	00.9	272 34.9	45.5	198 49.5	42.4			Enif	34 14.0	N 9 46.2
I 10	346 33.0	335 36.0	33.9	359 49.4	7 00.2	287 36.9	45.6	213 52.0	42.4			Fomalhaut	15 54.3	S29 44.5
E 11	1 35.5	350 39.8	32.9	14 50.1	6 59.4	302 38.8	45.7	228 54.5	42.4					
N 12	16 37.9	5 43.5	N12 32.0	29 50.8	S 6 58.7	317 40.7	N19 45.8	243 57.0	N18 42.4			Gacrux	172 30.7	S56 59.3
N 13	31 40.4	20 47.3	31.0	44 51.4	57.9	332 42.7	46.0	258 59.4	42.4			Gienah	176 20.0	S17 25.1
E 14	46 42.9	35 51.0	30.1	59 52.1	57.2	347 44.6	46.1	274 01.9	42.4			Hadar	149 25.9	S60 15.8
S 15	61 45.3	50 54.8	29.1	74 52.7	56.4	2 46.6	46.2	289 04.4	42.4			Hamal	328 31.9	N23 21.2
16	76 47.8	65 58.5	28.2	89 53.4	55.7	17 48.5	46.3	304 06.9	42.4			Kaus Aust.	84 19.8	S34 23.6
17	91 50.3	81 02.3	27.2	104 54.0	54.9	32 50.5	46.4	319 09.3	42.4					
18	106 52.7	96 06.0	N12 26.2	119 54.7	S 6 54.2	47 52.4	N19 46.5	334 11.8	N18 42.4			Kochab	137 18.0	N74 14.8
19	121 55.2	111 09.8	25.3	134 55.3	53.4	62 54.3	46.6	349 14.3	42.4			Markab	14 05.7	N15 04.9
20	136 57.7	126 13.5	24.3	149 56.0	52.7	77 56.3	46.7	4 16.8	42.4			Menkar	314 43.8	N 3 59.9
21	152 00.1	141 17.3	23.4	164 56.7	51.9	92 58.2	46.8	19 19.2	42.4			Menkent	148 39.3	S36 15.6
22	167 02.6	156 21.0	22.4	179 57.3	51.2	108 00.2	46.9	34 21.7	42.4			Miaplacidus	221 44.9	S69 37.8
23	182 05.0	171 24.8	21.4	194 58.0	50.4	123 02.1	47.1	49 24.2	42.4					
9 00	197 07.5	186 28.5	N12 20.5	209 58.6	S 6 49.6	138 04.0	N19 47.2	64 26.7	N18 42.4			Mirfak	309 19.8	N49 46.9
01	212 10.0	201 32.2	19.5	224 59.3	48.9	153 06.0	47.3	79 29.1	42.4			Nunki	76 32.0	S26 19.4
02	227 12.4	216 36.0	18.5	239 59.9	48.1	168 07.9	47.4	94 31.6	42.4			Peacock	54 02.3	S56 48.2
03	242 14.9	231 39.7	17.6	255 00.6	47.4	183 09.9	47.5	109 34.1	42.4			Pollux	244 01.0	N28 04.8
04	257 17.4	246 43.4	16.6	270 01.2	46.6	198 11.8	47.6	124 36.6	42.4			Procyon	245 28.2	N 5 16.8
05	272 19.8	261 47.2	15.6	285 01.9	45.9	213 13.7	47.7	139 39.0	42.4					
06	287 22.3	276 50.9	N12 14.7	300 02.6	S 6 45.1	228 15.7	N19 47.8	154 41.5	N18 42.4			Rasalhague	96 31.6	N12 34.5
07	302 24.8	291 54.6	13.7	315 03.2	44.4	243 17.6	47.9	169 44.0	42.4			Regulus	208 12.3	N12 04.6
08	317 27.2	306 58.4	12.7	330 03.9	43.6	258 19.5	48.0	184 46.5	42.4			Rigel	281 38.4	S 8 13.9
S 09	332 29.7	322 02.1	11.8	345 04.5	42.9	273 21.5	48.1	199 48.9	42.4			Rigil Kent.	140 28.3	S60 44.4
A 10	347 32.1	337 05.8	10.8	0 05.2	42.1	288 23.4	48.3	214 51.4	42.4			Sabik	102 43.6	S15 41.8
B 11	2 34.6	352 09.5	09.8	15 05.8	41.4	303 25.4	48.4	229 53.9	42.4					
A 12	17 37.1	7 13.2	N12 08.9	30 06.5	S 6 40.6	318 27.3	N19 48.5	244 56.3	N18 42.4			Schedar	350 12.1	N56 24.7
D 13	32 39.5	22 17.0	07.9	45 07.2	39.9	333 29.2	48.6	259 58.8	42.4			Shaula	96 58.7	S37 05.1
O 14	47 42.0	37 20.7	06.9	60 07.8	39.1	348 31.2	48.7	275 01.3	42.4			Sirius	258 57.8	S16 41.4
15	62 44.5	52 24.4	05.9	75 08.5	38.3	3 33.1	48.8	290 03.8	42.4			Spica	158 59.7	S11 02.7
16	77 46.9	67 28.1	05.0	90 09.1	37.6	18 35.0	48.9	305 06.2	42.4			Suhail	223 12.3	S43 20.8
17	92 49.4	82 31.8	04.0	105 09.8	36.8	33 37.0	49.0	320 08.7	42.4					
18	107 51.9	97 35.5	N12 03.0	120 10.4	S 6 36.1	48 38.9	N19 49.1	335 11.2	N18 42.4			Vega	80 57.3	N38 45.5
19	122 54.3	112 39.2	02.0	135 11.1	35.3	63 40.9	49.2	350 13.6	42.4			Zuben'ubi	137 35.3	S15 56.9
20	137 56.8	127 42.9	01.1	150 11.8	34.6	78 42.8	49.4	5 16.1	42.4					
21	152 59.3	142 46.6	12 00.1	165 12.4	33.8	93 44.7	49.5	20 18.6	42.4					
22	168 01.7	157 50.3	11 59.1	180 13.1	33.1	108 46.7	49.6	35 21.1	42.4			Venus	348 49.9	h 11 37
23	183 04.2	172 54.0	58.1	195 13.7	32.3	123 48.6	49.7	50 23.5	42.4			Marte	13 34.5	10

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		7	8	9	10	
JUEVES	7 00	179 25.9 N 6 42.1	320 34.0	5.3	S16 34.9	5.6	60.5	N 72	////	02 56	04 19	01 17	■	■	05 07
	01	194 26.1 43.0	334 58.3	5.2	16 40.5	5.5	60.5	N 70	01 11	03 19	04 31	00 23	02 08	03 19	03 47
	02	209 26.3 44.0	349 22.5	5.2	16 46.0	5.4	60.5	68	02 01	03 37	04 40	25 22	01 22	02 29	03 08
	03	224 26.4 44.9	3 46.7	5.2	16 51.4	5.3	60.5	66	02 31	03 51	04 48	24 52	00 52	01 57	02 41
	04	239 26.6 45.8	18 10.9	5.1	16 56.7	5.2	60.5	64	02 53	04 03	04 54	24 29	00 29	01 34	02 20
	05	254 26.8 46.8	32 35.0	5.2	17 01.9	5.0	60.5	62	03 10	04 12	05 00	24 11	00 11	01 15	02 04
	06	269 27.0 N 6 47.7	46 59.2	5.1	S17 06.9	4.9	60.5	60	03 24	04 21	05 05	23 56	25 00	01 00	01 49
	07	284 27.1 48.7	61 23.3	5.1	17 11.8	4.8	60.5	N 58	03 36	04 28	05 09	23 43	24 47	00 47	01 37
	08	299 27.3 49.6	75 47.4	5.2	17 16.6	4.7	60.4	56	03 46	04 34	05 13	23 33	24 36	00 36	01 27
	09	314 27.5 50.5	90 11.6	5.1	17 21.3	4.5	60.4	54	03 54	04 40	05 16	23 23	24 26	00 26	01 18
	10	329 27.7 51.5	104 35.7	5.1	17 25.8	4.5	60.4	52	04 02	04 44	05 19	23 14	24 17	00 17	01 09
	11	344 27.9 52.4	118 59.8	5.0	17 30.3	4.3	60.4	50	04 08	04 49	05 22	23 07	24 09	00 09	01 02
	12	359 28.0 N 6 53.4	133 23.8	5.1	S17 34.6	4.1	60.4	45	04 22	04 58	05 28	22 50	23 52	24 46	00 46
	13	14 28.2 54.3	147 47.9	5.1	17 38.7	4.1	60.4	N 40	04 33	05 06	05 33	22 37	23 38	24 33	00 33
	14	29 28.4 55.2	162 12.0	5.1	17 42.8	3.9	60.3	35	04 42	05 12	05 38	22 25	23 27	24 22	00 22
	15	44 28.6 56.2	176 36.1	5.0	17 46.7	3.8	60.3	30	04 49	05 17	05 41	22 16	23 16	24 12	00 12
	16	59 28.7 57.1	191 00.1	5.1	17 50.5	3.6	60.3	20	05 00	05 26	05 48	21 58	22 59	23 56	24 48
	17	74 28.9 58.1	205 24.2	5.1	17 54.1	3.6	60.3	N 10	05 08	05 32	05 53	21 44	22 44	23 41	24 35
	18	89 29.1 N 6 59.0	219 48.3	5.0	S17 57.7	3.4	60.3	0	05 14	05 38	05 59	21 30	22 29	23 27	24 23
	19	104 29.3 6 59.9	234 12.3	5.1	18 01.1	3.2	60.3	S 10	05 18	05 42	06 04	21 16	22 15	23 14	24 11
	20	119 29.4 7 00.9	248 36.4	5.1	18 04.3	3.2	60.2	20	05 21	05 47	06 09	21 01	22 00	22 59	23 58
	21	134 29.6 01.8	263 00.5	5.1	18 07.5	3.0	60.2	30	05 23	05 51	06 15	20 45	21 42	22 42	23 43
	22	149 29.8 02.7	277 24.6	5.0	18 10.5	2.9	60.2	35	05 23	05 53	06 18	20 35	21 32	22 33	23 34
23	164 30.0 03.7	291 48.6	5.1	18 13.4	2.8	60.2	40	05 23	05 55	06 22	20 24	21 21	22 21	23 24	
VIERNES	8 00	179 30.1 N 7 04.6	306 12.7	5.1	S18 16.2	2.6	60.2	45	05 23	05 57	06 26	20 11	21 07	22 08	23 13
	01	194 30.3 05.6	320 36.8	5.1	18 18.8	2.5	60.1	S 50	05 21	05 59	06 31	19 55	20 51	21 52	22 59
	02	209 30.5 06.5	335 00.9	5.2	18 21.3	2.4	60.1	52	05 21	06 00	06 34	19 48	20 43	21 45	22 52
	03	224 30.7 07.4	349 25.1	5.1	18 23.7	2.2	60.1	54	05 20	06 01	06 36	19 39	20 34	21 37	22 45
	04	239 30.8 08.4	3 49.2	5.1	18 25.9	2.1	60.1	56	05 18	06 01	06 39	19 30	20 24	21 27	22 37
	05	254 31.0 09.3	18 13.3	5.2	18 28.0	2.0	60.1	58	05 17	06 03	06 42	19 20	20 13	21 17	22 28
	06	269 31.2 N 7 10.2	32 37.5	5.2	S18 30.0	1.8	60.0	S 60	05 15	06 04	06 45	19 08	20 01	21 05	22 17
	07	284 31.4 11.2	47 01.7	5.2	18 31.8	1.8	60.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	08	299 31.5 12.1	61 25.9	5.2	18 33.6	1.6	60.0			Civil	Náut.	7	8	9	10
	09	314 31.7 13.0	75 50.1	5.2	18 35.2	1.4	60.0	N 72	19 48	21 13	////	04 02	■	■	06 22
	10	329 31.9 14.0	90 14.3	5.3	18 36.6	1.3	59.9	N 70	19 36	20 49	23 07	04 57	05 16	06 10	07 41
	11	344 32.1 14.9	104 38.6	5.2	18 37.9	1.2	59.9	68	19 26	20 30	22 09	05 30	06 03	06 59	08 20
	12	359 32.2 N 7 15.8	119 02.8	5.3	S18 39.1	1.1	59.9	66	19 18	20 15	21 37	05 55	06 33	07 31	08 46
	13	14 32.4 16.8	133 27.1	5.4	18 40.2	1.0	59.9	64	19 11	20 03	21 14	06 14	06 56	07 54	09 07
	14	29 32.6 17.7	147 51.5	5.3	18 41.2	0.8	59.8	62	19 06	19 53	20 57	06 29	07 14	08 13	09 23
	15	44 32.8 18.6	162 15.8	5.4	18 42.0	0.7	59.8	60	19 01	19 45	20 42	06 43	07 29	08 28	09 37
	16	59 32.9 19.6	176 40.2	5.4	18 42.7	0.5	59.8	N 58	18 56	19 38	20 30	06 54	07 42	08 41	09 49
	17	74 33.1 20.5	191 04.6	5.4	18 43.2	0.4	59.8	56	18 52	19 31	20 20	07 04	07 53	08 52	09 59
	18	89 33.3 N 7 21.4	205 29.0	5.5	S18 43.6	0.3	59.8	54	18 49	19 26	20 11	07 13	08 03	09 02	10 08
	19	104 33.5 22.4	219 53.5	5.5	18 43.9	0.2	59.7	52	18 45	19 21	20 03	07 21	08 12	09 11	10 16
	20	119 33.6 23.3	234 18.0	5.5	18 44.1	0.1	59.7	50	18 43	19 16	19 57	07 28	08 20	09 19	10 23
	21	134 33.8 24.2	248 42.5	5.6	18 44.2	0.1	59.7	45	18 36	19 06	19 43	07 43	08 36	09 35	10 38
	22	149 34.0 25.2	263 07.1	5.6	18 44.1	0.2	59.7	N 40	18 31	18 59	19 32	07 55	08 50	09 49	10 51
23	164 34.1 26.1	277 31.7	5.6	18 43.9	0.4	59.6	35	18 27	18 52	19 23	08 06	09 01	10 01	11 02	
SABADO	9 00	179 34.3 N 7 27.0	291 56.3	5.7	S18 43.5	0.4	59.6	30	18 23	18 47	19 16	08 15	09 12	10 11	11 11
	01	194 34.5 28.0	306 21.0	5.7	18 43.1	0.6	59.6	20	18 16	18 38	19 04	08 31	09 29	10 28	11 27
	02	209 34.7 28.9	320 45.7	5.8	18 42.5	0.7	59.6	N 10	18 10	18 32	18 56	08 45	09 44	10 43	11 41
	03	224 34.8 29.8	335 10.5	5.8	18 41.8	0.9	59.5	0	18 05	18 26	18 50	08 58	09 58	10 57	11 54
	04	239 35.0 30.8	349 35.3	5.8	18 40.9	0.9	59.5	S 10	18 00	18 21	18 46	09 12	10 12	11 11	12 07
	05	254 35.2 31.7	4 00.1	5.9	18 40.0	1.1	59.5	20	17 55	18 17	18 42	09 26	10 28	11 26	12 21
	06	269 35.4 N 7 32.6	18 25.0	5.9	S18 38.9	1.2	59.4	30	17 49	18 13	18 40	09 42	10 45	11 43	12 37
	07	284 35.5 33.5	32 49.9	6.0	18 37.7	1.4	59.4	35	17 45	18 11	18 40	09 51	10 55	11 53	12 46
	08	299 35.7 34.5	47 14.9	6.0	18 36.3	1.4	59.4	40	17 41	18 08	18 40	10 02	11 07	12 05	12 56
	09	314 35.9 35.4	61 39.9	6.1	18 34.9	1.6	59.4	45	17 37	18 06	18 40	10 14	11 20	12 18	13 08
	10	329 36.0 36.3	76 05.0	6.1	18 33.3	1.7	59.3	S 50	17 32	18 04	18 41	10 30	11 37	12 34	13 23
	11	344 36.2 37.3	90 30.1	6.1	18 31.6	1.8	59.3	52	17 29	18 03	18 42	10 37	11 44	12 42	13 30
	12	359 36.4 N 7 38.2	104 55.2	6.2	S18 29.8	1.9	59.3	54	17 27	18 02	18 43	10 45	11 53	12 51	13 37
	13	14 36.6 39.1	119 20.4	6.3	18 27.9	2.1	59.3	56	17 24	18 01	18 44	10 54	12 03	13 00	13 46
	14	29 36.7 40.0	133 45.7	6.3	18 25.8	2.2	59.2	58	17 21	18 00	18 45	11 04	12 14	13 11	13 56
	15	44 36.9 41.0	148 11.0	6.3	18 23.6	2.3	59.2	S 60	17 17	17 59	18 47	11 16	12 26	13 23	14 06
	16	59 37.1 41.9	162 36.3	6.5	18 21.3	2.4	59.2	Día	SOL		LUNA				
	17	74 37.2 42.8	177 01.8	6.4	18 18.9	2.5	59.1		E.T. (-)	Pas. Mer.	Pas. Mer.	Mer. Inf.	Edad.	Fase	
	18	89 37.4 N 7 43.8	191 27.2	6.5	S18 16.4	2.6	59.1	7	00 ^h	12 ^h	h m	h m	h m	d	
	19	104 37.6 44.7	205 52.7	6.6	18 13.8	2.8	59.1	8	m s	m s	h m	h m	h m		
	20	119 37.8 45.6	220 18.3	6.7	18 11.0	2.9	59.1	9	02 17	02 08	12 02	02 44	15 14	19	
	21	134 37.9 46.5	234 44.0	6.6	18 08.1	2.9	59.0		02 00	01 51	12 02	03 44	16 14	20	
	22	149 38.1 47.5	249 09.6	6.8	18 05.2	3.1	59.0								

T. M. G.	ARIES			VENUS -3.4			MARTE +1.4			JUPITER -1.6			SATURNO +0.4			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
DOMINGO	10 00	198 06.6	187 57.7 N11	57.2	210 14.4 S 6	31.6	138 50.5 N19	49.8	65 26.0 N18	42.4	Acamar	315 39.4 S40	23.9						
	01	213 09.1	203 01.4	56.2	225 15.1	30.8	153 52.5	49.9	80 28.5	42.4	Achernar	335 47.6 S57	21.2						
	02	228 11.6	218 05.1	55.2	240 15.7	30.1	168 54.4	50.0	95 30.9	42.4	Acrux	173 39.0 S62	58.6						
	03	243 14.0	233 08.8	54.2	255 16.4	29.3	183 56.4	50.1	110 33.4	42.4	Adhara	255 34.0 S28	56.8						
	04	258 16.5	248 12.4	53.2	270 17.0	28.5	198 58.3	50.2	125 35.9	42.4	Aldebaran	291 20.9 N16	27.7						
	05	273 19.0	263 16.1	52.3	285 17.7	27.8	214 00.2	50.3	140 38.3	42.4									
	06	288 21.4	278 19.8 N11	51.3	300 18.4 S 6	27.0	229 02.2 N19	50.5	155 40.8 N18	42.4	Alioth	166 44.1 N56	04.9						
	07	303 23.9	293 23.5	50.3	315 19.0	26.3	244 04.1	50.6	170 43.3	42.4	Alkaid	153 19.9 N49	25.5						
	08	318 26.4	308 27.2	49.3	330 19.7	25.5	259 06.0	50.7	185 45.7	42.4	Al Na'ir	28 18.2 S47	04.1						
	09	333 28.8	323 30.8	48.3	345 20.3	24.8	274 08.0	50.8	200 48.2	42.4	Alnilam	276 14.2 S 1	13.2						
	10	348 31.3	338 34.5	47.4	0 21.0	24.0	289 09.9	50.9	215 50.7	42.4	Alphard	218 22.7 S 8	33.9						
	11	3 33.8	353 38.2	46.4	15 21.7	23.3	304 11.8	51.0	230 53.2	42.4									
	12	18 36.2	8 41.8 N11	45.4	30 22.3 S 6	22.5	319 13.8 N19	51.1	245 55.6 N18	42.4	Alphecca	126 33.8 N26	47.3						
	13	33 38.7	23 45.5	44.4	45 23.0	21.7	334 15.7	51.2	260 58.1	42.4	Alpheratz	358 12.0 N28	57.8						
	14	48 41.1	38 49.2	43.4	60 23.6	21.0	349 17.6	51.3	276 00.6	42.4	Altair	62 34.8 N 8	48.4						
	15	63 43.6	53 52.8	42.4	75 24.3	20.2	4 19.6	51.4	291 03.0	42.4	Ankaa	353 43.0 S42	25.8						
	16	78 46.1	68 56.5	41.5	90 25.0	19.5	19 21.5	51.5	306 05.5	42.4	Antares	112 59.4 S26	22.9						
	17	93 48.5	84 00.1	40.5	105 25.6	18.7	34 23.4	51.7	321 08.0	42.4									
	18	108 51.0	99 03.8 N11	39.5	120 26.3 S 6	18.0	49 25.4 N19	51.8	336 10.4 N18	42.4	Arcturus	146 20.3 N19	17.9						
	19	123 53.5	114 07.4	38.5	135 26.9	17.2	64 27.3	51.9	351 12.9	42.4	Atria	108 25.4 S68	59.0						
	20	138 55.9	129 11.1	37.5	150 27.6	16.5	79 29.2	52.0	6 15.4	42.4	Avior	234 29.0 S59	26.6						
	21	153 58.4	144 14.7	36.5	165 28.3	15.7	94 31.2	52.1	21 17.8	42.4	Bellatrix	279 01.4 N 6	19.6						
	22	169 00.9	159 18.4	35.6	180 28.9	14.9	109 33.1	52.2	36 20.3	42.4	Betelgeuse	271 30.9 N 7	24.0						
23	184 03.3	174 22.0	34.6	195 29.6	14.2	124 35.0	52.3	51 22.8	42.4										
LUNES	11 00	199 05.8	189 25.7 N11	33.6	210 30.2 S 6	13.4	139 37.0 N19	52.4	66 25.2 N18	42.4	Canopus	264 08.4 S52	41.4						
	01	214 08.2	204 29.3	32.6	225 30.9	12.7	154 38.9	52.5	81 27.7	42.4	Capella	281 15.0 N45	58.6						
	02	229 10.7	219 32.9	31.6	240 31.6	11.9	169 40.8	52.6	96 30.1	42.4	Deneb	49 50.1 N45	11.7						
	03	244 13.2	234 36.6	30.6	255 32.2	11.2	184 42.8	52.8	111 32.6	42.4	Denebola	183 01.1 N14	41.8						
	04	259 15.6	249 40.2	29.6	270 32.9	10.4	199 44.7	52.9	126 35.1	42.4	Diphda	349 23.5 S18	06.7						
	05	274 18.1	264 43.8	28.6	285 33.5	09.6	214 46.6	53.0	141 37.5	42.4									
	06	289 20.6	279 47.4 N11	27.7	300 34.2 S 6	08.9	229 48.6 N19	53.1	156 40.0 N18	42.4	Dubhe	194 24.5 N61	52.5						
	07	304 23.0	294 51.1	26.7	315 34.9	08.1	244 50.5	53.2	171 42.5	42.4	Elnath	278 47.3 N28	35.3						
	08	319 25.5	309 54.7	25.7	330 35.5	07.4	259 52.4	53.3	186 44.9	42.4	Eltanin	90 58.6 N51	29.3						
	09	334 28.0	324 58.3	24.7	345 36.2	06.6	274 54.4	53.4	201 47.4	42.4	Enif	34 14.0 N 9	46.2						
	10	349 30.4	340 01.9	23.7	0 36.9	05.9	289 56.3	53.5	216 49.9	42.4	Fomalhaut	15 54.3 S29	44.5						
	11	4 32.9	355 05.5	22.7	15 37.5	05.1	304 58.2	53.6	231 52.3	42.4									
	12	19 35.4	10 09.1 N11	21.7	30 38.2 S 6	04.3	320 00.2 N19	53.7	246 54.8 N18	42.4	Gacrux	172 30.7 S56	59.3						
	13	34 37.8	25 12.7	20.8	45 38.8	03.6	335 02.1	53.9	261 57.2	42.4	Giennah	176 20.0 S17	25.1						
	14	49 40.3	40 16.3	19.8	60 39.5	02.8	350 04.0	54.0	276 59.7	42.4	Hadar	149 25.9 S60	15.8						
	15	64 42.7	55 19.9	18.8	75 40.2	02.1	5 06.0	54.1	292 02.2	42.4	Hamal	328 31.9 N23	21.2						
	16	79 45.2	70 23.5	17.8	90 40.8	01.3	20 07.9	54.2	307 04.6	42.4	Kaus Aust.	84 19.8 S34	23.6						
	17	94 47.7	85 27.1	16.8	105 41.5	6 00.5	35 09.8	54.3	322 07.1	42.4									
	18	109 50.1	100 30.7 N11	15.8	120 42.2 S 5	59.8	50 11.7 N19	54.4	337 09.6 N18	42.4	Kochab	137 17.9 N74	14.8						
	19	124 52.6	115 34.3	14.8	135 42.8	59.0	65 13.7	54.5	352 12.0	42.4	Markab	14 05.7 N15	04.9						
	20	139 55.1	130 37.9	13.8	150 43.5	58.3	80 15.6	54.6	7 14.5	42.4	Menkar	314 43.8 N 3	59.9						
	21	154 57.5	145 41.5	12.8	165 44.2	57.5	95 17.5	54.7	22 16.9	42.4	Menkent	148 39.3 S36	15.6						
	22	170 00.0	160 45.1	11.9	180 44.8	56.8	110 19.5	54.8	37 19.4	42.4	Miaplacidus	221 44.9 S69	37.8						
23	185 02.5	175 48.6	10.9	195 45.5	56.0	125 21.4	54.9	52 21.9	42.4										
MARTES	12 00	200 04.9	190 52.2 N11	09.9	210 46.1 S 5	55.2	140 23.3 N19	55.1	67 24.3 N18	42.4	Mirfak	309 19.8 N49	46.8						
	01	215 07.4	205 55.8	08.9	225 46.8	54.5	155 25.3	55.2	82 26.8	42.4	Nunki	76 32.0 S26	19.4						
	02	230 09.9	220 59.4	07.9	240 47.5	53.7	170 27.2	55.3	97 29.2	42.4	Peacock	54 02.2 S56	48.2						
	03	245 12.3	236 02.9	06.9	255 48.1	53.0	185 29.1	55.4	112 31.7	42.4	Pollux	244 01.0 N28	04.8						
	04	260 14.8	251 06.5	05.9	270 48.8	52.2	200 31.0	55.5	127 34.2	42.4	Procyon	245 28.2 N 5	16.8						
	05	275 17.2	266 10.1	04.9	285 49.5	51.4	215 33.0	55.6	142 36.6	42.4									
	06	290 19.7	281 13.6 N11	04.0	300 50.1 S 5	50.7	230 34.9 N19	55.7	157 39.1 N18	42.4	Rasalhague	96 31.6 N12	34.5						
	07	305 22.2	296 17.2	03.0	315 50.8	49.9	245 36.8	55.8	172 41.5	42.4	Regulus	208 12.3 N12	04.6						
	08	320 24.6	311 20.7	02.0	330 51.5	49.2	260 38.8	55.9	187 44.0	42.4	Rigel	281 38.4 S 8	13.9						
	09	335 27.1	326 24.3	01.0	345 52.1	48.4	275 40.7	56.0	202 46.5	42.4	Rigil Kent.	140 28.3 S60	44.4						
	10	350 29.6	341 27.8	11 00.0	0 52.8	47.7	290 42.6	56.1	217 48.9	42.4	Sabik	102 43.6 S15	41.8						
	11	5 32.0	356 31.4	10 59.0	15 53.5	46.9	305 44.5	56.3	232 51.4	42.4									
	12	20 34.5	11 34.9 N10	58.0	30 54.1 S 5	46.1	320 46.5 N19	56.4	247 53.8 N18	42.4	Schedar	350 12.1 N56	24.7						
	13	35 37.0	26 38.5	57.0	45 54.8	45.4	335 48.4	56.5	262 56.3	42.4	Shaula	96 58.7 S37	05.1						
	14	50 39.4	41 42.0	56.1	60 55.4	44.6	350 50.3	56.6	277 58.8	42.4	Sirius	258 57.8 S16	41.4						
	15	65 41.9	56 45.5	55.1	75 56.1	43.9	5 52.3	56.7	293 01.2	42.4	Spica	158 59.7 S11	02.7						
	16	80 44.3	71 49.1	54.1	90 56.8	43.1	20 54.2	56.8	308 03.7	42.4	Suhail	223 12.3 S43	20.8						
	17	95 46.8	86 52.6	53.1	105 57.4	42.3	35 56.1	56.9	323 06.1	42.4									
	18	110 49.3	101 56.1 N10	52.1	120 58.1 S 5	41.6	50 58.0 N19	57.0	338 08.6 N18	42.4	Vega	80 57.3 N38	45.6						
	19	125 51.7	116 59.7	51.1	135 58.8	40.8	66 00.0	57.1	353 11.0	42.4	Zuben'ubi	137 35.3 S15	56.9						
	20	140 54.2	132 03.2	50.1	150 59.4	40.1	81 01.9	57.2	8 13.5	42.4									
	21	155 56.7	147 06.7	49.1	166 00.1	39.3	96 03.8	57.4	23 16.0	42.4									
	22	170 59.1	162 10.2	48.2	181 00.8	38.5	111 05.8	57.5	38 18.4	42.4	Venus	350 19.9	11 20						
23	186 01.6	177 13.7	47.2	196 01.4	37.8	126 07.7	57.6	53 20.9	42.4	Marte	11 24.5	9 58							
Pas. Mer.		10 41.9			v 3.6 d 1.0			v 0.7 d 0.8			v 1.9 d 0.1			v 2.5 d 0.0			A. H. S. Pas. Mer. o / h m		
														Júpiter			300 31.2 14 40		
														Saturno			227 19.4 19 31		

T. M. G.	ARIES			VENUS -3.5			MARTE +1.4			JUPITER -1.6			SATURNO +0.4			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
13 M I E R C O L E S	00	201 04.1	192 17.2 N10	46.2	211 02.1 S	5 37.0	141 09.6 N19	57.7	68 23.3 N18	42.4	Acamar	315 39.4 S40	23.9					
	01	216 06.5	207 20.7	45.2	226 02.8	36.3	156 11.5	57.8	83 25.8	42.4	Achernar	335 47.6 S57	21.2					
	02	231 09.0	222 24.2	44.2	241 03.4	35.5	171 13.5	57.9	98 28.2	42.4	Acrux	173 39.1 S62	58.6					
	03	246 11.5	237 27.7	43.2	256 04.1	34.7	186 15.4	58.0	113 30.7	42.4	Adhara	255 34.0 S28	56.8					
	04	261 13.9	252 31.2	42.3	271 04.8	34.0	201 17.3	58.1	128 33.1	42.4	Aldebaran	291 20.9 N16	27.7					
	05	276 16.4	267 34.7	41.3	286 05.4	33.2	216 19.2	58.2	143 35.6	42.4								
	06	291 18.8	282 38.2 N10	40.3	301 06.1 S	5 32.4	231 21.2 N19	58.3	158 38.1 N18	42.4	Alioth	166 44.1 N56	05.0					
	07	306 21.3	297 41.7	39.3	316 06.8	31.7	246 23.1	58.4	173 40.5	42.3	Alkaid	153 19.9 N49	25.5					
	08	321 23.8	312 45.2	38.3	331 07.4	30.9	261 25.0	58.6	188 43.0	42.3	Al Na'ir	28 18.2 S47	04.1					
	09	336 26.2	327 48.7	37.3	346 08.1	30.2	276 26.9	58.7	203 45.4	42.3	Alnilam	276 14.2 S 1	13.2					
	10	351 28.7	342 52.1	36.4	1 08.8	29.4	291 28.9	58.8	218 47.9	42.3	Alphard	218 22.7 S 8	33.9					
	11	6 31.2	357 55.6	35.4	16 09.4	28.6	306 30.8	58.9	233 50.3	42.3								
	12	21 33.6	12 59.1 N10	34.4	31 10.1 S	5 27.9	321 32.7 N19	59.0	248 52.8 N18	42.3	Alphecca	126 33.8 N26	47.3					
	13	36 36.1	28 02.6	33.4	46 10.8	27.1	336 34.6	59.1	263 55.2	42.3	Alpheratz	358 12.0 N28	57.8					
	14	51 38.6	43 06.0	32.4	61 11.4	26.4	351 36.6	59.2	278 57.7	42.3	Altair	62 34.8 N 8	48.4					
	15	66 41.0	58 09.5	31.5	76 12.1	25.6	6 38.5	59.3	294 00.1	42.3	Ankaa	353 43.0 S42	25.7					
	16	81 43.5	73 13.0	30.5	91 12.8	24.8	21 40.4	59.4	309 02.6	42.3	Antares	112 59.4 S26	22.9					
	17	96 46.0	88 16.4	29.5	106 13.4	24.1	36 42.3	59.5	324 05.1	42.3								
	18	111 48.4	103 19.9 N10	28.5	121 14.1 S	5 23.3	51 44.3 N19	59.6	339 07.5 N18	42.3	Arcturus	146 20.3 N19	17.9					
	19	126 50.9	118 23.3	27.5	136 14.8	22.6	66 46.2	59.8	354 10.0	42.3	Atria	108 25.4 S68	59.0					
	20	141 53.3	133 26.8	26.6	151 15.5	21.8	81 48.1	19 59.9	9 12.4	42.3	Avior	234 29.0 S59	26.6					
	21	156 55.8	148 30.2	25.6	166 16.1	21.0	96 50.0	20 00.0	24 14.9	42.3	Bellatrix	279 01.4 N 6	19.6					
	22	171 58.3	163 33.7	24.6	181 16.8	20.3	111 52.0	00.1	39 17.3	42.3	Betelgeuse	271 30.9 N 7	24.0					
23	187 00.7	178 37.1	23.6	196 17.5	19.5	126 53.9	00.2	54 19.8	42.3									
14 J U E V E S	00	202 03.2	193 40.5 N10	22.6	211 18.1 S	5 18.7	141 55.8 N20	00.3	69 22.2 N18	42.3	Canopus	264 08.4 S52	41.4					
	01	217 05.7	208 44.0	21.7	226 18.8	18.0	156 57.7	00.4	84 24.7	42.3	Capella	281 15.0 N45	58.6					
	02	232 08.1	223 47.4	20.7	241 19.5	17.2	171 59.7	00.5	99 27.1	42.3	Deneb	49 50.1 N45	11.7					
	03	247 10.6	238 50.8	19.7	256 20.1	16.5	187 01.6	00.6	114 29.6	42.3	Denebola	183 01.1 N14	41.8					
	04	262 13.1	253 54.2	18.7	271 20.8	15.7	202 03.5	00.7	129 32.0	42.3	Diphda	349 23.5 S18	06.7					
	05	277 15.5	268 57.7	17.8	286 21.5	14.9	217 05.4	00.8	144 34.5	42.3								
	06	292 18.0	284 01.1 N10	16.8	301 22.1 S	5 14.2	232 07.3 N20	01.0	159 36.9 N18	42.3	Dubhe	194 24.5 N61	52.5					
	07	307 20.4	299 04.5	15.8	316 22.8	13.4	247 09.3	01.1	174 39.4	42.3	Elnath	278 47.3 N28	35.3					
	08	322 22.9	314 07.9	14.9	331 23.5	12.6	262 11.2	01.2	189 41.8	42.3	Eltanin	90 58.6 N51	29.3					
	09	337 25.4	329 11.3	13.9	346 24.1	11.9	277 13.1	01.3	204 44.3	42.2	Enif	34 14.0 N 9	46.2					
	10	352 27.8	344 14.7	12.9	1 24.8	11.1	292 15.0	01.4	219 46.7	42.2	Fomalhaut	15 54.3 S29	44.5					
	11	7 30.3	359 18.1	11.9	16 25.5	10.4	307 17.0	01.5	234 49.2	42.2								
	12	22 32.8	14 21.5 N10	11.0	31 26.2 S	5 09.6	322 18.9 N20	01.6	249 51.6 N18	42.2	Gacrux	172 30.7 S56	59.3					
	13	37 35.2	29 24.9	10.0	46 26.8	08.8	337 20.8	01.7	264 54.1	42.2	Gienah	176 20.0 S17	25.1					
	14	52 37.7	44 28.3	09.0	61 27.5	08.1	352 22.7	01.8	279 56.5	42.2	Hadar	149 25.9 S60	15.9					
	15	67 40.2	59 31.7	08.1	76 28.2	07.3	7 24.6	01.9	294 59.0	42.2	Hamal	328 31.9 N23	21.2					
	16	82 42.6	74 35.1	07.1	91 28.8	06.5	22 26.6	02.0	310 01.4	42.2	Kaus Aust.	84 19.8 S34	23.6					
	17	97 45.1	89 38.4	06.1	106 29.5	05.8	37 28.5	02.2	325 03.9	42.2								
	18	112 47.6	104 41.8 N10	05.2	121 30.2 S	5 05.0	52 30.4 N20	02.3	340 06.3 N18	42.2	Kochab	137 17.9 N74	14.8					
	19	127 50.0	119 45.2	04.2	136 30.8	04.3	67 32.3	02.4	355 08.8	42.2	Markab	14 05.7 N15	04.9					
	20	142 52.5	134 48.6	03.2	151 31.5	03.5	82 34.3	02.5	10 11.2	42.2	Menkar	314 43.9 N 3	59.9					
	21	157 54.9	149 51.9	02.3	166 32.2	02.7	97 36.2	02.6	25 13.7	42.2	Menkent	148 39.3 S36	15.6					
	22	172 57.4	164 55.3	01.3	181 32.9	02.0	112 38.1	02.7	40 16.1	42.2	Miaplacidus	221 45.0 S69	37.8					
23	187 59.9	179 58.6	10 00.3	196 33.5	01.2	127 40.0	02.8	55 18.5	42.2									
15 V I E R N E S	00	203 02.3	195 02.0 N 9	59.4	211 34.2 S	5 00.4	142 41.9 N20	02.9	70 21.0 N18	42.2	Mirfak	309 19.8 N49	46.8					
	01	218 04.8	210 05.4	58.4	226 34.9	4 59.7	157 43.9	03.0	85 23.4	42.2	Nunki	76 32.0 S26	19.4					
	02	233 07.3	225 08.7	57.5	241 35.5	58.9	172 45.8	03.1	100 25.9	42.2	Peacock	54 02.2 S56	48.2					
	03	248 09.7	240 12.1	56.5	256 36.2	58.1	187 47.7	03.2	115 28.3	42.2	Pollux	244 01.0 N28	04.8					
	04	263 12.2	255 15.4	55.5	271 36.9	57.4	202 49.6	03.3	130 30.8	42.2	Procyon	245 28.2 N 5	16.8					
	05	278 14.7	270 18.7	54.6	286 37.6	56.6	217 51.5	03.5	145 33.2	42.1								
	06	293 17.1	285 22.1 N 9	53.6	301 38.2 S	4 55.9	232 53.5 N20	03.6	160 35.7 N18	42.1	Rasalhague	96 31.6 N12	34.5					
	07	308 19.6	300 25.4	52.7	316 38.9	55.1	247 55.4	03.7	175 38.1	42.1	Regulus	208 12.3 N12	04.6					
	08	323 22.1	315 28.7	51.7	331 39.6	54.3	262 57.3	03.8	190 40.6	42.1	Rigel	281 38.4 S 8	13.9					
	09	338 24.5	330 32.1	50.7	346 40.2	53.6	277 59.2	03.9	205 43.0	42.1	Rigel Kent.	140 28.3 S60	44.4					
	10	353 27.0	345 35.4	49.8	1 40.9	52.8	293 01.1	04.0	220 45.5	42.1	Sabik	102 43.6 S15	41.8					
	11	8 29.4	0 38.7	48.8	16 41.6	52.0	308 03.1	04.1	235 47.9	42.1								
	12	23 31.9	15 42.0 N 9	47.9	31 42.3 S	4 51.3	323 05.0 N20	04.2	250 50.3 N18	42.1	Schedar	350 12.1 N56	24.7					
	13	38 34.4	30 45.3	46.9	46 42.9	50.5	338 06.9	04.3	265 52.8	42.1	Shaula	96 58.7 S37	05.1					
	14	53 36.8	45 48.6	46.0	61 43.6	49.7	353 08.8	04.4	280 55.2	42.1	Sirius	258 57.8 S16	41.4					
	15	68 39.3	60 51.9	45.0	76 44.3	49.0	8 10.7	04.5	295 57.7	42.1	Spica	158 59.7 S11	02.7					
	16	83 41.8	75 55.3	44.1	91 45.0	48.2	23 12.6	04.7	311 00.1	42.1	Suhail	223 12.3 S43	20.8					
	17	98 44.2	90 58.6	43.1	106 45.6	47.4	38 14.6	04.8	326 02.6	42.1								
	18	113 46.7	106 01.8 N 9	42.2	121 46.3 S	4 46.7	53 16.5 N20	04.9	341 05.0 N18	42.1	Vega	80 57.3 N38	45.6					
	19	128 49.2	121 05.1	41.2	136 47.0	45.9	68 18.4	05.0	356 07.5	42.1	Zuben'ubi	137 35.3 S15	56.9					
	20	143 51.6	136 08.4	40.3	151 47.6	45.2	83 20.3	05.1	11 09.9	42.1								
	21	158 54.1	151 11.7	39.3	166 48.3	44.4	98 22.2	05.2	26 12.3	42.0								
	22	173 56.5	166 15.0	38.4	181 49.0	43.6	113 24.2	05.3	41 14.8	42.0								
23	188 59.0	181 18.3	37.4	196 49.7	42.9	128 26.1	05.4	56 17.2	42.0									
Pas. Mer.		h m	v 3.4 d 1.0	v 0.7 d 0.8	v 1.9 d 0.1	v 2.4 d 0.0				A. H. S. Pas. Mer. o h m								
										Venus	351 37.3	11 03						
										Marte	9 14.9	9 54						
										Júpiter	299 52.6	14 30						
										Saturno	227 19.0	19 19						

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	13		14		15		16	
												h	m	h	m	h	m	h	m
M I E R C O L E S	13 ^d 00	179 50.3 N 8 55.4	239 51.2 11.6	S 10	11.1	8.9	56.9	N 72	////	02 09	03 46	04 15	04 09	04 02	03 56				
	01	194 50.5 56.3	254 21.8 11.6	10	02.2	9.0	56.9	N 70	////	02 42	04 02	04 01	04 00	04 00	04 00	03 59			
	02	209 50.6 57.2	268 52.4 11.6	9	53.2	9.0	56.9	68	00 59	03 06	04 14	03 49	03 54	03 58	04 01				
	03	224 50.8 58.1	283 23.0 11.7	9	44.2	9.1	56.8	66	01 51	03 24	04 25	03 39	03 48	03 56	04 03				
	04	239 51.0 59.0	297 53.7 11.8	9	35.1	9.1	56.8	64	02 21	03 39	04 33	03 30	03 43	03 54	04 05				
	05	254 51.1 59.9	312 24.5 11.8	9	26.0	9.1	56.8	62	02 43	03 51	04 41	03 23	03 39	03 53	04 06				
	06	269 51.3 N 9 00.8	326 55.3 11.9	S 9	16.9	9.2	56.8	60	03 01	04 01	04 47	03 17	03 35	03 52	04 08				
	07	284 51.4 01.7	341 26.2 11.9	9	07.7	9.2	56.7	N 58	03 15	04 10	04 53	03 11	03 32	03 51	04 09				
	08	299 51.6 02.6	355 57.1 12.0	8	58.5	9.2	56.7	56	03 27	04 18	04 58	03 06	03 29	03 50	04 10				
	09	314 51.8 03.5	10 28.1 12.0	8	49.3	9.3	56.7	54	03 37	04 24	05 02	03 02	03 27	03 49	04 11				
	10	329 51.9 04.5	24 59.1 12.1	8	40.0	9.3	56.7	52	03 46	04 30	05 06	02 58	03 24	03 48	04 12				
	11	344 52.1 05.4	39 30.2 12.1	8	30.7	9.4	56.6	50	03 54	04 36	05 10	02 54	03 22	03 48	04 12				
	12	359 52.2 N 9 06.3	54 01.3 12.2	S 8	21.3	9.4	56.6	45	04 10	04 47	05 18	02 46	03 17	03 46	04 14				
	13	14 52.4 07.2	68 32.5 12.2	8	11.9	9.4	56.6	N 40	04 23	04 56	05 24	02 40	03 13	03 45	04 15				
	14	29 52.6 08.1	83 03.7 12.3	8	02.5	9.5	56.6	35	04 33	05 04	05 30	02 34	03 10	03 44	04 17				
	15	44 52.7 09.0	97 35.0 12.3	7	53.0	9.4	56.6	30	04 41	05 10	05 35	02 29	03 07	03 43	04 18				
	16	59 52.9 09.9	112 06.3 12.4	7	43.6	9.5	56.5	20	04 54	05 21	05 43	02 20	03 02	03 41	04 20				
	17	74 53.0 10.8	126 37.7 12.4	7	34.1	9.6	56.5	N 10	05 04	05 29	05 50	02 12	02 57	03 40	04 21				
	18	89 53.2 N 9 11.7	141 09.1 12.4	S 7	24.5	9.6	56.5	0	05 12	05 36	05 57	02 05	02 53	03 38	04 23				
	19	104 53.3 12.6	155 40.5 12.6	7	14.9	9.6	56.5	S 10	05 18	05 42	06 04	01 58	02 48	03 37	04 25				
	20	119 53.5 13.5	170 12.1 12.5	7	05.3	9.6	56.4	20	05 23	05 48	06 11	01 50	02 44	03 36	04 27				
	21	134 53.7 14.4	184 43.6 12.6	6	55.7	9.6	56.4	30	05 26	05 54	06 18	01 41	02 38	03 34	04 29				
	22	149 53.8 15.3	199 15.2 12.6	6	46.1	9.7	56.4	35	05 28	05 57	06 23	01 36	02 35	03 33	04 30				
23	164 54.0 16.2	213 46.8 12.7	6	36.4	9.7	56.4	40	05 29	06 00	06 28	01 30	02 32	03 32	04 31					
14 ^d 00	179 54.1 N 9 17.1	228 18.5 12.8	S 6	26.7	9.7	56.3	45	05 30	06 04	06 34	01 24	02 28	03 31	04 33					
01	194 54.3 18.0	242 50.3 12.7	6	17.0	9.8	56.3	S 50	05 30	06 08	06 40	01 15	02 23	03 29	04 35					
02	209 54.4 18.9	257 22.0 12.8	6	07.2	9.8	56.3	52	05 30	06 09	06 44	01 12	02 21	03 29	04 35					
03	224 54.6 19.8	271 53.8 12.9	5	57.4	9.7	56.3	54	05 30	06 11	06 47	01 07	02 18	03 28	04 36					
04	239 54.8 20.7	286 25.7 12.9	5	47.7	9.9	56.2	56	05 30	06 13	06 51	01 03	02 16	03 27	04 38					
05	254 54.9 21.6	300 57.6 12.9	5	37.8	9.8	56.2	58	05 30	06 15	06 55	00 58	02 13	03 26	04 39					
06	269 55.1 N 9 22.5	315 29.5 13.0	S 5	28.0	9.8	56.2	S 60	05 29	06 17	07 00	00 52	02 09	03 25	04 40					
07	284 55.2 23.4	330 01.5 13.0	5	18.2	9.9	56.2													
08	299 55.4 24.3	344 33.5 13.0	5	08.3	9.9	56.2	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna								
09	314 55.5 25.2	359 05.5 13.1	4	58.4	9.9	56.1					13	14	15	16					
10	329 55.7 26.1	13 37.6 13.2	4	48.5	9.9	56.1					h	m	h	m	h	m			
11	344 55.8 27.0	28 09.8 13.1	4	38.6	9.9	56.1	N 72	20 19	21 59	////	12 37	14 21	16 02	17 40					
12	359 56.0 N 9 27.9	42 41.9 13.2	S 4	28.7	10.0	56.1	N 70	20 02	21 23	////	12 50	14 27	16 01	17 34					
13	14 56.2 28.8	57 14.1 13.2	4	18.7	9.9	56.0	68	19 49	20 58	23 18	13 01	14 32	16 01	17 29					
14	29 56.3 29.7	71 46.3 13.3	4	08.8	10.0	56.0	66	19 38	20 39	22 16	13 10	14 36	16 01	17 25					
15	44 56.5 30.6	86 18.6 13.3	3	58.8	10.0	56.0	64	19 29	20 24	21 44	13 17	14 40	16 01	17 21					
16	59 56.6 31.5	100 50.9 13.3	3	48.8	10.0	56.0	62	19 22	20 12	21 21	13 23	14 43	16 01	17 18					
17	74 56.8 32.4	115 23.2 13.4	3	38.8	10.0	56.0	60	19 15	20 01	21 03	13 28	14 45	16 01	17 15					
18	89 56.9 N 9 33.3	129 55.6 13.3	S 3	28.8	10.0	55.9	N 58	19 09	19 52	20 48	13 33	14 48	16 01	17 13					
19	104 57.1 34.2	144 27.9 13.5	3	18.8	10.0	55.9	56	19 04	19 45	20 36	13 37	14 50	16 01	17 11					
20	119 57.2 35.1	159 00.4 13.4	3	08.8	10.0	55.9	54	19 00	19 38	20 25	13 41	14 52	16 01	17 09					
21	134 57.4 36.0	173 32.8 13.5	2	58.8	10.0	55.9	52	18 56	19 32	20 16	13 45	14 53	16 01	17 07					
22	149 57.5 36.9	188 05.3 13.5	2	48.8	10.1	55.8	50	18 52	19 26	20 08	13 48	14 55	16 01	17 06					
23	164 57.7 37.8	202 37.8 13.5	2	38.7	10.0	55.8	45	18 44	19 15	19 52	13 54	14 58	16 01	17 02					
15 ^d 00	179 57.8 N 9 38.7	217 10.3 13.6	S 2	28.7	10.1	55.8	N 40	18 37	19 05	19 39	14 00	15 01	16 01	16 59					
01	194 58.0 39.6	231 42.9 13.6	2	18.6	10.0	55.8	35	18 31	18 58	19 28	14 05	15 03	16 00	16 57					
02	209 58.1 40.5	246 15.5 13.6	2	08.6	10.1	55.8	30	18 26	18 51	19 20	14 09	15 05	16 00	16 55					
03	224 58.3 41.4	260 48.1 13.6	1	58.5	10.0	55.7	20	18 18	18 40	19 07	14 16	15 09	16 00	16 51					
04	239 58.5 42.3	275 20.7 13.7	1	48.5	10.1	55.7	N 10	18 10	18 32	18 57	14 22	15 12	16 00	16 48					
05	254 58.6 43.2	289 53.4 13.7	1	38.4	10.0	55.7	0	18 04	18 25	18 49	14 28	15 15	16 00	16 44					
06	269 58.8 N 9 44.1	304 26.1 13.7	S 1	28.4	10.1	55.7	S 10	17 57	18 18	18 43	14 34	15 18	16 00	16 41					
07	284 58.9 45.0	318 58.8 13.7	1	18.3	10.1	55.7	20	17 50	18 12	18 38	14 40	15 21	16 00	16 38					
08	299 59.1 45.8	333 31.5 13.8	1	08.2	10.0	55.6	30	17 42	18 06	18 34	14 47	15 24	15 59	16 34					
09	314 59.2 46.7	348 04.3 13.8	0	58.2	10.1	55.6	35	17 37	18 03	18 32	14 51	15 26	15 59	16 32					
10	329 59.4 47.6	2 37.1 13.8	0	48.1	10.0	55.6	40	17 32	18 00	18 31	14 56	15 28	15 59	16 30					
11	344 59.5 48.5	17 09.9 13.8	0	38.1	10.1	55.6	45	17 26	17 56	18 30	15 01	15 31	15 59	16 27					
12	359 59.7 N 9 49.4	31 42.7 13.8	S 0	28.0	10.0	55.6	S 50	17 19	17 52	18 29	15 07	15 34	15 59	16 23					
13	14 59.8 50.3	46 15.5 13.9	0	18.0	10.1	55.5	52	17 16	17 50	18 29	15 10	15 35	15 59	16 22					
14	30 00.0 51.2	60 48.4 13.9	S 0	07.9	10.0	55.5	54	17 13	17 48	18 29	15 13	15 37	15 59	16 20					
15	45 00.1 52.1	75 21.3 13.9	N 0	02.1	10.0	55.5	56	17 09	17 46	18 29	15 16	15 38	15 58	16 18					
16	60 00.3 53.0	89 54.2 13.9	0	12.1	10.0	55.5	58	17 04	17 44	18 30	15 20	15 40	15 58	16 16					
17																			

T. M. G.	ARIES			VENUS -3.7			MARTE +1.3			JUPITER -1.6			SATURNO +0.4			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A. H. G.	Dec.		A. H. G.	Dec.		Nombre	A. H. S.	Dec.	
16	00	204 01.5	196 21.5 N 9	36.5	211 50.3 S 4	42.1	143 28.0 N20	05.5		71 19.7 N18	42.0		Acamar	315 39.4 S40	23.9				
	01	219 03.9	211 24.8	35.5	226 51.0	41.3	158 29.9	05.6		86 22.1	42.0		Achernar	335 47.6 S57	21.2				
	02	234 06.4	226 28.1	34.6	241 51.7	40.6	173 31.8	05.7		101 24.5	42.0		Acrux	173 39.1 S62	58.6				
	03	249 08.9	241 31.3	33.7	256 52.4	39.8	188 33.7	05.8		116 27.0	42.0		Adhara	255 34.0 S28	56.8				
	04	264 11.3	256 34.6	32.7	271 53.0	39.0	203 35.7	06.0		131 29.4	42.0		Aldebaran	291 20.9 N16	27.7				
	05	279 13.8	271 37.9	31.8	286 53.7	38.3	218 37.6	06.1		146 31.9	42.0								
	06	294 16.3	286 41.1 N 9	30.8	301 54.4 S 4	37.5	233 39.5 N20	06.2		161 34.3 N18	42.0		Alioth	166 44.1 N56	05.0				
	07	309 18.7	301 44.4	29.9	316 55.1	36.7	248 41.4	06.3		176 36.8	42.0		Alkaid	153 19.9 N49	25.5				
	08	324 21.2	316 47.6	29.0	331 55.7	36.0	263 43.3	06.4		191 39.2	42.0		Al Na'ir	28 18.1 S47	04.1				
	S 09	339 23.7	331 50.9	28.0	346 56.4	35.2	278 45.2	06.5		206 41.6	42.0		Alnilam	276 14.2 S 1	13.2				
	A 10	354 26.1	346 54.1	27.1	1 57.1	34.4	293 47.2	06.6		221 44.1	42.0		Alphard	218 22.7 S 8	33.9				
	B 11	9 28.6	1 57.3	26.2	16 57.7	33.7	308 49.1	06.7		236 46.5	42.0								
	A 12	24 31.0	17 00.6 N 9	25.2	31 58.4 S 4	32.9	323 51.0 N20	06.8		251 49.0 N18	41.9		Alphecca	126 33.8 N26	47.3				
	D 13	39 33.5	32 03.8	24.3	46 59.1	32.1	338 52.9	06.9		266 51.4	41.9		Alpheratz	358 12.0 N28	57.8				
	O 14	54 36.0	47 07.0	23.4	61 59.8	31.4	353 54.8	07.0		281 53.8	41.9		Altair	62 34.8 N 8	48.4				
	15	69 38.4	62 10.2	22.4	77 00.4	30.6	8 56.7	07.1		296 56.3	41.9		Ankaa	353 43.0 S42	25.7				
	16	84 40.9	77 13.5	21.5	92 01.1	29.8	23 58.7	07.3		311 58.7	41.9		Antares	112 59.4 S26	22.9				
	17	99 43.4	92 16.7	20.6	107 01.8	29.1	39 00.6	07.4		327 01.2	41.9								
	18	114 45.8	107 19.9 N 9	19.6	122 02.5 S 4	28.3	54 02.5 N20	07.5		342 03.6 N18	41.9		Arcturus	146 20.3 N19	17.9				
	19	129 48.3	122 23.1	18.7	137 03.1	27.5	69 04.4	07.6		357 06.0	41.9		Atria	108 25.3 S68	59.0				
	20	144 50.8	137 26.3	17.8	152 03.8	26.8	84 06.3	07.7		12 08.5	41.9		Avior	234 29.0 S59	26.6				
	21	159 53.2	152 29.5	16.9	167 04.5	26.0	99 08.2	07.8		27 10.9	41.9		Bellatrix	279 01.4 N 6	19.6				
	22	174 55.7	167 32.7	15.9	182 05.2	25.2	114 10.1	07.9		42 13.3	41.9		Betelgeuse	271 30.9 N 7	24.0				
23	189 58.2	182 35.9	15.0	197 05.8	24.5	129 12.1	08.0		57 15.8	41.9									
17	00	205 00.6	197 39.1 N 9	14.1	212 06.5 S 4	23.7	144 14.0 N20	08.1		72 18.2 N18	41.9		Canopus	264 08.4 S52	41.4				
	01	220 03.1	212 42.3	13.2	227 07.2	23.0	159 15.9	08.2		87 20.7	41.8		Capella	281 15.0 N45	58.6				
	02	235 05.5	227 45.4	12.3	242 07.9	22.2	174 17.8	08.3		102 23.1	41.8		Deneb	49 50.1 N45	11.7				
	03	250 08.0	242 48.6	11.3	257 08.5	21.4	189 19.7	08.4		117 25.5	41.8		Denebola	183 01.1 N14	41.8				
	04	265 10.5	257 51.8	10.4	272 09.2	20.7	204 21.6	08.6		132 28.0	41.8		Diphda	349 23.5 S18	06.7				
	05	280 12.9	272 55.0	09.5	287 09.9	19.9	219 23.5	08.7		147 30.4	41.8								
	06	295 15.4	287 58.1 N 9	08.6	302 10.6 S 4	19.1	234 25.5 N20	08.8		162 32.8 N18	41.8		Dubhe	194 24.6 N61	52.5				
	07	310 17.9	303 01.3	07.7	317 11.3	18.4	249 27.4	08.9		177 35.3	41.8		Elnath	278 47.3 N28	35.3				
	08	325 20.3	318 04.4	06.8	332 11.9	17.6	264 29.3	09.0		192 37.7	41.8		Eltanin	90 58.5 N51	29.3				
	09	340 22.8	333 07.6	05.8	347 12.6	16.8	279 31.2	09.1		207 40.2	41.8		Enif	34 14.0 N 9	46.2				
	D 10	355 25.3	348 10.8	04.9	2 13.3	16.1	294 33.1	09.2		222 42.6	41.8		Fomalhaut	15 54.3 S29	44.5				
	M 11	10 27.7	3 13.9	04.0	17 14.0	15.3	309 35.0	09.3		237 45.0	41.8								
	I 12	25 30.2	18 17.0 N 9	03.1	32 14.6 S 4	14.5	324 36.9 N20	09.4		252 47.5 N18	41.8		Gacrux	172 30.7 S56	59.4				
	N 13	40 32.6	33 20.2	02.2	47 15.3	13.8	339 38.9	09.5		267 49.9	41.8		Gienah	176 20.0 S17	25.1				
	O 14	55 35.1	48 23.3	01.3	62 16.0	13.0	354 40.8	09.6		282 52.3	41.7		Hadar	149 25.9 S60	15.9				
	15	70 37.6	63 26.5	9 00.4	77 16.7	12.2	9 42.7	09.7		297 54.8	41.7		Hamal	328 31.9 N23	21.2				
	16	85 40.0	78 29.6	8 59.5	92 17.3	11.5	24 44.6	09.9		312 57.2	41.7		Kaus Aust.	84 19.8 S34	23.6				
	17	100 42.5	93 32.7	58.6	107 18.0	10.7	39 46.5	10.0		327 59.6	41.7								
	18	115 45.0	108 35.8 N 8	57.7	122 18.7 S 4	09.9	54 48.4 N20	10.1		343 02.1 N18	41.7		Kochab	137 17.9 N74	14.9				
	19	130 47.4	123 39.0	56.8	137 19.4	09.1	69 50.3	10.2		358 04.5	41.7		Markab	14 05.7 N15	04.9				
	20	145 49.9	138 42.1	55.9	152 20.1	08.4	84 52.2	10.3		13 06.9	41.7		Menkar	314 43.9 N 3	59.9				
	21	160 52.4	153 45.2	55.0	167 20.7	07.6	99 54.2	10.4		28 09.4	41.7		Menkent	148 39.3 S36	15.6				
	22	175 54.8	168 48.3	54.1	182 21.4	06.8	114 56.1	10.5		43 11.8	41.7		Miaplacidus	221 45.0 S69	37.9				
23	190 57.3	183 51.4	53.2	197 22.1	06.1	129 58.0	10.6		58 14.2	41.7									
18	00	205 59.8	198 54.5 N 8	52.3	212 22.8 S 4	05.3	144 59.9 N20	10.7		73 16.7 N18	41.7		Mirfak	309 19.8 N49	46.8				
	01	221 02.2	213 57.6	51.4	227 23.4	04.5	160 01.8	10.8		88 19.1	41.6		Nunki	76 31.9 S26	19.4				
	02	236 04.7	229 00.7	50.5	242 24.1	03.8	175 03.7	10.9		103 21.5	41.6		Peacock	54 02.1 S56	48.2				
	03	251 07.1	244 03.8	49.6	257 24.8	03.0	190 05.6	11.0		118 24.0	41.6		Pollux	244 01.0 N28	04.8				
	04	266 09.6	259 06.9	48.7	272 25.5	02.2	205 07.5	11.2		133 26.4	41.6		Procyon	245 28.2 N 5	16.8				
	05	281 12.1	274 09.9	47.8	287 26.1	01.5	220 09.4	11.3		148 28.8	41.6								
	06	296 14.5	289 13.0 N 8	47.0	302 26.8 S 4	00.7	235 11.4 N20	11.4		163 31.3 N18	41.6		Rasalhague	96 31.5 N12	34.5				
	07	311 17.0	304 16.1	46.1	317 27.5	3 59.9	250 13.3	11.5		178 33.7	41.6		Regulus	208 12.3 N12	04.6				
	08	326 19.5	319 19.2	45.2	332 28.2	59.2	265 15.2	11.6		193 36.1	41.6		Rigel	281 38.5 S 8	13.9				
	L 09	341 21.9	334 22.2	44.3	347 28.9	58.4	280 17.1	11.7		208 38.6	41.6		Rigel Kent.	140 28.2 S60	44.4				
	U 10	356 24.4	349 25.3	43.4	2 29.5	57.6	295 19.0	11.8		223 41.0	41.6		Sabik	102 43.6 S15	41.8				
	N 11	11 26.9	4 28.4	42.5	17 30.2	56.9	310 20.9	11.9		238 43.4	41.6								
	E 12	26 29.3	19 31.4 N 8	41.7	32 30.9 S 3	56.1	325 22.8 N20	12.0		253 45.9 N18	41.5		Schedar	350 12.1 N56	24.6				
	13	41 31.8	34 34.5	40.8	47 31.6	55.3	340 24.7	12.1		268 48.3	41.5		Shaula	96 58.7 S37	05.1				
	14	56 34.3	49 37.5	39.9	62 32.3	54.6	355 26.6	12.2		283 50.7	41.5		Sirius	258 57.8 S16	41.4				
	15	71 36.7	64 40.6	39.0	77 32.9	53.8	10 28.6	12.3		298 53.1	41.5		Spica	158 59.7 S11	02.7				
	16	86 39.2	79 43.6	38.1	92 33.6	53.0	25 30.5	12.4		313 55.6	41.5		Suhail	223 12.3 S43	20.8				
	17	101 41.6	94 46.6	37.3	107 34.3	52.3	40 32.4												

T. M. G.	ARIES			VENUS -3.8			MARTE +1.3			JUPITER -1.6			SATURNO +0.4			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
19	00	206 58.9	200 07.8 N 8	31.2	212 39.0 S 3	46.9	145 45.7 N20	13.3	74 15.0 N18	41.4	Acamar	315 39.4 S40	23.9					
	01	222 01.4	215 10.8	30.3	227 39.7	46.1	160 47.6	13.4	89 17.4	41.4	Achernar	335 47.6 S57	21.1					
	02	237 03.8	230 13.8	29.5	242 40.4	45.3	175 49.6	13.5	104 19.9	41.4	Acruz	173 39.1 S62	58.6					
	03	252 06.3	245 16.8	28.6	257 41.1	44.6	190 51.5	13.6	119 22.3	41.4	Adhara	255 34.0 S28	56.8					
	04	267 08.7	260 19.8	27.7	272 41.8	43.8	205 53.4	13.7	134 24.7	41.4	Aldebaran	291 20.9 N16	27.7					
	05	282 11.2	275 22.8	26.9	287 42.4	43.0	220 55.3	13.8	149 27.2	41.4								
	06	297 13.7	290 25.8 N 8	26.0	302 43.1 S 3	42.3	235 57.2 N20	14.0	164 29.6 N18	41.4	Alioth	166 44.1 N56	05.0					
	07	312 16.1	305 28.7	25.2	317 43.8	41.5	250 59.1	14.1	179 32.0	41.3	Alkaid	153 19.9 N49	25.5					
	08	327 18.6	320 31.7	24.3	332 44.5	40.7	266 01.0	14.2	194 34.4	41.3	Al Na'ir	28 18.1 S47	04.1					
	M 09	342 21.1	335 34.7	23.5	347 45.2	40.0	281 02.9	14.3	209 36.9	41.3	Alnilam	276 14.2 S 1	13.2					
	A 10	357 23.5	350 37.7	22.6	2 45.9	39.2	296 04.8	14.4	224 39.3	41.3	Alphard	218 22.7 S 8	33.9					
	R 11	12 26.0	5 40.6	21.8	17 46.5	38.4	311 06.7	14.5	239 41.7	41.3								
	T 12	27 28.5	20 43.6 N 8	20.9	32 47.2 S 3	37.7	326 08.6 N20	14.6	254 44.1 N18	41.3	Alphecca	126 33.8 N26	47.3					
	E 13	42 30.9	35 46.6	20.1	47 47.9	36.9	341 10.5	14.7	269 46.6	41.3	Alpheratz	358 12.0 N28	57.8					
	S 14	57 33.4	50 49.5	19.2	62 48.6	36.1	356 12.5	14.8	284 49.0	41.3	Altair	62 34.8 N 8	48.4					
	15	72 35.9	65 52.5	18.4	77 49.3	35.4	11 14.4	14.9	299 51.4	41.3	Ankaa	353 43.0 S42	25.7					
	16	87 38.3	80 55.4	17.5	92 49.9	34.6	26 16.3	15.0	314 53.8	41.3	Antares	112 59.4 S26	22.9					
	17	102 40.8	95 58.4	16.7	107 50.6	33.8	41 18.2	15.1	329 56.3	41.2								
	18	117 43.2	111 01.3 N 8	15.9	122 51.3 S 3	33.0	56 20.1 N20	15.2	344 58.7 N18	41.2	Arcturus	146 20.2 N19	17.9					
	19	132 45.7	126 04.2	15.0	137 52.0	32.3	71 22.0	15.4	0 01.1	41.2	Atria	108 25.3 S68	59.0					
	20	147 48.2	141 07.2	14.2	152 52.7	31.5	86 23.9	15.5	15 03.5	41.2	Avior	234 29.1 S59	26.6					
	21	162 50.6	156 10.1	13.3	167 53.3	30.7	101 25.8	15.6	30 06.0	41.2	Bellatrix	279 01.4 N 6	19.6					
	22	177 53.1	171 13.0	12.5	182 54.0	30.0	116 27.7	15.7	45 08.4	41.2	Betelgeuse	271 31.0 N 7	24.0					
23	192 55.6	186 16.0	11.7	197 54.7	29.2	131 29.6	15.8	60 10.8	41.2									
20	00	207 58.0	201 18.9 N 8	10.8	212 55.4 S 3	28.4	146 31.5 N20	15.9	75 13.2 N18	41.2	Canopus	264 08.5 S52	41.4					
	01	223 00.5	216 21.8	10.0	227 56.1	27.7	161 33.4	16.0	90 15.7	41.1	Capella	281 15.0 N45	58.6					
	02	238 03.0	231 24.7	09.2	242 56.8	26.9	176 35.3	16.1	105 18.1	41.1	Deneb	49 50.1 N45	11.7					
	03	253 05.4	246 27.6	08.4	257 57.4	26.1	191 37.2	16.2	120 20.5	41.1	Denebola	183 01.1 N14	41.8					
	04	268 07.9	261 30.5	07.5	272 58.1	25.4	206 39.1	16.3	135 22.9	41.1	Diphda	349 23.5 S18	06.7					
	05	283 10.4	276 33.4	06.7	287 58.8	24.6	221 41.0	16.4	150 25.4	41.1								
	06	298 12.8	291 36.3 N 8	05.9	302 59.5 S 3	23.8	236 43.0 N20	16.5	165 27.8 N18	41.1	Dubhe	194 24.6 N61	52.5					
	07	313 15.3	306 39.2	05.1	318 00.2	23.0	251 44.9	16.6	180 30.2	41.1	Elnath	278 47.3 N28	35.3					
	08	328 17.7	321 42.1	04.3	333 00.8	22.3	266 46.8	16.7	195 32.6	41.1	Eltanin	90 58.5 N51	29.3					
	M 09	343 20.2	336 45.0	03.4	348 01.5	21.5	281 48.7	16.9	210 35.0	41.1	Enif	34 14.0 N 9	46.2					
	A 10	358 22.7	351 47.8	02.6	3 02.2	20.7	296 50.6	17.0	225 37.5	41.0	Fomalhaut	15 54.2 S29	44.5					
	R 11	13 25.1	6 50.7	01.8	18 02.9	20.0	311 52.5	17.1	240 39.9	41.0								
	T 12	28 27.6	21 53.6 N 8	01.0	33 03.6 S 3	19.2	326 54.4 N20	17.2	255 42.3 N18	41.0	Gacrux	172 30.7 S56	59.4					
	E 13	43 30.1	36 56.5	00.2	48 04.3	18.4	341 56.3	17.3	270 44.7	41.0	Gienah	176 20.0 S17	25.1					
	S 14	58 32.5	51 59.3	7 59.4	63 04.9	17.7	356 58.2	17.4	285 47.2	41.0	Hadar	149 25.9 S60	15.9					
	15	73 35.0	67 02.2	58.6	78 05.6	16.9	12 00.1	17.5	300 49.6	41.0	Hamal	328 31.9 N23	21.2					
	16	88 37.5	82 05.0	57.8	93 06.3	16.1	27 02.0	17.6	315 52.0	41.0	Kaus Aust.	84 19.7 S34	23.6					
	17	103 39.9	97 07.9	56.9	108 07.0	15.4	42 03.9	17.7	330 54.4	41.0								
	18	118 42.4	112 10.7 N 7	56.1	123 07.7 S 3	14.6	57 05.8 N20	17.8	345 56.8 N18	40.9	Kochab	137 17.9 N74	14.9					
	19	133 44.8	127 13.6	55.3	138 08.4	13.8	72 07.7	17.9	0 59.3	40.9	Markab	14 05.7 N15	04.9					
	20	148 47.3	142 16.4	54.5	153 09.0	13.0	87 09.6	18.0	16 01.7	40.9	Menkar	314 43.9 N 3	59.9					
	21	163 49.8	157 19.3	53.7	168 09.7	12.3	102 11.5	18.1	31 04.1	40.9	Menkent	148 39.3 S36	15.6					
	22	178 52.2	172 22.1	52.9	183 10.4	11.5	117 13.4	18.2	46 06.5	40.9	Miaplacidus	221 45.1 S69	37.9					
23	193 54.7	187 24.9	52.1	198 11.1	10.7	132 15.3	18.4	61 08.9	40.9									
21	00	208 57.2	202 27.8 N 7	51.3	213 11.8 S 3	10.0	147 17.2 N20	18.5	76 11.4 N18	40.9	Mirfak	309 19.8 N49	46.8					
	01	223 59.6	217 30.6	50.6	228 12.5	09.2	162 19.1	18.6	91 13.8	40.9	Nunki	76 31.9 S26	19.4					
	02	239 02.1	232 33.4	49.8	243 13.1	08.4	177 21.0	18.7	106 16.2	40.8	Peacock	54 02.1 S56	48.2					
	03	254 04.6	247 36.2	49.0	258 13.8	07.7	192 22.9	18.8	121 18.6	40.8	Pollux	244 01.0 N28	04.8					
	04	269 07.0	262 39.0	48.2	273 14.5	06.9	207 24.8	18.9	136 21.0	40.8	Procyon	245 28.2 N 5	16.8					
	05	284 09.5	277 41.8	47.4	288 15.2	06.1	222 26.8	19.0	151 23.5	40.8								
	06	299 12.0	292 44.6 N 7	46.6	303 15.9 S 3	05.3	237 28.7 N20	19.1	166 25.9 N18	40.8	Rasalhague	96 31.5 N12	34.5					
	07	314 14.4	307 47.4	45.8	318 16.6	04.6	252 30.6	19.2	181 28.3	40.8	Regulus	208 12.3 N12	04.6					
	08	329 16.9	322 50.2	45.0	333 17.2	03.8	267 32.5	19.3	196 30.7	40.8	Rigel	281 38.5 S 8	13.9					
	J 09	344 19.3	337 53.0	44.3	348 17.9	03.0	282 34.4	19.4	211 33.1	40.8	Rigel Kent.	140 28.2 S60	44.4					
	U 10	359 21.8	352 55.8	43.5	3 18.6	02.3	297 36.3	19.5	226 35.5	40.7	Sabik	102 43.5 S15	41.8					
	V 11	14 24.3	7 58.6	42.7	18 19.3	01.5	312 38.2	19.6	241 38.0	40.7								
	E 12	29 26.7	23 01.4 N 7	41.9	33 20.0 S 3	00.7	327 40.1 N20	19.7	256 40.4 N18	40.7	Schedar	350 12.1 N56	24.6					
	S 13	44 29.2	38 04.1	41.2	48 20.7	00.0	342 42.0	19.8	271 42.8	40.7	Shaula	96 58.6 S37	05.1					
	14	59 31.7	53 06.9	40.4	63 21.4	59.2	357 43.9	20.0	286 45.2	40.7	Sirius	258 57.9 S16	41.4					
	15	74 34.1	68 09.7	39.6	78 22.0	58.4	12 45.8	20.1	301 47.6	40.7	Spica	158 59.6 S11	02.7					
	16	89 36.6	83 12.4	38.8	93 22.7	57.6	27 47.7	20.2	316 50.0	40.7	Suhail	223 12.3 S43	20.8					
	17	104 39.1	98 15.2	38.1	108 23.4	56.9	42 49.6	20.3	331 52.5	40.6								
	18	119 41.5	113 17.9 N 7	37.3	123 24.1 S 2	56.1	57 51.5 N20	20.4	346 54.9 N18	40.6	Vega	80 57.2 N38	45.6					
	19	134 44.0	128 20.7	36.6	138 24.8	55.3	72 53.4	20.5	1 57.3	40.6	Zuben'ubi	137 35.3 S15	56.9					
	20	149 46.5	143 23.4	35.8	153 25.5	54.6	87 55.3	20.6	16 59.7	40.6								
	21	164 48.9	158 26.2	35.0	168 26.1	53.8	102 57.2	20.7	32 02.1	40.6								
	22	179 51.4	173 28.9	34.3	183 26.8	53.0	117 59.1	20.8	47 04.5	40.6								
23	194 53.8	188 31.7	33.5	198 27.5	52.2	133 01.0	20.9	62 07.0	40.6									
Pas. Mer. 10 06.5		v 2.9 d 0.8			v 0.7 d 0.8			v 1.9 d 0.1			v 2.4 d 0.0							
														A. H. S. Pas. Mer.				
														Venus 353 20.8 10 33				
														Marte 4 57.4 9 48				
														Júpiter 298 33.5 14 12				
														Saturno 227 15.2 18 56				

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	v	Dec.	d	P.H.		Náut.	Civil		19	20	21	22		
											h m	h m	h m	h m	h m	h m
M A R T E S	19 00	180 11.8	N11 33.3	173 57.5	13.7	N12 15.4	7.4	54.3	N 72	///	00 58	03 10	03 37	03 28	03 15	□
	01	195 11.9	34.2	188 30.2	13.7	12 22.8	7.3	54.3	N 70	///	01 58	03 32	03 59	04 02	04 09	04 25
	02	210 12.0	35.1	203 02.9	13.7	12 30.1	7.3	54.3	68	///	02 32	03 48	04 17	04 26	04 42	05 08
	03	225 12.2	35.9	217 35.6	13.7	12 37.4	7.2	54.3	66	00 50	02 56	04 01	04 31	04 45	05 06	05 36
	04	240 12.3	36.8	232 08.3	13.6	12 44.6	7.1	54.3	64	01 43	03 14	04 12	04 42	05 01	05 25	05 58
	05	255 12.5	37.7	246 40.9	13.7	12 51.7	7.1	54.3	62	02 14	03 29	04 21	04 52	05 14	05 41	06 16
	06	270 12.6	N11 38.5	261 13.6	13.6	N12 58.8	7.0	54.3	60	02 36	03 42	04 29	05 01	05 25	05 54	06 30
	07	285 12.7	39.4	275 46.2	13.6	13 05.8	7.0	54.3	N 58	02 53	03 52	04 36	05 08	05 34	06 05	06 43
	08	300 12.9	40.3	290 18.8	13.5	13 12.8	6.9	54.2	56	03 08	04 01	04 43	05 15	05 43	06 15	06 53
	09	315 13.0	41.1	304 51.3	13.6	13 19.7	6.8	54.2	54	03 20	04 09	04 48	05 21	05 50	06 24	07 03
	10	330 13.1	42.0	319 23.9	13.5	13 26.5	6.8	54.2	52	03 30	04 16	04 53	05 26	05 57	06 31	07 11
	11	345 13.3	42.9	333 56.4	13.6	13 33.3	6.7	54.2	50	03 40	04 23	04 58	05 31	06 03	06 38	07 19
	12	0 13.4	N11 43.7	348 29.0	13.5	N13 40.0	6.7	54.2	45	03 58	04 36	05 07	05 42	06 16	06 53	07 35
	13	15 13.5	44.6	3 01.5	13.4	13 46.7	6.6	54.2	N 40	04 13	04 47	05 15	05 51	06 27	07 06	07 48
	14	30 13.7	45.5	17 33.9	13.5	13 53.3	6.5	54.2	35	04 24	04 56	05 22	05 58	06 36	07 16	08 00
	15	45 13.8	46.3	32 06.4	13.5	13 59.8	6.5	54.2	30	04 34	05 03	05 28	06 05	06 44	07 25	08 10
	16	60 13.9	47.2	46 38.9	13.4	14 06.3	6.4	54.2	N 20	04 49	05 16	05 38	06 17	06 58	07 41	08 27
	17	75 14.1	48.0	61 11.3	13.4	14 12.7	6.3	54.2	10	05 01	05 26	05 47	06 27	07 11	07 55	08 42
	18	90 14.2	N11 48.9	75 43.7	13.4	N14 19.0	6.3	54.2	0	05 10	05 34	05 56	06 37	07 22	08 09	08 56
	19	105 14.3	49.8	90 16.1	13.4	14 25.3	6.2	54.2	S 10	05 18	05 42	06 04	06 46	07 34	08 22	09 10
	20	120 14.5	50.6	104 48.5	13.3	14 31.5	6.2	54.2	20	05 24	05 50	06 12	06 57	07 46	08 36	09 25
	21	135 14.6	51.5	119 20.8	13.4	14 37.7	6.0	54.1	30	05 30	05 58	06 22	07 09	08 01	08 52	09 42
	22	150 14.7	52.4	133 53.2	13.3	14 43.7	6.0	54.1	35	05 32	06 02	06 27	07 15	08 09	09 01	09 52
23	165 14.9	53.2	148 25.5	13.3	14 49.7	6.0	54.1	40	05 34	06 06	06 34	07 23	08 19	09 12	10 03	
20 00	180 15.0	N11 54.1	162 57.8	13.2	N14 55.7	5.9	54.1	45	05 37	06 11	06 41	07 33	08 30	09 25	10 17	
01	195 15.1	54.9	177 30.0	13.3	15 01.6	5.8	54.1	S 50	05 39	06 16	06 50	07 44	08 43	09 40	10 33	
02	210 15.3	55.8	192 02.3	13.2	15 07.4	5.7	54.1	52	05 40	06 19	06 54	07 49	08 50	09 48	10 41	
03	225 15.4	56.6	206 34.5	13.3	15 13.1	5.7	54.1	54	05 40	06 22	06 58	07 55	08 57	09 56	10 50	
04	240 15.5	57.5	221 06.8	13.2	15 18.8	5.6	54.1	56	05 41	06 24	07 03	08 01	09 05	10 05	10 59	
05	255 15.7	58.4	235 39.0	13.2	15 24.4	5.5	54.1	58	05 42	06 27	07 08	08 08	09 14	10 15	11 11	
06	270 15.8	N11 59.3	250 11.2	13.1	N15 29.9	5.5	54.1	S 60	05 42	06 31	07 14	08 16	09 24	10 27	11 23	
07	285 15.9	60.1	264 43.3	13.2	15 35.4	5.4	54.1									
08	300 16.1	60.9	279 15.5	13.1	15 40.8	5.3	54.1	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
09	315 16.2	61.8	293 47.6	13.1	15 46.1	5.3	54.1			Civil	Náut.	19	20	21	22	
10	330 16.3	62.7	308 19.7	13.1	15 51.4	5.1	54.1					h m	h m	h m	h m	
11	345 16.5	63.5	322 51.8	13.1	15 56.5	5.1	54.1	N 72	20 52	23 19	///	22 41	24 31	00 31	□	
12	0 16.6	N11 64.1	337 23.9	13.0	N16 01.6	5.1	54.1	N 70	20 30	22 06	///	22 08	23 37	24 58	00 58	
13	15 16.7	64.9	351 55.9	13.0	16 06.7	4.9	54.1	68	20 13	21 31	///	21 45	23 04	24 16	00 16	
14	30 16.9	65.7	6 27.9	13.0	16 11.6	4.9	54.1	66	19 59	21 06	23 24	21 26	22 41	23 47	24 43	
15	45 17.0	66.5	20 59.9	13.0	16 16.5	4.8	54.0	64	19 48	20 46	22 21	21 12	22 22	23 26	24 20	
16	60 17.1	67.3	35 31.9	13.0	16 21.3	4.8	54.0	62	19 38	20 31	21 48	20 59	22 07	23 08	24 02	
17	75 17.2	68.1	50 03.9	13.0	16 26.1	4.6	54.0	60	19 30	20 18	21 25	20 49	21 54	22 54	23 47	
18	90 17.4	N11 68.9	64 35.9	12.9	N16 30.7	4.6	54.0	N 58	19 23	20 08	21 07	20 40	21 43	22 42	23 34	
19	105 17.5	69.7	79 07.8	12.9	16 35.3	4.6	54.0	56	19 17	19 58	20 52	20 32	21 34	22 31	23 23	
20	120 17.6	70.5	93 39.7	12.9	16 39.9	4.4	54.0	54	19 11	19 50	20 40	20 25	21 25	22 22	23 13	
21	135 17.8	71.3	108 11.6	12.9	16 44.3	4.4	54.0	52	19 06	19 43	20 29	20 18	21 18	22 14	23 05	
22	150 17.9	72.1	122 43.5	12.9	16 48.7	4.3	54.0	50	19 01	19 36	20 20	20 13	21 11	22 06	22 57	
23	165 18.0	72.9	137 15.4	12.8	16 53.0	4.2	54.0	45	18 51	19 23	20 01	20 00	20 57	21 50	22 40	
21 00	180 18.1	N11 73.1	151 47.2	12.9	N16 57.2	4.1	54.0	N 40	18 43	19 12	19 46	19 50	20 45	21 37	22 27	
01	195 18.3	73.9	166 19.1	12.8	17 01.3	4.1	54.0	35	18 36	19 03	19 34	19 41	20 34	21 26	22 15	
02	210 18.4	74.7	180 50.9	12.8	17 05.4	3.9	54.0	30	18 30	18 55	19 24	19 34	20 26	21 16	22 05	
03	225 18.5	75.5	195 22.7	12.7	17 09.3	3.9	54.0	20	18 20	18 42	19 09	19 21	20 10	20 59	21 48	
04	240 18.7	76.3	209 54.4	12.8	17 13.2	3.9	54.0	N 10	18 11	18 32	18 57	19 09	19 57	20 45	21 33	
05	255 18.8	77.1	224 26.2	12.7	17 17.1	3.7	54.0	0	18 02	18 23	18 48	18 59	19 44	20 31	21 19	
06	270 18.9	N11 78.1	238 57.9	12.8	N17 20.8	3.7	54.0	S 10	17 54	18 15	18 40	18 48	19 32	20 18	21 04	
07	285 19.0	78.9	253 29.7	12.7	17 24.5	3.6	54.0	20	17 45	18 08	18 34	18 36	19 19	20 03	20 49	
08	300 19.2	79.7	268 01.4	12.7	17 28.1	3.5	54.0	30	17 35	18 00	18 28	18 23	19 04	19 46	20 32	
09	315 19.3	80.5	282 33.1	12.6	17 31.6	3.4	54.0	35	17 30	17 56	18 25	18 16	18 55	19 37	20 22	
10	330 19.4	81.3	297 04.7	12.7	17 35.0	3.4	54.0	40	17 24	17 51	18 23	18 07	18 45	19 26	20 10	
11	345 19.5	82.1	311 36.4	12.6	17 38.4	3.2	54.0	45	17 16	17 46	18 20	17 57	18 33	19 12	19 57	
12	0 19.7	N11 83.1	326 08.0	12.7	N17 41.6	3.2	54.0	S 50	17 07	17 41	18 18	17 45	18 19	18 57	19 40	
13	15 19.8	83.9	340 39.7	12.6	17 44.8	3.2	54.0	52	17 03	17 38	18 17	17 40	18 12	18 49	19 32	
14	30 19.9	84.7	355 11.3	12.6	17 48.0	3.0	54.0	54	16 59	17 35	18 17	17 34	18 05	18 41	19 23	
15	45 20.0	85.5	9 42.9	12.6	17 51.0	2.9	54.0	56	16 54	17 32	18 16	17 27	17 57	18 32	19 14	
16	60 20.2	86.3	24 14.5	12.5	17 53.9	2.9	54.0	58	16 49	17 29	18 15	17 19	17 47	18 21	19 03	
17	75 20.3	87.1	38 46.0	12.6	17 56.8	2.8	54.0	S 60	16 42	17 26	18 14	17 11	17 37	18 09	18 50	
18	90 20.4	N11 88.1	53 17.6	12.5	N17 59.6	2.7	54.0									
19	105 20.6	88.9	67 49.1	12.5	18 02.3	2.6	54.0									

T. M. G.	ARIES			VENUS -3.9			MARTE +1.3			JUPITER -1.6			SATURNO +0.5			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
22	00	209 56.3	203 34.4 N 7	32.8	213 28.2 S 2	51.5	148 02.9 N20	21.0		77 09.4 N18	40.6		Acamar	315 39.4 S40	23.9				
	01	224 58.8	218 37.1	32.0	228 28.9	50.7	163 04.8	21.1		92 11.8	40.5		Achernar	335 47.6 S57	21.1				
	02	240 01.2	233 39.9	31.2	243 29.6	49.9	178 06.7	21.2		107 14.2	40.5		Acrux	173 39.1 S62	58.6				
	03	255 03.7	248 42.6	30.5	258 30.3	49.2	193 08.6	21.3		122 16.6	40.5		Adhara	255 34.0 S28	56.8				
	04	270 06.2	263 45.3	29.7	273 30.9	48.4	208 10.5	21.4		137 19.0	40.5		Aldebaran	291 20.9 N16	27.7				
	05	285 08.6	278 48.0	29.0	288 31.6	47.6	223 12.4	21.6		152 21.4	40.5								
	06	300 11.1	293 50.7 N 7	28.3	303 32.3 S 2	46.9	238 14.3 N20	21.7		167 23.9 N18	40.5		Alioth	166 44.1 N56	05.0				
	07	315 13.6	308 53.4	27.5	318 33.0	46.1	253 16.2	21.8		182 26.3	40.5		Alkaid	153 19.9 N49	25.6				
	08	330 16.0	323 56.1	26.8	333 33.7	45.3	268 18.1	21.9		197 28.7	40.4		Al Na'ir	28 18.1 S47	04.1				
	09	345 18.5	338 58.8	26.0	348 34.4	44.5	283 20.0	22.0		212 31.1	40.4		Alnilam	276 14.2 S 1	13.2				
	10	0 20.9	354 01.5	25.3	3 35.1	43.8	298 21.9	22.1		227 33.5	40.4		Alphard	218 22.7 S 8	33.9				
	11	15 23.4	9 04.2	24.5	18 35.7	43.0	313 23.8	22.2		242 35.9	40.4								
	12	30 25.9	24 06.9 N 7	23.8	33 36.4 S 2	42.2	328 25.7 N20	22.3		257 38.3 N18	40.4		Alphecca	126 33.7 N26	47.4				
	13	45 28.3	39 09.6	23.1	48 37.1	41.5	343 27.6	22.4		272 40.8	40.4		Alpheratz	358 12.0 N28	57.8				
	14	60 30.8	54 12.2	22.3	63 37.8	40.7	358 29.5	22.5		287 43.2	40.4		Altair	62 34.7 N 8	48.4				
	15	75 33.3	69 14.9	21.6	78 38.5	39.9	13 31.4	22.6		302 45.6	40.3		Ankaa	353 42.9 S42	25.7				
	16	90 35.7	84 17.6	20.9	93 39.2	39.1	28 33.3	22.7		317 48.0	40.3		Antares	112 59.4 S26	22.9				
	17	105 38.2	99 20.3	20.2	108 39.9	38.4	43 35.2	22.8		332 50.4	40.3								
	18	120 40.7	114 22.9 N 7	19.4	123 40.6 S 2	37.6	58 37.1 N20	22.9		347 52.8 N18	40.3		Arcturus	146 20.2 N19	17.9				
	19	135 43.1	129 25.6	18.7	138 41.2	36.8	73 39.0	23.0		2 55.2	40.3		Atria	108 25.2 S68	59.0				
	20	150 45.6	144 28.2	18.0	153 41.9	36.1	88 40.9	23.2		17 57.6	40.3		Avior	234 29.1 S59	26.6				
	21	165 48.1	159 30.9	17.3	168 42.6	35.3	103 42.8	23.3		33 00.0	40.2		Bellatrix	279 01.4 N 6	19.6				
	22	180 50.5	174 33.5	16.5	183 43.3	34.5	118 44.7	23.4		48 02.5	40.2		Betelgeuse	271 31.0 N 7	24.0				
23	195 53.0	189 36.2	15.8	198 44.0	33.8	133 46.6	23.5		63 04.9	40.2									
23	00	210 55.4	204 38.8 N 7	15.1	213 44.7 S 2	33.0	148 48.5 N20	23.6		78 07.3 N18	40.2		Canopus	264 08.5 S52	41.4				
	01	225 57.9	219 41.5	14.4	228 45.4	32.2	163 50.4	23.7		93 09.7	40.2		Capella	281 15.0 N45	58.5				
	02	241 00.4	234 44.1	13.7	243 46.1	31.4	178 52.3	23.8		108 12.1	40.2		Deneb	49 50.0 N45	11.7				
	03	256 02.8	249 46.7	13.0	258 46.7	30.7	193 54.2	23.9		123 14.5	40.2		Denebola	183 01.1 N14	41.8				
	04	271 05.3	264 49.3	12.3	273 47.4	29.9	208 56.1	24.0		138 16.9	40.1		Diphda	349 23.5 S18	06.7				
	05	286 07.8	279 52.0	11.6	288 48.1	29.1	223 58.0	24.1		153 19.3	40.1								
	06	301 10.2	294 54.6 N 7	10.9	303 48.8 S 2	28.4	238 59.9 N20	24.2		168 21.7 N18	40.1		Dubhe	194 24.6 N61	52.5				
	07	316 12.7	309 57.2	10.2	318 49.5	27.6	254 01.8	24.3		183 24.1	40.1		Elnath	278 47.3 N28	35.3				
	08	331 15.2	324 59.8	09.5	333 50.2	26.8	269 03.7	24.4		198 26.6	40.1		Eltanin	90 58.5 N51	29.3				
	09	346 17.6	340 02.4	08.8	348 50.9	26.0	284 05.6	24.5		213 29.0	40.1		Enif	34 13.9 N 9	46.2				
	10	1 20.1	355 05.0	08.1	3 51.6	25.3	299 07.5	24.6		228 31.4	40.0		Fomalhaut	15 54.2 S29	44.5				
	11	16 22.6	10 07.6	07.4	18 52.2	24.5	314 09.4	24.7		243 33.8	40.0								
	12	31 25.0	25 10.2 N 7	06.7	33 52.9 S 2	23.7	329 11.3 N20	24.8		258 36.2 N18	40.0		Gacrux	172 30.7 S56	59.4				
	13	46 27.5	40 12.8	06.0	48 53.6	23.0	344 13.1	25.0		273 38.6	40.0		Gienah	176 20.0 S17	25.2				
	14	61 29.9	55 15.4	05.3	63 54.3	22.2	359 15.0	25.1		288 41.0	40.0		Hadar	149 25.9 S60	15.9				
	15	76 32.4	70 18.0	04.6	78 55.0	21.4	14 16.9	25.2		303 43.4	40.0		Hamal	328 31.9 N23	21.2				
	16	91 34.9	85 20.5	03.9	93 55.7	20.6	29 18.8	25.3		318 45.8	40.0		Kaus Aust.	84 19.7 S34	23.6				
	17	106 37.3	100 23.1	03.2	108 56.4	19.9	44 20.7	25.4		333 48.2	39.9								
	18	121 39.8	115 25.7 N 7	02.5	123 57.1 S 2	19.1	59 22.6 N20	25.5		348 50.6 N18	39.9		Kochab	137 17.9 N74	14.9				
	19	136 42.3	130 28.2	01.9	138 57.7	18.3	74 24.5	25.6		3 53.0	39.9		Markab	14 05.7 N15	04.9				
	20	151 44.7	145 30.8	01.2	153 58.4	17.6	89 26.4	25.7		18 55.5	39.9		Menkar	314 43.9 N 3	59.9				
	21	166 47.2	160 33.4	00.5	168 59.1	16.8	104 28.3	25.8		33 57.9	39.9		Menkent	148 39.3 S36	15.6				
	22	181 49.7	175 35.9	00.8	183 59.8	16.0	119 30.2	25.9		49 00.3	39.9		Miaplacidus	221 45.1 S69	37.9				
23	196 52.1	190 38.5	00.1	199 00.5	15.2	134 32.1	26.0		64 02.7	39.8									
24	00	211 54.6	205 41.0 N 6	58.5	214 01.2 S 2	14.5	149 34.0 N20	26.1		79 05.1 N18	39.8		Mirfak	309 19.8 N49	46.8				
	01	226 57.0	220 43.6	57.8	229 01.9	13.7	164 35.9	26.2		94 07.5	39.8		Nunki	76 31.9 S26	19.4				
	02	241 59.5	235 46.1	57.1	244 02.6	12.9	179 37.8	26.3		109 09.9	39.8		Peacock	54 02.1 S56	48.2				
	03	257 02.0	250 48.6	56.5	259 03.3	12.2	194 39.7	26.4		124 12.3	39.8		Pollux	244 01.1 N28	04.8				
	04	272 04.4	265 51.2	55.8	274 03.9	11.4	209 41.6	26.5		139 14.7	39.8		Procyon	245 28.3 N 5	16.8				
	05	287 06.9	280 53.7	55.1	289 04.6	10.6	224 43.5	26.6		154 17.1	39.7								
	06	302 09.4	295 56.2 N 6	54.5	304 05.3 S 2	09.8	239 45.4 N20	26.8		169 19.5 N18	39.7		Rasalhague	96 31.5 N12	34.5				
	07	317 11.8	310 58.7	53.8	319 06.0	09.1	254 47.3	26.9		184 21.9	39.7		Regulus	208 12.3 N12	04.6				
	08	332 14.3	326 01.3	53.2	334 06.7	08.3	269 49.2	27.0		199 24.3	39.7		Rigel	281 38.5 S 8	13.9				
	09	347 16.8	341 03.8	52.5	349 07.4	07.5	284 51.1	27.1		214 26.7	39.7		Rigil Kent.	140 28.2 S60	44.5				
	10	2 19.2	356 06.3	51.8	4 08.1	06.8	299 53.0	27.2		229 29.1	39.7		Sabik	102 43.5 S15	41.8				
	11	17 21.7	11 08.8	51.2	19 08.8	06.0	314 54.9	27.3		244 31.5	39.6								
	12	32 24.2	26 11.3 N 6	50.5	34 09.5 S 2	05.2	329 56.8 N20	27.4		259 33.9 N18	39.6		Schedar	350 12.1 N56	24.6				
	13	47 26.6	41 13.8	49.9	49 10.2	04.4	344 58.6	27.5		274 36.3	39.6		Shaula	96 58.6 S37	05.1				
	14	62 29.1	56 16.3	49.2	64 10.8	03.7	0 00.5	27.6		289 38.7	39.6		Sirius	258 57.9 S16	41.4				
	15	77 31.5	71 18.8	48.6	79 11.5	02.9	15 02.4	27.7		304 41.1	39.6		Spica	158 59.6 S11	02.7				
	16	92 34.0	86 21.2	47.9	94 12.2	02.1	30 04.3	27.8		319 43.5	39.6		Suhail	223 12.3 S43	20.8				
	17	107 36.5	101 23.7	47.3	10														

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.		Dec.		A.H.G.		Dec.			Náut.	Civil		22		23		24		25	
	h	m	°	'	h	m	°	'				h	m	h	m	h	m	h	m	h	m
22 V I E R N E S	00	180	21.2	N12	04.9	140	26.6	12.4	N18	14.6	2.2	54.0	N 72	////	////	02 51	□	□	□	06 41
	01	195	21.3		05.8	154	58.0	12.5	18	16.8	2.1	54.0	N 70	////	01 31	03 16	04 25	05 02	06 07	07 31
	02	210	21.4		06.6	169	29.5	12.4	18	18.9	2.1	54.0	68	////	02 13	03 35	05 08	05 49	06 48	08 02
	03	225	21.5	..	07.5	184	00.9	12.4	18	21.0	1.9	54.0	66	////	02 41	03 49	05 36	06 19	07 16	08 26
	04	240	21.7		08.3	198	32.3	12.4	18	22.9	1.9	54.0	64	01 20	03 02	04 02	05 58	06 42	07 38	08 44
	05	255	21.8		09.2	213	03.7	12.4	18	24.8	1.8	54.0	62	01 57	03 18	04 12	06 16	07 00	07 55	08 59
	06	270	21.9	N12	10.0	227	35.1	12.4	N18	26.6	1.7	54.0	60	02 23	03 32	04 21	06 30	07 15	08 09	09 11
	07	285	22.0		10.8	242	06.5	12.3	18	28.3	1.6	54.0	N 58	02 42	03 43	04 28	06 43	07 28	08 21	09 22
	08	300	22.2		11.7	256	37.8	12.4	18	29.9	1.6	54.0	56	02 58	03 53	04 35	06 53	07 39	08 32	09 31
	09	315	22.3	..	12.5	271	09.2	12.3	18	31.5	1.4	54.1	54	03 11	04 02	04 41	07 03	07 49	08 41	09 39
	10	330	22.4		13.4	285	40.5	12.3	18	32.9	1.4	54.1	52	03 23	04 10	04 47	07 11	07 57	08 49	09 47
	11	345	22.5		14.2	300	11.8	12.4	18	34.3	1.3	54.1	50	03 32	04 16	04 52	07 19	08 05	08 57	09 54
	12	0	22.6	N12	15.0	314	43.2	12.3	N18	35.6	1.2	54.1	45	03 52	04 31	05 02	07 35	08 22	09 13	10 08
	13	15	22.8		15.9	329	14.5	12.3	18	36.8	1.1	54.1	N 40	04 08	04 42	05 11	07 48	08 35	09 26	10 20
	14	30	22.9		16.7	343	45.8	12.2	18	37.9	1.0	54.1	35	04 20	04 52	05 18	08 00	08 47	09 37	10 30
	15	45	23.0	..	17.6	358	17.0	12.3	18	38.9	0.9	54.1	30	04 31	05 00	05 25	08 10	08 57	09 46	10 38
	16	60	23.1		18.4	372	48.3	12.3	18	39.8	0.9	54.1	20	04 47	05 13	05 36	08 27	09 14	10 03	10 53
	17	75	23.3		19.2	386	58.6	12.2	18	40.7	0.8	54.1	N 10	04 59	05 24	05 46	08 42	09 29	10 17	11 07
	18	90	23.4	N12	20.1	400	68.9	12.3	N18	41.5	0.7	54.1	0	05 09	05 34	05 55	08 56	09 43	10 31	11 19
	19	105	23.5		20.9	414	79.2	12.2	18	42.2	0.6	54.1	S 10	05 18	05 42	06 04	09 10	09 57	10 45	11 31
	20	120	23.6		21.7	428	89.5	12.2	18	42.8	0.5	54.1	20	05 25	05 51	06 13	09 25	10 12	10 59	11 44
	21	135	23.7	..	22.6	442	99.8	12.3	18	43.3	0.4	54.1	30	05 31	05 59	06 24	09 42	10 30	11 16	11 59
	22	150	23.9		23.4	456	109.1	12.2	18	43.7	0.3	54.1	35	05 34	06 04	06 30	09 52	10 40	11 25	12 08
23	165	24.0		24.3	470	118.4	12.2	18	44.0	0.3	54.1	40	05 37	06 09	06 37	10 03	10 51	11 36	12 18	
					484	127.7	12.2	18	44.0	0.3	54.1	45	05 40	06 14	06 45	10 17	11 05	11 49	12 29	
23 S A B A D O	00	180	24.1	N12	25.1	128	58.2	12.2	N18	44.3	0.2	54.1	S 50	05 43	06 21	06 54	10 33	11 22	12 05	12 43
	01	195	24.2		25.9	143	29.4	12.2	18	44.5	0.0	54.2	52	05 44	06 24	06 59	10 41	11 29	12 12	12 50
	02	210	24.3		26.8	158	00.6	12.2	18	44.5	0.0	54.2	54	05 45	06 27	07 03	10 50	11 38	12 21	12 57
	03	225	24.5	..	27.6	172	31.8	12.1	18	44.5	0.1	54.2	56	05 46	06 30	07 09	10 59	11 48	12 30	13 05
	04	240	24.6		28.4	187	02.9	12.2	18	44.4	0.1	54.2	58	05 48	06 34	07 15	11 11	11 59	12 40	13 14
	05	255	24.7		29.3	201	34.1	12.2	18	44.3	0.3	54.2	S 60	05 49	06 38	07 21	11 23	12 12	12 52	13 25
	06	270	24.8	N12	30.1	216	05.3	12.1	N18	44.0	0.4	54.2								
	07	285	24.9		30.9	230	36.4	12.2	18	43.6	0.4	54.2	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna				
	08	300	25.0		31.8	245	07.6	12.1	18	43.2	0.5	54.2				22	23	24	25	
	09	315	25.2	..	32.6	259	38.7	12.1	18	42.7	0.6	54.2								
	10	330	25.3		33.4	274	09.8	12.2	18	42.1	0.7	54.2								
	11	345	25.4		34.3	288	41.0	12.1	18	41.4	0.8	54.2								
	12	0	25.5	N12	35.1	303	12.1	12.1	N18	40.6	0.9	54.3	N 72	21 10	////	////	□	□	□	03 41
	13	15	25.6		35.9	317	43.2	12.1	18	39.7	0.9	54.3	N 70	20 44	22 35	////	00 58	02 00	02 34	02 50
	14	30	25.7		36.7	332	14.3	12.1	18	38.8	1.1	54.3	68	20 25	21 49	////	00 16	01 13	01 53	02 18
	15	45	25.9	..	37.6	346	45.4	12.1	18	37.7	1.1	54.3	66	20 10	21 20	////	24 43	00 43	01 24	01 54
	16	60	26.0		38.4	360	56.5	12.1	18	36.6	1.2	54.3	64	19 57	20 58	22 45	24 20	00 20	01 03	01 35
	17	75	26.1		39.2	374	7.6	12.1	18	35.4	1.4	54.3	62	19 47	20 41	22 04	24 02	00 02	00 45	01 20
	18	90	26.2	N12	40.1	388	18.7	12.1	N18	34.0	1.4	54.3	60	19 38	20 27	21 37	23 47	24 31	00 31	01 07
	19	105	26.3		40.9	402	29.8	12.1	18	32.6	1.4	54.3	N 58	19 30	20 15	21 17	23 34	24 19	00 19	00 56
	20	120	26.4		41.7	416	40.9	12.1	18	31.2	1.6	54.4	56	19 23	20 05	21 01	23 23	24 08	00 08	00 47
	21	135	26.6	..	42.5	430	52.0	12.1	18	29.6	1.7	54.4	54	19 17	19 56	20 47	23 13	23 59	24 38	00 38
	22	150	26.7		43.4	444	63.1	12.1	18	27.9	1.7	54.4	52	19 11	19 48	20 36	23 05	23 50	24 30	00 30
23	165	26.8		44.2	458	74.2	12.1	18	26.2	1.8	54.4	50	19 06	19 41	20 26	22 57	23 43	24 23	00 23	
					472	85.3	12.1	18	26.2	1.8	54.4	45	18 55	19 27	20 05	22 40	23 26	24 09	00 09	
24 D O M I N G O	00	180	26.9	N12	45.0	117	25.3	12.0	N18	24.4	1.9	54.4	N 40	18 46	19 15	19 50	22 27	23 13	23 56	24 36
	01	195	27.0		45.9	131	56.3	12.1	18	22.5	2.0	54.4	35	18 39	19 05	19 37	22 15	23 02	23 46	24 27
	02	210	27.1		46.7	146	27.4	12.1	18	20.5	2.1	54.4	30	18 32	18 57	19 27	22 05	22 52	23 37	24 19
	03	225	27.2	..	47.5	160	58.5	12.1	18	18.4	2.2	54.5	20	18 21	18 43	19 10	21 48	22 35	23 21	24 05
	04	240	27.4		48.3	175	29.6	12.0	18	16.2	2.3	54.5	N 10	18 11	18 32	18 58	21 33	22 20	23 07	23 53
	05	255	27.5		49.2	190	00.6	12.1	18	13.9	2.3	54.5	0	18 02	18 23	18 47	21 19	22 06	22 54	23 42
	06	270	27.6	N12	50.0	204	31.7	12.1	N18	11.6	2.4	54.5	S 10	17 53	18 14	18 39	21 04	21 52	22 41	23 30
	07	285	27.7		50.8	219	02.8	12.0	18	09.2	2.6	54.5	20	17 43	18 06	18 32	20 49	21 37	22 27	23 18
	08	300	27.8		51.6	233	33.8	12.1	18	06.6	2.6	54.5	30	17 32	17 57	18 25	20 32	21 20	22 11	23 04
	09	315	27.9	..	52.5	248	04.9	12.1	18	04.0	2.7	54.5	35	17 26	17 52	18 22	20 22	21 10	22 02	22 56
	10	330	28.0		53.3	262	36.0	12.0	18	01.3	2.7	54.6	40	17						

T. M. G.	ARIES			VENUS -4.0			MARTE +1.3			JUPITER -1.6			SATURNO +0.5			ESTRELLAS				
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.		
25 d h 00 01 02 03 04 05 06 07 08 L U N E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	212 53.7	206 41.0 N 6	42.9	214 17.7 S 1	56.0		150 19.5 N20	28.7	80 02.8 N18	39.4		Acomar	315 39.4 S40	23.9						
	227 56.2	221 43.5	42.2	229 18.4	55.2		165 21.4	28.8	95 05.2	39.4		Achernar	335 47.6 S57	21.1						
	242 58.7	236 45.9	41.6	244 19.1	54.4		180 23.3	28.9	110 07.6	39.4		Acrux	173 39.1 S62	58.6						
	258 01.1	251 48.3	41.0	259 19.8	53.6		195 25.2	29.0	125 10.0	39.4		Adhara	255 34.1 S28	56.8						
	273 03.6	266 50.8	40.4	274 20.5	52.9		210 27.1	29.1	140 12.4	39.3		Aldebaran	291 20.9 N16	27.7						
	288 06.0	281 53.2	39.7	289 21.2	52.1		225 28.9	29.2	155 14.8	39.3										
	303 08.5	296 55.7 N 6	39.1	304 21.9 S 1	51.3		240 30.8 N20	29.3	170 17.2 N18	39.3		Alioth	166 44.1 N56	05.0						
	318 11.0	311 58.1	38.5	319 22.6	50.6		255 32.7	29.4	185 19.6	39.3		Alkaid	153 19.9 N49	25.6						
	333 13.4	327 00.5	37.9	334 23.3	49.8		270 34.6	29.5	200 22.0	39.3		Al Na'ir	28 18.1 S47	04.0						
	348 15.9	342 02.9	37.3	349 24.0	49.0		285 36.5	29.6	215 24.4	39.3		Alnilam	276 14.2 S 1	13.2						
	3 18.4	357 05.4	36.7	4 24.7	48.2		300 38.4	29.7	230 26.8	39.2		Alphard	218 22.7 S 8	33.9						
	18 20.8	12 07.8	36.1	19 25.3	47.5		315 40.3	29.8	245 29.2	39.2										
	33 23.3	27 10.2 N 6	35.5	34 26.0 S 1	46.7		330 42.2 N20	29.9	260 31.6 N18	39.2		Alphecca	126 33.7 N26	47.4						
	48 25.8	42 12.6	34.9	49 26.7	45.9		345 44.1	30.0	275 34.0	39.2		Alpheratz	358 12.0 N28	57.8						
	63 28.2	57 15.0	34.2	64 27.4	45.2		0 46.0	30.1	290 36.4	39.2		Altair	62 34.7 N 8	48.4						
	78 30.7	72 17.4	33.6	79 28.1	44.4		15 47.9	30.2	305 38.8	39.2		Ankaa	353 42.9 S42	25.7						
	93 33.1	87 19.8	33.0	94 28.8	43.6		30 49.8	30.3	320 41.2	39.1		Antares	112 59.4 S26	22.9						
	108 35.6	102 22.2	32.4	109 29.5	42.8		45 51.7	30.4	335 43.6	39.1										
	123 38.1	117 24.6 N 6	31.9	124 30.2 S 1	42.1		60 53.5 N20	30.5	350 46.0 N18	39.1		Arcturus	146 20.2 N19	17.9						
	138 40.5	132 26.9	31.3	139 30.9	41.3		75 55.4	30.7	5 48.4	39.1		Atria	108 25.2 S68	59.0						
	153 43.0	147 29.3	30.7	154 31.6	40.5		90 57.3	30.8	20 50.8	39.1		Avior	234 29.1 S59	26.6						
	168 45.5	162 31.7	30.1	169 32.3	39.8		105 59.2	30.9	35 53.2	39.0		Bellatrix	279 01.5 N 6	19.6						
	183 47.9	177 34.1	29.5	184 33.0	39.0		121 01.1	31.0	50 55.6	39.0		Betelgeuse	271 31.0 N 7	24.0						
198 50.4	192 36.4	28.9	199 33.6	38.2		136 03.0	31.1	65 58.0	39.0											
26 00 01 02 03 04 05 06 07 08 M A R T E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	213 52.9	207 38.8 N 6	28.3	214 34.3 S 1	37.4		151 04.9 N20	31.2	81 00.3 N18	39.0		Canopus	264 08.5 S52	41.4						
	228 55.3	222 41.2	27.7	229 35.0	36.7		166 06.8	31.3	96 02.7	39.0		Capella	281 15.0 N45	58.5						
	243 57.8	237 43.5	27.2	244 35.7	35.9		181 08.7	31.4	111 05.1	38.9		Deneb	49 50.0 N45	11.8						
	259 00.3	252 45.9	26.6	259 36.4	35.1		196 10.6	31.5	126 07.5	38.9		Denebola	183 01.2 N14	41.8						
	274 02.7	267 48.2	26.0	274 37.1	34.4		211 12.5	31.6	141 09.9	38.9		Diphda	349 23.5 S18	06.7						
	289 05.2	282 50.6	25.4	289 37.8	33.6		226 14.3	31.7	156 12.3	38.9										
	304 07.6	297 52.9 N 6	24.9	304 38.5 S 1	32.8		241 16.2 N20	31.8	171 14.7 N18	38.9		Dubhe	194 24.6 N61	52.5						
	319 10.1	312 55.3	24.3	319 39.2	32.0		256 18.1	31.9	186 17.1	38.9		Elnath	278 47.3 N28	35.3						
	334 12.6	327 57.6	23.7	334 39.9	31.3		271 20.0	32.0	201 19.5	38.8		Eltanin	90 58.5 N51	29.3						
	349 15.0	342 59.9	23.1	349 40.6	30.5		286 21.9	32.1	216 21.9	38.8		Enif	34 13.9 N 9	46.2						
	4 17.5	358 02.3	22.6	4 41.3	29.7		301 23.8	32.2	231 24.3	38.8		Fomalhaut	15 54.2 S29	44.5						
	19 20.0	13 04.6	22.0	19 42.0	29.0		316 25.7	32.3	246 26.7	38.8										
	34 22.4	28 06.9 N 6	21.5	34 42.6 S 1	28.2		331 27.6 N20	32.4	261 29.1 N18	38.8		Gacrux	172 30.7 S56	59.4						
	49 24.9	43 09.2	20.9	49 43.3	27.4		346 29.5	32.5	276 31.5	38.7		Gienah	176 20.0 S17	25.2						
	64 27.4	58 11.5	20.3	64 44.0	26.6		1 31.4	32.6	291 33.9	38.7		Hadar	149 25.9 S60	15.9						
	79 29.8	73 13.8	19.8	79 44.7	25.9		16 33.2	32.7	306 36.3	38.7		Hamal	328 31.8 N23	21.2						
	94 32.3	88 16.2	19.2	94 45.4	25.1		31 35.1	32.9	321 38.7	38.7		Kaus Aust.	84 19.7 S34	23.6						
	109 34.8	103 18.5	18.7	109 46.1	24.3		46 37.0	33.0	336 41.1	38.7										
	124 37.2	118 20.8 N 6	18.1	124 46.8 S 1	23.6		61 38.9 N20	33.1	351 43.5 N18	38.6		Kochab	137 17.9 N74	14.9						
	139 39.7	133 23.0	17.6	139 47.5	22.8		76 40.8	33.2	6 45.9	38.6		Markab	14 05.6 N15	04.9						
	154 42.1	148 25.3	17.0	154 48.2	22.0		91 42.7	33.3	21 48.3	38.6		Menkar	314 43.9 N 3	59.9						
	169 44.6	163 27.6	16.5	169 48.9	21.2		106 44.6	33.4	36 50.6	38.6		Menkent	148 39.3 S36	15.6						
	184 47.1	178 29.9	15.9	184 49.6	20.5		121 46.5	33.5	51 53.0	38.6		Miaplacidus	221 45.2 S69	37.9						
199 49.5	193 32.2	15.4	199 50.3	19.7		136 48.4	33.6	66 55.4	38.5											
27 00 01 02 03 04 05 06 07 08 M I E R C O L E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	214 52.0	208 34.5 N 6	14.9	214 51.0 S 1	18.9		151 50.3 N20	33.7	81 57.8 N18	38.5		Mirfak	309 19.8 N49	46.8						
	229 54.5	223 36.7	14.3	229 51.7	18.2		166 52.1	33.8	97 00.2	38.5		Nunki	76 31.9 S26	19.4						
	244 56.9	238 39.0	13.8	244 52.4	17.4		181 54.0	33.9	112 02.6	38.5		Peacock	54 02.0 S56	48.2						
	259 59.4	253 41.3	13.3	259 53.0	16.6		196 55.9	34.0	127 05.0	38.5		Pollux	244 01.1 N28	04.8						
	275 01.9	268 43.5	12.7	274 53.7	15.8		211 57.8	34.1	142 07.4	38.4		Procyon	245 28.3 N 5	16.8						
	290 04.3	283 45.8	12.2	289 54.4	15.1		226 59.7	34.2	157 09.8	38.4										
	305 06.8	298 48.0 N 6	11.7	304 55.1 S 1	14.3		242 01.6 N20	34.3	172 12.2 N18	38.4		Rasalhague	96 31.5 N12	34.5						
	320 09.2	313 50.3	11.1	319 55.8	13.5		257 03.5	34.4	187 14.6	38.4		Regulus	208 12.3 N12	04.6						
	335 11.7	328 52.5	10.6	334 56.5	12.8		272 05.4	34.5	202 17.0	38.4		Rigel	281 38.5 S 8	13.9						
	350 14.2	343 54.8	10.1	349 57.2	12.0		287 07.2	34.6	217 19.3	38.3		Rigil Kent.	140 28.2 S60	44.5						
	5 16.6	358 57.0	09.6	4 57.9	11.2		302 09.1	34.7	232 21.7	38.3		Sabik	102 43.5 S15	41.8						
	20 19.1	13 59.3	09.1	19 58.6	10.4		317 11.0	34.8	247 24.1	38.3										
	35 21.6	29 01.5 N 6	08.5	34 59.3 S 1	09.7		332 12.9 N20	34.9	262 26.5 N18	38.3		Schedar	350 12.1 N56	24.6						
	50 24.0	44 03.7	08.0	50 00.0	08.9		347 14.8	35.0	277 28.9	38.3		Shaula	96 58.6 S37	05.1						
	65 26.5	59 06.0	07.5	65 00.7	08.1		2 16.7	35.1	292 31.3	38.2		Sirius	258 57.9 S16	41.4</						

T. M. G.	SOL				LUNA				Lot.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.		Dec.		A.H.G.		Dec.			P. H.	Náut.		Civil	25	26	27	28				
	°	'	°	'	°	'	°	'			h	m	h	m	h	m	h	m	h	m	
LUNES	25 ^d 00	180	29.6	N13	04.8	105	50.8	12.0	N17	14.7	4.0	54.8	N 72	////	////	02 31	06 41	08 33	10 21	12 09	
	01	195	29.7		05.6	120	21.8	12.1		17 10.7	4.0	54.8	N 70	////	00 55	03 00	07 31	09 04	10 41	12 20	
	02	210	29.8		06.4	134	52.9	12.1		17 06.7	4.2	54.9	68	////	01 52	03 21	08 02	09 26	10 56	12 29	
	03	225	29.9	..	07.2	149	24.0	12.0		17 02.5	4.2	54.9	66	////	02 25	03 38	08 26	09 44	11 08	12 36	
	04	240	30.0		08.0	163	55.0	12.1		16 58.3	4.3	54.9	64	00 48	02 49	03 51	08 44	09 58	11 18	12 42	
	05	255	30.2		08.8	178	26.1	12.0		16 54.0	4.4	54.9	62	01 39	03 07	04 03	08 59	10 10	11 27	12 48	
	06	270	30.3	N13	09.7	192	57.1	12.1	N16	49.6	4.4	55.0	60	02 09	03 22	04 12	09 11	10 20	11 34	12 52	
	07	285	30.4		10.5	207	28.2	12.1		16 45.2	4.6	55.0	N 58	02 31	03 34	04 21	09 22	10 29	11 40	12 56	
	08	300	30.5		11.3	221	59.3	12.0		16 40.6	4.6	55.0	56	02 48	03 45	04 28	09 31	10 36	11 46	13 00	
	09	315	30.6	..	12.1	236	30.3	12.1		16 36.0	4.7	55.0	54	03 02	03 55	04 35	09 39	10 43	11 51	13 03	
	10	330	30.7		12.9	251	01.4	12.1		16 31.3	4.8	55.0	52	03 15	04 03	04 41	09 47	10 49	11 56	13 06	
	11	345	30.8		13.7	265	32.5	12.0		16 26.5	4.9	55.1	50	03 25	04 10	04 46	09 54	10 55	12 00	13 08	
	12	0	30.9	N13	14.5	280	03.5	12.1	N16	21.6	4.9	55.1	45	03 47	04 26	04 57	10 08	11 07	12 09	13 14	
	13	15	31.0		15.4	294	34.6	12.0		16 16.7	5.1	55.1	N 40	04 03	04 38	05 07	10 20	11 17	12 16	13 19	
	14	30	31.1		16.2	309	05.6	12.1		16 11.6	5.1	55.1	35	04 16	04 48	05 15	10 30	11 25	12 23	13 23	
	15	45	31.2	..	17.0	323	36.7	12.1		16 06.5	5.2	55.2	30	04 27	04 57	05 22	10 38	11 32	12 28	13 26	
	16	60	31.3		17.8	338	07.8	12.0		16 01.3	5.3	55.2	20	04 44	05 11	05 34	10 53	11 45	12 38	13 33	
	17	75	31.4		18.6	352	38.8	12.1		15 56.0	5.3	55.2	N 10	04 58	05 23	05 45	11 07	11 56	12 47	13 38	
	18	90	31.6	N13	19.4	7	09.9	12.1	N15	50.7	5.5	55.2	0	05 08	05 33	05 54	11 19	12 07	12 55	13 43	
	19	105	31.7		20.2	21	41.0	12.0		15 45.2	5.5	55.3	S 10	05 18	05 42	06 04	11 31	12 17	13 03	13 48	
	20	120	31.8		21.0	36	12.0	12.1		15 39.7	5.6	55.3	20	05 26	05 52	06 14	11 44	12 28	13 11	13 54	
	21	135	31.9	..	21.8	50	43.1	12.1		15 34.1	5.7	55.3	30	05 33	06 01	06 26	11 59	12 41	13 21	14 00	
	22	150	32.0		22.7	65	14.2	12.0		15 28.4	5.8	55.3	35	05 36	06 06	06 32	12 08	12 48	13 26	14 04	
23	165	32.1		23.5	79	45.2	12.1		15 22.6	5.8	55.4	40	05 40	06 12	06 40	12 18	12 56	13 33	14 08		
MARTES	26 ^d 00	180	32.2	N13	24.3	94	16.3	12.1	N15	16.8	5.9	55.4	45	05 43	06 18	06 48	12 29	13 06	13 40	14 12	
	01	195	32.3		25.1	108	47.4	12.0		15 10.9	6.0	55.4	S 50	05 47	06 25	06 59	12 43	13 18	13 49	14 18	
	02	210	32.4		25.9	123	18.4	12.1		15 04.9	6.1	55.4	52	05 49	06 28	07 04	12 50	13 23	13 53	14 20	
	03	225	32.5	..	26.7	137	49.5	12.1		14 58.8	6.1	55.5	54	05 50	06 32	07 09	12 57	13 29	13 57	14 23	
	04	240	32.6		27.5	152	20.6	12.0		14 52.7	6.3	55.5	56	05 52	06 35	07 15	13 05	13 36	14 02	14 26	
	05	255	32.7		28.3	166	51.6	12.1		14 46.4	6.3	55.5	58	05 53	06 40	07 21	13 14	13 43	14 08	14 30	
	06	270	32.8	N13	29.1	181	22.7	12.0	N14	40.1	6.4	55.6	S 60	05 55	06 44	07 29	13 25	13 51	14 14	14 33	
	07	285	32.9		29.9	195	53.7	12.1		14 33.7	6.4	55.6									
	08	300	33.0		30.7	210	24.8	12.1		14 27.3	6.6	55.6	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
	09	315	33.1	..	31.5	224	55.9	12.0		14 20.7	6.6	55.6			Civil	Náut.	25	26	27	28	
	10	330	33.2		32.3	239	26.9	12.1		14 14.1	6.6	55.7									
	11	345	33.3		33.1	253	58.0	12.0		14 07.5	6.8	55.7									
	12	0	33.4	N13	33.9	268	29.0	12.0	N14	00.7	6.8	55.7	N 72	21 30	////	////	03 41	03 28	03 19	03 12	
	13	15	33.5		34.8	283	00.0	12.1		13 53.9	7.0	55.8	N 70	21 00	23 18	////	02 50	02 56	02 59	03 00	
	14	30	33.6		35.6	297	31.1	12.0		13 46.9	6.9	55.8	68	20 38	22 10	////	02 18	02 33	02 43	02 49	
	15	45	33.7	..	36.4	312	02.1	12.1		13 40.0	7.1	55.8	66	20 20	21 35	////	01 54	02 15	02 29	02 41	
	16	60	33.8		37.2	326	33.2	12.0		13 32.9	7.1	55.9	64	20 07	21 10	23 23	01 35	02 00	02 18	02 33	
	17	75	33.9		38.0	341	04.2	12.0		13 25.8	7.2	55.9	62	19 55	20 51	22 22	01 20	01 47	02 09	02 27	
	18	90	34.0	N13	38.8	355	35.2	12.0	N13	18.6	7.3	55.9	60	19 45	20 36	21 51	01 07	01 37	02 01	02 22	
	19	105	34.1		39.6	10	06.2	12.1		13 11.3	7.4	56.0	N 58	19 36	20 23	21 28	00 56	01 27	01 54	02 17	
	20	120	34.2		40.4	24	37.3	12.0		13 03.9	7.4	56.0	56	19 29	20 12	21 10	00 47	01 19	01 47	02 12	
	21	135	34.3	..	41.2	39	08.3	12.0		12 56.5	7.5	56.0	54	19 22	20 02	20 55	00 38	01 12	01 42	02 09	
	22	150	34.4		42.0	53	39.3	12.0		12 49.0	7.5	56.0	52	19 16	19 54	20 43	00 30	01 05	01 37	02 05	
23	165	34.5		42.8	68	10.3	12.0		12 41.5	7.7	56.1	50	19 11	19 47	20 32	00 23	01 00	01 32	02 02		
MIÉRCOLES	27 ^d 00	180	34.6	N13	43.6	82	41.3	12.0	N12	33.8	7.7	56.1	45	18 59	19 31	20 10	00 09	00 47	01 22	01 55	
	01	195	34.7		44.4	97	12.3	12.0		12 26.1	7.8	56.1	N 40	18 49	19 18	19 53	24 36	00 36	01 14	01 49	
	02	210	34.8		45.2	111	43.3	12.0		12 18.3	7.8	56.2	35	18 41	19 08	19 40	24 27	00 27	01 06	01 44	
	03	225	34.9	..	46.0	126	14.3	11.9		12 10.5	7.9	56.2	30	18 34	18 59	19 29	24 19	00 19	01 00	01 39	
	04	240	35.0		46.8	140	45.2	12.0		12 02.6	8.0	56.2	20	18 22	18 45	19 11	24 05	00 05	00 49	01 31	
	05	255	35.1		47.6	155	16.2	11.9		11 54.6	8.0	56.3	N 10	18 11	18 33	18 58	23 53	24 39	00 39	01 24	
	06	270	35.2	N13	48.4	169	47.1	12.0	N11	46.6	8.2	56.3	0	18 01	18 22	18 47	23 42	24 30	00 30	01 18	
	07	285	35.3		49.1	184	18.1	11.9		11 38.4	8.1	56.3	S 10	17 51	18 13	18 38	23 30	24 20	00 20	01 11	
	08	300	35.4		49.9	198	49.0	12.0		11 30.3	8.3	56.4	20	17 41	18 04	18 30	23 18	24 11	00 11	01 04	
	09	315	35.5	..	50.7	213	20.0	11.9		11 22.0	8.3	56.4	30	17 30	17 54	18 22	23 04	23 59	24 56	00 56	
	10	330	35.6		51.5	227	50.9	11.9		11 13.7	8.4	56.5	35	17 23	17 49	18 19	22 56	23 52	24 51	00 51	
	11	345	35.7		52.3	242	21.8	11.9		11 05.3	8.4	56.5	40	17 15	17 43	18 15	22 47	23 45	24 46	00 46	
	12	0	35.8	N13	53.1																

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna						
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		28		29		30		1
											h	m	h	m	h	m	h	m	h	m
J U E V E S	28 ^d 00	180 37.0	N14 02.6	71 02.6	11.8	N 9 10.5	9.2	57.0	N 72	///	///	02 10	12 09	13 59	15 52	17 51	
	01	195 37.1	03.4	85 33.4	11.7	9 01.3	9.3	57.0	N 70	///	///	02 43	12 20	14 03	15 49	17 40	
	02	210 37.2	04.2	100 04.1	11.7	8 52.0	9.4	57.0	68	///	01 28	03 07	12 29	14 06	15 46	17 31	
	03	225 37.3	05.0	114 34.8	11.7	8 42.6	9.4	57.1	66	///	02 08	03 26	12 36	14 08	15 44	17 24	
	04	240 37.4	05.8	129 05.5	11.7	8 33.2	9.5	57.1	64	///	02 35	03 41	12 42	14 11	15 42	17 18	
	05	255 37.5	06.6	143 36.2	11.6	8 23.7	9.5	57.1	62	01 18	02 56	03 53	12 48	14 12	15 41	17 13	
	06	270 37.6	N14 07.4	158 06.8	11.7	N 8 14.2	9.6	57.2	60	01 54	03 12	04 04	12 52	14 14	15 39	17 08	
	07	285 37.7	08.1	172 37.5	11.6	8 04.6	9.7	57.2	N 58	02 19	03 26	04 13	12 56	14 15	15 38	17 04	
	08	300 37.7	08.9	187 08.1	11.6	7 54.9	9.7	57.3	56	02 38	03 37	04 21	13 00	14 17	15 37	17 00	
	09	315 37.8	09.7	201 38.7	11.5	7 45.2	9.7	57.3	54	02 54	03 47	04 28	13 03	14 18	15 36	16 57	
	10	330 37.9	10.5	216 09.2	11.6	7 35.5	9.8	57.3	52	03 07	03 56	04 35	13 06	14 19	15 35	16 54	
	11	345 38.0	11.3	230 39.8	11.5	7 25.7	9.9	57.4	50	03 18	04 04	04 40	13 08	14 20	15 34	16 52	
	12	0 38.1	N14 12.1	245 10.3	11.5	N 7 15.8	9.9	57.4	45	03 41	04 21	04 53	13 14	14 22	15 33	16 46	
	13	15 38.2	12.9	259 40.8	11.5	7 05.9	10.0	57.5	N 40	03 58	04 34	05 03	13 19	14 24	15 31	16 41	
	14	30 38.3	13.6	274 11.3	11.5	6 55.9	10.0	57.5	35	04 12	04 45	05 12	13 23	14 25	15 30	16 37	
	15	45 38.4	14.4	288 41.8	11.4	6 45.9	10.0	57.5	30	04 24	04 54	05 19	13 26	14 26	15 29	16 34	
	16	60 38.5	15.2	303 12.2	11.4	6 35.9	10.1	57.6	20	04 42	05 09	05 32	13 33	14 29	15 27	16 27	
	17	75 38.6	16.0	317 42.6	11.4	6 25.8	10.2	57.6	N 10	04 56	05 22	05 43	13 38	14 31	15 25	16 22	
	18	90 38.7	N14 16.8	332 13.0	11.4	N 6 15.6	10.2	57.7	0	05 08	05 33	05 54	13 43	14 33	15 24	16 17	
	19	105 38.8	17.6	346 43.4	11.3	6 05.4	10.2	57.7	S 10	05 18	05 43	06 04	13 48	14 35	15 22	16 12	
	20	120 38.9	18.3	1 13.7	11.4	5 55.2	10.3	57.7	20	05 26	05 52	06 15	13 54	14 37	15 21	16 07	
	21	135 38.9	19.1	15 44.1	11.3	5 44.9	10.4	57.8	30	05 35	06 03	06 28	14 00	14 39	15 19	16 01	
	22	150 39.0	19.9	30 14.4	11.2	5 34.5	10.4	57.8	35	05 39	06 08	06 35	14 04	14 40	15 18	15 58	
23	165 39.1	20.7	44 44.6	11.2	5 24.1	10.4	57.9	40	05 43	06 15	06 43	14 08	14 42	15 17	15 54		
V I E R N E S	29 ^d 00	180 39.2	N14 21.5	59 14.8	11.3	N 5 13.7	10.5	57.9	45	05 47	06 21	06 52	14 12	14 44	15 16	15 50	
	01	195 39.3	22.2	73 45.1	11.1	5 03.2	10.5	57.9	S 50	05 51	06 29	07 03	14 18	14 46	15 14	15 44	
	02	210 39.4	23.0	88 15.2	11.2	4 52.7	10.5	58.0	52	05 53	06 33	07 08	14 20	14 47	15 14	15 42	
	03	225 39.5	23.8	102 45.4	11.1	4 42.2	10.6	58.0	54	05 55	06 37	07 14	14 23	14 48	15 13	15 39	
	04	240 39.6	24.6	117 15.5	11.1	4 31.6	10.7	58.1	56	05 57	06 41	07 21	14 26	14 49	15 12	15 37	
	05	255 39.7	25.4	131 45.6	11.0	4 20.9	10.6	58.1	58	05 59	06 45	07 28	14 30	14 50	15 11	15 33	
	06	270 39.7	N14 26.1	146 15.6	11.0	N 4 10.3	10.7	58.1	S 60	06 01	06 51	07 36	14 33	14 52	15 10	15 30	
	07	285 39.8	26.9	160 45.6	11.0	3 59.6	10.8	58.2	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
	08	300 39.9	27.7	175 15.6	11.0	3 48.8	10.8	58.2			Civil	Naut.	28	29	30	1	
	09	315 40.0	28.5	189 45.6	10.9	3 38.0	10.8	58.3	N 72	h	m	h	m	h	m	h	m
	10	330 40.1	29.2	204 15.5	10.9	3 27.2	10.8	58.3	N 70	21 51	///	///	03 12	03 06	02 59	02 53	
	11	345 40.2	30.0	218 45.4	10.8	3 16.4	10.9	58.3	68	21 16	///	///	03 00	03 00	02 59	02 59	
	12	0 40.3	N14 30.8	233 15.2	10.8	N 3 05.5	10.9	58.4	66	20 51	22 34	///	02 49	02 54	02 59	03 04	
	13	15 40.4	31.6	247 45.0	10.8	2 54.6	11.0	58.4	64	20 31	21 51	///	02 41	02 50	02 59	03 08	
	14	30 40.4	32.3	262 14.8	10.8	2 43.6	11.0	58.5	62	20 16	21 23	///	02 33	02 46	02 59	03 11	
	15	45 40.5	33.1	276 44.6	10.7	2 32.6	11.0	58.5	60	20 03	21 02	22 44	02 27	02 43	02 59	03 14	
	16	60 40.6	33.9	291 14.3	10.6	2 21.6	11.0	58.5	N 58	19 52	20 45	22 05	02 22	02 40	02 58	03 17	
	17	75 40.7	34.7	305 43.9	10.6	2 10.6	11.1	58.6	56	19 43	20 31	21 39	02 17	02 38	02 58	03 19	
	18	90 40.8	N14 35.4	320 13.5	10.6	N 1 59.5	11.1	58.6	54	19 35	20 19	21 19	02 12	02 36	02 58	03 22	
	19	105 40.9	36.2	334 43.1	10.6	1 48.4	11.1	58.7	52	19 28	20 09	21 03	02 09	02 34	02 58	03 24	
	20	120 41.0	37.0	349 12.7	10.5	1 37.3	11.1	58.7	50	19 21	20 00	20 50	02 05	02 32	02 58	03 25	
	21	135 41.1	37.8	3 42.2	10.4	1 26.2	11.2	58.7	45	19 15	19 52	20 38	02 02	02 30	02 58	03 27	
	22	150 41.1	38.5	18 11.6	10.4	1 15.0	11.2	58.8	40	19 03	19 35	20 15	01 55	02 26	02 58	03 30	
23	165 41.2	39.3	32 41.0	10.4	1 03.8	11.2	58.8	N 40	18 52	19 22	19 57	01 49	02 23	02 58	03 33		
S A B A D O	30 ^d 00	180 41.3	N14 40.1	47 10.4	10.3	N 0 52.6	11.2	58.9	35	18 44	19 11	19 43	01 44	02 21	02 58	03 36	
	01	195 41.4	40.8	61 39.7	10.3	0 41.4	11.3	58.9	30	18 36	19 01	19 31	01 39	02 18	02 57	03 38	
	02	210 41.5	41.6	76 09.0	10.3	0 30.1	11.3	58.9	20	18 23	18 46	19 13	01 31	02 14	02 57	03 42	
	03	225 41.6	42.4	90 38.3	10.2	0 18.8	11.3	59.0	N 10	18 11	18 33	18 59	01 24	02 10	02 57	03 46	
	04	240 41.6	43.1	105 07.5	10.1	N 0 07.5	11.3	59.0	0	18 01	18 22	18 47	01 18	02 07	02 57	03 49	
	05	255 41.7	43.9	119 36.6	10.1	S 0 03.8	11.3	59.1	S 10	17 50	18 12	18 37	01 11	02 03	02 56	03 52	
	06	270 41.8	N14 44.7	134 05.7	10.1	S 0 15.1	11.3	59.1	20	17 39	18 02	18 28	01 04	01 59	02 56	03 55	
	07	285 41.9	45.4	148 34.8	10.0	0 26.4	11.4	59.1	30	17 27	17 51	18 20	00 56	01 55	02 56	03 59	
	08	300 42.0	46.2	163 03.8	9.9	0 37.8	11.3	59.2	35	17 20	17 46	18 16	00 51	01 52	02 56	04 02	
	09	315 42.1	47.0	177 32.7	9.9	0 49.1	11.4	59.2	40	17 11	17 40	18 11	00 46	01 49	02 55	04 04	
	10	330 42.1	47.7	192 01.6	9.9	1 00.5	11.4	59.2	45	17 02	17 33	18 07	00 40	01 46	02 55	04 07	
	11	345 42.2	48.5	206 30.5	9.8	1 11.9	11.4	59.3	S 50	16 51	17 25	18 03	00 32	01 42	02 55	04 11	
	12	0 42.3	N14 49.3	220 59.3	9.8	S 1 23.3	11.4	59.3	52	16 45	17 21	18 01	00 29	01 40	02 55	04 12	
	13	15 42.4	50.0	235 28.1	9.7	1 34.7	11.4	59.4	54	16 40	17 17	17 59	00 25	01 38	02 54	04 14	
	14	30 42.5	50.8	249 56.8	9.6	1 46.1	11.4	59.4	56	16 33	17 13	17 57	00 20	01 36	02 54	04 16	
	15	45 42.5	51.6	264 25.4	9.6	1 57.5	11.4	59.4	58	16 26	17 08	17 55	00 16	01 33	02 54	04 18	
	16	60 42.6	52.3	278 54.0	9.6	2 08.9	11.4	59.5	S 60	16 18	17 03	17 52	00 10	01 30	02 54	04 21	
	17	75 42.7	53.1	293 22.6	9.5	2 20.3	11.5	59.5	Día	SOL E.T. (+)		LUNA					
	18	90 42.8	N14 53.9	307 51.1	9.4	S 2 31.8	11.4	59.5		00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.		

T. M. G.	ARIES		VENUS -4.2		MARTE +1.3		JUPITER -1.5		SATURNO +0.5		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
DOMINGO	00	218 48.6	211 56.4 N 5	32.0	215 57.8 S 0	04.9	154 51.1 N20	43.6	85 46.7 N18	36.4	Acomar	315 39.4 S40	23.8	
	01	233 51.0	226 58.4	31.7	230 58.5	04.1	169 53.0	43.7	100 49.0	36.4	Achernar	335 47.6 S57	21.1	
	02	248 53.5	242 00.3	31.3	245 59.2	03.4	184 54.9	43.8	115 51.4	36.3	Acrux	173 39.1 S62	58.7	
	03	263 55.9	257 02.2	30.9	260 59.9	02.6	199 56.8	43.9	130 53.8	36.3	Adhara	255 34.1 S28	56.8	
	04	278 58.4	272 04.1	30.6	276 00.6	01.8	214 58.7	44.0	145 56.2	36.3	Aldebaran	291 20.9 N16	27.7	
	05	294 00.9	287 06.1	30.3	291 01.3	01.1	230 00.5	44.1	160 58.5	36.3				
	06	309 03.3	302 08.0 N 5	29.9	306 02.0 S 0	00.3	245 02.4 N20	44.2	176 00.9 N18	36.2	Alioth	166 44.1 N56	05.0	
	07	324 05.8	317 09.9	29.6	321 02.7 N 0	00.5	260 04.3	44.3	191 03.3	36.2	Alkaid	153 19.9 N49	25.6	
	08	339 08.3	332 11.8	29.2	336 03.4	01.2	275 06.2	44.4	206 05.7	36.2	Al Na'ir	28 18.0 S47	04.0	
	09	354 10.7	347 13.7	28.9	351 04.1	02.0	290 08.1	44.5	221 08.0	36.2	Alnilam	276 14.2 S 1	13.2	
	10	9 13.2	2 15.6	28.6	6 04.8	02.8	305 09.9	44.6	236 10.4	36.1	Alphard	218 22.8 S 8	33.9	
	11	24 15.7	17 17.5	28.2	21 05.5	03.5	320 11.8	44.7	251 12.8	36.1				
	12	39 18.1	32 19.4 N 5	27.9	36 06.2 N 0	04.3	335 13.7 N20	44.8	266 15.2 N18	36.1	Alphecca	126 33.7 N26	47.4	
	13	54 20.6	47 21.3	27.6	51 06.9	05.1	350 15.6	44.9	281 17.5	36.1	Alpheratz	358 11.9 N28	57.8	
	14	69 23.1	62 23.2	27.2	66 07.6	05.9	5 17.5	45.0	296 19.9	36.0	Altair	62 34.7 N 8	48.4	
	15	84 25.5	77 25.1	26.9	81 08.3	06.6	20 19.3	45.1	311 22.3	36.0	Ankaa	353 42.9 S42	25.7	
	16	99 28.0	92 27.0	26.6	96 09.0	07.4	35 21.2	45.2	326 24.6	36.0	Antares	112 59.3 S26	22.9	
	17	114 30.4	107 28.9	26.2	111 09.7	08.2	50 23.1	45.3	341 27.0	36.0				
	18	129 32.9	122 30.8 N 5	25.9	126 10.4 N 0	08.9	65 25.0 N20	45.4	356 29.4 N18	35.9	Arcturus	146 20.2 N19	18.0	
	19	144 35.4	137 32.6	25.6	141 11.1	09.7	80 26.9	45.5	11 31.8	35.9	Atria	108 25.1 S68	59.1	
	20	159 37.8	152 34.5	25.3	156 11.8	10.5	95 28.7	45.6	26 34.1	35.9	Avior	234 29.2 S59	26.6	
	21	174 40.3	167 36.4	25.0	171 12.5	11.2	110 30.6	45.7	41 36.5	35.9	Bellatrix	279 01.5 N 6	19.6	
	22	189 42.8	182 38.3	24.7	186 13.2	12.0	125 32.5	45.8	56 38.9	35.8	Betelgeuse	271 31.0 N 7	24.0	
23	204 45.2	197 40.1	24.3	201 13.9	12.8	140 34.4	45.9	71 41.3	35.8					
LUNES	00	219 47.7	212 42.0 N 5	24.0	216 14.6 N 0	13.6	155 36.2 N20	46.1	86 43.6 N18	35.8	Canopus	264 08.5 S52	41.4	
	01	234 50.2	227 43.8	23.7	231 15.3	14.3	170 38.1	46.2	101 46.0	35.8	Capella	281 15.1 N45	58.5	
	02	249 52.6	242 45.7	23.4	246 16.0	15.1	185 40.0	46.3	116 48.4	35.7	Deneb	49 50.0 N45	11.8	
	03	264 55.1	257 47.5	23.1	261 16.7	15.9	200 41.9	46.4	131 50.7	35.7	Denebola	183 01.2 N14	41.8	
	04	279 57.5	272 49.4	22.8	276 17.4	16.6	215 43.8	46.5	146 53.1	35.7	Diphda	349 23.5 S18	06.7	
	05	295 00.0	287 51.2	22.5	291 18.1	17.4	230 45.6	46.6	161 55.5	35.6				
	06	310 02.5	302 53.1 N 5	22.2	306 18.8 N 0	18.2	245 47.5 N20	46.7	176 57.8 N18	35.6	Dubhe	194 24.7 N61	52.5	
	07	325 04.9	317 54.9	21.9	321 19.5	18.9	260 49.4	46.8	192 00.2	35.6	Elnath	278 47.3 N28	35.2	
	08	340 07.4	332 56.8	21.6	336 20.2	19.7	275 51.3	46.9	207 02.6	35.6	Eltanin	90 58.4 N51	29.4	
	09	355 09.9	347 58.6	21.3	351 20.9	20.5	290 53.1	47.0	222 05.0	35.5	Enif	34 13.9 N 9	46.2	
	10	10 12.3	3 00.4	21.0	6 21.6	21.2	305 55.0	47.1	237 07.3	35.5	Fomalhaut	15 54.2 S29	44.4	
	11	25 14.8	18 02.2	20.7	21 22.3	22.0	320 56.9	47.2	252 09.7	35.5				
	12	40 17.3	33 04.1 N 5	20.5	36 23.0 N 0	22.8	335 58.8 N20	47.3	267 12.1 N18	35.5	Gacrux	172 30.7 S56	59.4	
	13	55 19.7	48 05.9	20.2	51 23.7	23.5	351 00.6	47.4	282 14.4	35.4	Gienah	176 20.1 S17	25.2	
	14	70 22.2	63 07.7	19.9	66 24.4	24.3	6 02.5	47.5	297 16.8	35.4	Hadar	149 25.9 S60	15.9	
	15	85 24.7	78 09.5	19.6	81 25.1	25.1	21 04.4	47.6	312 19.2	35.4	Hamal	328 31.8 N23	21.2	
	16	100 27.1	93 11.3	19.3	96 25.8	25.9	36 06.3	47.7	327 21.5	35.4	Kaus Aust.	84 19.6 S34	23.6	
	17	115 29.6	108 13.1	19.0	111 26.5	26.6	51 08.2	47.8	342 23.9	35.3				
	18	130 32.0	123 14.9 N 5	18.8	126 27.2 N 0	27.4	66 10.0 N20	47.9	357 26.3 N18	35.3	Kochab	137 17.8 N74	14.9	
	19	145 34.5	138 16.7	18.5	141 27.9	28.2	81 11.9	48.0	12 28.6	35.3	Markab	14 05.6 N15	04.9	
	20	160 37.0	153 18.5	18.2	156 28.6	28.9	96 13.8	48.1	27 31.0	35.3	Menkar	314 43.9 N 3	59.9	
	21	175 39.4	168 20.3	18.0	171 29.3	29.7	111 15.7	48.2	42 33.4	35.2	Menkent	148 39.3 S36	15.6	
	22	190 41.9	183 22.1	17.7	186 30.0	30.5	126 17.5	48.3	57 35.7	35.2	Miaplacidus	221 45.3 S69	37.9	
23	205 44.4	198 23.9	17.4	201 30.7	31.2	141 19.4	48.4	72 38.1	35.2					
MARTES	00	220 46.8	213 25.7 N 5	17.1	216 31.4 N 0	32.0	156 21.3 N20	48.5	87 40.5 N18	35.1	Mirfak	309 19.8 N49	46.8	
	01	235 49.3	228 27.5	16.9	231 32.1	32.8	171 23.2	48.6	102 42.8	35.1	Nunki	76 31.8 S26	19.4	
	02	250 51.8	243 29.2	16.6	246 32.8	33.5	186 25.0	48.7	117 45.2	35.1	Peacock	54 02.0 S56	48.2	
	03	265 54.2	258 31.0	16.4	261 33.5	34.3	201 26.9	48.8	132 47.6	35.1	Pollux	244 01.1 N28	04.8	
	04	280 56.7	273 32.8	16.1	276 34.2	35.1	216 28.8	48.9	147 49.9	35.0	Procyon	245 28.3 N 5	16.8	
	05	295 59.2	288 34.6	15.8	291 34.9	35.8	231 30.7	49.0	162 52.3	35.0				
	06	311 01.6	303 36.3 N 5	15.6	306 35.6 N 0	36.6	246 32.5 N20	49.1	177 54.7 N18	35.0	Rasalhague	96 31.5 N12	34.5	
	07	326 04.1	318 38.1	15.3	321 36.3	37.4	261 34.4	49.2	192 57.0	35.0	Regulus	208 12.4 N12	04.6	
	08	341 06.5	333 39.8	15.1	336 37.0	38.1	276 36.3	49.3	207 59.4	34.9	Rigel	281 38.5 S 8	13.9	
	09	356 09.0	348 41.6	14.8	351 37.7	38.9	291 38.2	49.4	223 01.8	34.9	Rigil Kent.	140 28.2 S60	44.5	
	10	11 11.5	3 43.4	14.6	6 38.4	39.7	306 40.0	49.5	238 04.1	34.9	Sabik	102 43.5 S15	41.8	
	11	26 13.9	18 45.1	14.3	21 39.1	40.5	321 41.9	49.6	253 06.5	34.8				
	12	41 16.4	33 46.8 N 5	14.1	36 39.8 N 0	41.2	336 43.8 N20	49.7	268 08.9 N18	34.8	Schedar	350 12.0 N56	24.6	
	13	56 18.9	48 48.6	13.9	51 40.5	42.0	351 45.7	49.8	283 11.2	34.8	Shaula	96 58.5 S37	05.1	
	14	71 21.3	63 50.3	13.6	66 41.2	42.8	6 47.5	49.9	298 13.6	34.8	Sirius	258 57.9 S16	41.4	
	15	86 23.8	78 52.1	13.4	81 41.9	43.5	21 49.4	50.0	313 15.9	34.7	Spica	158 59.6 S11	02.7	
	16	101 26.3	93 53.8	13.1	96 42.6	44.3	36 51.3	50.1	328 18.3	34.7	Suhail	223 12.4 S43	20.8	
	17	116 28.7	108 55.5	12.9	111 43.3	45.1	51 53.2	50.2	343 20.7	34.7				
	18	131 31.2	123 57.3 N 5	12.7	126 44.0 N 0	45.8	66 55.0 N20	50.3	358 23.0 N18	34.7	Vega	80 57.1 N38	45.6	
	19	146 33.6	138 59.0	12.5	141 44.7	46.6	81 56.9	50.4	13 25.4	34.6	Zuben'ubi	137 35.2 S15	56.9	
	20	161 36.1	154 00.7	12.2	156 45.4	47.4	96 58.8	50.5	28 27.8	34.6				
	21	176 38.6	169 02.4	12.0	171 46.1	48.1	112 00.7	50.6	43 30.1	34.6				
	22	191 41.0	184 04.1	11.8	186 46.8	48.9	127 02.5	50.7	58 32.5	34.5	Venus	352 54.3	9 48	
23	206 43.5	199 05.9	11.5	201 47.5	49.7	142 04.4	50.8	73 34.9	34.5	Marte	356 26.9	9 35		
										Júpiter	295 48.5	13 36		
										Saturno	226 55.9	18 10		

Pas. Mer. 9 19.3

v 1.8 d 0.3

v 0.7 d 0.8

v 1.9 d 0.1

v 2.4 d 0.0

	A. H. S.	Pas. Mer.
	o	h m
Venus	352 54.3	9 48
Marte	356 26.9	9 35
Júpiter	29	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	1	2	3	4
	h m	°	h m	°	h m	°		h m	h m		h m	h m	h m	h m	h m
DOMINGO	1 00	180 43.3	N14 58.4	34 40.9	9.1 S	3 40.2	11.4 59.8	N 72	////	////	01 45	17 51	19 58	22 15	■
	01	195 43.3	59.2	49 09.0	9.0	3 51.6	11.4 59.8	N 70	////	////	02 26	17 40	19 36	21 36	23 33
	02	210 43.4	14 59.9	63 37.0	9.0	4 03.0	11.4 59.8	68	////	00 57	02 53	17 31	19 20	21 10	22 53
	03	225 43.5	15 00.7	78 05.0	8.9	4 14.4	11.4 59.9	66	////	01 50	03 14	17 24	19 07	20 49	22 25
	04	240 43.6	01.5	92 32.9	8.9	4 25.8	11.3 59.9	64	////	02 21	03 31	17 18	18 56	20 33	22 04
	05	255 43.7	02.2	107 00.8	8.8	4 37.1	11.3 59.9	62	00 50	02 44	03 44	17 13	18 47	20 20	21 47
	06	270 43.7	N15 03.0	121 28.6	8.7 S	4 48.4	11.4 60.0	60	01 38	03 02	03 56	17 08	18 39	20 09	21 33
	07	285 43.8	03.7	135 56.3	8.7	4 59.8	11.3 60.0	N 58	02 06	03 17	04 06	17 04	18 32	19 59	21 21
	08	300 43.9	04.5	150 24.0	8.6	5 11.1	11.3 60.0	56	02 28	03 30	04 14	17 00	18 26	19 50	21 11
	09	315 44.0	05.2	164 51.6	8.6	5 22.4	11.2 60.1	54	02 45	03 40	04 22	16 57	18 20	19 43	21 01
	10	330 44.0	06.0	179 19.2	8.5	5 33.6	11.3 60.1	52	02 59	03 50	04 29	16 54	18 15	19 36	20 53
	11	345 44.1	06.7	193 46.7	8.4	5 44.9	11.2 60.1	50	03 11	03 58	04 35	16 52	18 11	19 30	20 46
	12	0 44.2	N15 07.5	208 14.1	8.4 S	5 56.1	11.2 60.2	45	03 36	04 16	04 48	16 46	18 01	19 17	20 30
	13	15 44.3	08.3	222 41.5	8.3	6 07.3	11.2 60.2	N 40	03 54	04 30	04 59	16 41	17 53	19 06	20 17
	14	30 44.4	09.0	237 08.8	8.3	6 18.5	11.1 60.2	35	04 09	04 41	05 08	16 37	17 46	18 57	20 06
	15	45 44.4	09.8	251 36.1	8.1	6 29.6	11.1 60.3	30	04 21	04 51	05 16	16 34	17 41	18 49	19 57
	16	60 44.5	10.5	266 03.2	8.1	6 40.7	11.1 60.3	20	04 40	05 07	05 30	16 27	17 30	18 35	19 40
	17	75 44.6	11.3	280 30.3	8.1	6 51.8	11.1 60.3	N 10	04 55	05 21	05 42	16 22	17 21	18 23	19 26
	18	90 44.7	N15 12.0	294 57.4	8.0 S	7 02.9	11.0 60.4	0	05 07	05 32	05 54	16 17	17 13	18 12	19 13
	19	105 44.7	12.8	309 24.4	7.9	7 13.9	11.0 60.4	S 10	05 18	05 43	06 05	16 12	17 05	18 01	19 00
	20	120 44.8	13.5	323 51.3	7.9	7 24.9	10.9 60.4	20	05 27	05 53	06 16	16 07	16 56	17 49	18 46
	21	135 44.9	14.3	338 18.2	7.8	7 35.8	10.9 60.4	30	05 36	06 05	06 29	16 01	16 46	17 36	18 30
	22	150 45.0	15.0	352 45.0	7.7	7 46.7	10.9 60.5	35	05 41	06 11	06 37	15 58	16 41	17 28	18 21
23	165 45.0	15.8	7 11.7	7.6	7 57.6	10.9 60.5	40	05 45	06 17	06 46	15 54	16 34	17 19	18 10	
200	180 45.1	N15 16.5	21 38.3	7.6 S	8 08.5	10.7 60.5	45	05 50	06 25	06 56	15 50	16 27	17 09	17 58	
01	195 45.2	17.3	36 04.9	7.5	8 19.2	10.8 60.6	S 50	05 55	06 33	07 08	15 44	16 18	16 57	17 43	
02	210 45.2	18.0	50 31.4	7.5	8 30.0	10.7 60.6	52	05 57	06 37	07 13	15 42	16 14	16 51	17 36	
03	225 45.3	18.8	64 57.9	7.4	8 40.7	10.7 60.6	54	05 59	06 42	07 20	15 39	16 09	16 45	17 28	
04	240 45.4	19.5	79 24.3	7.3	8 51.4	10.6 60.6	56	06 02	06 46	07 26	15 37	16 05	16 38	17 19	
05	255 45.5	20.3	93 50.6	7.3	9 02.0	10.5 60.7	58	06 04	06 51	07 34	15 33	15 59	16 30	17 10	
06	270 45.5	N15 21.0	108 16.9	7.2 S	9 12.5	10.5 60.7	S 60	06 07	06 57	07 43	15 30	15 53	16 21	16 59	
07	285 45.6	21.8	122 43.1	7.1	9 23.0	10.5 60.7	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	300 45.7	22.5	137 09.2	7.0	9 33.5	10.4 60.7			Civil	Náut.	1	2	3	4	
09	315 45.8	23.3	151 35.2	7.0	9 43.9	10.4 60.8									
10	330 45.8	24.0	166 01.2	6.9	9 54.3	10.2 60.8									
11	345 45.9	24.7	180 27.1	6.9	10 04.5	10.3 60.8	N 72	22 16	////	////	02 53	02 46	02 37	02 24	
12	0 46.0	N15 25.5	194 53.0	6.8 S10	10 14.8	10.1 60.8	N 70	21 33	////	////	02 59	02 59	03 00	03 04	
13	15 46.0	26.2	209 18.8	6.7	10 24.9	10.2 60.9	68	21 04	23 10	////	03 04	03 09	03 18	03 31	
14	30 46.1	27.0	223 44.5	6.6	10 35.1	10.0 60.9	66	20 43	22 09	////	03 08	03 18	03 32	03 52	
15	45 46.2	27.7	238 10.1	6.6	10 45.1	10.0 60.9	64	20 26	21 36	////	03 11	03 26	03 44	04 09	
16	60 46.2	28.5	252 35.7	6.5	10 55.1	9.9 60.9	62	20 12	21 13	23 15	03 14	03 32	03 54	04 23	
17	75 46.3	29.2	267 01.2	6.5	11 05.0	9.8 60.9	60	20 00	20 54	22 21	03 17	03 38	04 03	04 35	
18	90 46.4	N15 29.9	281 26.7	6.4 S11	11 14.8	9.8 61.0	N 58	19 50	20 39	21 51	03 19	03 43	04 11	04 46	
19	105 46.5	30.7	295 52.1	6.3	11 24.6	9.7 61.0	56	19 41	20 26	21 29	03 22	03 47	04 18	04 55	
20	120 46.5	31.4	310 17.4	6.2	11 34.3	9.6 61.0	54	19 33	20 15	21 11	03 24	03 51	04 24	05 03	
21	135 46.6	32.2	324 42.6	6.2	11 43.9	9.6 61.0	52	19 26	20 05	20 57	03 25	03 55	04 29	05 10	
22	150 46.7	32.9	339 07.8	6.2	11 53.5	9.5 61.0	50	19 20	19 57	20 44	03 27	03 58	04 34	05 16	
23	165 46.7	33.6	353 33.0	6.0	12 03.0	9.4 61.0	45	19 06	19 39	20 20	03 30	04 06	04 45	05 30	
300	180 46.8	N15 34.4	7 58.0	6.0 S12	12.4 9.3 61.1	N 40	18 55	19 25	20 01	03 33	04 12	04 54	05 42		
01	195 46.9	35.1	22 23.0	5.9	12 21.7	9.3 61.1	35	18 46	19 13	19 46	03 36	04 17	05 02	05 52	
02	210 46.9	35.9	36 47.9	5.9	12 31.0	9.1 61.1	30	18 38	19 03	19 34	03 38	04 22	05 09	06 00	
03	225 47.0	36.6	51 12.8	5.8	12 40.1	9.1 61.1	20	18 24	18 47	19 14	03 42	04 30	05 21	06 15	
04	240 47.1	37.3	65 37.6	5.7	12 49.2	9.0 61.1	N 10	18 12	18 34	18 59	03 46	04 37	05 31	06 28	
05	255 47.1	38.1	80 02.3	5.7	12 58.2	8.9 61.1	0	18 00	18 22	18 47	03 49	04 43	05 41	06 41	
06	270 47.2	N15 38.8	94 27.0	5.6 S13	07.1 8.8 61.1	S 10	17 49	18 11	18 36	03 52	04 50	05 50	06 53		
07	285 47.3	39.5	108 51.6	5.6	13 15.9	8.7 61.2	20	17 37	18 00	18 26	03 55	04 57	06 01	07 06	
08	300 47.3	40.3	123 16.2	5.5	13 24.6	8.7 61.2	30	17 24	17 49	18 17	03 59	05 05	06 13	07 21	
09	315 47.4	41.0	137 40.7	5.4	13 33.3	8.5 61.2	35	17 16	17 43	18 13	04 02	05 10	06 20	07 30	
10	330 47.5	41.7	152 05.1	5.4	13 41.8	8.5 61.2	40	17 08	17 36	18 08	04 04	05 15	06 28	07 40	
11	345 47.5	42.5	166 29.5	5.3	13 50.3	8.3 61.2	45	16 58	17 28	18 03	04 07	05 21	06 37	07 52	
12	0 47.6	N15 43.2	180 53.8	5.2 S13	58.6 8.3 61.2	S 50	16 45	17 20	17 58	04 11	05 29	06 48	08 06		
13	15 47.7	43.9	195 18.0	5.2	14 06.9	8.2 61.2	52	16 40	17 16	17 56	04 12	05 32	06 53	08 13	
14	30 47.7	44.7	209 42.2	5.2	14 15.1	8.0 61.2	54	16 34	17 11	17 54	04 14	05 36	06 59	08 20	
15	45 47.8	45.4	224 06.4	5.1	14 23.1	8.0 61.2	56	16 27	17 07	17 51	04 16	05 40	07 05	08 28	
16	60 47.9	46.1	238 30.5	5.0	14 31.1	7.8 61.2	58	16 19	17 02	17 49	04 18	05 45	07 12	08 38	
17	75 47.9	46.9	252 54.5	5.0	14 38.9	7.8 61.3	S 60	16 10	16 56	17 46	04 21	05 50	07 21	08 48	
18	90 48.0	N15 47.6	267 18.5	4.9 S14	46.7 7.7 61.3										
19	105 48.0	48.3	281 42.4	4.9	14 54.4	7.5 61.3									
20	120 48.1	49.1	296 06.3	4.8	15 01.9	7.4 61.3									
21	135 48.2	49.8	310 30.1	4.8	15 09.3	7.4 61.3									
22	150 48.2	50.5	324 53.9	4.7	15 16.7	7.2 61.3									
23	165 48.3	51.3													

T. M. G.	ARIES			VENUS -4.2			MARTE +1.3			JUPITER -1.5			SATURNO +0.5			ESTRELLAS							
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.							
M I E R C O L E S	4 00	221 46.0	214 07.6 N 5 11.3	216 48.2 N 0 50.4	157 06.3 N20 50.9	88 37.2 N18 34.5	Acamar	315 39.4	S40 23.8														
	01	236 48.4	229 09.3 11.1	231 48.9 51.2	172 08.2 51.0	103 39.6 34.5	Achernar	335 47.6	S57 21.1														
	02	251 50.9	244 11.0 10.9	246 49.6 52.0	187 10.0 51.1	118 41.9 34.4	Acrux	173 39.1	S62 58.7														
	03	266 53.4	259 12.7 10.7	261 50.3 52.7	202 11.9 51.2	133 44.3 34.4	Adhara	255 34.1	S28 56.8														
	04	281 55.8	274 14.4 10.5	276 51.0 53.5	217 13.8 51.3	148 46.7 34.4	Aldebaran	291 20.9	N16 27.7														
	05	296 58.3	289 16.1 10.2	291 51.7 54.3	232 15.7 51.4	163 49.0 34.3																	
	06	312 00.8	304 17.8 N 5 10.0	306 52.4 N 0 55.0	247 17.5 N20 51.5	178 51.4 N18 34.3	Alioth	166 44.1	N56 05.0														
	07	327 03.2	319 19.5 09.8	321 53.1 55.8	262 19.4 51.6	193 53.7 34.3	Alkaid	153 19.9	N49 25.6														
	08	342 05.7	334 21.1 09.6	336 53.8 56.6	277 21.3 51.7	208 56.1 34.3	Al Na'ir	28 18.0	S47 04.0														
	09	357 08.1	349 22.8 09.4	351 54.5 57.3	292 23.2 51.8	223 58.5 34.2	Alnilam	276 14.2	S 1 13.2														
	10	12 10.6	4 24.5 09.2	6 55.2 58.1	307 25.0 51.9	239 00.8 34.2	Alphard	218 22.8	S 8 33.9														
	11	27 13.1	19 26.2 09.0	21 55.9 58.9	322 26.9 52.0	254 03.2 34.2																	
	12	42 15.5	34 27.9 N 5 08.8	36 56.6 N 0 59.6	337 28.8 N20 52.1	269 05.6 N18 34.1	Alphecca	126 33.7	N26 47.4														
	13	57 18.0	49 29.5 08.6	51 57.3 1 00.4	352 30.7 52.2	284 07.9 34.1	Alpheratz	358 11.9	N28 57.8														
	14	72 20.5	64 31.2 08.4	66 58.0 01.2	7 32.5 52.3	299 10.3 34.1	Altair	62 34.6	N 8 48.5														
	15	87 22.9	79 32.9 08.2	81 58.7 01.9	22 34.4 52.4	314 12.6 34.1	Ankaa	353 42.9	S42 25.6														
	16	102 25.4	94 34.5 08.0	96 59.4 02.7	37 36.3 52.5	329 15.0 34.0	Antares	112 59.3	S26 22.9														
	17	117 27.9	109 36.2 07.8	112 00.1 03.5	52 38.1 52.6	344 17.3 34.0																	
	18	132 30.3	124 37.8 N 5 07.6	127 00.8 N 1 04.2	67 40.0 N20 52.7	359 19.7 N18 34.0	Arcturus	146 20.2	N19 18.0														
	19	147 32.8	139 39.5 07.5	142 01.5 05.0	82 41.9 52.8	14 22.1 33.9	Atria	108 25.1	S68 59.1														
	20	162 35.3	154 41.1 07.3	157 02.2 05.8	97 43.8 52.9	29 24.4 33.9	Avior	234 29.2	S59 26.6														
	21	177 37.7	169 42.8 07.1	172 02.9 06.5	112 45.6 53.0	44 26.8 33.9	Bellatrix	279 01.5	N 6 19.6														
	22	192 40.2	184 44.4 06.9	187 03.6 07.3	127 47.5 53.1	59 29.1 33.9	Betelgeuse	271 31.0	N 7 24.0														
23	207 42.6	199 46.1 06.7	202 04.3 08.1	142 49.4 53.2	74 31.5 33.8																		
J U E V E S	5 00	222 45.1	214 47.7 N 5 06.5	217 05.0 N 1 08.8	157 51.3 N20 53.3	89 33.9 N18 33.8	Canopus	264 08.6	S52 41.4														
	01	237 47.6	229 49.3 06.4	232 05.7 09.6	172 53.1 53.4	104 36.2 33.8	Capella	281 15.1	N45 58.5														
	02	252 50.0	244 51.0 06.2	247 06.4 10.4	187 55.0 53.5	119 38.6 33.7	Deneb	49 49.9	N45 11.8														
	03	267 52.5	259 52.6 06.0	262 07.1 11.1	202 56.9 53.6	134 40.9 33.7	Denebola	183 01.2	N14 41.8														
	04	282 55.0	274 54.2 05.9	277 07.8 11.9	217 58.7 53.7	149 43.3 33.7	Diphda	349 23.5	S18 06.7														
	05	297 57.4	289 55.9 05.7	292 08.5 12.7	233 00.6 53.8	164 45.6 33.7																	
	06	312 59.9	304 57.5 N 5 05.5	307 09.3 N 1 13.4	248 02.5 N20 53.9	179 48.0 N18 33.6	Dubhe	194 24.7	N61 52.5														
	07	328 02.4	319 59.1 05.4	322 10.0 14.2	263 04.4 54.0	194 50.4 33.6	Elnath	278 47.3	N28 35.2														
	08	343 04.8	335 00.7 05.2	337 10.7 15.0	278 06.2 54.1	209 52.7 33.6	Eltanin	90 58.4	N51 29.4														
	09	358 07.3	350 02.3 05.0	352 11.4 15.7	293 08.1 54.2	224 55.1 33.5	Enif	34 13.9	N 9 46.2														
	10	13 09.7	5 03.9 04.9	7 12.1 16.5	308 10.0 54.3	239 57.4 33.5	Fomalhaut	15 54.1	S29 44.4														
	11	28 12.2	20 05.5 04.7	22 12.8 17.3	323 11.8 54.4	254 59.8 33.5																	
	12	43 14.7	35 07.1 N 5 04.5	37 13.5 N 1 18.0	338 13.7 N20 54.5	270 02.1 N18 33.4	Gacrux	172 30.7	S56 59.4														
	13	58 17.1	50 08.7 04.4	52 14.2 18.8	353 15.6 54.6	285 04.5 33.4	Gienah	176 20.1	S17 25.2														
	14	73 19.6	65 10.3 04.2	67 14.9 19.6	8 17.5 54.7	300 06.9 33.4	Hadar	149 25.9	S60 16.0														
	15	88 22.1	80 11.9 04.1	82 15.6 20.3	23 19.3 54.8	315 09.2 33.4	Hamal	328 31.8	N23 21.2														
	16	103 24.5	95 13.5 03.9	97 16.3 21.1	38 21.2 54.9	330 11.6 33.3	Kaus Aust.	84 19.6	S34 23.6														
	17	118 27.0	110 15.1 03.8	112 17.0 21.9	53 23.1 55.0	345 13.9 33.3																	
	18	133 29.5	125 16.7 N 5 03.6	127 17.7 N 1 22.6	68 24.9 N20 55.1	0 16.3 N18 33.3	Kochab	137 17.9	N74 15.0														
	19	148 31.9	140 18.3 03.5	142 18.4 23.4	83 26.8 55.2	15 18.6 33.2	Markab	14 05.6	N15 04.9														
	20	163 34.4	155 19.9 03.4	157 19.1 24.2	98 28.7 55.3	30 21.0 33.2	Menkar	314 43.8	N 3 59.9														
	21	178 36.9	170 21.4 03.2	172 19.8 24.9	113 30.6 55.4	45 23.3 33.2	Menkent	148 39.3	S36 15.6														
	22	193 39.3	185 23.0 03.1	187 20.5 25.7	128 32.4 55.5	60 25.7 33.1	Miaplacidus	221 45.3	S69 37.9														
23	208 41.8	200 24.6 02.9	202 21.2 26.5	143 34.3 55.6	75 28.1 33.1																		
V I E R N E S	6 00	223 44.2	215 26.2 N 5 02.8	217 21.9 N 1 27.2	158 36.2 N20 55.7	90 30.4 N18 33.1	Mirfak	309 19.8	N49 46.8														
	01	238 46.7	230 27.7 02.7	232 22.6 28.0	173 38.0 55.8	105 32.8 33.1	Nunki	76 31.8	S26 19.4														
	02	253 49.2	245 29.3 02.5	247 23.3 28.7	188 39.9 55.9	120 35.1 33.0	Peacock	54 01.9	S56 48.2														
	03	268 51.6	260 30.8 02.4	262 24.0 29.5	203 41.8 56.0	135 37.5 33.0	Pollux	244 01.1	N28 04.8														
	04	283 54.1	275 32.4 02.3	277 24.7 30.3	218 43.6 56.1	150 39.8 33.0	Procyon	245 28.3	N 5 16.8														
	05	298 56.6	290 34.0 02.1	292 25.4 31.0	233 45.5 56.2	165 42.2 32.9																	
	06	313 59.0	305 35.5 N 5 02.0	307 26.1 N 1 31.8	248 47.4 N20 56.3	180 44.5 N18 32.9	Rasalhague	96 31.4	N12 34.5														
	07	329 01.5	320 37.1 01.9	322 26.8 32.6	263 49.3 56.4	195 46.9 32.9	Regulus	208 12.4	N12 04.6														
	08	344 04.0	335 38.6 01.8	337 27.5 33.3	278 51.1 56.5	210 49.2 32.8	Rigel	281 38.5	S 8 13.9														
	09	359 06.4	350 40.1 01.7	352 28.2 34.1	293 53.0 56.6	225 51.6 32.8	Rigil Kent.	140 28.2	S60 44.5														
	10	14 08.9	5 41.7 01.5	7 28.9 34.9	308 54.9 56.7	240 53.9 32.8	Sabik	102 43.5	S15 41.8														
	11	29 11.4	20 43.2 01.4	22 29.6 35.6	323 56.7 56.8	255 56.3 32.7																	
	12	44 13.8	35 44.8 N 5 01.3	37 30.3 N 1 36.4	338 58.6 N20 56.9	270 58.6 N18 32.7	Schedar	350 12.0	N56 24.6														
	13	59 16.3	50 46.3 01.2	52 31.0 37.2	354 00.5 57.0	286 01.0 32.7	Shaula	96 58.5	S37 05.1														
	14	74 18.7	65 47.8 01.1	67 31.7 37.9	9 02.3 57.1	301 03.3 32.7	Sirius	258 57.9	S16 41.4														
	15	89 21.2	80 49.4 01.0	82 32.4 38.7	24 04.2 57.2	316 05.7 32.6	Spica	158 59.6	S11 02.7														
	16	104 23.7	95 50.9 00.9	97 33.1 39.5	39 06.1 57.3	331 08.0 32.6	Suhail	223 12.4	S43 20.9														
	17	119 26.1	110 52.4 00.8	112 33.9 40.2	54 08.0 57.4	346 10.4 32.6																	
	18	134 28.6	125 53.9 N 5 00.6	127 34.6 N 1 41.0	69 09.8 N20 57.5	1 12.7 N18 32.5	Vega	80 57.1	N38 45.6														
	19	149 31.1	140 55.4 00.5	142 35.3 41.7	84 11.7 57.6	16 15.1 32.5	Zuben'ubi	137 35.2	S15 56.9														
	20	164 33.5	155 56.9 00.4	157 36.0 42.5	99 13.6 57.7	31 17.4 32.5																	
	21	179 36.0	170 58.5 00.3	172 36.7 43.3	114 15.4 57.8	46 19.8 32.4																	
	22	194 38.5	186 00.0 00.2	187 37.4 44.0	129 17.3 57.9	61 22.1 32.4	Venus	352 02.6	9 40														
23	209 40.9	201 01.5 00.1	202 38.1 44.8	144 19.2 58.0	76 24.5 32.4	Marte	354 19.9	9 31															
Pas. Mer.															9	07.5							
Pas. Mer.															1.6	0.2							
Pas. Mer.															0.7	0.8							
Pas. Mer.															1.9	0.1							
Pas. Mer.															2.4	0.0							
Pas. Mer.															9	07.5							
Pas. Mer.															1.6	0.2							
Pas. Mer.															0.7	0.8							
Pas. Mer.															1.9	0.1							
Pas. Mer.															2.4	0.0							
Pas. Mer.															9	07.5							
Pas. Mer.															1.6	0.2							
Pas. Mer.															0.7	0.8							
Pas. Mer.															1.9	0.1							
Pas. Mer.															2.4	0.0							
Pas. Mer.															9	07.5							
Pas. Mer.															1.6	0.2							
Pas. Mer.															0.7	0.8							
Pas. Mer.															1.9	0.1							
Pas. Mer.															2.4	0.0							
Pas. Mer.															9	07.5							
Pas. Mer.															1.6	0.2							
Pas. Mer.															0.7	0.8							
Pas. Mer.															1.9	0.1							
Pas. Mer.															2.4	0.0							
Pas. Mer.															9	07.5							
Pas. Mer.															1.6	0.2							
Pas. Mer.															0.7	0.8							
Pas. Mer.															1.9	0.1							

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	ν	Dec.	d P.H.		Náut.	Civil		4	5	6	7
M I E R C O L E S	4 00	180 48.4 N15 52.0	353 41.3	4.6	S15 31.0	7.0 61.3	N 72	////	////	01 16	h m	h m	h m	h m
	01	195 48.4 52.7	8 04.9	4.6	15 38.0	6.9 61.3	N 70	////	////	02 07	23 33	25 07	01 07	01 53
	02	210 48.5 53.4	22 28.5	4.5	15 44.9	6.7 61.3	68	////	////	02 39	22 53	24 16	00 16	01 08
	03	225 48.5 .. 54.2	36 52.0	4.5	15 51.6	6.7 61.3	66	////	01 30	03 02	22 25	23 44	24 39	00 39
	04	240 48.6 54.9	51 15.5	4.5	15 58.3	6.5 61.3	64	////	02 07	03 20	22 04	23 20	24 17	00 17
	05	255 48.7 55.6	65 39.0	4.4	16 04.8	6.4 61.3	62	////	02 32	03 35	21 47	23 01	23 59	24 40
	06	270 48.7 N15 56.3	80 02.4	4.4	S16 11.2	6.3 61.3	60	01 20	02 52	03 48	21 33	22 46	23 44	24 27
	07	285 48.8 57.1	94 25.8	4.3	16 17.5	6.2 61.3	N 58	01 54	03 08	03 58	21 21	22 33	23 31	24 16
	08	300 48.8 57.8	108 49.1	4.3	16 23.7	6.1 61.3	56	02 17	03 22	04 08	21 11	22 21	23 20	24 06
	09	315 48.9 .. 58.5	123 12.4	4.2	16 29.8	5.9 61.3	54	02 36	03 33	04 16	21 01	22 12	23 10	23 58
	10	330 49.0 15 59.2	137 35.6	4.3	16 35.7	5.8 61.3	52	02 51	03 44	04 23	20 53	22 03	23 02	23 50
	11	345 49.0 16 00.0	151 58.9	4.1	16 41.5	5.7 61.3	50	03 04	03 53	04 30	20 46	21 55	22 54	23 43
	12	0 49.1 N16 00.7	166 22.0	4.2	S16 47.2	5.6 61.3	45	03 30	04 11	04 44	20 30	21 38	22 38	23 29
	13	15 49.1 01.4	180 45.2	4.1	16 52.8	5.4 61.3	N 40	03 50	04 26	04 55	20 17	21 24	22 24	23 17
	14	30 49.2 02.1	195 08.3	4.1	16 58.2	5.3 61.3	35	04 05	04 38	05 05	20 06	21 12	22 13	23 06
	15	45 49.3 .. 02.8	209 31.4	4.1	17 03.5	5.2 61.3	30	04 18	04 48	05 14	19 57	21 02	22 03	22 57
	16	60 49.3 03.6	223 54.5	4.0	17 08.7	5.1 61.3	20	04 38	05 05	05 29	19 40	20 45	21 45	22 41
	17	75 49.4 04.3	238 17.5	4.0	17 13.8	4.9 61.3	N 10	04 54	05 19	05 41	19 26	20 29	21 30	22 28
	18	90 49.4 N16 05.0	252 40.5	4.0	S17 18.7	4.8 61.2	0	05 07	05 32	05 53	19 13	20 15	21 16	22 15
	19	105 49.5 05.7	267 03.5	4.0	17 23.5	4.7 61.2	S 10	05 18	05 43	06 05	19 00	20 01	21 02	22 02
	20	120 49.6 06.4	281 26.5	4.0	17 28.2	4.5 61.2	20	05 28	05 54	06 17	18 46	19 46	20 47	21 48
	21	135 49.6 .. 07.2	295 49.5	3.9	17 32.7	4.4 61.2	30	05 38	06 06	06 31	18 30	19 28	20 30	21 32
	22	150 49.7 07.9	310 12.4	3.9	17 37.1	4.3 61.2	35	05 43	06 13	06 39	18 21	19 18	20 20	21 23
23	165 49.7 08.6	324 35.3	3.9	17 41.4	4.1 61.2	40	05 48	06 20	06 49	18 10	19 07	20 08	21 13	
5 00	180 49.8 N16 09.3	338 58.2	3.9	S17 45.5	4.0 61.2	45	05 53	06 28	06 59	17 58	18 53	19 55	21 01	
01	195 49.8 10.0	353 21.1	3.8	17 49.5	3.9 61.2	S 50	05 59	06 38	07 12	17 43	18 37	19 38	20 46	
02	210 49.9 10.7	7 43.9	3.9	17 53.4	3.7 61.2	52	06 01	06 42	07 18	17 36	18 29	19 31	20 39	
03	225 49.9 .. 11.5	22 06.8	3.8	17 57.1	3.6 61.2	54	06 04	06 46	07 25	17 28	18 20	19 22	20 31	
04	240 50.0 12.2	36 29.6	3.9	18 00.7	3.5 61.1	56	06 07	06 52	07 32	17 19	18 11	19 12	20 22	
05	255 50.1 12.9	50 52.5	3.8	18 04.2	3.3 61.1	58	06 10	06 57	07 41	17 10	18 00	19 02	20 12	
06	270 50.1 N16 13.6	65 15.3	3.9	S18 07.5	3.2 61.1	S 60	06 13	07 03	07 50	16 59	17 47	18 49	20 01	
07	285 50.2 14.3	79 38.2	3.8	18 10.7	3.0 61.1									
08	300 50.2 15.0	94 01.0	3.8	18 13.7	2.9 61.1	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna				
09	315 50.3 .. 15.7	108 23.8	3.8	18 16.6	2.8 61.1					4	5	6	7	
10	330 50.3 16.5	122 46.6	3.9	18 19.4	2.7 61.1	N 72	h m	h m	h m	h m	h m	h m	h m	
11	345 50.4 17.2	137 09.5	3.8	18 22.1	2.5 61.0	N 70	22 49	////	////	02 24	h m	h m	h m	
12	0 50.4 N16 17.9	151 32.3	3.8	S18 24.6	2.3 61.0	68	21 51	////	////	03 04	03 15	03 51	05 13	
13	15 50.5 18.6	165 55.1	3.9	18 26.9	2.3 61.0	66	21 18	////	////	03 31	03 56	04 43	05 57	
14	30 50.5 19.3	180 18.0	3.8	18 29.2	2.0 61.0	64	20 54	22 30	////	03 52	04 24	05 15	06 26	
15	45 50.6 .. 20.0	194 40.8	3.9	18 31.2	2.0 61.0	62	20 35	21 51	////	04 09	04 46	05 39	06 48	
16	60 50.6 20.7	209 03.7	3.9	18 33.2	1.8 61.0	60	20 20	21 24	////	04 23	05 03	05 57	07 06	
17	75 50.7 21.4	223 26.6	3.8	18 35.0	1.7 60.9	N 58	20 07	21 03	22 40	04 35	05 18	06 13	07 20	
18	90 50.8 N16 22.1	237 49.4	3.9	S18 36.7	1.5 60.9	56	19 56	20 47	22 03	04 46	05 30	06 26	07 33	
19	105 50.8 22.8	252 12.3	4.0	18 38.2	1.4 60.9	54	19 47	20 33	21 39	04 55	05 41	06 37	07 44	
20	120 50.9 23.6	266 35.3	3.9	18 39.6	1.2 60.9	52	19 39	20 21	21 19	05 03	05 50	06 47	07 53	
21	135 50.9 .. 24.3	280 58.2	4.0	18 40.8	1.2 60.9	50	19 31	20 11	21 04	05 10	05 59	06 56	08 02	
22	150 51.0 25.0	295 21.2	3.9	18 42.0	0.9 60.8	45	19 24	20 02	20 50	05 16	06 06	07 04	08 09	
23	165 51.0 25.7	309 44.1	4.1	18 42.9	0.9 60.8	40	19 10	19 43	20 24	05 30	06 22	07 21	08 25	
6 00	180 51.1 N16 26.4	324 07.2	4.0	S18 43.8	0.7 60.8	N 40	18 58	19 28	20 05	05 42	06 36	07 35	08 38	
01	195 51.1 27.1	338 30.2	4.0	18 44.5	0.5 60.8	35	18 48	19 16	19 49	05 52	06 47	07 47	08 50	
02	210 51.2 27.8	352 53.2	4.1	18 45.0	0.5 60.7	30	18 40	19 05	19 36	06 00	06 57	07 57	08 59	
03	225 51.2 .. 28.5	7 16.3	4.1	18 45.5	0.3 60.7	20	18 25	18 48	19 16	06 15	07 14	08 15	09 16	
04	240 51.3 29.2	21 39.4	4.2	18 45.8	0.1 60.7	N 10	18 12	18 34	19 00	06 28	07 29	08 30	09 31	
05	255 51.3 29.9	36 02.6	4.2	18 45.9	0.0 60.7	0	18 00	18 22	18 47	06 41	07 42	08 44	09 44	
06	270 51.4 N16 30.6	50 25.8	4.2	S18 45.9	0.1 60.7	S 10	17 48	18 10	18 35	06 53	07 56	08 59	09 58	
07	285 51.4 31.3	64 49.0	4.2	18 45.8	0.3 60.6	20	17 36	17 59	18 25	07 06	08 11	09 14	10 12	
08	300 51.5 32.0	79 12.2	4.3	18 45.5	0.3 60.6	30	17 22	17 47	18 15	07 21	08 28	09 31	10 29	
09	315 51.5 .. 32.7	93 35.5	4.4	18 45.2	0.6 60.6	35	17 13	17 40	18 10	07 30	08 38	09 41	10 38	
10	330 51.5 33.4	107 58.9	4.3	18 44.6	0.6 60.5	40	17 04	17 33	18 05	07 40	08 49	09 53	10 49	
11	345 51.6 34.1	122 22.2	4.5	18 44.0	0.8 60.5	45	16 53	17 25	18 00	07 52	09 03	10 07	11 02	
12	0 51.6 N16 34.8	136 45.7	4.4	S18 43.2	1.0 60.5	S 50	16 40	17 15	17 54	08 06	09 19	10 23	11 18	
13	15 51.7 35.5	151 09.1	4.5	18 42.2	1.0 60.5	52	16 34	17 11	17 51	08 13	09 26	10 31	11 25	
14	30 51.7 36.2	165 32.6	4.6	18 41.2	1.2 60.4	54	16 28	17 06	17 48	08 20	09 35	10 40	11 33	
15	45 51.8 .. 36.9	179 56.2	4.6	18 40.0	1.4 60.4	56	16 20	17 01	17 46	08 28	09 44	10 49	11 42	
16	60 51.8 37.6	194 19.8	4.6	18 38.6	1.4 60.4	58	16 12	16 55	17 43	08 38	09 55	11 00	11 52	
17	75 51.9 38.3	208 43.4	4.7	18 37.2	1.6 60.4	S 60	16 02	16 49	17 39	08 48	10 07	11 13	12 04	
18	90 51.9 N16 39.0	223 07.1	4.8	S18 35.6	1.7 60.3									
19	105 52.0 39.7	237 30.9	4.8	18 33.9	1.9 60.3									
20	120 52.0 40.4	251 54.7	4.8	18 32.0	2.0 60.3									
21	135 52.1 .. 41.1	266 18.5	5.0	18 30.0	2.1 60.2									
22	150 52.1 41.8	280 42.5	4.9	18 27.9	2.2 60.2									
23	165 52.1 42.5	295 06.4	5.1	18 25.7	2.4 60.2									
	S.D. 15.9 d 0.7	S.D. 16.7	16.6	16.5										
						Día	SOL E.T. (+)			LUNA				
							00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
						4								

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna												
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	7		8		9		10					
									h			m	h	m	h	m	h	m	h	m	h	m	h	m
7 A B A D O	180	52.2	N16	43.2	309	30.5	5.1	S18	23.3	2.5	60.2	N 72	////	////	00	29	00	29	02	41	02	31	
	01	195	52.2		43.9	323	54.6	5.1	18	20.8	2.6	60.1	N 70	////	////	01	47	01	53	02	08	02	12
	02	210	52.3		44.6	338	18.7	5.2	18	18.2	2.7	60.1	68	////	////	02	25	01	08	01	36	01	51
	03	225	52.3	..	45.3	352	42.9	5.3	18	15.5	2.9	60.1	66	////	01 05	02	50	00	39	01	13	01	34
	04	240	52.4		45.9	7	07.2	5.4	18	12.6	2.9	60.0	64	////	01 51	03	10	00	17	00	55	01	21
	05	255	52.4		46.6	21	31.6	5.4	18	09.7	3.1	60.0	62	////	02 21	03	26	24	40	00	40	01	09
	06	270	52.5	N16	47.3	35	56.0	5.4	S18	06.6	3.3	60.0	60	00 58	02 42	03	40	24	27	00	27	00	59
	07	285	52.5		48.0	50	20.4	5.6	18	03.3	3.3	59.9	N 58	01 40	03 00	03	51	24	16	00	16	00	50
	08	300	52.5		48.7	64	45.0	5.6	18	00.0	3.5	59.9	56	02 07	03 14	04	01	24	06	00	06	00	42
	09	315	52.6	..	49.4	79	09.6	5.7	17	56.5	3.6	59.9	54	02 27	03 27	04	10	23	58	24	36	00	36
	10	330	52.6		50.1	93	34.3	5.7	17	52.9	3.6	59.8	52	02 44	03 38	04	18	23	50	24	29	00	29
	11	345	52.7		50.8	107	59.0	5.8	17	49.3	3.9	59.8	50	02 58	03 47	04	25	23	43	24	24	00	24
	12	0	52.7	N16	51.5	122	23.8	5.9	S17	45.4	3.9	59.8	45	03 25	04 07	04	40	23	29	24	12	00	12
	13	15	52.7		52.2	136	48.7	6.0	17	41.5	4.0	59.7	N 40	03 45	04 22	04	52	23	17	24	02	00	02
	14	30	52.8		52.8	151	13.7	6.0	17	37.5	4.2	59.7	35	04 02	04 35	05	02	23	06	23	53	24	35
	15	45	52.8	..	53.5	165	38.7	6.1	17	33.3	4.2	59.7	30	04 15	04 46	05	12	22	57	23	46	24	29
	16	60	52.9		54.2	180	03.8	6.2	17	29.1	4.4	59.6	20	04 36	05 04	05	27	22	41	23	32	24	19
	17	75	52.9		54.9	194	29.0	6.3	17	24.7	4.5	59.6	N 10	04 53	05 18	05	40	22	28	23	21	24	10
	18	90	52.9	N16	55.6	208	54.3	6.3	S17	20.2	4.6	59.6	0	05 06	05 31	05	53	22	15	23	10	24	02
	19	105	53.0		56.3	223	19.6	6.4	17	15.6	4.7	59.5	S 10	05 18	05 43	06	05	22	02	22	59	23	54
	20	120	53.0		57.0	237	45.0	6.5	17	10.9	4.8	59.5	20	05 29	05 55	06	18	21	48	22	48	23	45
	21	135	53.1	..	57.6	252	10.5	6.6	17	06.1	4.9	59.5	30	05 39	06 08	06	33	21	32	22	35	23	35
	22	150	53.1		58.3	266	36.1	6.6	17	01.2	5.0	59.4	35	05 45	06 15	06	42	21	23	22	27	23	29
23	165	53.1		59.0	281	01.7	6.8	16	56.2	5.2	59.4	40	05 50	06 23	06	51	21	13	22	18	23	23	
8 00	180	53.2	N16	59.7	295	27.5	6.8	S16	51.0	5.2	59.4	45	05 56	06 32	07	03	21	01	22	08	23	15	
01	195	53.2	17	00.4	309	53.3	6.9	16	45.8	5.3	59.3	S 50	06 03	06 42	07	17	20	46	21	56	23	06	
02	210	53.3		01.1	324	19.2	6.9	16	40.5	5.4	59.3	52	06 06	06 46	07	23	20	39	21	50	23	01	
03	225	53.3	..	01.7	338	45.1	7.1	16	35.1	5.6	59.2	54	06 08	06 51	07	30	20	31	21	43	22	57	
04	240	53.3		02.4	353	11.2	7.1	16	29.5	5.6	59.2	56	06 12	06 57	07	38	20	22	21	36	22	51	
05	255	53.4		03.1	7	37.3	7.2	16	23.9	5.7	59.2	58	06 15	07 03	07	47	20	12	21	28	22	46	
06	270	53.4	N17	03.8	22	03.5	7.3	S16	18.2	5.8	59.1	S 60	06 19	07 09	07	57	20	01	21	19	22	39	
07	285	53.4		04.5	36	29.8	7.4	16	12.4	5.9	59.1												
08	300	53.5		05.1	50	56.2	7.4	16	06.5	6.0	59.1												
09	315	53.5	..	05.8	65	22.6	7.6	16	00.5	6.1	59.0												
10	330	53.6		06.5	79	49.2	7.6	15	54.4	6.2	59.0												
11	345	53.6		07.2	94	15.8	7.7	15	48.2	6.3	59.0												
12	0	53.6	N17	07.8	108	42.5	7.8	S15	41.9	6.3	58.9	N 72	□	□	□	■	h m	06	11	08	20	10	15
13	15	53.7		08.5	123	09.3	7.8	15	35.6	6.5	58.9	N 70	22	12	////	////	05	13	06	59	08	47	
14	30	53.7		09.2	137	36.1	8.0	15	29.1	6.5	58.8	68	21	32	////	////	05	57	07	29	09	07	
15	45	53.7	..	09.9	152	03.1	8.0	15	22.6	6.6	58.8	66	21	05	22 57	////	06	26	07	52	09	23	
16	60	53.8		10.5	166	30.1	8.1	15	16.0	6.7	58.8	64	20	45	22 06	////	06	48	08	10	09	36	
17	75	53.8		11.2	180	57.2	8.2	15	09.3	6.8	58.7	62	20	28	21 35	////	07	06	08	24	09	47	
18	90	53.8	N17	11.9	195	24.4	8.3	S15	02.5	6.9	58.7	60	20	15	21 13	23 03	07	20	08	37	09	56	
19	105	53.9		12.6	209	51.7	8.4	14	55.6	6.9	58.7	N 58	20	03	20 55	22 17	07	33	08	47	10	05	
20	120	53.9		13.2	224	19.1	8.4	14	48.7	7.1	58.6	56	19	53	20 40	21 49	07	44	08	56	10	12	
21	135	53.9	..	13.9	238	46.5	8.5	14	41.6	7.1	58.6	54	19	44	20 28	21 28	07	53	09	05	10	18	
22	150	54.0		14.6	253	14.0	8.7	14	34.5	7.2	58.6	52	19	36	20 17	21 11	08	02	09	12	10	24	
23	165	54.0		15.2	267	41.7	8.6	14	27.3	7.2	58.5	50	19	29	20 07	20 57	08	09	09	18	10	29	
9 00	180	54.0	N17	15.9	282	09.3	8.8	S14	20.1	7.3	58.5	45	19	14	19 47	20 29	08	25	09	32	10	40	
01	195	54.1		16.6	296	37.1	8.9	14	12.8	7.4	58.4	N 40	19	01	19 31	20 08	08	38	09	44	10	49	
02	210	54.1		17.3	311	05.0	8.9	14	05.4	7.5	58.4	35	18	51	19 18	19 52	08	50	09	54	10	57	
03	225	54.1	..	17.9	325	32.9	9.1	13	57.9	7.6	58.4	30	18	42	19 07	19 38	08	59	10	02	11	04	
04	240	54.2		18.6	340	01.0	9.1	13	50.3	7.6	58.3	20	18	26	18 49	19 17	09	16	10	17	11	16	
05	255	54.2		19.3	354	29.1	9.1	13	42.7	7.7	58.3	N 10	18	12	18 35	19 00	09	31	10	30	11	26	
06	270	54.2	N17	19.9	8	57.2	9.3	S13	35.0	7.7	58.3	0	18	00	18 22	18 47	09	44	10	42	11	35	
07	285	54.2		20.6	23	25.5	9.4	13	27.3	7.9	58.2	S 10	17	47	18 09	18 35	09	58	10	54	11	45	
08	300	54.3		21.3	37	53.9	9.4	13	19.4	7.9	58.2	20	17	34	17 57	18 24	10	12	11	06	11	55	
09	315	54.3	..	21.9	52	22.3	9.5	13	11.5	7.9	58.2	30	17	19	17 44	18 13	10	29	11	21	12	06	
10	330	54.3		22.6	66	50.8	9.6	13	03.6	8.0	58.1	35	17	11	17 37	18 08	10	38	11	29	12	13	
11	345	54.4		23.3	81	19.4	9.7	12	55.6	8.1	58.1	40	17	01	17 30	18 02	10	49	11	38	12	21	
12	0	54.4	N17	23.9	95	48.1	9.7	S12	47.5	8.2	58.0	45	16	50	17 21	17 56	11	02	11	49	12	29	
13	15	54.4		24.6	110	16.8	9.8	12	39.3	8.2	58.0	S 50	16	36	17 11	17 49	11	18	12	03	12	40	
14	30	54.5		25.3	124	45.6	9.9	12	31.1	8.2	58.0	52	16	29	17 06	17 47	11	25	12	09	12	44	
15	45	54.5	..	25.9	139	14.5	10.0	12	22.9	8.3	57.9	54	16	22	17 01	17 44	11	33	12	15	12	50	
16	60	54.5		26.6	153	43.5	10.1	12	14.6	8.4	57.9	56	16	14	16 55	17 40	11	42	12	23	12	56	
17	75	54.5																					

T. M. G.	ARIES		VENUS -4.2		MARTE +1.3		JUPITER -1.5		SATURNO +0.5		ESTRELLAS		
	A.H.G.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	Nombre	A. H. S.	Dec.		
10 ^h 00 01 02 03 04 05 06 07 08 M 09 A 10 R 11 T 12 E 13 S 14 15 16 17 18 19 20 21 22 23	227 40.8	217 44.2 N 4 57.6	218 29.5 N 2 40.4	161 35.4 N21 05.1	94 15.6 N18 30.0	Acamar	315 39.4	S40 23.8					
	242 43.3	232 45.5	233 30.2	176 37.3	109 17.9	Achernar	335 47.6	S57 21.0					
	257 45.7	247 46.8	248 30.9	191 39.1	124 20.3	Acrux	173 39.1	S62 58.7					
	272 48.2	262 48.1	263 31.6	206 41.0	139 22.6	Adhara	255 34.1	S28 56.8					
	287 50.7	277 49.4	278 32.3	221 42.9	154 24.9	Aldebaran	291 20.9	N16 27.7					
	302 53.1	292 50.7	293 33.0	236 44.7	169 27.3								
	317 55.6	307 52.0 N 4 57.8	308 33.7 N 2 45.0	251 46.6 N21 05.7	184 29.6 N18 29.7	Alioth	166 44.1	N56 05.1					
	332 58.0	322 53.3	323 34.4	266 48.5	199 31.9	Alkaid	153 19.9	N49 25.6					
	348 00.5	337 54.6	338 35.1	281 50.3	214 34.3	Al Na'ir	28 17.9	S47 04.0					
	M 09	3 03.0	352 55.9	353 35.8	296 52.2	229 36.6	Alnilam	276 14.2	S 1 13.1				
	A 10	18 05.4	7 57.2	8 36.5	311 54.0	244 39.0	Alphard	218 22.8	S 8 33.8				
	R 11	33 07.9	22 58.5	23 37.2	326 55.9	259 41.3							
	T 12	48 10.4	37 59.8 N 4 58.0	38 38.0 N 2 49.5	341 57.8 N21 06.2	274 43.6 N18 29.5	Alphecca	126 33.7	N26 47.4				
	E 13	63 12.8	53 01.1	53 38.7	356 59.6	289 46.0	Alpheratz	358 11.9	N28 57.8				
	S 14	78 15.3	68 02.3	68 39.4	12 01.5	304 48.3	Altair	62 34.6	N 8 48.5				
	15	93 17.8	83 03.6	83 40.1	27 03.4	319 50.6	Ankaa	353 42.8	S42 25.6				
	16	108 20.2	98 04.9	98 40.8	42 05.2	334 53.0	Antares	112 59.3	S26 22.9				
	17	123 22.7	113 06.2	113 41.5	57 07.1	349 55.3							
	18	138 25.2	128 07.4 N 4 58.3	128 42.2 N 2 54.0	72 09.0 N21 06.8	4 57.6 N18 29.3	Arcturus	146 20.2	N19 18.0				
	19	153 27.6	143 08.7	143 42.9	87 10.8	20 00.0	Atria	108 25.0	S68 59.1				
	20	168 30.1	158 10.0	158 43.6	102 12.7	35 02.3	Avior	234 29.3	S59 26.6				
	21	183 32.5	173 11.2	173 44.3	117 14.5	50 04.6	Bellatrix	279 01.5	N 6 19.6				
	22	198 35.0	188 12.5	188 45.0	132 16.4	65 07.0	Betelgeuse	271 31.0	N 7 24.0				
23	213 37.5	203 13.8	203 45.7	147 18.3	80 09.3								
11 ^h 00 01 02 03 04 05 06 07 08 M 09 I 10 E 11 C 12 O 13 L 14 E 15 S 16 17 18 19 20 21 22 23	228 39.9	218 15.0 N 4 58.6	218 46.4 N 2 58.6	162 20.1 N21 07.4	95 11.6 N18 29.1	Canopus	264 08.6	S52 41.3					
	243 42.4	233 16.3	233 47.1	177 22.0	110 14.0	Capella	281 15.1	N45 58.5					
	258 44.9	248 17.5	248 47.8	192 23.9	125 16.3	Deneb	49 49.9	N45 11.8					
	273 47.3	263 18.8	263 48.5	207 25.7	140 18.6	Denebola	183 01.2	N14 41.9					
	288 49.8	278 20.0	278 49.2	222 27.6	155 21.0	Diphda	349 23.4	S18 06.6					
	303 52.3	293 21.3	293 49.9	237 29.4	170 23.3								
	318 54.7	308 22.5 N 4 59.0	308 50.7 N 3 03.1	252 31.3 N21 08.0	185 25.6 N18 28.9	Dubhe	194 24.8	N61 52.6					
	333 57.2	323 23.8	323 51.4	267 33.2	200 28.0	Elnath	278 47.3	N28 35.2					
	M 08	348 59.7	338 25.0	338 52.1	282 35.0	215 30.3	Eltanin	90 58.4	N51 29.4				
	I 09	4 02.1	353 26.2	353 52.8	297 36.9	230 32.6	Enif	34 13.8	N 9 46.2				
	E 10	19 04.6	8 27.5	8 53.5	312 38.7	245 35.0	Fomalhaut	15 54.1	S29 44.4				
	C 11	34 07.0	23 28.7	23 54.2	327 40.6	260 37.3							
	O 12	49 09.5	38 29.9 N 4 59.4	38 54.9 N 3 07.7	342 42.5 N21 08.5	275 39.6 N18 28.7	Gacrux	172 30.8	S56 59.5				
	L 13	64 12.0	53 31.2	53 55.6	357 44.3	290 42.0	Gienah	176 20.1	S17 25.2				
	E 14	79 14.4	68 32.4	68 56.3	12 46.2	305 44.3	Hadar	149 25.9	S60 16.0				
	S 15	94 16.9	83 33.6	83 57.0	27 48.1	320 46.6	Hamal	328 31.8	N23 21.2				
	16	109 19.4	98 34.8	98 57.7	42 49.9	335 48.9	Kaus Aust.	84 19.6	S34 23.6				
	17	124 21.8	113 36.1	113 58.4	57 51.8	350 51.3							
	18	139 24.3	128 37.3 N 4 59.9	128 59.1 N 3 12.2	72 53.6 N21 09.1	5 53.6 N18 28.4	Kochab	137 17.9	N74 15.0				
	19	154 26.8	143 38.5	143 59.8	87 55.5	20 55.9	Markab	14 05.5	N15 04.9				
	20	169 29.2	158 39.7	159 00.5	102 57.4	35 58.3	Menkar	314 43.8	N 3 59.9				
	21	184 31.7	173 40.9	174 01.2	117 59.2	51 00.6	Menkent	148 39.3	S36 15.7				
	22	199 34.1	188 42.1	189 01.9	133 01.1	66 02.9	Miaplacidus	221 45.4	S69 37.9				
23	214 36.6	203 43.3	204 02.6	148 02.9	81 05.3								
12 ^h 00 01 02 03 04 05 06 07 08 J 09 U 10 E 11 V 12 E 13 S 14 15 16 17 18 19 20 21 22 23	229 39.1	218 44.5 N 5 00.5	219 03.4 N 3 16.7	163 04.8 N21 09.7	96 07.6 N18 28.2	Mirfak	309 19.8	N49 46.8					
	244 41.5	233 45.7	234 04.1	178 06.7	111 09.9	Nunki	76 31.8	S26 19.4					
	259 44.0	248 46.9	249 04.8	193 08.5	126 12.2	Peacock	54 01.8	S56 48.2					
	274 46.5	263 48.1	264 05.5	208 10.4	141 14.6	Pollux	244 01.1	N28 04.8					
	289 48.9	278 49.3	279 06.2	223 12.2	156 16.9	Procyon	245 28.3	N 5 16.8					
	304 51.4	293 50.5	294 06.9	238 14.1	171 19.2								
	319 53.9	308 51.7 N 5 01.1	309 07.6 N 3 21.3	253 16.0 N21 10.2	186 21.6 N18 28.0	Rasalhague	96 31.4	N12 34.5					
	334 56.3	323 52.9	324 08.3	268 17.8	201 23.9	Regulus	208 12.4	N12 04.6					
	M 08	349 58.8	338 54.1	339 09.0	283 19.7	216 26.2	Rigel	281 38.5	S 8 13.8				
	J 09	5 01.3	353 55.2	354 09.7	298 21.6	231 28.5	Rigel Kent.	140 28.2	S60 44.5				
	U 10	20 03.7	8 56.4	9 10.4	313 23.4	246 30.9	Sabik	102 43.4	S15 41.8				
	E 11	35 06.2	23 57.6	24 11.1	328 25.3	261 33.2							
	V 12	50 08.6	38 58.8 N 5 01.8	39 11.8 N 3 25.8	343 27.1 N21 10.8	276 35.5 N18 27.8	Schedar	350 11.9	N56 24.6				
	E 13	65 11.1	54 00.0	54 12.5	358 29.0	291 37.9	Shaula	96 58.5	S37 05.2				
	S 14	80 13.6	69 01.1	69 13.2	13 30.9	306 40.2	Sirius	258 57.9	S16 41.4				
	15	95 16.0	84 02.3	84 13.9	28 32.7	321 42.5	Spica	158 59.6	S11 02.7				
	16	110 18.5	99 03.5	99 14.6	43 34.6	336 44.8	Suhail	223 12.5	S43 20.8				
	17	125 21.0	114 04.6	114 15.4	58 36.4	351 47.2							
	18	140 23.4	129 05.8 N 5 02.5	129 16.1 N 3 30.3	73 38.3 N21 11.4	6 49.5 N18 27.6	Vega	80 57.1	N38 45.6				
	19	155 25.9	144 07.0	144 16.8	88 40.2	21 51.8	Zuben'ubi	137 35.2	S15 56.9				
	20	170 28.4	159 08.1	159 17.5	103 42.0	36 54.1							
	21	185 30.8	174 09.3	174 18.2	118 43.9	51 56.5							
	22	200 33.3	189 10.4	189 18.9	133 45.7	66 58.8	Venus	349 35.1	9 26				
23	215 35.8	204 11.6	204 19.6	148 47.6	82 01.1	Marte	350 06.5	9 24					
						Júpiter	293 40.2	13 09					
						Saturno	226 31.7	17 36					
Pas. Mer.	8 43.9	v 1.2 d 0.1	v 0.7 d 0.8	v 1.9 d 0.1	v 2.3 d 0.0								

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.		Dec.		A.H.G.		Dec.			Náut. Civil			10		11		12		13	
	°	'	°	'	°	'	°	'		h	m		h	m	h	m	h	m	h	m
M A R T E S	10 00	180	54.7	N17	31.9	269	38.1	10.7	S11	06.1	8.8	57.6	N 72	□	□	□	02 31	02 24	02 17	02 11
	01	195	54.8		32.5	284	07.8	10.7		10 57.3	8.9	57.6	N 70	////	////		01 24	02 14	02 14	02 13
	02	210	54.8		33.2	298	37.5	10.8		10 48.4	8.9	57.5	68	////	////		02 09	02 00	02 06	02 10
	03	225	54.8	..	33.8	313	07.3	10.9		10 39.5	8.9	57.5	66	////	00 27		02 39	01 48	01 59	02 07
	04	240	54.8		34.5	327	37.2	11.0		10 30.6	9.0	57.5	64	////	01 35		03 00	01 39	01 53	02 04
	05	255	54.9		35.1	342	07.2	11.0		10 21.6	9.0	57.4	62	////	02 08		03 18	01 30	01 48	02 02
	06	270	54.9	N17	35.8	356	37.2	11.1	S10	12.6	9.0	57.4	60	00 24	02 33		03 32	01 23	01 43	02 00
	07	285	54.9		36.5	11	07.3	11.1		10 03.6	9.2	57.4	N 58	01 25	02 52		03 45	01 17	01 39	01 58
	08	300	54.9		37.1	25	37.4	11.3		9 54.4	9.1	57.3	56	01 56	03 07		03 55	01 11	01 36	01 57
	09	315	55.0	..	37.8	40	07.7	11.3		9 45.3	9.2	57.3	54	02 18	03 20		04 04	01 06	01 32	01 55
	10	330	55.0		38.4	54	38.0	11.3		9 36.1	9.2	57.3	52	02 36	03 32		04 13	01 02	01 29	01 54
	11	345	55.0		39.1	69	08.3	11.4		9 26.9	9.3	57.2	50	02 51	03 42		04 20	00 58	01 27	01 53
	12	0	55.0	N17	39.7	83	38.7	11.5	S	9 17.6	9.3	57.2	45	03 20	04 02		04 36	00 49	01 21	01 50
	13	15	55.0		40.4	98	09.2	11.6		9 08.3	9.3	57.2	N 40	03 41	04 19		04 49	00 41	01 16	01 48
	14	30	55.1		41.0	112	39.8	11.6		8 59.0	9.4	57.1	35	03 58	04 32		05 00	00 35	01 12	01 46
	15	45	55.1	..	41.7	127	10.4	11.7		8 49.6	9.4	57.1	30	04 12	04 43		05 09	00 29	01 08	01 45
	16	60	55.1		42.3	141	41.1	11.8		8 40.2	9.4	57.1	20	04 34	05 02		05 26	00 19	01 02	01 42
	17	75	55.1		43.0	156	11.9	11.8		8 30.8	9.4	57.0	N 10	04 52	05 18		05 40	00 10	00 56	01 40
	18	90	55.2	N17	43.6	170	42.7	11.8	S	8 21.4	9.5	57.0	0	05 06	05 31		05 53	00 02	00 51	01 37
	19	105	55.2		44.3	185	13.5	12.0		8 11.9	9.6	57.0	S 10	05 18	05 44		06 06	24 46	00 46	01 35
	20	120	55.2		44.9	199	44.5	12.0		8 02.3	9.5	56.9	20	05 30	05 56		06 19	24 40	00 40	01 33
	21	135	55.2	..	45.6	214	15.5	12.0		7 52.8	9.6	56.9	30	05 41	06 10		06 35	24 33	00 33	01 30
	22	150	55.2		46.2	228	46.5	12.2		7 43.2	9.6	56.9	35	05 47	06 17		06 44	24 30	00 30	01 28
23	165	55.3		46.9	243	17.7	12.1		7 33.6	9.7	56.8	40	05 53	06 25		06 54	24 25	00 25	01 26	
												45	05 59	06 35		07 06	24 20	00 20	01 24	
M I E R C O L E S	11 00	180	55.3	N17	47.5	257	48.8	12.3	S	7 23.9	9.6	56.8	S 50	06 06	06 46		07 21	24 15	00 15	01 22
	01	195	55.3		48.2	272	20.1	12.2		7 14.3	9.7	56.8	52	06 10	06 50		07 28	24 12	00 12	01 21
	02	210	55.3		48.8	286	51.3	12.4		7 04.6	9.7	56.7	54	06 13	06 56		07 35	24 09	00 09	01 19
	03	225	55.3	..	49.4	301	22.7	12.4		6 54.9	9.8	56.7	56	06 16	07 02		07 43	24 06	00 06	01 18
	04	240	55.4		50.1	315	54.1	12.4		6 45.1	9.7	56.7	58	06 20	07 08		07 53	24 02	00 02	01 16
	05	255	55.4		50.7	330	25.5	12.5		6 35.4	9.8	56.6	S 60	06 24	07 16		08 04	23 58	25 15	01 15
	06	270	55.4	N17	51.4	344	57.0	12.6	S	6 25.6	9.8	56.6								
	07	285	55.4		52.0	359	28.6	12.6		6 15.8	9.8	56.6								
	08	300	55.4		52.7	14	00.2	12.7		6 06.0	9.8	56.6								
	09	315	55.4	..	53.3	28	31.9	12.7		5 56.2	9.9	56.5								
	10	330	55.5		53.9	43	03.6	12.7		5 46.3	9.9	56.5								
	11	345	55.5		54.6	57	35.3	12.9		5 36.4	9.9	56.5								
	12	0	55.5	N17	55.2	72	07.2	12.8	S	5 26.5	9.9	56.4	N 72	□	□	□	10 15	12 02	13 43	15 22
	13	15	55.5		55.9	86	39.0	12.9		5 16.6	9.9	56.4	N 70	22 36	////	////	10 31	12 10	13 45	15 18
	14	30	55.5		56.5	101	10.9	13.0		5 06.7	9.9	56.4	68	21 47	////	////	10 44	12 17	13 47	15 14
	15	45	55.5	..	57.1	115	42.9	13.0		4 56.8	10.0	56.3	66	21 17	////	////	10 54	12 22	13 48	15 11
	16	60	55.6		57.8	130	14.9	13.0		4 46.8	9.9	56.3	64	20 55	22 23	////	11 03	12 27	13 49	15 09
	17	75	55.6		58.4	144	46.9	13.1		4 36.9	10.0	56.3	62	20 37	21 47	////	11 10	12 31	13 50	15 07
	18	90	55.6	N17	59.1	159	19.0	13.1	S	4 26.9	10.0	56.3	60	20 22	21 23	////	11 16	12 34	13 50	15 05
	19	105	55.6		59.7	173	51.1	13.2		4 16.9	10.0	56.2	N 58	20 10	21 03		22 32	11 22	12 37	13 51
	20	120	55.6	18	00.3	188	23.3	13.2		4 06.9	10.0	56.2	56	19 59	20 47		22 00	11 27	12 40	13 52
	21	135	55.6	..	01.0	202	55.5	13.3		3 56.9	10.0	56.2	54	19 49	20 34		21 37	11 31	12 43	13 52
	22	150	55.7		01.6	217	27.8	13.3		3 46.9	10.0	56.1	52	19 41	20 22		21 18	11 35	12 45	13 53
23	165	55.7		02.2	232	00.1	13.3		3 36.9	10.0	56.1	50	19 33	20 12		21 03	11 39	12 47	13 53	
												45	19 17	19 51		20 34	11 46	12 51	13 54	
J U E V E S	12 00	180	55.7	N18	02.9	246	32.4	13.4	S	3 26.9	10.1	56.1	N 40	19 04	19 35		20 12	11 53	12 55	
	01	195	55.7		03.5	261	04.8	13.4		3 16.8	10.0	56.1	35	18 53	19 21		19 55	11 58	12 58	
	02	210	55.7		04.1	275	37.2	13.5		3 06.8	10.1	56.0	30	18 44	19 10		19 41	12 03	13 01	
	03	225	55.7	..	04.8	290	09.7	13.5		2 56.7	10.0	56.0	20	18 27	18 51		19 18	12 12	13 05	
	04	240	55.7		05.4	304	42.2	13.5		2 46.7	10.1	56.0	N 10	18 13	18 35		19 01	12 19	13 10	
	05	255	55.7		06.0	319	14.7	13.5		2 36.6	10.0	55.9	0	18 00	18 22		18 47	12 26	13 13	
	06	270	55.8	N18	06.7	333	47.2	13.6	S	2 26.6	10.1	55.9	S 10	17 47	18 09		18 34	12 33	13 17	
	07	285	55.8		07.3	348	19.8	13.7		2 16.5	10.0	55.9	20	17 33	17 56		18 23	12 40	13 21	
	08	300	55.8		07.9	2	52.5	13.6		2 06.5	10.1	55.9	30	17 17	17 42		18 11	12 48	13 26	
	09	315	55.8	..	08.5	17	25.1	13.7		1 56.4	10.0	55.8	35	17 08	17 35		18 05	12 52	13 28	
	10	330	55.8		09.2	31	57.8	13.7		1 46.4	10.1	55.8	40	16 58	17 27		17 59	12 58	13 31	
	11	345	55.8		09.8	46	30.5	13.8		1 36.3	10.1	55.8	45	16 46	17 17		17 53	13 04	13 35	
	12	0	55.8	N18	10.4	61	03.3	13.8	S	1 26.2	10.0	55.8	S 50	16 31	17 06		17 46	13 11	13 39	
	13	15	55.8		11.1	75	36.1	13.8		1 16.2	10.1									

T. M. G.	ARIES		VENUS -4.2		MARTE +1.3		JUPITER -1.5		SATURNO +0.5		ESTRELLAS				
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
13 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	230 38.2	219 12.7 N 5	03.2	219 20.3 N 3	34.8	163 49.5 N21	11.9	97 03.5 N18	27.3	Acamar	315 39.4	S40	23.8		
	245 40.7	234 13.9	03.4	234 21.0	35.6	178 51.3	12.0	112 05.8	27.3	Achernar	335 47.6	S57	21.0		
	260 43.1	249 15.0	03.5	249 21.7	36.4	193 53.2	12.1	127 08.1	27.2	AcruX	173 39.2	S62	58.7		
	275 45.6	264 16.2	03.6	264 22.4	37.1	208 55.0	12.2	142 10.4	27.2	Adhara	255 34.1	S28	56.8		
	290 48.1	279 17.3	03.8	279 23.1	37.9	223 56.9	12.3	157 12.8	27.2	Aldebaran	291 20.9	N16	27.7		
	305 50.5	294 18.4	03.9	294 23.8	38.6	238 58.7	12.4	172 15.1	27.1						
	320 53.0	309 19.6 N 5	04.0	309 24.5 N 3	39.4	254 00.6 N21	12.5	187 17.4 N18	27.1	Alioth	166 44.2	N56	05.1		
	335 55.5	324 20.7	04.2	324 25.2	40.1	269 02.5	12.6	202 19.7	27.1	Alkaid	153 19.9	N49	25.7		
	350 57.9	339 21.8	04.3	339 25.9	40.9	284 04.3	12.7	217 22.0	27.0	Al Na'ir	28 17.9	S47	04.0		
	6 00.4	354 23.0	04.5	354 26.7	41.6	299 06.2	12.8	232 24.4	27.0	Alnilam	276 14.3	S 1	13.1		
	21 02.9	9 24.1	04.6	9 27.4	42.4	314 08.0	12.9	247 26.7	26.9	Alphard	218 22.8	S 8	33.8		
	36 05.3	24 25.2	04.8	24 28.1	43.1	329 09.9	13.0	262 29.0	26.9						
	51 07.8	39 26.4 N 5	04.9	39 28.8 N 3	43.9	344 11.8 N21	13.1	277 31.3 N18	26.9	Alphecca	126 33.7	N26	47.4		
	66 10.2	54 27.5	05.0	54 29.5	44.6	359 13.6	13.2	292 33.7	26.8	Alpheratz	358 11.9	N28	57.8		
	81 12.7	69 28.6	05.2	69 30.2	45.4	14 15.5	13.2	307 36.0	26.8	Altair	62 34.6	N 8	48.5		
	96 15.2	84 29.7	05.4	84 30.9	46.1	29 17.3	13.3	322 38.3	26.7	Ankaa	353 42.8	S42	25.6		
	111 17.6	99 30.8	05.5	99 31.6	46.9	44 19.2	13.4	337 40.6	26.7	Antares	112 59.3	S26	22.9		
	126 20.1	114 31.9	05.7	114 32.3	47.6	59 21.1	13.5	352 43.0	26.7						
	141 22.6	129 33.1 N 5	05.8	129 33.0 N 3	48.4	74 22.9 N21	13.6	7 45.3 N18	26.6	Arcturus	146 20.2	N19	18.0		
	156 25.0	144 34.2	06.0	144 33.7	49.1	89 24.8	13.7	22 47.6	26.6	Atria	108 25.0	S68	59.1		
	171 27.5	159 35.3	06.1	159 34.4	49.9	104 26.6	13.8	37 49.9	26.6	Avior	234 29.3	S59	26.6		
	186 30.0	174 36.4	06.3	174 35.1	50.6	119 28.5	13.9	52 52.2	26.5	Bellatrix	279 01.5	N 6	19.6		
	201 32.4	189 37.5	06.4	189 35.8	51.4	134 30.3	14.0	67 54.6	26.5	Betelgeuse	271 31.0	N 7	24.0		
216 34.9	204 38.6	06.6	204 36.5	52.1	149 32.2	14.1	82 56.9	26.4							
14 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	231 37.4	219 39.7 N 5	06.8	219 37.2 N 3	52.9	164 34.1 N21	14.2	97 59.2 N18	26.4	Canopus	264 08.6	S52	41.3		
	246 39.8	234 40.8	06.9	234 38.0	53.7	179 35.9	14.3	113 01.5	26.4	Capella	281 15.1	N45	58.5		
	261 42.3	249 41.9	07.1	249 38.7	54.4	194 37.8	14.4	128 03.9	26.3	Deneb	49 49.8	N45	11.8		
	276 44.7	264 43.0	07.3	264 39.4	55.2	209 39.6	14.5	143 06.2	26.3	Denebola	183 01.2	N14	41.9		
	291 47.2	279 44.1	07.4	279 40.1	55.9	224 41.5	14.6	158 08.5	26.2	Diphda	349 23.4	S18	06.6		
	306 49.7	294 45.1	07.6	294 40.8	56.7	239 43.4	14.6	173 10.8	26.2						
	321 52.1	309 46.2 N 5	07.8	309 41.5 N 3	57.4	254 45.2 N21	14.7	188 13.1 N18	26.2	Dubhe	194 24.8	N61	52.6		
	336 54.6	324 47.3	08.0	324 42.2	58.2	269 47.1	14.8	203 15.5	26.1	Elnath	278 47.3	N28	35.2		
	351 57.1	339 48.4	08.1	339 42.9	58.9	284 48.9	14.9	218 17.8	26.1	Eltanin	90 58.3	N51	29.4		
	6 59.5	354 49.5	08.3	354 43.6	59.7	299 50.8	15.0	233 20.1	26.0	Enif	34 13.8	N 9	46.2		
	22 02.0	9 50.6	08.5	9 44.3	60.4	314 52.6	15.1	248 22.4	26.0	Fomalhaut	15 54.1	S29	44.4		
	37 04.5	24 51.6	08.7	24 45.0	61.2	329 54.5	15.2	263 24.7	26.0						
	52 06.9	39 52.7 N 5	08.8	39 45.7 N 4	61.9	344 56.4 N21	15.3	278 27.1 N18	25.9	Gacrux	172 30.8	S56	59.5		
	67 09.4	54 53.8	09.0	54 46.4	62.7	359 58.2	15.4	293 29.4	25.9	Gienah	176 20.1	S17	25.2		
	82 11.9	69 54.9	09.2	69 47.1	63.4	15 00.1	15.5	308 31.7	25.8	Hadar	149 25.9	S60	16.0		
	97 14.3	84 55.9	09.4	84 47.8	64.2	30 01.9	15.6	323 34.0	25.8	Hamal	328 31.8	N23	21.2		
	112 16.8	99 57.0	09.6	99 48.5	64.9	45 03.8	15.7	338 36.3	25.8	Kaus Aust.	84 19.5	S34	23.6		
	127 19.2	114 58.1	09.8	114 49.3	65.7	60 05.6	15.8	353 38.7	25.7						
	142 21.7	129 59.1 N 5	10.0	129 50.0 N 4	66.4	75 07.5 N21	15.9	8 41.0 N18	25.7	Kochab	137 17.9	N74	15.0		
	157 24.2	145 00.2	10.1	144 50.7	67.2	90 09.4	15.9	23 43.3	25.6	Markab	14 05.5	N15	04.9		
	172 26.6	160 01.2	10.3	159 51.4	67.9	105 11.2	16.0	38 45.6	25.6	Menkar	314 43.8	N 3	59.9		
	187 29.1	175 02.3	10.5	174 52.1	68.7	120 13.1	16.1	53 47.9	25.6	Menkent	148 39.3	S36	15.7		
	202 31.6	190 03.3	10.7	189 52.8	69.4	135 14.9	16.2	68 50.3	25.5	Miaplacidus	221 45.4	S69	37.9		
217 34.0	205 04.4	10.9	204 53.5	70.1	150 16.8	16.3	83 52.6	25.5							
15 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	232 36.5	220 05.4 N 5	11.1	219 54.2 N 4	10.9	165 18.6 N21	16.4	98 54.9 N18	25.4	Mirfak	309 19.8	N49	46.8		
	247 39.0	235 06.5	11.3	234 54.9	11.6	180 20.5	16.5	113 57.2	25.4	Nunki	76 31.7	S26	19.4		
	262 41.4	250 07.5	11.5	249 55.6	12.4	195 22.4	16.6	128 59.5	25.4	Peacock	54 01.8	S56	48.2		
	277 43.9	265 08.6	11.7	264 56.3	13.1	210 24.2	16.7	144 01.8	25.3	Pollux	244 01.1	N28	04.8		
	292 46.3	280 09.6	11.9	279 57.0	13.9	225 26.1	16.8	159 04.2	25.3	Procyon	245 28.3	N 5	16.8		
	307 48.8	295 10.7	12.1	294 57.7	14.6	240 27.9	16.9	174 06.5	25.2						
	322 51.3	310 11.7 N 5	12.3	309 58.4 N 4	15.4	255 29.8 N21	17.0	189 08.8 N18	25.2	Rasalhague	96 31.4	N12	34.6		
	337 53.7	325 12.7	12.5	324 59.1	16.1	270 31.6	17.1	204 11.1	25.2	Regulus	208 12.4	N12	04.6		
	352 56.2	340 13.8	12.7	339 59.9	16.9	285 33.5	17.2	219 13.4	25.1	Rigel	281 38.5	S 8	13.8		
	7 58.7	355 14.8	12.9	355 00.6	17.6	300 35.4	17.2	234 15.7	25.1	Rigil Kent.	140 28.2	S60	44.6		
	23 01.1	10 15.8	13.1	10 01.3	18.4	315 37.2	17.3	249 18.1	25.0	Sabik	102 43.4	S15	41.8		
	38 03.6	25 16.9	13.3	25 02.0	19.1	330 39.1	17.4	264 20.4	25.0						
	53 06.1	40 17.9 N 5	13.6	40 02.7 N 4	19.9	345 40.9 N21	17.5	279 22.7 N18	25.0	Schedar	350 11.9	N56	24.6		
	68 08.5	55 18.9	13.8	55 03.4	20.6	0 42.8	17.6	294 25.0	24.9	Shaula	96 58.5	S37	05.2		
	83 11.0	70 19.9	14.0	70 04.1	21.4	15 44.6	17.7	309 27.3	24.9	Sirius	258 57.9	S16	41.4		
	98 13.5	85 21.0	14.2	85 04.8	22.1	30 46.5	17.8	324 29.6	24.8	Spica	158 59.6	S11	02.7		
	113 15.9	100 22.0	14.4	100 05.5	22.9	45 48.3	17.9	339 31.9	24.8	Suhail	223 12.5	S43	20.8		
	128 18.4	115 23.0	14.6	115 06.2	23.6	60 50.2	18.0	354 34.3	24.7						
	143 20.8	130 24.0 N 5	14.9	130 06.9 N 4	24.4	75 52.1 N21	18.1	9 36.6 N18	24.7	Vega	80 57.1	N38	45.7		
	158 23.3	145 25.0	15.1	145 07.6	25.1	90 53.9	18.2	24 38.9	24.7	Zuben'ubi	137 35.2	S15	56.9		
	173 25.8	160 26.0	15.3	160 08.3	25.9	105 55.8	18.3	39 41.2	24.6						
	188 28.2	175 27.0	15.5	175 09.0	26.6	120 57.6	18.3	54 43.5	24.6						
	203 30.7	190 28.1	15.7	190 09.7	27.3	135 59.5	18.4	69 45.8	24.5						
218 33.2	205 29.1	16.0	205 10.4	28.1	151 01.3	18.5	84 48.2	24.5							
Pas. Mer. 8 32.1												A. H. S.		Pas. Mer.	
v 1.1 d 0.2												o /		h m	
v 0.7 d 0.7												o /		h m	
v 1.9 d 0.1												o /		h m	
v 2.3 d 0.0												o /		h m	
												Venus		348 02.3 9 21	
												Marte		347 59.9 9 21	
												Júpiter		292 56.7 13 00	
												Saturno		226 21.9 17 25	

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.		Dec.		A.H.G.		v Dec.			Naut.	Civil		13	14	15	16				
	h	m	°	'	°	'	°	'									h	m	h	m
13 V I E R N E S	180	55.9	N18	17.9	235	38.5	14.0	N 0	34.1	10.0	55.5	N 72	□	□	□	02 11	02 05	01 59	01 52	
	01	195	55.9	18.5	250	11.5	14.1	0	44.1	9.9	55.4	N 70	////	////	00 55	02 12	02 12	02 11	02 11	
	02	210	56.0	19.2	264	44.6	14.2	0	54.0	10.0	55.4	68	////	////	01 53	02 13	02 17	02 21	02 27	
	03	225	56.0	19.8	279	17.8	14.1	1	04.0	9.9	55.4	66	////	////	02 27	02 14	02 21	02 29	02 39	
	04	240	56.0	20.4	293	50.9	14.2	1	13.9	10.0	55.4	64	////	01 16	02 51	02 15	02 25	02 37	02 50	
	05	255	56.0	21.0	308	24.1	14.1	1	23.9	9.9	55.4	62	////	01 56	03 10	02 15	02 29	02 43	02 59	
	06	270	56.0	N18	21.6	322	57.2	14.2	N 1	33.8	9.9	55.3	60	////	02 23	03 25	02 16	02 31	02 48	03 07
	07	285	56.0	22.2	337	30.4	14.2	1	43.7	9.9	55.3	N 58	01 08	02 43	03 38	02 16	02 34	02 53	03 13	
	08	300	56.0	22.9	352	03.6	14.3	1	53.6	9.8	55.3	56	01 45	03 00	03 49	02 17	02 36	02 57	03 20	
	09	315	56.0	23.5	6	36.9	14.2	2	03.4	9.9	55.3	54	02 10	03 14	03 59	02 17	02 38	03 01	03 25	
	10	330	56.0	24.1	21	10.1	14.2	2	13.3	9.9	55.2	52	02 29	03 26	04 08	02 17	02 40	03 04	03 30	
	11	345	56.0	24.7	35	43.3	14.3	2	23.2	9.8	55.2	50	02 45	03 37	04 16	02 18	02 42	03 07	03 34	
	12	0	56.0	N18	25.3	50	16.6	14.3	N 2	33.0	9.8	55.2	45	03 15	03 58	04 32	02 18	02 46	03 14	03 44
	13	15	56.0	25.9	64	49.9	14.3	2	42.8	9.8	55.2	N 40	03 38	04 15	04 46	02 19	02 49	03 20	03 52	
	14	30	56.0	26.6	79	23.2	14.3	2	52.6	9.7	55.2	35	03 55	04 29	04 57	02 19	02 52	03 25	03 59	
	15	45	56.0	27.2	93	56.5	14.3	3	02.3	9.8	55.1	30	04 10	04 41	05 07	02 20	02 54	03 29	04 05	
	16	60	56.0	27.8	108	29.8	14.3	3	12.1	9.7	55.1	20	04 33	05 01	05 24	02 21	02 59	03 37	04 16	
	17	75	56.0	28.4	123	03.1	14.3	3	21.8	9.7	55.1	N 10	04 51	05 17	05 39	02 21	03 03	03 44	04 25	
	18	90	56.0	N18	29.0	137	36.4	14.4	N 3	31.5	9.7	55.1	0	05 06	05 31	05 53	02 22	03 06	03 50	04 34
	19	105	56.0	29.6	152	09.8	14.3	3	41.2	9.7	55.1	S 10	05 19	05 44	06 06	02 23	03 10	03 56	04 43	
	20	120	56.0	30.2	166	43.1	14.4	3	50.9	9.6	55.0	20	05 31	05 57	06 21	02 24	03 14	04 03	04 53	
	21	135	56.0	30.8	181	16.5	14.3	4	00.5	9.7	55.0	30	05 43	06 12	06 37	02 24	03 18	04 11	05 04	
	22	150	56.0	31.4	195	49.8	14.4	4	10.2	9.6	55.0	35	05 49	06 19	06 46	02 25	03 21	04 16	05 10	
23	165	56.0	32.0	210	23.2	14.4	4	19.8	9.5	55.0	40	05 55	06 28	06 57	02 26	03 24	04 21	05 17		
14 00	180	56.0	N18	32.7	224	56.6	14.3	N 4	29.3	9.6	55.0	S 50	06 10	06 49	07 25	02 27	03 31	04 34	05 36	
01	195	56.0	33.3	239	29.9	14.4	4	38.9	9.5	54.9	52	06 13	06 55	07 32	02 28	03 33	04 38	05 41		
02	210	56.0	33.9	254	03.3	14.4	4	48.4	9.5	54.9	54	06 17	07 00	07 40	02 28	03 35	04 41	05 46		
03	225	56.0	34.5	268	36.7	14.4	4	57.9	9.5	54.9	56	06 21	07 07	07 49	02 28	03 38	04 45	05 52		
04	240	56.0	35.1	283	10.1	14.4	5	07.4	9.4	54.9	58	06 25	07 14	07 59	02 29	03 40	04 50	05 59		
05	255	56.0	35.7	297	43.5	14.4	5	16.8	9.5	54.9	S 60	06 29	07 21	08 11	02 30	03 43	04 55	06 06		
06	270	56.0	N18	36.3	312	16.9	14.4	N 5	26.3	9.3	54.9									
07	285	56.0	36.9	326	50.3	14.4	5	35.6	9.4	54.8	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna	13	14	15	16	
08	300	56.0	37.5	341	23.7	14.3	5	45.0	9.3	54.8										
09	315	56.0	38.1	355	57.0	14.4	5	54.3	9.3	54.8										
10	330	56.0	38.7	10	30.4	14.4	6	03.6	9.3	54.8										
11	345	56.0	39.3	25	03.8	14.4	6	12.9	9.3	54.8										
12	0	56.0	N18	39.9	39	37.2	14.4	N 6	22.2	9.2	54.8									
13	15	56.0	40.5	54	10.6	14.4	6	31.4	9.1	54.7	N 72	□	□	□	15 22	17 00	18 38	20 19		
14	30	56.0	41.1	68	44.0	14.4	6	40.5	9.2	54.7	N 70	23 09	////	////	15 18	16 49	18 20	19 51		
15	45	56.0	41.7	83	17.4	14.3	6	49.7	9.1	54.7	68	22 04	////	////	15 14	16 40	18 06	19 30		
16	60	56.0	42.3	97	50.7	14.4	6	58.8	9.1	54.7	66	21 29	////	////	15 11	16 33	17 54	19 13		
17	75	56.0	42.9	112	24.1	14.4	7	07.9	9.0	54.7	64	21 04	22 43	////	15 09	16 27	17 44	19 00		
18	90	56.0	N18	43.5	126	57.5	14.3	N 7	16.9	9.0	54.7	62	20 45	22 00	////	15 07	16 22	17 36	18 49	
19	105	56.0	44.1	141	30.8	14.4	7	25.9	9.0	54.6	60	20 29	21 32	////	15 05	16 18	17 29	18 39		
20	120	56.0	44.7	156	04.2	14.3	7	34.9	8.9	54.6	N 58	20 16	21 11	22 50	15 03	16 14	17 23	18 30		
21	135	56.0	45.3	170	37.5	14.4	7	43.8	8.9	54.6	56	20 04	20 54	22 11	15 02	16 10	17 17	18 23		
22	150	56.0	45.9	185	10.9	14.3	7	52.7	8.9	54.6	54	19 54	20 40	21 45	15 00	16 07	17 13	18 17		
23	165	56.0	46.5	199	44.2	14.3	8	01.6	8.8	54.6	52	19 46	20 28	21 26	14 59	16 04	17 08	18 11		
15 00	180	56.0	N18	47.1	214	17.5	14.4	N 8	10.4	8.8	54.6	50	19 38	20 16	20 16	14 54	15 51	16 48	17 44	
01	195	56.0	47.7	228	50.9	14.3	8	19.2	8.7	54.6	35	18 56	19 24	19 58	14 52	15 47	16 42	17 36		
02	210	56.0	48.3	243	24.2	14.3	8	27.9	8.7	54.5	30	18 46	19 12	19 43	14 50	15 44	16 37	17 29		
03	225	56.0	48.9	257	57.5	14.3	8	36.6	8.7	54.5	20	18 28	18 52	19 20	14 48	15 38	16 27	17 17		
04	240	56.0	49.5	272	30.8	14.2	8	45.3	8.6	54.5	N 10	18 14	18 36	19 02	14 46	15 32	16 19	17 06		
05	255	56.0	50.1	287	04.0	14.3	8	53.9	8.6	54.5	0	18 00	18 22	18 47	14 43	15 27	16 11	16 56		
06	270	56.0	N18	50.6	301	37.3	14.3	N 9	02.5	8.5	54.5	S 10	17 46	18 08	18 34	14 41	15 22	16 04	16 46	
07	285	56.0	51.2	316	10.6	14.2	9	11.0	8.5	54.5	20	17 32	17 55	18 22	14 39	15 17	15 55	16 35		
08	300	56.0	51.8	330	43.8	14.2	9	19.5	8.5	54.5	30	17 15	17 41	18 10	14 36	15 11	15 46	16 23		
09	315	56.0	52.4	345	17.0	14.3	9	28.0	8.4	54.4	35	17 06	17 33	18 03	14 35	15 07	15 41	16 16		
10	330	55.9	53.0	359	50.3	14.2	9	36.4	8.4	54.4	40	16 55	17 24	17 57	14 33	15 03	15 35	16 08		
11	345	55.9	53.6	14	23.5	14.2	9	44.8	8.3	54.4	45	16 42	17 14	17 50	14 31	14 59	15 28	15 59		
12	0	55.9	N18	54.2	28	56.7	14.1	N 9	53.1	8.3	54.4	S 50	16 27	17 03	17 42	14 29	14 53	15 19	15 48	
13	15	55.9	54.8	43	29.8	14.2	10	01.4	8.2	54.4	52	16 20	16 57	17 39	14 27	14 51	15 15	15 43		
14	30	55.9	55.4	58	03.0	14.2	10	09.6	8.2	54.4	54	16 12	16 52	17 35	14 26	14 48	15 11	15 37		
15	45	55.9	55.9	72	36.2	14.1	10	17.8	8.1	54.4	56	16 03	16 45	17 31	14 25	14 45	15 06	15 31		
16	60	55.9	56.5	87	09.3	14.1	10	25.9	8.1	54.4	58	15 53	16 38	17 27	14 24	14 42	15 01	15 23		
17	75	55.9	57.1	101	42.4	14.1	10	34.0	8.1	54.3	S 60									

T. M. G.	ARIES		VENUS -4.2		MARTE +1.3		JUPITER -1.5		SATURNO +0.6		ESTRELLAS			
	A.H.G.		A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
LUNES	16 ^d 00	233 35.6	220 30.1 N 5	16.2	220 11.2 N 4	28.8	166 03.2 N21	18.6	99 50.5 N18	24.5	Acamar	315 39.4 S40	23.8	
	01	248 38.1	235 31.1	16.4	235 11.9	29.6	181 05.0	18.7	114 52.8	24.4	Achernar	335 47.5 S57	21.0	
	02	263 40.6	250 32.1	16.7	250 12.6	30.3	196 06.9	18.8	129 55.1	24.4	Acrux	173 39.2 S62	58.7	
	03	278 43.0	265 33.1	16.9	265 13.3	31.1	211 08.8	18.9	144 57.4	24.3	Adhara	255 34.1 S28	56.8	
	04	293 45.5	280 34.1	17.1	280 14.0	31.8	226 10.6	19.0	159 59.7	24.3	Aldebaran	291 20.9 N16	27.7	
	05	308 48.0	295 35.1	17.4	295 14.7	32.6	241 12.5	19.1	175 02.0	24.3				
	06	323 50.4	310 36.0 N 5	17.6	310 15.4 N 4	33.3	256 14.3 N21	19.2	190 04.3 N18	24.2	Alioth	166 44.2 N56	05.1	
	07	338 52.9	325 37.0	17.8	325 16.1	34.1	271 16.2	19.3	205 06.7	24.2	Alkaid	153 19.9 N49	25.7	
	08	353 55.3	340 38.0	18.1	340 16.8	34.8	286 18.0	19.4	220 09.0	24.1	Al Na'ir	28 17.9 S47	04.0	
	09	8 57.8	355 39.0	18.3	355 17.5	35.6	301 19.9	19.4	235 11.3	24.1	Alnilam	276 14.3 S 1	13.1	
	10	24 00.3	10 40.0	18.5	10 18.2	36.3	316 21.7	19.5	250 13.6	24.0	Alphard	218 22.8 S 8	33.8	
	11	39 02.7	25 41.0	18.8	25 18.9	37.0	331 23.6	19.6	265 15.9	24.0				
	12	54 05.2	40 42.0 N 5	19.0	40 19.6 N 4	37.8	346 25.5 N21	19.7	280 18.2 N18	24.0	Alphecca	126 33.7 N26	47.4	
	13	69 07.7	55 42.9	19.3	55 20.3	38.5	1 27.3	19.8	295 20.5	23.9	Alpheratz	358 11.8 N28	57.8	
	14	84 10.1	70 43.9	19.5	70 21.0	39.3	16 29.2	19.9	310 22.8	23.9	Altair	62 34.6 N 8	48.5	
	15	99 12.6	85 44.9	19.8	85 21.8	40.0	31 31.0	20.0	325 25.2	23.8	Ankaa	353 42.8 S42	25.6	
	16	114 15.1	100 45.9	20.0	100 22.5	40.8	46 32.9	20.1	340 27.5	23.8	Antares	112 59.3 S26	22.9	
	17	129 17.5	115 46.8	20.2	115 23.2	41.5	61 34.7	20.2	355 29.8	23.7				
	18	144 20.0	130 47.8 N 5	20.5	130 23.9 N 4	42.3	76 36.6 N21	20.3	10 32.1 N18	23.7	Arcturus	146 20.2 N19	18.0	
	19	159 22.4	145 48.8	20.7	145 24.6	43.0	91 38.4	20.4	25 34.4	23.7	Atria	108 25.0 S68	59.1	
	20	174 24.9	160 49.7	21.0	160 25.3	43.7	106 40.3	20.5	40 36.7	23.6	Avior	234 29.3 S59	26.6	
	21	189 27.4	175 50.7	21.3	175 26.0	44.5	121 42.2	20.5	55 39.0	23.6	Bellatrix	279 01.5 N 6	19.6	
	22	204 29.8	190 51.7	21.5	190 26.7	45.2	136 44.0	20.6	70 41.3	23.5	Betelgeuse	271 31.0 N 7	24.0	
23	219 32.3	205 52.6	21.8	205 27.4	46.0	151 45.9	20.7	85 43.6	23.5					
MARTES	17 ^d 00	234 34.8	220 53.6 N 5	22.0	220 28.1 N 4	46.7	166 47.7 N21	20.8	100 46.0 N18	23.5	Canopus	264 08.6 S52	41.3	
	01	249 37.2	235 54.5	22.3	235 28.8	47.5	181 49.6	20.9	115 48.3	23.4	Capella	281 15.1 N45	58.5	
	02	264 39.7	250 55.5	22.5	250 29.5	48.2	196 51.4	21.0	130 50.6	23.4	Deneb	49 49.8 N45	11.8	
	03	279 42.2	265 56.4	22.8	265 30.2	49.0	211 53.3	21.1	145 52.9	23.3	Denebola	183 01.2 N14	41.9	
	04	294 44.6	280 57.4	23.1	280 30.9	49.7	226 55.1	21.2	160 55.2	23.3	Diphda	349 23.4 S18	06.6	
	05	309 47.1	295 58.3	23.3	295 31.6	50.4	241 57.0	21.3	175 57.5	23.2				
	06	324 49.6	310 59.3 N 5	23.6	310 32.4 N 4	51.2	256 58.8 N21	21.4	190 59.8 N18	23.2	Dubhe	194 24.8 N61	52.6	
	07	339 52.0	326 00.2	23.9	325 33.1	51.9	272 00.7	21.4	206 02.1	23.2	Elnath	278 47.3 N28	35.2	
	08	354 54.5	341 01.2	24.1	340 33.8	52.7	287 02.5	21.5	221 04.4	23.1	Eltanin	90 58.3 N51	29.4	
	09	9 56.9	356 02.1	24.4	355 34.5	53.4	302 04.4	21.6	236 06.7	23.1	Elfan	34 13.8 N 9	46.2	
	10	24 59.4	11 03.1	24.7	10 35.2	54.2	317 06.3	21.7	251 09.0	23.0	Fomalhaut	15 54.0 S29	44.4	
	11	40 01.9	26 04.0	24.9	25 35.9	54.9	332 08.1	21.8	266 11.4	23.0				
	12	55 04.3	41 04.9 N 5	25.2	40 36.6 N 4	55.6	347 10.0 N21	21.9	281 13.7 N18	22.9	Gacrux	172 30.8 S56	59.5	
	13	70 06.8	56 05.9	25.5	55 37.3	56.4	2 11.8	22.0	296 16.0	22.9	Gienah	176 20.1 S17	25.2	
	14	85 09.3	71 06.8	25.7	70 38.0	57.1	17 13.7	22.1	311 18.3	22.9	Hadar	149 25.9 S60	16.0	
	15	100 11.7	86 07.7	26.0	85 38.7	57.9	32 15.5	22.2	326 20.6	22.8	Hamal	328 31.8 N23	21.2	
	16	115 14.2	101 08.7	26.3	100 39.4	58.6	47 17.4	22.3	341 22.9	22.8	Kaus Aust.	84 19.5 S34	23.6	
	17	130 16.7	116 09.6	26.6	115 40.1	59.3	62 19.2	22.4	356 25.2	22.7				
	18	145 19.1	131 10.5 N 5	26.8	130 40.8 N 5	00.1	77 21.1 N21	22.4	11 27.5 N18	22.7	Kochab	137 17.9 N74	15.0	
	19	160 21.6	146 11.4	27.1	145 41.5	00.8	92 22.9	22.5	26 29.8	22.6	Markab	14 05.5 N15	04.9	
	20	175 24.1	161 12.4	27.4	160 42.2	01.6	107 24.8	22.6	41 32.1	22.6	Menkar	314 43.8 N 3	59.9	
	21	190 26.5	176 13.3	27.7	175 43.0	02.3	122 26.6	22.7	56 34.4	22.5	Menkent	148 39.3 S36	15.7	
	22	205 29.0	191 14.2	28.0	190 43.7	03.1	137 28.5	22.8	71 36.7	22.5	Miaplacidus	221 45.5 S69	37.9	
23	220 31.4	206 15.1	28.3	205 44.4	03.8	152 30.4	22.9	86 39.0	22.5					
MIERCOLES	18 ^d 00	235 33.9	221 16.0 N 5	28.5	220 45.1 N 5	04.5	167 32.2 N21	23.0	101 41.4 N18	22.4	Mirfak	309 19.8 N49	46.7	
	01	250 36.4	236 17.0	28.8	235 45.8	05.3	182 34.1	23.1	116 43.7	22.4	Nunki	76 31.7 S26	19.4	
	02	265 38.8	251 17.9	29.1	250 46.5	06.0	197 35.9	23.2	131 46.0	22.3	Peacock	54 01.8 S56	48.2	
	03	280 41.3	266 18.8	29.4	265 47.2	06.8	212 37.8	23.3	146 48.3	22.3	Pollux	244 01.1 N28	04.8	
	04	295 43.8	281 19.7	29.7	280 47.9	07.5	227 39.6	23.3	161 50.6	22.2	Procyon	245 28.3 N 5	16.8	
	05	310 46.2	296 20.6	30.0	295 48.6	08.2	242 41.5	23.4	176 52.9	22.2				
	06	325 48.7	311 21.5 N 5	30.3	310 49.3 N 5	09.0	257 43.3 N21	23.5	191 55.2 N18	22.2	Rasalhague	96 31.4 N12	34.6	
	07	340 51.2	326 22.4	30.6	325 50.0	09.7	272 45.2	23.6	206 57.5	22.1	Regulus	208 12.4 N12	04.6	
	08	355 53.6	341 23.3	30.9	340 50.7	10.5	287 47.0	23.7	221 59.8	22.1	Rigel	281 38.5 S 8	13.8	
	09	10 56.1	356 24.2	31.2	355 51.4	11.2	302 48.9	23.8	237 02.1	22.0	Rigil Kent.	140 28.2 S60	44.6	
	10	25 58.5	11 25.1	31.5	10 52.1	11.9	317 50.7	23.9	252 04.4	22.0	Sabik	102 43.4 S15	41.8	
	11	41 01.0	26 26.0	31.8	25 52.8	12.7	332 52.6	24.0	267 06.7	21.9				
	12	56 03.5	41 26.9 N 5	32.1	40 53.6 N 5	13.4	347 54.4 N21	24.1	282 09.0 N18	21.9	Schedar	350 11.9 N56	24.6	
	13	71 05.9	56 27.8	32.4	55 54.3	14.2	2 56.3	24.2	297 11.3	21.8	Shaula	96 58.4 S37	05.2	
	14	86 08.4	71 28.7	32.7	70 55.0	14.9	17 58.1	24.2	312 13.6	21.8	Sirius	258 58.0 S16	41.4	
	15	101 10.9	86 29.6	33.0	85 55.7	15.6	33 00.0	24.3	327 15.9	21.8	Spica	158 59.6 S11	02.7	
	16	116 13.3	101 30.4	33.3	100 56.4	16.4	48 01.9	24.4	342 18.2	21.7	Suhail	223 12.5 S43	20.8	
	17	131 15.8	116 31.3	33.6	115 57.1	17.1	63 03.7	24.5	357 20.5	21.7				
	18	146 18.3	131 32.2 N 5	33.9	130 57.8 N 5	17.9	78 05.6 N21	24.6	12 22.8 N18	21.6	Vega	80 57.0 N38	45.7	
	19	161 20.7	146 33.1	34.2	145 58.5	18.6	93 07.4	24.7	27 25.1	21.6	Zuben'ubi	137 35.2 S15	56.9	
	20	176 23.2	161 34.0	34.5	160 59.2	19.3	108 09.3	24.8	42 27.4	21.5				
	21	191 25.7	176 34.9	34.8	175 59.9	20.1	123 11.1	24.9	57 29.7	21.5				
	22	206 28.1	191 35.7	35.1	191 00.6	20.8	138 13.0	25.0	72 32.1	21.5	Venus	346 18.8	9 16	
23	221 30.6	206 36.6	35.4	206 01.3	21.6	153 14.8	25.0	87 34.4	21.4	Marte	345 53.3	9 18		
Pas. Mer.	8 20.3	v 0.9 d 0.3		v 0.7 d 0.7		v 1.9 d 0.1		v 2.3 d 0.0		Júpiter	292 12.9	12 51		
										Saturno	226 11.2	17 14		

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.		A.H.G.	Dec.	d P.H.		Náut.	Civil		16	17	18	19		
16 L U N E S	180	55.8	N19 01.2	203	33.9	14.0	N11 29.3	7.7	54.3		01 52	01 44	01 32	00 52		
	195	55.8	01.8	218	06.9	13.9	11 37.0	7.6	54.3		02 11	02 13	02 18	02 29		
	210	55.8	02.4	232	39.8	14.0	11 44.6	7.6	54.3	01 36	02 27	02 35	02 48	03 09		
	225	55.8	02.9	247	12.8	13.9	11 52.2	7.6	54.2	02 15	02 39	02 52	03 11	03 37		
	240	55.8	03.5	261	45.7	13.9	11 59.8	7.4	54.2	02 41	02 50	03 07	03 28	03 58		
	255	55.8	04.1	276	18.6	14.0	12 07.2	7.5	54.2	01 43	03 02	02 59	03 18	03 43		
	270	55.8	N19 04.7	290	51.6	13.8	N12 14.7	7.3	54.2	02 13	03 18	03 07	03 29	03 56		
	285	55.7	05.3	305	24.4	13.9	12 22.0	7.4	54.2	00 48	02 35	03 32	03 13	03 38		
	300	55.7	05.8	319	57.3	13.8	12 29.4	7.2	54.2	01 33	02 53	03 44	03 20	03 45		
	315	55.7	06.4	334	30.1	13.9	12 36.6	7.2	54.2	02 01	03 08	03 54	03 25	03 52		
	330	55.7	07.0	349	03.0	13.8	12 43.8	7.2	54.2	02 22	03 21	04 03	03 30	03 59		
	345	55.7	07.6	3	35.8	13.8	12 51.0	7.1	54.2	02 39	03 32	04 12	03 34	04 04		
	0	55.7	N19 08.1	18	08.6	13.7	N12 58.1	7.0	54.2	03 11	03 55	04 29	03 44	04 17		
	15	55.7	08.7	32	41.3	13.8	13 05.1	7.0	54.2	03 34	04 12	04 43	03 52	04 27		
	30	55.7	09.3	47	14.1	13.7	13 12.1	6.9	54.1	03 53	04 27	04 55	03 59	04 36		
	45	55.6	09.9	61	46.8	13.7	13 19.0	6.9	54.1	04 08	04 39	05 05	04 05	04 43		
	60	55.6	10.4	76	19.5	13.7	13 25.9	6.8	54.1	04 31	05 00	05 23	04 16	04 57		
	75	55.6	11.0	90	52.2	13.6	13 32.7	6.7	54.1	04 50	05 16	05 39	04 25	05 08		
	90	55.6	N19 11.6	105	24.8	13.7	N13 39.4	6.7	54.1	05 05	05 31	05 53	04 34	05 19		
	105	55.6	12.1	119	57.5	13.6	13 46.1	6.6	54.1	05 19	05 45	06 07	04 43	05 31		
	120	55.6	12.7	134	30.1	13.6	13 52.7	6.6	54.1	05 32	05 59	06 22	04 53	05 42		
	135	55.5	13.3	149	02.7	13.5	13 59.3	6.5	54.1	05 44	06 13	06 39	05 04	05 56		
	150	55.5	13.9	163	35.2	13.6	14 05.8	6.4	54.1	05 51	06 22	06 49	05 10	06 04		
165	55.5	14.4	178	07.8	13.5	14 12.2	6.4	54.1	05 58	06 31	07 00	05 17	06 13			
180	55.5	N19 15.0	192	40.3	13.5	N14 18.6	6.3	54.1	06 05	06 41	07 13	05 26	06 24			
195	55.5	15.6	207	12.8	13.5	14 24.9	6.2	54.1	06 13	06 53	07 29	05 36	06 36			
210	55.5	16.1	221	45.3	13.5	14 31.1	6.2	54.1	06 17	06 59	07 37	05 41	06 42			
225	55.4	16.7	236	17.8	13.4	14 37.3	6.1	54.1	06 21	07 05	07 45	05 46	06 49			
240	55.4	17.3	250	50.2	13.4	14 43.4	6.1	54.0	06 25	07 11	07 54	05 52	06 57			
255	55.4	17.8	265	22.6	13.4	14 49.5	5.9	54.0	06 30	07 19	08 05	05 59	07 05			
270	55.4	N19 18.4	279	55.0	13.4	N14 55.4	6.0	54.0	06 35	07 27	08 17	06 06	07 14			
285	55.4	19.0	294	27.4	13.3	15 01.4	5.8	54.0								
300	55.4	19.5	308	59.7	13.4	15 07.2	5.8	54.0	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna				
315	55.3	20.1	323	32.1	13.3	15 13.0	5.7	54.0				16	17	18	19	
330	55.3	20.6	338	04.4	13.3	15 18.7	5.6	54.0	N 72	h m	h m	h m	h m	h m	h m	h m
345	55.3	21.2	352	36.7	13.2	15 24.3	5.6	54.0	N 70	□	□	□	20 19	22 06	24 24	00 24
0	55.3	N19 21.8	7	08.9	13.3	N15 29.9	5.5	54.0	68	22 22	///	///	19 51	21 21	22 46	23 57
15	55.3	22.3	21	41.2	13.2	15 35.4	5.5	54.0	66	21 41	///	///	19 30	20 51	22 07	23 10
30	55.2	22.9	36	13.4	13.2	15 40.9	5.3	54.0	64	21 14	23 08	///	19 13	20 29	21 39	22 39
45	55.2	23.4	50	45.6	13.1	15 46.2	5.3	54.0	62	20 53	22 13	///	19 00	20 12	21 19	22 16
60	55.2	24.0	65	17.7	13.2	15 51.5	5.3	54.0	60	20 36	21 42	///	18 49	19 58	21 02	21 58
75	55.2	24.6	79	49.9	13.1	15 56.8	5.1	54.0	N 58	20 22	21 19	23 13	18 39	19 46	20 48	21 43
90	55.2	N19 25.1	94	22.0	13.1	N16 01.9	5.1	54.0	56	20 10	21 01	22 23	18 30	19 35	20 36	21 30
105	55.1	25.7	108	54.1	13.1	16 07.0	5.0	54.0	54	19 59	20 46	21 54	18 23	19 26	20 25	21 19
120	55.1	26.2	123	26.2	13.1	16 12.0	5.0	54.0	52	19 50	20 33	21 33	18 17	19 18	20 16	21 10
135	55.1	26.8	137	58.3	13.0	16 17.0	4.8	54.0	50	19 42	20 22	21 16	18 11	19 11	20 08	21 01
150	55.1	27.3	152	30.3	13.0	16 21.8	4.8	54.0	45	19 24	19 59	20 43	18 05	19 05	20 01	20 53
165	55.1	27.9	167	02.3	13.0	16 26.6	4.7	54.0	N 40	19 10	19 41	20 19	17 54	18 51	19 45	20 37
180	55.0	N19 28.5	181	34.3	13.0	N16 31.3	4.7	54.0	35	18 58	19 26	20 01	17 44	18 39	19 33	20 23
195	55.0	29.0	196	06.3	12.9	16 36.0	4.6	54.0	30	18 47	19 14	19 45	17 36	18 30	19 22	20 12
210	55.0	29.6	210	38.2	13.0	16 40.6	4.5	54.0	20	18 30	18 53	19 21	17 29	18 21	19 12	20 02
225	55.0	30.1	225	10.2	12.9	16 45.1	4.4	54.0	N 10	18 14	18 37	19 03	17 17	18 06	18 56	19 44
240	54.9	30.7	239	42.1	12.9	16 49.5	4.3	54.0	0	18 00	18 22	18 47	17 06	17 54	18 41	19 29
255	54.9	31.2	254	14.0	12.8	16 53.8	4.3	53.9	S 10	17 46	18 08	18 34	16 56	17 42	18 28	19 15
270	54.9	N19 31.8	268	45.8	12.9	N16 58.1	4.2	53.9	20	17 31	17 54	18 21	16 46	17 30	18 15	19 01
285	54.9	32.3	283	17.7	12.8	17 02.3	4.1	53.9	30	17 14	17 39	18 08	16 35	17 17	18 00	18 46
300	54.8	32.9	297	49.5	12.8	17 06.4	4.1	53.9	54	16 07	16 47	17 31	16 23	17 02	17 44	18 29
315	54.8	33.4	312	21.3	12.8	17 10.5	3.9	53.9	56	15 58	16 41	17 27	16 16	16 54	17 35	18 19
330	54.8	34.0	326	53.1	12.8	17 14.4	3.9	53.9	58	15 47	16 33	17 22	16 08	16 44	17 24	18 07
345	54.8	34.5	341	24.9	12.7	17 18.3	3.8	53.9	S 60	15 35	16 25	17 17	15 59	16 33	17 11	17 54
0	54.7	N19 35.1	355	56.6	12.7	N17 22.1	3.8	53.9	52	16 23	16 59	17 39	15 59	16 33	17 11	17 54
15	54.7	35.6	10	28.3	12.8	17 25.9	3.6	53.9	50	16 16	16 53	17 35	15 48	16 20	16 56	17 37
30	54.7	36.2	25	00.1	12.6	17 29.5	3.6	53.9	52	16 16	16 53	17 35	15 43	16 13	16 48	17 29
45	54.7	36.7	39	31.7	12.7	17 33.1	3.5	53.9	54	16 07	16 47	17 31	15 37	16 06	16 40	17 21
60	54.6	37.2	54	03.4	12.7	17 36.6	3.4	53.9	56	15 58	16 41	17 27	15 31	15 58	16 32	17 11
75	54.6	37.8	68	35.1	12.6	17 40.0	3.3	53.9	58	15 47	16 33	17 22	15 23	15 50	16 21	17 00
90	54.6	N19 38.3	83	06.7	12.6	N17 43.3	3.3	53.9	S 60	15 35	16 25	17 17	15 15	15 40	16 10	16 47
105	54.6	38.9	97	38.3	12.6	17 46.6	3.2	53.9								
120	54.5	39.4	112	09.9	12.6	17 49.8	3.1	53.9	Día	SOL E.T. (+)		LUNA				
135	54.5	40.0	126	41.5	12.5	17 52.9	3.0	53.9		00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase
150	54.5	40.5	141	13.0	12.6	17 55.9	2.9	53.9	16	m s	m s	h m	h m	h m	d	
165	54.5	41.1	155	44.6	12.5	17 58.8	2.9	53.9	17	03 43	03 43	11 56	10 45	23 08	28	
	S.D.	15.8	d	0.6	S.D.	14.8	14.7	14.7	18	03 40	03 41	11 56	11 30	23 54	29	
										03 39	03 39	11 56	12 17	24 40	00	

T. M. G.	ARIES		VENUS -4.2		MARTE +1.3		JUPITER -1.5		SATURNO +0.6		ESTRELLAS				
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
19 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	236 33.0	221 37.5 N 5	35.7	221 02.0 N 5	22.3	168 16.7 N21	25.1	102 36.7 N18	21.4			Acamar	315 39.4 S40	23.8	
	251 35.5	236 38.4	36.1	236 02.7	23.0	183 18.5	25.2	117 39.0	21.3			Achernar	335 47.5 S57	21.0	
	266 38.0	251 39.2	36.4	251 03.4	23.8	198 20.4	25.3	132 41.3	21.3			Acruz	173 39.2 S62	58.7	
	281 40.4	266 40.1	36.7	266 04.1	24.5	213 22.2	25.4	147 43.6	21.2			Adhara	255 34.2 S28	56.8	
	296 42.9	281 41.0	37.0	281 04.9	25.2	228 24.1	25.5	162 45.9	21.2			Aldebaran	291 20.9 N16	27.7	
	311 45.4	296 41.8	37.3	296 05.6	26.0	243 25.9	25.6	177 48.2	21.1						
	326 47.8	311 42.7 N 5	37.6	311 06.3 N 5	26.7	258 27.8 N21	25.7	192 50.5 N18	21.1			Alioth	166 44.2 N56	05.1	
	341 50.3	326 43.6	38.0	326 07.0	27.5	273 29.6	25.8	207 52.8	21.0			Alkaid	153 19.9 N49	25.7	
	356 52.8	341 44.4	38.3	341 07.7	28.2	288 31.5	25.9	222 55.1	21.0			Al Na'ir	28 17.8 S47	04.0	
	11 55.2	356 45.3	38.6	356 08.4	28.9	303 33.3	25.9	237 57.4	21.0			Alnilam	276 14.3 S 1	13.1	
	26 57.7	11 46.1	38.9	11 09.1	29.7	318 35.2	26.0	252 59.7	20.9			Alphard	218 22.8 S 8	33.8	
	42 00.2	26 47.0	39.3	26 09.8	30.4	333 37.0	26.1	268 02.0	20.9						
	57 02.6	41 47.8 N 5	39.6	41 10.5 N 5	31.1	348 38.9 N21	26.2	283 04.3 N18	20.8			Alphecca	126 33.7 N26	47.5	
	72 05.1	56 48.7	39.9	56 11.2	31.9	3 40.7	26.3	298 06.6	20.8			Alpheratz	358 11.8 N28	57.8	
	87 07.5	71 49.5	40.2	71 11.9	32.6	18 42.6	26.4	313 08.9	20.7			Altair	62 34.5 N 8	48.5	
	102 10.0	86 50.4	40.6	86 12.6	33.4	33 44.5	26.5	328 11.2	20.7			Ankaa	353 42.8 S42	25.6	
	117 12.5	101 51.2	40.9	101 13.3	34.1	48 46.3	26.6	343 13.5	20.6			Antares	112 59.2 S26	22.9	
	132 14.9	116 52.1	41.2	116 14.0	34.8	63 48.2	26.7	358 15.8	20.6						
	147 17.4	131 52.9 N 5	41.6	131 14.7 N 5	35.6	78 50.0 N21	26.7	13 18.1 N18	20.6			Arcturus	146 20.2 N19	18.0	
	162 19.9	146 53.8	41.9	146 15.5	36.3	93 51.9	26.8	28 20.4	20.5			Atria	108 24.9 S68	59.1	
	177 22.3	161 54.6	42.2	161 16.2	37.0	108 53.7	26.9	43 22.7	20.5			Avior	234 29.3 S59	26.6	
	192 24.8	176 55.5	42.6	176 16.9	37.8	123 55.6	27.0	58 25.0	20.4			Bellatrix	279 01.5 N 6	19.6	
	207 27.3	191 56.3	42.9	191 17.6	38.5	138 57.4	27.1	73 27.3	20.4			Betelgeuse	271 31.0 N 7	24.0	
222 29.7	206 57.1	43.2	206 18.3	39.2	153 59.3	27.2	88 29.6	20.3							
20 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	237 32.2	221 58.0 N 5	43.6	221 19.0 N 5	40.0	169 01.1 N21	27.3	103 31.9 N18	20.3			Canopus	264 08.6 S52	41.3	
	252 34.6	236 58.8	43.9	236 19.7	40.7	184 03.0	27.4	118 34.2	20.2			Capella	281 15.1 N45	58.5	
	267 37.1	251 59.6	44.3	251 20.4	41.4	199 04.8	27.4	133 36.5	20.2			Deneb	49 49.8 N45	11.8	
	282 39.6	267 00.5	44.6	266 21.1	42.2	214 06.7	27.5	148 38.8	20.1			Denebola	183 01.2 N14	41.9	
	297 42.0	282 01.3	44.9	281 21.8	42.9	229 08.5	27.6	163 41.1	20.1			Diphda	349 23.4 S18	06.6	
	312 44.5	297 02.1	45.3	296 22.5	43.7	244 10.4	27.7	178 43.4	20.0						
	327 47.0	312 02.9 N 5	45.6	311 23.2 N 5	44.4	259 12.2 N21	27.8	193 45.7 N18	20.0			Dubhe	194 24.8 N61	52.6	
	342 49.4	327 03.8	46.0	326 23.9	45.1	274 14.1	27.9	208 48.0	20.0			Elnath	278 47.3 N28	35.2	
	357 51.9	342 04.6	46.3	341 24.6	45.9	289 15.9	28.0	223 50.3	19.9			Eltanin	90 58.3 N51	29.4	
	12 54.4	357 05.4	46.7	356 25.3	46.6	304 17.8	28.1	238 52.6	19.9			Enif	34 13.8 N 9	46.2	
	27 56.8	12 06.2	47.0	11 26.1	47.3	319 19.6	28.2	253 54.9	19.8			Fomalhaut	15 54.0 S29	44.4	
	42 59.3	27 07.0	47.4	26 26.8	48.1	334 21.5	28.2	268 57.2	19.8						
	58 01.8	42 07.8 N 5	47.7	41 27.5 N 5	48.8	349 23.3 N21	28.3	283 59.5 N18	19.7			Gacrux	172 30.8 S56	59.5	
	73 04.2	57 08.7	48.1	56 28.2	49.5	4 25.2	28.4	299 01.7	19.7			Gienah	176 20.1 S17	25.2	
	88 06.7	72 09.5	48.4	71 28.9	50.3	19 27.0	28.5	314 04.0	19.6			Hadar	149 25.9 S60	16.0	
	103 09.1	87 10.3	48.8	86 29.6	51.0	34 28.9	28.6	329 06.3	19.6			Hamal	328 31.8 N23	21.2	
	118 11.6	102 11.1	49.2	101 30.3	51.7	49 30.7	28.7	344 08.6	19.5			Kaus Aust.	84 19.5 S34	23.6	
	133 14.1	117 11.9	49.5	116 31.0	52.5	64 32.6	28.8	359 10.9	19.5						
	148 16.5	132 12.7 N 5	49.9	131 31.7 N 5	53.2	79 34.4 N21	28.9	14 13.2 N18	19.4			Kochab	137 17.9 N74	15.0	
	163 19.0	147 13.5	50.2	146 32.4	53.9	94 36.3	28.9	29 15.5	19.4			Markab	14 05.5 N15	04.9	
	178 21.5	162 14.3	50.6	161 33.1	54.7	109 38.1	29.0	44 17.8	19.4			Menkar	314 43.8 N 4	00.0	
	193 23.9	177 15.1	51.0	176 33.8	55.4	124 40.0	29.1	59 20.1	19.3			Menkent	148 39.3 S36	15.7	
	208 26.4	192 15.9	51.3	191 34.5	56.1	139 41.8	29.2	74 22.4	19.3			Miaplacidus	221 45.5 S69	37.9	
223 28.9	207 16.7	51.7	206 35.2	56.9	154 43.7	29.3	89 24.7	19.2							
21 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	238 31.3	222 17.5 N 5	52.0	221 35.9 N 5	57.6	169 45.5 N21	29.4	104 27.0 N18	19.2			Mirfak	309 19.8 N49	46.7	
	253 33.8	237 18.3	52.4	236 36.6	58.3	184 47.4	29.5	119 29.3	19.1			Nunki	76 31.7 S26	19.4	
	268 36.3	252 19.1	52.8	251 37.4	59.1	199 49.2	29.6	134 31.6	19.1			Peacock	54 01.7 S56	48.2	
	283 38.7	267 19.9	53.1	266 38.1	59.8	214 51.1	29.6	149 33.9	19.0			Pollux	244 01.2 N28	04.8	
	298 41.2	282 20.7	53.5	281 38.8	60.0	229 52.9	29.7	164 36.2	19.0			Procyon	245 28.3 N 5	16.8	
	313 43.6	297 21.5	53.9	296 39.5	60.3	244 54.8	29.8	179 38.5	18.9						
	328 46.1	312 22.2 N 5	54.2	311 40.2 N 6	62.0	259 56.6 N21	29.9	194 40.8 N18	18.9			Rasalhague	96 31.4 N12	34.6	
	343 48.6	327 23.0	54.6	326 40.9	62.7	274 58.5	30.0	209 43.1	18.8			Regulus	208 12.4 N12	04.6	
	358 51.0	342 23.8	55.0	341 41.6	63.4	290 00.3	30.1	224 45.4	18.8			Rigel	281 38.5 S 8	13.8	
	13 53.5	357 24.6	55.4	356 42.3	64.2	305 02.2	30.2	239 47.7	18.7			Rigel Kent.	140 28.1 S60	44.6	
	28 56.0	12 25.4	55.7	11 43.0	64.9	320 04.0	30.3	254 50.0	18.7			Sabik	102 43.4 S15	41.8	
	43 58.4	27 26.1	56.1	26 43.7	65.6	335 05.9	30.3	269 52.2	18.7						
	59 00.9	42 26.9 N 5	56.5	41 44.4 N 6	66.4	350 07.7 N21	30.4	284 54.5 N18	18.6			Schedar	350 11.9 N56	24.6	
	74 03.4	57 27.7	56.9	56 45.1	67.1	5 09.6	30.5	299 56.8	18.6			Shaula	96 58.4 S37	05.2	
	89 05.8	72 28.5	57.3	71 45.8	67.8	20 11.4	30.6	314 59.1	18.5			Sirius	258 58.0 S16	41.4	
	104 08.3	87 29.2	57.6	86 46.5	68.6	35 13.3	30.7	330 01.4	18.5			Spica	158 59.6 S11	02.7	
	119 10.7	102 30.0	58.0	101 47.2	69.3	50 15.1	30.8	345 03.7	18.4			Suhail	223 12.5 S43	20.8	
	134 13.2	117 30.8	58.4	116 47.9	70.0	65 17.0	30.9	0 06.0	18.4						
	149 15.7	132 31.6 N 5	58.8	131 48.7 N 6	70.8	80 18.8 N21	31.0	15 08.3 N18	18.3			Vega	80 57.0 N38	45.7	
	164 18.1	147 32.3	59.2	146 49.4	71.5	95 20.7	31.0	30 10.6	18.3			Zuben'ubi	137 35.2 S15	56.9	
	179 20.6	162 33.1	59.5	161 50.1	72.2	110 22.5	31.1	45 12.9	18.2						
	194 23.1	177 33.9	59.9	176 50.8	72.9	125 24.4	31.2	60 15.2	18.2						
	209 25.5	192 34.6	60.3	191 51.5	73.7	140 26.2	31.3	75 17.5	18.1						
224 28.0	207 35.4	60.7	206 52.2	74.4	155 28.1	31.4	90 19.8	18.1							
												A. H. S.		Pas. Mer.	
												o / ' / "		h m	
												344 25.8		9 12	
												343 46.8		9 14	
												291 28.9		12 42	
												225 59.7		17 03	

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.		A.H.G.	Dec.	d P.H.		Náut.	Civil		19	20	21	22
19 J U E V E S	00	180 54.4 N19	41.6	170 16.1 12.5	N18 01.7	2.7 53.9	N 72	□	□	□	00 52	□	□	04 07
	01	195 54.4	42.1	184 47.6 12.5	18 04.4	2.7 53.9	N 70	□	□	□	02 29	02 57	03 52	05 11
	02	210 54.4	42.7	199 19.1 12.5	18 07.1	2.6 53.9	68	////	////	01 17	03 09	03 44	04 37	05 47
	03	225 54.3	43.2	213 50.6 12.4	18 09.7	2.6 53.9	66	////	////	02 03	03 37	04 15	05 07	06 12
	04	240 54.3	43.7	228 22.0 12.5	18 12.3	2.4 53.9	64	////	00 16	02 32	03 58	04 38	05 29	06 32
	05	255 54.3	44.3	242 53.5 12.4	18 14.7	2.4 53.9	62	////	01 30	02 54	04 15	04 56	05 47	06 48
	06	270 54.3 N19	44.8	257 24.9 12.4	N18 17.1	2.2 53.9	60	////	02 03	03 11	04 29	05 11	06 02	07 01
	07	285 54.2	45.4	271 56.3 12.4	18 19.3	2.2 54.0	N 58	00 15	02 28	03 26	04 41	05 24	06 14	07 12
	08	300 54.2	45.9	286 27.7 12.4	18 21.5	2.1 54.0	56	01 21	02 47	03 39	04 52	05 35	06 25	07 22
	09	315 54.2	46.4	300 59.1 12.4	18 23.6	2.1 54.0	54	01 52	03 02	03 50	05 01	05 45	06 35	07 31
	10	330 54.1	47.0	315 30.5 12.3	18 25.7	1.9 54.0	52	02 15	03 16	03 59	05 10	05 53	06 43	07 39
	11	345 54.1	47.5	330 01.8 12.4	18 27.6	1.9 54.0	50	02 33	03 27	04 08	05 17	06 01	06 51	07 46
	12	0 54.1 N19	48.0	344 33.2 12.3	N18 29.5	1.7 54.0	45	03 06	03 51	04 26	05 33	06 18	07 07	08 01
	13	15 54.0	48.6	359 04.5 12.3	18 31.2	1.7 54.0	N 40	03 31	04 10	04 41	05 46	06 31	07 21	08 13
	14	30 54.0	49.1	13 35.8 12.4	18 32.9	1.6 54.0	35	03 50	04 25	04 53	05 57	06 43	07 32	08 24
	15	45 54.0	49.6	28 07.2 12.2	18 34.5	1.5 54.0	30	04 06	04 37	05 04	06 07	06 53	07 42	08 33
	16	60 53.9	50.2	42 38.4 12.3	18 36.0	1.5 54.0	20	04 30	04 58	05 22	06 24	07 10	07 59	08 49
	17	75 53.9	50.7	57 09.7 12.3	18 37.5	1.3 54.0	N 10	04 49	05 16	05 38	06 39	07 26	08 14	09 02
	18	90 53.9 N19	51.2	71 41.0 12.3	N18 38.8	1.3 54.0	0	05 05	05 31	05 53	06 52	07 40	08 28	09 15
	19	105 53.8	51.8	86 12.3 12.2	18 40.1	1.1 54.0	S 10	05 19	05 45	06 08	07 06	07 54	08 42	09 28
	20	120 53.8	52.3	100 43.5 12.3	18 41.2	1.1 54.0	20	05 33	06 00	06 23	07 21	08 09	08 56	09 42
	21	135 53.8	52.8	115 14.8 12.2	18 42.3	1.0 54.0	30	05 46	06 15	06 41	07 38	08 27	09 13	09 58
	22	150 53.7	53.3	129 46.0 12.2	18 43.3	1.0 54.0	35	05 53	06 24	06 51	07 48	08 37	09 23	10 07
23	165 53.7	53.9	144 17.2 12.2	18 44.3	0.8 54.0	40	06 00	06 33	07 03	07 59	08 49	09 35	10 17	
20	00	180 53.7 N19	54.4	158 48.4 12.2	N18 45.1	0.7 54.0	S 50	06 17	06 57	07 33	08 29	09 19	10 04	10 44
01	195 53.6	54.9	173 19.6 12.2	18 45.8	0.7 54.0	52	06 21	07 03	07 41	08 37	09 27	10 12	10 51	
02	210 53.6	55.4	187 50.8 12.2	18 46.5	0.6 54.0	54	06 25	07 09	07 50	08 45	09 36	10 20	10 59	
03	225 53.6	56.0	202 22.0 12.2	18 47.1	0.5 54.0	56	06 29	07 16	07 59	08 55	09 46	10 30	11 07	
04	240 53.5	56.5	216 53.2 12.2	18 47.6	0.4 54.0	58	06 34	07 24	08 11	09 06	09 57	10 41	11 17	
05	255 53.5	57.0	231 24.4 12.1	18 48.0	0.3 54.0	S 60	06 39	07 33	08 24	09 18	10 10	10 53	11 28	
06	270 53.5 N19	57.5	245 55.5 12.2	N18 48.3	0.2 54.0									
07	285 53.4	58.1	260 26.7 12.1	18 48.5	0.1 54.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	300 53.4	58.6	274 57.8 12.2	18 48.6	0.1 54.1			Civil	Náut.	19	20	21	22	
09	315 53.4	59.1	289 29.0 12.1	18 48.7	0.0 54.1									
10	330 53.3	59.6	304 00.1 12.2	18 48.7	0.2 54.1									
11	345 53.3	60.0	318 31.3 12.1	18 48.5	0.2 54.1									
12	0 53.3 N20	60.7	333 02.4 12.1	N18 48.3	0.3 54.1	N 70	□	□	□	00 24	□	□	02 06	
13	15 53.2	61.2	347 33.5 12.1	18 48.0	0.3 54.1	N 72	□	□	□	23 57	24 41	00 41	01 01	
14	30 53.2	61.7	2 04.6 12.1	18 47.7	0.5 54.1	68	22 42	////	////	23 10	23 56	24 25	00 25	
15	45 53.1	62.2	16 35.7 12.2	18 47.2	0.6 54.1	66	21 54	////	////	22 39	23 26	23 59	24 22	
16	60 53.1	62.7	31 06.9 12.1	18 46.6	0.6 54.1	64	21 23	////	////	22 16	23 03	23 39	24 06	
17	75 53.1	63.3	45 38.0 12.1	18 46.0	0.7 54.1	62	21 01	22 27	////	21 58	22 45	23 23	23 52	
18	90 53.0 N20	63.8	60 09.1 12.1	N18 45.3	0.8 54.1	60	20 43	21 52	////	21 43	22 31	23 09	23 41	
19	105 53.0	64.3	74 40.2 12.1	18 44.5	0.9 54.1	N 58	20 28	21 27	////	21 30	22 18	22 58	23 31	
20	120 53.0	64.8	89 11.3 12.1	18 43.6	1.0 54.1	56	20 15	21 08	22 36	21 19	22 07	22 48	23 22	
21	135 52.9	65.3	103 42.4 12.1	18 42.6	1.1 54.2	54	20 04	20 52	22 03	21 10	21 57	22 39	23 14	
22	150 52.9	65.8	118 13.5 12.1	18 41.5	1.2 54.2	52	19 55	20 38	21 40	21 01	21 49	22 31	23 07	
23	165 52.8	66.3	132 44.6 12.1	18 40.3	1.2 54.2	50	19 46	20 27	21 22	20 53	21 41	22 23	23 01	
21	00	180 52.8 N20	66.9	147 15.7 12.1	N18 39.1	1.4 54.2	45	19 28	20 03	20 47	20 37	21 25	22 08	22 47
01	195 52.8	67.4	161 46.8 12.1	18 37.7	1.4 54.2	N 40	19 13	19 44	20 23	20 23	21 11	21 55	22 36	
02	210 52.7	67.9	176 17.9 12.1	18 36.3	1.5 54.2	35	19 00	19 29	20 03	20 12	21 00	21 44	22 26	
03	225 52.7	68.4	190 49.0 12.1	18 34.8	1.6 54.2	30	18 49	19 16	19 48	20 02	20 49	21 35	22 18	
04	240 52.6	68.9	205 20.1 12.1	18 33.2	1.7 54.2	20	18 31	18 55	19 23	19 44	20 32	21 19	22 03	
05	255 52.6	69.4	219 51.2 12.1	18 31.5	1.7 54.2	N 10	18 15	18 37	19 04	19 29	20 17	21 04	21 50	
06	270 52.6 N20	69.9	234 22.3 12.1	N18 29.8	1.9 54.2	0	18 00	18 22	18 48	19 15	20 03	20 51	21 38	
07	285 52.5	70.4	248 53.4 12.1	18 27.9	1.9 54.2	S 10	17 45	18 08	18 33	19 01	19 49	20 37	21 26	
08	300 52.5	70.9	263 24.5 12.1	18 26.0	2.1 54.3	20	17 30	17 53	18 20	18 46	19 34	20 23	21 13	
09	315 52.4	71.4	277 55.6 12.1	18 23.9	2.1 54.3	30	17 12	17 38	18 07	18 29	19 16	20 06	20 58	
10	330 52.4	71.9	292 26.7 12.1	18 21.8	2.2 54.3	35	17 02	17 29	18 00	18 19	19 06	19 56	20 49	
11	345 52.4	72.5	306 57.8 12.2	18 19.6	2.3 54.3	40	16 50	17 19	17 52	18 07	18 54	19 45	20 39	
12	0 52.3 N20	73.0	321 29.0 12.1	N18 17.3	2.4 54.3	45	16 36	17 09	17 45	17 54	18 41	19 32	20 28	
13	15 52.3	73.5	336 00.1 12.1	18 14.9	2.4 54.3	S 50	16 19	16 56	17 36	17 37	18 24	19 16	20 14	
14	30 52.2	74.0	350 31.2 12.1	18 12.5	2.6 54.3	52	16 12	16 50	17 32	17 29	18 16	19 09	20 07	
15	45 52.2	74.5	5 02.3 12.1	18 09.9	2.6 54.3	54	16 03	16 43	17 28	17 21	18 07	19 01	20 00	
16	60 52.1	75.0	19 33.4 12.2	18 07.3	2.7 54.4	56	15 53	16 36	17 23	17 11	17 58	18 51	19 51	
17	75 52.1	75.5	34 04.6 12.1	18 04.6	2.8 54.4	58	15 42	16 29	17 18	17 00	17 46	18 41	19 42	
18	90 52.1 N20	76.0	48 35.7 12.2	N18 01.8	2.9 54.4	S 60	15 29	16 20	17 13	16 47	17 33	18 29	19 31	
19	105 52.0	76.5	63 06.9 12.1	17 58.9	3.0 54.4									
20	120 52.0	77.0	77 38.0 12.2	17 55.9	3.0 54.4									
21	135 51.9	77.5	92 09.2 12.1	17 52.9	3.1 54.4									
22	150 51.9	78.0	106 40.3 12.2	17 49.8	3.3 54.4									
23	165 51.8	78.5	121 11.5 12.2	17 46.5	3.3 54.4									
	S.D. 15.8	d 0.5	S.D. 14.7	14.7	14.8									
						Día	SOL E.T. (+)		Pas. Mer.		LUNA			Fase
							00 ^h	12 ^h		Pas. Sup.	Mer. Inf.	Edad.		
						19	m s	m s	h m</					

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	22		23		24		25		
												h	m	h	m	h	m	h	m	h	m	h	m
DOMINGO	180	51.8	N20	19.0	135	42.7	12.1	N17	43.2	3.4	54.5	N 72	□	□	□	04 07	06 05	07 53	09 38	
	01	195	51.7	19.5	150	13.8	12.2	17	39.8	3.4	54.5	N 70	□	□	□	05 11	06 42	08 16	09 53	
	02	210	51.7	20.0	164	45.0	12.2	17	36.4	3.6	54.5	68	////	////	00 55	05 47	07 07	08 34	10 04	
	03	225	51.7	20.5	179	16.2	12.2	17	32.8	3.6	54.5	66	////	////	01 50	06 12	07 27	08 48	10 13	
	04	240	51.6	21.0	193	47.4	12.2	17	29.2	3.8	54.5	64	////	////	02 23	06 32	07 43	09 00	10 21	
	05	255	51.6	21.5	208	18.6	12.2	17	25.4	3.8	54.5	62	////	01 15	02 47	06 48	07 56	09 10	10 27	
	06	270	51.5	N20	21.9	222	49.8	12.2	N17	21.6	3.9	54.5	60	////	01 54	03 05	07 01	08 07	09 18	10 33
	07	285	51.5	22.4	237	21.0	12.3	17	17.7	3.9	54.6	N 58	////	02 20	03 21	07 12	08 17	09 26	10 38	
	08	300	51.4	22.9	251	52.3	12.2	17	13.8	4.1	54.6	56	01 08	02 41	03 34	07 22	08 25	09 32	10 43	
	09	315	51.4	23.4	266	23.5	12.2	17	09.7	4.1	54.6	54	01 44	02 57	03 45	07 31	08 32	09 38	10 47	
	10	330	51.3	23.9	280	54.7	12.3	17	05.6	4.2	54.6	52	02 08	03 11	03 55	07 39	08 39	09 43	10 50	
	11	345	51.3	24.4	295	26.0	12.2	17	01.4	4.3	54.6	50	02 27	03 23	04 04	07 46	08 45	09 48	10 53	
	12	0	51.2	N20	24.9	309	57.2	12.3	N16	57.1	4.4	54.6	45	03 03	03 48	04 23	08 01	08 58	09 58	11 01
	13	15	51.2	25.4	324	28.5	12.2	16	52.7	4.5	54.7	N 40	03 28	04 07	04 38	08 13	09 09	10 07	11 06	
	14	30	51.1	25.9	338	59.7	12.3	16	48.2	4.5	54.7	35	03 48	04 23	04 51	08 24	09 18	10 14	11 12	
	15	45	51.1	26.4	353	31.0	12.3	16	43.7	4.6	54.7	30	04 04	04 36	05 02	08 33	09 26	10 20	11 16	
	16	60	51.0	26.9	8	02.3	12.3	16	39.1	4.7	54.7	20	04 29	04 57	05 21	08 49	09 40	10 31	11 24	
	17	75	51.0	27.3	22	33.6	12.3	16	34.4	4.8	54.7	N 10	04 49	05 15	05 38	09 02	09 51	10 41	11 31	
	18	90	50.9	N20	27.8	37	04.9	12.3	N16	29.6	4.9	54.7	0	05 05	05 31	05 53	09 15	10 03	10 50	11 37
	19	105	50.9	28.3	51	36.2	12.3	16	24.7	4.9	54.8	S 10	05 20	05 46	06 08	09 28	10 14	10 59	11 43	
	20	120	50.9	28.8	66	07.5	12.3	16	19.8	5.0	54.8	20	05 34	06 01	06 24	09 42	10 26	11 08	11 50	
	21	135	50.8	29.3	80	38.8	12.4	16	14.8	5.1	54.8	30	05 48	06 17	06 42	09 58	10 39	11 19	11 58	
	22	150	50.8	29.8	95	10.2	12.3	16	09.7	5.2	54.8	35	05 55	06 26	06 53	10 07	10 47	11 26	12 02	
23	165	50.7	30.3	109	41.5	12.4	16	04.5	5.3	54.8	40	06 02	06 36	07 05	10 17	10 56	11 33	12 07		
23	00	180	50.7	N20	30.7	124	12.9	12.3	N15	59.2	5.3	54.9	45	06 11	06 47	07 19	10 29	11 07	11 41	12 13
01	195	50.6	31.2	138	44.2	12.4	15	53.9	5.4	54.9	S 50	06 20	07 00	07 37	10 44	11 19	11 51	12 20		
02	210	50.6	31.7	153	15.6	12.4	15	48.5	5.5	54.9	52	06 24	07 06	07 45	10 51	11 25	11 56	12 23		
03	225	50.5	32.2	167	47.0	12.3	15	43.0	5.5	54.9	54	06 29	07 13	07 54	10 59	11 32	12 01	12 26		
04	240	50.4	32.7	182	18.3	12.4	15	37.5	5.7	54.9	56	06 33	07 20	08 04	11 07	11 39	12 06	12 30		
05	255	50.4	33.1	196	49.7	12.4	15	31.8	5.7	55.0	58	06 38	07 28	08 16	11 17	11 47	12 12	12 35		
06	270	50.3	N20	33.6	211	21.1	12.4	N15	26.1	5.8	55.0	S 60	06 44	07 38	08 30	11 28	11 56	12 19	12 39	
07	285	50.3	34.1	225	52.5	12.4	15	20.3	5.8	55.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna					
08	300	50.2	34.6	240	23.9	12.5	15	14.5	6.0	55.0	Civil	Náut.	22	23	24	25				
09	315	50.2	35.1	254	55.4	12.4	15	08.5	6.0	55.0	N 72	□	□	□	02 06	01 47	01 37	01 29		
10	330	50.1	35.5	269	26.8	12.4	15	02.5	6.1	55.1	N 70	□	□	□	01 01	01 09	01 13	01 14		
11	345	50.1	36.0	283	58.2	12.5	14	56.4	6.2	55.1	68	23 07	////	////	00 25	00 43	00 54	01 01		
12	0	50.0	N20	36.5	298	29.7	12.4	N14	50.2	6.2	55.1	66	22 06	////	////	24 22	00 22	00 39	00 51	
13	15	50.0	37.0	313	01.1	12.5	14	44.0	6.3	55.1	64	21 33	////	////	24 06	00 06	00 26	00 42		
14	30	49.9	37.4	327	32.6	12.4	14	37.7	6.4	55.1	62	21 09	22 43	////	23 52	24 15	00 15	00 34		
15	45	49.9	37.9	342	04.0	12.5	14	31.3	6.4	55.2	60	20 50	22 02	////	23 41	24 06	00 06	00 28		
16	60	49.8	38.4	356	35.5	12.5	14	24.9	6.6	55.2	N 58	20 34	21 35	////	23 31	23 58	24 22	00 22		
17	75	49.8	38.9	11	07.0	12.5	14	18.3	6.6	55.2	56	20 21	21 14	22 50	23 22	23 51	24 17	00 17		
18	90	49.7	N20	39.3	25	38.5	12.4	N14	11.7	6.6	55.2	54	20 09	20 58	22 12	23 14	23 45	24 12	00 12	
19	105	49.7	39.8	40	09.9	12.5	14	05.1	6.8	55.3	52	19 59	20 43	21 47	23 07	23 39	24 08	00 08		
20	120	49.6	40.3	54	41.4	12.5	13	58.3	6.8	55.3	50	19 50	20 31	21 28	23 01	23 34	24 04	00 04		
21	135	49.6	40.8	69	12.9	12.5	13	51.5	6.9	55.3	45	19 31	20 06	20 52	22 47	23 23	23 56	24 27		
22	150	49.5	41.2	83	44.4	12.6	13	44.6	6.9	55.3	N 40	19 15	19 47	20 26	22 36	23 14	23 49	24 22		
23	165	49.4	41.7	98	16.0	12.5	13	37.7	7.0	55.4	35	19 02	19 31	20 06	22 26	23 06	23 43	24 19		
24	00	180	49.4	N20	42.2	112	47.5	12.5	N13	30.7	7.1	55.4	30	18 51	19 18	19 50	22 18	22 59	23 38	24 15
01	195	49.3	42.6	127	19.0	12.5	13	23.6	7.2	55.4	20	18 32	18 56	19 24	22 03	22 46	23 28	24 10		
02	210	49.3	43.1	141	50.5	12.6	13	16.4	7.2	55.4	N 10	18 16	18 38	19 05	21 50	22 36	23 20	24 04		
03	225	49.2	43.6	156	22.1	12.5	13	09.2	7.3	55.5	0	18 00	18 22	18 48	21 38	22 25	23 12	24 00		
04	240	49.2	44.0	170	53.6	12.5	13	01.9	7.4	55.5	S 10	17 45	18 07	18 33	21 26	22 15	23 05	23 55		
05	255	49.1	44.5	185	25.1	12.6	12	54.5	7.4	55.5	20	17 29	17 52	18 19	21 13	22 04	22 56	23 49		
06	270	49.0	N20	45.0	199	56.7	12.5	N12	47.1	7.5	55.5	30	17 11	17 36	18 06	20 58	21 52	22 47	23 43	
07	285	49.0	45.4	214	28.2	12.6	12	39.6	7.6	55.6	35	17 00	17 27	17 58	20 49	21 44	22 41	23 40		
08	300	48.9	45.9	228	59.8	12.5	12	32.0	7.6	55.6	40	16 48	17 17	17 51	20 39	21 36	22 35	23 36		
09	315	48.9	46.4	243	31.3	12.6	12	24.4	7.7	55.6	45	16 34	17 06	17 42	20 28	21 26	22 28	23 31		
10	330	48.8	46.8	258	02.9	12.5	12	16.7	7.7	55.6	S 50	16 16	16 53	17 33	20 14	21 15	22 19	23 26		
11	345	48.8	47.3	272	34.4	12.6	12	09.0	7.9	55.7	52	16 08	16 47	17 29	20 07	21 09	22 15	23 23		
12	0	48.7	N20	47.7	287	06.0	12.6	N12	01.1	7.9	55.7	54	15 59	16 40	17 24	20 00	21 03	22 10	23 20	
13	15	48.6	48.2	301	37.6	12.5	11	53.2	7.9	55.7	56	15 48	16 33	17 20	19 51	20 56	22 05	23 17		
14	30	48.6	48.7	316	09.1	12.6	11	45.3	8.0	55.7	58	15 37	16 24	17 14	19 42	20 49	22 00	23 14		
15	45	48.5	49.1	330	40.7	12.5	11	37.3	8.1	55.8	S 60	15 23	16 15	17 09	19 31	20 40	21 53	23 10		
16	60	48.5	49.6	345	12.2	12.6	11	2												

T. M. G.	ARIES			VENUS -4.1			MARTE +1.3			JUPITER -1.5			SATURNO +0.6			ESTRELLAS		
	A.H.G.			A.H.G.			A.H.G.			A.H.G.			A.H.G.			Nombre	A. H. S.	
	d	h	'	Dec.	'	Dec.	'	Dec.	'	Dec.	'	Dec.	'	Dec.	'		Dec.	
M I E R C O L E S	25	00	242 27.9	223 27.0 N 6 31.6	222 43.7 N 7 07.3	172 43.0 N21 37.6	108 06.7 N18 14.5	Acamar	315 39.4 S40 23.7									
	01	257 30.3	238 27.6 32.0	237 44.4 08.0	187 44.8 37.7	123 08.9 14.4	Achernar	335 47.5 S57 20.9										
	02	272 32.8	253 28.3 32.5	252 45.1 08.7	202 46.7 37.8	138 11.2 14.4	Acrux	173 39.2 S62 58.8										
	03	287 35.3	268 28.9 .. 32.9	267 45.8 .. 09.4	217 48.5 .. 37.9	153 13.5 .. 14.3	Adhara	255 34.2 S28 56.7										
	04	302 37.7	283 29.6 33.4	282 46.5 10.2	232 50.4 37.9	168 15.8 14.3	Aldebaran	291 20.9 N16 27.7										
	05	317 40.2	298 30.2 33.8	297 47.2 10.9	247 52.2 38.0	183 18.1 14.2												
	06	332 42.7	313 30.9 N 6 34.3	312 47.9 N 7 11.6	262 54.1 N21 38.1	198 20.4 N18 14.2	Alioth	166 44.2 N56 05.1										
	07	347 45.1	328 31.5 34.8	327 48.6 12.3	277 55.9 38.2	213 22.6 14.1	Alkaid	153 19.9 N49 25.7										
	08	2 47.6	343 32.2 35.2	342 49.3 13.0	292 57.8 38.3	228 24.9 14.1	Al Na'ir	28 17.8 S47 04.0										
	09	17 50.1	358 32.8 .. 35.7	357 50.0 .. 13.8	307 59.6 .. 38.4	243 27.2 .. 14.0	Alnilam	276 14.3 S 1 13.1										
	10	32 52.5	13 33.4 36.1	12 50.7 14.5	323 01.5 38.5	258 29.5 14.0	Alphard	218 22.8 S 8 33.8										
	11	47 55.0	28 34.1 36.6	27 51.5 15.2	338 03.3 38.5	273 31.8 13.9												
	12	62 57.4	43 34.7 N 6 37.1	42 52.2 N 7 15.9	353 05.1 N21 38.6	288 34.0 N18 13.9	Alphecca	126 33.7 N26 47.5										
	13	77 59.9	58 35.4 37.5	57 52.9 16.6	8 07.0 38.7	303 36.3 13.8	Alpheratz	358 11.8 N28 57.8										
	14	93 02.4	73 36.0 38.0	72 53.6 17.3	23 08.8 38.8	318 38.6 13.8	Altair	62 34.5 N 8 48.5										
	15	108 04.8	88 36.6 .. 38.5	87 54.3 .. 18.1	38 10.7 .. 38.9	333 40.9 .. 13.7	Ankaa	353 42.7 S42 25.5										
	16	123 07.3	103 37.3 38.9	102 55.0 18.8	53 12.5 39.0	348 43.1 13.7	Antares	112 59.2 S26 22.9										
	17	138 09.8	118 37.9 39.4	117 55.7 19.5	68 14.4 39.0	3 45.4 13.6												
	18	153 12.2	133 38.5 N 6 39.9	132 56.4 N 7 20.2	83 16.2 N21 39.1	18 47.7 N18 13.6	Arcturus	146 20.2 N19 18.0										
	19	168 14.7	148 39.2 40.4	147 57.1 20.9	98 18.1 39.2	33 50.0 13.5	Atria	108 24.9 S68 59.2										
	20	183 17.2	163 39.8 40.8	162 57.8 21.6	113 19.9 39.3	48 52.3 13.5	Avior	234 29.4 S59 26.6										
	21	198 19.6	178 40.4 .. 41.3	177 58.5 .. 22.4	128 21.8 .. 39.4	63 54.5 .. 13.4	Bellatrix	279 01.5 N 6 19.6										
	22	213 22.1	193 41.1 41.8	192 59.2 23.1	143 23.6 39.5	78 56.8 13.4	Betelgeuse	271 31.0 N 7 24.1										
23	228 24.6	208 41.7 42.2	207 59.9 23.8	158 25.5 39.5	93 59.1 13.3													
J U E V E S	26	00	243 27.0	223 42.3 N 6 42.7	223 00.6 N 7 24.5	173 27.3 N21 39.6	109 01.4 N18 13.3	Canopus	264 08.7 S52 41.3									
	01	258 29.5	238 42.9 43.2	238 01.3 25.2	188 29.1 39.7	124 03.7 13.2	Capella	281 15.1 N45 58.5										
	02	273 31.9	253 43.5 43.7	253 02.0 25.9	203 31.0 39.8	139 05.9 13.2	Deneb	49 49.7 N45 11.8										
	03	288 34.4	268 44.2 .. 44.2	268 02.7 .. 26.7	218 32.8 .. 39.9	154 08.2 .. 13.1	Denebola	183 01.2 N14 41.9										
	04	303 36.9	283 44.8 44.6	283 03.4 27.4	233 34.7 39.9	169 10.5 13.1	Diphda	349 23.3 S18 06.6										
	05	318 39.3	298 45.4 45.1	298 04.1 28.1	248 36.5 40.0	184 12.8 13.0												
	06	333 41.8	313 46.0 N 6 45.6	313 04.8 N 7 28.8	263 38.4 N21 40.1	199 15.0 N18 13.0	Dubhe	194 24.9 N61 52.6										
	07	348 44.3	328 46.6 46.1	328 05.5 29.5	278 40.2 40.2	214 17.3 12.9	Elnath	278 47.3 N28 35.2										
	08	3 46.7	343 47.3 46.5	343 06.3 30.2	293 42.1 40.3	229 19.6 12.8	Eltanin	90 58.3 N51 29.5										
	09	18 49.2	358 47.9 .. 47.0	358 07.0 .. 30.9	308 43.9 .. 40.4	244 21.9 .. 12.8	Enif	34 13.7 N 9 46.3										
	10	33 51.7	13 48.5 47.5	13 07.7 31.7	323 45.8 40.4	259 24.1 12.7	Fomalhaut	15 54.0 S29 44.3										
	11	48 54.1	28 49.1 48.0	28 08.4 32.4	338 47.6 40.5	274 26.4 12.7												
	12	63 56.6	43 49.7 N 6 48.5	43 09.1 N 7 33.1	353 49.5 N21 40.6	289 28.7 N18 12.6	Gacrux	172 30.8 S56 59.5										
	13	78 59.1	58 50.3 49.0	58 09.8 33.8	8 51.3 40.7	304 31.0 12.6	Gienah	176 20.1 S17 25.2										
	14	94 01.5	73 50.9 49.5	73 10.5 34.5	23 53.1 40.8	319 33.2 12.5	Hadar	149 25.9 S60 16.0										
	15	109 04.0	88 51.5 .. 49.9	88 11.2 .. 35.2	38 55.0 .. 40.9	334 35.5 .. 12.5	Hamal	328 31.7 N23 21.2										
	16	124 06.4	103 52.1 50.4	103 11.9 35.9	53 56.8 40.9	349 37.8 12.4	Kaus Aust.	84 19.5 S34 23.6										
	17	139 08.9	118 52.7 50.9	118 12.6 36.7	68 58.7 41.0	4 40.1 12.4												
	18	154 11.4	133 53.3 N 6 51.4	133 13.3 N 7 37.4	84 00.5 N21 41.1	19 42.4 N18 12.3	Kochab	137 17.9 N74 15.1										
	19	169 13.8	148 53.9 51.9	148 14.0 38.1	99 02.4 41.2	34 44.6 12.3	Markab	14 05.4 N15 04.9										
	20	184 16.3	163 54.5 52.4	163 14.7 38.8	114 04.2 41.3	49 46.9 12.2	Menkar	314 43.8 N 4 00.0										
	21	199 18.8	178 55.1 .. 52.9	178 15.4 .. 39.5	129 06.1 .. 41.4	64 49.2 .. 12.2	Menkent	148 39.3 S36 15.7										
	22	214 21.2	193 55.7 53.4	193 16.1 40.2	144 07.9 41.4	79 51.5 12.1	Miaplacidus	221 45.6 S69 37.9										
23	229 23.7	208 56.3 53.9	208 16.8 40.9	159 09.8 41.5	94 53.7 12.1													
V I E N E S	27	00	244 26.2	223 56.9 N 6 54.4	223 17.5 N 7 41.6	174 11.6 N21 41.6	109 56.0 N18 12.0	Mirfak	309 19.8 N49 46.7									
	01	259 28.6	238 57.5 54.9	238 18.2 42.4	189 13.4 41.7	124 58.3 12.0	Nunki	76 31.7 S26 19.4										
	02	274 31.1	253 58.1 55.3	253 18.9 43.1	204 15.3 41.8	140 00.5 11.9	Peacock	54 01.7 S56 48.2										
	03	289 33.5	268 58.7 .. 55.8	268 19.6 .. 43.8	219 17.1 .. 41.8	155 02.8 .. 11.8	Pollux	244 01.2 N28 04.8										
	04	304 36.0	283 59.3 56.3	283 20.3 44.5	234 19.0 41.9	170 05.1 11.8	Procyon	245 28.4 N 5 16.9										
	05	319 38.5	298 59.8 56.8	298 21.0 45.2	249 20.8 42.0	185 07.4 11.7												
	06	334 40.9	314 00.4 N 6 57.3	313 21.7 N 7 45.9	264 22.7 N21 42.1	200 09.6 N18 11.7	Rasalhague	96 31.3 N12 34.6										
	07	349 43.4	329 01.0 57.8	328 22.5 46.6	279 24.5 42.2	215 11.9 11.6	Regulus	208 12.4 N12 04.6										
	08	4 45.9	344 01.6 58.3	343 23.2 47.3	294 26.4 42.3	230 14.2 11.6	Rigel	281 38.5 S 8 13.8										
	09	19 48.3	359 02.2 .. 58.8	358 23.9 .. 48.0	309 28.2 .. 42.3	245 16.5 .. 11.5	Rigil Kent.	140 28.2 S60 44.6										
	10	34 50.8	14 02.8 59.3	13 24.6 48.8	324 30.1 42.4	260 18.7 11.5	Sabik	102 43.4 S15 41.8										
	11	49 53.3	29 03.3 6 59.8	28 25.3 49.5	339 31.9 42.5	275 21.0 11.4												
	12	64 55.7	44 03.9 N 7 00.3	43 26.0 N 7 50.2	354 33.7 N21 42.6	290 23.3 N18 11.4	Schedar	350 11.8 N56 24.6										
	13	79 58.2	59 04.5 00.8	58 26.7 50.9	9 35.6 42.7	305 25.6 11.3	Shaula	96 58.4 S37 05.2										
	14	95 00.7	74 05.1 01.4	73 27.4 51.6	24 37.4 42.7	320 27.8 11.3	Sirius	258 58.0 S16 41.3										
	15	110 03.1	89 05.6 .. 01.9	88 28.1 .. 52.3	39 39.3 .. 42.8	335 30.1 .. 11.2	Spica	158 59.7 S11 02.7										
	16	125 05.6	104 06.2 02.4	103 28.8 53.0	54 41.1 42.9	350 32.4 11.2	Suhail	223 12.5 S43 20.8										
	17	140 08.0	119 06.8 02.9	118 29.5 53.7	69 43.0 43.0	5 34.6 11.1												
	18	155 10.5	134 07.4 N 7 03.4	133 30.2 N 7 54.4	84 44.8 N21 43.1	20 36.9 N18 11.1	Vega	80 57.0 N38 45.7										
	19	170 13.0	149 07.9 03.9	148 30.9 55.1	99 46.7 43.2	35 39.2 11.0	Zuben'ubi	137 35.2 S15 56.9										
	20	185 15.4	164 08.5 04.4	163 31.6 55.8	114 48.5 43.2	50 41.5 10.9												
	21	200 17.9	179 09.1 .. 04.9	178 32.3 .. 56.6	129 50.4 .. 43.3	65 43.7 .. 10.9												
	22	215 20.4	194 09.6 05.4	193 33.0 57.3	144 52.2 43.4	80 46.0 10.8	Venus	340 15.3 9 05										
23	230 22.8	209 10.2 05.9	208 33.7 58.0	159 54.0 43.5	95 48.3 10.8	Marte	339 33.6 9 08											
						Júpiter	290 00.3 12 25											
						Saturno	225 34.4 16 41											
Pas. Mer.	7 44.9	v 0.6 d 0.5	v 0.7 d 0.7	v 1.8 d 0.1	v 2.3 d 0.1													

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d	P.H.	Naut.		Civil	25		26	27	28	
M I E R C O L E S	25 00	180 48.0	N2C 53.2	101 24.7	12.5	N10 22.4	8.6	56.0	N 72	□	□	□	09 38	11 24	13 12	15 04
	01	195 47.9	53.7	115 56.2	12.6	10 13.8	8.7	56.1	N 70	□	□	□	09 53	11 31	13 12	14 57
	02	210 47.9	54.1	130 27.8	12.5	10 05.1	8.7	56.1	68	////	////	00 20	10 04	11 36	13 12	14 52
	03	225 47.8	54.6	144 59.3	12.5	9 56.4	8.8	56.1	66	////	////	01 38	10 13	11 41	13 12	14 47
	04	240 47.8	55.0	159 30.8	12.6	9 47.6	8.8	56.2	64	////	////	02 14	10 21	11 45	13 12	14 43
	05	255 47.7	55.5	174 02.4	12.5	9 38.8	8.9	56.2	62	////	00 59	02 40	10 27	11 48	13 12	14 40
	06	270 47.6	N2C 55.9	188 33.9	12.5	N 9 29.9	9.0	56.2	60	////	01 45	02 59	10 33	11 51	13 12	14 37
	07	285 47.6	56.4	203 05.4	12.5	9 20.9	9.0	56.3	N 58	////	02 13	03 16	10 38	11 54	13 12	14 34
	08	300 47.5	56.8	217 36.9	12.5	9 11.9	9.0	56.3	56	00 53	02 35	03 30	10 43	11 56	13 12	14 32
	09	315 47.4	57.3	232 08.4	12.5	9 02.9	9.1	56.3	54	01 35	02 52	03 41	10 47	11 58	13 12	14 30
	10	330 47.4	57.7	246 39.9	12.5	8 53.8	9.2	56.3	52	02 02	03 07	03 52	10 50	12 00	13 12	14 28
	11	345 47.3	58.2	261 11.4	12.4	8 44.6	9.2	56.4	50	02 22	03 20	04 01	10 53	12 02	13 12	14 26
	12	0 47.3	N2C 58.6	275 42.8	12.5	N 8 35.4	9.3	56.4	45	02 59	03 45	04 21	11 01	12 05	13 12	14 22
	13	15 47.2	59.1	290 14.3	12.5	8 26.1	9.3	56.4	N 40	03 25	04 05	04 36	11 06	12 08	13 13	14 19
	14	30 47.1	2C 59.5	304 45.8	12.4	8 16.8	9.4	56.5	35	03 46	04 21	04 50	11 12	12 11	13 13	14 16
	15	45 47.1	21 00.0	319 17.2	12.4	8 07.4	9.4	56.5	30	04 02	04 34	05 01	11 16	12 13	13 13	14 14
	16	60 47.0	00.4	333 48.6	12.4	7 58.0	9.5	56.5	20	04 28	04 57	05 21	11 24	12 17	13 13	14 10
	17	75 46.9	00.8	348 20.0	12.5	7 48.5	9.5	56.6	N 10	04 48	05 15	05 38	11 31	12 21	13 13	14 07
	18	90 46.9	N21 01.3	2 51.5	12.3	N 7 39.0	9.6	56.6	0	05 05	05 31	05 53	11 37	12 24	13 13	14 03
	19	105 46.8	01.7	17 22.8	12.4	7 29.4	9.6	56.6	S 10	05 21	05 46	06 09	11 43	12 28	13 13	14 00
	20	120 46.7	02.2	31 54.2	12.4	7 19.8	9.6	56.7	20	05 35	06 02	06 25	11 50	12 31	13 13	13 57
	21	135 46.7	02.6	46 25.6	12.3	7 10.2	9.7	56.7	30	05 49	06 18	06 44	11 58	12 35	13 13	13 53
	22	150 46.6	03.0	60 56.9	12.4	7 00.5	9.8	56.7	35	05 57	06 28	06 55	12 02	12 38	13 14	13 51
23	165 46.6	03.5	75 28.3	12.3	6 50.7	9.8	56.8	40	06 04	06 38	07 08	12 07	12 40	13 14	13 48	
26 00	180 46.5	N21 03.9	89 59.6	12.3	N 6 40.9	9.8	56.8	45	06 13	06 50	07 22	12 13	12 43	13 14	13 46	
01	195 46.4	04.4	104 30.9	12.3	6 31.1	9.9	56.8	S 50	06 23	07 03	07 40	12 20	12 47	13 14	13 42	
02	210 46.4	04.8	119 02.2	12.2	6 21.2	10.0	56.9	52	06 27	07 10	07 49	12 23	12 49	13 14	13 41	
03	225 46.3	05.2	133 33.4	12.3	6 11.2	9.9	56.9	54	06 32	07 17	07 58	12 26	12 51	13 14	13 39	
04	240 46.2	05.7	148 04.7	12.2	6 01.3	10.0	57.0	56	06 37	07 24	08 09	12 30	12 53	13 14	13 37	
05	255 46.2	06.1	162 35.9	12.2	5 51.3	10.1	57.0	58	06 42	07 33	08 21	12 35	12 55	13 15	13 35	
06	270 46.1	N21 06.5	177 07.1	12.2	N 5 41.2	10.1	57.0	S 60	06 48	07 43	08 36	12 39	12 57	13 15	13 33	
07	285 46.0	07.0	191 38.3	12.2	5 31.1	10.1	57.1	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	25	26	27	28	
08	300 46.0	07.4	206 09.5	12.1	5 21.0	10.2	57.1	N 72	h m	h m	h m	h m	h m	h m	h m	
09	315 45.9	07.8	220 40.6	12.1	5 10.8	10.2	57.1	N 70	□	□	□	01 29	01 22	01 16	01 09	
10	330 45.8	08.3	235 11.7	12.1	5 00.6	10.3	57.2	68	□	□	□	01 14	01 14	01 13	01 12	
11	345 45.8	08.7	249 42.8	12.1	4 50.3	10.3	57.2	66	22 19	////	////	01 01	01 06	01 11	01 15	
12	0 45.7	N21 09.1	264 13.9	12.0	N 4 40.0	10.3	57.2	64	21 42	////	////	00 51	01 00	01 09	01 17	
13	15 45.6	09.6	278 44.9	12.1	4 29.7	10.4	57.3	62	21 16	23 00	////	00 42	00 55	01 07	01 18	
14	30 45.6	10.0	293 16.0	12.0	4 19.3	10.4	57.3	60	20 56	22 12	////	00 34	00 50	01 05	01 20	
15	45 45.5	10.4	307 47.0	11.9	4 08.9	10.4	57.3	N 58	20 39	21 43	////	00 28	00 46	01 04	01 21	
16	60 45.4	10.9	322 17.9	12.0	3 58.5	10.4	57.4	56	20 25	21 21	23 06	00 22	00 43	01 03	01 22	
17	75 45.3	11.3	336 48.9	11.9	3 48.1	10.5	57.4	54	20 13	21 03	22 21	00 17	00 40	01 02	01 23	
18	90 45.3	N21 11.7	351 19.8	11.9	N 3 37.6	10.6	57.5	52	20 03	21 03	22 21	00 12	00 37	01 01	01 24	
19	105 45.2	12.1	5 50.7	11.8	3 27.0	10.5	57.5	50	19 53	20 35	21 33	00 08	00 34	01 00	01 25	
20	120 45.1	12.6	20 21.5	11.8	3 16.5	10.6	57.5	50	19 53	20 35	21 33	00 04	00 32	00 59	01 26	
21	135 45.1	13.0	34 52.3	11.8	3 05.9	10.7	57.6	45	19 34	20 10	20 56	24 27	00 27	00 57	01 28	
22	150 45.0	13.4	49 23.1	11.8	2 55.2	10.6	57.6	N 40	19 18	19 50	20 29	24 22	00 22	00 56	01 29	
23	165 44.9	13.8	63 53.9	11.7	2 44.6	10.7	57.6	35	19 05	19 33	20 09	24 19	00 19	00 54	01 30	
27 00	180 44.9	N21 14.3	78 24.6	11.7	N 2 33.9	10.7	57.7	30	18 53	19 20	19 52	24 15	00 15	00 53	01 32	
01	195 44.8	14.7	92 55.3	11.6	2 23.2	10.7	57.7	20	18 33	18 57	19 26	24 10	00 10	00 51	01 33	
02	210 44.7	15.1	107 25.9	11.7	2 12.5	10.8	57.8	N 10	18 16	18 39	19 06	24 04	00 04	00 49	01 35	
03	225 44.6	15.5	121 56.6	11.6	2 01.7	10.8	57.8	0	18 01	18 23	18 49	24 00	00 00	00 47	01 37	
04	240 44.6	16.0	136 27.2	11.5	1 50.9	10.8	57.8	S 10	17 45	18 07	18 33	23 55	24 46	00 46	01 38	
05	255 44.5	16.4	150 57.7	11.5	1 40.1	10.8	57.9	20	17 28	17 52	18 19	23 49	24 44	00 44	01 40	
06	270 44.4	N21 16.8	165 28.2	11.5	N 1 29.3	10.9	57.9	30	17 09	17 35	18 05	23 43	24 41	00 41	01 42	
07	285 44.4	17.2	179 58.7	11.4	1 18.4	10.8	58.0	35	16 59	17 26	17 57	23 40	24 40	00 40	01 43	
08	300 44.3	17.6	194 29.1	11.4	1 07.6	10.9	58.0	40	16 46	17 16	17 49	23 36	24 39	00 39	01 44	
09	315 44.2	18.1	208 59.5	11.4	0 56.7	11.0	58.0	45	16 31	17 04	17 40	23 31	24 37	00 37	01 45	
10	330 44.1	18.5	223 29.9	11.3	0 45.7	10.9	58.1	S 50	16 13	16 50	17 31	23 26	24 35	00 35	01 47	
11	345 44.1	18.9	238 00.2	11.3	0 34.8	11.0	58.1	52	16 05	16 44	17 26	23 23	24 34	00 34	01 48	
12	0 44.0	N21 19.3	252 30.5	11.2	N 0 23.8	10.9	58.1	54	15 55	16 37	17 21	23 20	24 33	00 33	01 48	
13	15 43.9	19.7	267 00.7	11.2	0 12.9	11.0	58.2	56	15 44	16 29	17 16	23 17	24 32	00 32	01 49	
14	30 43.9	20.1	281 30.9	11.1	N 0 01.9	11.0	58.2	58	15 32	16 20	17 11	23 14	24 30	00 30	01 50	
15	45 43.8	20.5	296 01.0	11.1	S 0 09.1	11.0	58.3	S 60	15 18	16 11	17 05	23 10	24 29	00 29	01 52	
16	60 43.7	21.0	310 31.1	11.1	0 20.1	11.1	58.3	Lat.	SOL E.T. (+)	Pas. Mer.	LUNA Pas. Mer. Edad. Fase					
17	75 43.6	21.4	325 01.2	11.0	0 31.2	11.0	58.3	00 ^h	m s	h m	h m	h m	h m	d		
18	90 43.6	N21 21.8	339 31.2	10.9	S 0 42.2	11.1	58.4	12 ^h	m s	h m	h m	h m	h m			
19	105 43.5	22.2	354 01.1	10.9	0 53.3	11.0	58.4	25	03 12	03 09	11 57	17 48	05 25	07		

T. M. G.	ARIES		VENUS -4.1			MARTE +1.3			JUPITER -1.5			SATURNO +0.6			ESTRELLAS									
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.										
28	00	245 25.3	224 10.7 N 7	06.4	223 34.4 N 7	58.7	174 55.9 N21	43.6	110 50.5 N18	10.7	Acamar	315 39.4 S40	23.7											
	01	260 27.8	239 11.3	07.0	238 35.1	7 59.4	189 57.7	43.6	125 52.8	10.7	Achernar	335 47.5 S57	20.9											
	02	275 30.2	254 11.9	07.5	253 35.8	8 00.1	204 59.6	43.7	140 55.1	10.6	Acruz	173 39.3 S62	58.8											
	03	290 32.7	269 12.4	08.0	268 36.5	00.8	220 01.4	43.8	155 57.4	10.6	Adhara	255 34.2 S28	56.7											
	04	305 35.2	284 13.0	08.5	283 37.2	01.5	235 03.3	43.9	170 59.6	10.5	Aldebaran	291 20.9 N16	27.7											
	05	320 37.6	299 13.5	09.0	298 37.9	02.2	250 05.1	44.0	186 01.9	10.5														
	06	335 40.1	314 14.1 N 7	09.5	313 38.6 N 8	02.9	265 07.0 N21	44.0	201 04.2 N18	10.4	Alioth	166 44.2 N56	05.1											
	07	350 42.5	329 14.7	10.0	328 39.3	03.6	280 08.8	44.1	216 06.4	10.4	Alkaid	153 20.0 N49	25.7											
	08	5 45.0	344 15.2	10.6	343 40.0	04.3	295 10.6	44.2	231 08.7	10.3	Al Na'ir	28 17.7 S47	04.0											
	S 09	20 47.5	359 15.8	11.1	358 40.8	05.1	310 12.5	44.3	246 11.0	10.2	Alnilam	276 14.3 S 1	13.1											
	A 10	35 49.9	14 16.3	11.6	13 41.5	05.8	325 14.3	44.4	261 13.2	10.2	Alphard	218 22.9 S 8	33.8											
	B 11	50 52.4	29 16.9	12.1	28 42.2	06.5	340 16.2	44.4	276 15.5	10.1														
	A 12	65 54.9	44 17.4 N 7	12.6	43 42.9 N 8	07.2	355 18.0 N21	44.5	291 17.8 N18	10.1	Alphecca	126 33.7 N26	47.5											
	D 13	80 57.3	59 18.0	13.2	58 43.6	07.9	10 19.9	44.6	306 20.1	10.0	Alpheratz	358 11.7 N28	57.8											
	O 14	95 59.8	74 18.5	13.7	73 44.3	08.6	25 21.7	44.7	321 22.3	10.0	Altair	62 34.5 N 8	48.5											
	15	111 02.3	89 19.0	14.2	88 45.0	09.3	40 23.6	44.8	336 24.6	09.9	Ankaa	353 42.7 S42	25.5											
	16	126 04.7	104 19.6	14.7	103 45.7	10.0	55 25.4	44.8	351 26.9	09.9	Antares	112 59.2 S26	22.9											
	17	141 07.2	119 20.1	15.3	118 46.4	10.7	70 27.2	44.9	6 29.1	09.8														
	18	156 09.6	134 20.7 N 7	15.8	133 47.1 N 8	11.4	85 29.1 N21	45.0	21 31.4 N18	09.8	Arcturus	146 20.2 N19	18.0											
	19	171 12.1	149 21.2	16.3	148 47.8	12.1	100 30.9	45.1	36 33.7	09.7	Atria	108 24.9 S68	59.2											
	20	186 14.6	164 21.8	16.8	163 48.5	12.8	115 32.8	45.2	51 35.9	09.6	Avior	234 29.4 S59	26.6											
	21	201 17.0	179 22.3	17.4	178 49.2	13.5	130 34.6	45.3	66 38.2	09.6	Bellatrix	279 01.5 N 6	19.6											
	22	216 19.5	194 22.8	17.9	193 49.9	14.2	145 36.5	45.3	81 40.5	09.5	Betelgeuse	271 31.0 N 7	24.1											
23	231 22.0	209 23.4	18.4	208 50.6	14.9	160 38.3	45.4	96 42.7	09.5															
29	00	246 24.4	224 23.9 N 7	18.9	223 51.3 N 8	15.6	175 40.2 N21	45.5	111 45.0 N18	09.4	Canopus	264 08.7 S52	41.3											
	01	261 26.9	239 24.4	19.5	238 52.0	16.3	190 42.0	45.6	126 47.3	09.4	Capella	281 15.1 N45	58.5											
	02	276 29.4	254 25.0	20.0	253 52.7	17.0	205 43.8	45.7	141 49.5	09.3	Deneb	49 49.7 N45	11.8											
	03	291 31.8	269 25.5	20.5	268 53.4	17.7	220 45.7	45.7	156 51.8	09.3	Denebola	183 01.2 N14	41.9											
	04	306 34.3	284 26.0	21.1	283 54.1	18.4	235 47.5	45.8	171 54.1	09.2	Diphda	349 23.3 S18	06.6											
	05	321 36.8	299 26.5	21.6	298 54.8	19.2	250 49.4	45.9	186 56.3	09.2														
	06	336 39.2	314 27.1 N 7	22.1	313 55.5 N 8	19.9	265 51.2 N21	46.0	201 58.6 N18	09.1	Dubhe	194 24.9 N61	52.6											
	07	351 41.7	329 27.6	22.7	328 56.2	20.6	280 53.1	46.1	217 00.9	09.0	Elnath	278 47.3 N28	35.2											
	08	6 44.1	344 28.1	23.2	343 56.9	21.3	295 54.9	46.1	232 03.1	09.0	Eltanin	90 58.3 N51	29.5											
	DOM 09	21 46.6	359 28.6	23.7	358 57.6	22.0	310 56.8	46.2	247 05.4	08.9	Enif	34 13.7 N 9	46.3											
	10	36 49.1	14 29.2	24.3	13 58.3	22.7	325 58.6	46.3	262 07.7	08.9	Fomalhaut	15 53.9 S29	44.3											
	11	51 51.5	29 29.7	24.8	28 59.0	23.4	341 00.4	46.4	277 09.9	08.8														
	12	66 54.0	44 30.2 N 7	25.3	43 59.7 N 8	24.1	356 02.3 N21	46.5	292 12.2 N18	08.8	Gacrux	172 30.8 S56	59.5											
	13	81 56.5	59 30.7	25.9	59 00.4	24.8	11 04.1	46.5	307 14.5	08.7	Gienah	176 20.1 S17	25.2											
	14	96 58.9	74 31.2	26.4	74 01.1	25.5	26 06.0	46.6	322 16.7	08.7	Hadar	149 25.9 S60	16.0											
	15	112 01.4	89 31.8	27.0	89 01.8	26.2	41 07.8	46.7	337 19.0	08.6	Hamal	328 31.7 N23	21.2											
	16	127 03.9	104 32.3	27.5	104 02.6	26.9	56 09.7	46.8	352 21.3	08.5	Kaus Aust.	84 19.5 S34	23.6											
	17	142 06.3	119 32.8	28.0	119 03.3	27.6	71 11.5	46.9	7 23.5	08.5														
	18	157 08.8	134 33.3 N 7	28.6	134 04.0 N 8	28.3	86 13.4 N21	46.9	22 25.8 N18	08.4	Kochab	137 18.0 N74	15.1											
	19	172 11.3	149 33.8	29.1	149 04.7	29.0	101 15.2	47.0	37 28.1	08.4	Markab	14 05.4 N15	04.9											
	20	187 13.7	164 34.3	29.7	164 05.4	29.7	116 17.0	47.1	52 30.3	08.3	Menkar	314 43.8 N 4	00.0											
	21	202 16.2	179 34.8	30.2	179 06.1	30.4	131 18.9	47.2	67 32.6	08.3	Menkent	148 39.3 S36	15.7											
	22	217 18.6	194 35.3	30.8	194 06.8	31.1	146 20.7	47.2	82 34.9	08.2	Miaplacidus	221 45.6 S69	37.9											
23	232 21.1	209 35.8	31.3	209 07.5	31.8	161 22.6	47.3	97 37.1	08.2															
30	00	247 23.6	224 36.4 N 7	31.9	224 08.2 N 8	32.5	176 24.4 N21	47.4	112 39.4 N18	08.1	Mirfak	309 19.7 N49	46.7											
	01	262 26.0	239 36.9	32.4	239 08.9	33.2	191 26.3	47.5	127 41.7	08.0	Nunki	76 31.6 S26	19.4											
	02	277 28.5	254 37.4	32.9	254 09.6	33.9	206 28.1	47.6	142 43.9	08.0	Peacock	54 01.6 S56	48.2											
	03	292 31.0	269 37.9	33.5	269 10.3	34.6	221 29.9	47.6	157 46.2	07.9	Pollux	244 01.2 N28	04.8											
	04	307 33.4	284 38.4	34.0	284 11.0	35.3	236 31.8	47.7	172 48.5	07.9	Procyon	245 28.4 N 5	16.9											
	05	322 35.9	299 38.9	34.6	299 11.7	36.0	251 33.6	47.8	187 50.7	07.8														
	06	337 38.4	314 39.4 N 7	35.1	314 12.4 N 8	36.7	266 35.5 N21	47.9	202 53.0 N18	07.8	Rasalhague	96 31.3 N12	34.6											
	07	352 40.8	329 39.9	35.7	329 13.1	37.4	281 37.3	48.0	217 55.2	07.7	Regulus	208 12.4 N12	04.6											
	08	7 43.3	344 40.4	36.2	344 13.8	38.1	296 39.2	48.0	232 57.5	07.7	Rigel	281 38.5 S 8	13.8											
	L 09	22 45.7	359 40.8	36.8	359 14.5	38.8	311 41.0	48.1	247 59.8	07.6	Rigel Kent.	140 28.2 S60	44.6											
	10	37 48.2	14 41.3	37.3	14 15.2	39.5	326 42.9	48.2	263 02.0	07.5	Sabik	102 43.3 S15	41.8											
	11	52 50.7	29 41.8	37.9	29 15.9	40.2	341 44.7	48.3	278 04.3	07.5														
	12	67 53.1	44 42.3 N 7	38.4	44 16.6 N 8	40.9	356 46.5 N21	48.4	293 06.6 N18	07.4	Schedar	350 11.8 N56	24.6											
	13	82 55.6	59 42.8	39.0	59 17.3	41.6	11 48.4	48.4	308 08.8	07.4	Shaula	96 58.4 S37	05.2											
	14	97 58.1	74 43.3	39.6	74 18.0	42.3	26 50.2	48.5	323 11.1	07.3	Sirius	258 58.0 S16	41.3											
	15	113 00.5	89 43.8	40.1	89 18.7	43.0	41 52.1	48.6	338 13.3	07.3	Spica	158 59.7 S11	02.7											
	16	128 03.0	104 44.3	40.7	104 19.4	43.7	56 53.9	48.7	353 15.6	07.2	Suhail	223 12.6 S43	20.8											
	17	143 05.5	119 44.8	41.2	119 20.1	44.4	71 55.8	48.7	8 17.9	07.2														
	18	158 07.9	134 45.3 N 7	41.8	134 20.8 N 8	45.1	86 57.6 N21	48.8	23 20.1 N18	07.1	Vega	80 57.0 N38	45.7											
	19	173 10.4	149 45.7	42.3	149 21.5	45.8	101 59.4	48.9	38 22.4	07.0	Zuben'ubi	137 35.2 S15	56.9											
	20	188 12.9	164 46.2	42.9	164 22.2	46.5	117 01.3	49.0	53 24.7	07.0														
	21	203 15.3	179 46.7	43.5	179 22.9	47.2	132 03.1	49.1	68 26.9	06.9														
	22	218 17.8	194 47.2	44.0	194 23.6	47.9	147 05.0	49.1	83 29.2	06.9														
23	233 20.2	209 47.7	44.6	209 24.3	48.6	162 06.8	49.2	98 31.4	06.8															
Pas. Mer. 7 33.1													v 0.5 d 0.5			v 0.7 d 0.7			v 1.8 d 0.1			v 2.3 d 0.1		
													A. H. S. Pas. Mer.			h m								
													Venus			337 59.5 9 02								
													Marte			337 26.9 9 04								
													Júpiter			289 15.7 12 16								
													Saturno			225 20.6 16 31								

T. M. G.	SOL				LUNA				Lat.	Crepúsculo			Orto Luna												
	A.H.G.		Dec.		A.H.G.		Dec.			Naut.	Civil	Orto Sol	28		29		30		31						
	h	m	°	'	h	m	°	'					h	m	h	m	h	m		h	m	h	m		
SABADO	00	180	43.1	N21	24.2	66	30.2	10.6	S	1	48.7	11.1	58.6	N 72	h m	h m	h m	15	04	17	03	19	12	21	38
	01	195	43.0		24.7	80	59.8	10.6		1	59.8	11.1	58.6	N 70	h m	h m	h m	14	57	16	48	18	44	20	44
	02	210	43.0		25.1	95	29.4	10.6		2	10.9	11.1	58.7	68	h m	h m	h m	14	52	16	36	18	24	20	11
	03	225	42.9	..	25.5	109	59.0	10.5		2	22.0	11.1	58.7	66	////	////	01 26	14	47	16	26	18	07	19	48
	04	240	42.8		25.9	124	28.5	10.4		2	33.1	11.1	58.8	64	////	////	02 06	14	43	16	17	17	54	19	29
	05	255	42.7		26.3	138	57.9	10.4		2	44.2	11.1	58.8	62	////	00 40	02 33	14	40	16	10	17	43	19	14
	06	270	42.7	N21	26.7	153	27.3	10.3	S	2	55.3	11.2	58.8	60	////	01 35	02 54	14	37	16	04	17	33	19	01
	07	285	42.6		27.1	167	56.6	10.3		3	06.5	11.1	58.9	N 58	00 36	02 29	03 26	14	34	15	59	17	25	18	50
	08	300	42.5		27.5	182	25.9	10.2		3	17.6	11.1	58.9	56	01 27	02 48	03 38	14	30	15	50	17	11	18	41
	09	315	42.4	..	27.9	196	55.1	10.2		3	28.7	11.1	59.0	54	01 56	03 03	03 49	14	28	15	46	17	05	18	25
	10	330	42.4		28.3	211	24.3	10.1		3	39.8	11.1	59.0	52	02 17	03 16	03 58	14	26	15	42	17	00	18	18
	11	345	42.3		28.7	225	53.4	10.0		3	50.9	11.1	59.0	50	02 56	03 43	04 18	14	22	15	35	16	49	18	03
	12	0	42.2	N21	29.1	240	22.4	10.0	S	4	02.0	11.1	59.1	N 40	03 23	04 03	04 35	14	19	15	28	16	40	17	52
	13	15	42.1		29.5	254	51.4	9.9		4	13.1	11.0	59.1	35	03 44	04 19	04 48	14	16	15	23	16	32	17	42
	14	30	42.1		29.9	269	20.3	9.9		4	24.1	11.1	59.1	30	04 01	04 33	05 00	14	14	15	18	16	25	17	33
	15	45	42.0	..	30.3	283	49.2	9.8		4	35.2	11.1	59.2	20	04 27	04 56	05 20	14	10	15	10	16	13	17	18
	16	60	41.9		30.7	298	18.0	9.7		4	46.3	11.0	59.2	N 10	04 48	05 15	05 38	14	07	15	03	16	02	17	04
	17	75	41.8		31.1	312	46.7	9.6		4	57.3	11.0	59.3	0	05 06	05 31	05 54	14	03	14	56	15	53	16	52
	18	90	41.7	N21	31.5	327	15.3	9.6	S	5	08.3	11.1	59.3	S 10	05 21	05 47	06 10	14	00	14	50	15	43	16	40
	19	105	41.7		31.9	341	43.9	9.6		5	19.4	11.0	59.3	20	05 36	06 03	06 27	13	57	14	43	15	33	16	27
	20	120	41.6		32.3	356	12.5	9.4		5	30.4	10.9	59.4	30	05 50	06 20	06 46	13	53	14	35	15	21	16	12
	21	135	41.5	..	32.7	10	40.9	9.4		5	41.3	11.0	59.4	35	05 58	06 29	06 57	13	51	14	31	15	15	16	04
	22	150	41.4		33.1	25	09.3	9.4		5	52.3	10.9	59.5	40	06 07	06 40	07 10	13	48	14	26	15	07	15	54
23	165	41.3		33.5	39	37.7	9.2		6	03.2	11.0	59.5	45	06 16	06 52	07 25	13	46	14	20	14	58	15	43	
DOMINGO	00	180	41.3	N21	33.8	54	05.9	9.2	S	6	14.2	10.9	59.5	S 50	06 26	07 06	07 44	13	42	14	13	14	48	15	29
	01	195	41.2		34.2	68	34.1	9.2		6	25.1	10.8	59.6	52	06 30	07 13	07 52	13	41	14	10	14	43	15	23
	02	210	41.1		34.6	83	02.3	9.0		6	35.9	10.9	59.6	54	06 35	07 20	08 02	13	39	14	06	14	38	15	16
	03	225	41.0	..	35.0	97	30.3	9.0		6	46.8	10.8	59.6	56	06 40	07 28	08 13	13	37	14	02	14	32	15	08
	04	240	40.9		35.4	111	58.3	8.9		6	57.6	10.8	59.7	58	06 46	07 37	08 26	13	35	13	58	14	25	14	59
	05	255	40.9		35.8	126	26.2	8.9		7	08.4	10.8	59.7	S 60	06 53	07 47	08 41	13	33	13	53	14	18	14	49
	06	270	40.8	N21	36.2	140	54.1	8.8	S	7	19.2	10.7	59.7												
	07	285	40.7		36.6	155	21.9	8.7		7	29.9	10.7	59.8												
	08	300	40.6		37.0	169	49.6	8.6		7	40.6	10.7	59.8												
	09	315	40.5	..	37.4	184	17.2	8.6		7	51.3	10.6	59.8												
	10	330	40.5		37.7	198	44.8	8.5		8	01.9	10.6	59.9												
	11	345	40.4		38.1	213	12.3	8.4		8	12.5	10.6	59.9												
	12	0	40.3	N21	38.5	227	39.7	8.3	S	8	23.1	10.5	60.0	N 72	h m	h m	h m	01	09	01	03	00	55	00	44
	13	15	40.2		38.9	242	07.0	8.3		8	33.6	10.5	60.0	N 70	h m	h m	h m	01	12	01	12	01	12	01	14
	14	30	40.1		39.3	256	34.3	8.2		8	44.1	10.5	60.0	68	h m	h m	h m	01	15	01	19	01	26	01	36
	15	45	40.1	..	39.7	271	01.5	8.1		8	54.6	10.4	60.1	66	22 33	////	////	01	17	01	26	01	37	01	53
	16	60	40.0		40.0	285	28.6	8.0		9	05.0	10.3	60.1	64	21 51	////	////	01	18	01	31	01	47	02	07
	17	75	39.9		40.4	299	55.6	8.0		9	15.3	10.3	60.1	62	21 23	23 23	////	01	20	01	36	01	55	02	19
	18	90	39.8	N21	40.8	314	22.6	7.8	S	9	25.6	10.3	60.2	60	21 02	22 22	////	01	21	01	40	02	02	02	29
	19	105	39.7		41.2	328	49.4	7.9		9	35.9	10.2	60.2	N 58	20 44	21 50	////	01	22	01	44	02	08	02	38
	20	120	39.6		41.6	343	16.3	7.7		9	46.1	10.2	60.2	56	20 30	21 27	23 26	01	23	01	47	02	14	02	46
	21	135	39.6	..	41.9	357	43.0	7.6		9	56.3	10.1	60.3	54	20 18	21 08	22 30	01	24	01	50	02	19	02	53
	22	150	39.5		42.3	372	09.6	7.6		10	06.4	10.1	60.3	52	20 07	20 53	22 01	01	25	01	53	02	23	02	59
23	165	39.4		42.7	26	36.2	7.5		10	16.5	10.0	60.3	50	19 57	20 39	21 39	01	26	01	55	02	27	03	05	
LUNES	00	180	39.3	N21	43.1	41	02.7	7.4	S	10	26.5	9.9	60.3	45	19 37	20 13	21 00	01	28	02	00	02	36	03	18
	01	195	39.2		43.5	55	29.1	7.4		10	36.4	9.9	60.4	N 40	19 20	19 52	20 32	01	29	02	05	02	44	03	28
	02	210	39.1		43.8	69	55.5	7.2		10	46.3	9.9	60.4	35	19 07	19 36	20 11	01	30	02	09	02	50	03	37
	03	225	39.1	..	44.2	84	21.7	7.2		10	56.2	9.7	60.4	30	18 55	19 22	19 54	01	32	02	12	02	56	03	44
	04	240	39.0		44.6	98	47.9	7.1		11	05.9	9.7	60.5	20	18 34	18 59	19 27	01	33	02	18	03	06	03	58
	05	255	38.9		45.0	113	14.0	7.1		11	15.6	9.7	60.5	N 10	18 17	18 40	19 07	01	35	02	23	03	15	04	10
	06	270	38.8	N21	45.3	127	40.1	6.9	S	11	25.3														

T. M. G.	ARIES		VENUS -4.1		MARTE +1.3		JUPITER -1.5		SATURNO +0.6		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.		
31 M A R T E S	00	248 22.7	224 48.1 N 7	45.1	224 25.0 N 8	49.2	177 08.7 N21	49.3	113 33.7 N18	06.8	Acamar	315 39.4 S40	23.7	
	01	263 25.2	239 48.6	45.7	239 25.7	49.9	192 10.5	49.4	128 36.0	06.7	Achernar	335 47.4 S57	20.9	
	02	278 27.6	254 49.1	46.3	254 26.4	50.6	207 12.4	49.5	143 38.2	06.6	Acrux	173 39.3 S62	58.8	
	03	293 30.1	269 49.6	46.8	269 27.1	51.3	222 14.2	49.5	158 40.5	06.6	Adhara	255 34.2 S28	56.7	
	04	308 32.6	284 50.0	47.4	284 27.8	52.0	237 16.0	49.6	173 42.7	06.5	Aldebaran	291 20.9 N16	27.7	
	05	323 35.0	299 50.5	47.9	299 28.5	52.7	252 17.9	49.7	188 45.0	06.5				
	06	338 37.5	314 51.0 N 7	48.5	314 29.2 N 8	53.4	267 19.7 N21	49.8	203 47.3 N18	06.4	Alioth	166 44.3 N56	05.1	
	07	353 40.0	329 51.4	49.1	329 29.9	54.1	282 21.6	49.8	218 49.5	06.4	Alkaid	153 20.0 N49	25.7	
	08	8 42.4	344 51.9	49.6	344 30.6	54.8	297 23.4	49.9	233 51.8	06.3	Al Na'ir	28 17.7 S47	03.9	
	09	23 44.9	359 52.4	50.2	359 31.3	55.5	312 25.3	50.0	248 54.0	06.2	Alnilam	276 14.3 S 1	13.1	
	10	38 47.4	14 52.9	50.8	14 32.0	56.2	327 27.1	50.1	263 56.3	06.2	Alphard	218 22.9 S 8	33.8	
	11	53 49.8	29 53.3	51.3	29 32.7	56.9	342 28.9	50.2	278 58.6	06.1				
	12	68 52.3	44 53.8 N 7	51.9	44 33.4 N 8	57.6	357 30.8 N21	50.2	294 00.8 N18	06.1	Alphecca	126 33.7 N26	47.5	
	13	83 54.7	59 54.2	52.5	59 34.1	58.3	12 32.6	50.3	309 03.1	06.0	Alpheratz	358 11.7 N28	57.8	
	14	98 57.2	74 54.7	53.0	74 34.9	59.0	27 34.5	50.4	324 05.3	06.0	Altair	62 34.5 N 8	48.5	
	15	113 59.7	89 55.2	53.6	89 35.6	59.7	42 36.3	50.5	339 07.6	05.9	Ankaa	353 42.7 S42	25.5	
	16	129 02.1	104 55.6	54.2	104 36.3	60.4	57 38.2	50.5	354 09.9	05.8	Antares	112 59.2 S26	22.9	
	17	144 04.6	119 56.1	54.8	119 37.0	61.1	72 40.0	50.6	9 12.1	05.8				
	18	159 07.1	134 56.5 N 7	55.3	134 37.7 N 9	61.8	87 41.8 N21	50.7	24 14.4 N18	05.7	Arcturus	146 20.2 N19	18.0	
	19	174 09.5	149 57.0	55.9	149 38.4	62.4	102 43.7	50.8	39 16.6	05.7	Atria	108 24.8 S68	59.2	
	20	189 12.0	164 57.5	56.5	164 39.1	63.1	117 45.5	50.9	54 18.9	05.6	Avior	234 29.4 S59	26.6	
	21	204 14.5	179 57.9	57.1	179 39.8	63.8	132 47.4	50.9	69 21.2	05.6	Bellatrix	279 01.5 N 6	19.6	
	22	219 16.9	194 58.4	57.6	194 40.5	64.5	147 49.2	51.0	84 23.4	05.5	Betelgeuse	271 31.0 N 7	24.1	
23	234 19.4	209 58.8	58.2	209 41.2	65.2	162 51.1	51.1	99 25.7	05.4					
1 M I E R C O L E S	00	249 21.8	224 59.3 N 7	58.8	224 41.9 N 9	65.9	177 52.9 N21	51.2	114 27.9 N18	05.4	Canopus	264 08.7 S52	41.3	
	01	264 24.3	239 59.7	59.4	239 42.6	66.6	192 54.7	51.2	129 30.2	05.3	Capella	281 15.1 N45	58.5	
	02	279 26.8	255 00.2	60.1	254 43.3	67.3	207 56.6	51.3	144 32.5	05.3	Deneb	49 49.7 N45	11.9	
	03	294 29.2	270 00.6	60.5	269 44.0	68.0	222 58.4	51.4	159 34.7	05.2	Denebola	183 01.2 N14	41.9	
	04	309 31.7	285 01.1	61.1	284 44.7	68.7	238 00.3	51.5	174 37.0	05.2	Diphda	349 23.3 S18	06.6	
	05	324 34.2	300 01.5	61.7	299 45.4	69.4	253 02.1	51.5	189 39.2	05.1				
	06	339 36.6	315 01.9 N 8	62.2	314 46.1 N 9	70.1	268 04.0 N21	51.6	204 41.5 N18	05.0	Dubhe	194 24.9 N61	52.6	
	07	354 39.1	330 02.4	62.8	329 46.8	70.7	283 05.8	51.7	219 43.7	05.0	Elnath	278 47.3 N28	35.2	
	08	9 41.6	345 02.8	63.4	344 47.5	71.4	298 07.6	51.8	234 46.0	04.9	Eltanin	90 58.3 N51	29.5	
	09	24 44.0	0 03.3	64.0	359 48.2	72.1	313 09.5	51.9	249 48.3	04.9	Enif	34 13.7 N 9	46.3	
	10	39 46.5	15 03.7	64.6	14 48.9	72.8	328 11.3	51.9	264 50.5	04.8	Fomalhaut	15 53.9 S29	44.3	
	11	54 49.0	30 04.2	65.1	29 49.6	73.5	343 13.2	52.0	279 52.8	04.8				
	12	69 51.4	45 04.6 N 8	65.7	44 50.3 N 9	74.2	358 15.0 N21	52.1	294 55.0 N18	04.7	Gacrux	172 30.9 S56	59.5	
	13	84 53.9	60 05.0	66.3	59 51.0	74.9	13 16.9	52.2	309 57.3	04.6	Gienah	176 20.1 S17	25.2	
	14	99 56.3	75 05.5	66.9	74 51.7	75.6	28 18.7	52.2	324 59.5	04.6	Hadar	149 25.9 S60	16.1	
	15	114 58.8	90 05.9	67.5	89 52.4	76.3	43 20.5	52.3	340 01.8	04.5	Hamal	328 31.7 N23	21.2	
	16	130 01.3	105 06.3	68.1	104 53.1	77.0	58 22.4	52.4	355 04.0	04.5	Kaus Aust.	84 19.4 S34	23.6	
	17	145 03.7	120 06.8	68.6	119 53.8	77.6	73 24.2	52.5	10 06.3	04.4				
	18	160 06.2	135 07.2 N 8	69.2	134 54.5 N 9	78.3	88 26.1 N21	52.5	25 08.6 N18	04.3	Kochab	137 18.0 N74	15.1	
	19	175 08.7	150 07.6	69.8	149 55.2	79.0	103 27.9	52.6	40 10.8	04.3	Markab	14 05.4 N15	05.0	
	20	190 11.1	165 08.1	70.4	164 55.9	79.7	118 29.8	52.7	55 13.1	04.2	Menkar	314 43.8 N 4	00.0	
	21	205 13.6	180 08.5	71.0	179 56.6	80.4	133 31.6	52.8	70 15.3	04.2	Menkent	148 39.3 S36	15.7	
	22	220 16.1	195 08.9	71.6	194 57.3	81.1	148 33.4	52.9	85 17.6	04.1	Miaplacidus	221 45.7 S69	37.9	
23	235 18.5	210 09.3	72.2	209 58.0	81.8	163 35.3	52.9	100 19.8	04.1					
2 J U N I O S	00	250 21.0	225 09.8 N 8	12.8	224 58.7 N 9	22.5	178 37.1 N21	53.0	115 22.1 N18	04.0	Mirfak	309 19.7 N49	46.7	
	01	265 23.5	240 10.2	13.3	239 59.4	23.1	193 39.0	53.1	130 24.3	03.9	Punck	76 31.6 S26	19.4	
	02	280 25.9	255 10.6	13.9	255 00.1	23.8	208 40.8	53.2	145 26.6	03.9	Peacock	54 01.6 S56	48.2	
	03	295 28.4	270 11.0	14.5	270 00.8	24.5	223 42.7	53.2	160 28.9	03.8	Pollux	244 01.2 N28	04.8	
	04	310 30.8	285 11.4	15.1	285 01.5	25.2	238 44.5	53.3	175 31.1	03.8	Procyon	245 28.4 N 5	16.9	
	05	325 33.3	300 11.9	15.7	300 02.2	25.9	253 46.3	53.4	190 33.4	03.7				
	06	340 35.8	315 12.3 N 8	16.3	315 02.9 N 9	26.6	268 48.2 N21	53.5	205 35.6 N18	03.6	Rasalhague	96 31.3 N12	34.6	
	07	355 38.2	330 12.7	16.9	330 03.6	27.3	283 50.0	53.5	220 37.9	03.6	Regulus	208 12.5 N12	04.6	
	08	10 40.7	345 13.1	17.5	345 04.3	28.0	298 51.9	53.6	235 40.1	03.5	Rigel	281 38.5 S 8	13.8	
	09	25 43.2	0 13.5	18.1	0 05.0	28.6	313 53.7	53.7	250 42.4	03.5	Rigil Kent.	140 28.2 S60	44.6	
	10	40 45.6	15 13.9	18.7	15 05.7	29.3	328 55.6	53.8	265 44.6	03.4	Sabik	102 43.3 S15	41.8	
	11	55 48.1	30 14.4	19.3	30 06.4	30.0	343 57.4	53.8	280 46.9	03.3				
	12	70 50.6	45 14.8 N 8	19.9	45 07.1 N 9	30.7	358 59.2 N21	53.9	295 49.1 N18	03.3	Schedar	350 11.7 N56	24.6	
	13	85 53.0	60 15.2	20.5	60 07.8	31.4	14 01.1	54.0	310 51.4	03.2	Shaula	96 58.4 S37	05.2	
	14	100 55.5	75 15.6	21.1	75 08.5	32.1	29 02.9	54.1	325 53.6	03.2	Sirius	258 58.0 S16	41.3	
	15	115 57.9	90 16.0	21.7	90 09.2	32.8	44 04.8	54.1	340 55.9	03.1	Spica	158 59.7 S11	02.7	
	16	131 00.4	105 16.4	22.2	105 09.9	33.4	59 06.6	54.2	355 58.2	03.1	Suhail	223 12.6 S43	20.8	
	17	146 02.9	120 16.8	22.8	120 10.6	34.1	74 08.5	54.3	11 00.4	03.0				
	18	161 05.3	135 17.2 N 8	23.4	135 11.3 N 9	34.8	89 10.3 N21	54.4	26 02.7 N18	02.9	Vega	80 56.9 N38	45.7	
	19	176 07.8	150 17.6	24.0	150 12.0	35.5	104 12.1	54.4	41 04.9	02.9	Zuben'ubi	137 35.2 S15	56.9	
	20	191 10.3	165 18.0	24.6	165 12.7	36.2	119 14.0	54.5	56 07.2	02.8				
	21	206 12.7	180 18.4	25.2	180 13.4	36.9	134 15.8	54.6	71 09.4	02.8				
	22	221 15.2	195 18.8	25.8	195 14.1	37.5	149 17.7	54.7	86 11.7	02.7	Venus	335 37.4	9 00	
23	236 17.7	210 19.2	26.4	210 14.8	38.2	164 19.5	54.8	101 13.9	02.6	Marte	335 20.0	9 01		
											A. H. S.		Pas. Mer.	
											h m		h m	
Pas. Mer. 7 21.3											v 0.4 d 0.6		v 0.7 d 0.7	
											v 1.8 d 0.1		v 2.3 d 0.1	
											Júpiter		288 31.1 12 07	
											Saturno		225 06.1 16 20	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		31	1			3
												h m	h m	h m	
M A R T E S	31 ^d 00	180 37.2 N21 51.9	27 15.3	5.5	S14 06.4	8.1 61.0	N 72	□	□	□	21 38	■	■	■	
	01	195 37.2	52.3	41 39.8	5.5	14 14.5	8.1 61.0	N 70	□	□	□	20 44	22 36	23 51	24 18
	02	210 37.1	52.6	56 04.3	5.5	14 22.6	8.0 61.0	68	□	□	□	20 11	21 49	23 00	23 40
	03	225 37.0	53.0	70 28.8	5.3	14 30.6	7.8 61.0	66	////	////	01 13	19 48	21 18	22 27	23 13
	04	240 36.9	53.4	84 53.1	5.3	14 38.4	7.8 61.1	64	////	////	01 58	19 29	20 55	22 04	22 52
	05	255 36.8	53.7	99 17.4	5.2	14 46.2	7.7 61.1	62	////	////	02 27	19 14	20 37	21 45	22 35
	06	270 36.7	N21 54.1	113 41.6	5.1	S14 53.9	7.5 61.1	60	////	01 26	02 49	19 01	20 22	21 29	22 21
	07	285 36.6	54.4	128 05.7	5.1	15 01.4	7.5 61.1	N 58	////	02 00	03 07	18 50	20 09	21 16	22 09
	08	300 36.5	54.8	142 29.8	5.0	15 08.9	7.4 61.1	56	////	02 25	03 22	18 41	19 58	21 05	21 59
	09	315 36.4	55.1	156 53.8	4.9	15 16.3	7.2 61.2	54	01 19	02 44	03 35	18 32	19 48	20 55	21 49
	10	330 36.3	55.5	171 17.7	4.9	15 23.5	7.2 61.2	52	01 50	03 00	03 46	18 25	19 39	20 46	21 41
	11	345 36.3	55.9	185 41.6	4.8	15 30.7	7.0 61.2	50	02 13	03 13	03 56	18 18	19 32	20 38	21 34
	12	0 36.2	N21 56.2	200 05.4	4.7	S15 37.7	7.0 61.2	45	02 53	03 40	04 17	18 03	19 15	20 21	21 18
	13	15 36.1	56.6	214 29.1	4.7	15 44.7	6.8 61.2	N 40	03 21	04 01	04 33	17 52	19 02	20 07	21 05
	14	30 36.0	56.9	228 52.8	4.6	15 51.5	6.7 61.2	35	03 42	04 18	04 47	17 42	18 50	19 55	20 54
	15	45 35.9	57.3	243 16.4	4.6	15 58.2	6.6 61.2	30	04 00	04 32	04 59	17 33	18 40	19 45	20 44
	16	60 35.8	57.6	257 40.0	4.4	16 04.8	6.5 61.3	20	04 27	04 56	05 20	17 18	18 23	19 27	20 27
	17	75 35.7	58.0	272 03.4	4.5	16 11.3	6.4 61.3	N 10	04 48	05 15	05 38	17 04	18 08	19 12	20 13
	18	90 35.6	N21 58.3	286 26.9	4.3	S16 17.7	6.2 61.3	0	05 06	05 32	05 54	16 52	17 54	18 57	19 59
	19	105 35.5	58.7	300 50.2	4.3	16 23.9	6.2 61.3	S 10	05 22	05 48	06 10	16 40	17 40	18 43	19 45
	20	120 35.4	59.0	315 13.5	4.3	16 30.1	6.0 61.3	20	05 37	06 04	06 28	16 27	17 26	18 27	19 31
	21	135 35.3	59.4	329 36.8	4.2	16 36.1	5.9 61.3	30	05 52	06 21	06 48	16 12	17 09	18 10	19 14
	22	150 35.3	21 59.7	344 00.0	4.1	16 42.0	5.8 61.3	35	06 00	06 31	06 59	16 04	16 59	18 00	19 04
23	165 35.2	22 00.1	358 23.1	4.1	16 47.8	5.6 61.3	40	06 08	06 42	07 12	15 54	16 48	17 48	18 53	
1	00	180 35.1	N22 00.4	12 46.2	4.1	S16 53.4	5.6 61.3	45	06 18	06 55	07 28	15 43	16 35	17 34	18 40
01	195 35.0	00.7	27 09.3	4.0	16 59.0	5.4 61.4	S 50	06 28	07 09	07 47	15 29	16 19	17 18	18 24	
02	210 34.9	01.1	41 32.3	3.9	17 04.4	5.3 61.4	52	06 33	07 16	07 56	15 23	16 11	17 10	18 17	
03	225 34.8	01.4	55 55.2	3.9	17 09.7	5.1 61.4	54	06 38	07 23	08 06	15 16	16 03	17 01	18 08	
04	240 34.7	01.8	70 18.1	3.8	17 14.8	5.1 61.4	56	06 44	07 32	08 17	15 08	15 54	16 51	17 59	
05	255 34.6	02.1	84 40.9	3.8	17 19.9	4.9 61.4	58	06 50	07 41	08 31	14 59	15 44	16 40	17 48	
06	270 34.5	N22 02.5	99 03.7	3.8	S17 24.8	4.7 61.4	S 60	06 56	07 51	08 46	14 49	15 32	16 27	17 36	
07	285 34.4	02.8	113 26.5	3.7	17 29.5	4.7 61.4	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	300 34.3	03.1	127 49.2	3.7	17 34.2	4.5 61.4			Civil	Naut.	31	1	2	3	
09	315 34.2	03.5	142 11.9	3.7	17 38.7	4.4 61.4									
10	330 34.1	03.8	156 34.6	3.6	17 43.1	4.2 61.4									
11	345 34.0	04.2	170 57.2	3.5	17 47.3	4.1 61.4									
12	0 33.9	N22 04.5	185 19.7	3.6	S17 51.4	4.0 61.4	N 72	□	□	□	00 44	00 25	■	■	
13	15 33.9	04.8	199 42.3	3.5	17 55.4	3.8 61.4	N 70	□	□	□	01 14	01 19	01 38	02 35	
14	30 33.8	05.2	214 04.8	3.5	17 59.2	3.7 61.4	68	□	□	□	01 36	01 53	02 26	03 26	
15	45 33.7	05.5	228 27.3	3.4	18 02.9	3.6 61.4	66	22 47	////	////	01 53	02 17	02 57	03 58	
16	60 33.6	05.8	242 49.7	3.4	18 06.5	3.4 61.4	64	21 59	////	////	02 07	02 36	03 20	04 22	
17	75 33.5	06.2	257 12.1	3.4	18 09.9	3.3 61.4	62	21 30	////	////	02 19	02 52	03 38	04 41	
18	90 33.4	N22 06.5	271 34.5	3.4	S18 13.2	3.2 61.4	60	21 07	22 32	////	02 29	03 05	03 54	04 56	
19	105 33.3	06.8	285 56.9	3.4	18 16.4	3.0 61.4	N 58	20 49	21 57	////	02 38	03 17	04 07	05 09	
20	120 33.2	07.2	300 19.3	3.3	18 19.4	2.9 61.4	56	20 34	21 32	////	02 46	03 27	04 18	05 21	
21	135 33.1	07.5	314 41.6	3.3	18 22.3	2.7 61.4	54	20 21	21 13	22 39	02 53	03 35	04 28	05 31	
22	150 33.0	07.8	329 03.9	3.3	18 25.0	2.6 61.4	52	20 10	20 57	22 07	02 59	03 43	04 37	05 40	
23	165 32.9	08.2	343 26.2	3.3	18 27.6	2.4 61.4	50	20 00	20 43	21 44	03 05	03 50	04 44	05 47	
2	00	180 32.8	N22 08.5	357 48.5	3.3	S18 30.0	2.4 61.4	45	19 39	20 16	21 03	03 18	04 06	05 01	06 04
01	195 32.7	08.8	12 10.8	3.3	18 32.4	2.1 61.4	N 40	19 23	19 55	20 35	03 28	04 18	05 15	06 18	
02	210 32.6	09.1	26 33.1	3.3	18 34.5	2.1 61.4	35	19 08	19 38	20 14	03 37	04 29	05 27	06 30	
03	225 32.5	09.5	40 55.4	3.2	18 36.6	1.8 61.4	30	18 56	19 23	19 56	03 44	04 38	05 37	06 40	
04	240 32.4	09.8	55 17.6	3.3	18 38.4	1.8 61.4	20	18 36	19 00	19 29	03 58	04 54	05 55	06 57	
05	255 32.3	10.1	69 39.9	3.2	18 40.2	1.6 61.4	N 10	18 18	18 41	19 07	04 10	05 08	06 10	07 13	
06	270 32.2	N22 10.4	84 02.1	3.3	S18 41.8	1.4 61.3	0	18 01	18 24	18 50	04 21	05 21	06 24	07 27	
07	285 32.1	10.8	98 24.4	3.2	18 43.2	1.4 61.3	S 10	17 45	18 08	18 34	04 32	05 35	06 38	07 41	
08	300 32.0	11.1	112 46.6	3.3	18 44.6	1.1 61.3	20	17 28	17 51	18 19	04 43	05 49	06 54	07 56	
09	315 31.9	11.4	127 08.9	3.3	18 45.7	1.1 61.3	30	17 08	17 34	18 03	04 57	06 05	07 11	08 13	
10	330 31.8	11.7	141 31.2	3.2	18 46.8	0.8 61.3	35	16 56	17 24	17 55	05 05	06 14	07 21	08 23	
11	345 31.7	12.1	155 53.4	3.3	18 47.6	0.8 61.3	40	16 43	17 13	17 47	05 14	06 25	07 33	08 35	
12	0 31.6	N22 12.4	170 15.7	3.3	S18 48.4	0.6 61.3	45	16 27	17 01	17 37	05 24	06 38	07 47	08 48	
13	15 31.5	12.7	184 38.0	3.3	18 49.0	0.4 61.3	S 50	16 08	16 46	17 27	05 37	06 53	08 03	09 04	
14	30 31.4	13.0	199 00.3	3.3	18 49.4	0.3 61.3	52	15 59	16 39	17 22	05 43	07 00	08 11	09 12	
15	45 31.3	13.3	213 22.6	3.4	18 49.7	0.2 61.2	54	15 49	16 32	17 17	05 49	07 08	08 20	09 21	
16	60 31.2	13.7	227 45.0	3.3	18 49.9	0.0 61.2	56	15 38	16 23	17 11	05 57	07 17	08 29	09 30	
17	75 31.1	14.0	242 07.3	3.4	18 49.9	0.1 61.2	58	15 24	16 14	17 05	06 05	07 27	08 41	09 41	
18	90 31.0	N22 14.3	256 29.7	3.4	S18 49.8	0.2 61.2	S 60	15 09	16 04	16 59	06 14	07 39	08 53	09 53	
19	105 30.9	14.6	270 52.1	3.4	18 49.6	0.4 61.2	Día	SOL E.T. (+)		LUNA					
20	120 30.8	14.9	285 14.5	3.5	18 49.2	0.6 61.2		00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
21	135 30.7	15.2	299 37.0	3.5	18 48.6	0.7 61.2		m s	m s	h m	h m	h m	d		
22	150 30.6	15.6	313 59.5	3.5	18 47.9	0.8 61.1	31	02 29	02 25	11 58	23 07	10 36	13		
23	165 30.5</														

T. M. G.	ARIES			VENUS -4.1			MARTE +1.3			JUPITER -1.5			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
3 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	251	20.1		225	19.6	N 8 27.0	225	15.5	N 9 38.9	179	21.4	N21 54.8	116	16.2	N18 02.6	Acamar	315	39.3	S40 23.7
	266	22.6		240	20.0	27.6	240	16.2	39.6	194	23.2	54.9	131	18.4	02.5	Achernar	335	47.4	S57 20.9
	281	25.1		255	20.4	28.3	255	16.9	40.3	209	25.0	55.0	146	20.7	02.5	Acrux	173	39.3	S62 58.8
	296	27.5		270	20.8	28.9	270	17.6	41.0	224	26.9	55.1	161	22.9	02.4	Adhara	255	34.2	S28 56.7
	311	30.0		285	21.2	29.5	285	18.3	41.6	239	28.7	55.1	176	25.2	02.3	Aldebaran	291	20.9	N16 27.7
	326	32.4		300	21.6	30.1	300	19.0	42.3	254	30.6	55.2	191	27.4	02.3				
	341	34.9		315	22.0	N 8 30.7	315	19.7	N 9 43.0	269	32.4	N21 55.3	206	29.7	N18 02.2	Alioth	166	44.3	N56 05.1
	356	37.4		330	22.4	31.3	330	20.4	43.7	284	34.2	55.4	221	31.9	02.2	Alkaid	153	20.0	N49 25.7
	11	39.8		345	22.8	31.9	345	21.1	44.4	299	36.1	55.4	236	34.2	02.1	Al Na'ir	28	17.7	S47 03.9
	26	42.3		0	23.2	32.5	0	21.8	45.1	314	37.9	55.5	251	36.4	02.0	Alnilam	276	14.2	S 1 13.1
	41	44.8		15	23.6	33.1	15	22.5	45.7	329	39.8	55.6	266	38.7	02.0	Alphard	218	22.9	S 8 33.8
	56	47.2		30	24.0	33.7	30	23.2	46.4	344	41.6	55.7	281	40.9	01.9				
	71	49.7		45	24.3	N 8 34.3	45	23.9	N 9 47.1	359	43.5	N21 55.7	296	43.2	N18 01.9	Alphecca	126	33.7	N26 47.5
	86	52.2		60	24.7	34.9	60	24.6	47.8	14	45.3	55.8	311	45.4	01.8	Alpheratz	358	11.7	N28 57.8
	101	54.6		75	25.1	35.5	75	25.3	48.5	29	47.1	55.9	326	47.7	01.7	Altair	62	34.4	N 8 48.5
	116	57.1		90	25.5	36.1	90	26.0	49.1	44	49.0	56.0	341	49.9	01.7	Ankaa	353	42.7	S42 25.5
	131	59.6		105	25.9	36.7	105	26.7	49.8	59	50.8	56.0	356	52.2	01.6	Antares	112	59.2	S26 22.9
	147	02.0		120	26.3	37.4	120	27.4	50.5	74	52.7	56.1	11	54.4	01.6				
	162	04.5		135	26.6	N 8 38.0	135	28.1	N 9 51.2	89	54.5	N21 56.2	26	56.7	N18 01.5	Arcturus	146	20.2	N19 18.1
	177	06.9		150	27.0	38.6	150	28.8	51.9	104	56.4	56.3	41	58.9	01.4	Atria	108	24.8	S68 59.2
	192	09.4		165	27.4	39.2	165	29.5	52.5	119	58.2	56.3	57	01.2	01.4	Avior	234	29.5	S59 26.6
	207	11.9		180	27.8	39.8	180	30.2	53.2	135	00.0	56.4	72	03.4	01.3	Bellatrix	279	01.5	N 6 19.6
	222	14.3		195	28.1	40.4	195	30.9	53.9	150	01.9	56.5	87	05.7	01.3	Betelgeuse	271	31.0	N 7 24.1
237	16.8		210	28.5	41.0	210	31.6	54.6	165	03.7	56.5	102	07.9	01.2					
4 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	252	19.3		225	28.9	N 8 41.6	225	32.3	N 9 55.3	180	05.6	N21 56.6	117	10.2	N18 01.1	Canopus	264	08.7	S52 41.2
	267	21.7		240	29.3	42.3	240	33.0	55.9	195	07.4	56.7	132	12.4	01.1	Capella	281	15.0	N45 58.4
	282	24.2		255	29.6	42.9	255	33.7	56.6	210	09.3	56.8	147	14.7	01.0	Deneb	49	49.7	N45 11.9
	297	26.7		270	30.0	43.5	270	34.4	57.3	225	11.1	56.8	162	16.9	01.0	Denebola	183	01.3	N14 41.9
	312	29.1		285	30.4	44.1	285	35.1	58.0	240	12.9	56.9	177	19.2	00.9	Diphda	349	23.3	S18 06.6
	327	31.6		300	30.8	44.7	300	35.8	58.6	255	14.8	57.0	192	21.4	00.8				
	342	34.0		315	31.1	N 8 45.3	315	36.5	N 9 59.3	270	16.6	N21 57.1	207	23.7	N18 00.8	Dubhe	194	25.0	N61 52.6
	357	36.5		330	31.5	45.9	330	37.2	10 00.0	285	18.5	57.1	222	25.9	00.7	Elnath	278	47.3	N28 35.2
	12	39.0		345	31.9	46.6	345	37.9	00.7	300	20.3	57.2	237	28.2	00.7	Eltanin	90	58.2	N51 29.5
	27	41.4		0	32.2	47.2	0	38.6	01.4	315	22.1	57.3	252	30.4	00.6	Enif	34	13.6	N 9 46.3
	42	43.9		15	32.6	47.8	15	39.3	02.0	330	24.0	57.4	267	32.7	00.5	Fomalhaut	15	53.9	S29 44.3
	57	46.4		30	32.9	48.4	30	39.9	02.7	345	25.8	57.4	282	34.9	00.5				
	72	48.8		45	33.3	N 8 49.0	45	40.6	N10 03.4	0	27.7	N21 57.5	297	37.2	N18 00.4	Gacrux	172	30.9	S56 59.5
	87	51.3		60	33.7	49.7	60	41.3	04.1	15	29.5	57.6	312	39.4	00.4	Gienah	176	20.1	S17 25.2
	102	53.8		75	34.0	50.3	75	42.0	04.7	30	31.4	57.7	327	41.7	00.3	Hadar	149	25.9	S60 16.1
	117	56.2		90	34.4	50.9	90	42.7	05.4	45	33.2	57.7	342	43.9	00.2	Hamal	328	31.7	N23 21.2
	132	58.7		105	34.7	51.5	105	43.4	06.1	60	35.0	57.8	357	46.1	00.2	Kaus Aust.	84	19.4	S34 23.6
	148	01.2		120	35.1	52.1	120	44.1	06.8	75	36.9	57.9	12	48.4	00.1				
	163	03.6		135	35.5	N 8 52.8	135	44.8	N10 07.4	90	38.7	N21 58.0	27	50.6	N18 00.0	Kochab	137	18.0	N74 15.1
	178	06.1		150	35.8	53.4	150	45.5	08.1	105	40.6	58.0	42	52.9	18 00.0	Markab	14	05.4	N15 05.0
	193	08.5		165	36.2	54.0	165	46.2	08.8	120	42.4	58.1	57	55.1	17 59.9	Menkar	314	43.7	N 4 00.0
	208	11.0		180	36.5	54.6	180	46.9	09.5	135	44.3	58.2	72	57.4	59.9	Menkent	148	39.3	S36 15.7
	223	13.5		195	36.9	55.3	195	47.6	10.1	150	46.1	58.2	87	59.6	59.8	Miaplacidus	221	45.7	S69 37.9
238	15.9		210	37.2	55.9	210	48.3	10.8	165	47.9	58.3	103	01.9	59.7					
5 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	253	18.4		225	37.6	N 8 56.5	225	49.0	N10 11.5	180	49.8	N21 58.4	118	04.1	N17 59.7	Mirfak	309	19.7	N49 46.7
	268	20.9		240	37.9	57.1	240	49.7	12.2	195	51.6	58.5	133	06.4	59.6	Nunki	76	31.6	S26 19.4
	283	23.3		255	38.3	57.8	255	50.4	12.8	210	53.5	58.5	148	08.6	59.6	Peacock	54	01.6	S56 48.2
	298	25.8		270	38.6	58.4	270	51.1	13.5	225	55.3	58.6	163	10.9	59.5	Pollux	244	01.2	N28 04.8
	313	28.3		285	39.0	59.0	285	51.8	14.2	240	57.1	58.7	178	13.1	59.4	Procyon	245	28.4	N 5 16.9
	328	30.7		300	39.3	8 59.6	300	52.5	14.9	255	59.0	58.8	193	15.3	59.4				
	343	33.2		315	39.6	N 9 00.3	315	53.2	N10 15.5	271	00.8	N21 58.8	208	17.6	N17 59.3	Rasalhague	96	31.3	N12 34.6
	358	35.7		330	40.0	00.9	330	53.9	16.2	286	02.7	58.9	223	19.8	59.2	Regulus	208	12.5	N12 04.6
	13	38.1		345	40.3	01.5	345	54.6	16.9	301	04.5	59.0	238	22.1	59.2	Rigel	281	38.5	S 8 13.8
	28	40.6		0	40.7	02.1	0	55.3	17.5	316	06.4	59.1	253	24.3	59.1	Rigil Kent.	140	28.2	S60 44.6
	43	43.0		15	41.0	02.8	15	56.0	18.2	331	08.2	59.1	268	26.6	59.1	Sabik	102	43.3	S15 41.8
	58	45.5		30	41.4	03.4	30	56.7	18.9	346	10.0	59.2	283	28.8	59.0				
	73	48.0		45	41.7	N 9 04.0	45	57.4	N10 19.6	1	11.9	N21 59.3	298	31.1	N17 58.9	Schedar	350	11.7	N56 24.6
	88	50.4		60	42.0	04.7	60	58.1	20.2	16	13.7	59.3	313	33.3	58.9	Shaula	96	58.3	S37 05.2
	103	52.9		75	42.4	05.3	75	58.8	20.9	31	15.6	59.4	328	35.6	58.8	Sirius	258	58.0	S16 41.3
	118	55.4		90	42.7	05.9	90	59.5	21.6	46	17.4	59.5	343	37.8	58.8	Pica	158	59.7	S11 02.7
	133	57.8		105	43.0	06.6	106	00.2	22.2	61	19.2	59.6	358	40.0	58.7	Suhail	223	12.6	S43 20.8
	149	00.3		120	43.4	07.2	121	00.9	22.9	76	21.1	59.6	13	42.3	58.6				
	164	02.8		135	43.7	N 9 07.8	136	01.6	N10 23.6	91	22.9	N21 59.7	28	44.5	N17 58.6	Vega	80	56.9	N38 45.8
	179	05.2		150	44.0	08.5	151	02.3	24.3	106	24.8	59.8	4						

T. M. G.	SOL		LUNA					Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d	P.H.		Náut.	Civil		6 7 8 9			
												h	m	h	m
LUNES	6 00	180 22.8	N22 36.9	300 38.1	9.0	S12 23.7	8.6 58.8	N 72	□	□	□	00 50	00 42	00 35	00 28
	01	195 22.7	37.2	315 06.1	9.0	12 15.1	8.7 58.7	N 70	□	□	□	00 28	00 29	00 28	00 27
	02	210 22.6	37.5	329 34.1	9.1	12 06.4	8.8 58.7	68	□	□	□	00 11	00 18	00 23	00 26
	03	225 22.5	37.7	344 02.2	9.2	11 57.6	8.8 58.7	66	////	////	00 45	24 09	00 09	00 18	00 26
	04	240 22.4	38.0	358 30.4	9.3	11 48.8	8.8 58.6	64	////	////	01 45	24 02	00 02	00 14	00 25
	05	255 22.2	38.3	12 58.7	9.3	11 40.0	8.9 58.6	62	////	////	02 18	23 55	24 11	00 11	00 25
	06	270 22.1	N22 38.5	27 27.0	9.5	S11 31.1	9.0 58.5	60	////	01 10	02 42	23 50	24 08	00 08	00 24
	07	285 22.0	38.8	41 55.5	9.5	11 22.1	9.0 58.5	N 58	////	01 50	03 01	23 45	24 06	00 06	00 24
	08	300 21.9	39.0	56 24.0	9.6	11 13.1	9.0 58.5	56	////	02 17	03 17	23 40	24 03	00 03	00 24
	09	315 21.8	39.3	70 52.6	9.7	11 04.1	9.1 58.4	54	01 04	02 37	03 30	23 36	24 01	00 01	00 24
	10	330 21.7	39.6	85 21.3	9.8	10 55.0	9.2 58.4	52	01 41	02 54	03 42	23 33	23 59	24 23	00 23
	11	345 21.6	39.8	99 50.1	9.9	10 45.8	9.2 58.3	50	02 06	03 09	03 52	23 30	23 57	24 23	00 23
	12	0 21.5	N22 40.1	114 19.0	10.0	S10 36.6	9.3 58.3	45	02 49	03 37	04 14	23 22	23 54	24 23	00 23
	13	15 21.3	40.3	128 48.0	10.0	10 27.3	9.3 58.3	N 40	03 18	03 59	04 31	23 16	23 50	24 22	00 22
	14	30 21.2	40.6	143 17.0	10.1	10 18.0	9.3 58.2	35	03 40	04 16	04 46	23 11	23 48	24 22	00 22
	15	45 21.1	40.8	157 46.1	10.2	10 08.7	9.4 58.2	30	03 58	04 31	04 58	23 07	23 45	24 21	00 21
	16	60 21.0	41.1	172 15.3	10.3	9 59.3	9.4 58.1	20	04 26	04 55	05 20	22 59	23 41	24 21	00 21
	17	75 20.9	41.3	186 44.6	10.3	9 49.9	9.5 58.1	N 10	04 48	05 15	05 38	22 52	23 37	24 20	00 20
	18	90 20.8	N22 41.6	201 13.9	10.4	S 9 40.4	9.5 58.1	0	05 07	05 33	05 55	22 45	23 34	24 20	00 20
	19	105 20.7	41.8	215 43.3	10.5	9 30.9	9.5 58.0	S 10	05 23	05 49	06 12	22 39	23 30	24 20	00 20
	20	120 20.6	42.1	230 12.8	10.6	9 21.4	9.6 58.0	20	05 39	06 06	06 30	22 32	23 27	24 19	00 19
	21	135 20.4	42.3	244 42.4	10.7	9 11.8	9.6 58.0	30	05 55	06 24	06 50	22 24	23 22	24 19	00 19
	22	150 20.3	42.6	259 12.1	10.7	9 02.2	9.6 57.9	35	06 03	06 34	07 02	22 19	23 20	24 18	00 18
23	165 20.2	42.8	273 41.8	10.8	8 52.6	9.7 57.9	40	06 12	06 46	07 16	22 14	23 17	24 18	00 18	
7 00	180 20.1	N22 43.1	288 11.6	10.9	S 8 42.9	9.7 57.8	45	06 22	06 59	07 32	22 08	23 14	24 18	00 18	
01	195 20.0	43.3	302 41.5	11.0	8 33.2	9.8 57.8	S 50	06 33	07 14	07 52	22 00	23 10	24 17	00 17	
02	210 19.9	43.6	317 11.5	11.0	8 23.4	9.7 57.8	52	06 38	07 21	08 02	21 57	23 08	24 17	00 17	
03	225 19.7	43.8	331 41.5	11.1	8 13.7	9.9 57.7	54	06 43	07 29	08 12	21 53	23 06	24 17	00 17	
04	240 19.6	44.1	346 11.6	11.2	8 03.8	9.8 57.7	56	06 49	07 38	08 24	21 49	23 04	24 17	00 17	
05	255 19.5	44.3	0 41.8	11.2	7 54.0	9.8 57.6	58	06 56	07 48	08 38	21 44	23 02	24 17	00 17	
06	270 19.4	N22 44.5	15 12.0	11.3	S 7 44.2	9.9 57.6	S 60	07 03	07 59	08 55	21 39	22 59	24 16	00 16	
07	285 19.3	44.8	29 42.3	11.4	7 34.3	9.9 57.6									
08	300 19.2	45.0	44 12.7	11.5	7 24.4	10.0 57.5	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
09	315 19.1	45.3	58 43.2	11.5	7 14.4	9.9 57.5			Civil	Náut.	6	7	8	9	
10	330 18.9	45.5	73 13.7	11.6	7 04.5	10.0 57.4					h m	h m	h m	h m	
11	345 18.8	45.8	87 44.3	11.6	6 54.5	10.0 57.4	N 72	□	□	□	07 40	09 34	11 19	13 01	
12	0 18.7	N22 46.0	102 14.9	11.8	S 6 44.5	10.0 57.4	N 70	□	□	□	08 00	09 45	11 24	12 58	
13	15 18.6	46.2	116 45.7	11.7	6 34.5	10.1 57.3	68	□	□	□	08 16	09 54	11 27	12 57	
14	30 18.5	46.5	131 16.4	11.9	6 24.4	10.1 57.3	66	23 17	////	////	08 29	10 01	11 30	12 55	
15	45 18.4	46.7	145 47.3	11.9	6 14.3	10.0 57.3	64	22 14	////	////	08 39	10 07	11 32	12 54	
16	60 18.2	46.9	160 18.2	12.0	6 04.3	10.1 57.2	62	21 41	////	////	08 48	10 13	11 34	12 53	
17	75 18.1	47.2	174 49.2	12.0	5 54.2	10.1 57.2	60	21 17	22 50	////	08 56	10 17	11 36	12 52	
18	90 18.0	N22 47.4	189 20.2	12.1	S 5 44.1	10.2 57.1	N 58	20 57	22 09	////	09 03	10 21	11 38	12 51	
19	105 17.9	47.6	203 51.3	12.1	5 33.9	10.1 57.1	56	20 41	21 42	////	09 08	10 25	11 39	12 51	
20	120 17.8	47.9	218 22.4	12.3	5 23.8	10.2 57.1	54	20 28	21 21	22 56	09 14	10 28	11 40	12 50	
21	135 17.7	48.1	232 53.7	12.2	5 13.6	10.1 57.0	52	20 16	21 04	22 18	09 18	10 31	11 41	12 49	
22	150 17.5	48.3	247 24.9	12.4	5 03.5	10.2 57.0	50	20 06	20 49	21 53	09 23	10 34	11 43	12 49	
23	165 17.4	48.6	261 56.3	12.3	4 53.3	10.2 57.0	45	19 44	20 21	21 10	09 32	10 40	11 45	12 48	
8 00	180 17.3	N22 48.8	276 27.6	12.5	S 4 43.1	10.2 56.9	N 40	19 26	19 59	20 40	09 40	10 44	11 47	12 47	
01	195 17.2	49.0	290 59.1	12.5	4 32.9	10.2 56.9	35	19 12	19 41	20 18	09 46	10 48	11 48	12 46	
02	210 17.1	49.3	305 30.6	12.5	4 22.7	10.2 56.8	30	18 59	19 27	20 00	09 52	10 52	11 50	12 45	
03	225 16.9	49.5	320 02.1	12.6	4 12.5	10.2 56.8	20	18 38	19 02	19 31	10 02	10 58	11 52	12 44	
04	240 16.8	49.7	334 33.7	12.7	4 02.3	10.3 56.8	N 10	18 19	18 42	19 09	10 11	11 04	11 54	12 43	
05	255 16.7	50.0	349 05.4	12.7	3 52.0	10.2 56.7	0	18 02	18 25	18 51	10 19	11 09	11 56	12 42	
06	270 16.6	N22 50.2	3 37.1	12.7	S 3 41.8	10.2 56.7	S 10	17 45	18 08	18 34	10 27	11 14	11 58	12 41	
07	285 16.5	50.4	18 08.8	12.9	3 31.6	10.3 56.7	20	17 27	17 51	18 19	10 35	11 19	12 00	12 39	
08	300 16.4	50.6	32 40.7	12.8	3 21.3	10.2 56.6	30	17 07	17 33	18 03	10 45	11 25	12 02	12 38	
09	315 16.2	50.9	47 12.5	12.9	3 11.1	10.3 56.6	35	16 55	17 23	17 54	10 50	11 29	12 04	12 37	
10	330 16.1	51.1	61 44.4	13.0	3 00.8	10.2 56.6	40	16 41	17 12	17 45	10 57	11 32	12 05	12 36	
11	345 16.0	51.3	76 16.4	13.0	2 50.6	10.3 56.5	45	16 25	16 59	17 36	11 04	11 37	12 07	12 35	
12	0 15.9	N22 51.5	90 48.4	13.0	S 2 40.3	10.2 56.5	S 50	16 05	16 43	17 24	11 12	11 42	12 09	12 34	
13	15 15.8	51.7	105 20.4	13.1	2 30.1	10.3 56.5	52	15 56	16 36	17 19	11 16	11 45	12 10	12 33	
14	30 15.6	52.0	119 52.5	13.1	2 19.8	10.2 56.4	54	15 45	16 28	17 14	11 21	11 47	12 11	12 33	
15	45 15.5	52.2	134 24.6	13.2	2 09.6	10.3 56.4	56	15 33	16 19	17 08	11 26	11 50	12 12	12 32	
16	60 15.4	52.4	148 56.8	13.2	1 59.3	10.2 56.4	58	15 19	16 10	17 02	11 31	11 54	12 13	12 31	
17	75 15.3	52.6	163 29.0	13.3	1 49.1	10.2 56.3	S 60	15 02	15 59	16 55	11 37	11 57	12 15	12 31	
18	90 15.2	N22 52.8	178 01.3	13.3	S 1 38.9	10.3 56.3									
19	105 15.0	53.1	192 33.6	13.3	1 28.6	10.2 56.3									
20	120 14.9	53.3	207 05.9	13.4	1 18.4	10.2 56.2									
21	135 14.8	53.5	221 38.3	13.4	1 08.2	10.2 56.2									
22	150 14.7	53.7	236 10.7	13.5	0 58.0	10.3 56.2									
23	165 14.6	53.9	250 43.2	13.5	0										

T. M. G.	ARIES			VENUS -4.0			MARTE +1.3			JUPITER -1.5			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
J U E V E S	9 00	257 15.0	226 06.6 N 9	58.3	226 55.8 N11	15.3	183 46.6 N22	05.2	121 39.2 N17	53.6	Acamar	315 39.3 S40	23.6						
	01	272 17.4	241 06.9	59.0	241 56.5	15.9	198 48.4	05.3	136 41.4	53.6	Achernar	335 47.4 S57	20.9						
	02	287 19.9	256 07.1	9 59.6	256 57.2	16.6	213 50.3	05.4	151 43.6	53.5	Acrux	173 39.4 S62	58.8						
	03	302 22.3	271 07.4	10 00.3	271 57.9	17.2	228 52.1	05.4	166 45.9	53.4	Adhara	255 34.2 S28	56.7						
	04	317 24.8	286 07.6	01.0	286 58.6	17.9	243 54.0	05.5	181 48.1	53.4	Aldebaran	291 20.9 N16	27.7						
	05	332 27.3	301 07.9	01.6	301 59.3	18.5	258 55.8	05.6	196 50.3	53.3									
	06	347 29.7	316 08.2 N10	02.3	317 00.0 N11	19.2	273 57.6 N22	05.7	211 52.6 N17	53.2	Alioth	166 44.3 N56	05.2						
	07	2 32.2	331 08.4	03.0	332 00.7	19.8	288 59.5	05.7	226 54.8	53.2	Alkaid	153 20.0 N49	25.8						
	08	17 34.7	346 08.7	03.6	347 01.4	20.5	304 01.3	05.8	241 57.0	53.1	Al Na'ir	28 17.6 S47	03.9						
	09	32 37.1	1 08.9	04.3	2 02.1	21.2	319 03.2	05.9	256 59.3	53.0	Alnilam	276 14.2 S 1	13.1						
	10	47 39.6	16 09.2	04.9	17 02.8	21.8	334 05.0	05.9	272 01.5	53.0	Alphard	218 22.9 S 8	33.8						
	11	62 42.1	31 09.4	05.6	32 03.5	22.5	349 06.9	06.0	287 03.7	52.9									
	12	77 44.5	46 09.6 N10	06.3	47 04.2 N11	23.1	4 08.7 N22	06.1	302 06.0 N17	52.8	Alphecca	126 33.7 N26	47.5						
	13	92 47.0	61 09.9	06.9	62 04.8	23.8	19 10.5	06.1	317 08.2	52.8	Alpheratz	358 11.6 N28	57.8						
	14	107 49.5	76 10.1	07.6	77 05.5	24.4	34 12.4	06.2	332 10.4	52.7	Altair	62 34.4 N 8	48.6						
	15	122 51.9	91 10.4	08.3	92 06.2	25.1	49 14.2	06.3	347 12.7	52.6	Ankaa	353 42.6 S42	25.5						
	16	137 54.4	106 10.6	08.9	107 06.9	25.7	64 16.1	06.3	2 14.9	52.6	Antares	112 59.2 S26	22.9						
	17	152 56.8	121 10.9	09.6	122 07.6	26.4	79 17.9	06.4	17 17.1	52.5									
	18	167 59.3	136 11.1 N10	10.3	137 08.3 N11	27.0	94 19.7 N22	06.5	32 19.4 N17	52.4	Arcturus	146 20.3 N19	18.1						
	19	183 01.8	151 11.3	10.9	152 09.0	27.7	109 21.6	06.5	47 21.6	52.4	Atria	108 24.8 S68	59.2						
	20	198 04.2	166 11.6	11.6	167 09.7	28.3	124 23.4	06.6	62 23.8	52.3	Avior	234 29.5 S59	26.6						
	21	213 06.7	181 11.8	12.3	182 10.4	29.0	139 25.3	06.7	77 26.1	52.3	Bellatrix	279 01.5 N 6	19.7						
	22	228 09.2	196 12.1	12.9	197 11.1	29.6	154 27.1	06.8	92 28.3	52.2	Betelgeuse	271 31.0 N 7	24.1						
23	243 11.6	211 12.3	13.6	212 11.8	30.3	169 29.0	06.8	107 30.5	52.1										
V I E R N E S	10 00	258 14.1	226 12.5 N10	14.3	227 12.5 N11	30.9	184 30.8 N22	06.9	122 32.8 N17	52.1	Canopus	264 08.7 S52	41.2						
	01	273 16.6	241 12.8	14.9	242 13.2	31.6	199 32.6	07.0	137 35.0	52.0	Capella	281 15.0 N45	58.4						
	02	288 19.0	256 13.0	15.6	257 13.9	32.2	214 34.5	07.0	152 37.2	51.9	Deneb	49 49.6 N45	11.9						
	03	303 21.5	271 13.2	16.3	272 14.6	32.9	229 36.3	07.1	167 39.5	51.9	Denebola	183 01.3 N14	41.9						
	04	318 24.0	286 13.5	16.9	287 15.2	33.5	244 38.2	07.2	182 41.7	51.8	Diphda	349 23.2 S18	06.5						
	05	333 26.4	301 13.7	17.6	302 15.9	34.2	259 40.0	07.2	197 43.9	51.7									
	06	348 28.9	316 13.9 N10	18.3	317 16.6 N11	34.8	274 41.9 N22	07.3	212 46.2 N17	51.7	Dubhe	194 25.0 N61	52.6						
	07	3 31.3	331 14.2	18.9	332 17.3	35.5	289 43.7	07.4	227 48.4	51.6	Elnath	278 47.3 N28	35.2						
	08	18 33.8	346 14.4	19.6	347 18.0	36.1	304 45.5	07.4	242 50.6	51.5	Eltanin	90 58.2 N51	29.6						
	09	33 36.3	1 14.6	20.3	2 18.7	36.8	319 47.4	07.5	257 52.8	51.5	Enif	34 13.6 N 9	46.3						
	10	48 38.7	16 14.9	21.0	17 19.4	37.4	334 49.2	07.6	272 55.1	51.4	Fomalhaut	15 53.8 S29	44.3						
	11	63 41.2	31 15.1	21.6	32 20.1	38.0	349 51.1	07.6	287 57.3	51.3									
	12	78 43.7	46 15.3 N10	22.3	47 20.8 N11	38.7	4 52.9 N22	07.7	302 59.5 N17	51.3	Gacrux	172 30.9 S56	59.5						
	13	93 46.1	61 15.5	23.0	62 21.5	39.3	19 54.7	07.8	318 01.8	51.2	Gienah	176 20.1 S17	25.2						
	14	108 48.6	76 15.8	23.6	77 22.2	40.0	34 56.6	07.8	333 04.0	51.1	Hadar	149 25.9 S60	16.1						
	15	123 51.1	91 16.0	24.3	92 22.9	40.6	49 58.4	07.9	348 06.2	51.1	Hamal	328 31.6 N23	21.2						
	16	138 53.5	106 16.2	25.0	107 23.6	41.3	65 00.3	08.0	3 08.5	51.0	Kaus Aust.	84 19.4 S34	23.6						
	17	153 56.0	121 16.4	25.7	122 24.2	41.9	80 02.1	08.0	18 10.7	50.9									
	18	168 58.4	136 16.6 N10	26.3	137 24.9 N11	42.6	95 04.0 N22	08.1	33 12.9 N17	50.9	Kochab	137 18.1 N74	15.1						
	19	184 00.9	151 16.9	27.0	152 25.6	43.2	110 05.8	08.2	48 15.1	50.8	Markab	14 05.3 N15	05.0						
	20	199 03.4	166 17.1	27.7	167 26.3	43.9	125 07.6	08.2	63 17.4	50.7	Menkar	314 43.7 N 4	00.0						
	21	214 05.8	181 17.3	28.4	182 27.0	44.5	140 09.5	08.3	78 19.6	50.7	Menkent	148 39.3 S36	15.7						
	22	229 08.3	196 17.5	29.0	197 27.7	45.2	155 11.3	08.4	93 21.8	50.6	Miaplacidus	221 45.8 S69	37.9						
23	244 10.8	211 17.7	29.7	212 28.4	45.8	170 13.2	08.4	108 24.1	50.5										
S A B	11 00	259 13.2	226 17.9 N10	30.4	227 29.1 N11	46.4	185 15.0 N22	08.5	123 26.3 N17	50.5	Mirfak	309 19.7 N49	46.7						
	01	274 15.7	241 18.2	31.0	242 29.8	47.1	200 16.8	08.6	138 28.5	50.4	Nunki	76 31.6 S26	19.4						
	02	289 18.2	256 18.4	31.7	257 30.5	47.7	215 18.7	08.6	153 30.7	50.3	Peacock	54 01.5 S56	48.2						
	03	304 20.6	271 18.6	32.4	272 31.2	48.4	230 20.5	08.7	168 33.0	50.3	Pollux	244 01.2 N28	04.8						
	04	319 23.1	286 18.8	33.1	287 31.9	49.0	245 22.4	08.8	183 35.2	50.2	Procyon	245 28.4 N 5	16.9						
	05	334 25.6	301 19.0	33.7	302 32.5	49.7	260 24.2	08.8	198 37.4	50.1									
	06	349 28.0	316 19.2 N10	34.4	317 33.2 N11	50.3	275 26.1 N22	08.9	213 39.7 N17	50.1	Rasalhague	96 31.3 N12	34.6						
	07	4 30.5	331 19.4	35.1	332 33.9	50.9	290 27.9	09.0	228 41.9	50.0	Regulus	208 12.5 N12	04.6						
	08	19 32.9	346 19.6	35.8	347 34.6	51.6	305 29.7	09.0	243 44.1	49.9	Rigel	281 38.5 S 8	13.8						
	09	34 35.4	1 19.8	36.4	2 35.3	52.2	320 31.6	09.1	258 46.3	49.9	Rigel Kent.	140 28.2 S60	44.7						
	10	49 37.9	16 20.0	37.1	17 36.0	52.9	335 33.4	09.2	273 48.6	49.8	Sabik	102 43.3 S15	41.8						
	11	64 40.3	31 20.2	37.8	32 36.7	53.5	350 35.3	09.2	288 50.8	49.7									
	12	79 42.8	46 20.4 N10	38.5	47 37.4 N11	54.2	5 37.1 N22	09.3	303 53.0 N17	49.7	Schedar	350 11.6 N56	24.6						
	13	94 45.3	61 20.7	39.2	62 38.1	54.8	20 39.0	09.4	318 55.3	49.6	Shaula	96 58.3 S37	05.2						
	14	109 47.7	76 20.9	39.8	77 38.8	55.4	35 40.8	09.4	333 57.5	49.5	Sirius	258 58.0 S16	41.3						
	15	124 50.2	91 21.1	40.5	92 39.5	56.1	50 42.6	09.5	348 59.7	49.5	Spica	158 59.7 S11	02.7						
	16	139 52.7	106 21.3	41.2	107 40.2	56.7	65 44.5	09.6	4 01.9	49.4	Suhail	223 12.6 S43	20.8						
	17	154																	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna						
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	9	10	11	12		
d ^h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
J U E V E S	9 00	180 14.4	N22 54.1	265 15.7	13.5 S	0 37.5	10.1	56.1	N 72	□	□	□	00 28	00 22	00 15	00 08	
	01	195 14.3	54.4	279 48.2	13.5	0 27.4	10.2	56.1	N 70	□	□	□	00 27	00 26	00 25	00 25	
	02	210 14.2	54.6	294 20.7	13.6	0 17.2	10.2	56.0	68	□	□	□	00 26	00 30	00 34	00 39	
	03	225 14.1	54.8	308 53.3	13.7	S 0 07.0	10.2	56.0	66	////	////	00 29	00 26	00 33	00 41	00 50	
	04	240 13.9	55.0	323 26.0	13.6	N 0 03.2	10.1	56.0	64	////	////	01 39	00 25	00 36	00 47	00 59	
	05	255 13.8	55.2	337 58.6	13.7	0 13.3	10.2	55.9	62	////	////	02 14	00 25	00 38	00 52	01 07	
	06	270 13.7	N22 55.4	352 31.3	13.7	N 0 23.5	10.1	55.9	60	////	01 03	02 39	00 24	00 40	00 56	01 14	
	07	285 13.6	55.6	7 04.0	13.8	0 33.6	10.1	55.9	N 58	////	01 46	02 59	00 24	00 42	01 00	01 20	
	08	300 13.5	55.8	21 36.8	13.8	0 43.7	10.1	55.8	56	////	02 14	03 15	00 24	00 44	01 04	01 25	
	09	315 13.3	56.0	36 09.6	13.8	0 53.8	10.1	55.8	54	00 57	02 35	03 29	00 24	00 45	01 07	01 30	
	10	330 13.2	56.2	50 42.4	13.8	1 03.9	10.1	55.8	52	01 37	02 53	03 41	00 23	00 46	01 10	01 35	
	11	345 13.1	56.4	65 15.2	13.9	1 14.0	10.0	55.8	50	02 03	03 07	03 51	00 23	00 48	01 13	01 39	
	12	0 13.0	N22 56.7	79 48.1	13.9	N 1 24.0	10.1	55.7	45	02 47	03 36	04 13	00 23	00 50	01 18	01 47	
	13	15 12.9	56.9	94 21.0	13.9	1 34.1	10.0	55.7	N 40	03 17	03 58	04 31	00 22	00 53	01 23	01 55	
	14	30 12.7	57.1	108 53.9	13.9	1 44.1	10.0	55.7	35	03 39	04 16	04 45	00 22	00 55	01 27	02 01	
	15	45 12.6	57.3	123 26.8	14.0	1 54.1	10.0	55.6	30	03 58	04 31	04 58	00 21	00 56	01 31	02 07	
	16	60 12.5	57.5	137 59.8	14.0	2 04.1	9.9	55.6	20	04 26	04 55	05 20	00 21	00 59	01 38	02 16	
	17	75 12.4	57.7	152 32.8	14.0	2 14.0	10.0	55.6	N 10	04 48	05 15	05 38	00 20	01 02	01 43	02 25	
	18	90 12.2	N22 57.9	167 05.8	14.0	N 2 24.0	9.9	55.6	0	05 07	05 33	05 56	00 20	01 05	01 49	02 33	
	19	105 12.1	58.1	181 38.8	14.0	2 33.9	9.9	55.5	S 10	05 24	05 50	06 13	00 20	01 07	01 54	02 41	
	20	120 12.0	58.3	196 11.8	14.1	2 43.8	9.9	55.5	20	05 40	06 07	06 31	00 19	01 10	02 00	02 50	
	21	135 11.9	58.5	210 44.9	14.1	2 53.7	9.9	55.5	30	05 56	06 25	06 52	00 19	01 13	02 07	03 00	
	22	150 11.7	58.7	225 18.0	14.1	3 03.6	9.8	55.4	35	06 04	06 36	07 04	00 18	01 15	02 11	03 05	
23	165 11.6	58.9	239 51.1	14.1	3 13.4	9.8	55.4	40	06 13	06 47	07 18	00 18	01 17	02 15	03 12		
10 00	180 11.5	N22 59.1	254 24.2	14.2	N 3 23.2	9.8	55.4	45	06 23	07 01	07 34	00 18	01 20	02 20	03 20		
01	195 11.4	59.3	268 57.4	14.1	3 33.0	9.8	55.4	S 50	06 35	07 16	07 54	00 17	01 23	02 26	03 29		
02	210 11.2	59.5	283 30.5	14.2	3 42.8	9.7	55.3	52	06 40	07 23	08 04	00 17	01 24	02 29	03 33		
03	225 11.1	59.7	298 03.7	14.2	3 52.5	9.8	55.3	54	06 45	07 31	08 15	00 17	01 26	02 32	03 38		
04	240 11.0	59.8	312 36.9	14.2	4 02.3	9.7	55.3	56	06 51	07 40	08 27	00 17	01 27	02 36	03 43		
05	255 10.9	00.0	327 10.1	14.2	4 12.0	9.6	55.3	58	06 58	07 50	08 41	00 17	01 29	02 40	03 49		
06	270 10.8	N23 00.2	341 43.3	14.2	N 4 21.6	9.7	55.2	S 60	07 05	08 02	08 58	00 16	01 31	02 44	03 56		
07	285 10.6	00.4	356 16.5	14.2	4 31.3	9.6	55.2	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna					
08	300 10.5	00.6	10 49.7	14.3	4 40.9	9.6	55.2	9	10	11	12	9	10	11	12		
09	315 10.4	00.8	25 23.0	14.2	4 50.5	9.5	55.2	N 72	h m	h m	h m	h m	h m	h m	h m		
10	330 10.3	01.0	39 56.2	14.3	5 00.0	9.6	55.1	N 70	□	□	□	13 01	14 39	16 18	17 58		
11	345 10.1	01.2	54 29.5	14.3	5 09.6	9.5	55.1	68	□	□	□	12 58	14 31	16 02	17 33		
12	0 10.0	N23 01.4	69 02.8	14.2	N 5 19.1	9.4	55.1	66	23 36	////	////	12 57	14 24	15 50	17 15		
13	15 09.9	01.6	83 36.0	14.3	5 28.5	9.5	55.1	64	22 21	////	////	12 55	14 19	15 40	17 00		
14	30 09.8	01.8	98 09.3	14.3	5 38.0	9.4	55.1	62	21 45	////	////	12 54	14 14	15 32	16 48		
15	45 09.6	01.9	112 42.6	14.3	5 47.4	9.4	55.0	60	21 20	22 58	////	12 53	14 10	15 25	16 38		
16	60 09.5	02.1	141 49.2	14.3	6 06.1	9.3	55.0	N 58	21 01	22 14	////	12 52	14 06	15 18	16 29		
17	75 09.4	02.3	156 22.5	14.3	N 6 15.4	9.3	55.0	56	20 44	21 45	////	12 51	14 00	15 08	16 14		
18	90 09.3	N23 02.5	170 55.8	14.4	6 24.7	9.2	54.9	54	20 30	21 24	23 03	12 50	13 58	15 04	16 08		
19	105 09.1	02.7	185 29.2	14.3	6 33.9	9.3	54.9	52	20 18	21 07	22 22	12 49	13 56	15 00	16 03		
20	120 09.0	02.9	200 02.5	14.3	6 43.2	9.1	54.9	50	20 08	20 52	21 56	12 49	13 53	14 56	15 58		
21	135 08.9	03.0	214 35.8	14.3	6 52.3	9.2	54.9	45	19 46	20 23	21 12	12 48	13 49	14 49	15 48		
22	150 08.8	03.2	229 09.1	14.4	7 01.5	9.1	54.9	N 40	19 28	20 01	20 42	12 47	13 45	14 43	15 39		
23	165 08.6	03.4	243 42.5	14.3	N 7 10.6	9.0	54.8	35	19 13	19 43	20 19	12 46	13 42	14 37	15 31		
11 00	180 08.5	N23 03.6	258 15.8	14.3	7 19.6	9.1	54.8	30	19 01	19 28	20 01	12 45	13 39	14 32	15 25		
01	195 08.4	03.8	272 49.1	14.3	7 28.7	9.0	54.8	20	18 39	19 03	19 33	12 44	13 34	14 24	15 13		
02	210 08.2	03.9	287 22.4	14.3	7 37.7	8.9	54.8	N 10	18 20	18 43	19 10	12 43	13 30	14 17	15 04		
03	225 08.1	04.1	301 55.7	14.4	7 46.6	8.9	54.8	0	18 03	18 25	18 52	12 42	13 26	14 10	14 54		
04	240 08.0	04.3	316 29.1	14.3	7 55.5	8.9	54.7	S 10	17 46	18 09	18 35	12 41	13 22	14 03	14 45		
05	255 07.9	04.5	331 02.4	14.3	N 8 04.4	8.8	54.7	20	17 28	17 52	18 19	12 39	13 18	13 56	14 35		
06	270 07.7	N23 04.7	345 35.7	14.3	8 13.2	8.8	54.7	30	17 07	17 33	18 03	12 38	13 13	13 48	14 24		
07	285 07.6	04.8	10 09.0	14.3	8 22.0	8.8	54.7	35	16 55	17 23	17 54	12 37	13 10	13 43	14 18		
08	300 07.5	05.0	14 42.3	14.3	8 30.8	8.7	54.7	40	16 41	17 11	17 45	12 36	13 07	13 38	14 10		
09	315 07.4	05.2	29 15.6	14.3	8 39.5	8.7	54.6	45	16 24	16 58	17 35	12 35	13 03	13 32	14 02		
10	330 07.2	05.4	43 48.9	14.3	8 48.2	8.6	54.6	S 50	16 04	16 42	17 24	12 34	12 59	13 24	13 51		
11	345 07.1	05.5	58 22.2	14.3	N 8 56.8	8.6	54.6	52	15 54	16 35	17 19	12 33	12 57	13 21	13 47		
12	0 07.0	N23 05.7	72 55.5	14.2	9 05.4	8.5	54.6	54	15 44	16 27	17 13	12 33	12 54	13 17	13 42		
13	15 06.8	05.9	87 28.7	14.3	9 13.9	8.5	54.6	56	15 31	16 18	17 07	12 32	12 52	13 13	13 36		
14	30 06.7	06.0	102 02.0	14.2	9 22.4	8.5	54.6	58	15 17	16 08	17 00	12 31	12 49	13 08	13 29		
15	45 06.6	06.2	116 35.2	14.3	9 30.9	8.4	54.5	S 60	15 00	15 57	16 53	12 31	12 46	13 03	13 22		
16	60 06.5	06.4	131 08.5	14.2	9 39.3	8.4	54.5	Lat.	SOL		LUNA						
17	75 06.3	06.5	145 41.7	14.3	N 9 47.7	8.3	54.5	Día	E.T. (+)	Pas. Mer.	Pas. Mer.	Mer. Inf.	Edad.	Fase			
18	90 06.2	N23 06.7	160 15.0	14.2	9 56.0	8.3	54.5	9	00 58	00 52	11 59	06 31	18 53	22			
19	105 06.1	06.9	174 48.2	14.2	10 04.3	8.2	54.5	10	00 46	00 40	11 59	07 15	19 37	23			

T. M. G.	ARIES			VENUS -4.0			MARTE +1.3			JUPITER -1.5			SATURNO +0.6			ESTRELLAS															
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.													
D O M I N G O	12 00	260 12.4	226 22.8 N10	46.6	227 45.7 N12	01.8	185 59.2 N22	10.1	124 19.8 N17	48.9	Acomar	315 39.3 S40	23.6																		
	01	275 14.8	241 23.0	47.3	242 46.4	02.5	201 01.1	10.2	139 22.0	48.8	Achernar	335 47.3 S57	20.8																		
	02	290 17.3	256 23.2	48.0	257 47.1	03.1	216 02.9	10.2	154 24.2	48.7	Acruz	173 39.4 S62	58.8																		
	03	305 19.8	271 23.4	48.7	272 47.7	03.7	231 04.7	10.3	169 26.4	48.7	Adhara	255 34.2 S28	56.7																		
	04	320 22.2	286 23.6	49.3	287 48.4	04.4	246 06.6	10.4	184 28.7	48.6	Aldebaran	291 20.9 N16	27.7																		
	05	335 24.7	301 23.8	50.0	302 49.1	05.0	261 08.4	10.4	199 30.9	48.5																					
	06	350 27.2	316 24.0 N10	50.7	317 49.8 N12	05.7	276 10.3 N22	10.5	214 33.1 N17	48.5	Alioth	166 44.3 N56	05.2																		
	07	5 29.6	331 24.2	51.4	332 50.5	06.3	291 12.1	10.6	229 35.3	48.4	Alkaid	153 20.0 N49	25.8																		
	08	20 32.1	346 24.4	52.1	347 51.2	06.9	306 14.0	10.6	244 37.6	48.3	Al Na'ir	28 17.6 S47	03.9																		
	09	35 34.5	1 24.5	52.7	2 51.9	07.6	321 15.8	10.7	259 39.8	48.3	Alnilam	276 14.2 S 1	13.1																		
	10	50 37.0	16 24.7	53.4	17 52.6	08.2	336 17.6	10.8	274 42.0	48.2	Alphard	218 22.9 S 8	33.8																		
	11	65 39.5	31 24.9	54.1	32 53.3	08.8	351 19.5	10.8	289 44.2	48.1																					
	12	80 41.9	46 25.1 N10	54.8	47 54.0 N12	09.5	6 21.3 N22	10.9	304 46.5 N17	48.0	Alphecca	126 33.7 N26	47.5																		
	13	95 44.4	61 25.3	55.5	62 54.7	10.1	21 23.2	11.0	319 48.7	48.0	Alpheratz	358 11.6 N28	57.8																		
	14	110 46.9	76 25.5	56.1	77 55.3	10.8	36 25.0	11.0	334 50.9	47.9	Altair	62 34.4 N 8	48.6																		
	15	125 49.3	91 25.6	56.8	92 56.0	11.4	51 26.9	11.1	349 53.1	47.8	Ankaa	353 42.6 S42	25.5																		
	16	140 51.8	106 25.8	57.5	107 56.7	12.0	66 28.7	11.2	4 55.4	47.8	Antares	112 59.2 S26	22.9																		
	17	155 54.3	121 26.0	58.2	122 57.4	12.7	81 30.5	11.2	19 57.6	47.7																					
	18	170 56.7	136 26.2 N10	58.9	137 58.1 N12	13.3	96 32.4 N22	11.3	34 59.8 N17	47.6	Arcturus	146 20.3 N19	18.1																		
	19	185 59.2	151 26.4	59.6	152 58.8	13.9	111 34.2	11.4	50 02.0	47.6	Atria	108 24.8 S68	59.2																		
	20	201 01.7	166 26.5	60.2	167 59.5	14.6	126 36.1	11.4	65 04.3	47.5	Avior	234 29.5 S59	26.5																		
	21	216 04.1	181 26.7	60.9	183 00.2	15.2	141 37.9	11.5	80 06.5	47.4	Bellatrix	279 01.4 N 6	19.7																		
	22	231 06.6	196 26.9	61.6	198 00.9	15.8	156 39.8	11.6	95 08.7	47.4	Betelgeuse	271 31.0 N 7	24.1																		
23	246 09.0	211 27.1	62.3	213 01.5	16.5	171 41.6	11.6	110 10.9	47.3																						
L U N E S	13 00	261 11.5	226 27.2 N11	03.0	228 02.2 N12	17.1	186 43.4 N22	11.7	125 13.2 N17	47.2	Canopus	264 08.7 S52	41.2																		
	01	276 14.0	241 27.4	03.7	243 02.9	17.7	201 45.3	11.8	140 15.4	47.2	Capella	281 15.0 N45	58.4																		
	02	291 16.4	256 27.6	04.3	258 03.6	18.4	216 47.1	11.8	155 17.6	47.1	Deneb	49 49.0 N45	11.9																		
	03	306 18.9	271 27.7	05.0	273 04.3	19.0	231 49.0	11.9	170 19.8	47.0	Denebola	183 01.3 N14	41.9																		
	04	321 21.4	286 27.9	05.7	288 05.0	19.6	246 50.8	11.9	185 22.0	47.0	Diphda	349 23.2 S18	06.5																		
	05	336 23.8	301 28.1	06.4	303 05.7	20.3	261 52.6	12.0	200 24.3	46.9																					
	06	351 26.3	316 28.3 N11	07.1	318 06.4 N12	20.9	276 54.5 N22	12.1	215 26.5 N17	46.8	Dubhe	194 25.0 N61	52.6																		
	07	6 28.8	331 28.4	07.8	333 07.1	21.5	291 56.3	12.1	230 28.7	46.8	Elnath	278 47.0 N28	35.2																		
	08	21 31.2	346 28.6	08.5	348 07.8	22.2	306 58.2	12.2	245 30.9	46.7	Eltanin	90 58.2 N51	29.6																		
	09	36 33.7	1 28.8	09.1	3 08.4	22.8	322 00.0	12.3	260 33.2	46.6	Enif	34 13.6 N 9	46.3																		
	10	51 36.2	16 28.9	09.8	18 09.1	23.4	337 01.9	12.3	275 35.4	46.5	Fomalhaut	15 53.8 S29	44.3																		
	11	66 38.6	31 29.1	10.5	33 09.8	24.1	352 03.7	12.4	290 37.6	46.5																					
	12	81 41.1	46 29.3 N11	11.2	48 10.5 N12	24.7	7 05.5 N22	12.5	305 39.8 N17	46.4	Gacrux	172 30.9 S56	59.5																		
	13	96 43.5	61 29.4	11.9	63 11.2	25.3	22 07.4	12.5	320 42.1	46.3	Gienah	176 20.1 S17	25.2																		
	14	111 46.0	76 29.6	12.6	78 11.9	25.9	37 09.2	12.6	335 44.3	46.3	Hadar	149 25.9 S60	16.1																		
	15	126 48.5	91 29.7	13.3	93 12.6	26.6	52 11.1	12.7	350 46.5	46.2	Hamal	328 31.6 N23	21.2																		
	16	141 50.9	106 29.9	13.9	108 13.3	27.2	67 12.9	12.7	5 48.7	46.1	Kaus Aust.	84 19.4 S34	23.6																		
	17	156 53.4	121 30.1	14.6	123 14.0	27.8	82 14.8	12.8	20 50.9	46.1																					
	18	171 55.9	136 30.2 N11	15.3	138 14.6 N12	28.5	97 16.6 N22	12.9	35 53.2 N17	46.0	Kochab	137 18.1 N74	15.1																		
	19	186 58.3	151 30.4	16.0	153 15.3	29.1	112 18.4	12.9	50 55.4	45.9	Markab	14 05.3 N15	05.0																		
	20	202 00.8	166 30.5	16.7	168 16.0	29.7	127 20.3	13.0	65 57.6	45.9	Menkar	314 43.7 N 4	00.0																		
	21	217 03.3	181 30.7	17.4	183 16.7	30.4	142 22.1	13.0	80 59.8	45.8	Menkent	148 39.3 S36	15.7																		
	22	232 05.7	196 30.8	18.1	198 17.4	31.0	157 24.0	13.1	96 02.0	45.7	Miaplacidus	221 45.8 S69	37.8																		
23	247 08.2	211 31.0	18.8	213 18.1	31.6	172 25.8	13.2	111 04.3	45.7																						
M A R T E S	14 00	262 10.6	226 31.1 N11	19.4	228 18.8 N12	32.2	187 27.7 N22	13.2	126 06.5 N17	45.6	Mirfak	309 19.6 N49	46.7																		
	01	277 13.1	241 31.3	20.1	243 19.5	32.9	202 29.5	13.3	141 08.7	45.5	Nunki	76 31.6 S26	19.4																		
	02	292 15.6	256 31.5	20.8	258 20.2	33.5	217 31.3	13.4	156 10.9	45.4	Peacock	54 01.5 S56	48.2																		
	03	307 18.0	271 31.6	21.5	273 20.8	34.1	232 33.2	13.4	171 13.2	45.4	Pollux	244 01.2 N28	04.8																		
	04	322 20.5	286 31.8	22.2	288 21.5	34.7	247 35.0	13.5	186 15.4	45.3	Procyon	245 28.4 N 5	16.9																		
	05	337 23.0	301 31.9	22.9	303 22.2	35.4	262 36.9	13.6	201 17.6	45.2																					
	06	352 25.4	316 32.1 N11	23.6	318 22.9 N12	36.0	277 38.7 N22	13.6	216 19.8 N17	45.2	Rasalhague	96 31.3 N12	34.7																		
	07	7 27.9	331 32.2	24.3	333 23.6	36.6	292 40.6	13.7	231 22.0	45.1	Regulus	208 12.5 N12	04.6																		
	08	22 30.4	346 32.3	25.0	348 24.3	37.3	307 42.4	13.7	246 24.3	45.0	Rigel	281 38.5 S 8	13.8																		
	09	37 32.8	1 32.5	25.6	3 25.0	37.9	322 44.2	13.8	261 26.5	45.0	Rigil Kent.	140 28.2 S60	44.7																		
	10	52 35.3	16 32.6	26.3	18 25.7	38.5	337 46.1	13.9	276 28.7	44.9	Sabik	102 43.3 S15	41.8																		
	11	67 37.8	31 32.8	27.0	33 26.3	39.1	352 47.9	13.9	291 30.9	44.8																					
	12	82 40.2	46 32.9 N11	27.7	48 27.0 N12	39.8	7 49.8 N22	14.0	306 33.1 N17	44.8	Schedar	350 11.6 N56	24.6																		
	13	97 42.7	61 33.1	28.4	63 27.7	40.4	22 51.6	14.1	321 35.4	44.7	Shaula	96 58.3 S37	05.2																		
	14	112 45.1	76 33.2	29.1	78 28.4	41.0	37 53.5	14.1	336 37.6	44.6	Sirius	258 58.0 S16	41.3																		
	15	127 47.6	91 33.4	29.8	93 29.1	41.6	52 55.3	14.2	351 39.8	44.5	Spica	158 59.7 S11	02.7																		
	16	142 50.1	106 33.5	30.5	108 29.8	42.3	67 57.1	14.3	6 42.0	44.5	Suhail	223 12.6 S43	20.8																		
	17	157 52.5	121 33.6	31.2	123 30.5	42.9	82 59.0	14.3	21 44.2	44.4																					
	18	172 55.0	136 33.8 N11	31.9	138 31.2 N12	43.5	98 00.8 N22	14.4	36 46.5 N17	44.3	Vega	80 56.9 N38	45.8																		
	19	187 57.5	151 33.9	32.5	153 31.8	44.1	113 02.7	14.4	51 48.7	44.3	Zuben'ubi	137 35.2 S15	56.9																		
	20	202 59.9	166 34.0	33.2	168 32.5	44.7	128 04.5	14.5	66 50.9	44.2																					
	21	218 02.4	181 34.2	33.9	183 33.2	45.4	143 06.4	14.6	81 53.1	44.1																					
	22	233 04.9	196 34.3	34.6	198 33.9	46.0	158 08.2	14.6	96 55.3	44.1																					
23	248 07.3	211 34.5	35.3	213 34.6	46.6	173 10.0	14.7	111 57.5	44.0																						
Pas. Mer. 6 34.2		v 0.2 d 0.7			v 0.7 d 0.6			v 1.8 d 0.1			v 2.2 d 0.1			<table border="0"> <tr> <td></td> <td>A. H. S.</td> <td>Pas. Mer.</td> </tr> <tr> <td>Venus</td> <td>325 15.7</td> <td>8 54</td> </tr> <tr> <td>Marte</td> <td>326 50.7</td> <td>8 47</td> </tr> <tr> <td>Júpiter</td> <td>285 31.9</td> <td>11 32</td> </tr> <tr> <td>Saturno</td> <td>224 01.6</td> <td>15 37</td> </tr> </table>				A. H. S.	Pas. Mer.	Venus	325 15.7	8 54	Marte	326 50.7	8 47	Júpiter	285 31.9	11 32	Saturno	224 01.6	15 37
	A. H. S.	Pas. Mer.																													
Venus	325 15.7	8 54																													
Marte	326 50.7	8 47																													
Júpiter	285 31.9	11 32																													
Saturno	224 01.6	15 37																													

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		12		13		14		15	
											h m	h m	h m	h m	h m	h m	h m	h m
DOMINGO	12 00	180 05.4	N23 07.7	233 00.9	14.2	N10 36.9	8.0	54.4	N 72	□	□	□	00 08	{ 00 23 } { 01 50 }	23 30	□		
	01	195 05.3	07.9	247 34.1	14.1	10 44.9	8.0	54.4	N 70	□	□	□	00 25	00 26	00 29	00 37		
	02	210 05.2	08.0	262 07.2	14.2	10 52.9	8.0	54.4	68	□	□	□	00 39	00 46	00 56	01 14		
	03	225 05.1	08.2	276 40.4	14.1	11 00.9	7.9	54.4	66	□	□	□	00 50	01 01	01 17	01 40		
	04	240 04.9	08.4	291 13.5	14.1	11 08.8	7.8	54.4	64	////	////	01 35	00 59	01 14	01 34	02 00		
	05	255 04.8	08.5	305 46.6	14.1	11 16.6	7.8	54.4	62	////	////	02 11	01 07	01 25	01 48	02 16		
	06	270 04.7	N23 08.7	320 19.7	14.1	N11 24.4	7.7	54.3	60	////	00 57	02 37	01 14	01 34	01 59	02 30		
	07	285 04.5	08.8	334 52.8	14.0	11 32.1	7.7	54.3	N 58	////	01 43	02 57	01 20	01 43	02 09	02 42		
	08	300 04.4	09.0	349 25.8	14.1	11 39.8	7.6	54.3	56	////	02 12	03 14	01 25	01 50	02 18	02 52		
	09	315 04.3	09.1	3 58.9	14.0	11 47.4	7.6	54.3	54	00 52	02 34	03 28	01 30	01 56	02 26	03 01		
	10	330 04.1	09.3	18 31.9	14.0	11 55.0	7.5	54.3	52	01 35	02 51	03 40	01 35	02 02	02 33	03 09		
	11	345 04.0	09.5	33 04.9	14.0	12 02.5	7.5	54.3	50	02 01	03 06	03 50	01 39	02 07	02 40	03 16		
	12	0 03.9	N23 09.6	47 37.9	14.0	N12 10.0	7.4	54.3	45	02 46	03 35	04 13	01 47	02 19	02 53	03 32		
	13	15 03.8	09.8	62 10.9	13.9	12 17.4	7.4	54.3	N 40	03 16	03 58	04 30	01 55	02 28	03 05	03 45		
	14	30 03.6	09.9	76 43.8	14.0	12 24.8	7.3	54.2	35	03 39	04 16	04 45	02 01	02 37	03 15	03 56		
	15	45 03.5	10.1	91 16.8	13.9	12 32.1	7.3	54.2	30	03 58	04 31	04 58	02 07	02 44	03 23	04 05		
	16	60 03.4	10.2	105 49.7	13.9	12 39.4	7.2	54.2	20	04 26	04 56	05 20	02 16	02 56	03 38	04 22		
	17	75 03.2	10.4	120 22.6	13.9	12 46.6	7.1	54.2	N 10	04 49	05 16	05 39	02 25	03 07	03 51	04 36		
	18	90 03.1	N23 10.5	134 55.5	13.8	N12 53.7	7.1	54.2	0	05 08	05 34	05 56	02 33	03 18	04 03	04 50		
	19	105 03.0	10.7	149 28.3	13.9	13 00.8	7.0	54.2	S 10	05 24	05 51	06 14	02 41	03 28	04 15	05 03		
	20	120 02.9	10.8	164 01.2	13.8	13 07.8	7.0	54.2	20	05 40	06 08	06 32	02 50	03 39	04 28	05 18		
	21	135 02.7	11.0	178 34.0	13.8	13 14.8	6.9	54.2	30	05 57	06 27	06 53	03 00	03 52	04 43	05 34		
	22	150 02.6	11.1	193 06.8	13.8	13 21.7	6.8	54.2	35	06 05	06 37	07 05	03 05	03 59	04 52	05 44		
23	165 02.5	11.3	207 39.6	13.7	13 28.5	6.8	54.2	40	06 15	06 49	07 19	03 12	04 08	05 02	05 55			
								45	06 25	07 02	07 36	03 20	04 18	05 14	06 08			
LUNES	13 00	180 02.3	N23 11.4	222 12.3	13.8	N13 35.3	6.7	54.1	S 50	06 36	07 18	07 56	03 29	04 30	05 28	06 24		
	01	195 02.2	11.6	236 45.1	13.7	13 42.0	6.7	54.1	52	06 42	07 25	08 06	03 33	04 35	05 35	06 32		
	02	210 02.1	11.7	251 17.8	13.7	13 48.7	6.6	54.1	54	06 47	07 33	08 17	03 38	04 41	05 42	06 40		
	03	225 01.9	11.8	265 50.5	13.7	13 55.3	6.6	54.1	56	06 53	07 42	08 30	03 43	04 48	05 51	06 49		
	04	240 01.8	12.0	280 23.2	13.6	14 01.9	6.4	54.1	58	07 00	07 52	08 44	03 49	04 56	06 00	07 00		
	05	255 01.7	12.1	294 55.8	13.7	14 08.3	6.5	54.1	S 60	07 07	08 04	09 01	03 56	05 05	06 11	07 12		
	06	270 01.5	N23 12.3	309 28.5	13.6	N14 14.8	6.3	54.1										
	07	285 01.4	12.4	324 01.1	13.6	14 21.1	6.3	54.1										
	08	300 01.3	12.6	338 33.7	13.5	14 27.4	6.2	54.1										
	09	315 01.1	12.7	353 06.2	13.6	14 33.6	6.2	54.1										
	10	330 01.0	12.8	7 38.8	13.5	14 39.8	6.1	54.1										
	11	345 00.9	13.0	22 11.3	13.5	14 45.9	6.1	54.1										
	12	0 00.8	N23 13.1	36 43.8	13.4	N14 52.0	5.9	54.1	N 72	□	□	□	17 58	19 42	21 39	□		
	13	15 00.6	13.3	51 16.2	13.5	14 57.9	5.9	54.1	N 70	□	□	□	17 33	19 04	20 32	21 50		
	14	30 00.5	13.4	65 48.7	13.4	15 03.8	5.9	54.0	68	□	□	□	17 15	18 37	19 56	21 04		
	15	45 00.4	13.5	80 21.1	13.4	15 09.7	5.7	54.0	66	□	□	□	17 00	18 17	19 30	20 34		
	16	60 00.2	13.7	94 53.5	13.4	15 15.4	5.8	54.0	64	22 26	////	////	16 48	18 01	19 10	20 12		
	17	75 00.1	13.8	109 25.9	13.4	15 21.2	5.6	54.0	62	21 49	////	////	16 38	17 48	18 54	19 54		
	18	90 00.0	N23 13.9	123 58.3	13.3	N15 26.8	5.6	54.0	60	21 23	23 05	////	16 29	17 37	18 41	19 39		
	19	104 59.8	14.1	138 30.6	13.3	15 32.4	5.5	54.0	N 58	21 03	22 18	////	16 21	17 27	18 29	19 26		
	20	119 59.7	14.2	153 02.9	13.3	15 37.9	5.4	54.0	56	20 47	21 49	////	16 14	17 18	18 19	19 15		
	21	134 59.6	14.3	167 35.2	13.3	15 43.3	5.4	54.0	54	20 33	21 27	23 10	16 08	17 11	18 10	19 06		
	22	149 59.4	14.5	182 07.5	13.2	15 48.7	5.3	54.0	52	20 20	21 09	22 26	16 03	17 04	18 03	18 57		
23	164 59.3	14.6	196 39.7	13.2	15 54.0	5.2	54.0	50	20 10	20 54	21 59	15 58	16 58	17 55	18 50			
								45	19 47	20 25	21 14	15 48	16 45	17 40	18 33			
MARTES	14 00	179 59.2	N23 14.7	211 11.9	13.2	N15 59.2	5.1	54.0	N 40	19 30	20 02	20 44	15 39	16 34	17 28	18 20		
	01	194 59.0	14.8	225 44.1	13.2	16 04.3	5.1	54.0	35	19 15	19 44	20 21	15 31	16 25	17 17	18 08		
	02	209 58.9	15.0	240 16.3	13.1	16 09.4	5.0	54.0	30	19 02	19 29	20 02	15 25	16 17	17 08	17 58		
	03	224 58.8	15.1	254 48.4	13.1	16 14.4	5.0	54.0	20	18 40	19 04	19 34	15 13	16 03	16 52	17 41		
	04	239 58.6	15.2	269 20.5	13.1	16 19.4	4.8	54.0	N 10	18 21	18 44	19 11	15 04	15 51	16 38	17 26		
	05	254 58.5	15.4	283 52.6	13.1	16 24.2	4.8	54.0	0	18 04	18 26	18 52	14 54	15 39	16 25	17 12		
	06	269 58.4	N23 15.5	298 24.7	13.0	N16 29.0	4.8	54.0	S 10	17 46	18 09	18 35	14 45	15 28	16 13	16 59		
	07	284 58.2	15.6	312 56.7	13.0	16 33.8	4.6	54.0	20	17 28	17 52	18 19	14 35	15 16	15 59	16 44		
	08	299 58.1	15.7	327 28.7	13.0	16 38.4	4.6	54.0	30	17 07	17 33	18 03	14 24	15 02	15 43	16 27		
	09	314 58.0	15.8	342 00.7	13.0	16 43.0	4.5	54.0	35	16 55	17 23	17 54	14 18	14 54	15 34	16 17		
	10	329 57.8	16.0	356 32.7	13.0	16 47.5	4.4	54.0	40	16 41	17 11	17 45	14 10	14 45	15 23	16 05		
	11	344 57.7	16.1	11 04.7	12.9	16 51.9	4.4	54.0	45	16 24	16 58	17 35	14 02	14 35	15 11	15 52		
	12	359 57.6	N23 16.2	25 36.6	12.9	N16 56.3	4.2	54.0	S 50	16 03	16 42	17 23	13 51	14 22	14 56	15 36		
	13	14 57.4	16.3	40 08.5	12.9	17 00.5	4.2	54.0	52	15 54	16 34	17 18	13 47	14 16	14 49	15 28		
	14	29 57.3	16.5	54 40.4	12.8	17 04.7	4.2	54.0	54	15 43	16 26	17 12	13 42	14 09	14 42	15 19		
	15	44 57.2	16.6	69 12.2	12.9	17 08.9	4.0	54.0	56	15 30	16 17	17 06	13 36	14 02	14 33	15 10		
	16	59 57.0	16.7	83 44.1	12.8	17 12.9	4.0	54.0	58	15 16	16 07	17 00	13 29	13 54	14 23	14 59		
	1																	

T. M. G.	ARIES			VENUS -3.9			MARTE +1.3			JUPITER -1.5			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
15 M I E R C O L E S	00	263 09.8	226 34.6	N11 36.0	228 35.3	N12 47.2	188 11.9	N22 14.8		126 59.8	N17 43.9		Acamar	315 39.3	S40 23.6				
	01	278 12.3	241 34.7	36.7	243 36.0	47.9	203 13.7	14.8		142 02.0	43.8		Achernar	335 47.3	S57 20.8				
	02	293 14.7	256 34.9	37.4	258 36.7	48.5	218 15.6	14.9		157 04.2	43.8		Acruz	173 39.4	S62 58.8				
	03	308 17.2	271 35.0	38.1	273 37.3	49.1	233 17.4	14.9		172 06.4	43.7		Adhara	255 34.2	S28 56.7				
	04	323 19.6	286 35.1	38.8	288 38.0	49.7	248 19.3	15.0		187 08.6	43.6		Aldebaran	291 20.8	N16 27.7				
	05	338 22.1	301 35.2	39.5	303 38.7	50.3	263 21.1	15.1		202 10.9	43.6								
	06	353 24.6	316 35.4	N11 40.1	318 39.4	N12 51.0	278 23.0	N22 15.1		217 13.1	N17 43.5		Alioth	166 44.4	N56 05.2				
	07	8 27.0	331 35.5	40.8	333 40.1	51.6	293 24.8	15.2		232 15.3	43.4		Alkaid	153 20.0	N49 25.8				
	08	23 29.5	346 35.6	41.5	348 40.8	52.2	308 26.6	15.3		247 17.5	43.4		Al Na'ir	28 17.6	S47 03.9				
	09	38 32.0	1 35.8	42.2	3 41.5	52.8	323 28.5	15.3		262 19.7	43.3		Alnilam	276 14.2	S 1 13.1				
	10	53 34.4	16 35.9	42.9	18 42.2	53.4	338 30.3	15.4		277 21.9	43.2		Alphard	218 22.9	S 8 33.8				
	11	68 36.9	31 36.0	43.6	33 42.8	54.1	353 32.2	15.5		292 24.2	43.1								
	12	83 39.4	46 36.1	N11 44.3	48 43.5	N12 54.7	8 34.0	N22 15.5		307 26.4	N17 43.1		Alphecca	126 33.7	N26 47.6				
	13	98 41.8	61 36.3	45.0	63 44.2	55.3	23 35.9	15.6		322 28.6	43.0		Alpheratz	358 11.6	N28 57.8				
	14	113 44.3	76 36.4	45.7	78 44.9	55.9	38 37.7	15.6		337 30.8	42.9		Alkair	62 34.4	N 8 48.6				
	15	128 46.7	91 36.5	46.4	93 45.6	56.5	53 39.5	15.7		352 33.0	42.9		Ankaa	353 42.6	S42 25.5				
	16	143 49.2	106 36.6	47.1	108 46.3	57.2	68 41.4	15.8		7 35.2	42.8		Antares	112 59.2	S26 22.9				
	17	158 51.7	121 36.7	47.8	123 47.0	57.8	83 43.2	15.8		22 37.5	42.7								
	18	173 54.1	136 36.9	N11 48.5	138 47.6	N12 58.4	98 45.1	N22 15.9		37 39.7	N17 42.7		Arcturus	146 20.3	N19 18.1				
	19	188 56.6	151 37.0	49.1	153 48.3	59.0	113 46.9	15.9		52 41.9	42.6		Atria	108 24.8	S68 59.2				
	20	203 59.1	166 37.1	49.8	168 49.0	12 59.6	128 48.8	16.0		67 44.1	42.5		Avior	234 29.5	S59 26.5				
	21	219 01.5	181 37.2	50.5	183 49.7	13 00.3	143 50.6	16.1		82 46.3	42.4		Bellatrix	279 01.4	N 6 19.7				
	22	234 04.0	196 37.3	51.2	198 50.4	00.9	158 52.4	16.1		97 48.5	42.4		Betelgeuse	271 31.0	N 7 24.1				
23	249 06.5	211 37.4	51.9	213 51.1	01.5	173 54.3	16.2		112 50.8	42.3									
16 J U E V E S	00	264 08.9	226 37.6	N11 52.6	228 51.8	N13 02.1	188 56.1	N22 16.3		127 53.0	N17 42.2		Canopus	264 08.7	S52 41.2				
	01	279 11.4	241 37.7	53.3	243 52.4	02.7	203 58.0	16.3		142 55.2	42.2		Capella	281 15.0	N45 58.4				
	02	294 13.9	256 37.8	54.0	258 53.1	03.3	218 59.8	16.4		157 57.4	42.1		Deneb	49 49.6	N45 11.9				
	03	309 16.3	271 37.9	54.7	273 53.8	04.0	234 01.7	16.4		172 59.6	42.0		Denebola	183 01.3	N14 41.9				
	04	324 18.8	286 38.0	55.4	288 54.5	04.6	249 03.5	16.5		188 01.8	41.9		Diphda	349 23.2	S18 06.5				
	05	339 21.2	301 38.1	56.1	303 55.2	05.2	264 05.4	16.6		203 04.1	41.9								
	06	354 23.7	316 38.2	N11 56.8	318 55.9	N13 05.8	279 07.2	N22 16.6		218 06.3	N17 41.8		Dubhe	194 25.1	N61 52.6				
	07	9 26.2	331 38.3	57.5	333 56.6	06.4	294 09.0	16.7		233 08.5	41.7		Elnath	278 47.3	N28 35.2				
	08	24 28.6	346 38.5	58.2	348 57.3	07.0	309 10.9	16.8		248 10.7	41.7		Eltanin	90 58.2	N51 29.6				
	09	39 31.1	1 38.6	58.9	3 57.9	07.6	324 12.7	16.8		263 12.9	41.6		Enif	34 13.6	N 9 46.3				
	10	54 33.6	16 38.7	11 59.6	18 58.6	08.3	339 14.6	16.9		278 15.1	41.5		Fomalhaut	15 53.8	S29 44.3				
	11	69 36.0	31 38.8	12 00.2	33 59.3	08.9	354 16.4	16.9		293 17.4	41.5								
	12	84 38.5	46 38.9	N12 00.9	49 00.0	N13 09.5	9 18.3	N22 17.0		308 19.6	N17 41.4		Gacrux	172 30.9	S56 59.5				
	13	99 41.0	61 39.0	01.6	64 00.7	10.1	24 20.1	17.1		323 21.8	41.3		Gienah	176 20.2	S17 25.2				
	14	114 43.4	76 39.1	02.3	79 01.4	10.7	39 21.9	17.1		338 24.0	41.2		Hadar	149 26.0	S60 16.1				
	15	129 45.9	91 39.2	03.0	94 02.1	11.3	54 23.8	17.2		353 26.2	41.2		Hamal	328 31.6	N23 21.2				
	16	144 48.4	106 39.3	03.7	109 02.7	11.9	69 25.6	17.2		8 28.4	41.1		Kaus Aust.	84 19.4	S34 23.6				
	17	159 50.8	121 39.4	04.4	124 03.4	12.6	84 27.5	17.3		23 30.6	41.0								
	18	174 53.3	136 39.5	N12 05.1	139 04.1	N13 13.2	99 29.3	N22 17.4		38 32.9	N17 41.0		Kochab	137 18.2	N74 15.2				
	19	189 55.7	151 39.6	05.8	154 04.8	13.8	114 31.2	17.4		53 35.1	40.9		Markab	14 05.3	N15 05.0				
	20	204 58.2	166 39.7	06.5	169 05.5	14.4	129 33.0	17.5		68 37.3	40.8		Menkar	314 43.7	N 4 00.0				
	21	220 00.7	181 39.8	07.2	184 06.2	15.0	144 34.9	17.6		83 39.5	40.7		Menkent	148 39.3	S36 15.7				
	22	235 03.1	196 39.9	07.9	199 06.8	15.6	159 36.7	17.6		98 41.7	40.7		Miaplacidus	221 45.9	S69 37.8				
23	250 05.6	211 40.0	08.6	214 07.5	16.2	174 38.5	17.7		113 43.9	40.6									
17 V I E R N E S	00	265 08.1	226 40.1	N12 09.3	229 08.2	N13 16.8	189 40.4	N22 17.7		128 46.1	N17 40.5		Mirfak	309 19.6	N49 46.7				
	01	280 10.5	241 40.2	10.0	244 08.9	17.4	204 42.2	17.8		143 48.4	40.5		Punki	76 31.5	S26 19.4				
	02	295 13.0	256 40.3	10.7	259 09.6	18.1	219 44.1	17.9		158 50.6	40.4		Peacock	54 01.4	S56 48.2				
	03	310 15.5	271 40.4	11.4	274 10.3	18.7	234 45.9	17.9		173 52.8	40.3		Pollux	244 01.2	N28 04.8				
	04	325 17.9	286 40.4	12.1	289 11.0	19.3	249 47.8	18.0		188 55.0	40.2		Procyon	245 28.4	N 5 16.9				
	05	340 20.4	301 40.5	12.8	304 11.6	19.9	264 49.6	18.0		203 57.2	40.2								
	06	355 22.8	316 40.6	N12 13.5	319 12.3	N13 20.5	279 51.5	N22 18.1		218 59.4	N17 40.1		Rasalhague	96 31.3	N12 34.7				
	07	10 25.3	331 40.7	14.2	334 13.0	21.1	294 53.3	18.2		234 01.6	40.0		Regulus	208 12.5	N12 04.6				
	08	25 27.8	346 40.8	14.8	349 13.7	21.7	309 55.1	18.2		249 03.8	40.0		Rigel	281 38.5	S 8 13.8				
	09	40 30.2	1 40.9	15.5	4 14.4	22.3	324 57.0	18.3		264 06.1	39.9		Rigil Kent.	140 28.2	S60 44.7				
	10	55 32.7	16 41.0	16.2	19 15.1	22.9	339 58.8	18.3		279 08.3	39.8		Sabik	102 43.3	S15 41.8				
	11	70 35.2	31 41.1	16.9	34 15.8	23.5	355 00.7	18.4		294 10.5	39.7								
	12	85 37.6	46 41.2	N12 17.6	49 16.4	N13 24.1	10 02.5	N22 18.5		309 12.7	N17 39.7		Schedar	350 11.5	N56 24.6				
	13	100 40.1	61 41.2	18.3	64 17.1	24.8	25 04.4	18.5		324 14.9	39.6		Shaula	96 58.3	S37 05.2				
	14	115 42.6	76 41.3	19.0	79 17.8	25.4	40 06.2	18.6		339 17.1	39.5		Sirius	258 58.0	S16 41.3				
	15	130 45.0	91 41.4	19.7	94 18.5	26.0	55 08.0	18.6		354 19.3	39.4		Spica	158 59.7	S11 02.7				
	16	145 47.5	106 41.5	20.4	109 19.2	26.6	70 09.9	18.7		9 21.5	39.4		Suhail	223 12.6	S43 20.8				
	17	160																	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	15	16	17	18	
15 M I E R C O L E S	00	179 56.0	N23 17.6	199 57.9	12.7	N17 42.5	3.3	54.0	N 72	□	□	□	□	□	□	01 16
	01	194 55.8	17.7	214 29.6	12.6	17 45.8	3.3	54.0	N 70	□	□	□	00 37	00 57	01 42	02 55
	02	209 55.7	17.8	229 01.2	12.6	17 49.1	3.2	54.0	68	□	□	□	01 14	01 43	02 30	03 34
	03	224 55.6	17.9	243 32.8	12.5	17 52.3	3.1	54.0	66	□	□	□	01 40	02 13	03 00	04 02
	04	239 55.4	18.0	258 04.3	12.6	17 55.4	3.0	54.0	64	////	////	01 32	02 00	02 36	03 23	04 22
	05	254 55.3	18.2	272 35.9	12.5	17 58.4	3.0	54.0	62	////	////	02 10	02 16	02 54	03 42	04 39
	06	269 55.2	N23 18.3	287 07.4	12.5	N18 01.4	2.8	54.0	60	////	00 52	02 36	02 30	03 09	03 57	04 53
	07	284 55.0	18.4	301 38.9	12.5	18 04.2	2.8	54.0	N 58	////	01 41	02 56	02 42	03 22	04 09	05 05
	08	299 54.9	18.5	316 10.4	12.5	18 07.0	2.7	54.0	56	////	02 11	03 13	02 52	03 33	04 21	05 16
	09	314 54.8	18.6	330 41.9	12.4	18 09.7	2.6	54.0	54	00 48	02 33	03 27	03 01	03 42	04 30	05 25
	10	329 54.6	18.7	345 13.3	12.5	18 12.3	2.5	54.0	52	01 33	02 51	03 39	03 09	03 51	04 39	05 33
	11	344 54.5	18.8	359 44.8	12.4	18 14.8	2.5	54.0	50	02 00	03 06	03 50	03 16	03 59	04 47	05 40
	12	359 54.4	N23 18.9	14 16.2	12.4	N18 17.3	2.4	54.0	45	02 46	03 35	04 13	03 32	04 15	05 03	05 56
	13	14 54.2	19.0	28 47.6	12.3	18 19.7	2.2	54.0	N 40	03 16	03 58	04 30	03 45	04 29	05 17	06 09
	14	29 54.1	19.1	43 18.9	12.4	18 21.9	2.2	54.0	35	03 39	04 16	04 46	03 56	04 40	05 28	06 19
	15	44 54.0	19.2	57 50.3	12.3	18 24.1	2.2	54.0	30	03 58	04 31	04 58	04 05	04 50	05 38	06 29
	16	59 53.8	19.3	72 21.6	12.4	18 26.3	2.0	54.0	20	04 27	04 56	05 20	04 22	05 08	05 56	06 45
	17	74 53.7	19.4	86 53.0	12.3	18 28.3	1.9	54.0	N 10	04 49	05 16	05 39	04 36	05 23	06 11	07 00
	18	89 53.6	N23 19.5	101 24.3	12.3	N18 30.2	1.9	54.0	0	05 08	05 34	05 57	04 50	05 37	06 25	07 13
	19	104 53.4	19.6	115 55.6	12.2	18 32.1	1.8	54.0	S 10	05 25	05 51	06 14	05 03	05 51	06 39	07 26
	20	119 53.3	19.7	130 26.8	12.3	18 33.9	1.7	54.0	20	05 41	06 09	06 33	05 18	06 06	06 54	07 41
	21	134 53.1	19.8	144 58.1	12.2	18 35.6	1.6	54.0	30	05 58	06 28	06 54	05 34	06 24	07 12	07 57
	22	149 53.0	19.9	159 29.3	12.3	18 37.2	1.5	54.0	35	06 06	06 38	07 06	05 44	06 34	07 22	08 06
23	164 52.9	20.0	174 00.6	12.2	18 38.7	1.5	54.0	40	06 16	06 50	07 20	05 55	06 46	07 33	08 17	
16 J U E V E S	00	179 52.7	N23 20.1	188 31.8	12.2	N18 40.2	1.3	54.0	45	06 26	07 03	07 37	06 08	06 59	07 47	08 30
	01	194 52.6	20.2	203 03.0	12.2	18 41.5	1.3	54.0	S 50	06 38	07 19	07 58	06 24	07 16	08 03	08 45
	02	209 52.5	20.3	217 34.2	12.1	18 42.8	1.2	54.0	52	06 43	07 27	08 08	06 32	07 24	08 11	08 53
	03	224 52.3	20.4	232 05.3	12.2	18 44.0	1.1	54.0	54	06 49	07 35	08 19	06 40	07 33	08 20	09 01
	04	239 52.2	20.5	246 36.5	12.1	18 45.1	1.0	54.0	56	06 55	07 44	08 31	06 49	07 43	08 30	09 10
	05	254 52.1	20.5	261 07.6	12.2	18 46.1	0.9	54.0	58	07 02	07 54	08 46	07 00	07 54	08 41	09 20
	06	269 51.9	N23 20.6	275 38.8	12.1	N18 47.0	0.8	54.0	S 60	07 09	08 06	09 03	07 12	08 07	08 53	09 31
	07	284 51.8	20.7	290 09.9	12.1	18 47.8	0.8	54.1	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	08	299 51.7	20.8	304 41.0	12.1	18 48.6	0.7	54.1			Civil	Náut.	15	16	17	18
	09	314 51.5	20.9	319 12.1	12.1	18 49.3	0.5	54.1								
	10	329 51.4	21.0	333 43.2	12.1	18 49.8	0.5	54.1								
	11	344 51.3	21.1	348 14.3	12.0	18 50.3	0.4	54.1								
	12	359 51.1	N23 21.2	2 45.3	12.1	N18 50.7	0.4	54.1	N 72	□	□	□	□	□	□	00 50
	13	14 51.0	21.3	17 16.4	12.0	18 51.1	0.2	54.1	N 70	□	□	□	21 50	22 45	23 12	23 23
	14	29 50.8	21.3	31 47.4	12.1	18 51.3	0.1	54.1	68	□	□	□	21 04	21 57	22 32	22 53
	15	44 50.7	21.4	46 18.5	12.0	18 51.4	0.1	54.1	66	□	□	□	20 34	21 26	22 04	22 30
	16	59 50.6	21.5	60 49.5	12.0	18 51.5	0.1	54.1	64	22 30	////	////	20 12	21 03	21 43	22 13
	17	74 50.4	21.6	75 20.5	12.0	18 51.4	0.1	54.1	62	21 52	////	////	19 54	20 45	21 26	21 58
	18	89 50.3	N23 21.7	89 51.5	12.0	N18 51.3	0.2	54.1	60	21 26	23 11	////	19 39	20 29	21 11	21 46
	19	104 50.2	21.8	104 22.5	12.0	18 51.1	0.3	54.1	N 58	21 05	22 21	////	19 26	20 17	20 59	21 35
	20	119 50.0	21.8	118 53.5	12.0	18 50.8	0.4	54.1	56	20 49	21 51	////	19 15	20 05	20 49	21 26
	21	134 49.9	21.9	133 24.5	12.0	18 50.4	0.4	54.1	54	20 34	21 29	23 15	19 06	19 56	20 39	21 17
	22	149 49.8	22.0	147 55.5	12.0	18 50.0	0.6	54.2	52	20 22	21 11	22 29	18 57	19 47	20 31	21 10
23	164 49.6	22.1	162 26.5	12.0	18 49.4	0.6	54.2	50	20 11	20 56	22 01	18 50	19 39	20 24	21 03	
17 V I E R N E S	00	179 49.5	N23 22.2	176 57.5	11.9	N18 48.8	0.8	54.2	45	19 49	20 26	21 16	18 33	19 22	20 08	20 49
	01	194 49.3	22.2	191 28.4	12.0	18 48.0	0.8	54.2	N 40	19 31	20 04	20 45	18 20	19 09	19 55	20 37
	02	209 49.2	22.3	205 59.4	11.9	18 47.2	0.9	54.2	35	19 16	19 45	20 22	18 08	18 57	19 43	20 27
	03	224 49.1	22.4	220 30.3	12.0	18 46.3	1.0	54.2	30	19 03	19 30	20 04	17 58	18 47	19 34	20 18
	04	239 48.9	22.5	235 01.3	12.0	18 45.3	1.1	54.2	20	18 41	19 05	19 35	17 41	18 30	19 17	20 02
	05	254 48.8	22.5	249 32.3	11.9	18 44.2	1.2	54.2	N 10	18 22	18 45	19 12	17 26	18 14	19 02	19 49
	06	269 48.7	N23 22.6	264 03.2	12.0	N18 43.0	1.2	54.2	0	18 04	18 27	18 53	17 12	18 00	18 48	19 36
	07	284 48.5	22.7	278 34.2	11.9	18 41.8	1.4	54.2	S 10	17 47	18 10	18 36	16 59	17 46	18 34	19 23
	08	299 48.4	22.8	293 05.1	12.0	18 40.4	1.4	54.2	20	17 28	17 52	18 20	16 44	17 31	18 19	19 10
	09	314 48.3	22.8	307 36.1	11.9	18 39.0	1.5	54.2	30	17 07	17 34	18 03	16 27	17 13	18 02	18 54
	10	329 48.1	22.9	322 07.0	12.0	18 37.5	1.7	54.3	35	16 55	17 23	17 55	16 17	17 03	17 53	18 45
	11	344 48.0	23.0	336 38.0	11.9	18 35.8	1.7	54.3	40	16 41	17 11	17 45	16 05	16 51	17 41	18 34
	12	359 47.8	N23 23.0	351 08.9	11.9	N18 34.1	1.7	54.3	45	16 24	16 58	17 35	15 52	16 37	17 28	18 22
	13	14 47.7	23.1	5 39.8	12.0	18 32.4	1.9	54.3	S 50	16 03	16 42	17 23	15 36	16 21	17 11	18 07
	14	29 47.6	23.2	20 10.8	11.9	18 30.5	2.0	54.3	52	15 53	16 34	17 18	15 28	16 13	17 04	18 00
	15	44 47.4	23.2	34 41.7	12.0	18 28.5	2.0	54.3	54	15 42	16 26	17 12	15 19	16 04	16 55	17 52
	16	59 47.3	23.3	49 12.7	11.9	18 26.5	2.2	54.3	56	15 30	16 17	17 06	15 10	15 54	16 46	17 44
	17	74 47.2	23.4	63 43.6	12.0	18 24.3	2.2	54.3	58	15 15	16 07	16 59	14 59	15 43	16 35	17 34
	18	89 47.0	N23 23.4	78 14.6	11.9	N18 22.1	2.3	54.3	S 60	14 58	15 55	16 52	14 47	15 30	16 22	17 22
	19	104 46.9	23.5	92 45.5	12.0	18 19.8	2.4	54.3								
	20	119 46.8	23.6	107 16.5	12.0	18 17.4	2.5	54.4								

T. M. G.	ARIES		VENUS -3.9		MARTE +1.3		JUPITER -1.5		SATURNO +0.6		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
18 00 01 02 03 04 05 06 07 08 S A B A D O 19 20 21 22 23	266 07.2	226 42.1	N12 26.0	229 24.7	N13 31.4	190 24.6	N22 19.2	129 39.2	N17 38.8	Acamar	315 39.3	S40 23.6	
	281 09.7	241 42.2	26.7	244 25.3	32.0	205 26.5	19.2	144 41.4	38.7	Achernar	335 47.3	S57 20.8	
	296 12.1	256 42.3	27.4	259 26.0	32.6	220 28.3	19.3	159 43.7	38.7	Acruz	173 39.4	S62 58.8	
	311 14.6	271 42.4	28.1	274 26.7	33.2	235 30.2	19.4	174 45.9	38.6	Adhara	255 34.2	S28 56.6	
	326 17.1	286 42.4	28.8	289 27.4	33.8	250 32.0	19.4	189 48.1	38.5	Aldebaran	291 20.8	N16 27.7	
	341 19.5	301 42.5	29.5	304 28.1	34.4	265 33.9	19.5	204 50.3	38.4				
	356 22.0	316 42.6	N12 30.2	319 28.8	N13 35.0	280 35.7	N22 19.5	219 52.5	N17 38.4	Alioth	166 44.4	N56 05.2	
	11 24.5	331 42.6	30.9	334 29.4	35.6	295 37.6	19.6	234 54.7	38.3	Alkaid	153 20.0	N49 25.8	
	26 26.9	346 42.7	31.6	349 30.1	36.3	310 39.4	19.7	249 56.9	38.2	Al Na'ir	28 17.5	S47 03.9	
	41 29.4	1 42.8	32.2	4 30.8	36.9	325 41.3	19.7	264 59.1	38.1	Alnilam	276 14.2	S 1 13.1	
	56 31.8	16 42.9	32.9	19 31.5	37.5	340 43.1	19.8	280 01.3	38.1	Alphard	218 22.9	S 8 33.8	
	71 34.3	31 42.9	33.6	34 32.2	38.1	355 44.9	19.8	295 03.6	38.0				
	86 36.8	46 43.0	N12 34.3	49 32.9	N13 38.7	10 46.8	N22 19.9	310 05.8	N17 37.9	Alphecca	126 33.7	N26 47.6	
	101 39.2	61 43.1	35.0	64 33.5	39.3	25 48.6	20.0	325 08.0	37.9	Alpheratz	358 11.6	N28 57.8	
	116 41.7	76 43.1	35.7	79 34.2	39.9	40 50.5	20.0	340 10.2	37.8	Altair	62 34.4	N 8 48.6	
	131 44.2	91 43.2	36.4	94 34.9	40.5	55 52.3	20.1	355 12.4	37.7	Ankaa	353 42.5	S42 25.4	
	146 46.6	106 43.3	37.1	109 35.6	41.1	70 54.2	20.1	10 14.6	37.6	Antares	112 59.2	S26 22.9	
	161 49.1	121 43.3	37.8	124 36.3	41.7	85 56.0	20.2	25 16.8	37.6				
	176 51.6	136 43.4	N12 38.5	139 37.0	N13 42.3	100 57.9	N22 20.3	40 19.0	N17 37.5	Arcturus	146 20.3	N19 18.1	
	191 54.0	151 43.4	39.2	154 37.6	42.9	115 59.7	20.3	55 21.2	37.4	Atria	108 24.8	S68 59.3	
	206 56.5	166 43.5	39.9	169 38.3	43.5	131 01.5	20.4	70 23.4	37.3	Avior	234 29.6	S59 26.5	
	221 58.9	181 43.6	40.6	184 39.0	44.1	146 03.4	20.4	85 25.7	37.3	Bellatrix	279 01.4	N 6 19.7	
	237 01.4	196 43.6	41.3	199 39.7	44.7	161 05.2	20.5	100 27.9	37.2	Betelgeuse	271 31.0	N 7 24.1	
252 03.9	211 43.7	42.0	214 40.4	45.3	176 07.1	20.5	115 30.1	37.1					
19 00 01 02 03 04 05 06 07 D O M I N G O 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	267 06.3	226 43.7	N12 42.7	229 41.1	N13 45.9	191 08.9	N22 20.6	130 32.3	N17 37.1	Canopus	264 08.7	S52 41.2	
	282 08.8	241 43.8	43.4	244 41.7	46.5	206 10.8	20.7	145 34.5	37.0	Capella	281 15.0	N45 58.4	
	297 11.3	256 43.9	44.1	259 42.4	47.1	221 12.6	20.7	160 36.7	36.9	Deneb	49 49.5	N45 11.9	
	312 13.7	271 43.9	44.8	274 43.1	47.7	236 14.5	20.8	175 38.9	36.8	Denebola	183 01.3	N14 41.9	
	327 16.2	286 44.0	45.5	289 43.8	48.3	251 16.3	20.8	190 41.1	36.8	Diphda	349 23.2	S18 06.5	
	342 18.7	301 44.0	46.2	304 44.5	48.9	266 18.2	20.9	205 43.3	36.7				
	357 21.1	316 44.1	N12 46.9	319 45.2	N13 49.5	281 20.0	N22 21.0	220 45.5	N17 36.6	Dubhe	194 25.1	N61 52.6	
	12 23.6	331 44.1	47.6	334 45.8	50.1	296 21.8	21.0	235 47.7	36.5	Elnath	278 47.3	N28 35.2	
	27 26.1	346 44.2	48.3	349 46.5	50.6	311 23.7	21.1	250 49.9	36.5	Eltanin	90 58.2	N51 29.6	
	42 28.5	1 44.2	49.0	4 47.2	51.2	326 25.5	21.1	265 52.2	36.4	Enif	34 13.5	N 9 46.3	
	57 31.0	16 44.3	49.7	19 47.9	51.8	341 27.4	21.2	280 54.4	36.3	Fomalhaut	15 53.8	S29 44.3	
	72 33.4	31 44.3	50.4	34 48.6	52.4	356 29.2	21.2	295 56.6	36.2				
	87 35.9	46 44.4	N12 51.1	49 49.3	N13 53.0	11 31.1	N22 21.3	310 58.8	N17 36.2	Gacrux	172 31.0	S56 59.5	
	102 38.4	61 44.4	51.8	64 49.9	53.6	26 32.9	21.4	326 01.0	36.1	Gienah	176 20.2	S17 25.2	
	117 40.8	76 44.5	52.4	79 50.6	54.2	41 34.8	21.4	341 03.2	36.0	Hadar	149 26.0	S60 16.1	
	132 43.3	91 44.5	53.1	94 51.3	54.8	56 36.6	21.5	356 05.4	36.0	Hamal	328 31.6	N23 21.2	
	147 45.8	106 44.6	53.8	109 52.0	55.4	71 38.5	21.5	11 07.6	35.9	Kaus Aust.	84 19.3	S34 23.6	
	162 48.2	121 44.6	54.5	124 52.7	56.0	86 40.3	21.6	26 09.8	35.8				
	177 50.7	136 44.7	N12 55.2	139 53.3	N13 56.6	101 42.1	N22 21.7	41 12.0	N17 35.7	Kochab	137 18.2	N74 15.2	
	192 53.2	151 44.7	55.9	154 54.0	57.2	116 44.0	21.7	56 14.2	35.7	Markab	14 05.2	N15 05.0	
	207 55.6	166 44.7	56.6	169 54.7	57.8	131 45.8	21.8	71 16.4	35.6	Menkar	314 43.7	N 4 00.0	
	222 58.1	181 44.8	57.3	184 55.4	58.4	146 47.7	21.8	86 18.6	35.5	Menkent	148 39.3	S36 15.7	
	238 00.6	196 44.8	58.0	199 56.1	59.0	161 49.5	21.9	101 20.8	35.4	Miaplacidus	221 45.9	S69 37.8	
253 03.0	211 44.9	58.7	214 56.8	59.6	176 51.4	21.9	116 23.1	35.4					
20 00 01 02 03 04 05 06 07 L U N E S 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	268 05.5	226 44.9	N12 59.4	229 57.4	N14 00.2	191 53.2	N22 22.0	131 25.3	N17 35.3	Mirfak	309 19.6	N49 46.7	
	283 07.9	241 44.9	00.1	244 58.1	00.8	206 55.1	22.1	146 27.5	35.2	Nunki	76 31.5	S26 19.4	
	298 10.4	256 45.0	00.8	259 58.8	01.4	221 56.9	22.1	161 29.7	35.1	Peacock	54 01.4	S56 48.2	
	313 12.9	271 45.0	01.5	274 59.5	01.9	236 58.8	22.2	176 31.9	35.1	Pollux	244 01.2	N28 04.8	
	328 15.3	286 45.1	02.2	290 00.2	02.5	252 00.6	22.2	191 34.1	35.0	Procyon	245 28.4	N 5 16.9	
	343 17.8	301 45.1	02.9	305 00.8	03.1	267 02.4	22.3	206 36.3	34.9				
	358 20.3	316 45.1	N13 03.6	320 01.5	N14 03.7	282 04.3	N22 22.3	221 38.5	N17 34.8	Rasalhague	96 31.3	N12 34.7	
	13 22.7	331 45.2	04.3	335 02.2	04.3	297 06.1	22.4	236 40.7	34.8	Regulus	208 12.5	N12 04.6	
	28 25.2	346 45.2	05.0	350 02.9	04.9	312 08.0	22.5	251 42.9	34.7	Rigel	281 38.5	S 8 13.7	
	43 27.7	1 45.2	05.7	5 03.6	05.5	327 09.8	22.5	266 45.1	34.6	Rigil Kent.	140 28.2	S60 44.7	
	58 30.1	16 45.3	06.4	20 04.3	06.1	342 11.7	22.6	281 47.3	34.6	Sabik	102 43.3	S15 41.8	
	73 32.6	31 45.3	07.1	35 04.9	06.7	357 13.5	22.6	296 49.5	34.5				
	88 35.0	46 45.3	N13 07.8	50 05.6	N14 07.3	12 15.4	N22 22.7	311 51.7	N17 34.4	Schedar	350 11.5	N56 24.6	
	103 37.5	61 45.4	08.5	65 06.3	07.9	27 17.2	22.7	326 53.9	34.3	Shaula	96 58.3	S37 05.2	
	118 40.0	76 45.4	09.2	80 07.0	08.4	42 19.1	22.8	341 56.1	34.3	Sirius	258 58.0	S16 41.3	
	133 42.4	91 45.4	09.9	95 07.7	09.0	57 20.9	22.9	356 58.4	34.2	Spica	158 59.7	S11 02.7	
	148 44.9	106 45.4	10.6	110 08.3	09.6	72 22.8	22.9	12 00.6	34.1	Suhail	223 12.6	S43 20.8	
	163 47.4	121 45.5	11.2	125 09.0	10.2	87 24.6	23.0	27 02.8	34.0				
	178 49.8	136 45.5	N13 11.9	140 09.7	N14 10.8	102 26.4	N22 23.0	42 05.0	N17 34.0	Vega	80 56.9	N38 45.8	
	193 52.3	151 45.5	12.6	155 10.4	11.4	117 28.3	23.1	57 07.2	33.9	Zuben'ubi	137 35.2	S15 56.9	
	208 54.8	166 45.5	13.3	170 11.1	12.0	132 30.1	23.1	72 09.4	33.8				
	223 57.2	181 45.6	14.0	185 11.8	12.6	147 32.0	23.2	87 11.6	33.7				
	238 59.7	196 45.6	14.7	200 12.4	13.1	162 33.8	23.3	102 13.8	33.7	Venus	319 37.4	8 53	
254 02.2	211 45.6	15.4	215 13.1	13.7	177 35.7	23.3	117 16.0	33.6	Marte	322 34.7	8 41		
									Júpiter	284 02.6	11 14		
									Saturno	223 25.9	15 16		

Pas. Mer. 6 10.6

v 0.0 d 0.7 v 0.7 d 0.6 v 1.8 d 0.1 v 2.2 d 0.1

A. H. S. Pas. Mer. h m

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	<i>v</i>	Dec.	<i>d</i> P. H.		Naut.	Civil		18	19	20	21		
^d ^h	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
18 00	179 46.2	N23 23.8	165 20.4	11.9	N18 06.9	2.8 54.4	N 72	□	□	□	01 16	03 38	05 29	07 15		
01	194 46.1	23.9	179 51.3	12.0	18 04.1	2.9 54.4	N 70	□	□	□	02 55	04 23	05 57	07 32		
02	209 45.9	23.9	194 22.3	12.0	18 01.2	3.0 54.4	68	□	□	□	03 34	04 52	06 17	07 46		
03	224 45.8	24.0	208 53.3	12.0	17 58.2	3.1 54.4	66	□	□	□	04 02	05 14	06 33	07 57		
04	239 45.7	24.0	223 24.3	12.0	17 55.1	3.2 54.4	64	////	////	01 31	04 22	05 31	06 46	08 06		
05	254 45.5	24.1	237 55.3	12.0	17 51.9	3.2 54.5	62	////	////	02 09	04 39	05 45	06 58	08 14		
06	269 45.4	N23 24.2	252 26.3	12.0	N17 48.7	3.3 54.5	60	////	00 49	02 35	04 53	05 57	07 07	08 20		
07	284 45.3	24.2	266 57.3	12.0	17 45.4	3.5 54.5	N 58	////	01 40	02 56	05 05	06 08	07 15	08 26		
08	299 45.1	24.3	281 28.3	12.1	17 41.9	3.5 54.5	56	////	02 10	03 13	05 16	06 17	07 22	08 32		
S 09	314 45.0	24.3	295 59.4	12.0	17 38.4	3.6 54.5	54	00 45	02 32	03 27	05 25	06 25	07 29	08 36		
A 10	329 44.8	24.4	310 30.4	12.1	17 34.8	3.6 54.5	52	01 32	02 50	03 39	05 33	06 32	07 35	08 40		
B 11	344 44.7	24.4	325 01.5	12.0	17 31.2	3.8 54.5	50	02 00	03 06	03 50	05 40	06 38	07 40	08 44		
A 12	359 44.6	N23 24.5	339 32.5	12.1	N17 27.4	3.9 54.5	45	02 46	03 35	04 13	05 56	06 52	07 51	08 53		
D 13	14 44.4	24.5	354 03.6	12.0	17 23.5	3.9 54.6	N 40	03 16	03 58	04 31	06 09	07 03	08 01	08 59		
O 14	29 44.3	24.6	8 34.6	12.1	17 19.6	4.0 54.6	35	03 39	04 16	04 46	06 19	07 13	08 08	09 05		
15	44 44.2	24.6	23 05.7	12.1	17 15.6	4.1 54.6	30	03 58	04 31	04 59	06 29	07 21	08 15	09 11		
16	59 44.0	24.7	37 36.8	12.1	17 11.5	4.2 54.6	20	04 27	04 56	05 21	06 45	07 36	08 28	09 20		
17	74 43.9	24.7	52 07.9	12.1	17 07.3	4.2 54.6	N 10	04 50	05 17	05 40	07 00	07 49	08 38	09 27		
18	89 43.7	N23 24.8	66 39.0	12.1	N17 03.1	4.3 54.6	0	05 09	05 35	05 58	07 13	08 01	08 48	09 35		
19	104 43.6	24.8	81 10.1	12.1	16 58.8	4.5 54.6	S 10	05 26	05 52	06 15	07 26	08 13	08 58	09 42		
20	119 43.5	24.9	95 41.2	12.2	16 54.3	4.5 54.7	20	05 42	06 10	06 34	07 41	08 25	09 08	09 50		
21	134 43.3	24.9	110 12.4	12.1	16 49.8	4.6 54.7	30	05 59	06 28	06 55	07 57	08 40	09 20	09 59		
22	149 43.2	25.0	124 43.5	12.1	16 45.2	4.6 54.7	35	06 07	06 39	07 07	08 06	08 48	09 27	10 04		
23	164 43.1	25.0	139 14.6	12.2	16 40.6	4.8 54.7	40	06 17	06 51	07 21	08 17	08 58	09 35	10 10		
19 00	179 42.9	N23 25.1	153 45.8	12.2	N16 35.8	4.8 54.7	45	06 27	07 04	07 38	08 30	09 09	09 44	10 17		
01	194 42.8	25.1	168 17.0	12.2	16 31.0	4.9 54.7	S 50	06 39	07 20	07 59	08 45	09 22	09 55	10 25		
02	209 42.6	25.1	182 48.2	12.2	16 26.1	5.0 54.7	52	06 44	07 28	08 09	08 53	09 29	10 00	10 28		
03	224 42.5	25.2	197 19.4	12.2	16 21.1	5.0 54.8	54	06 50	07 36	08 20	09 01	09 36	10 06	10 32		
04	239 42.4	25.2	211 50.6	12.2	16 16.1	5.2 54.8	56	06 56	07 45	08 33	09 10	09 43	10 12	10 37		
05	254 42.2	25.3	226 21.8	12.2	16 10.9	5.2 54.8	58	07 03	07 56	08 47	09 20	09 52	10 19	10 42		
06	269 42.1	N23 25.3	240 53.0	12.3	N16 05.7	5.3 54.8	S 60	07 10	08 07	09 05	09 31	10 02	10 27	10 47		
07	284 42.0	25.3	255 24.3	12.2	16 00.4	5.3 54.8										
D 08	299 41.8	25.4	269 55.5	12.3	15 55.1	5.5 54.8	Lat.	Ocaso Sol	Crepúsculo Civil		Ocaso Luna					
O 09	314 41.7	25.4	284 26.8	12.3	15 49.6	5.5 54.9			Naut.	18	19	20	21			
M 10	329 41.6	25.4	298 58.1	12.3	15 44.1	5.6 54.9				h m	h m	h m	h m			
I 11	344 41.4	25.5	313 29.4	12.3	15 38.5	5.7 54.9	N 72	□	□	□	00 50	{ 00 23 } { 08 56 }	23 47	23 40		
N 12	359 41.3	N23 25.5	328 00.7	12.3	N15 32.8	5.8 54.9	N 70	□	□	□	23 23	23 27	23 29	23 29		
G 13	14 41.1	25.6	342 32.0	12.3	15 27.0	5.8 54.9	68	□	□	□	22 53	23 06	23 14	23 20		
O 14	29 41.0	25.6	357 03.3	12.4	15 21.2	5.9 54.9	66	□	□	□	22 30	22 49	23 02	23 12		
15	44 40.9	25.6	11 34.7	12.3	15 15.3	6.0 55.0	64	22 32	////	////	22 13	22 35	22 52	23 05		
16	59 40.7	25.7	26 06.0	12.4	15 09.3	6.0 55.0	62	21 54	////	////	21 58	22 23	22 43	23 00		
17	74 40.6	25.7	40 37.4	12.4	15 03.3	6.1 55.0	60	21 27	23 14	////	21 46	22 13	22 36	22 55		
18	89 40.5	N23 25.7	55 08.8	12.3	N14 57.2	6.2 55.0	N 58	21 07	22 23	////	21 35	22 04	22 29	22 51		
19	104 40.3	25.7	69 40.1	12.4	14 51.0	6.3 55.0	56	20 50	21 53	////	21 26	21 57	22 23	22 47		
20	119 40.2	25.8	84 11.5	12.5	14 44.7	6.4 55.0	54	20 36	21 30	23 18	21 17	21 50	22 18	22 43		
21	134 40.0	25.8	98 43.0	12.4	14 38.3	6.4 55.1	52	20 23	21 12	22 31	21 10	21 43	22 13	22 40		
22	149 39.9	25.8	113 14.4	12.4	14 31.9	6.5 55.1	50	20 10	20 57	22 03	21 03	21 38	22 09	22 37		
23	164 39.8	25.9	127 45.8	12.5	14 25.4	6.5 55.1	45	19 50	20 27	21 17	20 49	21 26	21 59	22 31		
20 00	179 39.6	N23 25.9	142 17.3	12.4	N14 18.9	6.7 55.1	N 40	19 32	20 05	20 46	20 37	21 16	21 52	22 25		
01	194 39.5	25.9	156 48.7	12.5	14 12.2	6.7 55.1	35	19 17	19 46	20 23	20 27	21 07	21 45	22 21		
02	209 39.4	25.9	171 20.2	12.5	14 05.5	6.7 55.2	30	19 04	19 31	20 04	20 18	20 59	21 39	22 17		
03	224 39.2	26.0	185 51.7	12.5	13 58.8	6.9 55.2	20	18 42	19 06	19 35	20 02	20 46	21 28	22 09		
04	239 39.1	26.0	200 23.2	12.5	13 51.9	6.9 55.2	N 10	18 23	18 46	19 13	19 49	20 34	21 19	22 03		
05	254 38.9	26.0	214 54.7	12.5	13 45.0	6.9 55.2	0	18 05	18 27	18 54	19 36	20 24	21 11	21 57		
06	269 38.8	N23 26.0	229 26.2	12.6	N13 38.1	7.1 55.2	S 10	17 47	18 10	18 37	19 23	20 13	21 02	21 51		
07	284 38.7	26.0	243 57.8	12.5	13 31.0	7.1 55.2	20	17 29	17 53	18 20	19 10	20 01	20 53	21 45		
08	299 38.5	26.1	258 29.3	12.6	13 23.9	7.2 55.3	30	17 08	17 34	18 04	18 54	19 47	20 42	21 37		
L 09	314 38.4	26.1	273 00.9	12.5	13 16.7	7.2 55.3	35	16 55	17 23	17 55	18 45	19 39	20 36	21 33		
U 10	329 38.3	26.1	287 32.4	12.6	13 09.5	7.3 55.3	40	16 41	17 12	17 46	18 34	19 31	20 29	21 28		
N 11	344 38.1	26.1	302 04.0	12.6	13 02.2	7.4 55.3	45	16 24	16 58	17 35	18 22	19 20	20 20	21 23		
E 12	359 38.0	N23 26.1	316 35.6	12.6	N12 54.8	7.4 55.3	S 50	16 03	16 42	17 24	18 07	19 07	20 10	21 16		
S 13	14 37.9	26.2	331 07.2	12.6	12 47.4	7.6 55.4	52	15 54	16 35	17 18	18 00	19 01	20 06	21 13		
14	29 37.7	26.2	345 38.8	12.6	12 39.8	7.5 55.4	54	15 42	16 26	17 13	17 52	18 55	20 01	21 09		
15	44 37.6	26.2	0 10.4	12.6	12 32.3	7.7 55.4	56	15 30	16 17	17 06	17 44	18 47	19 55	21 05		
16	59 37.4	26.2	14 42.0	12.7	12 24.6	7.6 55.4	58	15 15	16 07	17 00	17 34	18 39	19 49	21 01		
17	74 37.3	26.2	29 13.7	12.6	12 17.0	7.8 55.4	S 60	14 57	15 55	16 52	17 22	18 30	19 41</			

T. M. G.	ARIES			VENUS -3.9			MARTE +1.2			JUPITER -1.5			SATURNO +0.6			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
21 00	269 04.6	226 45.6 N13	16.1	230 13.8 N14	14.3		192 37.5 N22	23.4		132 18.2 N17	33.5		Acamar	315 39.2 S40	23.6			
01	284 07.1	241 45.7	16.8	245 14.5	14.9		207 39.4	23.4		147 20.4	33.4		Achernar	335 47.2 S57	20.8			
02	299 09.5	256 45.7	17.5	260 15.2	15.5		222 41.2	23.5		162 22.6	33.4		Acruz	173 39.5 S62	58.8			
03	314 12.0	271 45.7	18.2	275 15.8	16.1		237 43.1	23.5		177 24.8	33.3		Adhara	255 34.2 S28	56.6			
04	329 14.5	286 45.7	18.9	290 16.5	16.7		252 44.9	23.6		192 27.0	33.2		Aldebaran	291 20.8 N16	27.7			
05	344 16.9	301 45.7	19.6	305 17.2	17.3		267 46.8	23.7		207 29.2	33.1							
06	359 19.4	316 45.8 N13	20.3	320 17.9 N14	17.8		282 48.6 N22	23.7		222 31.4 N17	33.1		Alioth	166 44.4 N56	05.2			
07	14 21.9	331 45.8	21.0	335 18.6	18.4		297 50.5	23.8		237 33.6	33.0		Alkaid	153 20.1 N49	25.8			
08	29 24.3	346 45.8	21.7	350 19.2	19.0		312 52.3	23.8		252 35.8	32.9		Al Na'ir	28 17.5 S47	03.9			
M 09	44 26.8	1 45.8	22.4	5 19.9	19.6		327 54.1	23.9		267 38.0	32.8		Alnilam	276 14.2 S 1	13.1			
A 10	59 29.3	16 45.8	23.1	20 20.6	20.2		342 56.0	23.9		282 40.2	32.8		Alphard	218 22.9 S 8	33.8			
R 11	74 31.7	31 45.8	23.8	35 21.3	20.8		357 57.8	24.0		297 42.4	32.7							
T 12	89 34.2	46 45.8 N13	24.5	50 22.0 N14	21.3		12 59.7 N22	24.0		312 44.6 N17	32.6		Alphecca	126 33.7 N26	47.6			
E 13	104 36.7	61 45.9	25.2	65 22.6	21.9		28 01.5	24.1		327 46.8	32.5		Alpheratz	358 11.5 N28	57.8			
S 14	119 39.1	76 45.9	25.8	80 23.3	22.5		43 03.4	24.2		342 49.0	32.5		Altair	62 34.3 N 8	48.6			
15	134 41.6	91 45.9	26.5	95 24.0	23.1		58 05.2	24.2		357 51.2	32.4		Ankaa	353 42.5 S42	25.4			
16	149 44.0	106 45.9	27.2	110 24.7	23.7		73 07.1	24.3		12 53.5	32.3		Antares	112 59.2 S26	22.9			
17	164 46.5	121 45.9	27.9	125 25.4	24.3		88 08.9	24.3		27 55.7	32.2							
18	179 49.0	136 45.9 N13	28.6	140 26.0 N14	24.8		103 10.8 N22	24.4		42 57.9 N17	32.2		Arcturus	146 20.3 N19	18.1			
19	194 51.4	151 45.9	29.3	155 26.7	25.4		118 12.6	24.4		58 00.1	32.1		Atria	108 24.8 S68	59.3			
20	209 53.9	166 45.9	30.0	170 27.4	26.0		133 14.5	24.5		73 02.3	32.0		Avior	234 29.6 S59	26.5			
21	224 56.4	181 45.9	30.7	185 28.1	26.6		148 16.3	24.6		88 04.5	31.9		Bellatrix	279 01.4 N 6	19.7			
22	239 58.8	196 45.9	31.4	200 28.8	27.2		163 18.2	24.6		103 06.7	31.9		Betelgeuse	271 31.0 N 7	24.1			
23	255 01.3	211 45.9	32.1	215 29.5	27.7		178 20.0	24.7		118 08.9	31.8							
22 00	270 03.8	226 45.9 N13	32.8	230 30.1 N14	28.3		193 21.9 N22	24.7		133 11.1 N17	31.7		Canopus	264 08.7 S52	41.2			
01	285 06.2	241 45.9	33.5	245 30.8	28.9		208 23.7	24.8		148 13.3	31.6		Capella	281 15.0 N45	58.4			
02	300 08.7	256 45.9	34.2	260 31.5	29.5		223 25.5	24.8		163 15.5	31.6		Deneb	49 49.5 N45	12.0			
03	315 11.1	271 45.9	34.9	275 32.2	30.1		238 27.4	24.9		178 17.7	31.5		Denebola	183 01.3 N14	41.9			
04	330 13.6	286 45.9	35.6	290 32.9	30.6		253 29.2	24.9		193 19.9	31.4		Diphda	349 23.1 S18	06.5			
05	345 16.1	301 45.9	36.3	305 33.5	31.2		268 31.1	25.0		208 22.1	31.3							
06	0 18.5	316 45.9 N13	36.9	320 34.2 N14	31.8		283 32.9 N22	25.1		223 24.3 N17	31.3		Dubhe	194 25.1 N61	52.6			
07	15 21.0	331 45.9	37.6	335 34.9	32.4		298 34.8	25.1		238 26.5	31.2		Elnath	278 47.3 N28	35.2			
M 08	30 23.5	346 45.9	38.3	350 35.6	33.0		313 36.6	25.2		253 28.7	31.1		Eltanin	90 58.2 N51	29.6			
M 09	45 25.9	1 45.9	39.0	5 36.3	33.5		328 38.5	25.2		268 30.9	31.0		Enif	34 13.5 N 9	46.3			
E 10	60 28.4	16 45.9	39.7	20 36.9	34.1		343 40.3	25.3		283 33.1	31.0		Fomalhaut	15 53.7 S29	44.3			
R 11	75 30.9	31 45.9	40.4	35 37.6	34.7		358 42.2	25.3		298 35.3	30.9							
O 12	90 33.3	46 45.9 N13	41.1	50 38.3 N14	35.3		13 44.0 N22	25.4		313 37.5 N17	30.8		Gacrux	172 31.0 S56	59.5			
L 13	105 35.8	61 45.9	41.8	65 39.0	35.9		28 45.9	25.4		328 39.7	30.7		Gienah	176 20.2 S17	25.1			
14	120 38.3	76 45.9	42.5	80 39.7	36.4		43 47.7	25.5		343 41.9	30.7		Hadar	149 26.0 S60	16.1			
E 15	135 40.7	91 45.9	43.2	95 40.3	37.0		58 49.6	25.5		358 44.1	30.6		Hamal	328 31.5 N23	21.2			
S 16	150 43.2	106 45.9	43.9	110 41.0	37.6		73 51.4	25.6		13 46.3	30.5		Kaus Aust.	84 19.3 S34	23.6			
17	165 45.6	121 45.9	44.6	125 41.7	38.2		88 53.3	25.7		28 48.5	30.4							
18	180 48.1	136 45.9 N13	45.3	140 42.4 N14	38.7		103 55.1 N22	25.7		43 50.7 N17	30.4		Kochab	137 18.2 N74	15.2			
19	195 50.6	151 45.9	46.0	155 43.0	39.3		118 57.0	25.8		58 52.9	30.3		Markab	14 05.2 N15	05.0			
20	210 53.0	166 45.9	46.6	170 43.7	39.9		133 58.8	25.8		73 55.1	30.2		Menkar	314 43.6 N 4	00.0			
21	225 55.5	181 45.8	47.3	185 44.4	40.5		149 00.7	25.9		88 57.3	30.1		Menkent	148 39.3 S36	15.7			
22	240 58.0	196 45.8	48.0	200 45.1	41.0		164 02.5	25.9		103 59.5	30.0		Miaplacidus	221 45.9 S69	37.8			
23	256 00.4	211 45.8	48.7	215 45.8	41.6		179 04.4	26.0		119 01.7	30.0							
23 00	271 02.9	226 45.8 N13	49.4	230 46.4 N14	42.2		194 06.2 N22	26.0		134 03.9 N17	29.9		Mirfak	309 19.6 N49	46.7			
01	286 05.4	241 45.8	50.1	245 47.1	42.8		209 08.0	26.1		149 06.1	29.8		Nunki	76 31.5 S26	19.4			
02	301 07.8	256 45.8	50.8	260 47.8	43.3		224 09.9	26.1		164 08.3	29.7		Peacock	54 01.4 S56	48.2			
03	316 10.3	271 45.8	51.5	275 48.5	43.9		239 11.7	26.2		179 10.5	29.7		Pollux	244 01.2 N28	04.8			
04	331 12.8	286 45.7	52.2	290 49.2	44.5		254 13.6	26.3		194 12.7	29.6		Procyon	245 28.4 N 5	16.9			
05	346 15.2	301 45.7	52.9	305 49.8	45.1		269 15.4	26.3		209 14.9	29.5							
06	1 17.7	316 45.7 N13	53.6	320 50.5 N14	45.6		284 17.3 N22	26.4		224 17.1 N17	29.4		Rasalhague	96 31.3 N12	34.7			
07	16 20.1	331 45.7	54.3	335 51.2	46.2		299 19.1	26.4		239 19.3	29.4		Regulus	208 12.5 N12	04.6			
08	31 22.6	346 45.7	54.9	350 51.9	46.8		314 21.0	26.5		254 21.5	29.3		Rigel	281 38.4 S 8	13.7			
J 09	46 25.1	1 45.6	55.6	5 52.6	47.3		329 22.8	26.5		269 23.7	29.2		Rigil Kent.	140 28.2 S60	44.7			
U 10	61 27.5	16 45.6	56.3	20 53.2	47.9		344 24.7	26.6		284 25.9	29.1		Sabik	102 43.3 S15	41.8			
E 11	76 30.0	31 45.6	57.0	35 53.9	48.5		359 26.5	26.6		299 28.1	29.1							
V 12	91 32.5	46 45.6 N13	57.7	50 54.6 N14	49.1		14 28.4 N22	26.7		314 30.3 N17	29.0		Schedar	350 11.5 N56	24.6			
E 13	106 34.9	61 45.5	58.4	65 55.3	49.6		29 30.2	26.7		329 32.5	28.9		Shaula	96 58.3 S37	05.2			
S 14	121 37.4	76 45.5	59.1	80 56.0	50.2		44 32.1	26.8		344 34.7	28.8		Sirius	258 58.0 S16	41.3			
15	136 39.9	91 45.5	59.8	95 56.6	50.8		59 33.9	26.8		359 36.9	28.8		Spica	158 59.7 S11				

T. M. G.	ARIES			VENUS -3.9			MARTE +1.2			JUPITER -1.5			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
24 ^d 00 01 02 03 04 05 06 07 08 Y 09 I 10 E 11 R 12 N 13 E 14 S 15 16 17 18 19 20 21 22 23	272	02.0		226	45.2	N14 06.0	231	02.7	N14 55.9	194	50.6	N22 27.3	134	56.7	N17 28.1	Acamar	315	39.2	S40 23.6
	287	04.5		241	45.2	06.7	246	03.4	56.5	209	52.4	27.4	149	58.9	28.0	Achernar	335	47.2	S57 20.8
	302	07.0		256	45.2	07.4	261	04.1	57.0	224	54.3	27.4	165	01.1	27.9	Acrux	173	39.5	S62 58.8
	317	09.4		271	45.1	08.0	276	04.8	57.6	239	56.1	27.5	180	03.3	27.8	Adhara	255	34.2	S28 56.6
	332	11.9		286	45.1	08.7	291	05.5	58.2	254	58.0	27.5	195	05.5	27.8	Aldebaran	291	20.8	N16 27.7
	347	14.4		301	45.1	09.4	306	06.1	58.7	269	59.8	27.6	210	07.7	27.7				
	2	16.8		316	45.0	N14 10.1	321	06.8	N14 59.3	285	01.7	N22 27.7	225	09.8	N17 27.6	Alioth	166	44.4	N56 05.2
	17	19.3		331	45.0	10.8	336	07.5	14 59.9	300	03.5	27.7	240	12.0	27.5	Alkaid	153	20.1	N49 25.8
	32	21.7		346	45.0	11.5	351	08.2	15 00.4	315	05.4	27.8	255	14.2	27.4	Al Na'ir	28	17.5	S47 03.9
	47	24.2		1	44.9	12.2	6	08.8	01.0	330	07.2	27.8	270	16.4	27.4	Alnilam	276	14.2	S 1 13.1
	62	26.7		16	44.9	12.9	21	09.5	01.6	345	09.1	27.9	285	18.6	27.3	Alphard	218	22.9	S 8 33.8
	77	29.1		31	44.8	13.5	36	10.2	02.1	0	10.9	27.9	300	20.8	27.2				
	92	31.6		46	44.8	N14 14.2	51	10.9	N15 02.7	15	12.8	N22 28.0	315	23.0	N17 27.1	Alphecca	126	33.7	N26 47.6
	107	34.1		61	44.8	14.9	66	11.6	03.2	30	14.6	28.0	330	25.2	27.1	Alphaatz	358	11.5	N28 57.9
	122	36.5		76	44.7	15.6	81	12.2	03.8	45	16.5	28.1	345	27.4	27.0	Althair	62	34.3	N 8 48.6
	137	39.0		91	44.7	16.3	96	12.9	04.4	60	18.3	28.1	0	29.6	26.9	Ankaa	353	42.5	S42 25.4
	152	41.5		106	44.6	17.0	111	13.6	04.9	75	20.2	28.2	15	31.8	26.8	Antares	112	59.2	S26 22.9
	167	43.9		121	44.6	17.7	126	14.3	05.5	90	22.0	28.2	30	34.0	26.8				
	182	46.4		136	44.5	N14 18.4	141	14.9	N15 06.1	105	23.9	N22 28.3	45	36.2	N17 26.7	Arcturus	146	20.3	N19 18.1
	197	48.9		151	44.5	19.0	156	15.6	06.6	120	25.7	28.3	60	38.4	26.6	Atria	108	24.8	S68 59.3
	212	51.3		166	44.4	19.7	171	16.3	07.2	135	27.6	28.4	75	40.6	26.5	Avior	234	29.6	S59 26.5
	227	53.8		181	44.4	20.4	186	17.0	07.8	150	29.4	28.4	90	42.8	26.4	Bellatrix	279	01.4	N 6 19.7
	242	56.2		196	44.3	21.1	201	17.7	08.3	165	31.3	28.5	105	45.0	26.4	Betelgeuse	271	31.0	N 7 24.1
257	58.7		211	44.3	21.8	216	18.3	08.9	180	33.1	28.5	120	47.2	26.3					
25 ^d 00 01 02 03 04 05 06 07 08 S 09 A 10 B 11 A 12 D 13 O 14 15 16 17 18 19 20 21 22 23	273	01.2		226	44.2	N14 22.5	231	19.0	N15 09.4	195	35.0	N22 28.6	135	49.4	N17 26.2	Canopus	264	08.7	S52 41.1
	288	03.6		241	44.2	23.2	246	19.7	10.0	210	36.8	28.7	150	51.6	26.1	Capella	281	15.0	N45 58.4
	303	06.1		256	44.1	23.8	261	20.4	10.6	225	38.7	28.7	165	53.8	26.1	Deneb	49	49.5	N45 12.0
	318	08.6		271	44.1	24.5	276	21.0	11.1	240	40.5	28.8	180	56.0	26.0	Denebola	183	01.3	N14 41.9
	333	11.0		286	44.0	25.2	291	21.7	11.7	255	42.4	28.8	195	58.2	25.9	Diphda	349	23.1	S18 06.5
	348	13.5		301	44.0	25.9	306	22.4	12.2	270	44.2	28.9	211	00.4	25.8				
	3	16.0		316	43.9	N14 26.6	321	23.1	N15 12.8	285	46.1	N22 28.9	226	02.6	N17 25.7	Dubhe	194	25.1	N61 52.6
	18	18.4		331	43.9	27.3	336	23.8	13.4	300	47.9	29.0	241	04.8	25.7	Elnath	278	47.3	N28 35.2
	33	20.9		346	43.8	27.9	351	24.4	13.9	315	49.8	29.0	256	06.9	25.6	Eltanin	90	58.2	N51 29.6
	48	23.3		1	43.8	28.6	6	25.1	14.5	330	51.6	29.1	271	09.1	25.5	Enif	34	13.5	N 9 46.4
	63	25.8		16	43.7	29.3	21	25.8	15.0	345	53.5	29.1	286	11.3	25.4	Fomalhaut	15	53.7	S29 44.3
	78	28.3		31	43.7	30.0	36	26.5	15.6	0	55.3	29.2	301	13.5	25.4				
	93	30.7		46	43.6	N14 30.7	51	27.1	N15 16.2	15	57.2	N22 29.2	316	15.7	N17 25.3	Gacrux	172	31.0	S56 59.5
	108	33.2		61	43.5	31.4	66	27.8	16.7	30	59.0	29.3	331	17.9	25.2	Gienah	176	20.2	S17 25.1
	123	35.7		76	43.5	32.1	81	28.5	17.3	46	00.9	29.3	346	20.1	25.1	Hadar	149	26.0	S60 16.1
	138	38.1		91	43.4	32.7	96	29.2	17.8	61	02.7	29.4	1	22.3	25.0	Hamal	328	31.5	N23 21.2
	153	40.6		106	43.4	33.4	111	29.8	18.4	76	04.6	29.4	16	24.5	25.0	Kaus Aust.	84	19.3	S34 23.6
	168	43.1		121	43.3	34.1	126	30.5	18.9	91	06.4	29.5	31	26.7	24.9				
	183	45.5		136	43.2	N14 34.8	141	31.2	N15 19.5	106	08.3	N22 29.5	46	28.9	N17 24.8	Kochab	137	18.3	N74 15.2
	198	48.0		151	43.2	35.5	156	31.9	20.1	121	10.1	29.6	61	31.1	24.7	Markab	14	05.2	N15 05.0
	213	50.5		166	43.1	36.1	171	32.6	20.6	136	12.0	29.6	76	33.3	24.7	Menkar	314	43.6	N 4 00.0
	228	52.9		181	43.0	36.8	186	33.2	21.2	151	13.8	29.7	91	35.5	24.6	Menkent	148	39.3	S36 15.7
	243	55.4		196	43.0	37.5	201	33.9	21.7	166	15.7	29.7	106	37.7	24.5	Miaplacidus	221	46.0	S69 37.8
258	57.8		211	42.9	38.2	216	34.6	22.3	181	17.5	29.8	121	39.9	24.4					
26 ^d 00 01 02 03 04 05 06 07 08 D 09 O 10 11 12 13 14 15 16 17 18 19 20 21 22 23	274	00.3		226	42.8	N14 38.9	231	35.3	N15 22.8	196	19.4	N22 29.8	136	42.1	N17 24.3	Mirfak	309	19.5	N49 46.7
	289	02.8		241	42.8	39.6	246	35.9	23.4	211	21.2	29.9	151	44.2	24.3	Nunki	76	31.5	S26 19.4
	304	05.2		256	42.7	40.2	261	36.6	23.9	226	23.1	29.9	166	46.4	24.2	Peacock	54	01.3	S56 48.2
	319	07.7		271	42.6	40.9	276	37.3	24.5	241	24.9	30.0	181	48.6	24.1	Pollux	244	01.2	N28 04.8
	334	10.2		286	42.6	41.6	291	38.0	25.0	256	26.8	30.0	196	50.8	24.0	Procyon	245	28.4	N 5 16.9
	349	12.6		301	42.5	42.3	306	38.6	25.6	271	28.6	30.1	211	53.0	24.0				
	4	15.1		316	42.4	N14 43.0	321	39.3	N15 26.2	286	30.5	N22 30.2	226	55.2	N17 23.9	Rasalhague	96	31.3	N12 34.7
	19	17.6		331	42.3	43.6	336	40.0	26.7	301	32.3	30.2	241	57.4	23.8	Regulus	208	12.5	N12 04.6
	34	20.0		346	42.3	44.3	351	40.7	27.3	316	34.2	30.3	256	59.6	23.7	Rigel	281	38.4	S 8 13.7
	49	22.5		1	42.2	45.0	6	41.3	27.8	331	36.0	30.3	272	01.8	23.6	Rigel Kent.	140	28.3	S60 44.7
	64	25.0		16	42.1	45.7	21	42.0	28.4	346	37.9	30.4	287	04.0	23.6	Sabik	102	43.3	S15 41.8
	79	27.4		31	42.0	46.4	36	42.7	28.9	1	39.7	30.4	302	06.2	23.5				
	94	29.9		46	42.0	N14 47.0	51	43.4	N15 29.5	16	41.6	N22 30.5	317	08.4	N17 23.4	Schedar	350	11.4	N56 24.6
	109	32.3		61	41.9	47.7	66	44.1	30.0	31	43.4	30.5	332	10.6	23.3	Shaula	96	58.3	S37 05.2
	124	34.8		76	41.8	48.4	81	44.7	30.6	46	45.3	30.6	347	12.8	23.2	Sirius	258	58.0	S16 41.3
	139	37.3		91	41.7	49.1	96	45.4	31.1	61	47.1	30.6	2	15.0	23.2	Spica	158	59.7	S11 02.7
	154	39.7		106	41.7	49.7	111	46.1	31.7	76	49.0	30.7	17	17.1	23.1	Suhail	223	12.7	S43 20.8
	169	42.2		121	41.6	50.4	126	46.8	32.2	91	50.8	30.7	32	19.3	23.0				
	184	44.7		136	41.5	N14 51.1	141	47.4	N15 32.8	106	52.7	N22 30.8	47	21.5	N17 22.9	Vega	80	56.9	N38 45.9
	199	47.1		151	41.4	51.8	156	48.1	33.3	121									

T. M. G.	SO.		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	24		25		26		27	
												h	m	h	m	h	m	h	m
24 00	179 26.6	N23 25.1	96 47.0	11.9	S 0	20.2	10.7	57.6	□	□	□	12 31	14 23	16 23	18 34				
01	194 26.4	25.0	111 17.9	11.8	0	30.9	10.8	57.6	□	□	□	12 27	14 12	16 02	17 56				
02	209 26.3	25.0	125 48.7	11.8	0	41.7	10.8	57.6	□	□	□	12 24	14 03	15 45	17 31				
03	224 26.2	25.0	140 19.5	11.8	0	52.5	10.7	57.7	□	□	□	12 21	13 55	15 32	17 11				
04	239 26.0	24.9	154 50.3	11.7	1	03.2	10.8	57.7	□	□	□	12 19	13 49	15 21	16 55				
05	254 25.9	24.9	169 21.0	11.7	1	14.0	10.8	57.7	□	□	□	12 17	13 44	15 12	16 42				
06	269 25.8	N23 24.8	183 51.7	11.6	S 1	24.8	10.8	57.8	□	□	□	12 16	13 39	15 04	16 31				
07	284 25.6	24.8	198 22.3	11.6	1	35.6	10.8	57.8	□	□	□	12 14	13 35	14 58	16 21				
08	299 25.5	24.7	212 52.9	11.5	1	46.4	10.9	57.8	□	□	□	12 13	13 31	14 52	16 13				
09	314 25.4	24.7	227 23.4	11.5	1	57.3	10.8	57.9	□	□	□	12 12	13 28	14 46	16 05				
10	329 25.2	24.6	241 53.9	11.5	2	08.1	10.8	57.9	□	□	□	12 11	13 25	14 41	15 59				
11	344 25.1	24.6	256 24.4	11.4	2	18.9	10.8	57.9	□	□	□	12 10	13 22	14 37	15 53				
12	359 25.0	N23 24.5	270 54.8	11.4	S 2	29.7	10.8	58.0	□	□	□	12 07	13 16	14 27	15 40				
13	14 24.8	24.5	285 25.2	11.3	2	40.5	10.8	58.0	□	□	□	12 06	13 12	14 20	15 29				
14	29 24.7	24.4	299 55.5	11.3	2	51.3	10.8	58.0	□	□	□	12 04	13 07	14 13	15 20				
15	44 24.6	24.4	314 25.8	11.2	3	02.1	10.8	58.1	□	□	□	12 03	13 04	14 07	15 12				
16	59 24.4	24.3	328 56.0	11.2	3	12.9	10.8	58.1	□	□	□	12 01	12 57	13 57	14 59				
17	74 24.3	24.3	343 26.2	11.1	3	23.7	10.8	58.1	□	□	□	11 59	12 52	13 48	14 47				
18	89 24.2	N23 24.2	357 56.3	11.1	S 3	34.5	10.8	58.2	□	□	□	11 57	12 47	13 40	14 36				
19	104 24.0	24.1	12 26.4	11.1	3	45.3	10.8	58.2	□	□	□	11 55	12 42	13 32	14 25				
20	119 23.9	24.1	26 56.5	11.0	3	56.1	10.8	58.2	□	□	□	11 53	12 37	13 23	14 13				
21	134 23.8	24.0	41 26.5	10.9	4	06.9	10.7	58.3	□	□	□	11 51	12 30	13 13	14 00				
22	149 23.6	24.0	55 56.4	10.9	4	17.6	10.8	58.3	□	□	□	11 50	12 27	13 07	13 52				
23	164 23.5	23.9	70 26.3	10.8	4	28.4	10.7	58.3	□	□	□	11 48	12 23	13 01	13 44				
25 00	179 23.4	N23 23.9	84 56.1	10.8	S 4	39.1	10.7	58.4	□	□	□	11 47	12 19	12 54	13 34				
01	194 23.2	23.8	99 25.9	10.7	4	49.8	10.8	58.4	□	□	□	11 45	12 13	12 45	13 22				
02	209 23.1	23.7	113 55.6	10.6	5	00.6	10.6	58.4	□	□	□	11 44	12 11	12 41	13 16				
03	224 23.0	23.7	128 25.2	10.7	5	11.2	10.7	58.5	□	□	□	11 43	12 08	12 36	13 10				
04	239 22.8	23.6	142 54.9	10.5	5	21.9	10.7	58.5	□	□	□	11 43	12 05	12 31	13 03				
05	254 22.7	23.5	157 24.4	10.5	5	32.6	10.6	58.5	□	□	□	11 41	12 02	12 26	12 55				
06	269 22.6	N23 23.5	171 53.9	10.4	S 5	43.2	10.7	58.6	□	□	□	11 40	11 58	12 20	12 47				
07	284 22.4	23.4	186 23.3	10.4	5	53.9	10.6	58.6	□	□	□	11 40	11 58	12 20	12 47				
08	299 22.3	23.3	200 52.7	10.3	6	04.5	10.6	58.6	□	□	□	11 40	11 58	12 20	12 47				
09	314 22.2	23.3	215 22.0	10.3	6	15.1	10.5	58.7	□	□	□	11 40	11 58	12 20	12 47				
10	329 22.0	23.2	229 51.3	10.1	6	25.6	10.6	58.7	□	□	□	11 40	11 58	12 20	12 47				
11	344 21.9	23.1	244 20.4	10.2	6	36.2	10.5	58.7	□	□	□	11 40	11 58	12 20	12 47				
12	359 21.8	N23 23.1	258 49.6	10.0	S 6	46.7	10.5	58.8	□	□	□	11 40	11 58	12 20	12 47				
13	14 21.6	23.0	273 18.6	10.0	6	57.2	10.4	58.8	□	□	□	11 40	11 58	12 20	12 47				
14	29 21.5	22.9	287 47.6	10.0	7	07.6	10.5	58.8	□	□	□	11 40	11 58	12 20	12 47				
15	44 21.4	22.9	302 16.6	9.8	7	18.1	10.4	58.9	□	□	□	11 40	11 58	12 20	12 47				
16	59 21.3	22.8	316 45.4	9.9	7	28.5	10.4	58.9	□	□	□	11 40	11 58	12 20	12 47				
17	74 21.1	22.7	331 14.3	9.7	7	38.9	10.3	58.9	□	□	□	11 40	11 58	12 20	12 47				
18	89 21.0	N23 22.7	345 43.0	9.7	S 7	49.2	10.3	59.0	□	□	□	11 40	11 58	12 20	12 47				
19	104 20.9	22.6	0 11.7	9.6	7	59.5	10.3	59.0	□	□	□	11 40	11 58	12 20	12 47				
20	119 20.7	22.5	14 40.3	9.5	8	09.8	10.2	59.0	□	□	□	11 40	11 58	12 20	12 47				
21	134 20.6	22.4	29 08.8	9.5	8	20.0	10.2	59.1	□	□	□	11 40	11 58	12 20	12 47				
22	149 20.5	22.4	43 37.3	9.4	8	30.2	10.2	59.1	□	□	□	11 40	11 58	12 20	12 47				
23	164 20.3	22.3	58 05.7	9.3	8	40.4	10.1	59.1	□	□	□	11 40	11 58	12 20	12 47				
26 00	179 20.2	N23 22.2	72 34.0	9.3	S 8	50.5	10.1	59.1	□	□	□	11 40	11 58	12 20	12 47				
01	194 20.1	22.1	87 02.3	9.2	9	00.6	10.1	59.2	□	□	□	11 40	11 58	12 20	12 47				
02	209 19.9	22.1	101 30.5	9.1	9	10.7	10.0	59.2	□	□	□	11 40	11 58	12 20	12 47				
03	224 19.8	22.0	115 58.6	9.0	9	20.7	10.0	59.2	□	□	□	11 40	11 58	12 20	12 47				
04	239 19.7	21.9	130 26.6	9.0	9	30.7	9.9	59.3	□	□	□	11 40	11 58	12 20	12 47				
05	254 19.5	21.8	144 54.6	8.9	9	40.6	9.9	59.3	□	□	□	11 40	11 58	12 20	12 47				
06	269 19.4	N23 21.7	159 22.5	8.9	S 9	50.5	9.8	59.3	□	□	□	11 40	11 58	12 20	12 47				
07	284 19.3	21.7	173 50.4	8.7	10	00.3	9.8	59.4	□	□	□	11 40	11 58	12 20	12 47				
08	299 19.1	21.6	188 18.1	8.7	10	10.1	9.7	59.4	□	□	□	11 40	11 58	12 20	12 47				
09	314 19.0	21.5	202 45.8	8.6	10	19.8	9.7	59.4	□	□	□	11 40	11 58	12 20	12 47				
10	329 18.9	21.4	217 13.4	8.5	10	29.5	9.6	59.5	□	□	□	11 40	11 58	12 20	12 47				
11	344 18.8	21.3	231 40.9	8.5	10	39.1	9.5	59.5	□	□	□	11 40	11 58	12 20	12 47				
12	359 18.6	N23 21.2	246 08.4	8.4	S 10	48.6	9.6	59.5	□	□	□	11 40	11 58	12 20	12 47				
13	14 18.5	21.1	260 35.8	8.3	10	58.2	9.4	59.6	□	□	□	11 40	11 58	12 20	12 47				
14	29 18.4	21.1	275 03.1	8.2	11	07.6	9.4	59.6	□	□	□	11 40	11 58	12 20	12 47				
15	44 18.2	21.0	289 30.3	8.2	11	17.0	9.4	59.6	□	□	□	11 40	11 58	12 20	12 47				
16	59 18.1	20.9	303 57.5	8.1	11	26.4	9.2	59.7	□	□	□	11 40	11 58	12 20	12 47				
17	74 18.0	20.8	318 24.6	8.0	11	35.6	9.3	59.7	□	□	□	11 40	11 58	12 20	12 47				
18	89 17.8	N23 20.7	332 51.6	7.9	S 11	44.9	9.1	59.7	□	□	□	11 40	11 58	12 20	12 47				
19	104 17.7	20.6	347 18.5	7.8	11	54.0	9.1	59.7	□	□	□	11 40	11 58	12 20	12 47				
20	119 17.6																		

T. M. G.	ARIES		VENUS -3.8		MARTE +1.2		JUPITER -1.5		SATURNO +0.6		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.		
LUNES	27 ^d 00	274 59.4	226 41.0 N14	55.2	231 51.5 N15	36.1	197 03.8 N22	31.1	137 34.7 N17	22.5	Acamar	315 39.2 S40 23.6		
	01	290 01.9	241 40.9	55.8	246 52.2	36.6	212 05.6	31.1	152 36.9	22.4	Achernar	335 47.2 S57 20.8		
	02	305 04.4	256 40.8	56.5	261 52.8	37.2	227 07.5	31.2	167 39.1	22.3	Acrux	173 39.5 S62 58.8		
	03	320 06.8	271 40.7	57.2	276 53.5	37.7	242 09.4	31.2	182 41.3	22.2	Adhara	255 34.2 S28 56.6		
	04	335 09.3	286 40.7	57.9	291 54.2	38.3	257 11.2	31.3	197 43.4	22.1	Aldebaran	291 20.8 N16 27.8		
	05	350 11.8	301 40.6	58.5	306 54.9	38.8	272 13.1	31.3	212 45.6	22.1				
	06	5 14.2	316 40.5 N14	59.2	321 55.5 N15	39.4	287 14.9 N22	31.4	227 47.8 N17	22.0	Alioth	166 44.4 N56 05.2		
	07	20 16.7	331 40.4 14	59.9	336 56.2	39.9	302 16.8	31.4	242 50.0	21.9	Alkaid	153 20.1 N49 25.8		
	08	35 19.2	346 40.3 15	00.6	351 56.9	40.4	317 18.6	31.5	257 52.2	21.8	Al Na'ir	28 17.4 S47 03.9		
	09	50 21.6	1 40.2	01.2	6 57.6	41.0	332 20.5	31.5	272 54.4	21.8	Alnilam	276 14.2 S 1 13.0		
	10	65 24.1	16 40.1	01.9	21 58.2	41.5	347 22.3	31.6	287 56.6	21.7	Alphard	218 22.9 S 8 33.8		
	11	80 26.6	31 40.0	02.6	36 58.9	42.1	2 24.2	31.6	302 58.8	21.6				
	12	95 29.0	46 39.9 N15	03.3	51 59.6 N15	42.6	17 26.0 N22	31.7	318 01.0 N17	21.5	Alphecca	126 33.7 N26 47.6		
	13	110 31.5	61 39.8	03.9	67 00.3	43.2	32 27.9	31.7	333 03.2	21.4	Alpheratz	358 11.5 N28 57.9		
	14	125 33.9	76 39.7	04.6	82 00.9	43.7	47 29.7	31.8	348 05.4	21.4	Altair	62 34.3 N 8 48.6		
	15	140 36.4	91 39.7	05.3	97 01.6	44.3	62 31.6	31.8	3 07.5	21.3	Ankaa	353 42.4 S42 25.4		
	16	155 38.9	106 39.6	06.0	112 02.3	44.8	77 33.4	31.9	18 09.7	21.2	Antares	112 59.2 S26 22.9		
	17	170 41.3	121 39.5	06.6	127 03.0	45.3	92 35.3	31.9	33 11.9	21.1				
	18	185 43.8	136 39.4 N15	07.3	142 03.6 N15	45.9	107 37.1 N22	32.0	48 14.1 N17	21.0	Arcturus	146 20.3 N19 18.1		
	19	200 46.3	151 39.3	08.0	157 04.3	46.4	122 39.0	32.0	63 16.3	21.0	Atria	108 24.8 S68 59.3		
	20	215 48.7	166 39.2	08.6	172 05.0	47.0	137 40.8	32.1	78 18.5	20.9	Avior	234 29.6 S59 26.5		
	21	230 51.2	181 39.1	09.3	187 05.7	47.5	152 42.7	32.1	93 20.7	20.8	Bellatrix	279 01.4 N 6 19.7		
	22	245 53.7	196 39.0	10.0	202 06.3	48.1	167 44.6	32.2	108 22.9	20.7	Betelgeuse	271 31.0 N 7 24.1		
23	260 56.1	211 38.9	10.7	217 07.0	48.6	182 46.4	32.2	123 25.1	20.6					
MARTES	28 ^d 00	275 58.6	226 38.8 N15	11.3	232 07.7 N15	49.1	197 48.3 N22	32.3	138 27.3 N17	20.6	Canopus	264 08.7 S52 41.1		
	01	291 01.1	241 38.7	12.0	247 08.4	49.7	212 50.1	32.3	153 29.4	20.5	Capella	281 15.0 N45 58.4		
	02	306 03.5	256 38.6	12.7	262 09.0	50.2	227 52.0	32.4	168 31.6	20.4	Deneb	49 49.5 N45 12.0		
	03	321 06.0	271 38.5	13.3	277 09.7	50.8	242 53.8	32.4	183 33.8	20.3	Denebola	183 01.3 N14 41.9		
	04	336 08.4	286 38.3	14.0	292 10.4	51.3	257 55.7	32.5	198 36.0	20.2	Diphda	349 23.1 S18 06.5		
	05	351 10.9	301 38.2	14.7	307 11.1	51.8	272 57.5	32.5	213 38.2	20.2				
	06	6 13.4	316 38.1 N15	15.4	322 11.7 N15	52.4	287 59.4 N22	32.5	228 40.4 N17	20.1	Dubhe	194 25.2 N61 52.6		
	07	21 15.8	331 38.0	16.0	337 12.4	52.9	303 01.2	32.6	243 42.6	20.0	Elnath	278 47.2 N28 35.2		
	08	36 18.3	346 37.9	16.7	352 13.1	53.5	318 03.1	32.6	258 44.8	19.9	Eltanin	90 58.2 N51 29.7		
	09	51 20.8	1 37.8	17.4	7 13.8	54.0	333 04.9	32.7	273 47.0	19.8	Enif	34 13.5 N 9 46.4		
	10	66 23.2	16 37.7	18.0	22 14.4	54.5	348 06.8	32.7	288 49.1	19.8	Fomalhaut	15 53.7 S29 44.3		
	11	81 25.7	31 37.6	18.7	37 15.1	55.1	3 08.6	32.8	303 51.3	19.7				
	12	96 28.2	46 37.5 N15	19.4	52 15.8 N15	55.6	18 10.5 N22	32.8	318 53.5 N17	19.6	Gacrux	172 31.0 S56 59.5		
	13	111 30.6	61 37.4	20.0	67 16.5	56.2	33 12.4	32.9	333 55.7	19.5	Gienah	176 20.2 S17 25.1		
	14	126 33.1	76 37.3	20.7	82 17.1	56.7	48 14.2	32.9	348 57.9	19.4	Hadar	149 26.0 S60 16.1		
	15	141 35.5	91 37.1	21.4	97 17.8	57.2	63 16.1	33.0	4 00.1	19.4	Hamal	328 31.5 N23 21.2		
	16	156 38.0	106 37.0	22.0	112 18.5	57.8	78 17.9	33.0	19 02.3	19.3	Kaus Aust.	84 19.3 S34 23.6		
	17	171 40.5	121 36.9	22.7	127 19.2	58.3	93 19.8	33.1	34 04.5	19.2				
	18	186 42.9	136 36.8 N15	23.4	142 19.8 N15	58.8	108 21.6 N22	33.1	49 06.7 N17	19.1	Kochab	137 18.3 N74 15.2		
	19	201 45.4	151 36.7	24.0	157 20.5	59.4	123 23.5	33.2	64 08.8	19.0	Markab	14 05.2 N15 05.0		
	20	216 47.9	166 36.6	24.7	172 21.2 15	59.9	138 25.3	33.2	79 11.0	19.0	Menkar	314 43.6 N 4 00.1		
	21	231 50.3	181 36.5	25.4	187 21.9 16	00.4	153 27.2	33.3	94 13.2	18.9	Menkent	148 39.3 S36 15.7		
	22	246 52.8	196 36.3	26.0	202 22.5	01.0	168 29.0	33.3	109 15.4	18.8	Miaplacidus	221 46.0 S69 37.8		
23	261 55.3	211 36.2	26.7	217 23.2	01.5	183 30.9	33.4	124 17.6	18.7					
MIÉRCOLES	29 ^d 00	276 57.7	226 36.1 N15	27.4	232 23.9 N16	02.1	198 32.7 N22	33.4	139 19.8 N17	18.6	Mirfak	309 19.5 N49 46.7		
	01	292 00.2	241 36.0	28.0	247 24.6	02.6	213 34.6	33.5	154 22.0	18.6	Nunki	76 31.5 S26 19.4		
	02	307 02.7	256 35.9	28.7	262 25.2	03.1	228 36.5	33.5	169 24.2	18.5	Peacock	54 01.3 S56 48.2		
	03	322 05.1	271 35.7	29.4	277 25.9	03.7	243 38.3	33.6	184 26.3	18.4	Pollux	244 01.2 N28 04.8		
	04	337 07.6	286 35.6	30.0	292 26.6	04.2	258 40.2	33.6	199 28.5	18.3	Procyon	245 28.4 N 5 16.9		
	05	352 10.0	301 35.5	30.7	307 27.3	04.7	273 42.0	33.7	214 30.7	18.2				
	06	7 12.5	316 35.4 N15	31.3	322 27.9 N16	05.3	288 43.9 N22	33.7	229 32.9 N17	18.2	Rasalhague	96 31.3 N12 34.7		
	07	22 15.0	331 35.3	32.0	337 28.6	05.8	303 45.7	33.8	244 35.1	18.1	Regulus	208 12.5 N12 04.6		
	08	37 17.4	346 35.1	32.7	352 29.3	06.3	318 47.6	33.8	259 37.3	18.0	Rigel	281 38.4 S 8 13.7		
	09	52 19.9	1 35.0	33.3	7 29.9	06.9	333 49.4	33.9	274 39.5	17.9	Rigel Kent.	140 28.3 S60 44.7		
	10	67 22.4	16 34.9	34.0	22 30.6	07.4	348 51.3	33.9	289 41.7	17.8	Sabik	102 43.3 S15 41.8		
	11	82 24.8	31 34.7	34.7	37 31.3	07.9	3 53.1	33.9	304 43.8	17.8				
	12	97 27.3	46 34.6 N15	35.3	52 32.0 N16	08.4	18 55.0 N22	34.0	319 46.0 N17	17.7	Schedar	350 11.4 N56 24.6		
	13	112 29.8	61 34.5	36.0	67 32.6	09.0	33 56.9	34.0	334 48.2	17.6	Shaula	96 58.3 S37 05.2		
	14	127 32.2	76 34.4	36.6	82 33.3	09.5	48 58.7	34.1	349 50.4	17.5	Sirius	258 58.0 S16 41.2		
	15	142 34.7	91 34.2	37.3	97 34.0	10.0	64 00.6	34.1	4 52.6	17.4	Spica	158 59.7 S11 02.7		
	16	157 37.2	106 34.1	38.0	112 34.7	10.6	79 02.4	34.2	19 54.8	17.4	Suhail	223 12.7 S43 20.7		
	17	172 39.6	121 34.0	38.6	127 35.3	11.1	94 04.3	34.2	34 57.0	17.3				
	18	187 42.1	136 33.8 N15	39.3	142 36.0 N16	11.6	109 06.1 N22	34.3	49 59.1 N17	17.2	Vega	80 56.9 N38 45.9		
	19	202 44.5	151 33.7	39.9	157 36.7	12.2	124 08.0	34.3	65 01.3	17.1	Zuben'ubi	137 35.2 S15 56.9		
	20	217 47.0	166 33.6	40.6	172 37.4	12.7	139 09.8	34.4	80 03.5	17.0				
	21	232 49.5	181 33.4	41.3	187 38.0	13.2	154 11.7	34.4	95 05.7	17.0				
	22	247 51.9	196 33.3	41.9	202 38.7	13.7	169 13.6	34.5	110 07.9	16.9				
23	262 54.4	211 33.2	42.6	217 39.4	14.3	184 15.4	34.5	125 10.1	16.8					
Pas. Mer. 5 35.2											A. H. S.		Pas. Mer.	
											v -0.1 d 0.7		v 0.7 d 0.5	
											v 1.9 d 0.0		v 2.2 d 0.1	
											310 40.2 8 53		316 09.1 8 31	
											281 49.7 10 47		222 28.7 14 44	

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d	P.H.	Náut.		Civil	27		28	29	30		
27 L U N E S	00	179 17.1 N23 20.2	59 31.9	7.5	S12 38.8	8.7	59.9	N 72	h m	h m	h m	h m	h m	h m	h m	h m	h m
	01	194 16.9 20.1	73 58.4	7.4	12 47.5	8.7	59.9	N 70	h m	h m	h m	h m	h m	h m	h m	h m	h m
	02	209 16.8 20.0	88 24.8	7.3	12 56.2	8.6	59.9	68	h m	h m	h m	h m	h m	h m	h m	h m	h m
	03	224 16.7 19.9	102 51.1	7.2	13 04.8	8.5	60.0	66	h m	h m	h m	h m	h m	h m	h m	h m	h m
	04	239 16.5 19.8	117 17.3	7.2	13 13.3	8.5	60.0	64	h m	h m	h m	h m	h m	h m	h m	h m	h m
	05	254 16.4 19.7	131 43.5	7.0	13 21.8	8.4	60.0	62	h m	h m	h m	h m	h m	h m	h m	h m	h m
	06	269 16.3 N23 19.6	146 09.5	7.0	S13 30.2	8.2	60.1	60	h m	h m	h m	h m	h m	h m	h m	h m	h m
	07	284 16.2 19.5	160 35.5	6.9	13 38.4	8.3	60.1	N 58	h m	h m	h m	h m	h m	h m	h m	h m	h m
	08	299 16.0 19.4	175 01.4	6.9	13 46.7	8.1	60.1	56	h m	h m	h m	h m	h m	h m	h m	h m	h m
	09	314 15.9 19.3	189 27.3	6.7	13 54.8	8.0	60.1	54	h m	h m	h m	h m	h m	h m	h m	h m	h m
	10	329 15.8 19.2	203 53.0	6.7	14 02.8	8.0	60.2	52	h m	h m	h m	h m	h m	h m	h m	h m	h m
	11	344 15.6 19.1	218 18.7	6.6	14 10.8	7.9	60.2	50	h m	h m	h m	h m	h m	h m	h m	h m	h m
	12	359 15.5 N23 19.0	232 44.3	6.5	S14 18.7	7.8	60.2	45	h m	h m	h m	h m	h m	h m	h m	h m	h m
	13	14 15.4 18.9	247 09.8	6.5	14 26.5	7.7	60.2	N 40	h m	h m	h m	h m	h m	h m	h m	h m	h m
	14	29 15.2 18.8	261 35.3	6.4	14 34.2	7.6	60.3	35	h m	h m	h m	h m	h m	h m	h m	h m	h m
	15	44 15.1 18.7	276 00.7	6.3	14 41.8	7.5	60.3	30	h m	h m	h m	h m	h m	h m	h m	h m	h m
	16	59 15.0 18.6	290 26.0	6.2	14 49.3	7.4	60.3	20	h m	h m	h m	h m	h m	h m	h m	h m	h m
	17	74 14.9 18.5	304 51.2	6.2	14 56.7	7.3	60.3	N 10	h m	h m	h m	h m	h m	h m	h m	h m	h m
	18	89 14.7 N23 18.3	319 16.4	6.0	S15 04.0	7.3	60.4	0	h m	h m	h m	h m	h m	h m	h m	h m	h m
	19	104 14.6 18.2	333 41.4	6.0	15 11.3	7.1	60.4	S 10	h m	h m	h m	h m	h m	h m	h m	h m	h m
	20	119 14.5 18.1	348 06.4	6.0	15 18.4	7.0	60.4	20	h m	h m	h m	h m	h m	h m	h m	h m	h m
	21	134 14.3 18.0	2 31.4	5.8	15 25.4	7.0	60.4	30	h m	h m	h m	h m	h m	h m	h m	h m	h m
	22	149 14.2 17.9	16 56.2	5.8	15 32.4	6.8	60.5	40	h m	h m	h m	h m	h m	h m	h m	h m	h m
23	164 14.1 17.8	31 21.0	5.7	15 39.2	6.8	60.5	45	h m	h m	h m	h m	h m	h m	h m	h m	h m	
28 M A R T E S	00	179 14.0 N23 17.7	45 45.7	5.6	S15 46.0	6.6	60.5	S 50	h m	h m	h m	h m	h m	h m	h m	h m	h m
	01	194 13.8 17.6	60 10.3	5.6	15 52.6	6.5	60.5	52	h m	h m	h m	h m	h m	h m	h m	h m	h m
	02	209 13.7 17.5	74 34.9	5.5	15 59.1	6.5	60.5	54	h m	h m	h m	h m	h m	h m	h m	h m	h m
	03	224 13.6 17.4	88 59.4	5.4	16 05.6	6.3	60.6	56	h m	h m	h m	h m	h m	h m	h m	h m	h m
	04	239 13.5 17.2	103 23.8	5.4	16 11.9	6.2	60.6	58	h m	h m	h m	h m	h m	h m	h m	h m	h m
	05	254 13.3 17.1	117 48.2	5.3	16 18.1	6.1	60.6	S 60	h m	h m	h m	h m	h m	h m	h m	h m	h m
	06	269 13.2 N23 17.0	132 12.5	5.2	S16 24.2	6.0	60.6	Lat.	h m	h m	h m	h m	h m	h m	h m	h m	h m
	07	284 13.1 16.9	146 36.7	5.2	16 30.2	5.9	60.6	Ocaso Sol	h m	h m	h m	h m	h m	h m	h m	h m	h m
	08	299 12.9 16.8	161 00.9	5.1	16 36.1	5.7	60.7	Crepúsculo Civil	h m	h m	h m	h m	h m	h m	h m	h m	h m
	09	314 12.8 16.7	175 25.0	5.0	16 41.8	5.7	60.7	Náut.	h m	h m	h m	h m	h m	h m	h m	h m	h m
	10	329 12.7 16.5	189 49.0	5.0	16 47.5	5.5	60.7	27	h m	h m	h m	h m	h m	h m	h m	h m	h m
	11	344 12.6 16.4	204 13.0	4.9	16 53.0	5.5	60.7	28	h m	h m	h m	h m	h m	h m	h m	h m	h m
	12	359 12.4 N23 16.3	218 36.9	4.8	S16 58.5	5.3	60.7	29	h m	h m	h m	h m	h m	h m	h m	h m	h m
	13	14 12.3 16.2	233 00.7	4.8	17 03.8	5.1	60.8	30	h m	h m	h m	h m	h m	h m	h m	h m	h m
	14	29 12.2 16.1	247 24.5	4.8	17 08.9	5.1	60.8	N 72	h m	h m	h m	h m	h m	h m	h m	h m	h m
	15	44 12.1 15.9	261 48.3	4.6	17 14.0	5.0	60.8	N 70	h m	h m	h m	h m	h m	h m	h m	h m	h m
	16	59 11.9 15.8	276 11.9	4.6	17 19.0	4.8	60.8	68	h m	h m	h m	h m	h m	h m	h m	h m	h m
	17	74 11.8 15.7	290 35.5	4.6	17 23.8	4.7	60.8	66	h m	h m	h m	h m	h m	h m	h m	h m	h m
	18	89 11.7 N23 15.6	304 59.1	4.5	S17 28.5	4.6	60.8	64	h m	h m	h m	h m	h m	h m	h m	h m	h m
	19	104 11.5 15.5	319 22.6	4.5	17 33.1	4.4	60.8	62	h m	h m	h m	h m	h m	h m	h m	h m	h m
	20	119 11.4 15.3	333 46.1	4.4	17 37.5	4.4	60.9	60	h m	h m	h m	h m	h m	h m	h m	h m	h m
	21	134 11.3 15.2	348 09.5	4.3	17 41.9	4.2	60.9	N 58	h m	h m	h m	h m	h m	h m	h m	h m	h m
	22	149 11.2 15.1	2 32.8	4.3	17 46.1	4.0	60.9	56	h m	h m	h m	h m	h m	h m	h m	h m	h m
23	164 11.0 14.9	16 56.1	4.3	17 50.1	4.0	60.9	54	h m	h m	h m	h m	h m	h m	h m	h m	h m	
29 M I E R C O L E S	00	179 10.9 N23 14.8	31 19.4	4.2	S17 54.1	3.8	60.9	N 40	h m	h m	h m	h m	h m	h m	h m	h m	h m
	01	194 10.8 14.7	45 42.6	4.1	17 57.9	3.7	60.9	35	h m	h m	h m	h m	h m	h m	h m	h m	h m
	02	209 10.7 14.6	60 05.7	4.1	18 01.6	3.6	60.9	30	h m	h m	h m	h m	h m	h m	h m	h m	h m
	03	224 10.5 14.4	74 28.8	4.1	18 05.2	3.4	60.9	20	h m	h m	h m	h m	h m	h m	h m	h m	h m
	04	239 10.4 14.3	88 51.9	4.1	18 08.6	3.3	61.0	N 10	h m	h m	h m	h m	h m	h m	h m	h m	h m
	05	254 10.3 14.2	103 15.0	4.0	18 11.9	3.1	61.0	0	h m	h m	h m	h m	h m	h m	h m	h m	h m
	06	269 10.2 N23 14.0	117 38.0	3.9	S18 15.0	3.1	61.0	S 10	h m	h m	h m	h m	h m	h m	h m	h m	h m
	07	284 10.0 13.9	132 00.9	3.9	18 18.1	2.9	61.0	20	h m	h m	h m	h m	h m	h m	h m	h m	h m
	08	299 09.9 13.8	146 23.8	3.9	18 21.0	2.7	61.0	30	h m	h m	h m	h m	h m	h m	h m	h m	h m
	09	314 09.8 13.6	160 46.7	3.9	18 23.7	2.7	61.0	Lat.	h m	h m	h m	h m	h m	h m	h m	h m	h m
	10	329 09.7 13.5	175 09.6	3.8	18 26.4	2.4	61.0	Ocaso Sol	h m	h m	h m	h m	h m	h m	h m	h m	h m
	11	344 09.5 13.4	189 32.4	3.8	18 28.8	2.4	61.0	Crepúsculo Civil	h m	h m	h m	h m	h m	h m	h m	h m	h m
	12	359 09.4 N23 13.2	203 55.2	3.8	S18 31.2	2.2	61.0	Náut.	h m	h m	h m	h m	h m	h m	h m	h m	h m
	13	14 09.3 13.1	218 18.0	3.7	18 33.4	2.1	61.0	27	h m	h m	h m	h m	h m	h m	h m	h m	h m
	14	29 09.2 13.0	232 40.7	3.8	18 35.5	1.9	61.0	28	h m	h m	h m	h m	h m	h m	h m	h m	h m
	15	44 09.0 12.8	247 03.5	3.7	18 37.4	1.8	61.0	29	h m	h m	h m	h m	h m	h m	h m	h m	h m
	16	59 08.9 12.7	261 26.2	3.7	18 39.2	1.7	61.0	N 72	h m	h m	h m	h m	h m	h m	h m	h m	h m
	17	74 08.8 12.5	275 48.9	3.6	18 40.9	1.5	61.0	N 70	h m	h m	h m	h m	h m	h m	h m	h m	h m
	18	89 08.7 N23 12.4	290 11.5	3.7	S18 42.4	1.4	61.0	68	h m	h m	h m	h m	h m	h m	h m	h m	h m
	19	104 08.5 12.3	304 34.2	3.6	18 43.8	1.3	61.0	66	h m	h m	h m	h m	h m	h m	h m	h m	h m
	20	119 08.4 12.1	318 56.8	3.6	18 45.1	1.1	61.0	64	h m	h m	h m	h m	h m	h m	h m	h m	h m
	21	134 08.3 12.0	333 19.4	3.6	18 46.2	0.9	61.0	62	h m	h m	h m	h m	h m	h m	h m	h m	h m
	22	149 08.2 11.8	347 42.0	3.6	18 47.1	0.9	6										

T. M. G.	ARIES			VENUS -3.8			MARTE +1.2			JUPITER -1.5			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
30	00	277 56.9	226 33.0 N15	43.2	232 40.0 N16	14.8	199 17.3 N22	34.6	140 12.3 N17	16.7	Acamar	315 39.2 S40	23.5						
	01	292 59.3	241 32.9	43.9	247 40.7	15.3	214 19.1	34.6	155 14.4	16.6	Achernar	335 47.1 S57	20.8						
	02	308 01.8	256 32.8	44.6	262 41.4	15.9	229 21.0	34.7	170 16.6	16.6	Acrux	173 39.5 S62	58.8						
	03	323 04.3	271 32.6	45.2	277 42.1	16.4	244 22.8	34.7	185 18.8	16.5	Adhara	255 34.2 S28	56.6						
	04	338 06.7	286 32.5	45.9	292 42.7	16.9	259 24.7	34.7	200 21.0	16.4	Aldebaran	291 20.8 N16	27.8						
	05	353 09.2	301 32.3	46.5	307 43.4	17.4	274 26.5	34.8	215 23.2	16.3									
	06	8 11.6	316 32.2 N15	47.2	322 44.1 N16	18.0	289 28.4 N22	34.8	230 25.4 N17	16.2	Alioth	166 44.5 N56	05.2						
	07	23 14.1	331 32.1	47.8	337 44.8	18.5	304 30.3	34.9	245 27.6	16.1	Alkaid	153 20.1 N49	25.8						
	08	38 16.6	346 31.9	48.5	352 45.4	19.0	319 32.1	34.9	260 29.7	16.1	Al Na'ir	28 17.4 S47	03.9						
	J 09	53 19.0	1 31.8	49.1	7 46.1	19.5	334 34.0	35.0	275 31.9	16.0	Alnilam	276 14.2 S 1	13.0						
	U 10	68 21.5	16 31.6	49.8	22 46.8	20.1	349 35.8	35.0	290 34.1	15.9	Alphard	218 22.9 S 8	33.8						
	E 11	83 24.0	31 31.5	50.5	37 47.4	20.6	4 37.7	35.1	305 36.3	15.8									
	V 12	98 26.4	46 31.3 N15	51.1	52 48.1 N16	21.1	19 39.5 N22	35.1	320 38.5 N17	15.7	Alphecca	126 33.7 N26	47.6						
	E 13	113 28.9	61 31.2	51.8	67 48.8	21.6	34 41.4	35.2	335 40.7	15.7	Alpheratz	358 11.5 N28	57.9						
	S 14	128 31.4	76 31.1	52.4	82 49.5	22.2	49 43.2	35.2	350 42.9	15.6	Altair	62 34.3 N 8	48.6						
	15	143 33.8	91 30.9	53.1	97 50.1	22.7	64 45.1	35.3	5 45.0	15.5	Ankaa	353 42.4 S42	25.4						
	16	158 36.3	106 30.8	53.7	112 50.8	23.2	79 47.0	35.3	20 47.2	15.4	Antares	112 59.2 S26	22.9						
	17	173 38.8	121 30.6	54.4	127 51.5	23.7	94 48.8	35.4	35 49.4	15.3									
	18	188 41.2	136 30.5 N15	55.0	142 52.1 N16	24.3	109 50.7 N22	35.4	50 51.6 N17	15.3	Arcturus	146 20.3 N19	18.1						
	19	203 43.7	151 30.3	55.7	157 52.8	24.8	124 52.5	35.4	65 53.8	15.2	Atria	108 24.8 S68	59.3						
	20	218 46.1	166 30.2	56.3	172 53.5	25.3	139 54.4	35.5	80 56.0	15.1	Avior	234 29.6 S59	26.5						
	21	233 48.6	181 30.0	57.0	187 54.2	25.8	154 56.2	35.5	95 58.1	15.0	Bellatrix	279 01.4 N 6	19.7						
	22	248 51.1	196 29.9	57.6	202 54.8	26.3	169 58.1	35.6	111 00.3	14.9	Betelgeuse	271 30.9 N 7	24.1						
23	263 53.5	211 29.7	58.3	217 55.5	26.9	185 00.0	35.6	126 02.5	14.8										
1	00	278 56.0	226 29.6 N15	58.9	232 56.2 N16	27.4	200 01.8 N22	35.7	141 04.7 N17	14.8	Canopus	264 08.7 S52	41.1						
	01	293 58.5	241 29.4	59.6	247 56.8	27.9	215 03.7	35.7	156 06.9	14.7	Capella	281 14.9 N45	58.4						
	02	309 00.9	256 29.2	60.2	262 57.5	28.4	230 05.5	35.8	171 09.1	14.6	Deneb	49 49.5 N45	12.0						
	03	324 03.4	271 29.1	60.9	277 58.2	28.9	245 07.4	35.8	186 11.2	14.5	Denebola	183 01.3 N14	41.9						
	04	339 05.9	286 28.9	61.5	292 58.9	29.5	260 09.2	35.9	201 13.4	14.4	Diphda	349 23.1 S18	06.5						
	05	354 08.3	301 28.8	62.2	307 59.5	30.0	275 11.1	35.9	216 15.6	14.4									
	06	9 10.8	316 28.6 N16	62.8	323 00.2 N16	30.5	290 13.0 N22	36.0	231 17.8 N17	14.3	Dubhe	194 25.2 N61	52.6						
	07	24 13.3	331 28.5	63.5	338 00.9	31.0	305 14.8	36.0	246 20.0	14.2	Elnath	278 47.2 N28	35.2						
	08	39 15.7	346 28.3	64.1	353 01.5	31.5	320 16.7	36.0	261 22.2	14.1	Eltanin	90 58.2 N51	29.7						
	09	54 18.2	1 28.1	64.8	8 02.2	32.1	335 18.5	36.1	276 24.3	14.0	Enif	34 13.5 N 9	46.4						
	U 10	69 20.6	16 28.0	65.4	23 02.9	32.6	350 20.4	36.1	291 26.5	14.0	Fomalhaut	15 53.7 S29	44.3						
	V 11	84 23.1	31 27.8	66.1	38 03.6	33.1	5 22.2	36.2	306 28.7	13.9									
	E 12	99 25.6	46 27.7 N16	66.7	53 04.2 N16	33.6	20 24.1 N22	36.2	321 30.9 N17	13.8	Gacrux	172 31.0 S56	59.5						
	S 13	114 28.0	61 27.5	67.4	68 04.9	34.1	35 26.0	36.3	336 33.1	13.7	Gienah	176 20.2 S17	25.1						
	14	129 30.5	76 27.3	68.0	83 05.6	34.6	50 27.8	36.3	351 35.3	13.6	Hadar	149 26.0 S60	16.1						
	15	144 33.0	91 27.2	68.7	98 06.2	35.2	65 29.7	36.4	6 37.4	13.5	Hamal	328 31.5 N23	21.3						
	16	159 35.4	106 27.0	69.3	113 06.9	35.7	80 31.5	36.4	21 39.6	13.5	Kaus Aust.	84 19.3 S34	23.6						
	17	174 37.9	121 26.8	70.0	128 07.6	36.2	95 33.4	36.5	36 41.8	13.4									
	18	189 40.4	136 26.7 N16	70.6	143 08.3 N16	36.7	110 35.2 N22	36.5	51 44.0 N17	13.3	Kochab	137 18.4 N74	15.2						
	19	204 42.8	151 26.5	71.3	158 08.9	37.2	125 37.1	36.5	66 46.2	13.2	Markab	14 05.2 N15	05.1						
	20	219 45.3	166 26.3	71.9	173 09.6	37.7	140 39.0	36.6	81 48.4	13.1	Menkar	314 43.6 N 4	00.1						
	21	234 47.7	181 26.2	72.5	188 10.3	38.3	155 40.8	36.6	96 50.5	13.0	Menkent	148 39.3 S36	15.7						
	22	249 50.2	196 26.0	73.2	203 10.9	38.8	170 42.7	36.7	111 52.7	13.0	Miaplacidus	221 46.0 S69	37.8						
23	264 52.7	211 25.8	73.8	218 11.6	39.3	185 44.5	36.7	126 54.9	12.9										
2	00	279 55.1	226 25.7 N16	14.5	233 12.3 N16	39.8	200 46.4 N22	36.8	141 57.1 N17	12.8	Mirfak	309 19.5 N49	46.7						
	01	294 57.6	241 25.5	15.1	248 12.9	40.3	215 48.2	36.8	156 59.3	12.7	Nunki	76 31.5 S26	19.4						
	02	310 00.1	256 25.3	15.8	263 13.6	40.8	230 50.1	36.9	172 01.4	12.6	Peacock	54 01.3 S56	48.2						
	03	325 02.5	271 25.2	16.4	278 14.3	41.3	245 52.0	36.9	187 03.6	12.6	Pollux	244 01.2 N28	04.8						
	04	340 05.0	286 25.0	17.0	293 15.0	41.9	260 53.8	36.9	202 05.8	12.5	Procyon	245 28.4 N 5	16.9						
	05	355 07.5	301 24.8	17.7	308 15.6	42.4	275 55.7	37.0	217 08.0	12.4									
	06	10 09.9	316 24.6 N16	18.3	323 16.3 N16	42.9	290 57.5 N22	37.0	232 10.2 N17	12.3	Rasalhague	96 31.3 N12	34.7						
	07	25 12.4	331 24.5	19.0	338 17.0	43.4	305 59.4	37.1	247 12.4	12.2	Regulus	208 12.5 N12	04.6						
	08	40 14.9	346 24.3	19.6	353 17.6	43.9	321 01.3	37.1	262 14.5	12.1	Rigel	281 38.4 S 8	13.7						
	S 09	55 17.3	1 24.1	20.3	8 18.3	44.4	336 03.1	37.2	277 16.7	12.1	Rigel Kent.	140 28.3 S60	44.7						
	A 10	70 19.8	16 23.9	20.9	23 19.0	44.9	351 05.0	37.2	292 18.9	12.0	Sabik	102 43.3 S15	41.8						
	B 11	85 22.2	31 23.7	21.5	38 19.6	45.4	6 06.8	37.3	307 21.1	11.9									
	A 12	100 24.7	46 23.6 N16	22.2	53 20.3 N16	45.9	21 08.7 N22	37.3	322 23.3 N17	11.8	Schedar	350 11.4 N56	24.6						
	D 13	115 27.2	61 23.4	22.8	68 21.0	46.5	36 10.6	37.3	337 25.4	11.7	Shaula	96 58.3 S37	05.2						
	O 14	130 29.6	76 23.2	23.5	83 21.6	47.0	51 12.4	37.4	352 27.6	11.7	Sirius	258 58.0 S16	41.2						
	15	145 32.1	91 23.0	24.1	98 22.3	47.5	66 14.3	37.4	7 29.8	11.6	Spica	158 59.7 S11	02.7						
	16	160 34.6	106 22.8	24.7	113 23.0	48.0	81 16.1	37.5	22 32.0	11.5	Suhail	223 12.7 S43	20.7						
	17	175 37.0	121 22.7	25.4	128 23.7	48.5	96 18.0	37.5	37 34.2	11.4									
	18	190 39.5	136 22.5 N16	26.0	143 24.3 N16	49.0	111 19.8 N22	37.6	52 36.3 N17	11.3	Vega	80 56.8 N38	45.9						
	19	205 42.0	151 22.3	26.6	158 25.0	49.5	126 21.7	37.6	67 38.5	11.2	Zuben'ubi	137 35.2 S15	56.9						
	20	220 44.4	166 22.1	27.3	173 25.7	50.0	141 23.6	37.7	82 40.7	11.2									
	21	235 46.9	181 21.9	27.9	188 26.3	50.5	156 25.4	37.7	97 42.9	11.1									
	22	250 49.4	196 21.7	28.6	203 27.0	51.0	171 27.3	37.7	112 45.1	11.0									
23	265 51.8	211 21.5	29.2	218 27.7	51.5	186 29.1	37.8	127 47.3	10.9										
Pas. Mer.		5 23.4			v -0.2 d 0.6			v 0.7 d 0.5			v 1.9 d 0.0			v 2.2 d 0.1			A. H. S. Pas. Mer.		
														Venus			307 33.6 8 54		
														Marte			314 00.2 8 28		
														Júpiter			281 05.8 10 39		
														Saturno			222 08.7 14 34		

T. M. G.	SOL		LUNA				Lat.	Crepúsculo			Orto Luna			
	A.H.G.	Dec.	A.H.G.	<i>v</i>	Dec.	<i>d</i> P.H.		Náut.	Civil	Orto Sol	30	1	2	3
30 J U E V E S	00	179 07.9 N23 11.5	16 27.2	3.6	S18 48.6	0.6 61.0	N 72	□	□	□	■	23 28	23 10	23 00
	01	194 07.8 11.4	30 49.8	3.6	18 49.2	0.4 61.0	N 70	□	□	□	22 21	22 37	22 42	22 43
	02	209 07.7 11.2	45 12.4	3.5	18 49.6	0.2 61.0	68	□	□	□	21 35	22 05	22 21	22 30
	03	224 07.5 11.1	59 34.9	3.6	18 49.8	0.2 61.0	66	////	////	00 17	21 04	21 41	22 04	22 18
	04	239 07.4 11.0	73 57.5	3.6	18 50.0	0.1 61.0	64	////	////	01 41	20 42	21 22	21 50	22 09
	05	254 07.3 10.8	88 20.1	3.6	18 49.9	0.1 61.0	62	////	////	02 16	20 23	21 07	21 38	22 01
	06	269 07.2 N23 10.7	102 42.7	3.6	S18 49.8	0.3 61.0	60	////	01 03	02 42	20 08	20 54	21 28	21 54
	07	284 07.1 10.5	117 05.3	3.5	18 49.5	0.5 61.0	N 58	////	01 48	03 02	19 55	20 43	21 19	21 48
	08	299 06.9 10.4	131 27.8	3.6	18 49.0	0.5 61.0	56	////	02 17	03 18	19 44	20 33	21 12	21 42
	09	314 06.8 10.2	145 50.4	3.7	18 48.5	0.8 61.0	54	00 58	02 38	03 32	19 34	20 25	21 05	21 37
	10	329 06.7 10.1	160 13.1	3.6	18 47.7	0.8 61.0	52	01 40	02 56	03 44	19 26	20 17	20 58	21 33
	11	344 06.6 09.9	174 35.7	3.6	18 46.9	1.0 61.0	50	02 06	03 11	03 55	19 18	20 10	20 53	21 28
	12	359 06.4 N23 09.7	188 58.3	3.7	S18 45.9	1.2 61.0	45	02 50	03 40	04 17	19 01	19 55	20 41	21 20
	13	14 06.3 09.6	203 21.0	3.6	18 44.7	1.3 61.0	N 40	03 20	04 02	04 35	18 48	19 43	20 31	21 12
	14	29 06.2 09.4	217 43.6	3.7	18 43.4	1.4 61.0	35	03 43	04 20	04 49	18 36	19 32	20 22	21 06
	15	44 06.1 09.3	232 06.3	3.8	18 42.0	1.5 61.0	30	04 02	04 35	05 02	18 26	19 23	20 14	21 00
	16	59 05.9 09.1	246 29.1	3.7	18 40.5	1.7 61.0	20	04 30	05 00	05 24	18 08	19 07	20 01	20 50
	17	74 05.8 09.0	260 51.8	3.8	18 38.8	1.9 61.0	N 10	04 53	05 20	05 43	17 53	18 53	19 50	20 42
	18	89 05.7 N23 08.8	275 14.6	3.7	S18 36.9	2.0 61.0	0	05 11	05 38	06 00	17 39	18 40	19 39	20 34
	19	104 05.6 08.7	289 37.3	3.9	18 34.9	2.1 61.0	S 10	05 28	05 55	06 17	17 25	18 27	19 28	20 26
	20	119 05.5 08.5	304 00.2	3.8	18 32.8	2.2 60.9	20	05 44	06 12	06 36	17 10	18 13	19 16	20 17
	21	134 05.3 08.3	318 23.0	3.9	18 30.6	2.4 60.9	30	06 00	06 30	06 56	16 52	17 57	19 03	20 07
	22	149 05.2 08.2	332 45.9	3.9	18 28.2	2.5 60.9	35	06 09	06 41	07 09	16 42	17 48	18 55	20 01
23	164 05.1 08.0	347 08.8	4.0	18 25.7	2.7 60.9	40	06 18	06 52	07 23	16 30	17 37	18 46	19 55	
1	179 05.0 N23 07.8	1 31.8	3.9	S18 23.0	2.8 60.9	45	06 28	07 05	07 39	16 17	17 25	18 36	19 47	
01	194 04.9 07.7	15 54.7	4.1	18 20.2	2.9 60.9	S 50	06 40	07 21	08 00	16 00	17 10	18 24	19 38	
02	209 04.7 07.5	30 17.8	4.0	18 17.3	3.1 60.9	52	06 45	07 29	08 09	15 53	17 03	18 18	19 34	
03	224 04.6 07.4	44 40.8	4.1	18 14.2	3.1 60.9	54	06 51	07 37	08 20	15 44	16 55	18 11	19 29	
04	239 04.5 07.2	59 03.9	4.2	18 11.1	3.4 60.8	56	06 57	07 45	08 32	15 34	16 46	18 04	19 24	
05	254 04.4 07.0	73 27.1	4.2	18 07.7	3.4 60.8	58	07 03	07 55	08 47	15 23	16 36	17 56	19 18	
06	269 04.3 N23 06.9	87 50.3	4.2	S18 04.3	3.6 60.8	S 60	07 10	08 07	09 04	15 10	16 25	17 47	19 12	
07	284 04.1 06.7	102 13.5	4.3	18 00.7	3.7 60.8	Lat.	Ocaso Sol	Crepúsculo			Ocaso Luna			
08	299 04.0 06.5	116 36.8	4.4	17 57.0	3.8 60.8			Civil	Náut.	30	1	2	3	
09	314 03.9 06.4	131 00.2	4.4	17 53.2	4.0 60.8	N 72	h m	h m	h m	h m	h m	h m	h m	
10	329 03.8 06.2	145 23.6	4.4	17 49.2	4.1 60.7	N 70	□	□	□	■	■	02 32	04 50	
11	344 03.7 06.0	159 47.0	4.5	17 45.1	4.2 60.7	68	□	□	□	00 11	01 31	03 22	05 17	
12	359 03.5 N23 05.9	174 10.5	4.6	S17 40.9	4.4 60.7	66	23 41	////	////	01 03	02 17	03 53	05 37	
13	14 03.4 05.7	188 34.1	4.6	17 36.5	4.4 60.7	64	22 25	////	////	01 35	02 47	04 16	05 53	
14	29 03.3 05.5	202 57.7	4.6	17 32.1	4.6 60.7	62	21 50	////	////	01 59	03 10	04 35	06 06	
15	44 03.2 05.2	217 21.3	4.8	17 27.5	4.7 60.6	60	21 25	23 03	////	02 18	03 28	04 49	06 17	
16	59 03.1 05.0	231 45.1	4.8	17 22.8	4.8 60.6	N 58	21 05	22 18	////	02 34	03 42	05 02	06 26	
17	74 02.9 04.8	246 08.9	4.8	17 18.0	5.0 60.6	56	20 49	21 50	////	02 47	03 55	05 13	06 35	
18	89 02.8 N23 04.8	260 32.7	4.9	S17 13.0	5.1 60.6	54	20 35	21 29	23 08	02 59	04 06	05 22	06 42	
19	104 02.7 04.6	274 56.6	5.0	17 07.9	5.2 60.6	52	20 23	21 11	22 27	03 09	04 16	05 30	06 48	
20	119 02.6 04.5	289 20.6	5.1	17 02.7	5.3 60.5	50	20 12	20 57	22 01	03 18	04 24	05 37	06 54	
21	134 02.5 04.3	303 44.7	5.1	16 57.4	5.4 60.5	50	20 12	20 57	22 01	03 26	04 32	05 44	06 59	
22	149 02.3 04.1	318 08.8	5.1	16 52.0	5.5 60.5	45	19 50	20 28	21 17	03 43	04 48	05 58	07 10	
23	164 02.2 03.9	332 32.9	5.3	16 46.5	5.6 60.5	N 40	19 33	20 05	20 47	03 57	05 02	06 10	07 19	
01	194 02.0 03.6	1 21.5	5.4	16 35.1	5.9 60.4	35	19 18	19 47	20 24	04 08	05 13	06 20	07 27	
02	209 01.9 03.4	15 45.9	5.4	16 29.2	5.9 60.4	30	19 05	19 32	20 06	04 19	05 23	06 29	07 34	
03	224 01.7 03.2	30 10.3	5.6	16 23.3	6.1 60.4	20	18 43	19 08	19 37	04 36	05 40	06 43	07 46	
04	239 01.6 03.0	44 34.9	5.6	16 17.2	6.2 60.3	N 10	18 25	18 48	19 15	04 52	05 54	06 56	07 56	
05	254 01.5 02.8	58 59.5	5.6	16 11.0	6.3 60.3	0	18 07	18 30	18 56	05 06	06 08	07 08	08 05	
06	269 01.4 N23 02.7	73 24.1	5.8	S16 04.7	6.4 60.3	S 10	17 50	18 13	18 39	05 21	06 22	07 20	08 15	
07	284 01.3 02.5	87 48.9	5.8	15 58.3	6.5 60.3	20	17 32	17 56	18 23	05 36	06 37	07 33	08 25	
08	299 01.2 02.3	102 13.7	5.9	15 51.8	6.6 60.2	30	17 11	17 37	18 07	05 53	06 53	07 48	08 36	
09	314 01.0 02.1	116 38.6	6.0	15 45.2	6.7 60.2	35	16 59	17 27	17 59	06 04	07 03	07 56	08 43	
10	329 00.9 01.9	131 03.6	6.1	15 38.5	6.8 60.2	40	16 45	17 15	17 49	06 15	07 14	08 06	08 50	
11	344 00.8 01.7	145 28.7	6.1	15 31.7	6.9 60.2	45	16 29	17 02	17 39	06 29	07 27	08 17	08 59	
12	359 00.7 N23 01.5	159 53.8	6.2	S15 24.8	7.0 60.1	S 50	16 08	16 46	17 28	06 46	07 43	08 30	09 09	
13	14 00.6 01.4	174 19.0	6.3	15 17.8	7.1 60.1	52	15 58	16 39	17 23	06 54	07 50	08 36	09 14	
14	29 00.5 01.2	188 44.3	6.4	15 10.7	7.2 60.1	54	15 48	16 31	17 17	07 02	07 58	08 43	09 19	
15	44 00.3 01.0	203 09.7	6.4	15 03.5	7.2 60.0	56	15 35	16 22	17 11	07 12	08 07	08 51	09 25	
16	59 00.2 00.8	217 35.1	6.6	14 56.3	7.4 60.0	58	15 21	16 12	17 05	07 23	08 17	08 59	09 32	
17	74 00.1 00.6	232 00.7	6.6	14 48.9	7.5 60.0	S 60	15 04	16 01	16 57	07 36	08 29	09 09	09 39	
18	89 00.0 N23 00.4	246 26.3	6.7	S14 41.4	7.5 59.9	Día	SOL			LUNA				
19	103 59.9 00.2	260 52.0	6.7	14 33.9	7.6 59.9		E.T. (-)	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase		
20	118 59.8 23 00.0	275 17.7	6.9	14 26.3	7.7 59.9	30	00 ^h	12 ^h	h m	h m	h m	d		
21	133 59.7 22 59.8	289 43.6	7.0	14 18.6	7.8 59.9	1	m s	m s	h m	h m	h m		○	
22	148 59.5 59.6	304 09.6	7.0	14 10.8	7.9 59.8	2	03 28	03 34	12 04	23 54	11 23	14		
23	163 59.4 59.4	318 35.6	7.1	14 02.9	8.0 59.8		03 40	03 46	12 04	24 54	12 24	15		
	S.D. 15.8 <i>d</i> 0.2	S.D. 16.6 16.5 16.4					03 51	03 57	12 04	00 54	13 24	16		

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna											
	A.H.G.	Dec.	°	A.H.G.	v	Dec.		d	P.H.		h	m	h	m	3		4		5		6	
															h	m	h	m	h	m	h	m	h	m
DOMINGO	3 00	178 59.3	N22 59.3	333 01.7	7.2	S13 54.9	8.0	59.8	N 72	□	□	□	23 00	22 53	22 46	22 40						
	01	193 59.2	59.1	347 27.9	7.3	13 46.9	8.2	59.7	N 70	□	□	□	22 43	22 43	22 43	22 42						
	02	208 59.1	58.9	1 54.2	7.3	13 38.7	8.2	59.7	68	□	□	□	22 30	22 36	22 40	22 44						
	03	223 59.0	58.7	16 20.5	7.5	13 30.5	8.2	59.7	66	////	////	00 40	22 18	22 29	22 37	22 45						
	04	238 58.9	58.5	30 47.0	7.5	13 22.3	8.4	59.6	64	////	////	01 47	22 09	22 23	22 35	22 46						
	05	253 58.7	58.3	45 13.5	7.6	13 13.9	8.4	59.6	62	////	////	02 21	22 01	22 19	22 34	22 47						
	06	268 58.6	N22 58.1	59 40.1	7.7	S13 05.5	8.5	59.6	60	////	01 10	02 45	21 54	22 14	22 32	22 48						
	07	283 58.5	57.9	74 06.8	7.8	12 57.0	8.6	59.5	N 58	////	01 53	03 05	21 48	22 11	22 31	22 49						
	08	298 58.4	57.7	88 33.6	7.9	12 48.4	8.6	59.5	56	////	02 20	03 21	21 42	22 07	22 29	22 50						
	09	313 58.3	57.5	103 00.5	7.9	12 39.8	8.7	59.5	54	01 05	02 41	03 34	21 37	22 04	22 28	22 51						
	10	328 58.2	57.3	117 27.4	8.0	12 31.1	8.8	59.4	52	01 44	02 58	03 46	21 33	22 02	22 27	22 51						
	11	343 58.0	57.1	131 54.4	8.2	12 22.3	8.8	59.4	50	02 09	03 13	03 57	21 28	21 59	22 26	22 52						
	12	358 57.9	N22 56.9	146 21.6	8.2	S12 13.5	8.9	59.3	45	02 53	03 42	04 19	21 20	21 54	22 24	22 53						
	13	13 57.8	56.7	160 48.8	8.2	12 04.6	9.0	59.3	N 40	03 22	04 04	04 36	21 12	21 49	22 23	22 54						
	14	28 57.7	56.4	175 16.0	8.4	11 55.6	9.0	59.3	35	03 45	04 21	04 51	21 06	21 45	22 21	22 55						
	15	43 57.6	56.2	189 43.4	8.5	11 46.6	9.1	59.2	30	04 03	04 36	05 04	21 00	21 42	22 20	22 56						
	16	58 57.5	56.0	204 10.9	8.5	11 37.5	9.1	59.2	20	04 31	05 01	05 25	20 50	21 36	22 18	22 58						
	17	73 57.4	55.8	218 38.4	8.6	11 28.4	9.2	59.2	N 10	04 54	05 21	05 44	20 42	21 30	22 16	22 59						
	18	88 57.2	N22 55.6	233 06.0	8.7	S11 19.2	9.2	59.1	0	05 12	05 38	06 01	20 34	21 25	22 14	23 00						
	19	103 57.1	55.4	247 33.7	8.8	11 10.0	9.4	59.1	S 10	05 29	05 55	06 18	20 26	21 20	22 12	23 02						
	20	118 57.0	55.2	262 01.5	8.9	11 00.6	9.3	59.1	20	05 44	06 12	06 36	20 17	21 15	22 10	23 03						
	21	133 56.9	55.0	276 29.4	8.9	10 51.3	9.4	59.0	30	06 00	06 30	06 56	20 07	21 09	22 08	23 05						
	22	148 56.8	54.8	290 57.3	9.1	10 41.9	9.5	59.0	35	06 09	06 40	07 08	20 01	21 05	22 07	23 06						
23	163 56.7	54.6	305 25.4	9.1	10 32.4	9.5	58.9	40	06 18	06 52	07 22	19 55	21 01	22 05	23 07							
4 00	178 56.6	N22 54.4	319 53.5	9.2	S10 22.9	9.5	58.9	45	06 28	07 05	07 39	19 47	20 57	22 04	23 08							
01	193 56.4	54.1	334 21.7	9.3	10 13.4	9.6	58.9	S 50	06 39	07 20	07 59	19 38	20 51	22 02	23 09							
02	208 56.3	53.9	348 50.0	9.3	10 03.8	9.7	58.8	52	06 44	07 28	08 08	19 34	20 49	22 01	23 10							
03	223 56.2	53.7	3 18.3	9.4	9 54.1	9.7	58.8	54	06 50	07 36	08 19	19 29	20 46	22 00	23 11							
04	238 56.1	53.5	17 46.7	9.6	9 44.4	9.7	58.8	56	06 56	07 44	08 31	19 24	20 43	21 59	23 12							
05	253 56.0	53.3	32 15.3	9.6	9 34.7	9.8	58.7	58	07 02	07 54	08 45	19 18	20 39	21 57	23 13							
06	268 55.9	N22 53.1	46 43.9	9.6	S 9 24.9	9.8	58.7	S 60	07 09	08 05	09 02	19 12	20 35	21 56	23 14							
07	283 55.8	52.9	61 12.5	9.8	9 15.1	9.8	58.6															
08	298 55.7	52.6	75 41.3	9.8	9 05.3	9.9	58.6	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna										
09	313 55.6	52.4	90 10.1	9.9	8 55.4	9.9	58.6			Civil	Naut.	3	4	5	6							
10	328 55.4	52.2	104 39.0	10.0	8 45.5	10.0	58.5					h m	h m	h m	h m	h m	h m	h m	h m			
11	343 55.3	52.0	119 08.0	10.0	8 35.5	10.0	58.5	N 72	□	□	□	04 50	06 52	08 45	10 30							
12	358 55.2	N22 51.8	133 37.0	10.2	S 8 25.5	10.0	58.4	N 70	□	□	□	05 17	07 07	08 52	10 31							
13	13 55.1	51.5	148 06.2	10.2	8 15.5	10.1	58.4	68	□	□	□	05 37	07 20	08 58	10 32							
14	28 55.0	51.3	162 35.4	10.3	8 05.4	10.1	58.4	66	23 23	////	////	05 53	07 30	09 03	10 32							
15	43 54.9	51.1	177 04.7	10.3	7 55.3	10.1	58.3	64	22 20	////	////	06 06	07 38	09 07	10 33							
16	58 54.8	50.9	191 34.0	10.5	7 45.2	10.1	58.3	62	21 47	////	////	06 17	07 45	09 11	10 33							
17	73 54.7	50.7	206 03.5	10.5	7 35.1	10.2	58.3	60	21 22	22 56	////	06 26	07 51	09 14	10 33							
18	88 54.6	N22 50.4	220 33.0	10.5	S 7 24.9	10.2	58.2	N 58	21 03	22 15	////	06 35	07 57	09 17	10 33							
19	103 54.4	50.2	235 02.5	10.7	7 14.7	10.2	58.2	56	20 47	21 47	////	06 42	08 01	09 19	10 34							
20	118 54.3	50.0	249 32.2	10.7	7 04.5	10.3	58.1	54	20 34	21 27	23 02	06 48	08 06	09 21	10 34							
21	133 54.2	49.8	264 01.9	10.8	6 54.2	10.2	58.1	52	20 22	21 10	22 24	06 54	08 09	09 23	10 34							
22	148 54.1	49.5	278 31.7	10.8	6 44.0	10.3	58.1	50	20 11	20 55	21 58	06 59	08 13	09 25	10 34							
23	163 54.0	49.3	293 01.5	11.0	6 33.7	10.3	58.0	45	19 50	20 27	21 15	07 10	08 21	09 29	10 35							
5 00	178 53.9	N22 49.1	307 31.5	11.0	S 6 23.4	10.4	58.0	N 40	19 32	20 05	20 46	07 19	08 27	09 32	10 35							
01	193 53.8	48.8	322 01.5	11.0	6 13.0	10.3	57.9	35	19 18	19 47	20 23	07 27	08 32	09 35	10 35							
02	208 53.7	48.6	336 31.5	11.1	6 02.7	10.4	57.9	30	19 05	19 32	20 05	07 34	08 37	09 37	10 35							
03	223 53.6	48.4	351 01.6	11.2	5 52.3	10.3	57.9	20	18 44	19 08	19 37	07 46	08 45	09 42	10 36							
04	238 53.5	48.1	5 31.8	11.3	5 42.0	10.4	57.8	N 10	18 25	18 48	19 15	07 56	08 52	09 45	10 36							
05	253 53.4	47.9	20 02.1	11.3	5 31.6	10.4	57.8	0	18 08	18 30	18 57	08 05	08 59	09 49	10 36							
06	268 53.2	N22 47.7	34 32.4	11.4	S 5 21.2	10.5	57.7	S 10	17 51	18 14	18 40	08 15	09 05	09 52	10 37							
07	283 53.1	47.4	49 02.8	11.4	5 10.7	10.4	57.7	20	17 33	17 57	18 24	08 25	09 12	09 56	10 37							
08	298 53.0	47.2	63 33.2	11.6	5 00.3	10.4	57.7	30	17 12	17 39	18 08	08 36	09 20	10 00	10 37							
09	313 52.9	47.0	78 03.8	11.5	4 49.9	10.5	57.6	35	17 00	17 28	18 00	08 43	09 25	10 02	10 37							
10	328 52.8	46.7	92 34.3	11.7	4 39.4	10.5	57.6	40	16 47	17 17	17 51	08 50	09 30	10 05	10 37							
11	343 52.7	46.5	107 05.0	11.6	4 28.9	10.4	57.5	45	16 30	17 04	17 41	08 59	09 35	10 08	10 38							
12	358 52.6	N22 46.3	121 35.6	11.8	S 4 18.5	10.5	57.5	S 50	16 10	16 48	17 30	09 09	09 42	10 11	10 38							
13	13																					

T. M. G.	SOL			LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	N22	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	6	7	8	9	
										h m	h m	h m	h m	h m	h m	h m	h m
M I E R C O L E S	6 00	178 51.3	43.4	295 48.4	12.4	S 2	12.6	10.5	57.1	N 72	□	□	□	22 40	22 33	22 27	22 20
	01	193 51.2	43.1	310 19.8	12.4	2	02.1	10.5	57.0	N 70	□	□	□	22 42	22 41	22 41	22 41
	02	208 51.1	42.9	324 51.2	12.5	1	51.6	10.5	57.0	68	□	□	□	22 44	22 47	22 52	22 58
	03	223 51.0	42.6	339 22.7	12.6	1	41.1	10.5	56.9	66	////	////	00 57	22 45	22 53	23 01	23 12
	04	238 50.9	42.4	353 54.3	12.6	1	30.6	10.4	56.9	64	////	////	01 53	22 46	22 57	23 09	23 23
	05	253 50.8	42.1	8 25.9	12.6	1	20.2	10.5	56.9	62	////	////	02 26	22 47	23 01	23 16	23 33
	06	268 50.7	N22 41.9	22 57.5	12.7	S 1	09.7	10.4	56.8	60	////	01 19	02 49	22 48	23 05	23 22	23 41
	07	283 50.6	41.6	37 29.2	12.7	0	59.3	10.5	56.8	N 58	////	01 58	03 08	22 49	23 08	23 27	23 49
	08	298 50.5	41.4	52 00.9	12.8	0	48.8	10.4	56.8	56	////	02 24	03 24	22 50	23 10	23 32	23 55
	09	313 50.4	41.1	66 32.7	12.8	0	38.4	10.4	56.7	54	01 13	02 45	03 37	22 51	23 13	23 36	24 01
	10	328 50.3	40.9	81 04.5	12.9	0	28.0	10.4	56.7	52	01 49	03 02	03 49	22 51	23 15	23 40	24 06
	11	343 50.2	40.6	95 36.4	12.9	0	17.6	10.4	56.6	50	02 13	03 16	03 59	22 52	23 17	23 43	24 11
	12	358 50.1	N22 40.4	110 08.3	12.9	S 0	07.2	10.4	56.6	45	02 56	03 44	04 21	22 53	23 22	23 51	24 21
	13	13 50.0	40.1	124 40.2	13.0	N 0	03.2	10.4	56.6	N 40	03 25	04 06	04 38	22 54	23 25	23 57	24 30
	14	28 49.9	39.9	139 12.2	13.0	0	13.6	10.3	56.5	35	03 47	04 23	04 52	22 55	23 29	24 02	00 02
	15	43 49.8	39.6	153 44.2	13.0	0	23.9	10.2	56.5	30	04 05	04 38	05 05	22 56	23 32	24 07	00 07
	16	58 49.7	39.4	168 16.2	13.1	0	34.3	10.3	56.5	20	04 33	05 02	05 26	22 58	23 37	24 16	00 16
	17	73 49.6	39.1	182 48.3	13.2	0	44.6	10.3	56.4	N 10	04 54	05 21	05 44	22 59	23 41	24 23	00 23
	18	88 49.5	N22 38.8	197 20.5	13.1	N 0	54.9	10.3	56.4	0	05 13	05 39	06 01	23 00	23 46	24 30	00 30
	19	103 49.4	38.6	211 52.6	13.2	1	05.2	10.3	56.4	S 10	05 29	05 55	06 18	23 02	23 50	24 37	00 37
	20	118 49.2	38.3	226 24.8	13.3	1	15.5	10.2	56.3	20	05 45	06 12	06 36	23 03	23 54	24 45	00 45
	21	133 49.1	38.1	240 57.1	13.2	1	25.7	10.2	56.3	30	06 00	06 30	06 56	23 05	24 00	00 00	00 53
	22	148 49.0	37.8	255 29.3	13.3	1	35.9	10.2	56.3	35	06 09	06 40	07 08	23 06	24 03	00 03	00 58
23	163 48.9	37.5	270 01.6	13.3	1	46.1	10.2	56.2	40	06 17	06 51	07 22	23 07	24 06	00 06	01 04	
7 00	178 48.8	N22 37.3	284 33.9	13.4	N 1	56.3	10.2	56.2	45	06 27	07 04	07 38	23 08	24 10	00 10	01 11	
01	193 48.7	37.0	299 06.3	13.4	2	06.5	10.2	56.2	S 50	06 38	07 19	07 57	23 09	24 15	00 15	01 19	
02	208 48.6	36.8	313 38.7	13.4	2	16.7	10.1	56.1	52	06 43	07 26	08 07	23 10	24 17	00 17	01 22	
03	223 48.5	36.5	328 11.1	13.5	2	26.8	10.1	56.1	54	06 48	07 34	08 17	23 11	24 20	00 20	01 26	
04	238 48.4	36.2	342 43.6	13.4	2	36.9	10.1	56.1	56	06 54	07 43	08 29	23 12	24 22	00 22	01 31	
05	253 48.3	36.0	357 16.0	13.5	2	47.0	10.0	56.0	58	07 01	07 52	08 43	23 13	24 26	00 26	01 36	
06	268 48.2	N22 35.7	11 48.5	13.6	N 2	57.0	10.0	56.0	S 60	07 08	08 03	08 59	23 14	24 29	00 29	01 42	
07	283 48.1	35.4	26 21.1	13.5	3	07.0	10.0	56.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	298 48.0	35.2	40 53.6	13.6	3	17.0	10.0	55.9			Civil	Náut.	6	7	8	9	
09	313 47.9	34.9	55 26.2	13.6	3	27.0	10.0	55.9					h m	h m	h m	h m	
10	328 47.8	34.6	69 58.8	13.6	3	37.0	9.9	55.9	N 72	□	□	□	10 30	12 12	13 52	15 32	
11	343 47.7	34.4	84 31.4	13.7	3	46.9	9.9	55.8	N 70	□	□	□	10 31	12 07	13 40	15 11	
12	358 47.6	N22 34.1	99 04.1	13.6	N 3	56.8	9.8	55.8	68	□	□	□	10 32	12 02	13 30	14 56	
13	13 47.5	33.8	113 36.7	13.7	4	06.6	9.9	55.8	66	23 08	////	////	10 32	11 58	13 22	14 43	
14	28 47.4	33.5	128 09.4	13.7	4	16.5	9.8	55.8	64	22 14	////	////	10 33	11 55	13 15	14 32	
15	43 47.3	33.3	142 42.1	13.8	4	26.3	9.7	55.7	62	21 43	////	////	10 33	11 52	13 09	14 23	
16	58 47.2	33.0	157 14.9	13.7	4	36.0	9.8	55.7	60	21 19	////	////	10 33	11 50	13 04	14 16	
17	73 47.1	32.7	171 47.6	13.8	4	45.8	9.7	55.7	N 58	21 01	22 10	////	10 33	11 48	12 59	14 09	
18	88 47.0	N22 32.5	186 20.4	13.8	N 4	55.5	9.7	55.6	56	20 45	21 44	////	10 34	11 46	12 55	14 03	
19	103 46.9	32.2	200 53.2	13.8	5	05.2	9.6	55.6	54	20 32	21 24	22 55	10 34	11 44	12 52	13 58	
20	118 46.8	31.9	215 26.0	13.8	5	14.8	9.6	55.6	52	20 20	21 07	22 20	10 34	11 42	12 49	13 53	
21	133 46.7	31.6	229 58.8	13.8	5	24.4	9.5	55.5	50	20 10	20 53	21 55	10 34	11 41	12 46	13 49	
22	148 46.6	31.4	244 31.6	13.8	5	34.0	9.5	55.5	45	19 49	20 25	21 13	10 35	11 38	12 39	13 39	
23	163 46.5	31.1	259 04.4	13.9	5	43.5	9.6	55.5	N 40	19 31	20 04	20 45	10 35	11 35	12 34	13 31	
8 00	178 46.4	N22 30.8	273 37.3	13.9	N 5	53.1	9.4	55.5	35	19 17	19 46	20 23	10 35	11 33	12 30	13 25	
01	193 46.3	30.5	288 10.2	13.8	6	02.5	9.5	55.4	30	19 05	19 32	20 05	10 35	11 31	12 26	13 19	
02	208 46.2	30.2	302 40.3	13.9	6	12.0	9.4	55.4	20	18 44	19 08	19 37	10 36	11 28	12 19	13 09	
03	223 46.1	30.0	317 15.9	13.9	6	21.4	9.3	55.4	N 10	18 25	18 48	19 15	10 36	11 25	12 13	13 00	
04	238 46.1	29.7	331 48.8	14.0	6	30.7	9.3	55.4	0	18 08	18 31	18 57	10 36	11 22	12 07	12 52	
05	253 46.0	29.4	346 21.8	13.9	6	40.0	9.3	55.3	S 10	17 52	18 14	18 41	10 37	11 19	12 01	12 43	
06	268 45.9	N22 29.1	0 54.7	13.9	N 6	49.3	9.3	55.3	20	17 34	17 58	18 25	10 37	11 16	11 55	12 35	
07	283 45.8	28.8	15 27.6	14.0	6	58.6	9.2	55.3	30	17 14	17 40	18 10	10 37	11 13	11 48	12 24	
08	298 45.7	28.6	30 00.6	13.9	7	07.8	9.2	55.3	35	17 02	17 30	18 01	10 37	11 11	11 44	12 19	
09	313 45.6	28.3	44 33.5	14.0	7	17.0	9.1	55.2	40	16 48	17 19	17 52	10 37	11 09	11 40	12 12	
10	328 45.5	28.0	59 06.5	13.9	7	26.1	9.1	55.2	45	16 32	17 06	17 43	10 38	11 06	11 35	12 05	
11	343 45.4	27.7	73 39.4	14.0	7	35.2	9.0	55.2	S 50	16 13	16 51	17 32	10 38	11 03	11 29	11 55	
12	358 45.3	N22 27.4	88 12.4	14.0	N 7	44.2	9.0	55.2	52	16 03	16 43	17 27	10 38	11 02	11 26	11 51	
13	13 45.2	27.1	102 45.4	13.9	7	53.2	9.0	55.1	54	15 53	16 36	17 21	10 38	11 00	11 23	11 47	
14	28 45.1	26.8	117 18.3	14.0	8	02.2	8.9	55.1	56	15 41	16 27	17 16	10 38	10 59	11 19	11 42	
15	43 45.0	26.5	131 51.3	14.0	8	11.1	8.9	55.1	58	15 27	16 18	17 09	10 38	10 57	11 16	11 36	
16	58 44.9	26.3	146 24.3	14.0	8	20.0	8.8	55.1	S 60	15 11	16 07	17 02	10 38	10 55	11 11	11 29	
17	73 44.8	26.0	160 57.3	14.0	8	28.8	8.8	55.0	Dfa	SOL E.T. (-)		LUNA					
18																	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna																	
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	9	10	11	12													
																h	m	h	m	h	m	h	m					
9 00 01 02 03 04 05 06 07 08 S A B A D O 15 16 17 18 19 20 21 22 23	178	44.1	N22	23.9	262	48.2	14.0	N	9	29.4	8.5	54.9	N	72	□	□	□	22	20	22	11	21	58	□				
	193	44.0		23.6	277	21.2	14.0		9	37.9	8.4	54.9	N	70	□	□	□	22	41	22	44	22	50	23	04			
	208	43.9		23.3	291	54.2	13.9		9	46.3	8.4	54.8		68	□	□	□	22	58	23	07	23	22	23	46			
	223	43.8	..	23.0	306	27.1	14.0		9	54.7	8.3	54.8		66	////	////	01	11	23	12	23	26	23	46	24	15		
	238	43.8		22.7	321	00.1	14.0	10	03.0	8.3	54.8		64	////	////	02	01	23	23	23	41	24	04	00	04			
	253	43.7		22.4	335	33.1	13.9	10	11.3	8.2	54.8		62	////	////	02	31	23	33	23	54	24	20	00	20			
	268	43.6	N22	22.1	350	06.0	14.0	N10	19.5	8.2	54.8		60	////	01	28	02	54	23	41	24	04	00	04	00	33		
	283	43.5		21.8	4	39.0	13.9	10	27.7	8.1	54.7		N	58	////	02	04	03	12	23	49	24	14	00	14	00	44	
	298	43.4		21.5	19	11.9	14.0	10	35.8	8.1	54.7		56	////	02	29	03	28	23	55	24	22	00	22	00	54		
	313	43.3	..	21.2	33	44.9	13.9	10	43.9	8.0	54.7		54	01	21	02	49	03	41	24	01	00	01	00	29	01	02	
	328	43.2		20.9	48	17.8	14.0	10	51.9	7.9	54.7		52	01	54	03	05	03	52	24	06	00	06	00	36	01	10	
	343	43.1		20.6	62	50.8	13.9	10	59.8	8.0	54.7		50	02	18	03	19	04	02	24	11	00	11	00	42	01	17	
	358	43.0	N22	20.3	77	23.7	13.9	N11	07.8	7.8	54.6		45	02	59	03	47	04	23	24	21	00	21	00	55	01	32	
	13	42.9		20.0	91	56.6	13.9	11	15.6	7.8	54.6		N	40	03	27	04	08	04	40	24	30	00	30	01	05	01	44
	14	42.8		19.7	106	29.5	13.9	11	23.4	7.8	54.6		35	03	49	04	25	04	54	00	02	00	37	01	14	01	54	
	15	42.7	..	19.4	121	02.4	13.9	11	31.2	7.7	54.6		30	04	06	04	39	05	06	00	07	00	44	01	22	02	03	
	16	42.6		19.1	135	35.3	13.9	11	38.9	7.6	54.6		20	04	34	05	03	05	27	00	16	00	55	01	36	02	19	
	17	42.6		18.8	150	08.2	13.8	11	46.5	7.6	54.6		N	10	04	55	05	22	05	45	00	23	01	05	01	49	02	33
	18	42.5	N22	18.5	164	41.0	13.9	N11	54.1	7.6	54.5		0	05	13	05	39	06	02	00	30	01	15	02	00	02	46	
	19	42.4		18.2	179	13.9	13.8	12	01.7	7.5	54.5		S	10	05	29	05	55	06	18	00	37	01	24	02	12	02	59
	103	42.4		17.9	193	46.7	13.8	12	09.2	7.4	54.5		20	05	45	06	12	06	36	00	45	01	34	02	24	03	13	
	118	42.3		17.9	193	46.7	13.8	12	09.2	7.4	54.5		30	06	00	06	30	06	56	00	53	01	46	02	38	03	29	
	133	42.2	..	17.6	208	19.5	13.9	12	16.6	7.3	54.5		35	06	08	06	39	07	07	00	58	01	53	02	46	03	39	
148	42.1		17.3	222	52.4	13.8	12	23.9	7.4	54.5		40	06	17	06	50	07	21	01	04	02	01	02	56	03	49		
163	42.0		17.0	237	25.2	13.7	12	31.3	7.2	54.5		45	06	26	07	03	07	36	01	11	02	10	03	07	04	02		
10 01 02 03 04 05 06 07 08 D O M I N G O 12 13 14 15 16 17 18 19 20 21 22 23	178	41.9	N22	16.7	251	57.9	13.8	N12	38.5	7.2	54.5		S	50	06	37	07	18	07	56	01	19	02	20	03	20	04	17
	193	41.8		16.4	266	30.7	13.8	12	45.7	7.1	54.4		52	06	42	07	25	08	05	01	22	02	26	03	27	04	25	
	208	41.7		16.0	281	03.5	13.7	12	52.8	7.1	54.4		54	06	47	07	32	08	15	01	26	02	31	03	33	04	33	
	223	41.6	..	15.7	295	36.2	13.8	12	59.9	7.0	54.4		56	06	52	07	41	08	26	01	31	02	37	03	41	04	42	
	238	41.6		15.4	310	09.0	13.7	13	06.9	7.0	54.4		58	06	59	07	50	08	40	01	36	02	44	03	50	04	52	
	253	41.5		15.1	324	41.7	13.7	13	13.9	6.9	54.4		S	60	07	05	08	01	08	56	01	42	02	52	04	00	05	03
	268	41.4	N22	14.8	339	14.4	13.7	N13	20.8	6.8	54.4																	
	283	41.3		14.5	353	47.1	13.6	13	27.6	6.8	54.4		Lat.	Ocaso Sol														
	298	41.2		14.2	8	19.7	13.7	13	34.4	6.7	54.3																	
	313	41.1	..	13.8	22	52.4	13.6	13	41.1	6.7	54.3																	
	328	41.0		13.5	37	25.0	13.6	13	47.8	6.6	54.3																	
	343	40.9		13.2	51	57.6	13.6	13	54.4	6.5	54.3																	
	358	40.8	N22	12.9	66	30.2	13.6	N14	00.9	6.5	54.3		N	72	□	□	□	15	32	17	14	19	03	□	□	□		
	13	40.8		12.6	81	02.8	13.6	14	07.4	6.4	54.3		N	70	□	□	□	15	11	16	42	18	12	19	34			
	14	40.7		12.2	95	35.4	13.5	14	13.8	6.3	54.3		68	□	□	□	14	56	16	19	17	40	18	52				
	15	40.6	..	11.9	110	07.9	13.5	14	20.1	6.3	54.3		66	22	55	////	////	14	43	16	02	17	16	18	24			
	16	40.5		11.6	124	40.4	13.6	14	26.4	6.2	54.3		64	22	08	////	////	14	32	15	47	16	58	18	03			
	17	40.4		11.3	139	13.0	13.4	14	32.6	6.2	54.2		62	21	38	////	////	14	23	15	35	16	43	17	45			
	18	40.3	N22	11.0	153	45.4	13.5	N14	38.8	6.0	54.2		60	21	15	22	40	////	14	16	15	25	16	31	17	31		
	103	40.2		10.6	168	17.9	13.5	14	44.8	6.0	54.2		N	58	20	57	22	05	////	14	09	15	16	16	20	17	19	
	118	40.1		10.3	182	50.4	13.4	14	50.8	6.0	54.2		56	20	42	21	40	////	14	03	15	08	16	10	17	08		
	133	40.1	..	10.0	197	22.8	13.4	14	56.8	5.9	54.2		54	20	29	21	21	22	47	13	58	15	01	16	02	16	59	
	148	40.0		09.7	211	55.2	13.4	15	02.7	5.8	54.2		52	20	18	21	05	22	15	13	53	14	55	15	55	16	51	
163	39.9		09.3	226	27.6	13.4	15	08.5	5.7	54.2		50	20	08	20	51	21	52	13	49	14	49	15	48	16	43		
11 00 01 02 03 04 05 06 07 08 L U N E S 12 13 14 15 16 17 18 19 20 21 22 23	178	39.8	N22	09.0	241	00.0	13.3	N15	14.2	5.7	54.2		45	19	47	20	24	21	11	13	39	14	37	15	34	16	27	
	193	39.7		08.7	255	32.3	13.3	15	19.9	5.6	54.2		N	40	19	30	20	02	20	43	13	31	14	27	15	22	16	14
	208	39.6		08.4	270	04.6	13.3	15	25.5	5.6	54.2		35	19	16	19	45	20	21	13	25	14	19	15	12	16	03	
	223	39.5	..	08.0	284	36.9	13.3	15	31.1	5.4	54.2		30	19	04	19	31	20	04	13	19	14	11	15	03	15	54	
	238	39.5		07.7	299	09.2	13.3	15	36.5	5.4	54.2		20	18	43	19	08	19	36	13	09	13	58	14	48	15	37	
	253	39.4		07.4	313	41.5	13.2	15	41.9	5.4	54.1		N	10	18	25	18	48	19	15	13	00	13	47	14	35	15	22
	268	39.3	N22	07.0	328	13.7	13.2	N15	47.3	5.2	54.1		0	18	09	18	31	18	57	12	52	13	37	14	22	15	09	
	283	39.2		06.7	342	45.9	13.2	15	52.5	5.2	54.1		S	10	17	52	18	15	18	41	12	43	13	26	14	10	14	55
	298	39.1		06.4	357	18.1	13.2	15	57.7	5.2	54.1		20	17	35	17	59	18	26	12	35	13	15	13	57	14	41	
	313	39.0	..	06.1	11	50.3	13.2	16	02.9	5.0	54.1		30	17	15	17	41</											

T. M. G.	ARIES			VENUS -3.7			MARTE +1.2			JUPITER -1.5			SATURNO +0.7			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.			
M A R T E S	12 00	289 46.5	225 24.9 N18	36.9	235 52.3 N18	34.5	208 14.1 N22	46.3	150 38.9 N16	52.3	Acamar	315 39.1 S40	23.5					
	01	304 49.0	240 24.6	37.4	250 52.9	35.0	223 16.0	46.3	165 41.1	52.2	Achernar	335 47.0 S57	20.7					
	02	319 51.5	255 24.3	38.0	265 53.6	35.4	238 17.9	46.4	180 43.3	52.2	Acrux	173 39.6 S62	58.8					
	03	334 53.9	270 23.9	38.5	280 54.2	35.9	253 19.8	46.4	195 45.4	52.1	Adhara	255 34.2 S28	56.5					
	04	349 56.4	285 23.6	39.0	295 54.9	36.3	268 21.6	46.4	210 47.6	52.0	Aldebaran	291 20.7 N16	27.8					
	05	4 58.8	300 23.3	39.6	310 55.6	36.7	283 23.5	46.5	225 49.8	51.9								
	06	20 01.3	315 22.9 N18	40.1	325 56.2 N18	37.2	298 25.4 N22	46.5	240 51.9 N16	51.8	Alioth	166 44.5 N56	05.2					
	07	35 03.8	330 22.6	40.6	340 56.9	37.6	313 27.3	46.5	255 54.1	51.7	Alkaid	153 20.2 N49	25.8					
	08	50 06.2	345 22.3	41.1	355 57.6	38.0	328 29.1	46.6	270 56.3	51.6	Al Na'ir	28 17.3 S47	03.9					
	09	65 08.7	0 21.9	41.7	10 58.2	38.5	343 31.0	46.6	285 58.4	51.5	Alnilam	276 14.1 S 1	13.0					
	10	80 11.2	15 21.6	42.2	25 58.9	38.9	358 32.9	46.6	301 00.6	51.5	Alphard	218 22.9 S 8	33.7					
	11	95 13.6	30 21.3	42.7	40 59.5	39.4	13 34.8	46.7	316 02.8	51.4								
	12	110 16.1	45 20.9 N18	43.3	56 00.2 N18	39.8	28 36.6 N22	46.7	331 04.9 N16	51.3	Alphecca	126 33.7 N26	47.6					
	13	125 18.6	60 20.6	43.8	71 00.9	40.2	43 38.5	46.7	346 07.1	51.2	Alpheratz	358 11.4 N28	57.9					
	14	140 21.0	75 20.2	44.3	86 01.5	40.7	58 40.4	46.8	1 09.3	51.1	Altair	62 34.3 N 8	48.7					
	15	155 23.5	90 19.9	44.8	101 02.2	41.1	73 42.3	46.8	16 11.4	51.0	Ankaa	353 42.3 S42	25.4					
	16	170 26.0	105 19.5	45.4	116 02.9	41.5	88 44.1	46.8	31 13.6	50.9	Antares	112 59.2 S26	22.9					
	17	185 28.4	120 19.2	45.9	131 03.5	42.0	103 46.0	46.9	46 15.8	50.8								
	18	200 30.9	135 18.9 N18	46.4	146 04.2 N18	42.4	118 47.9 N22	46.9	61 17.9 N16	50.7	Arcturus	146 20.3 N19	18.1					
	19	215 33.3	150 18.5	46.9	161 04.9	42.9	133 49.8	47.0	76 20.1	50.7	Atria	108 24.8 S68	59.4					
	20	230 35.8	165 18.2	47.5	176 05.5	43.3	148 51.6	47.0	91 22.3	50.6	Avior	234 29.6 S59	26.4					
	21	245 38.3	180 17.8	48.0	191 06.2	43.7	163 53.5	47.0	106 24.4	50.5	Bellatrix	279 01.3 N 6	19.7					
	22	260 40.7	195 17.5	48.5	206 06.8	44.2	178 55.4	47.1	121 26.6	50.4	Betelgeuse	271 30.9 N 7	24.1					
23	275 43.2	210 17.1	49.0	221 07.5	44.6	193 57.3	47.1	136 28.8	50.3									
M I E R C O L E S	13 00	290 45.7	225 16.8 N18	49.5	236 08.2 N18	45.0	208 59.1 N22	47.1	151 30.9 N16	50.2	Canopus	264 08.7 S52	41.0					
	01	305 48.1	240 16.4	50.1	251 08.8	45.5	224 01.0	47.2	166 33.1	50.1	Capella	281 14.8 N45	58.4					
	02	320 50.6	255 16.1	50.6	266 09.5	45.9	239 02.9	47.2	181 35.3	50.0	Deneb	49 49.4 N45	12.1					
	03	335 53.1	270 15.7	51.1	281 10.2	46.3	254 04.8	47.2	196 37.4	49.9	Denebola	183 01.4 N14	41.9					
	04	350 55.5	285 15.4	51.6	296 10.8	46.8	269 06.6	47.3	211 39.6	49.9	Diphda	349 23.0 S18	06.4					
	05	5 58.0	300 15.0	52.1	311 11.5	47.2	284 08.5	47.3	226 41.8	49.8								
	06	21 00.4	315 14.7 N18	52.7	326 12.1 N18	47.6	299 10.4 N22	47.3	241 43.9 N16	49.7	Dubhe	194 25.3 N61	52.5					
	07	36 02.9	330 14.3	53.2	341 12.8	48.1	314 12.3	47.4	256 46.1	49.6	Elnath	278 47.2 N28	35.2					
	08	51 05.4	345 14.0	53.7	356 13.5	48.5	329 14.1	47.4	271 48.3	49.5	Eltanin	90 58.2 N51	29.7					
	09	66 07.8	0 13.6	54.2	11 14.1	48.9	344 16.0	47.4	286 50.4	49.4	Enif	34 13.4 N 9	46.4					
	10	81 10.3	15 13.3	54.7	26 14.8	49.3	359 17.9	47.5	301 52.6	49.3	Fomalhaut	15 53.6 S29	44.2					
	11	96 12.8	30 12.9	55.2	41 15.5	49.8	14 19.8	47.5	316 54.8	49.2								
	12	111 15.2	45 12.6 N18	55.7	56 16.1 N18	50.2	29 21.7 N22	47.5	331 56.9 N16	49.1	Gacrux	172 31.1 S56	59.5					
	13	126 17.7	60 12.2	56.3	71 16.8	50.6	44 23.5	47.5	346 59.1	49.1	Gienah	176 20.2 S17	25.1					
	14	141 20.2	75 11.9	56.8	86 17.4	51.1	59 25.4	47.6	2 01.3	49.0	Hadar	149 26.1 S60	16.1					
	15	156 22.6	90 11.5	57.3	101 18.1	51.5	74 27.3	47.6	17 03.4	48.9	Hamal	328 31.4 N23	21.3					
	16	171 25.1	105 11.1	57.8	116 18.8	51.9	89 29.2	47.6	32 05.6	48.8	Kaus Aust.	84 19.3 S34	23.6					
	17	186 27.6	120 10.8	58.3	131 19.4	52.4	104 31.0	47.7	47 07.8	48.7								
	18	201 30.0	135 10.4 N18	58.8	146 20.1 N18	52.8	119 32.9 N22	47.7	62 09.9 N16	48.6	Kochab	137 18.6 N74	15.2					
	19	216 32.5	150 10.1	59.3	161 20.8	53.2	134 34.8	47.7	77 12.1	48.5	Markab	14 05.1 N15	05.1					
	20	231 34.9	165 09.7	59.8	176 21.4	53.6	149 36.7	47.8	92 14.3	48.4	Menkar	314 43.5 N 4	00.1					
	21	246 37.4	180 09.3	60.3	191 22.1	54.1	164 38.6	47.8	107 16.4	48.3	Menkent	148 39.4 S36	15.7					
	22	261 39.9	195 09.0	60.8	206 22.7	54.5	179 40.4	47.8	122 18.6	48.3	Miaplacidus	221 46.1 S69	37.7					
23	276 42.3	210 08.6	61.3	221 23.4	54.9	194 42.3	47.9	137 20.7	48.2									
J U E V E S	14 00	291 44.8	225 08.3 N19	01.8	236 24.1 N18	55.3	209 44.2 N22	47.9	152 22.9 N16	48.1	Mirfak	309 19.4 N49	46.7					
	01	306 47.3	240 07.9	02.4	251 24.7	55.8	224 46.1	47.9	167 25.1	48.0	Nunki	76 31.4 S26	19.4					
	02	321 49.7	255 07.5	02.9	266 25.4	56.2	239 47.9	48.0	182 27.2	47.9	Peacock	54 01.2 S56	48.2					
	03	336 52.2	270 07.2	03.4	281 26.1	56.6	254 49.8	48.0	197 29.4	47.8	Pollux	244 01.2 N28	04.8					
	04	351 54.7	285 06.8	03.9	296 26.7	57.0	269 51.7	48.0	212 31.6	47.7	Procyon	245 28.4 N 5	16.9					
	05	6 57.1	300 06.4	04.4	311 27.4	57.5	284 53.6	48.1	227 33.7	47.6								
	06	21 59.6	315 06.1 N19	04.9	326 28.1 N18	57.9	299 55.5 N22	48.1	242 35.9 N16	47.5	Rasalhague	96 31.3 N12	34.8					
	07	37 02.1	330 05.7	05.4	341 28.7	58.3	314 57.3	48.1	257 38.1	47.5	Regulus	208 12.5 N12	04.6					
	08	52 04.5	345 05.3	05.9	356 29.4	58.7	329 59.2	48.2	272 40.2	47.4	Rigel	281 38.4 S 8	13.7					
	09	67 07.0	0 05.0	06.4	11 30.0	59.2	345 01.1	48.2	287 42.4	47.3	Rigel Kent.	140 28.4 S60	44.7					
	10	82 09.4	15 04.6	06.9	26 30.7	59.6	0 03.0	48.2	302 44.6	47.2	Sabik	102 43.3 S15	41.8					
	11	97 11.9	30 04.2	07.4	41 31.4	60.0	15 04.9	48.3	317 46.7	47.1								
	12	112 14.4	45 03.9 N19	07.9	56 32.0 N19	60.4	30 06.7 N22	48.3	332 48.9 N16	47.0	Schedar	350 11.2 N56	24.6					
	13	127 16.8	60 03.5	08.4	71 32.7	60.9	45 08.6	48.3	347 51.0	46.9	Shaula	96 58.3 S37	05.2					
	14	142 19.3	75 03.1	08.9	86 33.4	61.3	60 10.5	48.4	2 53.2	46.8	Sirius	258 57.9 S16	41.2					
	15	157 21.8	90 02.8	09.4	101 34.0	61.7	75 12.4	48.4	17 55.4	46.7	Spica	158 59.8 S11	02.7					
	16	172 24.2	105 02.4	09.9	116 34.7	62.1	90 14.2	48.4	32 57.5	46.6	Suhail	223 12.7 S43	20.7					
	17	187 26.7	120 02.0	10.4	131 35.3	62.5	105 16.1	48.5	47 59.7	46.6								
	18	202 29.2	135 01.6 N19	10.8	146 36.0 N19	63.0	120 18.0 N22	48.5	63 01.9 N16	46.5	Vega	80 56.8 N38	46.0					
	19																	

T. M. G.	ARIES			VENUS -3.7			MARTE +1.2			JUPITER -1.5			SATURNO +0.7			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
V I E R N E S	15 ^d 00	292 43.9	224 59.4 N19	13.8	236 40.0 N19	05.5	210 29.3 N22	48.7	153 14.8 N16	45.9	Acamar	315 39.1 S40	23.5						
	01	307 46.4	239 59.0	14.3	251 40.6	05.9	225 31.2	48.7	168 17.0	45.8	Achernar	335 47.0 S57	20.7						
	02	322 48.9	254 58.6	14.8	266 41.3	06.3	240 33.1	48.7	183 19.2	45.8	Acrux	173 39.7 S62	58.8						
	03	337 51.3	269 58.3	15.3	281 42.0	06.7	255 34.9	48.8	198 21.3	45.7	Adhara	255 34.1 S28	56.5						
	04	352 53.8	284 57.9	15.8	296 42.6	07.1	270 36.8	48.8	213 23.5	45.6	Aldebaran	291 20.7 N16	27.8						
	05	7 56.3	299 57.5	16.2	311 43.3	07.6	285 38.7	48.8	228 25.7	45.5									
	06	22 58.7	314 57.1 N19	16.7	326 44.0 N19	08.0	300 40.6 N22	48.9	243 27.8 N16	45.4	Alioth	166 44.6 N56	05.2						
	07	38 01.2	329 56.7	17.2	341 44.6	08.4	315 42.5	48.9	258 30.0	45.3	Alkaid	153 20.2 N49	25.8						
	08	53 03.7	344 56.4	17.7	356 45.3	08.8	330 44.3	48.9	273 32.2	45.2	Al Na'ir	28 17.3 S47	03.9						
	09	68 06.1	359 56.0	18.2	11 45.9	09.2	345 46.2	49.0	288 34.3	45.1	Alnilam	276 14.1 S 1	13.0						
	10	83 08.6	14 55.6	18.7	26 46.6	09.6	0 48.1	49.0	303 36.5	45.0	Alphard	218 22.9 S 8	33.7						
	11	98 11.0	29 55.2	19.2	41 47.3	10.1	15 50.0	49.0	318 38.6	44.9									
	12	113 13.5	44 54.8 N19	19.6	56 47.9 N19	10.5	30 51.9 N22	49.0	333 40.8 N16	44.9	Alphecca	126 33.7 N26	47.6						
	13	128 16.0	59 54.4	20.1	71 48.6	10.9	45 53.7	49.1	348 43.0	44.8	Alpheratz	358 11.3 N28	57.9						
	14	143 18.4	74 54.1	20.6	86 49.3	11.3	60 55.6	49.1	3 45.1	44.7	Altair	62 34.3 N 8	48.7						
	15	158 20.9	89 53.7	21.1	101 49.9	11.7	75 57.5	49.1	18 47.3	44.6	Ankaa	353 42.3 S42	25.4						
	16	173 23.4	104 53.3	21.6	116 50.6	12.1	90 59.4	49.2	33 49.5	44.5	Antares	112 59.2 S26	22.9						
	17	188 25.8	119 52.9	22.1	131 51.2	12.5	106 01.3	49.2	48 51.6	44.4									
	18	203 28.3	134 52.5 N19	22.5	146 51.9 N19	13.0	121 03.1 N22	49.2	63 53.8 N16	44.3	Arcturus	146 20.3 N19	18.1						
	19	218 30.8	149 52.1	23.0	161 52.6	13.4	136 05.0	49.3	78 55.9	44.2	Atria	108 24.8 S68	59.4						
	20	233 33.2	164 51.7	23.5	176 53.2	13.8	151 06.9	49.3	93 58.1	44.1	Avior	234 29.6 S59	26.4						
	21	248 35.7	179 51.3	24.0	191 53.9	14.2	166 08.8	49.3	109 00.3	44.0	Bellatrix	279 01.3 N 6	19.7						
	22	263 38.2	194 51.0	24.4	206 54.6	14.6	181 10.7	49.4	124 02.4	44.0	Betelgeuse	271 30.9 N 7	24.1						
23	278 40.6	209 50.6	24.9	221 55.2	15.0	196 12.6	49.4	139 04.6	43.9										
S A B I D O	16 ^d 00	293 43.1	224 50.2 N19	25.4	236 55.9 N19	15.4	211 14.4 N22	49.4	154 06.8 N16	43.8	Canopus	264 08.7 S52	41.0						
	01	308 45.5	239 49.8	25.9	251 56.5	15.8	226 16.3	49.4	169 08.9	43.7	Capella	281 14.8 N45	58.4						
	02	323 48.0	254 49.4	26.3	266 57.2	16.2	241 18.2	49.5	184 11.1	43.6	Deneb	49 49.4 N45	12.1						
	03	338 50.5	269 49.0	26.8	281 57.9	16.7	256 20.1	49.5	199 13.2	43.5	Denebola	183 01.4 N14	41.9						
	04	353 52.9	284 48.6	27.3	296 58.5	17.1	271 22.0	49.5	214 15.4	43.4	Diphda	349 22.9 S18	06.4						
	05	8 55.4	299 48.2	27.8	311 59.2	17.5	286 23.9	49.6	229 17.6	43.3									
	06	23 57.9	314 47.8 N19	28.2	326 59.9 N19	17.9	301 25.7 N22	49.6	244 19.7 N16	43.2	Dubhe	194 25.3 N61	52.5						
	07	39 00.3	329 47.4	28.7	342 00.5	18.3	316 27.6	49.6	259 21.9	43.1	Elnath	278 47.1 N28	35.2						
	08	54 02.8	344 47.0	29.2	357 01.2	18.7	331 29.5	49.7	274 24.1	43.1	Eltanin	90 58.2 N51	29.8						
	09	69 05.3	359 46.6	29.6	12 01.8	19.1	346 31.4	49.7	289 26.2	43.0	Enif	34 13.4 N 9	46.4						
	10	84 07.7	14 46.2	30.1	27 02.5	19.5	1 33.3	49.7	304 28.4	42.9	Fomalhaut	15 53.6 S29	44.2						
	11	99 10.2	29 45.8	30.6	42 03.2	19.9	16 35.2	49.7	319 30.5	42.8									
	12	114 12.6	44 45.4 N19	31.0	57 03.8 N19	20.3	31 37.0 N22	49.8	334 32.7 N16	42.7	Gacrux	172 31.2 S56	59.5						
	13	129 15.1	59 45.0	31.5	72 04.5	20.7	46 38.9	49.8	349 34.9	42.6	Giengah	176 20.2 S17	25.1						
	14	144 17.6	74 44.6	32.0	87 05.2	21.1	61 40.8	49.8	4 37.0	42.5	Hadar	149 26.1 S60	16.1						
	15	159 20.0	89 44.2	32.4	102 05.8	21.5	76 42.7	49.9	19 39.2	42.4	Hamal	328 31.3 N23	21.3						
	16	174 22.5	104 43.8	32.9	117 06.5	21.9	91 44.6	49.9	34 41.4	42.3	Kaus Aust.	84 19.3 S34	23.7						
	17	189 25.0	119 43.4	33.4	132 07.2	22.4	106 46.5	49.9	49 43.5	42.2									
	18	204 27.4	134 43.0 N19	33.8	147 07.8 N19	22.8	121 48.3 N22	50.0	64 45.7 N16	42.1	Kochab	137 18.6 N74	15.2						
	19	219 29.9	149 42.6	34.3	162 08.5	23.2	136 50.2	50.0	79 47.8	42.1	Markab	14 05.1 N15	05.1						
	20	234 32.4	164 42.2	34.8	177 09.1	23.6	151 52.1	50.0	94 50.0	42.0	Menkar	314 43.5 N 4	00.1						
	21	249 34.8	179 41.8	35.2	192 09.8	24.0	166 54.0	50.0	109 52.2	41.9	Menkent	148 39.4 S36	15.7						
	22	264 37.3	194 41.4	35.7	207 10.5	24.4	181 55.9	50.1	124 54.3	41.8	Miaplacidus	221 46.1 S69	37.7						
23	279 39.8	209 41.0	36.2	222 11.1	24.8	196 57.8	50.1	139 56.5	41.7										
D O M I N G O	17 ^d 00	294 42.2	224 40.6 N19	36.6	237 11.8 N19	25.2	211 59.6 N22	50.1	154 58.6 N16	41.6	Mirfak	309 19.3 N49	46.7						
	01	309 44.7	239 40.2	37.1	252 12.5	25.6	227 01.5	50.2	170 00.8	41.5	Nunki	76 31.4 S26	19.4						
	02	324 47.1	254 39.8	37.5	267 13.1	26.0	242 03.4	50.2	185 03.0	41.4	Peacock	54 01.2 S56	48.3						
	03	339 49.6	269 39.4	38.0	282 13.8	26.4	257 05.3	50.2	200 05.1	41.3	Pollux	244 01.1 N28	04.8						
	04	354 52.1	284 39.0	38.4	297 14.4	26.8	272 07.2	50.2	215 07.3	41.2	Procyon	245 28.3 N 5	16.9						
	05	9 54.5	299 38.6	38.9	312 15.1	27.2	287 09.1	50.3	230 09.4	41.2									
	06	24 57.0	314 38.2 N19	39.4	327 15.8 N19	27.6	302 11.0 N22	50.3	245 11.6 N16	41.1	Rasalhague	96 31.3 N12	34.8						
	07	39 59.5	329 37.8	39.8	342 16.4	28.0	317 12.8	50.3	260 13.8	41.0	Regulus	208 12.5 N12	04.6						
	08	55 01.9	344 37.4	40.3	357 17.1	28.4	332 14.7	50.4	275 15.9	40.9	Rigel	281 38.3 S 8	13.7						
	09	70 04.4	359 37.0	40.7	12 17.8	28.8	347 16.6	50.4	290 18.1	40.8	Rigil Kent.	140 28.4 S60	44.7						
	10	85 06.9	14 36.5	41.2	27 18.4	29.2	2 18.5	50.4	305 20.3	40.7	Sabik	102 43.3 S15	41.8						
	11	100 09.3	29 36.1	41.6	42 19.1	29.6	17 20.4	50.5	320 22.4	40.6									
	12	115 11.8	44 35.7 N19	42.1	57 19.7 N19	30.0	32 22.3 N22	50.5	335 24.6 N16	40.5	Schedar	350 11.2 N56	24.6						
	13	130 14.3	59 35.3	42.5	72 20.4	30.4	47 24.2	50.5	350 26.7	40.4	Shaula	96 58.3 S37	05.2						
	14	145 16.7	74 34.9	43.0	87 21.1	30.8	62 26.0	50.5	5 28.9	40.3	Sirius	258 57.9 S16	41.2						
	15	160 19.2	89 34.5	43.4	102 21.7	31.2	77 27.9	50.6	20 31.1	40.2	Spica	158 59.8 S11	02.7						
	16	175 21.6	104 34.1	43.9	117 22.4	31.6	92 29.8	50.6	35 33.2	40.2	Suhail	223 12.7 S43	20.7						

T. M. G.	SOL				LUNA				Lat.	Crepúsculo			Orto Luna								
	A.H.G.		Dec.	v	A.H.G.		Dec.	d		P. H.	Náut.	Civil	Orto Sol	15		16		17		18	
	h	m			h	m								h	m	h	m	h	m		h
15 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	V I E R N E S	178	32.4	N21	34.7	195	15.4	11.8	N18	22.3	2.2	54.5	N 72	□	□	□	□	01 10	03 05	04 53	
		193	32.3		34.3	209	46.2	11.8	18	20.1	2.3	54.5	N 70	□	□	□	00 40	02 04	03 37	05 13	
		208	32.3		33.9	224	17.0	11.8	18	17.8	2.3	54.5	68	□	□	□	01 23	02 37	04 01	05 29	
		223	32.2	..	33.5	238	47.8	11.7	18	15.5	2.5	54.5	66	////	////	01 39	01 52	03 01	04 19	05 42	
		238	32.1		33.1	253	18.5	11.8	18	13.0	2.5	54.5	64	////	////	02 18	02 14	03 20	04 33	05 52	
		253	32.1		32.7	267	49.3	11.8	18	10.5	2.6	54.5	62	////	00 56	02 44	02 31	03 35	04 46	06 01	
		268	32.0	N21	32.3	282	20.1	11.8	N18	07.9	2.7	54.5	60	////	01 47	03 05	02 46	03 48	04 56	06 09	
		283	31.9		31.9	296	50.9	11.8	18	05.2	2.8	54.6	N 58	////	02 18	03 22	02 58	03 59	05 05	06 16	
		298	31.9		31.5	311	21.7	11.8	18	02.4	2.9	54.6	56	00 51	02 40	03 36	03 09	04 08	05 13	06 22	
		313	31.8	..	31.1	325	52.5	11.7	17	59.5	2.9	54.6	54	01 39	02 58	03 48	03 18	04 17	05 20	06 27	
		328	31.7		30.7	340	23.2	11.8	17	56.6	3.1	54.6	52	02 07	03 13	03 59	03 27	04 24	05 26	06 32	
		343	31.7		30.3	354	54.0	11.8	17	53.5	3.1	54.6	50	02 28	03 26	04 08	03 34	04 31	05 32	06 36	
		358	31.6	N21	29.9	9	24.8	11.8	N17	50.4	3.2	54.6	45	03 06	03 52	04 28	03 50	04 45	05 44	06 46	
		13	13	31.5	29.6	23	55.6	11.8	17	47.2	3.3	54.6	N 40	03 33	04 12	04 44	04 03	04 57	05 54	06 53	
		14	28	31.5	29.2	38	26.4	11.8	17	43.9	3.4	54.7	35	03 53	04 29	04 58	04 14	05 08	06 03	07 00	
		15	43	31.4	28.8	52	57.2	11.8	17	40.5	3.5	54.7	30	04 10	04 43	05 09	04 24	05 16	06 11	07 06	
		16	58	31.4	28.4	67	28.0	11.8	17	37.0	3.6	54.7	20	04 37	05 05	05 29	04 41	05 32	06 24	07 16	
		17	73	31.3	28.0	81	58.8	11.8	17	33.4	3.6	54.7	N 10	04 57	05 24	05 46	04 56	05 45	06 35	07 25	
		18	88	31.2	N21	27.6	96	29.6	11.8	N17	29.8	3.8	54.7	0	05 14	05 40	06 02	05 09	05 58	06 46	07 33
		19	103	31.2	27.2	111	00.4	11.9	17	26.0	3.8	54.7	S 10	05 30	05 56	06 18	05 23	06 10	06 56	07 41	
		20	118	31.1	26.8	125	31.3	11.8	17	22.2	3.9	54.7	20	05 44	06 11	06 35	05 38	06 24	07 08	07 50	
		21	133	31.0	26.4	140	02.1	11.8	17	18.3	4.0	54.8	30	05 59	06 28	06 54	05 55	06 39	07 21	08 00	
		22	148	31.0	26.0	154	32.9	11.8	17	14.3	4.1	54.8	35	06 06	06 37	07 05	06 04	06 48	07 28	08 06	
23	163	30.9	25.5	169	03.7	11.9	17	10.2	4.1	54.8	40	06 14	06 48	07 18	06 15	06 58	07 37	08 13			
16	178	30.8	N21	25.1	183	34.6	11.8	N17	06.1	4.3	54.8	45	06 23	07 00	07 33	06 29	07 09	07 46	08 20		
01	193	30.8	24.7	198	05.4	11.9	17	01.8	4.3	54.8	S 50	06 33	07 14	07 51	06 44	07 24	07 58	08 29			
02	208	30.7	24.3	212	36.3	11.8	16	57.5	4.4	54.8	52	06 38	07 20	07 59	06 52	07 30	08 04	08 34			
03	223	30.7	23.9	227	07.1	11.9	16	53.1	4.5	54.8	54	06 43	07 27	08 09	07 00	07 38	08 10	08 38			
04	238	30.6	23.5	241	38.0	11.9	16	48.6	4.6	54.9	56	06 48	07 35	08 20	07 10	07 46	08 17	08 43			
05	253	30.5	23.1	256	08.9	11.9	16	44.0	4.6	54.9	58	06 53	07 44	08 32	07 20	07 55	08 24	08 49			
06	268	30.5	N21	22.7	270	39.8	11.9	N16	39.4	4.8	54.9	S 60	06 59	07 54	08 47	07 32	08 06	08 33	08 55		
07	283	30.4	22.3	285	10.7	11.8	16	34.6	4.8	54.9	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna						
08	298	30.4	21.9	299	41.5	12.0	16	29.8	4.9	54.9	15	15	16	17	18	18	18	18			
09	313	30.3	21.5	314	12.5	11.9	16	24.9	5.0	54.9	N 72	h m	h m	h m	h m	h m	h m	h m			
10	328	30.2	21.1	328	43.4	11.9	16	19.9	5.0	55.0	N 70	□	□	□	22 28	22 13	22 05	21 57			
11	343	30.2	20.7	343	14.3	11.9	16	14.9	5.2	55.0	68	□	□	□	21 33	21 40	21 43	21 44			
12	358	30.1	N21	20.3	357	45.2	12.0	N16	09.7	5.2	55.0	66	22 29	////	////	21 00	21 16	21 26	21 33		
13	13	30.1	19.8	12	16.2	11.9	16	04.5	5.3	55.0	64	21 52	////	////	20 36	20 57	21 12	21 24			
14	28	30.0	19.4	26	47.1	12.0	15	59.2	5.4	55.0	62	21 26	23 10	////	20 17	20 42	21 01	21 16			
15	43	29.9	19.0	41	18.1	11.9	15	53.8	5.4	55.0	60	21 06	22 22	////	20 01	20 29	20 51	21 09			
16	58	29.9	18.6	55	49.0	12.0	15	48.4	5.6	55.0	N 58	20 49	21 52	////	19 48	20 18	20 43	21 03			
17	73	29.8	18.2	70	20.0	12.0	15	42.8	5.6	55.1	56	20 35	21 52	23 15	19 37	20 09	20 35	20 58			
18	88	29.8	N21	17.8	84	51.0	12.0	N15	37.2	5.7	55.1	54	20 23	21 12	22 31	19 27	20 00	20 29	20 54		
19	103	29.7	17.4	99	22.0	12.0	15	31.5	5.8	55.1	52	20 12	20 58	22 04	19 18	19 53	20 23	20 49			
20	118	29.7	16.9	113	53.0	12.0	15	25.7	5.8	55.1	50	20 03	20 45	21 43	19 10	19 46	20 18	20 46			
21	133	29.6	16.5	128	24.0	12.1	15	19.9	5.9	55.1	45	19 43	20 19	21 05	19 03	19 40	20 13	20 42			
22	148	29.5	16.1	142	55.1	12.0	15	14.0	6.0	55.1	N 40	19 27	19 59	20 39	18 48	19 27	20 02	20 35			
23	163	29.5	15.7	157	26.1	12.1	15	08.0	6.1	55.2	35	19 14	19 43	20 18	18 36	19 16	19 54	20 29			
17	178	29.4	N21	15.3	171	57.2	12.0	N15	01.9	6.2	55.2	30	19 02	19 29	20 01	18 25	19 07	19 46	20 23		
01	193	29.4	14.8	186	28.2	12.1	14	55.7	6.2	55.2	20	18 42	19 07	19 35	18 16	18 59	19 40	20 18			
02	208	29.3	14.4	200	59.3	12.1	14	49.5	6.3	55.2	N 10	18 25	18 48	19 15	18 00	18 45	19 28	20 10			
03	223	29.3	14.0	215	30.4	12.1	14	43.2	6.4	55.2	0	18 10	18 32	18 58	17 46	18 32	19 18	20 03			
04	238	29.2	13.6	230	01.5	12.1	14	36.8	6.4	55.3	S 10	17 54	18 16	18 42	17 33	18 21	19 09	19 56			
05	253	29.1	13.2	244	32.6	12.1	14	30.4	6.5	55.3	20	17 37	18 01	18 28	17 20	18 09	18 59	19 49			
06	268	29.1	N21	12.7	259	03.7	12.1	N14	23.9	6.6	55.3	30	17 18	17 44	18 13	17 05	17 57	18 49	19 41		
07	283	29.0	12.3	273	34.8	12.2	14	17.3	6.7	55.3	35	17 07	17 35	18 06	16 49	17 42	18 37	19 33			
08	298	29.0	11.9	288	06.0	12.1	14	10.6	6.7	55.3	40	16 55	17 24	17 58	16 40	17 34	18 30	19 28			
09	313	28.9	11.5	302	37.1	12.2	14	03.9	6.8	55.3	45	16 40	17 13	17 49	16 29	17 24	18 22	19 22			
10	328	28.9	11.0	317	08.3	12.2	13	57.1	6.9	55.4	S 50	16 21	16 59	17 39	16 16	17 13	18 13	19 16			
11	343	28.8	10.6	331	39.5	12.2	13	50.2	6.9	55.4	52	16 13	16 52	17 35	16 01	17 00	18 02	19 08			
12	358	28.8	N21	10.2	346	10.7	12.2	N13	43.3	7.1	55.4	54	16 03	16 45	17 30	15 53	16 53	17 57	19 04		
13	13	28.7	09.8	0	41.9	12.2	13	36.2	7.1	55.4	56	15 52	16 37	17 25	15 45	16 46	17 52	19 00			
14	28	28.7	09.3	15	13.1	12.2	13	29.1	7.1	55.4	58	15 40	16 29	17 19	15 36	16 38	17 45	18 55			
15	43	28.6	08.9	29	44.3	12.2	13	22.0	7.2	55.5	S 60	15 25	16 19	17 13	15 26	16 29	17 38	18 50			
16	58	28.6	08.5	44	15.5	12.3	13	14.8	7.3	55.5	15	15 14	16 19	17 13	15 14	16 19	17 30	18 45			
17	73	28.5	08.1	58	46.8	12.2	13	07.5	7.4	55.5	Día	SOL E.T. (-) 00 ^h 12 ^h Pas. Mer.			LUNA Pas. Sup. Mer. Inf. Edad. Fase						
18	88	28.4	N21	07.6	73	18.0	12.3	N13	00.1	7.4	55.5	15	05 50	05 53	12 06						

T. M. G.	ARIES			VENUS -3.7			MARTE +1.2			JUPITER -1.6			SATURNO +0.7			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
18 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	295 41.4	224 30.7	N19 47.4	237 27.7	N19 34.8		212 44.9	N22 50.8		155 50.5	N16 39.4		Acamar	315 39.0	S40 23.5			
	310 43.8	239 30.3	47.9	252 28.4	35.2		227 46.8	50.9		170 52.7	39.3		Achernar	335 46.9	S57 20.7			
	325 46.3	254 29.9	48.3	267 29.0	35.5		242 48.7	50.9		185 54.8	39.2		Acrux	173 39.7	S62 58.8			
	340 48.7	269 29.5	48.8	282 29.7	35.9		257 50.6	50.9		200 57.0	39.2		Adhara	255 34.1	S28 56.5			
	355 51.2	284 29.1	49.2	297 30.4	36.3		272 52.5	50.9		215 59.1	39.1		Aldebaran	291 20.7	N16 27.8			
	10 53.7	299 28.6	49.6	312 31.0	36.7		287 54.3	51.0		231 01.3	39.0							
	25 56.1	314 28.2	N19 50.1	327 31.7	N19 37.1		302 56.2	N22 51.0		246 03.5	N16 38.9		Alioth	166 44.6	N56 05.2			
	40 58.6	329 27.8	50.5	342 32.3	37.5		317 58.1	51.0		261 05.6	38.8		Alkaid	153 20.2	N49 25.8			
	56 01.1	344 27.4	51.0	357 33.0	37.9		333 00.0	51.1		276 07.8	38.7		Al Na'ir	28 17.3	S47 03.9			
	71 03.5	359 26.9	51.4	12 33.7	38.3		348 01.9	51.1		291 09.9	38.6		Alnilam	276 14.1	S 1 13.0			
	86 06.0	14 26.5	51.8	27 34.3	38.7		3 03.8	51.1		306 12.1	38.5		Alphard	218 22.9	S 8 33.7			
	101 08.5	29 26.1	52.3	42 35.0	39.1		18 05.7	51.1		321 14.3	38.4							
	116 10.9	44 25.7	N19 52.7	57 35.7	N19 39.5		33 07.6	N22 51.2		336 16.4	N16 38.3		Alphecca	126 33.7	N26 47.7			
	131 13.4	59 25.2	53.1	72 36.3	39.9		48 09.4	51.2		351 18.6	38.2		Alpheratz	358 11.3	N28 57.9			
	146 15.9	74 24.8	53.6	87 37.0	40.3		63 11.3	51.2		6 20.7	38.1		Altair	62 34.2	N 8 48.7			
	161 18.3	89 24.4	54.0	102 37.6	40.6		78 13.2	51.2		21 22.9	38.1		Ankaa	353 42.2	S42 25.4			
	176 20.8	104 24.0	54.4	117 38.3	41.0		93 15.1	51.3		36 25.1	38.0		Antares	112 59.2	S26 22.9			
	191 23.2	119 23.5	54.9	132 39.0	41.4		108 17.0	51.3		51 27.2	37.9							
	206 25.7	134 23.1	N19 55.3	147 39.6	N19 41.8		123 18.9	N22 51.3		66 29.4	N16 37.8		Arcturus	146 20.4	N19 18.1			
	221 28.2	149 22.7	55.7	162 40.3	42.2		138 20.8	51.4		81 31.5	37.7		Atria	108 24.9	S68 59.4			
	236 30.6	164 22.3	56.2	177 41.0	42.6		153 22.7	51.4		96 33.7	37.6		Avior	234 29.6	S59 26.4			
	251 33.1	179 21.8	56.6	192 41.6	43.0		168 24.5	51.4		111 35.9	37.5		Bellatrix	279 01.3	N 6 19.7			
	266 35.6	194 21.4	57.0	207 42.3	43.4		183 26.4	51.4		126 38.0	37.4		Betelgeuse	271 30.9	N 7 24.1			
281 38.0	209 21.0	57.4	222 43.0	43.8		198 28.3	51.5		141 40.2	37.3								
19 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	296 40.5	224 20.5	N19 57.9	237 43.6	N19 44.1		213 30.2	N22 51.5		156 42.3	N16 37.2		Canopus	264 08.7	S52 41.0			
	311 43.0	239 20.1	58.3	252 44.3	44.5		228 32.1	51.5		171 44.5	37.1		Capella	281 14.8	N45 58.4			
	326 45.4	254 19.7	58.7	267 44.9	44.9		243 34.0	51.5		186 46.7	37.0		Deneb	49 49.4	N45 12.1			
	341 47.9	269 19.2	59.1	282 45.6	45.3		258 35.9	51.6		201 48.8	37.0		Denebola	183 01.4	N14 41.9			
	356 50.4	284 18.8	59.6	297 46.3	45.7		273 37.8	51.6		216 51.0	36.9		Diphda	349 22.9	S18 06.4			
	11 52.8	299 18.4	20 00.0	312 46.9	46.1		288 39.7	51.6		231 53.1	36.8							
	26 55.3	314 17.9	N20 00.4	327 47.6	N19 46.5		303 41.6	N22 51.7		246 55.3	N16 36.7		Dubhe	194 25.3	N61 52.5			
	41 57.7	329 17.5	00.8	342 48.3	46.8		318 43.4	51.7		261 57.4	36.6		Elnath	278 47.1	N28 35.2			
	57 00.2	344 17.1	01.3	357 48.9	47.2		333 45.3	51.7		276 59.6	36.5		Eltanin	90 58.2	N51 29.8			
	72 02.7	359 16.6	01.7	12 49.6	47.6		348 47.2	51.7		292 01.8	36.4		Enif	34 13.4	N 9 46.4			
	87 05.1	14 16.2	02.1	27 50.3	48.0		3 49.1	51.8		307 03.9	36.3		Fomalhaut	15 53.5	S29 44.2			
	102 07.6	29 15.7	02.5	42 50.9	48.4		18 51.0	51.8		322 06.1	36.2							
	117 10.1	44 15.3	N20 02.9	57 51.6	N19 48.8		33 52.9	N22 51.8		337 08.2	N16 36.1		Gacrux	172 31.2	S56 59.5			
	132 12.5	59 14.9	03.3	72 52.2	49.1		48 54.8	51.8		352 10.4	36.0		Gienah	176 20.2	S17 25.1			
	147 15.0	74 14.4	03.8	87 52.9	49.5		63 56.7	51.9		7 12.6	35.9		Hadar	149 26.2	S60 16.1			
	162 17.5	89 14.0	04.2	102 53.6	49.9		78 58.6	51.9		22 14.7	35.9		Hamal	328 31.3	N23 21.3			
	177 19.9	104 13.5	04.6	117 54.2	50.3		94 00.5	51.9		37 16.9	35.8		Kaus Aust.	84 19.3	S34 23.7			
	192 22.4	119 13.1	05.0	132 54.9	50.7		109 02.3	52.0		52 19.0	35.7							
	207 24.8	134 12.7	N20 05.4	147 55.6	N19 51.1		124 04.2	N22 52.0		67 21.2	N16 35.6		Kochab	137 18.7	N74 15.2			
	222 27.3	149 12.2	05.8	162 56.2	51.4		139 06.1	52.0		82 23.4	35.5		Markab	14 05.0	N15 05.1			
	237 29.8	164 11.8	06.2	177 56.9	51.8		154 08.0	52.0		97 25.5	35.4		Menkar	314 43.5	N 4 00.1			
	252 32.2	179 11.3	06.7	192 57.6	52.2		169 09.9	52.1		112 27.7	35.3		Menkent	148 39.4	S36 15.7			
	267 34.7	194 10.9	07.1	207 58.2	52.6		184 11.8	52.1		127 29.8	35.2		Miaplacidus	221 46.1	S69 37.7			
282 37.2	209 10.4	07.5	222 58.9	53.0		199 13.7	52.1		142 32.0	35.1								
20 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	297 39.6	224 10.0	N20 07.9	237 59.5	N19 53.3		214 15.6	N22 52.1		157 34.1	N16 35.0		Mirfak	309 19.3	N49 46.7			
	312 42.1	239 09.6	08.3	253 00.2	53.7		229 17.5	52.2		172 36.3	34.9		Nunki	76 31.4	S26 19.4			
	327 44.6	254 09.1	08.7	268 00.9	54.1		244 19.4	52.2		187 38.5	34.8		Pelluc	54 01.2	S56 48.3			
	342 47.0	269 08.7	09.1	283 01.5	54.5		259 21.3	52.2		202 40.6	34.8		Pollux	244 01.1	N28 04.8			
	357 49.5	284 08.2	09.5	298 02.2	54.9		274 23.2	52.2		217 42.8	34.7		Procyon	245 28.3	N 5 16.9			
	12 52.0	299 07.8	09.9	313 02.9	55.2		289 25.0	52.3		232 44.9	34.6							
	27 54.4	314 07.3	N20 10.3	328 03.5	N19 55.6		304 26.9	N22 52.3		247 47.1	N16 34.5		Rasalhague	96 31.3	N12 34.8			
	42 56.9	329 06.9	10.7	343 04.2	56.0		319 28.8	52.3		262 49.2	34.4		Regulus	208 12.5	N12 04.6			
	57 59.3	344 06.4	11.1	358 04.9	56.4		334 30.7	52.3		277 51.4	34.3		Rigel	281 38.3	S 8 13.6			
	73 01.8	359 06.0	11.5	13 05.5	56.7		349 32.6	52.4		292 53.6	34.2		Rigil Kent.	140 28.4	S60 44.7			
	88 04.3	14 05.5	11.9	28 06.2	57.1		4 34.5	52.4		307 55.7	34.1		Sabik	102 43.3	S15 41.8			
	103 06.7	29 05.1	12.3	43 06.8	57.5		19 36.4	52.4		322 57.9	34.0							
	118 09.2	44 04.6	N20 12.7	58 07.5	N19 57.9		34 38.3	N22 52.5		338 00.0	N16 33.9		Schedar	350 11.2	N56 24.7			
	133 11.7	59 04.2	13.1	73 08.2	58.2		49 40.2	52.5		353 02.2	33.8		Shaula	96 58.3	S37 05.2			
	148 14.1	74 03.7	13.5	88 08.8	58.6		64 42.1	52.5		8 04.4	33.7		Sirius	258 57.9	S16 41.2			
	163 16.6	89 03.3	13.9	103 09.5	59.0		79 44.0	52.5		23 06.5	33.6		Spica	158 59.8	S11 02.7			
	178 19.1	104 02.8	14.3	118 10.2	59.4		94 45.9	52.6		38 08.7	33.6		Suhail	223 12.7	S43 20.7			
	193 21.5	119 02.4	14.7	133 10.8	19 59.7		109 47.8	52.6		53 10.8	33.5							
	208 24.0	134 01.9	N20 15.1	148 11.5	N20 00.1		124 49.7	N22 52.6		68 13.0	N16 33.4		Vega	80 56.8				

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.		Dec.		A.H.G.		v Dec.			P. H.	Náut.		Civil	18	19	20	21			
	h	m	°	'	°	'	°	'												
LUNES	18 00	178	28.1	N21	05.0	160	25.8	12.3	N12	14.6	7.8	55.6	N 72	□	□	□	04 53	06 38	08 23	10 08
	01	193	28.1		04.6	174	57.1	12.4	12	06.8	7.9	55.6	N 70	□	□	□	05 13	06 50	08 28	10 07
	02	208	28.0		04.2	189	28.5	12.3	11	58.9	7.9	55.7	68	////	////	00 43	05 29	07 00	08 32	10 05
	03	223	28.0	..	03.7	203	59.8	12.4	11	51.0	8.0	55.7	66	////	////	01 52	05 42	07 08	08 35	10 04
	04	238	27.9		03.3	218	31.2	12.4	11	43.0	8.1	55.7	64	////	////	02 27	05 52	07 14	08 38	10 03
	05	253	27.9		02.8	233	02.6	12.4	11	34.9	8.1	55.7	62	////	01 14	02 52	06 01	07 20	08 40	10 03
	06	268	27.8	N21	02.4	247	34.0	12.3	N11	26.8	8.1	55.7	60	////	01 57	03 11	06 09	07 25	08 43	10 02
	07	283	27.8		02.0	262	05.3	12.4	11	18.7	8.3	55.8	N 58	////	02 25	03 27	06 16	07 29	08 44	10 01
	08	298	27.7		01.5	276	36.7	12.5	11	10.4	8.3	55.8	56	01 08	02 46	03 41	06 22	07 33	08 46	10 01
	09	313	27.7	..	01.1	291	08.2	12.4	11	02.1	8.3	55.8	54	01 47	03 03	03 52	06 27	07 36	08 48	10 01
	10	328	27.6		00.7	305	39.6	12.4	10	53.8	8.4	55.8	52	02 13	03 18	04 03	06 32	07 40	08 49	10 00
	11	343	27.6	21	00.2	320	11.0	12.4	10	45.4	8.5	55.8	50	02 33	03 30	04 12	06 36	07 42	08 50	10 00
	12	358	27.5	N20	59.8	334	42.4	12.5	N10	36.9	8.5	55.9	45	03 10	03 56	04 31	06 46	07 49	08 53	09 59
	13	13	27.5		59.3	349	13.9	12.4	10	28.4	8.6	55.9	N 40	03 36	04 15	04 47	06 53	07 54	08 55	09 58
	14	28	27.5		58.9	3	45.3	12.5	10	19.8	8.6	55.9	35	03 56	04 31	05 00	07 00	07 58	08 57	09 58
	15	43	27.4	..	58.4	18	16.8	12.5	10	11.2	8.7	55.9	30	04 12	04 44	05 11	07 06	08 02	08 59	09 57
	16	58	27.4		58.0	32	48.3	12.5	10	02.5	8.7	55.9	20	04 38	05 06	05 30	07 16	08 09	09 02	09 56
	17	73	27.3		57.6	47	19.8	12.4	9	53.8	8.8	56.0	N 10	04 58	05 25	05 47	07 25	08 15	09 05	09 56
	18	88	27.3	N20	57.1	61	51.2	12.5	N 9	45.0	8.9	56.0	0	05 15	05 41	06 03	07 33	08 20	09 07	09 55
	19	103	27.2		56.7	76	22.7	12.5	9	36.1	8.9	56.0	S 10	05 30	05 56	06 18	07 41	08 26	09 10	09 54
	20	118	27.2		56.2	90	54.2	12.5	9	27.2	8.9	56.0	20	05 44	06 11	06 34	07 50	08 32	09 13	09 54
	21	133	27.1	..	55.8	105	25.7	12.5	9	18.3	9.0	56.0	30	05 58	06 27	06 53	08 00	08 38	09 16	09 53
	22	148	27.1		55.3	119	57.2	12.6	9	09.3	9.0	56.1	35	06 05	06 36	07 04	08 06	08 42	09 17	09 52
	23	163	27.0		54.9	134	28.8	12.5	9	00.3	9.1	56.1	40	06 13	06 46	07 16	08 13	08 47	09 19	09 52
19 00	178	27.0	N20	54.4	149	00.3	12.5	N 8	51.2	9.2	56.1	45	06 21	06 58	07 30	08 20	08 52	09 22	09 51	
01	193	26.9		54.0	163	31.8	12.5	8	42.0	9.2	56.1	S 50	06 31	07 11	07 48	08 29	08 58	09 24	09 51	
02	208	26.9		53.5	178	03.3	12.6	8	32.8	9.2	56.1	52	06 35	07 17	07 56	08 34	09 00	09 26	09 51	
03	223	26.9	..	53.1	192	34.9	12.5	8	23.6	9.3	56.2	54	06 40	07 24	08 06	08 38	09 03	09 27	09 50	
04	238	26.8		52.6	207	06.4	12.5	8	14.3	9.3	56.2	56	06 45	07 32	08 16	08 43	09 07	09 29	09 50	
05	253	26.8		52.2	221	37.9	12.6	8	05.0	9.4	56.2	58	06 50	07 40	08 28	08 49	09 10	09 30	09 50	
06	268	26.7	N20	51.7	236	09.5	12.5	N 7	55.6	9.4	56.2	S 60	06 56	07 50	08 42	08 55	09 15	09 32	09 49	
07	283	26.7		51.3	250	41.0	12.6	7	46.2	9.4	56.2	Lat.	Ocaso Sol		Crepúsculo Civil		Ocaso Luna			
08	298	26.6		50.8	265	12.6	12.5	7	36.8	9.5	56.3	N 72	□	□	□	21 57	21 51	21 45	21 39	
09	313	26.6	..	50.4	279	44.1	12.6	7	27.3	9.6	56.3	N 70	□	□	□	21 44	21 44	21 43	21 43	
10	328	26.6		49.9	294	15.7	12.5	7	17.7	9.6	56.3	68	23 18	////	////	21 33	21 38	21 42	21 46	
11	343	26.5		49.5	308	47.2	12.6	7	08.1	9.6	56.3	66	22 17	////	////	21 24	21 33	21 41	21 49	
12	358	26.5	N20	49.0	323	18.8	12.5	N 6	58.5	9.6	56.4	64	22 17	////	////	21 16	21 29	21 40	21 52	
13	13	26.4		48.5	337	50.3	12.6	6	48.9	9.8	56.4	62	21 19	22 53	////	21 09	21 25	21 39	21 54	
14	28	26.4		48.1	352	21.9	12.5	6	39.1	9.7	56.4	60	21 00	22 13	////	21 03	21 22	21 39	21 56	
15	43	26.3	..	47.6	6	53.4	12.6	6	29.4	9.8	56.4	N 58	20 44	21 45	////	20 58	21 19	21 38	21 57	
16	58	26.3		47.2	21	25.0	12.5	6	19.6	9.8	56.4	56	20 31	21 25	23 00	20 54	21 16	21 37	21 59	
17	73	26.3		46.7	35	56.5	12.6	6	09.8	9.8	56.5	54	20 19	21 08	22 23	20 49	21 14	21 37	22 00	
18	88	26.2	N20	46.3	50	28.1	12.5	N 6	00.0	9.9	56.5	52	20 09	20 53	21 57	20 46	21 12	21 36	22 01	
19	103	26.2		45.8	64	59.6	12.5	5	50.1	9.9	56.5	50	20 00	20 41	21 38	20 42	21 10	21 36	22 03	
20	118	26.1		45.3	79	31.1	12.6	5	40.2	10.0	56.5	45	19 41	20 16	21 02	20 35	21 05	21 35	22 05	
21	133	26.1	..	44.9	94	02.7	12.5	5	30.2	10.0	56.5	N 40	19 25	19 57	20 36	20 29	21 02	21 34	22 07	
22	148	26.1		44.4	108	34.2	12.5	5	20.2	10.0	56.6	35	19 12	19 41	20 16	20 23	20 59	21 34	22 09	
23	163	26.0		44.0	123	05.7	12.5	5	10.2	10.1	56.6	30	19 01	19 28	20 00	20 18	20 56	21 33	22 11	
20 00	178	26.0	N20	43.5	137	37.2	12.5	N 5	00.1	10.1	56.6	20	18 42	19 06	19 34	20 10	20 51	21 32	22 13	
01	193	25.9		43.0	152	08.7	12.5	4	50.0	10.1	56.6	N 10	18 25	18 48	19 14	20 03	20 47	21 31	22 16	
02	208	25.9		42.6	166	40.2	12.5	4	39.9	10.1	56.7	0	18 10	18 32	18 58	19 56	20 43	21 30	22 18	
03	223	25.9	..	42.1	181	11.7	12.5	4	29.8	10.2	56.7	S 10	17 55	18 17	18 43	19 49	20 39	21 29	22 20	
04	238	25.8		41.6	195	43.2	12.5	4	19.6	10.2	56.7	20	17 38	18 02	18 29	19 41	20 34	21 28	22 23	
05	253	25.8		41.2	210	14.7	12.5	4	09.4	10.2	56.7	30	17 20	17 46	18 15	19 33	20 29	21 27	22 25	
06	268	25.8	N20	40.7	224	46.2	12.5	N 3	59.2	10.3	56.7	35	17 09	17 37	18 08	19 28	20 26	21 26	22 27	
07	283	25.7		40.2	239	17.7	12.4	3	48.9	10.2	56.8	40	16 57	17 27	18 00	19 22	20 23	21 25	22 29	
08	298	25.7		39.8	253	49.1	12.5	3	38.7	10.4	56.8	45	16 42	17 15	17 51	19 16	20 19	21 24	22 31	
09	313	25.6	..	39.3	268	20.6	12.4	3	28.3	10.3	56.8	S 50	16 25	17 02	17 42	19 08	20 15	21 23	22 33	
10	328	25.6		38.8	282	52.0	12.4	3	18.0	10.3	56.8	52	16 17	16 55	17 38	19 04	20 13	21 23	22 34	
11	343	25.6		38.4	297	23.4	12.4	3	07.7	10.4	56.9	54	16 07	16 49	17 33	19 00	20 10	21 22	22 36	
12	358	25.5	N20	37.9	311	54.8	12.4													

T. M. G.	ARIES		VENUS -3.6		MARTE +1.2		JUPITER -1.6		SATURNO +0.6		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
21 J U E V E S	00	298 38.8	223 59.2 N20	17.5	238 15.5 N20	02.3	215 01.0 N22	52.8	158 25.9 N16	32.8	Acamar	315 39.0 S40	23.5	
	01	313 41.2	238 58.7	17.9	253 16.1	02.7	230 02.9	52.8	173 28.1	32.7	Achernar	335 46.9 S57	20.7	
	02	328 43.7	253 58.3	18.3	268 16.8	03.1	245 04.8	52.8	188 30.2	32.6	Acruz	173 39.7 S62	58.8	
	03	343 46.2	268 57.8	18.7	283 17.5	03.5	260 06.7	52.8	203 32.4	32.5	Adhara	255 34.1 S28	56.5	
	04	358 48.6	283 57.3	19.0	298 18.1	03.8	275 08.6	52.9	218 34.6	32.4	Aldebaran	291 20.6 N16	27.8	
	05	13 51.1	298 56.9	19.4	313 18.8	04.2	290 10.5	52.9	233 36.7	32.4				
	06	28 53.6	313 56.4 N20	19.8	328 19.5 N20	04.6	305 12.4 N22	52.9	248 38.9 N16	32.3	Alioth	166 44.6 N56	05.2	
	07	43 56.0	328 55.9	20.2	343 20.1	04.9	320 14.3	52.9	263 41.0	32.2	Alkaid	153 20.2 N49	25.8	
	08	58 58.5	343 55.5	20.6	358 20.8	05.3	335 16.2	53.0	278 43.2	32.1	Al Na'ir	28 17.2 S47	03.9	
	09	74 00.9	358 55.0	21.0	13 21.5	05.7	350 18.1	53.0	293 45.3	32.0	Alnilam	276 14.1 S 1	13.0	
	10	89 03.4	13 54.6	21.4	28 22.1	06.0	5 20.0	53.0	308 47.5	31.9	Alphard	218 22.9 S 8	33.7	
	11	104 05.9	28 54.1	21.7	43 22.8	06.4	20 21.9	53.0	323 49.7	31.8				
	12	119 08.3	43 53.6 N20	22.1	58 23.4 N20	06.8	35 23.8 N22	53.1	338 51.8 N16	31.7	Alphecca	126 33.8 N26	47.7	
	13	134 10.8	58 53.2	22.5	73 24.1	07.1	50 25.6	53.1	353 54.0	31.6	Alpheratz	358 11.3 N28	57.9	
	14	149 13.3	73 52.7	22.9	88 24.8	07.5	65 27.5	53.1	8 56.1	31.5	Altair	62 34.2 N 8	48.7	
	15	164 15.7	88 52.2	23.3	103 25.4	07.9	80 29.4	53.1	23 58.3	31.4	Ankaa	353 42.2 S42	25.4	
	16	179 18.2	103 51.8	23.6	118 26.1	08.2	95 31.3	53.2	39 00.4	31.3	Antares	112 59.2 S26	22.9	
	17	194 20.7	118 51.3	24.0	133 26.8	08.6	110 33.2	53.2	54 02.6	31.2				
	18	209 23.1	133 50.8 N20	24.4	148 27.4 N20	09.0	125 35.1 N22	53.2	69 04.8 N16	31.1	Arcturus	146 20.4 N19	18.1	
	19	224 25.6	148 50.4	24.8	163 28.1	09.3	140 37.0	53.2	84 06.9	31.1	Atria	108 24.9 S68	59.4	
	20	239 28.1	163 49.9	25.2	178 28.8	09.7	155 38.9	53.3	99 09.1	31.0	Avior	234 29.6 S59	26.4	
	21	254 30.5	178 49.4	25.5	193 29.4	10.1	170 40.8	53.3	114 11.2	30.9	Bellatrix	279 01.3 N 6	19.7	
	22	269 33.0	193 49.0	25.9	208 30.1	10.4	185 42.7	53.3	129 13.4	30.8	Betelgeuse	271 30.9 N 7	24.1	
23	284 35.4	208 48.5	26.3	223 30.8	10.8	200 44.6	53.3	144 15.5	30.7					
22 V I E R N E S	00	299 37.9	223 48.0 N20	26.7	238 31.4 N20	11.2	215 46.5 N22	53.4	159 17.7 N16	30.6	Canopus	264 08.6 S52	41.0	
	01	314 40.4	238 47.6	27.0	253 32.1	11.5	230 48.4	53.4	174 19.8	30.5	Capella	281 14.8 N45	58.4	
	02	329 42.8	253 47.1	27.4	268 32.8	11.9	245 50.3	53.4	189 22.0	30.4	Deneb	49 49.4 N45	12.1	
	03	344 45.3	268 46.6	27.8	283 33.4	12.3	260 52.2	53.4	204 24.2	30.3	Denebola	183 01.4 N14	41.9	
	04	359 47.8	283 46.1	28.1	298 34.1	12.6	275 54.1	53.5	219 26.3	30.2	Diphda	349 22.9 S18	06.4	
	05	14 50.2	298 45.7	28.5	313 34.7	13.0	290 56.0	53.5	234 28.5	30.1				
	06	29 52.7	313 45.2 N20	28.9	328 35.4 N20	13.3	305 57.9 N22	53.5	249 30.6 N16	30.0	Dubhe	194 25.3 N61	52.5	
	07	44 55.2	328 44.7	29.2	343 36.1	13.7	320 59.8	53.5	264 32.8	29.9	Elnath	278 47.1 N28	35.2	
	08	59 57.6	343 44.2	29.6	358 36.7	14.1	336 01.7	53.6	279 34.9	29.8	Eltanin	90 58.2 N51	29.8	
	09	75 00.1	358 43.8	30.0	13 37.4	14.4	351 03.6	53.6	294 37.1	29.8	Enif	34 13.3 N 9	46.5	
	10	90 02.6	13 43.3	30.3	28 38.1	14.8	6 05.5	53.6	309 39.3	29.7	Fomalhaut	15 53.5 S29	44.2	
	11	105 05.0	28 42.8	30.7	43 38.7	15.1	21 07.4	53.6	324 41.4	29.6				
	12	120 07.5	43 42.3 N20	31.1	58 39.4 N20	15.5	36 09.3 N22	53.7	339 43.6 N16	29.5	Gacrux	172 31.2 S56	59.5	
	13	135 09.9	58 41.9	31.4	73 40.1	15.9	51 11.2	53.7	354 45.7	29.4	Gienah	176 20.3 S17	25.1	
	14	150 12.4	73 41.4	31.8	88 40.7	16.2	66 13.1	53.7	9 47.9	29.3	Hadar	149 26.2 S60	16.1	
	15	165 14.9	88 40.9	32.2	103 41.4	16.6	81 15.0	53.7	24 50.0	29.2	Hamal	328 31.3 N23	21.3	
	16	180 17.3	103 40.4	32.5	118 42.1	16.9	96 16.9	53.7	39 52.2	29.1	Kaus Aust.	84 19.3 S34	23.7	
	17	195 19.8	118 40.0	32.9	133 42.7	17.3	111 18.8	53.8	54 54.3	29.0				
	18	210 22.3	133 39.5 N20	33.2	148 43.4 N20	17.7	126 20.7 N22	53.8	69 56.5 N16	28.9	Kochab	137 18.8 N74	15.2	
	19	225 24.7	148 39.0	33.6	163 44.1	18.0	141 22.6	53.8	84 58.7	28.8	Markab	14 05.0 N15	05.1	
	20	240 27.2	163 38.5	34.0	178 44.7	18.4	156 24.5	53.8	100 00.8	28.7	Menkar	314 43.4 N 4	00.1	
	21	255 29.7	178 38.0	34.3	193 45.4	18.7	171 26.4	53.9	115 03.0	28.6	Menkent	148 39.4 S36	15.7	
	22	270 32.1	193 37.6	34.7	208 46.0	19.1	186 28.3	53.9	130 05.1	28.5	Miaplacidus	221 46.2 S69	37.7	
23	285 34.6	208 37.1	35.0	223 46.7	19.4	201 30.2	53.9	145 07.3	28.5					
23 S A B A D O	00	300 37.0	223 36.6 N20	35.4	238 47.4 N20	19.8	216 32.1 N22	53.9	160 09.4 N16	28.4	Mirfak	309 19.3 N49	46.7	
	01	315 39.5	238 36.1	35.7	253 48.0	20.1	231 34.0	54.0	175 11.6	28.3	Nunki	76 31.4 S26	19.4	
	02	330 42.0	253 35.6	36.1	268 48.7	20.5	246 35.9	54.0	190 13.7	28.2	Peacock	54 01.2 S56	48.3	
	03	345 44.4	268 35.1	36.4	283 49.4	20.9	261 37.8	54.0	205 15.9	28.1	Pollux	244 01.1 N28	04.8	
	04	0 46.9	283 34.7	36.8	298 50.0	21.2	276 39.7	54.0	220 18.1	28.0	Procyon	245 28.3 N 5	16.9	
	05	15 49.4	298 34.2	37.1	313 50.7	21.6	291 41.6	54.1	235 20.2	27.9				
	06	30 51.8	313 33.7 N20	37.5	328 51.4 N20	21.9	306 43.5 N22	54.1	250 22.4 N16	27.8	Rasalhague	96 31.3 N12	34.8	
	07	45 54.3	328 33.2	37.8	343 52.0	22.3	321 45.4	54.1	265 24.5	27.7	Regulus	208 12.5 N12	04.6	
	08	60 56.8	343 32.7	38.2	358 52.7	22.6	336 47.3	54.1	280 26.7	27.6	Rigel	281 38.3 S 8	13.6	
	09	75 59.2	358 32.2	38.5	13 53.4	23.0	351 49.2	54.1	295 28.8	27.5	Rigel Kent.	140 28.4 S60	44.7	
	10	91 01.7	13 31.7	38.9	28 54.0	23.3	6 51.1	54.2	310 31.0	27.4	Sabik	102 43.3 S15	41.8	
	11	106 04.2	28 31.2	39.2	43 54.7	23.7	21 53.0	54.2	325 33.1	27.3				
	12	121 06.6	43 30.8 N20	39.6	58 55.4 N20	24.0	36 54.9 N22	54.2	340 35.3 N16	27.2	Schedar	350 11.1 N56	24.7	
	13	136 09.1	58 30.3	39.9	73 56.0	24.4	51 56.8	54.2	355 37.5	27.1	Shaula	96 58.3 S37	05.2	
	14	151 11.5	73 29.8	40.3	88 56.7	24.7	66 58.7	54.3	10 39.6	27.1	Sirius	258 57.9 S16	41.2	
	15	166 14.0	88 29.3	40.6	103 57.4	25.1	82 00.6	54.3	25 41.8	27.0	Spica	158 59.8 S11	02.7	
	16	181 16.5	103 28.8	40.9	118 58.0	25.4	97 02.5	54.3	40 43.9	26.9	Suhail	223 12.7 S43	20.6	
	17	196 18.9	118 28.3	41.3	133 58.7	25.8	112 04.4	54.3	55 46.1	26.8				
	18	211 21.4	133 27.8 N20	41.6	148 59.4 N20	26.1	127 06.3 N22	54.4	70 48.2 N16	26.7	Vega	80 56.8 N38	46.0	
	19	226 23.9	148 27.3	42.0	164 00.0	26.5	142 08.2	54.4	85 50.4	26.6	Zuben'ubi	137 35.3 S15	56.9	
	20	241 26.3	163 26.8	42.3	179 00.7	26.8	157 10.1	54.4	100 52.5	26.5				
	21	256 28.8	178 26.3	42.6	194 01.4	27.2	172 12.0	54.4	115 54.7	26.4				
	22	271 31.3	193 25.8	43.0	209 02.0	27.5	187 13.9	54.4	130 56.9	26.3				
23	286 33.7	208 25.4	43.3	224 02.7	27.9	202 15.8	54.5	145 59.0	26.2					
Pas. Mer. 4 00.8		v -0.5 d 0.4		v 0.7 d 0.4		v 1.9 d 0.0		v 2.2 d 0.1						
										A. H. S.		Pas. Mer.		
										o / h m		o / h m		
										Venus		284 10.1 9 05		
										Marte		298 53.5 8 06		
										Júpiter		276 08.6 9 36		
										Saturno		219 39.8 13 21		

T. M. G.	ARIES		VENUS -3.6		MARTE +1.2		JUPITER -1.6		SATURNO +0.6		ESTRELLAS												
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.									
DOMINGO	24 00	301 36.2	223 24.9	N20 43.6	239 03.3	N20 28.2	217 17.7	N22 54.5	161 01.2	N16 26.1		Acamar	315 39.0	S40 23.5									
	01	316 38.7	238 24.4	44.0	254 04.0	28.6	232 19.6	54.5	176 03.3	26.0		Achernar	335 46.9	S57 20.7									
	02	331 41.1	253 23.9	44.3	269 04.7	28.9	247 21.5	54.5	191 05.5	25.9		Acrux	173 39.7	S62 58.8									
	03	346 43.6	268 23.4	44.7	284 05.3	29.3	262 23.4	54.6	206 07.6	25.8		Adhara	255 34.1	S28 56.5									
	04	1 46.0	283 22.9	45.0	299 06.0	29.6	277 25.3	54.6	221 09.8	25.7		Aldebaran	291 20.6	N16 27.8									
	05	16 48.5	298 22.4	45.3	314 06.7	30.0	292 27.2	54.6	236 11.9	25.6													
	06	31 51.0	313 21.9	N20 45.6	329 07.3	N20 30.3	307 29.1	N22 54.6	251 14.1	N16 25.6		Alioth	166 44.6	N56 05.2									
	07	46 53.4	328 21.4	46.0	344 08.0	30.7	322 31.0	54.6	266 16.2	25.5		Alkaid	153 20.3	N49 25.8									
	08	61 55.9	343 20.9	46.3	359 08.7	31.0	337 32.9	54.7	281 18.4	25.4		Al Na'ir	28 17.2	S47 03.9									
	09	76 58.4	358 20.4	46.6	14 09.3	31.3	352 34.8	54.7	296 20.6	25.3		Alnilam	276 14.1	S 1 13.0									
	10	92 00.8	13 19.9	47.0	29 10.0	31.7	7 36.7	54.7	311 22.7	25.2		Alphard	218 22.9	S 8 33.7									
	11	107 03.3	28 19.4	47.3	44 10.7	32.0	22 38.6	54.7	326 24.9	25.1													
	12	122 05.8	43 18.9	N20 47.6	59 11.3	N20 32.4	37 40.5	N22 54.8	341 27.0	N16 25.0		Alphecca	126 33.8	N26 47.7									
	13	137 08.2	58 18.4	47.9	74 12.0	32.7	52 42.4	54.8	356 29.2	24.9		Alpheratz	358 11.3	N28 58.0									
	14	152 10.7	73 17.9	48.3	89 12.7	33.1	67 44.3	54.8	11 31.3	24.8		Altair	62 34.2	N 8 48.7									
	15	167 13.1	88 17.4	48.6	104 13.3	33.4	82 46.2	54.8	26 33.5	24.7		Ankaa	353 42.2	S42 25.4									
	16	182 15.6	103 16.9	48.9	119 14.0	33.7	97 48.1	54.8	41 35.6	24.6		Antares	112 59.2	S26 22.9									
	17	197 18.1	118 16.4	49.2	134 14.7	34.1	112 50.0	54.9	56 37.8	24.5													
	18	212 20.5	133 15.9	N20 49.5	149 15.3	N20 34.4	127 51.9	N22 54.9	71 39.9	N16 24.4		Arcturus	146 20.4	N19 18.1									
	19	227 23.0	148 15.4	49.9	164 16.0	34.8	142 53.8	54.9	86 42.1	24.3		Atria	108 24.9	S68 59.4									
	20	242 25.5	163 14.9	50.2	179 16.7	35.1	157 55.7	54.9	101 44.3	24.2		Avior	234 29.6	S59 26.4									
	21	257 27.9	178 14.4	50.5	194 17.3	35.5	172 57.6	55.0	116 46.4	24.1		Bellatrix	279 01.3	N 6 19.7									
	22	272 30.4	193 13.9	50.8	209 18.0	35.8	187 59.5	55.0	131 48.6	24.1		Betelgeuse	271 30.8	N 7 24.1									
23	287 32.9	208 13.3	51.1	224 18.7	36.1	203 01.4	55.0	146 50.7	24.0														
LUNES	25 00	302 35.3	223 12.8	N20 51.5	239 19.3	N20 36.5	218 03.3	N22 55.0	161 52.9	N16 23.9		Canopus	264 08.6	S52 41.0									
	01	317 37.8	238 12.3	51.8	254 20.0	36.8	233 05.2	55.0	176 55.0	23.8		Capella	281 14.8	N45 58.4									
	02	332 40.3	253 11.8	52.1	269 20.7	37.2	248 07.2	55.1	191 57.2	23.7		Deneb	49 49.4	N45 12.1									
	03	347 42.7	268 11.3	52.4	284 21.3	37.5	263 09.1	55.1	206 59.3	23.6		Denebola	183 01.4	N14 41.9									
	04	2 45.2	283 10.8	52.7	299 22.0	37.8	278 11.0	55.1	222 01.5	23.5		Diphda	349 22.9	S18 06.4									
	05	17 47.6	298 10.3	53.0	314 22.7	38.2	293 12.9	55.1	237 03.6	23.4													
	06	32 50.1	313 09.8	N20 53.3	329 23.3	N20 38.5	308 14.8	N22 55.2	252 05.8	N16 23.3		Dubhe	194 25.3	N61 52.5									
	07	47 52.6	328 09.3	53.6	344 24.0	38.8	323 16.7	55.2	267 07.9	23.2		Elnath	278 47.1	N28 35.2									
	08	62 55.0	343 08.8	54.0	359 24.7	39.2	338 18.6	55.2	282 10.1	23.1		Eltanin	90 58.3	N51 29.8									
	09	77 57.5	358 08.3	54.3	14 25.3	39.5	353 20.5	55.2	297 12.3	23.0		Enif	34 13.3	N 9 46.5									
	10	93 00.0	13 07.8	54.6	29 26.0	39.9	8 22.4	55.2	312 14.4	22.9		Fomalhaut	15 53.5	S29 44.2									
	11	108 02.4	28 07.2	54.9	44 26.7	40.2	23 24.3	55.3	327 16.6	22.8													
	12	123 04.9	43 06.7	N20 55.2	59 27.3	N20 40.5	38 26.2	N22 55.3	342 18.7	N16 22.7		Gacrux	172 31.2	S56 59.5									
	13	138 07.4	58 06.2	55.5	74 28.0	40.9	53 28.1	55.3	357 20.9	22.6		Gienah	176 20.3	S17 25.1									
	14	153 09.8	73 05.7	55.8	89 28.7	41.2	68 30.0	55.3	12 23.0	22.5		Hadar	149 26.2	S60 16.1									
	15	168 12.3	88 05.2	56.1	104 29.3	41.5	83 31.9	55.3	27 25.2	22.4		Hamal	328 31.3	N23 21.3									
	16	183 14.8	103 04.7	56.4	119 30.0	41.9	98 33.8	55.4	42 27.3	22.4		Kaus Aust.	84 19.3	S34 23.7									
	17	198 17.2	118 04.2	56.7	134 30.7	42.2	113 35.7	55.4	57 29.5	22.3													
	18	213 19.7	133 03.6	N20 57.0	149 31.3	N20 42.5	128 37.6	N22 55.4	72 31.6	N16 22.2		Kochab	137 18.8	N74 15.2									
	19	228 22.1	148 03.1	57.3	164 32.0	42.9	143 39.6	55.4	87 33.8	22.1		Markab	14 05.0	N15 05.1									
	20	243 24.6	163 02.6	57.6	179 32.7	43.2	158 41.5	55.4	102 35.9	22.0		Menkar	314 43.4	N 4 00.1									
	21	258 27.1	178 02.1	57.9	194 33.3	43.5	173 43.4	55.5	117 38.1	21.9		Menkent	148 39.4	S36 15.7									
	22	273 29.5	193 01.6	58.2	209 34.0	43.9	188 45.3	55.5	132 40.3	21.8		Miaplacidus	221 46.2	S69 37.7									
23	288 32.0	208 01.1	58.5	224 34.7	44.2	203 47.2	55.5	147 42.4	21.7														
MARTES	26 00	303 34.5	223 00.5	N20 58.8	239 35.3	N20 44.5	218 49.1	N22 55.5	162 44.6	N16 21.6		Mirfak	309 19.2	N49 46.7									
	01	318 36.9	238 00.0	59.1	254 36.0	44.9	233 51.0	55.6	177 46.7	21.5		Nunki	76 31.4	S26 19.4									
	02	333 39.4	252 59.5	59.4	269 36.7	45.2	248 52.9	55.6	192 48.9	21.4		Peacock	54 01.2	S56 48.3									
	03	348 41.9	267 59.0	20 59.7	284 37.3	45.5	263 54.8	55.6	207 51.0	21.3		Pollux	244 01.1	N28 04.8									
	04	3 44.3	282 58.5	21 00.0	299 38.0	45.8	278 56.7	55.6	222 53.2	21.2		Procyon	245 28.3	N 5 16.9									
	05	18 46.8	297 58.0	00.3	314 38.7	46.2	293 58.6	55.6	237 55.3	21.1													
	06	33 49.2	312 57.4	N21 00.6	329 39.3	N20 46.5	309 00.5	N22 55.7	252 57.5	N16 21.0		Rasalhague	96 31.3	N12 34.8									
	07	48 51.7	327 56.9	00.8	344 40.0	46.8	324 02.4	55.7	267 59.6	20.9		Regulus	208 12.5	N12 04.6									
	08	63 54.2	342 56.4	01.1	359 40.7	47.2	339 04.4	55.7	283 01.8	20.8		Rigel	281 38.3	S 8 13.6									
	09	78 56.6	357 55.9	01.4	14 41.3	47.5	354 06.3	55.7	298 03.9	20.8		Rigil Kent.	140 28.5	S60 44.7									
	10	93 59.1	12 55.3	01.7	29 42.0	47.8	9 08.2	55.7	313 06.1	20.7		Sabik	102 43.3	S15 41.8									
	11	109 01.6	27 54.8	02.0	44 42.7	48.2	24 10.1	55.8	328 08.2	20.6													
	12	124 04.0	42 54.3	N21 02.3	59 43.3	N20 48.5	39 12.0	N22 55.8	343 10.4	N16 20.5		Schedar	350 11.1	N56 24.7									
	13	139 06.5	57 53.8	02.6	74 44.0	48.8	54 13.9	55.8	358 12.5	20.4		Shaula	96 58.3	S37 05.2									
	14	154 09.0	72 53.3	02.9	89 44.7	49.1	69 15.8	55.8	13 14.7	20.3		Sirius	258 57.9	S16 41.2									
	15	169 11.4	87 52.7	03.1	104 45.3	49.5	84 17.7	55.8	28 16.9	20.2		Spica	158 59.8	S11 02.7									
	16	184 13.9	102 52.2	03.4	119 46.0	49.8	99 19.6	55.9	43 19.0	20.1		Suhail	223 12.7	S43 20.6									
	17	199 16.4	117 51.7	03.7	134 46.7	50.1	114 21.5	55.9	58 21.2	20.0													
	18	214 18.8	132 51.2	N21 04.0	149 47.3	N20 50.4	129 23.4	N22 55.9	73 23.3	N16 19.9		Vega	80 56.9	N38 46.0									
	19	229 21.3	147 50.6	04.3	164 48.0	50.8	144 25.3	55.9	88 25.5	19.8		Zuben'ubi	137 35.3	S15 56.9									
	20	244 23.7	162 50.1	04.5	179 48.7	51.1	159 27.3	55.9	103 27.6	19.7													
	21	259 26.2	177 49.6	04.8	194 49.3	51.4	174 29.2	56.0	118 29.8	19.6													
	22	274 28.7	192 49.0	05.1	209 50.0	51.7	189 31.1	56.0	133 31.9	19.5		Venus	280 37.5	9 07									
23	289 31.1	207 48.5	05.4	224 50.7	52.1	204 33.0	56.0	148 34.1	19.4		Marte	296 44.0	8 02										
												A. H. S.		Pas. Mer.									
												h m		h m									
Pas. Mer. 3 49.0												v -0.5 d 0.3		v 0.7 d 0.3		v 1.9 d 0.0		v 2.2 d 0.1		Júpiter 275 28.0 9 27		Saturno 219 17.5 13 11	

T. M. G.	ARIES		VENUS -3.6		MARTE +1.2		JUPITER -1.6		SATURNO +0.6		ESTRELLAS		
	A.H.G.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	A.H.G. Dec.	Nombre	A. H. S.	Dec.		
M I E R C O L E S	27 ^d 00	304 33.6	222 48.0 N21 05.7	239 51.4 N20 52.4	219 34.9 N22 56.0	163 36.2 N16 19.3	Acamar	315 38.9	S40	23.4			
	01	319 36.1	237 47.5 05.9	254 52.0 52.7	234 36.8 56.0	178 38.4 19.2	Achernar	335 46.8	S57	20.7			
	02	334 38.5	252 46.9 06.2	269 52.7 53.0	249 38.7 56.1	193 40.5 19.1	Acrux	173 39.8	S62	58.8			
	03	349 41.0	267 46.4 06.5	284 53.4 53.4	264 40.6 56.1	208 42.7 19.0	Adhara	255 34.1	S28	56.5			
	04	4 43.5	282 45.9 06.8	299 54.0 53.7	279 42.5 56.1	223 44.8 19.0	Aldebaran	291 20.6	N16	27.8			
	05	19 45.9	297 45.3 07.0	314 54.7 54.0	294 44.5 56.1	238 47.0 18.9							
	06	34 48.4	312 44.8 N21 07.3	329 55.4 N20 54.3	309 46.4 N22 56.1	253 49.1 N16 18.8	Alioth	166 44.6	N56	05.2			
	07	49 50.9	327 44.3 07.6	344 56.0 54.6	324 48.3 56.2	268 51.3 18.7	Alkaid	153 20.3	N49	25.8			
	08	64 53.3	342 43.7 07.8	359 56.7 55.0	339 50.2 56.2	283 53.5 18.6	Al Na'ir	28 17.2	S47	03.9			
	09	79 55.8	357 43.2 08.1	14 57.4 55.3	354 52.1 56.2	298 55.6 18.5	Alnilam	276 14.0	S 1	13.0			
	10	94 58.2	12 42.7 08.4	29 58.0 55.6	9 54.0 56.2	313 57.8 18.4	Alphard	218 22.9	S 8	33.7			
	11	110 00.7	27 42.1 08.6	44 58.7 55.9	24 55.9 56.2	328 59.9 18.3							
	12	125 03.2	42 41.6 N21 08.9	59 59.4 N20 56.2	39 57.8 N22 56.3	344 02.1 N16 18.2	Alphecca	126 33.8	N26	47.7			
	13	140 05.6	57 41.1 09.2	75 00.0 56.6	54 59.7 56.3	359 04.2 18.1	Alpheratz	358 11.3	N28	58.0			
	14	155 08.1	72 40.5 09.4	90 00.7 56.9	70 01.7 56.3	14 06.4 18.0	Altair	62 34.2	N 8	48.7			
	15	170 10.6	87 40.0 09.7	105 01.4 57.2	85 03.6 56.3	29 08.5 17.9	Ankaa	353 42.2	S42	25.4			
	16	185 13.0	102 39.5 10.0	120 02.0 57.5	100 05.5 56.3	44 10.7 17.8	Antares	112 59.2	S26	22.9			
	17	200 15.5	117 38.9 10.2	135 02.7 57.8	115 07.4 56.4	59 12.8 17.7							
	18	215 18.0	132 38.4 N21 10.5	150 03.4 N20 58.2	130 09.3 N22 56.4	74 15.0 N16 17.6	Arcturus	146 20.4	N19	18.1			
	19	230 20.4	147 37.9 10.7	165 04.0 58.5	145 11.2 56.4	89 17.1 17.5	Atria	108 24.9	S68	59.4			
	20	245 22.9	162 37.3 11.0	180 04.7 58.8	160 13.1 56.4	104 19.3 17.4	Avior	234 29.6	S59	26.3			
	21	260 25.4	177 36.8 11.3	195 05.4 59.1	175 15.0 56.4	119 21.4 17.3	Bellatrix	279 01.2	N 6	19.7			
	22	275 27.8	192 36.2 11.5	210 06.1 59.4	190 17.0 56.4	134 23.6 17.2	Betelgeuse	271 30.8	N 7	24.1			
23	290 30.3	207 35.7 11.8	225 06.7 20 59.7	205 18.9 56.5	149 25.7 17.1								
J U E V E S	28 ^d 00	305 32.7	222 35.2 N21 12.0	240 07.4 N21 00.1	220 20.8 N22 56.5	164 27.9 N16 17.1	Canopus	264 08.6	S52	41.0			
	01	320 35.2	237 34.6 12.3	255 08.1 00.4	235 22.7 56.5	179 30.0 17.0	Capella	281 14.7	N45	58.4			
	02	335 37.7	252 34.1 12.5	270 08.7 00.7	250 24.6 56.5	194 32.2 16.9	Deneb	49 49.4	N45	12.2			
	03	350 40.1	267 33.5 12.8	285 09.4 01.0	265 26.5 56.5	209 34.3 16.8	Denebola	183 01.4	N14	41.9			
	04	5 42.6	282 33.0 13.0	300 10.1 01.3	280 28.4 56.6	224 36.5 16.7	Diphda	349 22.9	S18	06.4			
	05	20 45.1	297 32.5 13.3	315 10.7 01.6	295 30.3 56.6	239 38.6 16.6							
	06	35 47.5	312 31.9 N21 13.5	330 11.4 N21 01.9	310 32.3 N22 56.6	254 40.8 N16 16.5	Dubhe	194 25.3	N61	52.5			
	07	50 50.0	327 31.4 13.8	345 12.1 02.3	325 34.2 56.6	269 43.0 16.4	Elnath	278 47.1	N28	35.2			
	08	65 52.5	342 30.8 14.0	0 12.7 02.6	340 36.1 56.6	284 45.1 16.3	Eltanin	90 58.3	N51	29.8			
	09	80 54.9	357 30.3 14.3	15 13.4 02.9	355 38.0 56.7	299 47.3 16.2	Enif	34 13.3	N 9	46.5			
	10	95 57.4	12 29.7 14.5	30 14.1 03.2	10 39.9 56.7	314 49.4 16.1	Fomalhaut	15 53.5	S29	44.2			
	11	110 59.8	27 29.2 14.8	45 14.7 03.5	25 41.8 56.7	329 51.6 16.0							
	12	126 02.3	42 28.7 N21 15.0	60 15.4 N21 03.8	40 43.7 N22 56.7	344 53.7 N16 15.9	Gacrux	172 31.2	S56	59.5			
13	141 04.8	57 28.1 15.3	75 16.1 04.1	55 45.7 56.7	359 55.9 15.8	Gienah	176 20.3	S17	25.1				
14	156 07.2	72 27.6 15.5	90 16.8 04.4	70 47.6 56.7	14 58.0 15.7	Hadar	149 26.2	S60	16.1				
15	171 09.7	87 27.0 15.7	105 17.4 04.7	85 49.5 56.8	30 00.2 15.6	Hamal	328 31.2	N23	21.3				
16	186 12.2	102 26.5 16.0	120 18.1 05.1	100 51.4 56.8	45 02.3 15.5	Kaus Aust.	84 19.3	S34	23.7				
17	201 14.6	117 25.9 16.2	135 18.8 05.4	115 53.3 56.8	60 04.5 15.4								
18	216 17.1	132 25.4 N21 16.5	150 19.4 N21 05.7	130 55.2 N22 56.8	75 06.6 N16 15.3	Kochab	137 18.9	N74	15.2				
19	231 19.6	147 24.8 16.7	165 20.1 06.0	145 57.2 56.8	90 08.8 15.2	Markab	14 05.0	N15	05.2				
20	246 22.0	162 24.3 16.9	180 20.8 06.3	160 59.1 56.9	105 10.9 15.1	Menkar	314 43.4	N 4	00.1				
21	261 24.5	177 23.7 17.2	195 21.4 06.6	176 01.0 56.9	120 13.1 15.1	Menkent	148 39.5	S36	15.7				
22	276 27.0	192 23.2 17.4	210 22.1 06.9	191 02.9 56.9	135 15.2 15.0	Miaplacidus	221 46.2	S69	37.7				
23	291 29.4	207 22.6 17.7	225 22.8 07.2	206 04.8 56.9	150 17.4 14.9								
V I E R N E S	29 ^d 00	306 31.9	222 22.1 N21 17.9	240 23.4 N21 07.5	221 06.7 N22 56.9	165 19.5 N16 14.8	Mirfak	309 19.2	N49	46.7			
	01	321 34.3	237 21.5 18.1	255 24.1 07.8	236 08.6 57.0	180 21.7 14.7	Nunki	76 31.4	S26	19.4			
	02	336 36.8	252 21.0 18.4	270 24.8 08.1	251 10.6 57.0	195 23.8 14.6	Peacock	54 01.1	S56	48.3			
	03	351 39.3	267 20.4 18.6	285 25.5 08.4	266 12.5 57.0	210 26.0 14.5	Pollux	244 01.1	N28	04.8			
	04	6 41.7	282 19.9 18.8	300 26.1 08.8	281 14.4 57.0	225 28.1 14.4	Procyon	245 28.3	N 5	16.9			
	05	21 44.2	297 19.3 19.1	315 26.8 09.1	296 16.3 57.0	240 30.3 14.3							
	06	36 46.7	312 18.8 N21 19.3	330 27.5 N21 09.4	311 18.2 N22 57.0	255 32.4 N16 14.2	Rasalhague	96 31.3	N12	34.8			
	07	51 49.1	327 18.2 19.5	345 28.1 09.7	326 20.1 57.1	270 34.6 14.1	Regulus	208 12.5	N12	04.6			
	08	66 51.6	342 17.7 19.7	0 28.8 10.0	341 22.1 57.1	285 36.7 14.0	Rigel	281 38.3	S 8	13.6			
	09	81 54.1	357 17.1 20.0	15 29.5 10.3	356 24.0 57.1	300 38.9 13.9	Rigel Kent.	140 28.5	S60	44.7			
	10	96 56.5	12 16.6 20.2	30 30.1 10.6	11 25.9 57.1	315 41.0 13.8	Sabik	102 43.3	S15	41.7			
	11	111 59.0	27 16.0 20.4	45 30.8 10.9	26 27.8 57.1	330 43.2 13.7							
	12	127 01.4	42 15.5 N21 20.6	60 31.5 N21 11.2	41 29.7 N22 57.1	345 45.3 N16 13.6	Schedar	350 11.1	N56	24.7			
13	142 03.9	57 14.9 20.9	75 32.2 11.5	56 31.6 57.2	0 47.5 13.5	Shaula	96 58.3	S37	05.3				
14	157 06.4	72 14.3 21.1	90 32.8 11.8	71 33.6 57.2	15 49.6 13.4	Sirius	258 57.9	S16	41.1				
15	172 08.8	87 13.8 21.3	105 33.5 12.1	86 35.5 57.2	30 51.8 13.3	Spica	158 59.8	S11	02.7				
16	187 11.3	102 13.2 21.5	120 34.2 12.4	101 37.4 57.2	45 54.0 13.2	Suhail	223 12.7	S43	20.6				
17	202 13.8	117 12.7 21.7	135 34.8 12.7	116 39.3 57.2	60 56.1 13.1								
18	217 16.2	132 12.1 N21 22.0	150 35.5 N21 13.0	131 41.2 N22 57.3	75 58.3 N16 13.0	Vega	80 56.9	N38	46.0				
19	232 18.7	147 11.6 22.2	165 36.2 13.3	146 43.2 57.3	91 00.4 12.9	Zuben'ubi	137 35.3	S15	56.9				
20	247 21.2	162 11.0 22.4	180 36.8 13.6	161 45.1 57.3	106 02.6 12.9								
21	262 23.6	177 10.4 22.6	195 37.5 13.9	176 47.0 57.3	121 04.7 12.8								
22	277 26.1	192 09.9 22.8	210 38.2 14.2	191 48.9 57.3	136 06.9 12.7	Venus	277 02.4		9 10				
23	292 28.6	207 09.3 23.0	225 38.9 14.5	206 50.8 57.3	151 09.0 12.6	Marte	294 34.6		7 59				
						Júpiter	274 48.0		9 17				
						Saturno	218 55.1		13 00				

Pas. Mer. ^h 3 ^m 37.2

v -0.5 d 0.2

v 0.7 d 0.3

v 1.9 d 0.0

v 2.2 d 0.1

A. H. S. Pas. Mer. o / h m

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P. H.		Naut.	Civil		27	28	29	30		
	h m	°	h m	°	h m	h m		h m	h m	h m	h m	h m	h m	h m		
M I E R C O L E S	27 ^d 00	178 23.1	N19 17.3	48 56.2	4.8	S18 29.3	1.9	60.2	N 72	00 31	00 31	20 12	22 01	21 30	21 18	
	01	193 23.1	16.8	63 20.0	4.9	18 31.2	1.7	60.2	N 70	01 52	01 52	19 22	20 04	20 53	20 56	
	02	208 23.1	16.2	77 43.9	4.8	18 32.9	1.6	60.2	68	02 29	02 29	18 51	19 37	20 06	20 25	
	03	223 23.1	15.6	92 07.7	4.8	18 34.5	1.5	60.2	66	03 15	03 15	18 27	19 16	19 50	20 13	
	04	238 23.1	15.1	106 31.5	4.8	18 36.0	1.3	60.2	64	04 06	04 06	18 08	18 59	19 36	20 03	
	05	253 23.1	14.5	120 55.3	4.8	18 37.3	1.2	60.2	62	05 00	05 00	17 53	18 45	19 24	19 54	
	06	268 23.1	N19 14.0	135 19.1	4.7	S18 38.5	1.1	60.3	60	06 03	06 03	17 40	18 33	19 14	19 47	
	07	283 23.1	13.4	149 42.8	4.7	18 39.6	0.9	60.3	N 58	07 07	07 07	17 29	18 22	19 06	19 40	
	08	298 23.1	12.8	164 06.5	4.7	18 40.5	0.8	60.3	56	08 11	08 11	17 19	18 13	18 58	19 34	
	09	313 23.1	12.3	178 30.2	4.7	18 41.3	0.7	60.3	54	09 15	09 15	17 10	18 05	18 51	19 29	
	10	328 23.1	11.7	192 53.9	4.7	18 42.0	0.6	60.3	52	10 19	10 19	17 02	17 57	18 44	19 24	
	11	343 23.1	11.1	207 17.6	4.6	18 42.6	0.4	60.3	50	11 23	11 23	16 45	17 42	18 31	19 13	
	12	358 23.1	N19 10.6	221 41.2	4.7	S18 43.0	0.3	60.3	45	12 27	12 27	16 31	17 29	18 20	19 04	
	13	13 23.1	10.0	236 04.9	4.6	18 43.3	0.1	60.3	N 40	13 31	13 31	16 20	17 17	18 10	18 57	
	14	28 23.1	09.4	250 28.5	4.6	18 43.4	0.0	60.3	35	14 35	14 35	16 09	17 08	18 01	18 50	
	15	43 23.2	08.9	264 52.1	4.7	18 43.4	0.1	60.3	30	15 39	15 39	15 52	16 51	17 47	18 38	
	16	58 23.2	08.3	279 15.8	4.6	18 43.3	0.2	60.3	20	16 43	16 43	15 36	16 36	17 34	18 28	
	17	73 23.2	07.7	293 39.4	4.6	18 43.1	0.4	60.3	N 10	17 47	17 47	15 22	16 23	17 22	18 19	
	18	88 23.2	N19 07.2	308 03.0	4.6	S18 42.7	0.5	60.3	0	18 51	18 51	15 08	16 09	17 10	18 09	
	19	103 23.2	06.6	322 26.6	4.6	18 42.2	0.7	60.3	S 10	19 55	19 55	14 53	15 54	16 57	17 59	
	20	118 23.2	06.0	336 50.2	4.6	18 41.5	0.8	60.3	20	20 59	20 59	14 35	15 38	16 42	17 47	
	21	133 23.2	05.4	351 13.8	4.6	18 40.7	0.9	60.3	30	21 63	21 63	14 25	15 28	16 34	17 40	
	22	148 23.2	04.9	5 37.4	4.6	18 39.8	1.0	60.3	40	22 67	22 67	14 14	15 17	16 24	17 33	
23	163 23.2	04.3	20 01.0	4.6	18 38.8	1.2	60.3	35	23 71	23 71	14 00	15 04	16 13	17 24		
J U E V E S	28 ^d 00	178 23.2	N19 03.7	34 24.6	4.6	S18 37.6	1.3	60.3	S 50	06 22	07 02	13 43	14 48	15 59	17 13	
	01	193 23.2	03.1	48 48.2	4.6	18 36.3	1.5	60.3	52	07 07	07 07	13 36	14 40	15 52	17 08	
	02	208 23.3	02.6	63 11.8	4.6	18 34.8	1.6	60.3	54	07 52	07 52	13 27	14 32	15 45	17 02	
	03	223 23.3	02.0	77 35.4	4.7	18 33.2	1.7	60.3	56	08 37	08 37	13 17	14 23	15 37	16 56	
	04	238 23.3	01.4	91 59.1	4.6	18 31.5	1.8	60.3	58	09 22	09 22	13 06	14 12	15 28	16 49	
	05	253 23.3	00.8	106 22.7	4.7	18 29.7	2.0	60.3	S 60	10 07	10 07	12 53	14 00	15 17	16 41	
	06	268 23.3	N19 00.3	120 46.4	4.7	S18 27.7	2.1	60.3	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna	27	28	29	30
	07	283 23.3	18 59.7	135 10.1	4.7	18 25.6	2.2	60.3	N 72	h m	h m	h m	h m	h m	h m	h m
	08	298 23.3	59.1	149 33.8	4.7	18 23.4	2.4	60.3	N 70	23 23	23 23	23 03	24 39	00 39	02 31	
	09	313 23.3	58.5	163 57.5	4.7	18 21.0	2.5	60.3	68	22 16	22 16	23 52	25 17	01 17	02 57	
	10	328 23.4	57.9	178 21.2	4.8	18 18.5	2.6	60.3	66	21 41	21 41	24 24	00 24	01 43	03 16	
	11	343 23.4	57.4	192 45.0	4.8	18 15.9	2.8	60.3	64	21 16	22 55	24 47	00 47	02 04	03 32	
	12	358 23.4	N18 56.8	207 08.8	4.8	S18 13.1	2.9	60.3	62	20 56	22 12	00 07	01 06	02 20	03 45	
	13	13 23.4	56.2	221 32.6	4.8	18 10.2	3.0	60.3	60	20 40	21 44	00 22	01 21	02 34	03 56	
	14	28 23.4	55.6	235 56.4	4.9	18 07.2	3.1	60.3	N 58	20 27	21 23	00 35	01 34	02 46	04 05	
	15	43 23.4	55.0	250 20.3	4.8	18 04.1	3.3	60.3	56	20 16	21 05	00 46	01 46	02 56	04 13	
	16	58 23.4	54.5	264 44.1	5.0	18 00.8	3.4	60.3	54	20 06	20 51	00 55	01 55	03 05	04 21	
	17	73 23.5	53.9	279 08.1	4.9	17 57.4	3.5	60.3	52	19 57	20 39	01 04	02 04	03 13	04 27	
	18	88 23.5	N18 53.3	293 32.0	5.0	S17 53.9	3.6	60.3	50	19 49	20 28	01 12	02 12	03 20	04 33	
	19	103 23.5	52.7	307 56.0	5.0	17 50.3	3.8	60.3	45	19 32	20 06	01 28	02 29	03 36	04 46	
	20	118 23.5	52.1	322 20.0	5.0	17 46.5	3.9	60.3	N 40	19 18	19 49	01 42	02 43	03 48	04 56	
	21	133 23.5	51.5	336 44.0	5.1	17 42.6	4.0	60.2	35	19 06	19 34	01 54	02 54	03 59	05 05	
	22	148 23.5	51.0	351 08.1	5.1	17 38.6	4.2	60.2	30	18 56	19 22	02 04	03 04	04 08	05 13	
23	163 23.6	50.4	5 32.2	5.2	17 34.4	4.2	60.2	20	18 39	19 02	02 21	03 22	04 24	05 27		
V I E R N E S	29 ^d 00	178 23.6	N18 49.8	19 56.4	5.2	S17 30.2	4.4	60.2	N 10	18 24	18 46	02 36	03 37	04 38	05 38	
	01	193 23.6	49.2	34 20.6	5.2	17 25.8	4.5	60.2	0	18 10	18 32	02 50	03 51	04 51	05 49	
	02	208 23.6	48.6	48 44.8	5.3	17 21.3	4.6	60.2	S 10	17 56	18 18	03 05	04 05	05 04	06 00	
	03	223 23.6	48.0	63 09.1	5.3	17 16.7	4.8	60.2	20	17 42	18 05	03 20	04 20	05 18	06 12	
	04	238 23.6	47.4	77 33.4	5.4	17 11.9	4.8	60.2	30	17 25	17 50	03 37	04 37	05 34	06 25	
	05	253 23.7	46.8	91 57.8	5.4	17 07.1	5.0	60.2	40	17 15	17 42	03 47	04 47	05 43	06 32	
	06	268 23.7	N18 46.3	106 22.2	5.4	S17 02.1	5.1	60.2	50	17 04	17 34	03 59	04 59	05 53	06 41	
	07	283 23.7	45.7	120 46.6	5.6	16 57.0	5.2	60.2	60	16 52	17 24	04 12	05 12	06 05	06 51	
	08	298 23.7	45.1	135 11.2	5.5	16 51.8	5.3	60.1	S 50	16 36	17 12	04 29	05 28	06 20	07 03	
	09	313 23.7	44.5	149 35.7	5.6	16 46.5	5.4	60.1	52	16 29	17 06	04 36	05 36	06 27	07 08	
	10	328 23.8	43.9	164 00.3	5.7	16 41.1	5.6	60.1	54	16 21	17 01	04 45	05 44	06 34	07 14	
	11	343 23.8	43.3	178 25.0	5.7	16 35.5	5.6	60.1	56	16 12	16 54	04 55	05 54	06 42	07 21	
	12	358 23.8	N18 42.7	192 49.7	5.7	S16 29.9	5.8	60.1	58	16 01	16 47	05 06	06 05	06 52	07 29	
	13	13 23.8	42.1	207 14.4	5.9	16 24.1	5.9	60.1	S 60	15 49	16 39	05 18	06 17	07 03	07 37	
	14	28 23.8	41.5	221 39.3	5.8	16 18.2	5.9	60.1	Día	SOL E.T. (-)	Pas. Mer.	LUNA Pas. Mer. Sup. Inf.	Edad.	Fase		
	15	43 23.9	40.9	236 04.1	6.0	16 12.3	6.1	60.1	27	00 ^h	12 ^h	h m	h m	h m	d	
	16	58 23.9	40.3	250 29.1	5.9	16 06.2	6.2	60.0	28	m s	m s	h m	h m	h m		
	17	73 23.9	39.7	264 54.0	6.1	16 00.0	6.3	60.0	29	06 28	06 28	12 06	21 37	09 06	11	
	18	88 23.9	N18 39.1	279 19.1	6.1	S15 53.7	6.4	60.0	06 27	06 26	12 06	22 37	10 07	12	○	
	19	103 23.9	38.5	293 44.2	6.1	15 47.3	6.5	60.0	06 26	06 25	12 06	23 36	11 07	13		
	20	118 24.0	37.9	308 09.3	6.3	15 40.8	6.6	60.0								
	21	133 24.0	37.3	322 34.6	6.2	15 34.2	6.7	60.0								
	22	148 24.0	36.7	336 59.8	6.4	15 27.5	6.8	59.9								
23	163 24.0	36.1	351 25.2	6.4	15 20.7	6.9										


T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		30		31		1		2	
											h	m	h	m	h	m	h	m
30	00	178 24.1 N13	35.5	5 50.6	6.5	S15 13.8	7.0	59.9	N 72	□	□	□	21 18	21 10	21 04	20 57	20 57	
	01	193 24.1	34.9	20 16.1	6.5	15 06.8	7.1	59.9	N 70	////	////	////	01 15	20 56	20 57	20 57	20 57	
	02	208 24.1	34.3	34 41.6	6.6	14 59.7	7.2	59.9	N 68	////	////	////	02 09	20 39	20 46	20 52	20 56	
	03	223 24.1	33.7	49 07.2	6.6	14 52.5	7.3	59.8	N 66	////	////	////	02 41	20 25	20 38	20 47	20 56	
	04	238 24.2	33.1	63 32.8	6.8	14 45.2	7.3	59.8	N 64	////	01 32	03 04	20 13	20 30	20 44	20 56	20 56	
	05	253 24.2	32.5	77 58.6	6.8	14 37.9	7.5	59.8	N 62	////	02 10	03 23	20 03	20 24	20 40	20 55	20 55	
	06	268 24.2 N18	31.9	92 24.4	6.8	S14 30.4	7.6	59.8	N 60	////	02 36	03 38	19 54	20 18	20 37	20 55	20 55	
	07	283 24.2	31.3	106 50.2	6.9	14 22.8	7.6	59.8	N 58	01 24	02 56	03 51	19 47	20 13	20 35	20 55	20 55	
	08	298 24.3	30.7	121 16.1	7.0	14 15.2	7.7	59.7	N 56	01 58	03 13	04 02	19 40	20 08	20 33	20 55	20 55	
	S	09	313 24.3	30.1	135 42.1	7.1	14 07.5	7.8	59.7	N 54	02 23	03 26	04 11	19 34	20 04	20 31	20 54	20 54
		10	328 24.3	29.5	150 08.2	7.1	13 59.7	7.9	59.7	N 52	02 41	03 38	04 20	19 29	20 01	20 29	20 54	20 54
	A	11	343 24.3	28.9	164 34.3	7.2	13 51.8	8.0	59.7	N 50	02 57	03 49	04 27	19 24	19 57	20 27	20 54	20 54
		12	358 24.4 N18	28.3	179 00.5	7.3	S13 43.8	8.1	59.7	N 48	03 27	04 10	04 44	19 13	19 50	20 23	20 54	20 54
	D	13	13 24.4	27.7	193 26.8	7.3	13 35.7	8.1	59.6	N 46	03 49	04 27	04 57	19 04	19 44	20 20	20 53	20 53
		14	28 24.4	27.1	207 53.1	7.4	13 27.6	8.2	59.6	N 44	04 07	04 40	05 08	18 57	19 39	20 17	20 53	20 53
	O	15	43 24.4	26.5	222 19.5	7.5	13 19.4	8.3	59.6	N 42	04 21	04 52	05 18	18 50	19 34	20 15	20 53	20 53
		16	58 24.5	25.9	236 46.0	7.5	13 11.1	8.4	59.6	N 40	04 44	05 11	05 35	18 38	19 26	20 11	20 53	20 53
	17	73 24.5	25.3	251 12.5	7.6	13 02.7	8.4	59.5	N 38	05 01	05 27	05 49	18 28	19 19	20 07	20 52	20 52	
	18	88 24.5 N18	24.7	265 39.1	7.7	S12 54.3	8.6	59.5	N 36	05 16	05 41	06 03	18 19	19 13	20 03	20 52	20 52	
	19	103 24.6	24.0	280 05.8	7.7	12 45.7	8.5	59.5	S 10	05 29	05 54	06 16	18 09	19 06	20 00	20 52	20 52	
	20	118 24.6	23.4	294 32.5	7.9	12 37.2	8.7	59.5	S 20	05 40	06 07	06 30	17 59	18 59	19 56	20 51	20 51	
	21	133 24.6	22.8	308 59.4	7.9	12 28.5	8.7	59.4	S 30	05 52	06 21	06 46	17 47	18 51	19 52	20 51	20 51	
	22	148 24.6	22.2	323 26.3	7.9	12 19.8	8.9	59.4	S 35	05 58	06 29	06 55	17 40	18 46	19 50	20 51	20 51	
23	163 24.7	21.6	337 53.2	8.1	12 10.9	8.8	59.4	S 40	06 04	06 37	07 06	17 33	18 41	19 47	20 51	20 51		
31	00	178 24.7 N18	21.0	352 20.3	8.1	S12 02.1	9.0	59.4	S 45	06 11	06 47	07 18	17 24	18 35	19 44	20 51	20 51	
	01	193 24.7	20.4	6 47.4	8.1	11 53.1	9.0	59.3	S 50	06 19	06 58	07 33	17 13	18 27	19 40	20 51	20 51	
	02	208 24.8	19.8	21 14.5	8.3	11 44.1	9.0	59.3	S 52	06 22	07 03	07 40	17 08	18 24	19 38	20 50	20 50	
	03	223 24.8	19.1	35 41.8	8.3	11 35.1	9.1	59.3	S 54	06 25	07 08	07 48	17 02	18 20	19 36	20 50	20 50	
	04	238 24.8	18.5	50 09.1	8.4	11 26.0	9.2	59.3	S 56	06 29	07 14	07 56	16 56	18 16	19 34	20 50	20 50	
	05	253 24.9	17.9	64 36.5	8.5	11 16.8	9.3	59.2	S 58	06 33	07 21	08 06	16 49	18 11	19 32	20 50	20 50	
	06	268 24.9 N18	17.3	79 04.0	8.5	S11 07.5	9.3	59.2	S 60	06 37	07 29	08 17	16 41	18 06	19 29	20 50	20 50	
	07	283 24.9	16.7	93 31.5	8.6	10 58.2	9.3	59.2	Lat.	Ocaso Sol	Crepúsculo Civil		Ocaso Luna					
	08	298 24.9	16.1	107 59.1	8.7	10 48.9	9.5	59.1	Naut.	h m	h m	h m	h m	h m	h m	h m	h m	
	09	313 25.0	15.5	122 26.8	8.7	10 39.4	9.4	59.1	N 72	□	□	□	01 55	04 03	06 01	07 52	07 52	
	10	328 25.0	14.8	136 54.5	8.8	10 30.0	9.5	59.1	N 70	22 49	////	////	02 31	04 24	06 12	07 56	07 56	
	11	343 25.0	14.2	151 22.3	8.9	10 20.5	9.6	59.1	N 68	22 00	////	////	02 57	04 40	06 21	07 59	07 59	
	12	358 25.1 N18	13.6	165 50.2	9.0	S10 10.9	9.6	59.0	N 66	21 29	////	////	03 16	04 53	06 29	08 02	08 02	
	13	13 25.1	13.0	180 18.2	9.0	10 01.3	9.7	59.0	N 64	21 06	22 35	////	03 32	05 04	06 35	08 04	08 04	
	14	28 25.1	12.4	194 46.2	9.1	9 51.6	9.7	59.0	N 62	20 48	21 59	////	03 45	05 13	06 41	08 06	08 06	
	15	43 25.2	11.7	209 14.3	9.1	9 41.9	9.8	58.9	N 60	20 33	21 34	////	03 56	05 21	06 45	08 08	08 08	
	16	58 25.2	11.1	223 42.4	9.3	9 32.1	9.8	58.9	N 58	20 21	21 14	22 44	04 05	05 27	06 49	08 09	08 09	
	17	73 25.2	10.5	238 10.7	9.3	9 22.3	9.9	58.9	N 56	20 10	20 58	22 11	04 13	05 33	06 53	08 11	08 11	
	18	88 25.3 N18	09.9	252 39.0	9.4	S 9 12.4	9.9	58.8	N 54	20 00	20 45	21 48	04 21	05 39	06 56	08 12	08 12	
	19	103 25.3	09.3	267 07.4	9.4	9 02.5	9.9	58.8	N 52	19 52	20 33	21 29	04 27	05 44	06 59	08 13	08 13	
	20	118 25.3	08.6	281 35.8	9.5	8 52.6	10.0	58.8	N 50	19 44	20 23	21 14	04 33	05 48	07 02	08 14	08 14	
	21	133 25.4	08.0	296 04.3	9.6	8 42.6	10.0	58.8	N 48	19 28	20 02	20 45	04 46	05 57	07 08	08 16	08 16	
	22	148 25.4	07.4	310 32.9	9.6	8 32.6	10.1	58.7	N 46	19 15	19 45	20 23	04 56	06 05	07 13	08 18	08 18	
23	163 25.5	06.8	325 01.5	9.7	8 22.6	10.1	58.7	N 44	19 04	19 32	20 05	05 05	06 12	07 17	08 19	08 19		
1	00	178 25.5 N18	06.1	339 30.2	9.8	S 8 12.5	10.2	58.7	N 42	18 54	19 20	19 51	05 13	06 18	07 20	08 21	08 21	
	01	193 25.5	05.5	353 59.0	9.9	8 02.3	10.1	58.6	N 40	18 38	19 01	19 29	05 27	06 28	07 27	08 23	08 23	
	02	208 25.6	04.9	8 27.9	9.9	7 52.2	10.2	58.6	N 38	18 23	18 45	19 11	05 38	06 37	07 32	08 25	08 25	
	03	223 25.6	04.3	22 56.8	10.0	7 42.0	10.2	58.6	N 36	18 10	18 32	18 57	05 49	06 45	07 37	08 27	08 27	
	04	238 25.6	03.6	37 25.8	10.0	7 31.8	10.3	58.5	S 10	17 57	18 19	18 44	06 00	06 53	07 42	08 29	08 29	
	05	253 25.7	03.0	51 54.8	10.1	7 21.5	10.3	58.5	S 20	17 43	18 06	18 32	06 12	07 01	07 48	08 31	08 31	
	06	268 25.7 N18	02.4	66 23.9	10.2	S 7 11.2	10.3	58.5	S 30	17 27	17 52	18 21	06 25	07 11	07 54	08 33	08 33	
	07	283 25.7	01.8	80 53.1	10.2	7 00.9	10.3	58.4	S 35	17 18	17 44	18 15	06 32	07 17	07 57	08 34	08 34	
	08	298 25.8	01.1	95 22.3	10.3	6 50.6	10.4	58.4	S 40	17 07	17 36	18 09	06 41	07 23	08 01	08 35	08 35	
	L	09	313 25.8	18 00.5	109 51.6	10.4	6 40.2	10.4	58.4	S 45	16 55	17 27	18 02	06 51	07 30	08 05	08 37	08 37
	U	10	328 25.9	17 59.9	124 21.0	10.4	6 29.8	10.4	58.3	S 50	16 40	17 15	17 55	07 03	07 39	08 11	08 39	08 39
	N	11	343 25.9	59.2	138 50.4	10.5	6 19.4	10.4	58.3	S 52	16 33	17 10	17 52	07 08	07 43	08 13	08 40	08 40
	E	12	358 25.9 N17	58.6	153 19.9	10.5	S 6 09.0	10.4	58.3	S 54	16 25	17 05	17 48	07 14	07 48	08 16	08 41	08 41
	S	13	13 26.0	58.0	167 49.4	10.6	5 58.6	10.5	58.2	S 56	16 17	16 59	17 44	07 21	07 53	08 19	08 42	08 42
	14	28 26.0	57.3	182 19.0	10.7	5 48.1	10.5	58.2	S 58	16 07	16 52	17 41	07 29	07 58</				

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna										
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	h		m	h	m	2		3		4		5	
														h	m	h	m	h	m	h	m	h	m
MARTES	00	178 26.4 N17 51.0	327 18.4 11.2 S	4 02.6	10.6	57.9	N 72	□	□	□	20 57	20 51	20 45	20 39							
	01	193 26.5 50.4	341 48.6 11.3	3 52.0	10.6	57.8	N 70	////	////	01 41	20 57	20 56	20 56	20 57							
	02	208 26.5 49.7	356 18.9 11.4	3 41.4	10.7	57.8	68	////	////	02 24	20 56	21 00	21 05	21 11							
	03	223 26.6 49.1	10 49.3 11.4	3 30.7	10.6	57.7	66	////	00 50	02 52	20 56	21 04	21 12	21 23							
	04	238 26.6 48.4	25 19.7 11.4	3 20.1	10.6	57.7	64	////	01 50	03 14	20 56	21 07	21 19	21 32							
	05	253 26.6 47.8	39 50.1 11.5	3 09.5	10.7	57.7	62	////	02 22	03 31	20 55	21 09	21 24	21 41							
	06	268 26.7 N17 47.2	54 20.6 11.6 S	2 58.8	10.6	57.6	60	00 46	02 46	03 45	20 55	21 12	21 29	21 48							
	07	283 26.7 46.5	68 51.2 11.6	2 48.2	10.6	57.6	N 58	01 39	03 04	03 57	20 55	21 14	21 33	21 54							
	08	298 26.8 45.9	83 21.8 11.7	2 37.6	10.7	57.6	56	02 09	03 19	04 07	20 55	21 16	21 37	22 00							
	09	313 26.8 45.2	97 52.5 11.7	2 26.9	10.6	57.5	54	02 31	03 32	04 16	20 54	21 17	21 40	22 05							
	10	328 26.9 44.6	112 23.2 11.7	2 16.3	10.6	57.5	52	02 49	03 44	04 24	20 54	21 19	21 43	22 09							
	11	343 26.9 44.0	126 53.9 11.8	2 05.7	10.6	57.5	50	03 03	03 53	04 32	20 54	21 20	21 46	22 14							
	12	358 27.0 N17 43.3	141 24.7 11.9 S	1 55.1	10.7	57.4	45	03 32	04 14	04 47	20 54	21 23	21 52	22 23							
	13	13 27.0 42.7	155 55.6 11.9	1 44.4	10.6	57.4	N 40	03 53	04 30	05 00	20 53	21 25	21 57	22 30							
	14	28 27.0 42.0	170 26.5 11.9	1 33.8	10.6	57.4	35	04 09	04 43	05 11	20 53	21 28	22 02	22 37							
	15	43 27.1 41.4	184 57.4 12.0	1 23.2	10.6	57.3	30	04 23	04 54	05 20	20 53	21 30	22 06	22 43							
	16	58 27.1 40.7	199 28.4 12.1	1 12.6	10.6	57.3	20	04 45	05 13	05 36	20 53	21 33	22 13	22 53							
	17	73 27.2 40.1	213 59.5 12.1	1 02.0	10.6	57.3	N 10	05 02	05 28	05 50	20 52	21 36	22 19	23 01							
	18	88 27.2 N17 39.4	228 30.6 12.1 S	0 51.4	10.6	57.2	0	05 16	05 41	06 03	20 52	21 39	22 24	23 10							
	19	103 27.3 38.8	243 01.7 12.1	0 40.8	10.5	57.2	S 10	05 28	05 53	06 15	20 52	21 42	22 30	23 18							
	20	118 27.3 38.1	257 32.8 12.3	0 30.3	10.6	57.2	20	05 39	06 06	06 29	20 51	21 45	22 36	23 27							
	21	133 27.4 37.5	272 04.1 12.2	0 19.7	10.5	57.1	30	05 50	06 19	06 44	20 51	21 48	22 44	23 37							
	22	148 27.4 36.9	286 35.3 12.3 S	0 09.2	10.5	57.1	35	05 56	06 26	06 53	20 51	21 50	22 48	23 43							
23	163 27.5 36.2	301 06.6 12.3 N	0 01.3	10.6	57.0	40	06 02	06 34	07 03	20 51	21 53	22 52	23 50								
MIÉRCOLES	00	178 27.5 N17 35.6	315 37.9 12.4 N	0 11.9	10.5	57.0	45	06 08	06 43	07 15	20 51	21 55	22 58	23 58							
	01	193 27.6 34.9	330 09.3 12.4	0 22.4	10.4	57.0	S 50	06 15	06 54	07 29	20 51	21 59	23 04	24 08							
	02	208 27.6 34.3	344 40.7 12.4	0 32.8	10.5	56.9	52	06 18	06 58	07 35	20 50	22 00	23 07	24 12							
	03	223 27.7 33.6	359 12.1 12.5	0 43.3	10.5	56.9	54	06 21	07 04	07 43	20 50	22 02	23 11	24 17							
	04	238 27.7 33.0	13 43.6 12.5	0 53.8	10.4	56.9	56	06 24	07 09	07 51	20 50	22 04	23 14	24 23							
	05	253 27.8 32.3	28 15.1 12.6	1 04.2	10.4	56.8	58	06 28	07 16	08 00	20 50	22 06	23 18	24 29							
	06	268 27.8 N17 31.7	42 46.7 12.6 N	1 14.6	10.4	56.8	S 60	06 32	07 23	08 10	20 50	22 08	23 23	24 36							
	07	283 27.9 31.0	57 18.3 12.6	1 25.0	10.4	56.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna										
	08	298 27.9 30.3	71 49.9 12.7	1 35.4	10.3	56.7			Civil	Náut.	2	3	4	5							
	09	313 28.0 29.7	86 21.6 12.7	1 45.7	10.4	56.7	N 72	□	□	□	07 52	09 37	11 19	13 00							
	10	328 28.0 29.0	100 53.3 12.7	1 56.1	10.3	56.7	N 70	22 24	////	////	07 56	09 35	11 10	12 44							
	11	343 28.1 28.4	115 25.0 12.7	2 06.4	10.3	56.6	68	21 44	////	////	07 59	09 33	11 03	12 31							
	12	358 28.1 N17 27.7	129 56.7 12.8 N	2 16.7	10.2	56.6	66	21 17	23 10	////	08 02	09 31	10 57	12 21							
	13	13 28.2 27.1	144 28.5 12.8	2 26.9	10.3	56.6	64	20 56	22 18	////	08 04	09 30	10 52	12 12							
	14	28 28.2 26.4	159 00.3 12.9	2 37.2	10.2	56.5	62	20 40	21 47	////	08 06	09 28	10 48	12 04							
	15	43 28.3 25.8	173 32.2 12.9	2 47.4	10.2	56.5	60	20 26	21 24	23 16	08 08	09 27	10 44	11 58							
	16	58 28.3 25.1	188 04.1 12.9	2 57.6	10.1	56.5	N 58	20 14	21 06	22 29	08 09	09 26	10 41	11 52							
	17	73 28.4 24.4	202 36.0 12.9	3 07.7	10.2	56.4	56	20 04	20 51	22 00	08 11	09 25	10 38	11 47							
	18	88 28.4 N17 23.8	217 07.9 13.0 N	3 17.9	10.1	56.4	54	19 55	20 38	21 39	08 12	09 25	10 35	11 43							
	19	103 28.5 23.1	231 39.9 13.0	3 28.0	10.0	56.4	52	19 47	20 27	21 22	08 13	09 24	10 32	11 39							
	20	118 28.5 22.5	246 11.9 13.0	3 38.0	10.1	56.3	50	19 40	20 18	21 08	08 14	09 23	10 30	11 35							
	21	133 28.6 21.8	260 43.9 13.0	3 48.1	10.0	56.3	45	19 24	19 58	20 40	08 16	09 22	10 25	11 27							
	22	148 28.6 21.2	275 15.9 13.1	4 08.1	9.9	56.2	N 40	19 12	19 42	20 19	08 18	09 21	10 21	11 20							
23	163 28.7 20.5	289 48.0 13.1	4 18.0	10.0	56.2	35	19 01	19 29	20 02	08 19	09 20	10 18	11 15								
JUEVES	00	178 28.8 N17 19.8	304 20.1 13.1 N	4 28.0	9.9	56.2	30	18 52	19 18	19 49	08 21	09 19	10 15	11 10							
	01	193 28.8 19.2	318 52.2 13.1	4 37.9	9.8	56.2	20	18 36	18 59	19 27	08 23	09 17	10 10	11 01							
	02	208 28.9 18.5	333 24.3 13.1	4 47.7	9.8	56.1	N 10	18 22	18 44	19 10	08 25	09 16	10 05	10 53							
	03	223 28.9 17.8	347 56.4 13.2	4 57.5	9.8	56.1	0	18 10	18 31	18 56	08 27	09 15	10 01	10 46							
	04	238 29.0 17.2	2 28.6 13.2	4 57.5	9.8	56.1	S 10	17 57	18 19	18 44	08 29	09 13	09 56	10 39							
	05	253 29.0 16.5	17 00.8 13.2	5 07.3	9.8	56.1	20	17 44	18 07	18 33	08 31	09 12	09 52	10 32							
	06	268 29.1 N17 15.9	31 33.0 13.3 N	5 17.1	9.7	56.0	30	17 29	17 54	18 22	08 33	09 10	09 47	10 23							
	07	283 29.1 15.2	46 05.3 13.2	5 26.8	9.7	56.0	35	17 20	17 46	18 17	08 34	09 09	09 44	10 18							
	08	298 29.2 14.5	60 37.5 13.3	5 36.5	9.6	56.0	40	17 10	17 39	18 11	08 35	09 08	09 40	10 13							
	09	313 29.3 13.9	75 09.8 13.3	5 46.1	9.6	55.9	45	16 58	17 30	18 05	08 37	09 07	09 36	10 06							
	10	328 29.3 13.2	89 42.1 13.3	5 55.7	9.6	55.9	S 50	16 44	17 19	17 58	08 39	09 06	09 32	09 58							
	11	343 29.4 12.5	104 14.4 13.3	6 05.3	9.5	55.9	52	16 38	17 14	17 55	08 40	09 05	09 29	09 55							
	12	358 29.4 N17 11.9	118 46.7 13.3 N	6 14.8	9.5	55.8	54	16 30	17 09	17 52	08 41	09 04	09 27	09 51							
	13	13 29.5 11.2	133 19.0 13.4	6 24.3	9.4	55.8	56	16 22	17 04	17 49	08 42	09 03	09 24	09 46							
	14	28 29.5 10.5	147 51.4 13.3	6 33.7	9.4	55.8	58	16 13	16 57	17 45	08 43	09 02	09 22	09 42							
	15	43 29.6 09.9	162 23.7 13.4	6 43.1	9.4	55.8	S 60	16 03	16 50	17 42	08 44	09 01	09 18	09 36							
	16	58 29.7 09.2	176 56.1 13.4	6 52.5	9.3	55.7	Día	SOL		LUNA											
	17	73 29.7 08.5	191 28.5 13.4	7 01.8	9.3	55.7		E.T. (-)	Pas. Mer.	Pas. Mer.	Mer. Inf.	Edad.	Fase								
	18	88 29.8 N17 07.9	206 00.9 13.4 N	7 11.1	9.2	55.7	2	06 14	06 12	12 06	02 15	14 40	17								
	19	103 29.8 07.2	220 33.3 13.5	7 20.3	9.2	55.6	3	06 10	06 08	12 06	03 03	15 27	18								
	20	118 29.9 06.5	235 05.8 13.4	7 29.5	9.2	55.6	4	06 05	06 02	12 06	03 50	16 13	19								
	21	133 30.0 05.8	249 38.2 13.4	7 38.7	9.1	55.6															
	22	148 30.0 05.2	264 10.6 13.5	7 47.8	9.1	55.6															
23	163 30.1 04.5	278 43.1 13.5	7 56.9	9.0	55.5																
	S.D. 15.8	d 0.7	S.D. 15.6	15.4	15.2	</															

T. M. G.	ARIES			VENUS -3.5			MARTE +1.1			JUPITER -1.6			SATURNO +0.6			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
5	00	313 25.9	220 44.3 N21	44.4	242 16.6 N21	54.4	226 30.5 N22	59.5	171 20.7 N15	58.6	Acomar	315 38.9	S40	23.4				
	01	328 28.3	235 43.7	44.5	257 17.3	54.7	241 32.4	59.5	186 22.9	58.5	Achernar	335 46.7	S57	20.7				
	02	343 30.8	250 43.0	44.5	272 18.0	54.9	256 34.4	59.5	201 25.0	58.4	Acrux	173 39.8	S62	58.7				
	03	358 33.2	265 42.4	44.6	287 18.7	55.2	271 36.3	59.5	216 27.2	58.3	Adhara	255 34.1	S28	56.4				
	04	13 35.7	280 41.8	44.7	302 19.4	55.4	286 38.3	59.5	231 29.3	58.2	Aldebaran	291 20.5	N16	27.8				
	05	28 38.2	295 41.2	44.8	317 20.0	55.7	301 40.2	59.5	246 31.5	58.1								
	06	43 40.6	310 40.6 N21	44.8	332 20.7 N21	55.9	316 42.1 N22	59.6	261 33.6 N15	58.0	Alioth	166 44.7	N56	05.2				
	07	58 43.1	325 40.0	44.9	347 21.4	56.2	331 44.1	59.6	276 35.7	57.9	Alkaid	153 20.3	N49	25.8				
	08	73 45.6	340 39.4	45.0	2 22.1	56.4	346 46.0	59.6	291 37.9	57.8	Al Na'ir	28 17.2	S47	04.0				
	09	88 48.0	355 38.8	45.0	17 22.7	56.6	1 48.0	59.6	306 40.0	57.7	Alnilam	276 14.0	S 1	13.0				
	10	103 50.5	10 38.1	45.1	32 23.4	56.9	16 49.9	59.6	321 42.2	57.6	Alphard	218 22.9	S 8	33.7				
	11	118 53.0	25 37.5	45.2	47 24.1	57.1	31 51.8	59.6	336 44.3	57.5								
	12	133 55.4	40 36.9 N21	45.3	62 24.8 N21	57.4	46 53.8 N22	59.6	351 46.5 N15	57.4	Alphecca	126 33.8	N26	47.7				
	13	148 57.9	55 36.3	45.3	77 25.5	57.6	61 55.7	59.6	6 48.6	57.3	Alpheratz	358 11.2	N28	58.0				
	14	164 00.3	70 35.7	45.4	92 26.1	57.9	76 57.7	59.7	21 50.8	57.2	Altair	62 34.2	N 8	48.8				
	15	179 02.8	85 35.1	45.5	107 26.8	58.1	91 59.6	59.7	36 52.9	57.1	Ankaa	353 42.1	S42	25.4				
	16	194 05.3	100 34.5	45.5	122 27.5	58.4	107 01.5	59.7	51 55.1	57.0	Antares	112 59.2	S26	22.9				
	17	209 07.7	115 33.8	45.6	137 28.2	58.6	122 03.5	59.7	66 57.2	56.9								
	18	224 10.2	130 33.2 N21	45.6	152 28.9 N21	58.9	137 05.4 N22	59.7	81 59.4 N15	56.8	Arcturus	146 20.4	N19	18.2				
	19	239 12.7	145 32.6	45.7	167 29.5	59.1	152 07.4	59.7	97 01.5	56.7	Atria	108 25.0	S68	59.4				
	20	254 15.1	160 32.0	45.8	182 30.2	59.4	167 09.3	59.7	112 03.7	56.6	Avior	234 29.6	S59	26.3				
	21	269 17.6	175 31.4	45.8	197 30.9	59.6	182 11.2	59.7	127 05.8	56.5	Bellatrix	279 01.2	N 6	19.8				
	22	284 20.1	190 30.8	45.9	212 31.6	59.8	197 13.2	59.7	142 08.0	56.4	Betelgeuse	271 30.8	N 7	24.2				
23	299 22.5	205 30.1	45.9	227 32.3	00.1	212 15.1	59.8	157 10.1	56.3									
6	00	314 25.0	220 29.5 N21	46.0	242 33.0 N22	00.3	227 17.1 N22	59.8	172 12.3 N15	56.2	Canopus	264 08.6	S52	40.9				
	01	329 27.5	235 28.9	46.0	257 33.6	00.6	242 19.0	59.8	187 14.4	56.1	Capella	281 14.6	N45	58.4				
	02	344 29.9	250 28.3	46.1	272 34.3	00.8	257 21.0	59.8	202 16.6	56.0	Deneb	49 49.4	N45	12.2				
	03	359 32.4	265 27.7	46.2	287 35.0	01.1	272 22.9	59.8	217 18.7	55.9	Denebola	183 01.4	N14	41.9				
	04	14 34.8	280 27.0	46.2	302 35.7	01.3	287 24.8	59.8	232 20.9	55.8	Diphda	349 22.8	S18	06.4				
	05	29 37.3	295 26.4	46.3	317 36.4	01.5	302 26.8	59.8	247 23.0	55.7								
	06	44 39.8	310 25.8 N21	46.3	332 37.0 N22	01.8	317 28.7 N22	59.8	262 25.2 N15	55.6	Dubhe	194 25.4	N61	52.5				
	07	59 42.2	325 25.2	46.4	347 37.7	02.0	332 30.7	59.9	277 27.3	55.5	Elnath	278 47.0	N28	35.2				
	08	74 44.7	340 24.6	46.4	2 38.4	02.3	347 32.6	59.9	292 29.5	55.4	Eltanin	90 58.3	N51	29.8				
	09	89 47.2	355 23.9	46.5	17 39.1	02.5	2 34.6	59.9	307 31.6	55.3	Enif	34 13.3	N 9	46.5				
	10	104 49.6	10 23.3	46.5	32 39.8	02.7	17 36.5	59.9	322 33.8	55.2	Fomalhaut	15 53.4	S29	44.2				
	11	119 52.1	25 22.7	46.5	47 40.4	03.0	32 38.4	59.9	337 35.9	55.1								
	12	134 54.6	40 22.1 N21	46.6	62 41.1 N22	03.2	47 40.4 N22	59.9	352 38.1 N15	55.0	Gacrux	172 31.3	S56	59.5				
	13	149 57.0	55 21.5	46.6	77 41.8	03.5	62 42.3	59.9	7 40.2	54.9	Gienah	176 20.3	S17	25.1				
	14	164 59.5	70 20.8	46.7	92 42.5	03.7	77 44.3	59.9	22 42.4	54.8	Hadar	149 26.3	S60	16.1				
	15	180 02.0	85 20.2	46.7	107 43.2	03.9	92 46.2	59.9	37 44.5	54.8	Hamal	328 31.2	N23	21.3				
	16	195 04.4	100 19.6	46.8	122 43.9	04.2	107 48.2	00.0	52 46.6	54.7	Kaus Aust.	84 19.3	S34	23.7				
	17	210 06.9	115 19.0	46.8	137 44.5	04.4	122 50.1	00.0	67 48.8	54.6								
	18	225 09.3	130 18.4 N21	46.8	152 45.2 N22	04.6	137 52.1 N23	00.0	82 50.9 N15	54.5	Kochab	137 19.0	N74	15.2				
	19	240 11.8	145 17.7	46.9	167 45.9	04.9	152 54.0	00.0	97 53.1	54.4	Markab	14 04.9	N15	05.2				
	20	255 14.3	160 17.1	46.9	182 46.6	05.1	167 56.0	00.0	112 55.2	54.3	Menkar	314 43.3	N 4	00.2				
	21	270 16.7	175 16.5	47.0	197 47.3	05.3	182 57.9	00.0	127 57.4	54.2	Menkent	148 39.5	S36	15.7				
	22	285 19.2	190 15.9	47.0	212 47.9	05.6	197 59.8	00.0	142 59.5	54.1	Miaplacidus	221 46.2	S69	37.6				
23	300 21.7	205 15.2	47.0	227 48.6	05.8	213 01.8	00.0	158 01.7	54.0									
7	00	315 24.1	220 14.6 N21	47.1	242 49.3 N22	06.1	228 03.7 N23	00.0	173 03.8 N15	53.9	Mirfak	309 19.1	N49	46.7				
	01	330 26.6	235 14.0	47.1	257 50.0	06.3	243 05.7	00.1	188 06.0	53.8	Nunki	76 31.4	S26	19.4				
	02	345 29.1	250 13.4	47.1	272 50.7	06.5	258 07.6	00.1	203 08.1	53.7	Peacock	54 01.1	S56	48.3				
	03	0 31.5	265 12.7	47.1	287 51.4	06.8	273 09.6	00.1	218 10.3	53.6	Pollux	244 01.1	N28	04.8				
	04	15 34.0	280 12.1	47.2	302 52.0	07.0	288 11.5	00.1	233 12.4	53.5	Procyon	245 28.3	N 5	16.9				
	05	30 36.4	295 11.5	47.2	317 52.7	07.2	303 13.5	00.1	248 14.6	53.4								
	06	45 38.9	310 10.9 N21	47.2	332 53.4 N22	07.5	318 15.4 N23	00.1	263 16.7 N15	53.3	Rasalhague	96 31.3	N12	34.8				
	07	60 41.4	325 10.2	47.3	347 54.1	07.7	333 17.4	00.1	278 18.9	53.2	Regulus	208 12.5	N12	04.6				
	08	75 43.8	340 09.6	47.3	2 54.8	07.9	348 19.3	00.1	293 21.0	53.1	Rigel	281 38.2	S 8	13.6				
	09	90 46.3	355 09.0	47.3	17 55.5	08.2	3 21.3	00.1	308 23.2	53.0	Rigil Kent.	140 28.6	S60	44.7				
	10	105 48.8	10 08.4	47.3	32 56.1	08.4	18 23.2	00.1	323 25.3	52.9	Sabik	102 43.3	S15	41.7				
	11	120 51.2	25 07.7	47.3	47 56.8	08.6	33 25.1	00.2	338 27.5	52.8								
	12	135 53.7	40 07.1 N21	47.4	62 57.5 N22	08.8	48 27.1 N23	00.2	353 29.6 N15	52.7	Schedar	350 11.0	N56	24.7				
	13	150 56.2	55 06.5	47.4	77 58.2	09.1	63 29.0	00.2	8 31.8	52.6	Shaula	96 58.3	S37	05.3				
	14	165 58.6	70 05.9	47.4	92 58.9	09.3	78 31.0	00.2	23 33.9	52.5	Sirius	258 57.8	S16	41.1				
	15	181 01.1	85 05.2	47.4	107 59.6	09.5	93 32.9	00.2	38 36.1	52.4	Spica	158 59.8	S11	02.6				
	16	196 03.6	100 04.6	47.4	123 00.2	09.8	108 34.9	00.2	53 38.2	52.3	Suhail	223 12.7	S43	20.6				
	17	211 06.0	115 04.0	47.5	138 00.9	10.0	123 36.8	00.2	68 40.4	52.2								
	18	226 08.5	130 03.3 N21	47.5	153 01.6 N22	10.2	138 38.8 N23	00.2	83 42.5 N15	52.1	Vega	80 56.9	N38	46.1				
	19	241 10.9</																

T. M. G.	SOL		LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A. H. G. v	Dec.	d P. H.		Naut.	Civil		5	6	7	8	
										h m	h m	h m	h m	h m
5 00	178 30.1	N17 03.8	293 15.6	13.4 N	8 05.9	8.9 55.5	////	////	00 55	20 39	20 32	20 23	20 05	
01	193 30.2	03.2	307 48.0	13.5	8 14.8	9.0 55.5	////	////	02 03	20 57	20 59	21 04	21 15	
02	208 30.3	02.5	322 20.5	13.5	8 23.8	8.8 55.5	////	////	02 39	21 11	21 19	21 32	21 52	
03	223 30.3	01.8	336 53.0	13.5	8 32.6	8.9 55.4	////	01 22	03 04	21 23	21 35	21 53	22 18	
04	238 30.4	01.1	351 25.5	13.5	8 41.5	8.8 55.4	////	02 06	03 23	21 32	21 49	22 10	22 38	
05	253 30.4	17 00.5	5 58.0	13.5	8 50.3	8.7 55.4	01 14	02 55	03 52	21 48	22 10	22 36	23 08	
06	268 30.5	N16 59.8	20 30.5	13.5 N	8 59.0	8.7 55.4	01 53	03 12	04 03	21 54	22 18	22 46	23 20	
07	283 30.6	59.1	35 03.0	13.5	9 07.7	8.6 55.3	02 19	03 26	04 13	22 00	22 25	22 55	23 30	
08	298 30.6	58.4	49 35.5	13.6	9 16.3	8.6 55.3	02 39	03 38	04 21	22 05	22 32	23 03	23 39	
09	313 30.7	57.8	64 08.1	13.5	9 24.9	8.5 55.3	02 56	03 49	04 29	22 09	22 38	23 10	23 47	
10	328 30.8	57.1	78 40.6	13.5	9 33.4	8.5 55.3	03 09	03 58	04 36	22 14	22 43	23 17	23 55	
11	343 30.8	56.4	93 13.1	13.6	9 41.9	8.5 55.2	03 36	04 18	04 51	22 23	22 55	23 31	24 10	
12	358 30.9	N16 55.7	107 45.7	13.5 N	9 50.4	8.3 55.2	03 56	04 33	05 03	22 30	23 05	23 42	24 23	
13	13 30.9	55.0	122 18.2	13.5	9 58.7	8.4 55.2	04 12	04 45	05 13	22 37	23 13	23 52	24 34	
14	28 31.0	54.4	136 50.7	13.5	10 07.1	8.3 55.2	04 25	04 56	05 22	22 43	23 21	24 01	00 01	
15	43 31.1	53.7	151 23.2	13.6	10 15.4	8.2 55.1	04 46	05 14	05 37	22 53	23 33	24 16	00 16	
16	58 31.1	53.0	165 55.8	13.5	10 23.6	8.2 55.1	05 02	05 28	05 50	23 01	23 45	24 29	00 29	
17	73 31.2	52.3	180 28.3	13.6	10 31.8	8.1 55.1	05 16	05 41	06 02	23 10	23 55	24 41	00 41	
18	88 31.3	N16 51.6	195 00.9	13.5 N10	39.9	8.0 55.1	05 27	05 53	06 14	23 18	24 06	00 06	00 54	
19	103 31.3	51.0	209 33.4	13.5	10 47.9	8.0 55.0	05 38	06 04	06 27	23 27	24 17	00 17	01 07	
20	118 31.4	50.3	224 05.9	13.5	10 55.9	8.0 55.0	05 48	06 17	06 42	23 37	24 30	00 30	01 22	
21	133 31.5	49.6	238 38.4	13.6	11 03.9	7.9 55.0	05 53	06 24	06 50	23 43	24 38	00 38	01 31	
22	148 31.5	48.9	253 11.0	13.5	11 11.8	7.8 55.0	05 59	06 31	07 00	23 50	24 47	00 47	01 41	
23	163 31.6	48.2	267 43.5	13.5	11 19.6	7.8 55.0	06 04	06 39	07 11	23 58	24 57	00 57	01 53	
6 00	178 31.7	N16 47.5	282 16.0	13.5 N11	27.4	7.7 54.9	06 11	06 49	07 24	24 08	00 08	01 09	02 08	
01	193 31.7	46.9	296 48.5	13.5	11 35.1	7.7 54.9	06 13	06 54	07 30	24 12	00 12	01 15	02 14	
02	208 31.8	46.2	311 21.0	13.5	11 42.8	7.6 54.9	06 16	06 58	07 37	24 17	00 17	01 21	02 22	
03	223 31.9	45.5	325 53.5	13.5	11 50.4	7.6 54.9	06 19	07 04	07 45	24 23	00 23	01 28	02 30	
04	238 31.9	44.8	340 26.0	13.5	11 58.0	7.5 54.9	06 22	07 10	07 53	24 29	00 29	01 36	02 40	
05	253 32.0	44.1	354 58.5	13.5	12 05.5	7.4 54.8	06 26	07 16	08 03	24 36	00 36	01 45	02 51	
06	268 32.1	N16 43.4	9 31.0	13.5 N12	12.9	7.4 54.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
07	283 32.1	42.7	24 03.5	13.5	12 20.3	7.3 54.8			Civil	Naut.	5	6	7	8
08	298 32.2	42.1	38 36.0	13.5	12 27.6	7.3 54.8								
09	313 32.3	41.4	53 08.5	13.4	12 34.9	7.2 54.8								
10	328 32.3	40.7	67 40.9	13.5	12 42.1	7.1 54.7								
11	343 32.4	40.0	82 13.4	13.4	12 49.2	7.1 54.7								
12	358 32.5	N16 39.3	96 45.8	13.4 N12	56.3	7.0 54.7	N 72	23 03	////	////	13 00	14 42	16 26	18 21
13	13 32.6	38.6	111 18.2	13.5	13 03.3	6.9 54.7	N 70	22 03	////	////	12 44	14 16	15 46	17 12
14	28 32.6	37.9	125 50.7	13.4	13 10.2	6.9 54.7	68	21 29	////	////	12 31	13 57	15 19	16 35
15	43 32.7	37.2	140 23.1	13.4	13 17.1	6.9 54.7	66	21 05	22 43	////	12 21	13 41	14 58	16 09
16	58 32.8	36.5	154 55.5	13.4	13 24.0	6.7 54.6	64	20 46	22 02	////	12 12	13 29	14 42	15 49
17	73 32.8	35.8	169 27.9	13.4	13 30.7	6.7 54.6	62	20 31	21 35	////	12 04	13 18	14 28	15 33
18	88 32.9	N16 35.2	184 00.3	13.4 N13	37.4	6.7 54.6	60	20 18	21 14	22 51	11 58	13 09	14 17	15 20
19	103 33.0	34.5	198 32.7	13.3	13 44.1	6.5 54.6	N 58	20 07	20 58	22 15	11 52	13 01	14 07	15 08
20	118 33.1	33.8	213 05.0	13.4	13 50.6	6.5 54.6	56	19 57	20 44	21 49	11 47	12 54	13 58	14 58
21	133 33.1	33.1	227 37.4	13.3	13 57.1	6.5 54.6	54	19 49	20 32	21 30	11 43	12 48	13 50	14 49
22	148 33.2	32.4	242 09.7	13.3	14 03.6	6.3 54.5	52	19 41	20 21	21 14	11 39	12 42	13 44	14 41
23	163 33.3	31.7	256 42.0	13.4	14 09.9	6.3 54.5	50	19 35	20 12	21 01	11 35	12 37	13 37	14 34
7 00	178 33.3	N16 31.0	271 14.4	13.3 N14	16.2	6.3 54.5	45	19 20	19 53	20 34	11 27	12 27	13 24	14 19
01	193 33.4	30.3	285 46.7	13.3	14 22.5	6.2 54.5	N 40	19 08	19 38	20 15	11 20	12 18	13 13	14 07
02	208 33.5	29.6	300 19.0	13.2	14 28.7	6.1 54.5	35	18 58	19 26	19 59	11 15	12 10	13 04	13 56
03	223 33.6	28.9	314 51.2	13.3	14 34.8	6.0 54.5	30	18 49	19 15	19 46	11 10	12 03	12 55	13 47
04	238 33.6	28.2	329 23.5	13.3	14 40.8	6.0 54.5	20	18 34	18 58	19 25	11 01	11 51	12 41	13 31
05	253 33.7	27.5	343 55.8	13.2	14 46.8	5.9 54.5	N 10	18 21	18 43	19 09	10 53	11 41	12 29	13 17
06	268 33.8	N16 26.8	358 28.0	13.2 N14	52.7	5.8 54.4	0	18 09	18 31	18 56	10 46	11 32	12 17	13 04
07	283 33.9	26.1	13 00.2	13.2	14 58.5	5.8 54.4	S 10	17 57	18 19	18 44	10 39	11 22	12 06	12 51
08	298 33.9	25.4	27 32.4	13.2	15 04.3	5.7 54.4	20	17 45	18 08	18 34	10 32	11 12	11 54	12 37
09	313 34.0	24.7	42 04.6	13.2	15 10.0	5.6 54.4	30	17 30	17 55	18 24	10 23	11 00	11 40	12 21
10	328 34.1	24.0	56 36.8	13.2	15 15.6	5.6 54.4	35	17 22	17 49	18 19	10 18	10 54	11 31	12 12
11	343 34.2	23.3	71 09.0	13.1	15 21.2	5.5 54.4	40	17 13	17 41	18 13	10 13	10 46	11 22	12 01
12	358 34.2	N16 22.6	85 41.1	13.1 N15	26.7	5.4 54.4	45	17 02	17 33	18 08	10 06	10 37	11 11	11 49
13	13 34.3	21.9	100 13.2	13.1	15 32.1	5.3 54.4	S 50	16 48	17 23	18 02	09 58	10 27	10 58	11 34
14	28 34.4	21.2	114 45.3	13.1	15 37.4	5.3 54.4	52	16 42	17 19	17 59	09 55	10 22	10 52	11 27
15	43 34.5	20.5	129 17.4	13.1	15 42.7	5.2 54.3	54	16 35	17 14	17 56	09 51	10 17	10 46	11 19
16	58 34.5	19.8	143 49.5	13.1	15 47.9	5.1 54.3	56	16 28	17 09	17 54	09 46	10 11	10 38	11 10
17	73 34.6	19.1	158 21.6	13.1	15 53.0	5.1 54.3	58	16 19	17 03	17 50	09 42	10 04	10 30	11 01
18	88 34.7	N16 18.4	172 53.7	13.0 N15	58.1	5.0 54.3	S 60	16 09	16 56	17 47	09 36	09 56	10 20	10 49
19	103 34.8	17.7	187 25.7	13.0	16 03.1	4.9 54.3	Día	SOL E.T. (-)		LUNA				
20	118 34.8	17.0	201 57.7	13.0	16 08.0	4.8 54.3		00h	12h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase
21	133 34.9	16.3	216 29.7	13.0	16 12.8	4.8 54.3		m s	m s	h m	h m	h m	d	
22	148 35.0	15.6	231 01.7	13.0	16 17.6	4.7 54.3	5	06 00	05 57	12 06	04 35	16 58	20	
23	163 35.1	14.9	245 33.7	12.9	16 22.3	4.6 54.3	6	05 53	05 50	12 06	05 21	17 43	21	
	S.D. 15.8	d 0.7	S.D. 15.0	14.9										

T. M. G.		ARIES		VENUS -3.5		MARTE +1.1		JUPITER -1.6		SATURNO +0.6		ESTRELLAS								
		A.H.G.		A.H.G. Dec.		A.H.G. Dec.		A.H.G. Dec.		A.H.G. Dec.		Nombre	A. H. S. Dec.							
d	h	'	''	'	''	'	''	'	''	'	''		'	''	'					
8	00	316	23.3	219	59.6 N21	47.5	243	05.7 N22	11.6	228	50.5 N23	00.3	173	55.4 N15	51.5	Acamar	315	38.8	S40	23.4
	01	331	25.7	234	58.9	47.6	258	06.4	11.8	243	52.4	00.3	188	57.5	51.4	Achernar	335	46.7	S57	20.7
	02	346	28.2	249	58.3	47.6	273	07.1	12.0	258	54.4	00.3	203	59.7	51.3	Acrux	173	39.9	S62	58.7
	03	1	30.7	264	57.7	47.6	288	07.8	12.3	273	56.3	00.3	219	01.8	51.2	Adhara	255	34.1	S28	56.4
	04	16	33.1	279	57.0	47.6	303	08.5	12.5	288	58.3	00.3	234	04.0	51.1	Aldebaran	291	20.5	N16	27.8
	05	31	35.6	294	56.4	47.6	318	09.1	12.7	304	00.2	00.3	249	06.1	51.0					
	06	46	38.1	309	55.8 N21	47.6	333	09.8 N22	12.9	319	02.2 N23	00.4	264	08.3 N15	50.9	Alioth	166	44.7	N56	05.1
	07	61	40.5	324	55.2	47.6	348	10.5	13.2	334	04.1	00.4	279	10.4	50.8	Alkaid	153	20.4	N49	25.8
	08	76	43.0	339	54.5	47.6	3	11.2	13.4	349	06.1	00.4	294	12.6	50.7	Al Na'ir	28	17.1	S47	04.0
	09	91	45.4	354	53.9	47.6	18	11.9	13.6	4	08.0	00.4	309	14.7	50.6	Alnilam	276	14.0	S 1	12.9
L	10	106	47.9	9	53.3	47.6	33	12.6	13.8	19	10.0	00.4	324	16.9	50.5	Alphard	218	22.9	S 8	33.7
U	11	121	50.4	24	52.6	47.6	48	13.3	14.1	34	11.9	00.4	339	19.0	50.4					
N	12	136	52.8	39	52.0 N21	47.6	63	13.9 N22	14.3	49	13.9 N23	00.4	354	21.2 N15	50.3	Alphecca	126	33.8	N26	47.7
E	13	151	55.3	54	51.4	47.6	78	14.6	14.5	64	15.8	00.4	9	23.3	50.2	Alpheratz	358	11.2	N28	58.0
S	14	166	57.8	69	50.7	47.6	93	15.3	14.7	79	17.8	00.4	24	25.5	50.1	Altair	62	34.2	N 8	48.8
	15	182	00.2	84	50.1	47.6	108	16.0	15.0	94	19.7	00.4	39	27.6	50.0	Ankaa	353	42.1	S42	25.4
	16	197	02.7	99	49.5	47.6	123	16.7	15.2	109	21.7	00.5	54	29.8	50.0	Antares	112	59.3	S26	22.9
	17	212	05.2	114	48.8	47.6	138	17.4	15.4	124	23.6	00.5	69	31.9	49.9					
	18	227	07.6	129	48.2 N21	47.5	153	18.1 N22	15.6	139	25.6 N23	00.5	84	34.1 N15	49.8	Arcturus	146	20.4	N19	18.2
	19	242	10.1	144	47.6	47.5	168	18.8	15.8	154	27.5	00.5	99	36.2	49.7	Atria	108	25.0	S68	59.4
	20	257	12.5	159	46.9	47.5	183	19.4	16.1	169	29.5	00.5	114	38.3	49.6	Avior	234	29.6	S59	26.3
	21	272	15.0	174	46.3	47.5	198	20.1	16.3	184	31.5	00.5	129	40.5	49.5	Bellatrix	279	01.2	N 6	19.8
	22	287	17.5	189	45.7	47.5	213	20.8	16.5	199	33.4	00.5	144	42.6	49.4	Betelgeuse	271	30.7	N 7	24.2
	23	302	19.9	204	45.0	47.5	228	21.5	16.7	214	35.4	00.5	159	44.8	49.3					
9	00	317	22.4	219	44.4 N21	47.5	243	22.2 N22	16.9	229	37.3 N23	00.5	174	46.9 N15	49.2	Canopus	264	08.5	S52	40.9
	01	332	24.9	234	43.8	47.5	258	22.9	17.2	244	39.3	00.5	189	49.1	49.1	Capella	281	14.6	N45	58.3
	02	347	27.3	249	43.1	47.4	273	23.6	17.4	259	41.2	00.5	204	51.2	49.0	Deneb	49	49.4	N45	12.2
	03	2	29.8	264	42.5	47.4	288	24.2	17.6	274	43.2	00.6	219	53.4	48.9	Denebola	183	01.4	N14	41.9
	04	17	32.3	279	41.8	47.4	303	24.9	17.8	289	45.1	00.6	234	55.5	48.8	Diphda	349	22.8	S18	06.4
	05	32	34.7	294	41.2	47.4	318	25.6	18.0	304	47.1	00.6	249	57.7	48.7					
	06	47	37.2	309	40.6 N21	47.4	333	26.3 N22	18.2	319	49.0 N23	00.6	264	59.8 N15	48.6	Dubhe	194	25.4	N61	52.4
	07	62	39.7	324	39.9	47.3	348	27.0	18.5	334	51.0	00.6	280	02.0	48.5	Elnath	278	47.0	N28	35.2
	08	77	42.1	339	39.3	47.3	3	27.7	18.7	349	52.9	00.6	295	04.1	48.4	Eltanin	90	58.3	N51	29.9
M	09	92	44.6	354	38.7	47.3	18	28.4	18.9	4	54.9	00.6	310	06.3	48.3	Enif	34	13.3	N 9	46.5
A	10	107	47.0	9	38.0	47.3	33	29.1	19.1	19	56.9	00.6	325	08.4	48.2	Fomalhaut	15	53.4	S29	44.2
R	11	122	49.5	24	37.4	47.3	48	29.8	19.3	34	58.8	00.6	340	10.6	48.1					
T	12	137	52.0	39	36.8 N21	47.2	63	30.4 N22	19.5	50	00.8 N23	00.6	355	12.7 N15	48.0	Gacrux	172	31.3	S56	59.5
E	13	152	54.4	54	36.1	47.2	78	31.1	19.7	65	02.7	00.6	10	14.9	47.9	Gienah	176	20.3	S17	25.1
	14	167	56.9	69	35.5	47.2	93	31.8	20.0	80	04.7	00.7	25	17.0	47.8	Hadar	149	26.3	S60	16.1
	15	182	59.4	84	34.8	47.1	108	32.5	20.2	95	06.6	00.7	40	19.2	47.7	Hamal	328	31.2	N23	21.4
	16	198	01.8	99	34.2	47.1	123	33.2	20.4	110	08.6	00.7	55	21.3	47.6	Kaus Aust.	84	19.3	S34	23.7
	17	213	04.3	114	33.6	47.1	138	33.9	20.6	125	10.5	00.7	70	23.5	47.5					
	18	228	06.8	129	32.9 N21	47.0	153	34.6 N22	20.8	140	12.5 N23	00.7	85	25.6 N15	47.4	Kochab	137	19.1	N74	15.2
	19	243	09.2	144	32.3	47.0	168	35.3	21.0	155	14.5	00.7	100	27.7	47.3	Markab	14	04.9	N15	05.2
	20	258	11.7	159	31.6	47.0	183	36.0	21.2	170	16.4	00.7	115	29.9	47.2	Menkar	314	43.3	N 4	00.2
	21	273	14.2	174	31.0	46.9	198	36.6	21.4	185	18.4	00.7	130	32.0	47.1	Menkent	148	39.5	S36	15.7
	22	288	16.6	189	30.4	46.9	213	37.3	21.7	200	20.3	00.7	145	34.2	47.0	Miaplacidus	221	46.2	S69	37.6
	23	303	19.1	204	29.7	46.9	228	38.0	21.9	215	22.3	00.7	160	36.3	46.9					
10	00	318	21.5	219	29.1 N21	46.8	243	38.7 N22	22.1	230	24.2 N23	00.7	175	38.5 N15	46.8	Mirfak	309	19.1	N49	46.7
	01	333	24.0	234	28.4	46.8	258	39.4	22.3	245	26.2	00.8	190	40.6	46.7	Nunki	76	31.4	S26	19.4
	02	348	26.5	249	27.8	46.8	273	40.1	22.5	260	28.2	00.8	205	42.8	46.6	Peacock	54	01.1	S56	48.3
	03	3	28.9	264	27.2	46.7	288	40.8	22.7	275	30.1	00.8	220	44.9	46.5	Pollux	244	01.1	N28	04.8
	04	18	31.4	279	26.5	46.7	303	41.5	22.9	290	32.1	00.8	235	47.1	46.4	Procyon	245	28.3	N 5	16.9
	05	33	33.9	294	25.9	46.6	318	42.2	23.1	305	34.0	00.8	250	49.2	46.3					
	06	48	36.3	309	25.2 N21	46.6	333	42.8 N22	23.3	320	36.0 N23	00.8	265	51.4 N15	46.2	Rasalhague	96	31.3	N12	34.8
	07	63	38.8	324	24.6	46.5	348	43.5	23.5	335	37.9	00.8	280	53.5	46.1	Regulus	208	12.5	N12	04.6
	08	78	41.3	339	24.0	46.5	3	44.2	23.8	350	39.9	00.8	295	55.7	46.0	Rigel	281	38.2	S 8	13.6
	09	93	43.7	354	23.3	46.4	18	44.9	24.0	5	41.9	00.8	310	57.8	45.9	Rigil Kent.	140	28.6	S60	44.7
M	10	108	46.2	9	22.7	46.4	33	45.6	24.2	20	43.8	00.8	326	00.0	45.8	Sabik	102	43.3	S15	41.7
I	11	123	48.6	24	22.0	46.3	48	46.3	24.4	35	45.8	00.8	341	02.1	45.7					
E	12	138	51.1	39	21.4 N21	46.3	63	47.0 N22	24.6	50	47.7 N23	00.8	356	04.3 N15	45.6	Schedar	350	10.9	N56	24.7
	13	153	53.6	54	20.8	46.2	78	47.7	24.8	65	49.7	00.9	11	06.4	45.5	Shaula	96	58.3	S37	05.3
	14	168	56.0	69	20.1	46.2	93	48.4	25.0	80	51.7	00.9	26	08.6	45.4	Sirius	258	57.8	S16	41.1
	15	183	58.5	84	19.5	46.1	108	49.1	25.2	95	53.6	00.9	41	10.7	45.3	Spica	158	59.8	S11	02.6
	16	199	01.0	99	18.8	46.1	123	49.8	25.4	110	55.6	00.9	56	12.9	45.2	Suhail	223	12.7	S43	20.6
	17	214	03.4	114	18.2	46.0	138	50.4	25.6	125	57.5	00.9	71	15.0	45.1					
	18	229	05.9	129	17.5 N21	46.0	153	51.1 N22	25.8	140	59.5 N23	00.9	86	17.2 N15	45.0	Vega	80	56.9	N38	46.1
	19	244	08.4	144	16.9	45.9	168	51.8	26.0	156	01.5	00.9	101	19.3	44.9	Zuben'ubi	137	35.3	S15	56.9
	20	259	10.8	159	16.3	45.9	183	52.5	26.2	171										

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		8	9	10	11
LUNES	8 00	178 35.2 N16 14.2	260 05.6 12.9 N16 26.9	4.6	54.3	N 72	01 33	20 05	21 15	21 40	22 30	22 39		
	01	193 35.2 13.5	274 37.5 12.9 16 31.5	4.4	54.3	N 70	02 22	21 15	22 24	23 14	24 22	24 47		
	02	208 35.3 12.8	289 09.4 12.9 16 35.9	4.4	54.3	68	00 22	02 52	21 52	22 24	23 14	24 22		
	03	223 35.4 12.1	303 41.3 12.9 16 40.3	4.3	54.2	66	01 44	03 15	22 18	22 54	23 44	24 47		
	04	238 35.5 11.3	318 13.2 12.9 16 44.6	4.3	54.2	64	02 20	03 33	22 38	23 16	24 06	00 06		
	05	253 35.6 10.6	332 45.1 12.8 16 48.9	4.2	54.2	62	00 20	02 45	03 47	22 55	23 34	24 24	00 24	
	06	268 35.6 N16 09.9	347 16.9 12.9 N16 53.1	4.0	54.2	60	01 34	03 04	03 59	23 08	23 49	24 38	00 38	
	07	283 35.7 09.2	1 48.8 12.8 16 57.1	4.1	54.2	N 58	02 06	03 20	04 10	23 20	24 01	00 01	00 51	
	08	298 35.8 08.5	16 20.6 12.8 17 01.2	3.9	54.2	56	02 29	03 33	04 19	23 30	24 12	00 12	01 02	
	09	313 35.9 07.8	30 52.4 12.7 17 05.1	3.9	54.2	54	02 48	03 45	04 27	23 39	24 22	00 22	01 11	
	10	328 36.0 07.1	45 24.1 12.8 17 09.0	3.7	54.2	52	03 03	03 54	04 34	23 47	24 30	00 30	01 20	
	11	343 36.0 06.4	59 55.9 12.7 17 12.7	3.7	54.2	50	03 15	04 03	04 40	23 55	24 38	00 38	01 27	
	12	358 36.1 N16 05.7	74 27.6 12.7 N17 16.4	3.7	54.2	45	03 41	04 21	04 54	24 10	00 10	00 54	01 43	
	13	13 36.2 05.0	88 59.3 12.7 17 20.1	3.5	54.2	N 40	04 00	04 36	05 06	24 23	00 23	01 08	01 57	
	14	28 36.3 04.2	103 31.0 12.7 17 23.6	3.5	54.2	35	04 15	04 48	05 15	24 34	00 34	01 19	02 08	
	15	43 36.4 03.5	118 02.7 12.7 17 27.1	3.4	54.2	30	04 28	04 58	05 24	00 01	00 44	01 29	02 18	
	16	58 36.5 02.8	132 34.4 12.6 17 30.5	3.3	54.2	20	04 48	05 15	05 38	00 16	01 00	01 46	02 35	
	17	73 36.5 02.1	147 06.0 12.6 17 33.8	3.2	54.2	N 10	05 03	05 29	05 50	00 29	01 15	02 01	02 50	
	18	88 36.6 N16 01.4	161 37.6 12.6 N17 37.0	3.2	54.2	0	05 16	05 41	06 02	00 41	01 28	02 16	03 04	
	19	103 36.7 00.7	176 09.2 12.6 17 40.2	3.0	54.2	S 10	05 27	05 52	06 13	00 54	01 42	02 30	03 17	
	20	118 36.8 16 00.0	190 40.8 12.6 17 43.2	3.0	54.2	20	05 36	06 03	06 26	01 07	01 56	02 45	03 32	
	21	133 36.9 15 59.2	205 12.4 12.6 17 46.2	3.0	54.2	30	05 46	06 14	06 39	01 22	02 13	03 02	03 49	
	22	148 37.0 58.5	219 44.0 12.5 17 49.2	2.8	54.2	35	05 51	06 21	06 47	01 31	02 23	03 12	03 59	
23	163 37.0 57.8	234 15.5 12.5 17 52.0	2.7	54.2	40	05 56	06 28	06 56	01 41	02 34	03 24	04 11		
9 00	178 37.1 N15 57.1	248 47.0 12.5 N17 54.7	2.7	54.2	45	06 01	06 36	07 06	01 53	02 47	03 37	04 24		
01	193 37.2 56.4	263 18.5 12.5 17 57.4	2.6	54.2	S 50	06 06	06 45	07 19	02 08	03 03	03 54	04 40		
02	208 37.3 55.7	277 50.0 12.5 18 00.0	2.5	54.2	52	06 08	06 49	07 25	02 14	03 10	04 01	04 48		
03	223 37.4 54.9	292 21.5 12.4 18 02.5	2.4	54.2	54	06 11	06 53	07 31	02 22	03 19	04 10	04 56		
04	238 37.5 54.2	306 52.9 12.4 18 04.9	2.4	54.2	56	06 14	06 58	07 38	02 30	03 28	04 20	05 06		
05	253 37.5 53.5	321 24.3 12.5 18 07.3	2.2	54.2	58	06 16	07 03	07 46	02 40	03 39	04 31	05 16		
06	268 37.6 N15 52.8	335 55.8 12.4 N18 09.5	2.2	54.2	S 60	06 19	07 09	07 55	02 51	03 51	04 44	05 29		
07	283 37.7 52.1	350 27.2 12.3 18 11.7	2.1	54.2	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna						
08	298 37.8 51.3	4 58.5 12.4 18 13.8	2.0	54.2	8	9	10	11						
09	313 37.9 50.6	19 29.9 12.3 18 15.8	1.9	54.2	N 72	22 29	18 21	17 12	18 25	19 14	19 39			
10	328 38.0 49.9	34 01.2 12.4 18 17.7	1.9	54.2	N 70	21 44	17 12	16 35	17 40	18 30	19 02			
11	343 38.1 49.2	48 32.6 12.3 18 19.6	1.7	54.2	68	21 15	23 24	16 09	17 11	18 00	18 36			
12	358 38.2 N15 48.5	63 03.9 12.3 N18 21.3	1.7	54.2	66	20 53	22 21	15 49	16 49	17 38	18 16			
13	13 38.2 47.7	77 35.2 12.2 18 23.0	1.6	54.2	64	20 36	21 47	15 33	16 31	17 20	18 00			
14	28 38.3 47.0	92 06.4 12.3 18 24.6	1.5	54.2	62	20 22	21 23	15 20	16 16	17 05	17 46			
15	43 38.4 46.3	106 37.7 12.3 18 26.1	1.4	54.2	60	20 10	21 04	15 08	16 04	16 53	17 34			
16	58 38.5 45.6	121 09.0 12.2 18 27.5	1.4	54.2	N 58	20 00	20 49	14 49	15 43	16 32	17 15			
17	73 38.6 44.8	135 40.2 12.2 18 28.9	1.2	54.2	56	19 51	20 36	14 34	15 35	16 24	17 07			
18	88 38.7 N15 44.1	150 11.4 12.2 N18 30.1	1.2	54.2	54	19 43	20 25	14 21	15 35	16 24	17 07			
19	103 38.8 43.4	164 42.6 12.2 18 31.3	1.1	54.2	52	19 36	20 15	14 07	15 27	16 16	17 00			
20	118 38.9 42.7	179 13.8 12.2 18 32.4	1.0	54.2	50	19 30	20 07	14 19	15 11	16 00	16 44			
21	133 39.0 41.9	193 45.0 12.1 18 33.4	0.9	54.2	45	19 16	19 49	14 07	14 58	15 46	16 32			
22	148 39.0 41.2	208 16.1 12.2 18 34.3	0.8	54.3	N 40	19 05	19 34	13 56	14 47	15 35	16 21			
23	163 39.1 40.5	222 47.3 12.1 18 35.1	0.8	54.3	35	18 55	19 22	13 47	14 37	15 25	16 11			
10 00	178 39.2 N15 39.8	237 18.4 12.1 N18 35.9	0.6	54.3	30	18 47	19 12	13 31	14 20	15 08	15 55			
01	193 39.3 39.0	251 49.5 12.1 18 36.5	0.6	54.3	20	18 33	18 56	13 17	14 05	14 53	15 40			
02	208 39.4 38.3	266 20.6 12.1 18 37.1	0.5	54.3	N 10	18 20	18 42	13 04	13 51	14 39	15 27			
03	223 39.5 37.6	280 51.7 12.0 18 37.6	0.4	54.3	0	18 09	18 30	12 51	13 37	14 25	15 13			
04	238 39.6 36.8	295 22.7 12.1 18 38.0	0.3	54.3	S 10	17 58	18 19	12 37	13 22	14 10	14 59			
05	253 39.7 36.1	309 53.8 12.0 18 38.3	0.2	54.3	20	17 46	18 08	12 21	13 05	13 52	14 42			
06	268 39.8 N15 35.4	324 24.8 12.1 N18 38.5	0.1	54.3	30	17 32	17 57	12 12	12 55	13 42	14 33			
07	283 39.9 34.7	338 55.9 12.0 18 38.6	0.1	54.3	35	17 24	17 51	12 01	12 44	13 31	14 21			
08	298 40.0 33.9	353 26.9 12.0 18 38.7	0.1	54.3	40	17 15	17 44	11 49	12 31	13 17	14 08			
09	313 40.1 33.2	7 57.9 12.0 18 38.6	0.1	54.3	S 50	16 53	17 27	11 34	12 14	13 01	13 52			
10	328 40.1 32.5	22 28.9 12.0 18 38.5	0.2	54.3	52	16 47	17 23	11 27	12 07	12 53	13 45			
11	343 40.2 31.7	36 59.9 11.9 18 38.3	0.3	54.4	54	16 40	17 19	11 19	11 58	12 44	13 37			
12	358 40.3 N15 31.0	51 30.8 12.0 N18 38.0	0.4	54.4	56	16 33	17 14	11 10	11 49	12 34	13 27			
13	13 40.4 30.3	66 01.8 11.9 18 37.6	0.4	54.4	58	16 25	17 08	11 01	11 38	12 23	13 17			
14	28 40.5 29.5	80 32.7 12.0 18 37.2	0.6	54.4	S 60	16 16	17 02	10 49	11 26	12 10	13 04			
15	43 40.6 28.8	95 03.7 11.9 18 36.6	0.7	54.4	Día	SOL E.T. (-)	Pas. Mer.	LUNA			Fase			
16	58 40.7 28.1	109 34.6 11.9 18 35.9	0.7	54.4	8	00 ^b	12 ^b	Pas. Sup.	Mer. Inf.	Edad.				
17	73 40.8 27.3	124 05.5 11.9 18 35.2	0.8	54.4	9	m s	m s	h m	h m	h m	d			
18	88 40.9 N15 26.6	138 36.4 11.9 N18 34.4	0.9	54.4	10	05 40	05 36	12 06	06 53	19 16	23			
19	103 41.0 25.9	153 07.3 11.9 18 33.5	1.0	54.4	05 32	05 28	12 05	07 39	20 03	20 03	24			
20	118 41.1 25.1	167 38.2 11.9 18 32.5	1.1	54.4	05 23	05 19	12 05	08 27	20 51	20 51	25			
21	133 41.2 24.4	182 09.1 11.9 18 31.4	1.2	54.5										
22	148 41.3 23.6	196 40.0 11.8 18 30.2	1.2	54.5										
23	163 41.4 22.9	211 10.8 11.9 18 29.0	1.4	54.5										
	S.D. 15.8 d 0.7	S.D. 14.8 14.8	14.8											

T. M. G.	ARIES			VENUS -3.5			MARTE +1.1			JUPITER -1.6			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
11	00	319 20.7	219 13.7 N21	45.6	243 55.3 N22	27.0	231 11.3 N23	00.9		176 30.0 N15	44.4		Acamar	315 38.8 S40	23.4				
	01	334 23.1	234 13.0	45.6	258 56.0	27.2	246 13.2	00.9		191 32.2	44.3		Achernar	335 46.7 S57	20.7				
	02	349 25.6	249 12.4	45.5	273 56.7	27.4	261 15.2	01.0		206 34.3	44.2		Acruz	173 39.9 S62	58.7				
	03	4 28.1	264 11.7	45.4	288 57.4	27.6	276 17.1	01.0		221 36.5	44.1		Adhara	255 34.0 S28	56.4				
	04	19 30.5	279 11.1	45.4	303 58.1	27.8	291 19.1	01.0		236 38.6	44.1		Aldebaran	291 20.5 N16	27.8				
	05	34 33.0	294 10.5	45.3	318 58.8	28.1	306 21.1	01.0		251 40.8	44.0								
	06	49 35.5	309 09.8 N21	45.2	333 59.4 N22	28.3	321 23.0 N23	01.0		266 42.9 N15	43.9		Alioth	166 44.7 N56	05.1				
	07	64 37.9	324 09.2	45.2	349 00.1	28.5	336 25.0	01.0		281 45.1	43.8		Alkaid	153 20.4 N49	25.8				
	08	79 40.4	339 08.5	45.1	4 00.8	28.7	351 27.0	01.0		296 47.2	43.7		Al Na'ir	28 17.1 S47	04.0				
	J 09	94 42.9	354 07.9	45.0	19 01.5	28.9	6 28.9	01.0		311 49.4	43.6		Alnilam	276 14.0 S 1	12.9				
	U 10	109 45.3	9 07.2	44.9	34 02.2	29.1	21 30.9	01.0		326 51.5	43.5		Alphard	218 22.9 S 8	33.7				
	E 11	124 47.8	24 06.6	44.9	49 02.9	29.3	36 32.8	01.0		341 53.7	43.4								
	V 12	139 50.3	39 05.9 N21	44.8	64 03.6 N22	29.4	51 34.8 N23	01.0		356 55.8 N15	43.3		Alphecca	126 33.8 N26	47.7				
	E 13	154 52.7	54 05.3	44.7	79 04.3	29.6	66 36.8	01.0		11 58.0	43.2		Alpheratz	358 11.2 N28	58.0				
	S 14	169 55.2	69 04.6	44.6	94 05.0	29.8	81 38.7	01.0		27 00.1	43.1		Altair	62 34.2 N 8	48.8				
	15	184 57.6	84 04.0	44.6	109 05.7	30.0	96 40.7	01.1		42 02.3	43.0		Ankaa	353 42.0 S42	25.4				
	16	200 00.1	99 03.3	44.5	124 06.4	30.2	111 42.7	01.1		57 04.4	42.9		Antares	112 59.3 S26	22.9				
	17	215 02.6	114 02.7	44.4	139 07.1	30.4	126 44.6	01.1		72 06.6	42.8								
	18	230 05.0	129 02.1 N21	44.3	154 07.8 N22	30.6	141 46.6 N23	01.1		87 08.7 N15	42.7		Arcturus	146 20.4 N19	18.2				
	19	245 07.5	144 01.4	44.2	169 08.5	30.8	156 48.5	01.1		102 10.8	42.6		Atria	108 25.1 S68	59.4				
	20	260 10.0	159 00.8	44.2	184 09.2	31.0	171 50.5	01.1		117 13.0	42.5		Avior	234 29.6 S59	26.3				
	21	275 12.4	174 00.1	44.1	199 09.9	31.2	186 52.5	01.1		132 15.1	42.4		Bellatrix	279 01.1 N 6	19.8				
	22	290 14.9	188 59.5	44.0	214 10.5	31.4	201 54.4	01.1		147 17.3	42.3		Betelgeuse	271 30.7 N 7	24.2				
23	305 17.4	203 58.8	43.9	229 11.2	31.6	216 56.4	01.1		162 19.4	42.2									
12	00	320 19.8	218 58.2 N21	43.8	244 11.9 N22	31.8	231 58.4 N23	01.1		177 21.6 N15	42.1		Canopus	264 08.5 S52	40.9				
	01	335 22.3	233 57.5	43.7	259 12.6	32.0	247 00.3	01.1		192 23.7	42.0		Capella	281 14.6 N45	58.3				
	02	350 24.7	248 56.9	43.6	274 13.3	32.2	262 02.3	01.1		207 25.9	41.9		Deneb	49 49.4 N45	12.2				
	03	5 27.2	263 56.2	43.6	289 14.0	32.4	277 04.3	01.1		222 28.0	41.8		Denebola	183 01.4 N14	41.9				
	04	20 29.7	278 55.6	43.5	304 14.7	32.6	292 06.2	01.2		237 30.2	41.7		Diphda	349 22.8 S18	06.4				
	05	35 32.1	293 54.9	43.4	319 15.4	32.8	307 08.2	01.2		252 32.3	41.6								
	06	50 34.6	308 54.3 N21	43.3	334 16.1 N22	33.0	322 10.2 N23	01.2		267 34.5 N15	41.5		Dubhe	194 25.4 N61	52.4				
	07	65 37.1	323 53.6	43.2	349 16.8	33.2	337 12.1	01.2		282 36.6	41.4		Elnath	278 46.9 N28	35.2				
	08	80 39.5	338 53.0	43.1	4 17.5	33.4	352 14.1	01.2		297 38.8	41.3		Eltanin	90 58.3 N51	29.9				
	Y 09	95 42.0	353 52.3	43.0	19 18.2	33.5	7 16.1	01.2		312 40.9	41.2		Enif	34 13.3 N 9	46.5				
	I 10	110 44.5	8 51.7	42.9	34 18.9	33.7	22 18.0	01.2		327 43.1	41.1		Fomalhaut	15 53.4 S29	44.2				
	E 11	125 46.9	23 51.0	42.8	49 19.6	33.9	37 20.0	01.2		342 45.2	41.0								
	R 12	140 49.4	38 50.4 N21	42.7	64 20.3 N22	34.1	52 22.0 N23	01.2		357 47.4 N15	40.9		Gacrux	172 31.3 S56	59.5				
	N 13	155 51.9	53 49.7	42.6	79 21.0	34.3	67 23.9	01.2		12 49.5	40.8		Gienah	176 20.3 S17	25.1				
	E 14	170 54.3	68 49.1	42.5	94 21.7	34.5	82 25.9	01.2		27 51.7	40.7		Hadar	149 26.4 S60	16.1				
	S 15	185 56.8	83 48.4	42.4	109 22.4	34.7	97 27.9	01.2		42 53.8	40.6		Hamal	328 31.1 N23	21.4				
	16	200 59.2	98 47.8	42.3	124 23.1	34.9	112 29.8	01.2		57 56.0	40.5		Kaus Aust.	84 19.3 S34	23.7				
	17	216 01.7	113 47.1	42.2	139 23.8	35.1	127 31.8	01.2		72 58.1	40.4								
	18	231 04.2	128 46.5 N21	42.1	154 24.5 N22	35.3	142 33.8 N23	01.2		88 00.2 N15	40.3		Kochab	137 19.2 N74	15.2				
	19	246 06.6	143 45.8	42.0	169 25.2	35.4	157 35.7	01.3		103 02.4	40.2		Markab	14 04.9 N15	05.2				
	20	261 09.1	158 45.2	41.9	184 25.9	35.6	172 37.7	01.3		118 04.5	40.1		Menkar	314 43.3 N 4	00.2				
	21	276 11.6	173 44.5	41.8	199 26.6	35.8	187 39.7	01.3		133 06.7	40.0		Menkent	148 39.5 S36	15.7				
	22	291 14.0	188 43.9	41.7	214 27.3	36.0	202 41.6	01.3		148 08.8	39.9		Miaplacidus	221 46.2 S69	37.6				
23	306 16.5	203 43.2	41.6	229 27.9	36.2	217 43.6	01.3		163 11.0	39.8									
13	00	321 19.0	218 42.6 N21	41.4	244 28.6 N22	36.4	232 45.6 N23	01.3		178 13.1 N15	39.7		Mirfak	309 19.0 N49	46.7				
	01	336 21.4	233 41.9	41.3	259 29.3	36.6	247 47.5	01.3		193 15.3	39.6		Nunki	76 31.4 S26	19.4				
	02	351 23.9	248 41.3	41.2	274 30.0	36.8	262 49.5	01.3		208 17.4	39.5		Peacock	54 01.1 S56	48.3				
	03	6 26.4	263 40.6	41.1	289 30.7	36.9	277 51.5	01.3		223 19.6	39.4		Pollux	244 01.0 N28	04.8				
	04	21 28.8	278 40.0	41.0	304 31.4	37.1	292 53.5	01.3		238 21.7	39.3		Procyon	245 28.2 N 5	16.9				
	05	36 31.3	293 39.3	40.9	319 32.1	37.3	307 55.4	01.3		253 23.9	39.2								
	06	51 33.7	308 38.7 N21	40.8	334 32.8 N22	37.5	322 57.4 N23	01.3		268 26.0 N15	39.1		Rasalhague	96 31.3 N12	34.8				
	07	66 36.2	323 38.0	40.6	349 33.5	37.7	337 59.4	01.3		283 28.2	39.0		Regulus	208 12.5 N12	04.6				
	08	81 38.7	338 37.4	40.5	4 34.2	37.9	353 01.3	01.3		298 30.3	38.9		Rigel	281 38.2 S 8	13.6				
	S 09	96 41.1	353 36.7	40.4	19 34.9	38.1	8 03.3	01.3		313 32.5	38.8		Rigil Kent.	140 28.6 S60	44.7				
	A 10	111 43.6	8 36.1	40.3	34 35.6	38.2	23 05.3	01.4		328 34.6	38.7		Sabik	102 43.3 S15	41.7				
	B 11	126 46.1	23 35.4	40.2	49 36.3	38.4	38 07.2	01.4		343 36.8	38.6								
	A 12	141 48.5	38 34.8 N21	40.0	64 37.0 N22	38.6	53 09.2 N23	01.4		358 38.9 N15	38.5		Schedar	350 10.9 N56	24.8				
	D 13	156 51.0	53 34.1	39.9	79 37.7	38.8	68 11.2	01.4		13 41.1	38.4		Shaula	96 58.3 S37	05.3				
	O 14	171 53.5	68 33.5	39.8	94 38.4	39.0	83 13.2	01.4		28 43.2	38.3		Sirius	258 57.8 S16	41.1				
	15	186 55.9	83 32.8	39.7	109 39.1	39.2	98 15.1	01.4		43 45.4	38.2		Spica	158 59.9 S11	02.6				
	16	201 58.4	98 32.2	39.5	124 39.8	39.3	113 17.1	01.4		58 47.5	38.1		Suhail	223 12.7 S43	20.6				
	17	217 00.8	113 31.5	3															

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.		Dec.		A.H.G.		Dec.			Náut.	Civil		11	12	13	14				
	°	'	°	'	°	'	°	'												
J U E V E S	11 ^d 00	178	41.5	N15	22.2	225	41.7	11.8	N18	27.6	1.4	54.5	N 72	///	///	02 00	22 39	24 37	00 37	02 26
	01	193	41.6		21.4	240	12.5	11.8	18	26.2	1.6	54.5	N 70	///	///	02 39	23 46	25 15	01 15	02 51
	02	208	41.7		20.7	254	43.3	11.9	18	24.6	1.6	54.5	68	///	01 14	03 06	24 22	00 22	01 42	03 09
	03	223	41.8		20.0	269	14.2	11.8	18	23.0	1.7	54.5	66	///	02 03	03 26	24 47	00 47	02 02	03 24
	04	238	41.9		19.2	283	45.0	11.8	18	21.3	1.8	54.5	64	///	02 33	03 42	00 06	01 07	02 18	03 36
	05	253	42.0		18.5	298	15.8	11.8	18	19.5	1.8	54.6	62	01 06	02 56	03 55	00 24	01 23	02 32	03 46
	06	268	42.1	N15	17.7	312	46.6	11.8	N18	17.7	2.0	54.6	60	01 50	03 13	04 06	00 38	01 37	02 43	03 55
	07	283	42.2		17.0	327	17.4	11.8	18	15.7	2.0	54.6	N 58	02 18	03 28	04 16	00 51	01 48	02 53	04 02
	08	298	42.3		16.3	341	48.2	11.8	18	13.7	2.2	54.6	56	02 39	03 40	04 25	01 02	01 58	03 01	04 09
	09	313	42.4		15.5	356	19.0	11.8	18	11.5	2.2	54.6	54	02 55	03 51	04 32	01 11	02 07	03 09	04 15
	10	328	42.5		14.8	371	49.8	11.8	18	09.3	2.3	54.6	52	03 09	04 00	04 39	01 20	02 15	03 15	04 20
	11	343	42.6		14.0	385	20.6	11.7	18	07.0	2.4	54.6	50	03 21	04 08	04 45	01 27	02 22	03 22	04 25
	12	358	42.7	N15	13.3	399	51.3	11.8	N18	04.6	2.5	54.7	45	03 45	04 25	04 58	01 43	02 37	03 35	04 36
	13	13	42.7		12.5	413	22.1	11.8	18	02.1	2.6	54.7	N 40	04 03	04 39	05 08	01 57	02 49	03 45	04 44
	14	28	42.8		11.8	427	52.9	11.7	17	59.5	2.7	54.7	35	04 18	04 50	05 17	02 08	03 00	03 55	04 52
	15	43	42.9		11.1	441	23.6	11.8	17	56.8	2.7	54.7	30	04 30	05 00	05 25	02 18	03 09	04 03	04 58
	16	58	43.1		10.3	455	54.4	11.7	17	54.1	2.8	54.7	20	04 49	05 16	05 39	02 35	03 25	04 17	05 09
	17	73	43.2		09.6	469	25.1	11.8	17	51.3	3.0	54.7	N 10	05 03	05 29	05 51	02 50	03 39	04 29	05 19
	18	88	43.3	N15	08.8	483	55.9	11.7	N17	48.3	3.0	54.7	0	05 15	05 40	06 02	03 04	03 52	04 40	05 29
	19	103	43.4		08.1	497	26.6	11.8	17	45.3	3.1	54.8	S 10	05 26	05 51	06 12	03 17	04 05	04 52	05 38
	20	118	43.5		07.3	511	57.4	11.7	17	42.2	3.2	54.8	20	05 35	06 01	06 24	03 32	04 19	05 04	05 48
	21	133	43.6		06.6	525	28.1	11.8	17	39.0	3.2	54.8	30	05 44	06 12	06 37	03 49	04 35	05 18	05 59
	22	148	43.7		05.8	539	58.9	11.7	17	35.8	3.4	54.8	35	05 48	06 18	06 44	03 59	04 44	05 26	06 05
23	163	43.8		05.1	553	29.6	11.7	17	32.4	3.4	54.8	40	05 52	06 24	06 52	04 11	04 54	05 35	06 12	
V I E R N E S	12 ^d 00	178	43.9	N15	04.3	214	00.3	11.8	N17	29.0	3.6	54.8	S 50	06 01	06 40	07 14	04 40	05 21	05 58	06 31
	01	193	44.0		03.6	228	31.1	11.7	17	25.4	3.6	54.9	52	06 03	06 43	07 19	04 48	05 28	06 04	06 36
	02	208	44.1		02.8	243	01.8	11.7	17	21.8	3.7	54.9	54	06 06	06 48	07 25	04 56	05 36	06 11	06 41
	03	223	44.2		02.1	257	32.5	11.8	17	18.1	3.8	54.9	56	06 08	06 52	07 32	05 06	05 45	06 18	06 47
	04	238	44.3		01.3	272	03.3	11.7	17	14.3	3.8	54.9	58	06 10	06 57	07 39	05 16	05 55	06 26	06 53
	05	253	44.4	15	00.6	286	34.0	11.7	17	10.5	4.0	54.9	S 60	06 13	07 02	07 48	05 29	06 06	06 36	07 00
	06	268	44.5	N14	59.8	301	04.7	11.8	N17	06.5	4.0	54.9								
	07	283	44.6		59.1	315	35.5	11.7	17	02.5	4.2	55.0								
	08	298	44.7		58.3	330	06.2	11.7	16	58.3	4.2	55.0								
	09	313	44.8		57.6	344	36.9	11.8	16	54.1	4.3	55.0								
	10	328	44.9		56.8	359	07.7	11.7	16	49.8	4.3	55.0								
	11	343	45.0		56.1	373	38.4	11.8	16	45.5	4.5	55.0								
	12	358	45.1	N14	55.3	387	09.2	11.7	N16	41.0	4.5	55.0	N 72	22 03	///	///	20 46	20 29	20 20	20 13
	13	13	45.2		54.6	42	39.9	11.7	16	36.5	4.7	55.1	N 70	21 26	///	///	19 39	19 50	19 55	19 57
	14	28	45.3		53.8	57	10.6	11.8	16	31.8	4.7	55.1	68	21 01	22 46	///	19 02	19 22	19 35	19 44
	15	43	45.4		53.1	71	41.4	11.7	16	27.1	4.8	55.1	66	20 41	22 02	///	18 36	19 02	19 20	19 33
	16	58	45.5		52.3	86	12.1	11.8	16	22.3	4.9	55.1	64	20 26	21 33	///	18 16	18 45	19 07	19 24
	17	73	45.6		51.6	100	42.9	11.7	16	17.4	4.9	55.1	62	20 13	21 12	22 55	18 00	18 31	18 56	19 16
	18	88	45.7	N14	50.8	115	13.6	11.8	N16	12.5	5.1	55.2	60	20 02	20 54	22 15	17 46	18 19	18 47	19 09
	19	103	45.9		50.0	129	44.4	11.7	16	07.4	5.1	55.2	N 58	19 52	20 40	21 49	17 34	18 09	18 38	19 03
	20	118	46.0		49.3	144	15.1	11.8	16	02.3	5.2	55.2	56	19 44	20 28	21 29	17 24	18 00	18 31	18 58
	21	133	46.1		48.5	158	45.9	11.8	15	57.1	5.3	55.2	54	19 37	20 18	21 12	17 15	17 52	18 25	18 53
	22	148	46.2		47.8	173	16.7	11.7	15	51.8	5.3	55.2	52	19 30	20 09	20 59	17 07	17 45	18 19	18 49
23	163	46.3		47.0	187	47.4	11.8	15	46.5	5.5	55.3	50	19 24	20 01	20 47	17 00	17 39	18 14	18 45	
S A B A D O	13 ^d 00	178	46.4	N14	46.3	202	18.2	11.8	N15	41.0	5.5	55.3	N 40	19 01	19 30	20 06	16 32	17 14	17 53	18 29
	01	193	46.5		45.5	216	49.0	11.8	15	35.5	5.6	55.3	35	18 52	19 19	19 51	16 21	17 04	17 45	18 23
	02	208	46.6		44.7	231	19.8	11.8	15	29.9	5.7	55.3	30	18 44	19 09	19 40	16 11	16 55	17 37	18 17
	03	223	46.7		44.0	245	50.6	11.7	15	24.2	5.7	55.3	20	18 31	18 54	19 21	15 55	16 41	17 25	18 08
	04	238	46.8		43.2	260	21.3	11.8	15	18.5	5.9	55.4	N 10	18 19	18 41	19 06	15 40	16 28	17 14	18 00
	05	253	46.9		42.5	274	52.1	11.8	15	12.6	5.9	55.4	0	18 08	18 30	18 55	15 27	16 15	17 04	17 52
	06	268	47.0	N14	41.7	289	22.9	11.8	N15	06.7	6.0	55.4	S 10	17 58	18 19	18 44	15 13	16 03	16 53	17 44
	07	283	47.2		40.9	303	53.7	11.8	15	00.7	6.1	55.4	20	17 46	18 09	18 35	14 59	15 50	16 42	17 35
	08	298	47.3		40.2	318	24.5	11.9	14	54.6	6.1	55.4	30	17 34	17 58	18 27	14 42	15 35	16 29	17 25
	09	313	47.4		39.4	332	55.4	11.8	14	48.5	6.3	55.5	35	17 26	17 53	18 23	14 33	15 26	16 22	17 20
	10	328	47.5		38.7	347	26.2	11.8	14	42.2	6.3	55.5	40	17 18	17 46	18 18	14 21	15 16	16 13	17 13
	11	343	47.6		37.9	361	57.0	11.8	14	35.9	6.3	55.5	45	17 08	17 39	18 14	14 08	15 04	16 03	17 06
	12	358	47.7	N14	37.1	376	27.8	11.9	N14	29.6	6.5	55.5	S 50	16 57	17 31	18 09	1			

T. M. G.	SOL		LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.		d	P.H.		Naut.	Civil	14 15 16 17			
												h	m	h	m
DOMINGO	14 00	178 49.1	N14 28.0	190 38.2	11.9	N13 07.3	7.4 55.8	N 72	////	////	02 23	02 26	04 13	05 59	07 46
	01	193 49.2	27.2	205 09.1	11.9	12 59.9	7.3 55.8	N 70	////	////	02 55	02 51	04 28	06 07	07 46
	02	208 49.3	26.4	219 40.0	11.9	12 52.6	7.5 55.8	68	////	01 42	03 19	03 09	04 40	06 13	07 47
	03	223 49.4	25.6	234 10.9	11.9	12 45.1	7.5 55.8	66	////	02 20	03 37	03 24	04 49	06 18	07 47
	04	238 49.5	24.9	248 41.8	12.0	12 37.6	7.6 55.9	64	////	02 46	03 51	03 36	04 57	06 22	07 48
	05	253 49.6	24.1	263 12.8	11.9	12 30.0	7.7 55.9	62	01 31	03 06	04 03	03 46	05 04	06 25	07 48
	06	268 49.7	N14 23.3	277 43.7	11.9	N12 22.3	7.7 55.9	60	02 05	03 22	04 14	03 55	05 10	06 29	07 49
	07	283 49.9	22.6	292 14.6	12.0	12 14.6	7.8 55.9	N 58	02 29	03 35	04 23	04 02	05 16	06 31	07 49
	08	298 50.0	21.8	306 45.6	11.9	12 06.8	7.9 55.9	56	02 48	03 47	04 30	04 09	05 20	06 34	07 49
	09	313 50.1	21.0	321 16.5	12.0	11 58.9	7.9 56.0	54	03 03	03 57	04 37	04 15	05 24	06 36	07 49
	10	328 50.2	20.3	335 47.5	11.9	11 51.0	8.0 56.0	52	03 16	04 05	04 44	04 20	05 28	06 38	07 50
	11	343 50.3	19.5	350 18.4	12.0	11 43.0	8.0 56.0	50	03 27	04 13	04 49	04 25	05 31	06 40	07 50
	12	358 50.4	N14 18.7	4 49.4	12.0	N11 35.0	8.1 56.0	45	03 50	04 29	05 01	04 36	05 39	06 44	07 50
	13	13 50.6	17.9	19 20.4	11.9	11 26.9	8.2 56.1	N 40	04 07	04 42	05 11	04 44	05 45	06 47	07 51
	14	28 50.7	17.2	33 51.3	12.0	11 18.7	8.3 56.1	35	04 21	04 53	05 20	04 52	05 50	06 50	07 51
	15	43 50.8	16.4	48 22.3	12.0	11 10.4	8.3 56.1	30	04 32	05 02	05 27	04 58	05 55	06 53	07 51
	16	58 50.9	15.6	62 53.3	12.0	11 02.1	8.3 56.1	20	04 50	05 17	05 40	05 09	06 03	06 57	07 52
	17	73 51.0	14.8	77 24.3	12.0	10 53.8	8.4 56.1	N 10	05 04	05 29	05 51	05 19	06 10	07 01	07 52
	18	88 51.1	N14 14.1	91 55.3	12.0	N10 45.4	8.5 56.2	0	05 15	05 40	06 01	05 29	06 17	07 04	07 53
	19	103 51.3	13.3	106 26.3	12.0	10 36.9	8.6 56.2	S 10	05 25	05 50	06 11	05 38	06 23	07 08	07 53
	20	118 51.4	12.5	120 57.3	12.0	10 28.3	8.6 56.2	20	05 33	05 59	06 22	05 48	06 30	07 12	07 54
	21	133 51.5	11.7	135 28.3	12.0	10 19.7	8.6 56.2	30	05 41	06 09	06 34	05 59	06 38	07 16	07 54
	22	148 51.6	11.0	149 59.3	12.0	10 11.1	8.7 56.3	35	05 45	06 15	06 41	06 05	06 43	07 19	07 55
23	163 51.7	10.2	164 30.3	12.0	10 02.4	8.8 56.3	40	05 49	06 20	06 48	06 12	06 48	07 22	07 55	
15 00	178 51.9	N14 09.4	179 01.3	12.0	N 9 53.6	8.8 56.3	45	05 53	06 27	06 58	06 21	06 54	07 25	07 55	
01	193 52.0	08.6	193 32.3	12.0	9 44.8	8.9 56.3	S 50	05 57	06 35	07 08	06 31	07 01	07 29	07 56	
02	208 52.1	07.9	208 03.3	12.1	9 35.9	8.9 56.3	52	05 58	06 38	07 13	06 36	07 04	07 31	07 56	
03	223 52.2	07.1	222 34.4	12.0	9 27.0	9.0 56.4	54	06 00	06 42	07 19	06 41	07 08	07 33	07 57	
04	238 52.3	06.3	237 05.4	12.0	9 18.0	9.0 56.4	56	06 02	06 46	07 25	06 47	07 12	07 35	07 57	
05	253 52.5	05.5	251 36.4	12.1	9 09.0	9.1 56.4	58	06 04	06 50	07 32	06 53	07 16	07 37	07 57	
06	268 52.6	N14 04.7	266 07.5	12.0	N 8 59.9	9.1 56.4	S 60	06 06	06 55	07 40	07 00	07 21	07 40	07 58	
07	283 52.7	04.0	280 38.5	12.0	8 50.8	9.2 56.5									
08	298 52.8	03.2	295 09.5	12.1	8 41.6	9.3 56.5	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
09	313 52.9	02.4	309 40.6	12.0	8 32.3	9.2 56.5					14	15	16	17	
10	328 53.1	01.6	324 11.6	12.0	8 23.1	9.4 56.5									
11	343 53.2	00.8	338 42.6	12.1	8 13.7	9.4 56.5	N 72	21 40	////	////	20 13	20 07	20 01	19 55	
12	358 53.3	N14 00.1	353 13.7	12.0	N 8 04.3	9.4 56.6	N 70	21 10	23 36	////	19 57	19 57	19 58	19 57	
13	13 53.4	13 59.3	7 44.7	12.0	7 54.9	9.5 56.6	68	20 47	22 20	////	19 44	19 50	19 55	19 59	
14	28 53.5	58.5	22 15.7	12.1	7 45.4	9.5 56.6	66	20 30	21 44	////	19 33	19 43	19 52	20 01	
15	43 53.7	57.7	36 46.8	12.0	7 35.9	9.6 56.6	64	20 15	21 20	23 39	19 24	19 38	19 50	20 02	
16	58 53.8	56.9	51 17.8	12.1	7 26.3	9.6 56.7	62	20 04	21 00	22 32	19 16	19 33	19 48	20 03	
17	73 53.9	56.1	65 48.9	12.0	7 16.7	9.6 56.7	60	19 54	20 45	22 00	19 09	19 29	19 47	20 04	
18	88 54.0	N13 55.4	80 19.9	12.0	N 7 07.1	9.7 56.7	N 58	19 45	20 32	21 37	19 03	19 25	19 45	20 05	
19	103 54.2	54.6	94 50.9	12.1	6 57.4	9.7 56.7	56	19 37	20 20	21 18	18 58	19 22	19 44	20 06	
20	118 54.3	53.8	109 22.0	12.0	6 47.7	9.8 56.7	54	19 30	20 11	21 04	18 53	19 19	19 43	20 07	
21	133 54.4	53.0	123 53.0	12.0	6 37.9	9.8 56.8	52	19 24	20 02	20 51	18 49	19 16	19 42	20 07	
22	148 54.5	52.2	138 24.0	12.0	6 28.1	9.9 56.8	50	19 19	19 55	20 40	18 45	19 14	19 41	20 08	
23	163 54.7	51.4	152 55.0	12.1	6 18.2	9.9 56.8	45	19 07	19 39	20 18	18 36	19 08	19 39	20 09	
16 00	178 54.8	N13 50.6	167 26.1	12.0	N 6 08.3	9.9 56.8	N 40	18 57	19 26	20 01	18 29	19 04	19 37	20 10	
01	193 54.9	49.9	181 57.1	12.0	5 58.4	10.0 56.8	35	18 49	19 15	19 47	18 23	19 00	19 35	20 11	
02	208 55.0	49.1	196 28.1	12.0	5 48.4	10.0 56.9	30	18 41	19 06	19 36	18 17	18 56	19 34	20 12	
03	223 55.2	48.3	210 59.1	12.0	5 38.4	10.0 56.9	20	18 29	18 52	19 19	18 08	18 50	19 32	20 14	
04	238 55.3	47.5	225 30.1	12.0	5 28.4	10.1 56.9	N 10	18 18	18 40	19 05	18 00	18 45	19 29	20 15	
05	253 55.4	46.7	240 01.1	12.0	5 18.3	10.1 56.9	0	18 08	18 29	18 54	17 52	18 39	19 27	20 16	
06	268 55.5	N13 45.9	254 32.1	12.0	N 5 08.2	10.1 57.0	S 10	17 58	18 19	18 44	17 44	18 34	19 25	20 17	
07	283 55.7	45.1	269 03.1	12.0	4 58.1	10.2 57.0	20	17 47	18 10	18 36	17 35	18 29	19 23	20 18	
08	298 55.8	44.3	283 34.1	11.9	4 47.9	10.2 57.0	30	17 35	18 00	18 28	17 25	18 22	19 21	20 20	
09	313 55.9	43.6	298 05.0	12.0	4 37.7	10.2 57.0	35	17 29	17 55	18 25	17 20	18 19	19 19	20 20	
10	328 56.0	42.8	312 36.0	12.0	4 27.5	10.3 57.0	40	17 21	17 49	18 21	17 13	18 15	19 17	20 21	
11	343 56.2	42.0	327 07.0	11.9	4 17.2	10.3 57.1	45	17 12	17 42	18 17	17 06	18 10	19 15	20 22	
12	358 56.3	N13 41.2	341 37.9	12.0	N 4 06.9	10.3 57.1	S 50	17 01	17 35	18 13	16 56	18 04	19 13	20 24	
13	13 56.4	40.4	356 08.9	11.9	3 56.6	10.3 57.1	52	16 56	17 32	18 11	16 52	18 01	19 12	20 24	
14	28 56.6	39.6	10 39.8	11.9	3 46.3	10.4 57.1	54	16 51	17 28	18 10	16 48	17 58	19 11	20 25	
15	43 56.7	38.8	25 10.7	11.9	3 35.9	10.4 57.1	56	16 45	17 24	18 08	16 42	17 55	19 09	20 25	
16	58 56.8	38.0	39 41.6	11.9	3 25.5	10.4 57.2	58	16 38	17 20	18 06	16 37	17 51	19 08	20 26	
17	73 56.9	37.2	54 12.5	11.9	3 15.1	10.5 57.2	S 60	16 30	17 15	18 04	16 30	17 47	19 06	20 27	
18	88 57.1	N13 36.4	68 43.4	11.9	N 3 04.6	10.4 57.2									
19	103 57.2	35.6	83 14.3	11.9	2 54.2	10.5 57.2									
20	118 57.3	34.8	97 45.2	11.8	2 43.7	10.5 57.3									
21	133 57.5	34.0	112 16.0	11.9	2 33.2	10.6 57.3									
22	148 57.6	33.3	126 46.9	11.8	2 22.6	10.5 57.3									

T. M. G.	ARIES			VENUS -3.5			MARTE +1.1			JUPITER -1.7			SATURNO +0.6			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
17 00 01 02 03 04 05 06 07 M 08 I 09 E 10 R 11 C 12 O 13 L 14 E 15 S 16 17 18 19 20 21 22 23	325 15.5	217 39.7 N21	26.1	245 36.2 N22	52.8		235 55.4 N23	01.8	181 39.4 N15	30.2		Acamar	315 38.8 S40	23.4				
	340 18.0	232 39.0	25.9	260 36.9	53.0		250 57.4	01.8	196 41.5	30.1		Achernar	335 46.6 S57	20.7				
	355 20.4	247 38.3	25.7	275 37.7	53.1		265 59.4	01.8	211 43.7	30.0		Acrux	173 39.9 S62	58.7				
	10 22.9	262 37.7	25.5	290 38.4	53.3		281 01.4	01.8	226 45.8	29.9		Adhara	255 34.0 S28	56.4				
	25 25.4	277 37.0	25.3	305 39.1	53.4		296 03.3	01.8	241 48.0	29.8		Aldebaran	291 20.4 N16	27.8				
	40 27.8	292 36.4	25.1	320 39.8	53.6		311 05.3	01.8	256 50.1	29.7								
	55 30.3	307 35.7 N21	24.8	335 40.5 N22	53.7		326 07.3 N23	01.8	271 52.3 N15	29.6		Alioth	166 44.8 N56	05.1				
	70 32.8	322 35.0	24.6	350 41.2	53.9		341 09.3	01.8	286 54.4	29.5		Alkaid	153 20.4 N49	25.8				
	85 35.2	337 34.4	24.4	5 41.9	54.0		356 11.3	01.8	301 56.6	29.4		Al Na'ir	28 17.1 S47	04.0				
	100 37.7	352 33.7	24.2	20 42.6	54.2		11 13.3	01.8	316 58.7	29.3		Alnilam	276 13.9 S 1	12.9				
	115 40.2	7 33.1	24.0	35 43.3	54.3		26 15.3	01.8	332 00.9	29.2		Alphard	218 22.9 S 8	33.7				
	130 42.6	22 32.4	23.8	50 44.1	54.5		41 17.2	01.8	347 03.0	29.1								
	145 45.1	37 31.8 N21	23.5	65 44.8 N22	54.6		56 19.2 N23	01.8	2 05.2 N15	29.0		Alphecca	126 33.9 N26	47.7				
	160 47.5	52 31.1	23.3	80 45.5	54.8		71 21.2	01.8	17 07.3	28.9		Alpheratz	358 11.1 N28	58.1				
	175 50.0	67 30.4	23.1	95 46.2	54.9		86 23.2	01.9	32 09.4	28.8		Altair	62 34.2 N 8	48.8				
	190 52.5	82 29.8	22.9	110 46.9	55.1		101 25.2	01.9	47 11.6	28.7		Ankaa	353 42.0 S42	25.4				
	205 54.9	97 29.1	22.6	125 47.6	55.2		116 27.2	01.9	62 13.7	28.6		Antares	112 59.3 S26	22.9				
	220 57.4	112 28.5	22.4	140 48.3	55.4		131 29.2	01.9	77 15.9	28.5								
	235 59.9	127 27.8 N21	22.2	155 49.1 N22	55.5		146 31.2 N23	01.9	92 18.0 N15	28.4		Arcturus	146 20.5 N19	18.1				
	251 02.3	142 27.1	22.0	170 49.8	55.7		161 33.2	01.9	107 20.2	28.3		Atria	108 25.1 S68	59.4				
	266 04.8	157 26.5	21.7	185 50.5	55.8		176 35.1	01.9	122 22.3	28.2		Avior	234 29.6 S59	26.2				
	281 07.3	172 25.8	21.5	200 51.2	56.0		191 37.1	01.9	137 24.5	28.1		Bellatrix	279 01.1 N 6	19.8				
	296 09.7	187 25.2	21.3	215 51.9	56.1		206 39.1	01.9	152 26.6	28.0		Betelgeuse	271 30.7 N 7	24.2				
311 12.2	202 24.5	21.0	230 52.6	56.3		221 41.1	01.9	167 28.8	27.9									
18 00 01 02 03 04 05 06 07 08 J 09 U 10 E 11 V 12 E 13 S 14 15 16 17 18 19 20 21 22 23	326 14.7	217 23.8 N21	20.8	245 53.3 N22	56.4		236 43.1 N23	01.9	182 30.9 N15	27.8		Canopus	264 08.5 S52	40.9				
	341 17.1	232 23.2	20.6	260 54.0	56.6		251 45.1	01.9	197 33.1	27.7		Capella	281 14.5 N45	58.3				
	356 19.6	247 22.5	20.3	275 54.8	56.7		266 47.1	01.9	212 35.2	27.6		Deneb	49 49.4 N45	12.3				
	11 22.0	262 21.9	20.1	290 55.5	56.9		281 49.1	01.9	227 37.4	27.5		Denebola	183 01.4 N14	41.9				
	26 24.5	277 21.2	19.9	305 56.2	57.0		296 51.1	01.9	242 39.5	27.4		Diphda	349 22.7 S18	06.4				
	41 27.0	292 20.6	19.6	320 56.9	57.2		311 53.1	01.9	257 41.7	27.3								
	56 29.4	307 19.9 N21	19.4	335 57.6 N22	57.3		326 55.0 N23	01.9	272 43.8 N15	27.2		Dubhe	194 25.4 N61	52.4				
	71 31.9	322 19.2	19.2	350 58.3	57.5		341 57.0	01.9	287 46.0	27.1		Elnath	278 46.9 N28	35.2				
	86 34.4	337 18.6	18.9	5 59.1	57.6		356 59.0	01.9	302 48.1	27.0		Eltanin	90 58.4 N51	29.9				
	101 36.8	352 17.9	18.7	20 59.8	57.8		12 01.0	01.9	317 50.3	26.9		Enif	34 13.3 N 9	46.5				
	116 39.3	7 17.3	18.4	36 00.5	57.9		27 03.0	01.9	332 52.4	26.8		Fomalhaut	15 53.4 S29	44.2				
	131 41.8	22 16.6	18.2	51 01.2	58.0		42 05.0	01.9	347 54.6	26.7								
	146 44.2	37 15.9 N21	17.9	66 01.9 N22	58.2		57 07.0 N23	01.9	2 56.7 N15	26.6		Gacrux	172 31.4 S56	59.4				
	161 46.7	52 15.3	17.7	81 02.6	58.3		72 09.0	01.9	17 58.9	26.5		Gienah	176 20.3 S17	25.1				
	176 49.1	67 14.6	17.5	96 03.3	58.5		87 11.0	01.9	33 01.0	26.4		Hadar	149 26.4 S60	16.1				
	191 51.6	82 14.0	17.2	111 04.1	58.6		102 13.0	01.9	48 03.2	26.3		Hamal	328 31.1 N23	21.4				
	206 54.1	97 13.3	17.0	126 04.8	58.8		117 15.0	01.9	63 05.3	26.2		Kaus Aust.	84 19.3 S34	23.7				
	221 56.5	112 12.6	16.7	141 05.5	58.9		132 17.0	01.9	78 07.5	26.1								
	236 59.0	127 12.0 N21	16.5	156 06.2 N22	59.0		147 19.0 N23	01.9	93 09.6 N15	26.0		Kochab	137 19.3 N74	15.2				
	252 01.5	142 11.3	16.2	171 06.9	59.2		162 21.0	01.9	108 11.8	25.9		Markab	14 04.9 N15	05.2				
	267 03.9	157 10.7	16.0	186 07.6	59.3		177 22.9	01.9	123 13.9	25.8		Menkar	314 43.2 N 4	00.2				
	282 06.4	172 10.0	15.7	201 08.4	59.5		192 24.9	02.0	138 16.1	25.7		Menkent	148 39.6 S36	15.7				
	297 08.9	187 09.3	15.4	216 09.1	59.6		207 26.9	02.0	153 18.2	25.6		Miaplacidus	221 46.2 S69	37.6				
312 11.3	202 08.7	15.2	231 09.8	59.7		222 28.9	02.0	168 20.4	25.5									
19 00 01 02 03 04 05 06 07 08 V 09 I 10 E 11 R 12 N 13 E 14 S 15 16 17 18 19 20 21 22 23	327 13.8	217 08.0 N21	14.9	246 10.5 N22	59.9		237 30.9 N23	02.0	183 22.5 N15	25.4		Mirfak	309 19.0 N49	46.7				
	342 16.3	232 07.4	14.7	261 11.2 N23	00.0		252 32.9	02.0	198 24.7	25.3		Nunki	76 31.5 S26	19.4				
	357 18.7	247 06.7	14.4	276 12.0	00.2		267 34.9	02.0	213 26.8	25.2		Peacock	54 01.1 S56	48.4				
	12 21.2	262 06.0	14.2	291 12.7	00.3		282 36.9	02.0	228 29.0	25.1		Pollux	244 01.0 N28	04.8				
	27 23.6	277 05.4	13.9	306 13.4	00.4		297 38.9	02.0	243 31.1	25.0		Procyon	245 28.2 N 5	17.0				
	42 26.1	292 04.7	13.6	321 14.1	00.6		312 40.9	02.0	258 33.3	25.0								
	57 28.6	307 04.1 N21	13.4	336 14.8 N23	00.7		327 42.9 N23	02.0	273 35.4 N15	24.9		Rasalhague	96 31.3 N12	34.8				
	72 31.0	322 03.4	13.1	351 15.5	00.9		342 44.9	02.0	288 37.6	24.8		Regulus	208 12.5 N12	04.6				
	87 33.5	337 02.7	12.8	6 16.3	01.0		357 46.9	02.0	303 39.7	24.7		Rigel	281 38.1 S 8	13.6				
	102 36.0	352 02.1	12.6	21 17.0	01.1		12 48.9	02.0	318 41.9	24.6		Rigil Kent.	140 28.7 S60	44.7				
	117 38.4	7 01.4	12.3	36 17.7	01.3		27 50.9	02.0	333 44.0	24.5		Sabik	102 43.4 S15	41.7				
	132 40.9	22 00.8	12.0	51 18.4	01.4		42 52.9	02.0	348 46.2	24.4								
	147 43.4	37 00.1 N21	11.8	66 19.1 N23	01.5		57 54.9 N23	02.0	3 48.3 N15	24.3		Schedar	350 10.9 N56	24.8				
	162 45.8	51 59.5	11.5	81 19.9	01.7		72 56.9	02.0	18 50.5	24.2		Shaula	96 58.3 S37	05.3				
	177 48.3	66 58.8	11.2	96 20.6	01.8		87 58.9	02.0	33 52.6	24.1		Sirius	258 57.8 S16	41.1				
	192 50.8	81 58.1	11.0	111 21.3	02.0		103 00.9	02.0	48 54.8	24.0		Spica	158 59.9 S11	02.6				
	207 53.2	96 57.5	10.7	126 22.0	02.1		118 02.9	02.0	63 56.9	23.9		Suhail	223 12.7 S43	20.5				
	222 55.7	111 56.8	10.4	141 22.7	02.2		133 04.9	02.0	78 59.1	23.8								
	237 58.1	126 56.2 N21	10.1	156 23.5 N23</														

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol		Orto Luna									
	A.H.G.		Dec.		A.H.G.		Dec.			Náut.		Civil		17		18		19		20			
	°	'	°	'	°	'	°	'		h	m	h	m	h	m	h	m	h	m	h	m		
M I E R C O L E S	17 00	178	57.9	N13	31.7	155	48.5	11.8	N	2	01.5	10.5	57.3	N 72	02 43	07 46	09 34	11 25	13 22				
	01	193	58.0		30.9	170	19.3	11.8		1	51.0	10.6	57.4	N 70	01 11	03 11	07 46	09 28	11 12	12 59			
	02	208	58.1		30.1	184	50.1	11.8		1	40.4	10.6	57.4	68	02 04	03 31	07 47	09 23	11 01	12 40			
	03	223	58.2	·	29.3	199	20.9	11.7		1	29.8	10.7	57.4	66	02 35	03 47	07 47	09 19	10 52	12 26			
	04	238	58.4		28.5	213	51.6	11.8		1	19.1	10.6	57.4	64	01 02	02 58	04 00	07 48	09 16	10 45	12 14		
	05	253	58.5		27.7	228	22.4	11.7		1	08.5	10.7	57.4	62	01 50	03 16	04 11	07 48	09 13	10 38	12 04		
	06	268	58.6	N13	26.9	242	53.1	11.7	N	0	57.8	10.6	57.5	60	02 18	03 31	04 21	07 49	09 10	10 33	11 56		
	07	283	58.8		26.1	257	23.8	11.7		0	47.2	10.7	57.5	N 58	02 40	03 43	04 29	07 49	09 08	10 28	11 48		
	08	298	58.9		25.3	271	54.5	11.7		0	36.5	10.7	57.5	56	02 57	03 54	04 36	07 49	09 06	10 24	11 42		
	09	313	59.0	·	24.5	286	25.2	11.6		0	25.8	10.7	57.5	54	03 11	04 03	04 43	07 49	09 04	10 20	11 36		
	10	328	59.2		23.7	300	55.8	11.7		0	15.1	10.7	57.5	52	03 23	04 11	04 48	07 50	09 02	10 16	11 31		
	11	343	59.3		22.9	315	26.5	11.6	N	0	04.4	10.7	57.6	50	03 33	04 18	04 54	07 50	09 01	10 13	11 26		
	12	358	59.4	N13	22.1	329	57.1	11.6	S	0	06.3	10.7	57.6	45	03 54	04 33	05 05	07 50	08 58	10 06	11 16		
	13	13	59.6		21.3	344	27.7	11.6		0	17.0	10.7	57.6	N 40	04 11	04 45	05 14	07 51	08 55	10 01	11 07		
	14	28	59.7		20.5	358	58.3	11.5		0	27.7	10.7	57.6	35	04 23	04 55	05 22	07 51	08 53	09 56	11 00		
	15	43	59.8	·	19.7	13	28.8	11.5		0	38.4	10.7	57.6	30	04 34	05 04	05 29	07 51	08 51	09 52	10 53		
	16	59	00.0		18.9	27	59.3	11.6		0	49.1	10.8	57.7	20	04 51	05 18	05 41	07 52	08 47	09 44	10 43		
	17	74	00.1		18.1	42	29.9	11.4		0	59.9	10.7	57.7	N 10	05 04	05 29	05 51	07 52	08 44	09 38	10 33		
	18	89	00.2	N13	17.3	57	00.3	11.5	S	1	10.6	10.7	57.7	0	05 15	05 39	06 00	07 53	08 42	09 32	10 24		
	19	104	00.4		16.5	71	30.8	11.4		1	21.3	10.7	57.7	S 10	05 23	05 48	06 10	07 53	08 39	09 26	10 15		
	20	119	00.5		15.7	86	01.2	11.5		1	32.0	10.8	57.7	20	05 31	05 57	06 20	07 54	08 36	09 20	10 06		
	21	134	00.6	·	14.9	100	31.7	11.3		1	42.8	10.7	57.8	30	05 38	06 06	06 31	07 54	08 33	09 13	09 55		
	22	149	00.8		14.1	115	02.0	11.4		1	53.5	10.7	57.8	35	05 42	06 11	06 37	07 55	08 31	09 09	09 49		
23	164	00.9		13.3	129	32.4	11.3		2	04.2	10.7	57.8	40	05 45	06 17	06 44	07 55	08 29	09 04	09 42			
					45	05 48	06 23	06 53	07 55	08 26	08 59	09 34											
J U E V E S	18 00	179	01.1	N13	12.5	144	02.7	11.3	S	2	14.9	10.7	57.8	S 50	05 51	06 29	07 03	07 56	08 23	08 53	09 25		
	01	194	01.2		11.7	158	33.0	11.3		2	25.6	10.7	57.8	52	05 53	06 32	07 07	07 56	08 22	08 50	09 20		
	02	209	01.3		10.9	173	03.3	11.3		2	36.3	10.7	57.9	54	05 54	06 36	07 13	07 57	08 21	08 47	09 15		
	03	224	01.5	·	10.0	187	33.6	11.2		2	47.0	10.7	57.9	56	05 56	06 39	07 18	07 57	08 19	08 43	09 10		
	04	239	01.6		09.2	202	03.8	11.2		2	57.7	10.7	57.9	58	05 57	06 43	07 24	07 57	08 17	08 39	09 04		
	05	254	01.7		08.4	216	34.0	11.2		3	08.4	10.6	57.9	S 60	05 59	06 47	07 32	07 58	08 15	08 35	08 57		
	06	269	01.9	N13	07.6	231	04.2	11.1	S	3	19.0	10.7	57.9										
	07	284	02.0		06.8	245	34.3	11.1		3	29.7	10.6	57.9										
	08	299	02.1		06.0	260	04.4	11.1		3	40.3	10.6	58.0										
	09	314	02.3	·	05.2	274	34.5	11.1		3	50.9	10.6	58.0										
	10	329	02.4		04.4	289	04.6	11.0		4	01.5	10.6	58.0										
	11	344	02.6		03.6	303	34.6	11.0		4	12.1	10.6	58.0										
	12	359	02.7	N13	02.8	318	04.6	10.9	S	4	22.7	10.6	58.0										
	13	14	02.8		02.0	332	34.5	10.9		4	33.3	10.5	58.1										
	14	29	03.0		01.2	347	04.4	10.9		4	43.8	10.5	58.1										
	15	44	03.1	13	00.4	1	34.3	10.8		4	54.3	10.5	58.1										
	16	59	03.3	12	59.5	16	04.1	10.9		5	04.8	10.5	58.1										
	17	74	03.4		58.7	30	34.0	10.7		5	15.3	10.4	58.1										
	18	89	03.5	N12	57.9	45	03.7	10.8	S	5	25.7	10.5	58.1	N 58	19 37	20 23	21 25	20 05	20 26	20 49	21 16		
	19	104	03.7		57.1	59	33.5	10.7		5	36.2	10.4	58.2	56	19 30	20 12	21 09	20 06	20 29	20 54	21 23		
	20	119	03.8		56.3	74	03.2	10.6		5	46.6	10.4	58.2	54	19 24	20 03	20 55	20 07	20 31	20 58	21 29		
	21	134	04.0	·	55.5	88	32.8	10.7		5	57.0	10.3	58.2	52	19 18	19 55	20 43	20 07	20 34	21 02	21 35		
	22	149	04.1		54.7	103	02.5	10.6		6	07.3	10.3	58.2	50	19 13	19 48	20 33	20 08	20 36	21 06	21 40		
23	164	04.2		53.9	117	32.1	10.5		6	17.6	10.3	58.2	45	19 02	19 33	20 12	20 09	20 41	21 14	21 52			
V I E R N E S	19 00	179	04.4	N12	53.1	132	01.6	10.5	S	6	27.9	10.3	58.2	N 40	18 53	19 22	19 56	20 10	20 45	21 21	22 01		
	01	194	04.5		52.2	146	31.1	10.5		6	38.2	10.2	58.3	35	18 45	19 12	19 43	20 11	20 48	21 27	22 09		
	02	209	04.7		51.4	161	00.6	10.4		6	48.4	10.2	58.3	30	18 38	19 03	19 33	20 12	20 51	21 32	22 16		
	03	224	04.8	·	50.6	175	30.0	10.4		6	58.6	10.2	58.3	20	18 27	18 49	19 16	20 14	20 56	21 41	22 29		
	04	239	04.9		49.8	189	59.4	10.4		7	08.8	10.1	58.3	N 10	18 17	18 38	19 03	20 15	21 01	21 49	22 40		
	05	254	05.1		49.0	204	28.8	10.3		7	18.9	10.1	58.3	0	18 07	18 28	18 53	20 16	21 05	21 57	22 50		
	06	269	05.2	N12	48.2	218	58.1	10.2	S	7	29.0	10.1	58.3	S 10	17 58	18 19	18 44	20 17	21 10	22 04	23 00		
	07	284	05.4		47.4	233	27.3	10.3		7	39.1	10.0	58.4	20	17 48	18 11	18 37	20 18	21 14	22 12	23 11		
	08	299	05.5		46.5	247	56.6	10.1		7	49.1	10.0	58.4	30	17 37								

T. M. G.	ARIES			VENUS -3.5			MARTE +1.1			JUPITER -1.7			SATURNO +0.6			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
20 ^d 00 01 02 03 04 05 06 07 08 S 09 A 10 B 11 A 12 D 13 O 14 15 16 17 18 19 20 21 22 23	328	12.9		216	52.2	N21 08.5	246	27.8	N23 03.2	238	18.8	N23 02.0	184	14.1	N15 23.1	Acomar	315	38.7	S40 23.4
	343	15.4		231	51.5	08.2	261	28.5	03.3	253	20.8	02.0	199	16.3	23.0	Achernar	335	46.6	S57 20.7
	358	17.9		246	50.9	07.9	276	29.2	03.4	268	22.8	02.0	214	18.4	22.9	Acrux	173	39.9	S62 58.7
	13	20.3		261	50.2	07.6	291	30.0	03.5	283	24.8	02.0	229	20.6	22.8	Adhara	255	34.0	S28 56.4
	28	22.8		276	49.6	07.3	306	30.7	03.7	298	26.8	02.0	244	22.7	22.7	Aldebaran	291	20.4	N16 27.8
	43	25.2		291	48.9	07.0	321	31.4	03.8	313	28.8	02.0	259	24.9	22.6				
	58	27.7		306	48.2	N21 06.8	336	32.1	N23 03.9	328	30.8	N23 02.0	274	27.0	N15 22.5	Alioth	166	44.8	N56 05.1
	73	30.2		321	47.6	06.5	351	32.8	04.1	343	32.8	02.0	289	29.1	22.4	Alkaid	153	20.4	N49 25.8
	88	32.6		336	46.9	06.2	6	33.6	04.2	358	34.8	02.0	304	31.3	22.3	Al Na'ir	28	17.1	S47 04.0
	103	35.1		351	46.3	05.9	21	34.3	04.3	13	36.8	02.0	319	33.4	22.2	Alnilam	276	13.9	S 1 12.9
	118	37.6		6	45.6	05.6	36	35.0	04.5	28	38.8	02.0	334	35.6	22.1	Alphard	218	22.9	S 8 33.7
	133	40.0		21	45.0	05.3	51	35.7	04.6	43	40.8	02.0	349	37.7	22.0				
	148	42.5		36	44.3	N21 05.0	66	36.5	N23 04.7	58	42.9	N23 02.0	4	39.9	N15 21.9	Alphecca	126	33.9	N26 47.7
	163	45.0		51	43.6	04.7	81	37.2	04.8	73	44.9	02.1	19	42.0	21.8	Alpheratz	358	11.1	N28 58.1
	178	47.4		66	43.0	04.4	96	37.9	05.0	88	46.9	02.1	34	44.2	21.7	Altair	62	34.2	N 8 48.8
	193	49.9		81	42.3	04.1	111	38.6	05.1	103	48.9	02.1	49	46.3	21.6	Ankaa	353	42.0	S42 25.4
	208	52.4		96	41.7	03.8	126	39.4	05.2	118	50.9	02.1	64	48.5	21.5	Antares	112	59.3	S26 22.9
	223	54.8		111	41.0	03.5	141	40.1	05.4	133	52.9	02.1	79	50.6	21.4				
	238	57.3		126	40.3	N21 03.2	156	40.8	N23 05.5	148	54.9	N23 02.1	94	52.8	N15 21.3	Arcturus	146	20.5	N19 18.1
	253	59.7		141	39.7	02.9	171	41.5	05.6	163	56.9	02.1	109	54.9	21.2	Atria	108	25.2	S68 59.4
	269	02.2		156	39.0	02.6	186	42.3	05.7	178	58.9	02.1	124	57.1	21.1	Avior	234	29.6	S59 26.2
	284	04.7		171	38.4	02.3	201	43.0	05.9	194	00.9	02.1	139	59.2	21.0	Bellatrix	279	01.1	N 6 19.8
	299	07.1		186	37.7	02.0	216	43.7	06.0	209	02.9	02.1	155	01.4	20.9	Betelgeuse	271	30.7	N 7 24.2
314	09.6		201	37.1	01.7	231	44.4	06.1	224	04.9	02.1	170	03.5	20.8					
21 00 01 02 03 04 05 06 07 D 08 O 09 M 10 I 11 N 12 G 13 O 14 15 16 17 18 19 20 21 22 23	329	12.1		216	36.4	N21 01.4	246	45.2	N23 06.2	239	06.9	N23 02.1	185	05.7	N15 20.7	Canopus	264	08.4	S52 40.9
	344	14.5		231	35.7	01.1	261	45.9	06.4	254	08.9	02.1	200	07.8	20.6	Capella	281	14.5	N45 58.3
	359	17.0		246	35.1	00.8	276	46.6	06.5	269	10.9	02.1	215	10.0	20.5	Deneb	49	49.4	N45 12.3
	14	19.5		261	34.4	00.5	291	47.3	06.6	284	12.9	02.1	230	12.1	20.4	Denebola	183	01.4	N14 41.9
	29	21.9		276	33.8	21 00.2	306	48.1	06.7	299	14.9	02.1	245	14.3	20.3	Diphda	349	22.7	S18 06.4
	44	24.4		291	33.1	20 59.9	321	48.8	06.9	314	16.9	02.1	260	16.4	20.2				
	59	26.9		306	32.4	N20 59.6	336	49.5	N23 07.0	329	18.9	N23 02.1	275	18.6	N15 20.1	Dubhe	194	25.4	N61 52.4
	74	29.3		321	31.8	59.2	351	50.2	07.1	344	20.9	02.1	290	20.7	20.0	Elnath	278	46.9	N28 35.2
	89	31.8		336	31.1	58.9	6	51.0	07.2	359	22.9	02.1	305	22.9	19.9	Eltanin	90	58.4	N51 29.9
	104	34.2		351	30.5	58.6	21	51.7	07.3	14	24.9	02.1	320	25.0	19.8	Enif	34	13.3	N 9 46.5
	119	36.7		6	29.8	58.3	36	52.4	07.5	29	26.9	02.1	335	27.2	19.7	Fomalhaut	15	53.4	S29 44.2
	134	39.2		21	29.2	58.0	51	53.2	07.6	44	28.9	02.1	350	29.3	19.6				
	149	41.6		36	28.5	N20 57.7	66	53.9	N23 07.7	59	30.9	N23 02.1	5	31.5	N15 19.5	Gacrux	172	31.4	S56 59.4
	164	44.1		51	27.8	57.3	81	54.6	07.8	74	32.9	02.1	20	33.6	19.4	Gienah	176	20.3	S17 25.1
	179	46.6		66	27.2	57.0	96	55.3	07.9	89	35.0	02.1	35	35.8	19.3	Hadar	149	26.5	S60 16.1
	194	49.0		81	26.5	56.7	111	56.1	08.1	104	37.0	02.1	50	38.0	19.2	Hamal	328	31.1	N23 21.4
	209	51.5		96	25.9	56.4	126	56.8	08.2	119	39.0	02.1	65	40.1	19.1	Kaus Aust.	84	19.3	S34 23.7
	224	54.0		111	25.2	56.1	141	57.5	08.3	134	41.0	02.1	80	42.3	19.0				
	239	56.4		126	24.5	N20 55.7	156	58.2	N23 08.4	149	43.0	N23 02.1	95	44.4	N15 18.9	Kochab	137	19.3	N74 15.2
	254	58.9		141	23.9	55.4	171	59.0	08.5	164	45.0	02.1	110	46.6	18.8	Markab	14	04.9	N15 05.2
	270	01.3		156	23.2	55.1	186	59.7	08.7	179	47.0	02.1	125	48.7	18.7	Menkar	314	43.2	N 4 00.2
	285	03.8		171	22.6	54.8	202	00.4	08.8	194	49.0	02.1	140	50.9	18.6	Menkent	148	39.6	S36 15.7
	300	06.3		186	21.9	54.4	217	01.2	08.9	209	51.0	02.1	155	53.0	18.5	Miaplacidus	221	46.2	S69 37.5
315	08.7		201	21.3	54.1	232	01.9	09.0	224	53.0	02.1	170	55.2	18.4					
22 00 01 02 03 04 05 06 07 08 L 09 U 10 N 11 E 12 S 13 14 15 16 17 18 19 20 21 22 23	330	11.2		216	20.6	N20 53.8	247	02.6	N23 09.1	239	55.0	N23 02.1	185	57.3	N15 18.3	Mirfak	309	18.9	N49 46.7
	345	13.7		231	19.9	53.4	262	03.4	09.3	254	57.0	02.1	200	59.5	18.2	Nunki	76	31.5	S26 19.4
	0	16.1		246	19.3	53.1	277	04.1	09.4	269	59.0	02.1	216	01.6	18.1	Punck	54	01.1	S56 48.4
	15	18.6		261	18.6	52.8	292	04.8	09.5	285	01.1	02.1	231	03.8	18.0	Pollux	244	01.0	N28 04.8
	30	21.1		276	18.0	52.4	307	05.5	09.6	300	03.1	02.1	246	05.9	17.9	Procyon	245	28.2	N 5 17.0
	45	23.5		291	17.3	52.1	322	06.3	09.7	315	05.1	02.1	261	08.1	17.8				
	60	26.0		306	16.7	N20 51.8	337	07.0	N23 09.8	330	07.1	N23 02.1	276	10.2	N15 17.7	Rasalhague	96	31.3	N12 34.8
	75	28.5		321	16.0	51.4	352	07.7	09.9	345	09.1	02.1	291	12.4	17.6	Regulus	208	12.5	N12 04.6
	90	30.9		336	15.4	51.1	7	08.5	10.1	0	11.1	02.1	306	14.5	17.5	Rigel	281	38.1	S 8 13.6
	105	33.4		351	14.7	50.8	22	09.2	10.2	15	13.1	02.1	321	16.7	17.4	Rigil Kent.	140	28.7	S60 44.7
	120	35.8		6	14.0	50.4	37	09.9	10.3	30	15.1	02.1	336	18.8	17.3	Sabik	102	43.4	S15 41.7
	135	38.3		21	13.4	50.1	52	10.7	10.4	45	17.1	02.1	351	21.0	17.2				
	150	40.8		36	12.7	N20 49.7	67	11.4	N23 10.5	60	19.1	N23 02.1	6	23.1	N15 17.1	Schedar	350	10.8	N56 24.8
	165	43.2		51	12.1	49.4	82	12.1	10.6	75	21.2	02.1	21	25.3	17.0	Shaula	96	58.4	S37 05.3
	180	45.7		66	11.4	49.0	97	12.9	10.7	90	23.2	02.1	36	27.4	16.9	Sirius	258	57.8	S16 41.1
	195	48.2		81	10.8	48.7	112	13.6	10.9	105	25.2	02.1	51	29.6	16.8	Spica	158	59.9	S11 02.6
	210	50.6		96	10.1	48.4	127	14.3	11.0	120	27.2	02.1	66	31.7	16.7	Suhail	223	12.7	S43 20.5
	225	53.1		111	09.4	48.0	142	15.1	11.1	135	29.2	02.1	81	33.9	16.6				
	240	55.6		126	08.8	N20 47.7	157	15.8	N23 11.2	150	31.2	N23 02.1	96	36.0	N15 16.5	Vega	80	56.9	N38 46.1
	255	58.0		141	08.1	47.3	172	16.5	11.3										

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	20		21		22		23	
												h	m	h	m	h	m	h	m
S A B A D O	20 00	179 07.8	N12 33.4	119 38.1	9.4	S10 23.4	9.3	58.6	N 72	////	////	03 01	13 22	15 27	18 01	■			
	01	194 08.0	32.6	134 06.5	9.4	10 32.7	9.1	58.6	N 70	////	01 43	03 25	12 59	14 47	16 32	17 57			
	02	209 08.1	31.8	148 34.9	9.3	10 41.8	9.1	58.7	68	////	02 23	03 43	12 40	14 20	15 52	17 09			
	03	224 08.3	31.0	163 03.2	9.3	10 50.9	9.1	58.7	66	////	02 50	03 58	12 26	13 59	15 25	16 38			
	04	239 08.4	30.2	177 31.5	9.3	11 00.0	9.0	58.7	64	01 30	03 10	04 09	12 14	13 42	15 04	16 15			
	05	254 08.6	29.3	191 59.8	9.2	11 09.0	8.9	58.7	62	02 06	03 26	04 19	12 04	13 29	14 48	15 57			
	06	269 08.7	N12 28.5	206 28.0	9.1	S11 17.9	8.9	58.7	60	02 31	03 39	04 28	11 56	13 17	14 34	15 41			
	07	284 08.9	27.7	220 56.1	9.1	11 26.8	8.8	58.7	N 58	02 50	03 51	04 36	11 48	13 07	14 22	15 29			
	08	299 09.0	26.9	235 24.2	9.1	11 35.6	8.7	58.7	56	03 05	04 00	04 42	11 42	12 59	14 11	15 17			
	09	314 09.2	26.0	249 52.3	9.0	11 44.3	8.7	58.8	54	03 18	04 09	04 48	11 36	12 51	14 02	15 08			
	10	329 09.3	25.2	264 20.3	8.9	11 53.0	8.6	58.8	52	03 29	04 16	04 53	11 31	12 44	13 54	14 59			
	11	344 09.5	24.4	278 48.2	8.9	12 01.6	8.5	58.8	50	03 39	04 23	04 58	11 26	12 38	13 47	14 51			
	12	359 09.6	N12 23.6	293 16.1	8.8	S12 10.1	8.5	58.8	45	03 59	04 37	05 08	11 16	12 24	13 31	14 35			
	13	14 09.8	22.7	307 43.9	8.8	12 18.6	8.4	58.8	N 40	04 14	04 48	05 17	11 07	12 13	13 19	14 21			
	14	29 09.9	21.9	322 11.7	8.7	12 27.0	8.3	58.8	35	04 26	04 58	05 24	11 00	12 04	13 08	14 09			
	15	44 10.0	21.1	336 39.4	8.7	12 35.3	8.3	58.8	30	04 36	05 06	05 31	10 53	11 56	12 58	13 59			
	16	59 10.2	20.3	351 07.1	8.7	12 43.6	8.1	58.9	20	04 52	05 19	05 42	10 43	11 42	12 42	13 42			
	17	74 10.3	19.4	5 34.8	8.5	12 51.7	8.2	58.9	N 10	05 04	05 29	05 51	10 33	11 30	12 28	13 27			
	18	89 10.5	N12 18.6	20 02.3	8.6	S12 59.9	8.0	58.9	0	05 14	05 39	06 00	10 24	11 18	12 15	13 13			
	19	104 10.6	17.8	34 29.9	8.5	13 07.9	8.0	58.9	S 10	05 22	05 47	06 08	10 15	11 07	12 02	12 59			
	20	119 10.8	16.9	48 57.4	8.4	13 15.9	7.8	58.9	20	05 29	05 55	06 18	10 06	10 55	11 48	12 44			
	21	134 10.9	16.1	63 24.8	8.3	13 23.7	7.8	58.9	30	05 35	06 03	06 28	09 55	10 41	11 32	12 27			
	22	149 11.1	15.3	77 52.1	8.4	13 31.5	7.8	58.9	35	05 38	06 08	06 34	09 49	10 34	11 23	12 17			
23	164 11.3	14.5	92 19.5	8.2	13 39.3	7.6	58.9	40	05 41	06 13	06 40	09 42	10 25	11 12	12 05				
21 00	179 11.4	N12 13.6	106 46.7	8.3	S13 46.9	7.6	59.0	45	05 44	06 18	06 48	09 34	10 14	11 00	11 52				
01	194 11.6	12.8	121 14.0	8.1	13 54.5	7.5	59.0	S 50	05 46	06 24	06 57	09 25	10 02	10 45	11 36				
02	209 11.7	12.0	135 41.1	8.1	14 02.0	7.4	59.0	52	05 47	06 27	07 01	09 20	09 56	10 38	11 28				
03	224 11.9	11.1	150 08.2	8.1	14 09.4	7.3	59.0	54	05 48	06 29	07 06	09 15	09 49	10 30	11 20				
04	239 12.0	10.3	164 35.3	8.0	14 16.7	7.2	59.0	56	05 49	06 33	07 11	09 10	09 42	10 22	11 10				
05	254 12.2	09.5	179 02.3	8.0	14 23.9	7.2	59.0	58	05 50	06 36	07 17	09 04	09 34	10 12	11 00				
06	269 12.3	N12 08.7	193 29.3	7.9	S14 31.1	7.1	59.0	S 60	05 51	06 40	07 23	08 57	09 25	10 01	10 47				
07	284 12.5	07.8	207 56.2	7.8	14 38.2	6.9	59.0												
08	299 12.6	07.0	222 23.0	7.8	14 45.1	6.9	59.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna							
09	314 12.8	06.2	236 49.8	7.8	14 52.0	6.8	59.1			Civil	Náut.	20	21	22	23				
10	329 12.9	05.3	251 16.6	7.7	14 58.8	6.7	59.1					h m	h m	h m	h m				
11	344 13.1	04.5	265 43.3	7.6	15 05.5	6.7	59.1	N 72	21 00	23 38	////	19 35	19 25	18 50	■				
12	359 13.2	N12 03.7	280 09.9	7.6	S15 12.2	6.5	59.1	N 70	20 38	22 16	////	20 00	20 06	20 20	20 56				
13	14 13.4	02.8	294 36.5	7.6	15 18.7	6.4	59.1	68	20 20	21 39	////	20 20	20 34	20 59	21 44				
14	29 13.5	02.0	309 03.1	7.5	15 25.1	6.3	59.1	66	20 06	21 13	23 42	20 35	20 55	21 27	22 15				
15	44 13.7	01.2	323 29.6	7.4	15 31.4	6.3	59.1	64	19 55	20 54	22 29	20 48	21 13	21 48	22 38				
16	59 13.9	00.3	337 56.0	7.4	15 37.7	6.1	59.1	62	19 45	20 38	21 56	20 58	21 27	22 05	22 57				
17	74 14.0	11 59.5	352 22.4	7.4	15 43.8	6.1	59.1	60	19 36	20 25	21 32	21 08	21 39	22 19	23 12				
18	89 14.2	N11 58.6	6 48.8	7.3	S15 49.9	5.9	59.2	N 58	19 29	20 14	21 14	21 16	21 49	22 31	23 25				
19	104 14.3	57.8	21 15.1	7.3	15 55.8	5.9	59.2	56	19 23	20 04	20 59	21 23	21 58	22 42	23 36				
20	119 14.5	57.0	35 41.4	7.2	16 01.7	5.8	59.2	54	19 17	19 56	20 46	21 29	22 06	22 51	23 46				
21	134 14.6	56.1	50 07.6	7.1	16 07.5	5.6	59.2	52	19 12	19 49	20 35	21 35	22 14	23 00	23 54				
22	149 14.8	55.3	64 33.7	7.2	16 13.1	5.6	59.2	50	19 07	19 42	20 26	21 40	22 20	23 07	24 02				
23	164 14.9	54.5	78 59.9	7.0	16 18.7	5.4	59.2	45	18 57	19 28	20 06	21 52	22 34	23 23	24 19				
22 00	179 15.1	N11 53.6	93 25.9	7.1	S16 24.1	5.4	59.2	N 40	18 49	19 17	19 51	22 01	22 46	23 36	24 33				
01	194 15.3	52.8	107 52.0	7.0	16 29.5	5.2	59.2	35	18 41	19 08	19 39	22 09	22 56	23 47	24 44				
02	209 15.4	52.0	122 18.0	6.9	16 34.7	5.1	59.2	30	18 35	19 00	19 29	22 16	23 05	23 57	24 54				
03	224 15.6	51.1	136 43.9	6.9	16 39.8	5.1	59.2	20	18 24	18 47	19 14	22 29	23 20	24 14	00 14				
04	239 15.7	50.3	151 09.8	6.8	16 44.9	4.9	59.3	N 10	18 15	18 37	19 02	22 40	23 33	24 29	00 29				
05	254 15.9	49.4	165 35.6	6.8	16 49.8	4.8	59.3	0	18 06	18 28	18 52	22 50	23 45	24 42	00 42				
06	269 16.0	N11 48.6	180 01.4	6.8	S16 54.6	4.8	59.3	S 10	17 58	18 19	18 44	23 00	23 57	24 56	00 56				
07	284 16.2	47.8	194 27.2	6.7	16 59.4	4.6	59.3	20	17 49	18 11	18 37	23 11	24 11	00 11	01 11				
08	299 16.4	46.9	208 52.9	6.7	17 04.0	4.5	59.3	30	17 39	18 03	18 31	23 23	24 26	00 26	01 28				
09	314 16.5	46.1	223 18.6	6.7	17 08.5	4.4	59.3	35	17 33	17 59	18 29	23 30	24 35	00 35	01 37				
10	329 16.7	45.2	237 44.3	6.6	17 12.9	4.2	59.3	40	17 27	17 54	18 26	23 39	24 45	00 45	01 48				
11	344 16.8	44.4	252 09.9	6.5	17 17.1	4.2	59.3	45	17 19	17 49	18 23	23 48	24 56	00 56	02 02				
12	359 17.0	N11 43.6	266 35.4	6.6	S17 21.3	4.1	59.3	S 50	17 10	17 43	18 21	24 00	00 00	01 11	02 18				
13	14 17.1	42.7	281 01.0	6.4	17 25.4	3.9	59.3	52	17 06	17 41	18 20	24 05	00 05	01 17	02 25				
14	29 17.3	41.9	295 26.4	6.5	17 29.3	3.8	59.3	54	17 01	17 38	18 19	24 11	00 11	01 25	02 33				
15	44 17.5	41.0	309 51.9	6.4	17 33.1	3.7	59.4	56	16 56	17 35	18 18	24 18	00 18	01 33	02 43				
16	59 17.6	40.2	324 17.3	6.4	17 36.8	3.7	59.4	58	16 50	17 31	18 17	24 25	00 25	01 42	02 53				
17	74 17.8	39.3	338 42.7	6.3	17 40.5	3.4	59.4	S 60	16 44	17 28	18 16	24 34	00 34	01 53	03 06				
18	89 17.9	N11 38.5	353 08.0	6.3	S17 43.9														

T. M. G.	ARIES			VENUS -3.5			MARTE +1.1			JUPITER -1.7			SATURNO +0.7			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
23	00	331 10.3	216 04.9 N20	247 20.2 N23	240 43.3 N23	186 48.9 N15	247 20.2 N23	11.9	240 43.3 N23	02.1	186 48.9 N15	15.9	Acamar	315 38.7 S40	23.4			
	01	346 12.8	231 04.2	262 20.9	255 45.3	201 51.1	262 20.9	12.0	255 45.3	02.1	201 51.1	15.8	Achernar	335 46.5 S57	20.7			
	02	1 15.3	246 03.5	277 21.7	270 47.3	216 53.2	277 21.7	12.1	270 47.3	02.1	216 53.2	15.7	Acrux	173 40.0 S62	58.7			
	03	16 17.7	261 02.9	292 22.4	285 49.3	231 55.4	261 02.9	44.5	285 49.3	02.1	231 55.4	15.6	Adhara	255 34.0 S28	56.4			
	04	31 20.2	276 02.2	307 23.1	300 51.3	246 57.5	307 23.1	44.1	300 51.3	02.1	246 57.5	15.5	Aldebaran	291 20.4 N16	27.8			
	05	46 22.7	291 01.6	322 23.9	315 53.4	261 59.7	291 01.6	43.8	315 53.4	02.1	261 59.7	15.4						
	06	61 25.1	306 00.9 N20	337 24.6 N23	330 55.4 N23	277 01.8 N15	306 00.9 N20	43.4	330 55.4 N23	02.1	277 01.8 N15	15.3	Alioth	166 44.8 N56	05.1			
	07	76 27.6	321 00.3	352 25.3	345 57.4	292 04.0	321 00.3	43.0	345 57.4	02.1	292 04.0	15.2	Alkaid	153 20.4 N49	25.8			
	08	91 30.1	335 59.6	7 26.1	0 59.4	307 06.1	335 59.6	42.7	0 59.4	02.1	307 06.1	15.1	Al Na'ir	28 17.1 S47	04.0			
	M 09	106 32.5	350 59.0	22 26.8	16 01.4	322 08.3	350 59.0	42.3	16 01.4	02.1	322 08.3	15.0	Alnilam	276 13.9 S 1	12.9			
	A 10	121 35.0	5 58.3	37 27.5	31 03.4	337 10.4	5 58.3	42.0	31 03.4	02.1	337 10.4	14.9	Alphard	218 22.9 S 8	33.7			
	R 11	136 37.4	20 57.6	52 28.3	46 05.4	352 12.6	20 57.6	41.6	46 05.4	02.1	352 12.6	14.8						
	T 12	151 39.9	35 57.0 N20	67 29.0 N23	61 07.5 N23	7 14.7 N15	35 57.0 N20	41.2	61 07.5 N23	02.1	7 14.7 N15	14.7	Alphecca	126 33.9 N26	47.7			
	E 13	166 42.4	50 56.3	82 29.7	76 09.5	22 16.9	50 56.3	40.9	76 09.5	02.1	22 16.9	14.6	Alpheratz	358 11.1 N28	58.1			
	S 14	181 44.8	65 55.7	97 30.5	91 11.5	37 19.0	65 55.7	40.5	91 11.5	02.1	37 19.0	14.5	Altair	62 34.2 N 8	48.8			
	15	196 47.3	80 55.0	112 31.2	106 13.5	52 21.2	80 55.0	40.1	106 13.5	02.1	52 21.2	14.4	Ankaa	353 42.0 S42	25.4			
	16	211 49.8	95 54.4	127 31.9	121 15.5	67 23.3	95 54.4	39.8	121 15.5	02.1	67 23.3	14.3	Antares	112 59.3 S26	22.9			
	17	226 52.2	110 53.7	142 32.7	136 17.5	82 25.5	110 53.7	39.4	136 17.5	02.1	82 25.5	14.2						
	18	241 54.7	125 53.1 N20	157 33.4 N23	151 19.6 N23	97 27.6 N15	125 53.1 N20	39.0	151 19.6 N23	02.1	97 27.6 N15	14.1	Arcturus	146 20.5 N19	18.1			
	19	256 57.2	140 52.4	172 34.2	166 21.6	112 29.8	140 52.4	38.6	166 21.6	02.1	112 29.8	14.0	Atria	108 25.2 S68	59.4			
	20	271 59.6	155 51.8	187 34.9	181 23.6	127 31.9	155 51.8	38.3	181 23.6	02.1	127 31.9	13.9	Avior	234 29.5 S59	26.2			
	21	287 02.1	170 51.1	202 35.6	196 25.6	142 34.1	170 51.1	37.9	196 25.6	02.1	142 34.1	13.8	Bellatrix	279 01.1 N 6	19.8			
	22	302 04.6	185 50.5	217 36.4	211 27.6	157 36.2	185 50.5	37.5	211 27.6	02.1	157 36.2	13.7	Betelgeuse	271 30.7 N 7	24.2			
23	317 07.0	200 49.8	232 37.1	226 29.6	172 38.4	200 49.8	37.1	226 29.6	02.1	172 38.4	13.6							
24	00	332 09.5	215 49.1 N20	247 37.8 N23	241 31.7 N23	187 40.6 N15	215 49.1 N20	36.8	241 31.7 N23	02.1	187 40.6 N15	13.5	Canopus	264 08.4 S52	40.9			
	01	347 11.9	230 48.5	262 38.6	256 33.7	202 42.7	230 48.5	36.4	256 33.7	02.1	202 42.7	13.4	Capella	281 14.5 N45	58.3			
	02	2 14.4	245 47.8	277 39.3	271 35.7	217 44.9	245 47.8	36.0	271 35.7	02.1	217 44.9	13.3	Deneb	49 49.4 N45	12.3			
	03	17 16.9	260 47.2	292 40.1	286 37.7	232 47.0	260 47.2	35.6	286 37.7	02.1	232 47.0	13.2	Denebola	183 01.4 N14	41.9			
	04	32 19.3	275 46.5	307 40.8	301 39.7	247 49.2	275 46.5	35.2	301 39.7	02.1	247 49.2	13.1	Diphda	349 22.7 S18	06.4			
	05	47 21.8	290 45.9	322 41.5	316 41.8	262 51.3	290 45.9	34.8	316 41.8	02.1	262 51.3	13.0						
	06	62 24.3	305 45.2 N20	337 42.3 N23	331 43.8 N23	277 53.5 N15	305 45.2 N20	34.5	331 43.8 N23	02.1	277 53.5 N15	12.9	Dubhe	194 25.4 N61	52.4			
	07	77 26.7	320 44.6	352 43.0	346 45.8	292 55.6	320 44.6	34.1	346 45.8	02.1	292 55.6	12.8	Elnath	278 46.9 N28	35.2			
	M 08	92 29.2	335 43.9	7 43.3	1 47.8	307 57.8	335 43.9	33.7	1 47.8	02.1	307 57.8	12.7	Eltanin	90 58.4 N51	29.9			
	I 09	107 31.7	350 43.3	22 44.5	16 49.8	322 59.9	350 43.3	33.3	16 49.8	02.1	322 59.9	12.6	Enif	34 13.3 N 9	46.6			
	E 10	122 34.1	5 42.6	37 45.2	31 51.9	338 02.1	5 42.6	32.9	31 51.9	02.1	338 02.1	12.5	Fomalhaut	15 53.4 S29	44.2			
	R 11	137 36.6	20 42.0	52 46.0	46 53.9	353 04.2	20 42.0	32.5	46 53.9	02.1	353 04.2	12.5						
	C 12	152 39.1	35 41.3 N20	67 46.7 N23	61 55.9 N23	8 06.4 N15	35 41.3 N20	32.1	61 55.9 N23	02.1	8 06.4 N15	12.4	Gacrux	172 31.4 S56	59.4			
	O 13	167 41.5	50 40.7	82 47.5	76 57.9	23 08.5	50 40.7	31.7	76 57.9	02.1	23 08.5	12.3	Gienah	176 20.3 S17	25.0			
	L 14	182 44.0	65 40.0	97 48.2	91 59.9	38 10.7	65 40.0	31.4	91 59.9	02.1	38 10.7	12.2	Hadar	149 26.5 S60	16.1			
	E 15	197 46.4	80 39.4	112 48.9	107 02.0	53 12.8	80 39.4	31.0	107 02.0	02.1	53 12.8	12.1	Hamal	328 31.0 N23	21.4			
	S 16	212 48.9	95 38.7	127 49.7	122 04.0	68 15.0	95 38.7	30.6	122 04.0	02.1	68 15.0	12.0	Kaus Aust.	84 19.3 S34	23.7			
	17	227 51.4	110 38.1	142 50.4	137 06.0	83 17.1	110 38.1	30.2	137 06.0	02.1	83 17.1	11.9						
	18	242 53.8	125 37.4 N20	157 51.2 N23	152 08.0 N23	98 19.3 N15	125 37.4 N20	29.8	152 08.0 N23	02.1	98 19.3 N15	11.8	Kochab	137 19.4 N74	15.2			
	19	257 56.3	140 36.7	172 51.9	167 10.0	113 21.4	140 36.7	29.4	167 10.0	02.1	113 21.4	11.7	Markab	14 04.9 N15	05.3			
	20	272 58.8	155 36.1	187 52.6	182 12.1	128 23.6	155 36.1	29.0	182 12.1	02.1	128 23.6	11.6	Menkar	314 43.2 N 4	00.2			
	21	288 01.2	170 35.4	202 53.4	197 14.1	143 25.7	170 35.4	28.6	197 14.1	02.1	143 25.7	11.5	Menkent	148 39.6 S36	15.7			
	22	303 03.7	185 34.8	217 54.1	212 16.1	158 27.9	185 34.8	28.2	212 16.1	02.1	158 27.9	11.4	Miaplacidus	221 46.2 S69	37.5			
23	318 06.2	200 34.1	232 54.9	227 18.1	173 30.0	200 34.1	27.8	227 18.1	02.1	173 30.0	11.3							
25	00	333 08.6	215 33.5 N20	247 55.6 N23	242 20.2 N23	188 32.2 N15	215 33.5 N20	27.4	242 20.2 N23	02.1	188 32.2 N15	11.2	Mirfak	309 18.9 N49	46.7			
	01	348 11.1	230 32.8	262 56.4	257 22.2	203 34.3	230 32.8	27.0	257 22.2	02.1	203 34.3	11.1	Nunki	76 31.5 S26	19.4			
	02	3 13.5	245 32.2	277 57.1	272 24.2	218 36.5	245 32.2	26.6	272 24.2	02.1	218 36.5	11.0	Peacock	54 01.1 S56	48.4			
	03	18 16.0	260 31.5	292 57.8	287 26.2	233 38.7	260 31.5	26.2	287 26.2	02.1	233 38.7	10.9	Pollux	244 01.0 N28	04.8			
	04	33 18.5	275 30.9	307 58.6	302 28.3	248 40.8	275 30.9	25.8	302 28.3	02.1	248 40.8	10.8	Procyon	245 28.2 N 5	17.0			
	05	48 20.9	290 30.2	322 59.3	317 30.3	263 43.0	290 30.2	25.4	317 30.3	02.1	263 43.0	10.7						
	06	63 23.4	305 29.6 N20	338 00.1 N23	332 32.3 N23	278 45.1 N15	305 29.6 N20	24.9	332 32.3 N23	02.1	278 45.1 N15	10.6	Rasalhague	96 31.4 N12	34.8			
	07	78 25.9	320 28.9	353 00.8	347 34.3	293 47.3	320 28.9	24.5	347 34.3	02.1	293 47.3	10.5	Regulus	208 12.5 N12	04.6			
	08	93 28.3	335 28.3	8 01.6	2 36.3	308 49.4	335 28.3	24.1	2 36.3	02.1	308 49.4	10.4	Rigel	281 38.1 S 8	13.6			
	J 09	108 30.8	350 27.6	23 02.3	17 38.4	323 51.6	350 27.6	23.7	17 38.4	02.1	323 51.6	10.3	Rigil Kent.	140 28.7 S60	44.7			
	U 10	123 33.3	5 27.0	38 03.0														

T. M. G.	SOL				LUNA				Lat.	Crepúsculo			Orto Luna								
	A.H.G.		Dec.		A.H.G.		Dec.			P. H.	Náut.	Civil	Orto Sol	23		24		25		26	
	h	m	°	'	°	'	°	'						h	m	h	m	h	m	h	m
23 M A R T E S	00	179	18.9	N11	33.4	79	39.4	6.2	S18	02.4	2.7	59.4	N 72	////	01 12	03 19	■	■	19 46	19 34	
	01	194	19.1		32.6	94	04.6	6.1	18	05.1	2.5	59.4	N 70	////	02 07	03 39	17 57	18 42	18 59	19 06	
	02	209	19.2		31.7	108	29.7	6.1	18	07.6	2.5	59.4	68	////	02 40	03 55	17 09	18 00	18 29	18 45	
	03	224	19.4	..	30.9	122	54.8	6.0	18	10.1	2.3	59.4	64	01 02	03 03	04 08	16 38	17 31	18 06	18 29	
	04	239	19.6		30.1	137	19.8	6.0	18	12.4	2.2	59.4	62	01 51	03 21	04 18	16 15	17 09	17 48	18 15	
	05	254	19.7		29.2	151	44.8	6.0	18	14.6	2.1	59.4	60	02 21	03 35	04 28	15 57	16 52	17 33	18 04	
	06	269	19.9	N11	28.4	166	09.8	6.0	S18	16.7	1.9	59.4	N 58	03 00	03 58	04 42	15 29	16 25	17 10	17 45	
	07	284	20.0		27.5	180	34.8	6.0	18	18.6	1.8	59.5	56	03 14	04 07	04 48	15 17	16 14	17 00	17 37	
	08	299	20.2		26.7	194	59.8	5.9	18	20.4	1.7	59.5	54	03 26	04 15	04 53	15 08	16 04	16 52	17 31	
	09	314	20.4	..	25.8	209	24.7	5.9	18	22.1	1.6	59.5	52	03 36	04 22	04 58	14 59	15 56	16 44	17 25	
	10	329	20.5		25.0	223	49.6	5.9	18	23.7	1.5	59.5	50	03 45	04 28	05 03	14 51	15 48	16 37	17 19	
	11	344	20.7		24.1	238	14.5	5.9	18	25.2	1.3	59.5	45	04 03	04 41	05 12	14 35	15 32	16 23	17 07	
	12	359	20.9	N11	23.3	252	39.4	5.9	S18	26.5	1.2	59.5	N 40	04 17	04 52	05 20	14 21	15 19	16 11	16 57	
	13	14	21.0		22.4	267	04.3	5.8	18	27.7	1.1	59.5	35	04 29	05 00	05 27	14 09	15 07	16 00	16 49	
	14	29	21.2		21.6	281	29.1	5.9	18	28.8	1.0	59.5	30	04 38	05 08	05 32	13 59	14 57	15 51	16 41	
	15	44	21.3	..	20.7	295	54.0	5.8	18	29.8	0.8	59.5	20	04 53	05 20	05 42	13 42	14 40	15 36	16 28	
	16	59	21.5		19.9	310	18.8	5.8	18	30.6	0.8	59.5	N 10	05 05	05 30	05 51	13 27	14 25	15 22	16 17	
	17	74	21.7		19.0	324	43.6	5.8	18	31.4	0.6	59.5	0	05 13	05 38	05 59	13 13	14 12	15 10	16 06	
	18	89	21.8	N11	18.2	339	08.4	5.8	S18	32.0	0.4	59.5	S 10	05 21	05 46	06 07	12 59	13 58	14 57	15 55	
	19	104	22.0		17.3	353	33.2	5.8	18	32.4	0.4	59.5	20	05 27	05 53	06 15	12 44	13 43	14 43	15 44	
	20	119	22.2		16.5	7	58.0	5.8	18	32.8	0.2	59.5	30	05 32	06 00	06 25	12 27	13 26	14 28	15 31	
	21	134	22.3	..	15.6	22	22.8	5.7	18	33.0	0.1	59.5	35	05 35	06 04	06 30	12 17	13 16	14 19	15 23	
	22	149	22.5		14.8	36	47.5	5.8	18	33.1	0.0	59.5	40	05 37	06 08	06 36	12 05	13 05	14 08	15 15	
23	164	22.7		13.9	51	12.3	5.8	18	33.1	0.2	59.5	45	05 39	06 13	06 43	11 52	12 51	13 56	15 04		
24 M I E R C O L E S	00	179	22.8	N11	13.1	65	37.1	5.7	S18	32.9	0.3	59.5	S 50	05 41	06 18	06 51	11 36	12 35	13 41	14 52	
	01	194	23.0		12.2	80	01.8	5.8	18	32.6	0.3	59.5	52	05 41	06 20	06 55	11 28	12 28	13 34	14 47	
	02	209	23.2		11.4	94	26.6	5.7	18	32.3	0.6	59.5	54	05 42	06 23	06 59	11 20	12 19	13 27	14 40	
	03	224	23.3	..	10.5	108	51.3	5.8	18	31.7	0.6	59.5	56	05 42	06 26	07 04	11 10	12 10	13 18	14 33	
	04	239	23.5		09.7	123	16.1	5.7	18	31.1	0.8	59.5	58	05 43	06 29	07 09	11 00	11 59	13 08	14 25	
	05	254	23.7		08.8	137	40.8	5.8	18	30.3	0.9	59.5	S 60	05 43	06 32	07 15	10 47	11 46	12 57	14 16	
	06	269	23.8	N11	07.9	152	05.6	5.8	S18	29.4	1.0	59.5									
	07	284	24.0		07.1	166	30.4	5.7	18	28.4	1.2	59.5	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna				
	08	299	24.2		06.2	180	55.1	5.8	18	27.2	1.2	59.5				23	24	25	26		
	09	314	24.3	..	05.4	195	19.9	5.8	18	26.0	1.4	59.5				h m	h m	h m	h m		
	10	329	24.5		04.5	209	44.7	5.8	18	24.6	1.5	59.5	N 72	20 42	22 40	////	■	■	23 11	25 20	
	11	344	24.7		03.7	224	09.5	5.8	18	23.1	1.7	59.5	N 70	20 22	21 51	////	20 56	22 14	23 57	25 46	
	12	359	24.8	N11	02.8	238	34.3	5.8	S18	21.4	1.7	59.5	68	20 07	21 21	////	21 44	22 56	24 27	00 27	
	13	14	25.0		02.0	252	59.1	5.8	18	19.7	1.9	59.5	66	19 54	20 58	22 51	22 15	23 24	24 49	00 49	
	14	29	25.2		01.1	267	23.9	5.8	18	17.8	2.0	59.5	64	19 44	20 41	22 08	22 38	23 46	25 06	01 06	
	15	44	25.3	11	00.2	281	48.7	5.9	18	15.8	2.2	59.5	62	19 35	20 27	21 40	22 57	24 03	00 03	01 21	
	16	59	25.5	10	59.4	296	13.6	5.8	18	13.6	2.2	59.5	60	19 28	20 15	21 19	22 12	24 17	00 17	01 33	
	17	74	25.7		58.5	310	38.4	5.9	18	11.4	2.4	59.5	N 58	19 21	20 05	21 03	23 25	24 29	00 29	01 43	
	18	89	25.8	N10	57.7	325	03.3	5.9	S18	09.0	2.5	59.5	56	19 15	19 56	20 49	23 36	24 40	00 40	01 52	
	19	104	26.0		56.8	339	28.2	5.9	18	06.5	2.6	59.5	54	19 10	19 48	20 37	23 46	24 49	00 49	02 00	
	20	119	26.2		56.0	353	53.1	6.0	18	03.9	2.7	59.5	52	19 05	19 42	20 37	23 54	24 58	00 58	02 08	
	21	134	26.4	..	55.1	8	18.1	5.9	18	01.2	2.9	59.5	50	19 01	19 36	20 18	24 02	00 02	01 05	02 14	
	22	149	26.5		54.2	22	43.0	6.0	17	58.3	3.0	59.5	45	18 52	19 23	20 00	24 19	00 19	01 21	02 28	
23	164	26.7		53.4	37	08.0	6.0	17	55.3	3.1	59.5	N 40	18 44	19 12	19 46	24 33	00 33	01 34	02 39		
25 J U E V E S	00	179	26.9	N10	52.5	51	33.0	6.0	S17	52.2	3.2	59.5	35	18 38	19 04	19 35	24 44	00 44	01 45	02 49	
	01	194	27.0		51.7	65	58.0	6.1	17	49.0	3.3	59.5	30	18 32	18 57	19 26	24 54	00 54	01 55	02 58	
	02	209	27.2		50.8	80	23.1	6.1	17	45.7	3.5	59.5	20	18 22	18 45	19 11	00 14	01 12	02 11	03 12	
	03	224	27.4	..	49.9	94	48.2	6.1	17	42.2	3.6	59.5	N 10	18 14	18 35	19 00	00 29	01 27	02 26	03 25	
	04	239	27.5		49.1	109	13.3	6.1	17	38.6	3.6	59.5	0	18 06	18 27	18 51	00 42	01 41	02 39	03 37	
	05	254	27.7		48.2	123	38.4	6.2	17	35.0	3.8	59.5	S 10	17 58	18 19	18 44	00 56	01 55	02 53	03 49	
	06	269	27.9	N10	47.3	138	03.6	6.1	S17	31.2	4.0	59.5	20	17 50	18 12	18 38	01 11	02 10	03 07	04 01	
	07	284	28.1		46.5	152	28.7	6.3	17	27.2	4.0	59.5	30	17 41	18 05	18 33	01 28	02 27	03 23	04 15	
	08	299	28.2		45.6	166	54.0	6.2	17	23.2	4.1	59.5	35	17 35	18 01	18 31	01 37	02 37	03 33	04 24	
	09	314	28.4	..	44.8	181	19.2	6.3	17	19.1	4.3	59.5	40	17 29	17 57	18 28	01 48	02 49	03 44	04 33	
	10	329	28.6		43.9	195	44.5	6.3	17	14.8	4.4	59.5	45	17 22	17 52	18 27	02 02	03 02	03 56	04 44	
	11	344	28.8		43.0	210	09.8	6.4	17	10.4	4.5	59.4	S 50	17 14	17 47	18 25	02 18	03 18	04 12	04 57	

T. M. G.	ARIES		VENUS -3.5		MARTE +1.0		JUPITER -1.7		SATURNO +0.7		ESTRELLAS			
	A.H.G.	A.H.G. Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
26	00	334 07.8	215 17.9 N20	17.4	248 13.5 N23	18.9	243 08.8 N23	02.1	189 23.9 N15	08.8	Acamar	315 38.7 S40	23.4	
	01	349 10.2	230 17.3	17.0	263 14.2	19.0	258 10.8	02.1	204 26.0	08.7	Achernar	335 46.5 S57	20.7	
	02	4 12.7	245 16.6	16.6	278 15.0	19.1	273 12.8	02.1	219 28.2	08.6	Acrux	173 40.0 S62	58.7	
	03	19 15.2	260 16.0	16.1	293 15.7	19.2	288 14.9	02.1	234 30.3	08.5	Adhara	255 33.9 S28	56.4	
	04	34 17.6	275 15.3	15.7	308 16.5	19.3	303 16.9	02.1	249 32.5	08.4	Aldebaran	291 20.4 N16	27.8	
	05	49 20.1	290 14.7	15.3	323 17.2	19.4	318 18.9	02.1	264 34.6	08.3				
	06	64 22.5	305 14.0 N20	14.9	338 18.0 N23	19.5	333 20.9 N23	02.1	279 36.8 N15	08.2	Alioth	166 44.8 N56	05.1	
	07	79 25.0	320 13.4	14.4	353 18.7	19.5	348 23.0	02.1	294 38.9	08.1	Alkaid	153 20.5 N49	25.8	
	08	94 27.5	335 12.7	14.0	8 19.5	19.6	3 25.0	02.1	309 41.1	08.0	Al Na'ir	28 17.1 N547	04.0	
	09	109 29.9	350 12.1	13.6	23 20.2	19.7	18 27.0	02.1	324 43.2	07.9	Alnilam	276 13.9 S 1	12.9	
	10	124 32.4	5 11.4	13.1	38 21.0	19.8	33 29.1	02.1	339 45.4	07.8	Alphard	218 22.9 S 8	33.7	
	11	139 34.9	20 10.8	12.7	53 21.7	19.9	48 31.1	02.1	354 47.5	07.7				
	12	154 37.3	35 10.1 N20	12.2	68 22.5 N23	20.0	63 33.1 N23	02.1	9 49.7 N15	07.6	Alphecca	126 33.9 N26	47.7	
	13	169 39.8	50 09.5	11.8	83 23.2	20.0	78 35.2	02.1	24 51.8	07.5	Alpheratz	358 11.1 N28	58.1	
	14	184 42.3	65 08.8	11.4	98 24.0	20.1	93 37.2	02.1	39 54.0	07.4	Altair	62 34.3 N 8	48.8	
	15	199 44.7	80 08.2	10.9	113 24.7	20.2	108 39.2	02.1	54 56.1	07.3	Ankaa	353 41.9 S42	25.4	
	16	214 47.2	95 07.5	10.5	128 25.5	20.3	123 41.2	02.1	69 58.3	07.2	Antares	112 59.3 S26	22.9	
	17	229 49.6	110 06.9	10.0	143 26.2	20.4	138 43.3	02.1	85 00.5	07.1				
	18	244 52.1	125 06.3 N20	09.6	158 27.0 N23	20.5	153 45.3 N23	02.1	100 02.6 N15	07.0	Arcturus	146 20.5 N19	18.1	
	19	259 54.6	140 05.6	09.1	173 27.7	20.5	168 47.3	02.1	115 04.8	06.9	Atria	108 25.2 S68	59.5	
	20	274 57.0	155 05.0	08.7	188 28.5	20.6	183 49.4	02.1	130 06.9	06.8	Avior	234 29.5 S59	26.2	
	21	289 59.5	170 04.3	08.3	203 29.2	20.7	198 51.4	02.1	145 09.1	06.7	Bellatrix	279 01.0 N 6	19.8	
	22	305 02.0	185 03.7	07.8	218 30.0	20.8	213 53.4	02.1	160 11.2	06.6	Betelgeuse	271 30.6 N 7	24.2	
23	320 04.4	200 03.0	07.4	233 30.7	20.9	228 55.5	02.1	175 13.4	06.5					
27	00	335 06.9	215 02.4 N20	06.9	248 31.5 N23	20.9	243 57.5 N23	02.1	190 15.5 N15	06.4	Canopus	264 08.4 S52	40.8	
	01	350 09.4	230 01.7	06.5	263 32.2	21.0	258 59.5	02.1	205 17.7	06.3	Capella	281 14.4 N45	58.3	
	02	5 11.8	245 01.1	06.0	278 33.0	21.1	274 01.6	02.1	220 19.8	06.2	Deneb	49 49.4 N45	12.3	
	03	20 14.3	260 00.4	05.6	293 33.7	21.2	289 03.6	02.1	235 22.0	06.1	Denebola	183 01.4 N14	41.9	
	04	35 16.8	274 59.8	05.1	308 34.5	21.3	304 05.6	02.1	250 24.1	06.0	Diphda	349 22.7 S18	06.4	
	05	50 19.2	289 59.2	04.6	323 35.2	21.3	319 07.7	02.1	265 26.3	05.9				
	06	65 21.7	304 58.5 N20	04.2	338 36.0 N23	21.4	334 09.7 N23	02.1	280 28.4 N15	05.8	Dubhe	194 25.4 N61	52.4	
	07	80 24.1	319 57.9	03.7	353 36.7	21.5	349 11.7	02.1	295 30.6	05.7	Elnath	278 46.8 N28	35.2	
	08	95 26.6	334 57.2	03.3	8 37.5	21.6	4 13.8	02.1	310 32.8	05.6	Eltanin	90 58.5 N51	29.9	
	09	110 29.1	349 56.6	02.8	23 38.2	21.6	19 15.8	02.1	325 34.9	05.5	Enif	34 13.3 N 9	46.6	
	10	125 31.5	4 55.9	02.4	38 39.0	21.7	34 17.8	02.1	340 37.1	05.4	Fomalhaut	15 53.3 S29	44.2	
	11	140 34.0	19 55.3	01.9	53 39.7	21.8	49 19.9	02.1	355 39.2	05.3				
	12	155 36.5	34 54.6 N20	01.4	68 40.5 N23	21.9	64 21.9 N23	02.1	10 41.4 N15	05.2	Gacrux	172 31.4 S56	59.4	
	13	170 38.9	49 54.0	01.0	83 41.3	22.0	79 24.0	02.1	25 43.5	05.1	Gienah	176 20.3 S17	25.0	
	14	185 41.4	64 53.4	00.5	98 42.0	22.0	94 26.0	02.1	40 45.7	05.0	Hadar	149 26.5 S60	16.1	
	15	200 43.9	79 52.7	00.0	113 42.8	22.1	109 28.0	02.1	55 47.8	04.9	Hamal	328 31.0 N23	21.4	
	16	215 46.3	94 52.1	19 59.6	128 43.5	22.2	124 30.1	02.1	70 50.0	04.8	Kaus Aust.	84 19.3 S34	23.7	
	17	230 48.8	109 51.4	59.1	143 44.3	22.3	139 32.1	02.1	85 52.1	04.7				
	18	245 51.3	124 50.8 N19	58.6	158 45.0 N23	22.3	154 34.1 N23	02.1	100 54.3 N15	04.6	Kochab	137 19.5 N74	15.2	
	19	260 53.7	139 50.1	58.2	173 45.8	22.4	169 36.2	02.1	115 56.4	04.5	Markab	14 04.9 N15	05.3	
	20	275 56.2	154 49.5	57.7	188 46.5	22.5	184 38.2	02.1	130 58.6	04.4	Menkar	314 43.2 N 4	00.2	
	21	290 58.6	169 48.9	57.2	203 47.3	22.6	199 40.2	02.1	146 00.8	04.3	Menkent	148 39.6 S36	15.7	
	22	306 01.1	184 48.2	56.8	218 48.1	22.6	214 42.3	02.1	161 02.9	04.2	Miaplacidus	221 46.1 S69	37.5	
23	321 03.6	199 47.6	56.3	233 48.8	22.7	229 44.3	02.1	176 05.1	04.1					
28	00	336 06.0	214 46.9 N19	55.8	248 49.6 N23	22.8	244 46.4 N23	02.1	191 07.2 N15	04.0	Mirfak	309 18.9 N49	46.7	
	01	351 08.5	229 46.3	55.4	263 50.3	22.8	259 48.4	02.1	206 09.4	03.9	Nunki	76 31.5 S26	19.4	
	02	6 11.0	244 45.7	54.9	278 51.1	22.9	274 50.4	02.1	221 11.5	03.8	Peacock	54 01.1 S56	48.4	
	03	21 13.4	259 45.0	54.4	293 51.8	23.0	289 52.5	02.1	236 13.7	03.7	Pollux	244 01.0 N28	04.8	
	04	36 15.9	274 44.4	53.9	308 52.6	23.1	304 54.5	02.1	251 15.8	03.6	Procyon	245 28.2 N 5	17.0	
	05	51 18.4	289 43.7	53.4	323 53.3	23.1	319 56.6	02.1	266 18.0	03.5				
	06	66 20.8	304 43.1 N19	53.0	338 54.1 N23	23.2	334 58.6 N23	02.0	281 20.1 N15	03.4	Rasalhague	96 31.4 N12	34.8	
	07	81 23.3	319 42.5	52.5	353 54.9	23.3	350 00.6	02.0	296 22.3	03.3	Regulus	208 12.5 N12	04.6	
	08	96 25.7	334 41.8	52.0	8 55.6	23.3	5 02.7	02.0	311 24.4	03.2	Rigel	281 38.1 S 8	13.6	
	09	111 28.2	349 41.2	51.5	23 56.4	23.4	20 04.7	02.0	326 26.6	03.1	Rigel Kent.	140 28.7 S60	44.7	
	10	126 30.7	4 40.5	51.0	38 57.1	23.5	35 06.8	02.0	341 28.8	03.0	Sabik	102 43.4 S15	41.7	
	11	141 33.1	19 39.9	50.6	53 57.9	23.6	50 08.8	02.0	356 30.9	02.9				
	12	156 35.6	34 39.3 N19	50.1	68 58.7 N23	23.6	65 10.8 N23	02.0	11 33.1 N15	02.9	Schedar	350 10.8 N56	24.8	
	13	171 38.1	49 38.6	49.6	83 59.4	23.7	80 12.9	02.0	26 35.2	02.8	Shaula	96 58.4 S37	05.3	
	14	186 40.5	64 38.0	49.1	99 00.2	23.8	95 14.9	02.0	41 37.4	02.7	Sirius	258 57.7 S16	41.1	
	15	201 43.0	79 37.3	48.6	114 00.9	23.8	110 17.0	02.0	56 39.5	02.6	Spica	158 59.9 S11	02.6	
	16	216 45.5	94 36.7	48.1	129 01.7	23.9	125 19.0	02.0	71 41.7	02.5	Suhail	223 12.7 S43	20.5	
	17	231 47.9	109 36.1	47.6	144 02.5	24.0	140 21.0	02.0	86 43.8	02.4				
	18	246 50.4	124 35.4 N19	47.1	159 03.2 N23	24.0	155 23.1 N23	02.0	101 46.0 N15	02.3	Vega	80 57.0 N38	46.1	
	19	261 52.9	139 34.8	46.6	174 04.0	24.1	170 25.1	02.0	116 48.1	02.2	Zuben'ubi	137 35.4 S15	56.9	
	20	276 55.3	154 34.1	46.2	189 04.7	24.2	185 27.2	02.0	131 50.3	02.1				
	21	291 57.8	169 33.5	45.7	204 05.5	24.2	200 29.2	02.0	146 52.5	02.0				
	22	307 00.2	184 32.9	45.2	219 06.3	24.3	215 31.3	02.0	161 54.6	01.9	Venus	239 55.5	9 40	
23	322 02.7	199 32.2	44.7	234 07.0	24.4	230 33.3	02.0	176 56.8	01.8	Marte	273 24.6	7 26		
Pas. Mer. 1 39.3		v -0.6 d 0.5		v 0.8 d 0.1		v 2.0 d 0.0		v 2.2 d 0.1						
										A. H. S.		Pas. Mer.		
										Júpiter		268 50.6 7 43		
										Saturno		215 08.6 11 17		

T.M.G.	SOL			LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.		Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	26	27	28	29					
	h	m	°	°	°	°	°		°	h	m	h	m	h	m	h	m				
VIERNES	26	00	179	31.0	N10	31.8	37	42.4	6.8	S16	03.6	5.9	59.3	N 72	////	01 48	03 35	19 34	19 26	19 19	19 13
	01	194	31.2		30.9	52	08.2	7.0	15	57.7	5.9	59.3	N 70	////	02 28	03 53	19 06	19 09	19 10	19 10	
	02	209	31.4		30.1	66	34.2	6.9	15	51.8	6.1	59.3	68	////	02 55	04 07	18 45	18 55	19 02	19 07	
	03	224	31.5	..	29.2	81	00.1	7.0	15	45.7	6.2	59.3	66	01 33	03 16	04 18	18 29	18 44	18 56	19 05	
	04	239	31.7		28.3	95	26.1	7.1	15	39.5	6.3	59.3	64	02 09	03 32	04 27	18 15	18 35	18 50	19 03	
	05	254	31.9		27.5	109	52.2	7.1	15	33.2	6.4	59.3	62	02 34	03 45	04 35	18 04	18 27	18 45	19 01	
	06	269	32.1	N10	26.6	124	18.3	7.2	S15	26.8	6.4	59.3	60	02 53	03 56	04 42	17 54	18 20	18 41	19 00	
	07	284	32.2		25.7	138	44.5	7.2	15	20.4	6.6	59.3	N 58	03 09	04 05	04 49	17 45	18 14	18 37	18 58	
	08	299	32.4		24.8	153	10.7	7.2	15	13.8	6.6	59.3	56	03 22	04 13	04 54	17 37	18 08	18 34	18 57	
	09	314	32.6	..	24.0	167	36.9	7.3	15	07.2	6.8	59.3	54	03 33	04 21	04 59	17 31	18 03	18 31	18 56	
	10	329	32.8		23.1	182	03.2	7.4	15	00.4	6.8	59.2	52	03 42	04 27	05 03	17 25	17 59	18 28	18 55	
	11	344	32.9		22.2	196	29.6	7.4	14	53.6	7.0	59.2	50	03 50	04 33	05 07	17 19	17 55	18 26	18 54	
	12	359	33.1	N10	21.4	210	56.0	7.4	S14	46.6	7.0	59.2	45	04 08	04 45	05 16	17 07	17 46	18 20	18 52	
	13	14	33.3		20.5	225	22.4	7.6	14	39.6	7.1	59.2	N 40	04 21	04 55	05 23	16 57	17 38	18 16	18 50	
	14	29	33.5		19.6	239	49.0	7.5	14	32.5	7.2	59.2	35	04 32	05 03	05 29	16 49	17 32	18 12	18 49	
	15	44	33.6	..	18.8	254	15.5	7.6	14	25.3	7.3	59.2	30	04 40	05 09	05 34	16 41	17 27	18 08	18 48	
	16	59	33.8		17.9	268	42.1	7.7	14	18.0	7.4	59.2	20	04 54	05 21	05 43	16 28	17 17	18 02	18 45	
	17	74	34.0		17.0	283	08.8	7.7	14	10.6	7.5	59.2	N 10	05 05	05 30	05 51	16 17	17 08	17 57	18 44	
	18	89	34.2	N10	16.1	297	35.5	7.8	S14	03.1	7.5	59.1	0	05 13	05 37	05 58	16 06	17 00	17 52	18 42	
	19	104	34.4		15.3	312	02.3	7.8	13	55.6	7.6	59.1	S 10	05 19	05 44	06 05	15 55	16 52	17 47	18 40	
	20	119	34.5		14.4	326	29.1	7.9	13	48.0	7.8	59.1	20	05 25	05 51	06 13	15 44	16 44	17 42	18 38	
	21	134	34.7	..	13.5	340	56.0	7.9	13	40.2	7.7	59.1	30	05 29	05 57	06 21	15 31	16 34	17 36	18 36	
	22	149	34.9		12.6	355	22.9	8.0	13	32.5	7.9	59.1	35	05 31	06 00	06 26	15 23	16 28	17 32	18 35	
23	164	35.1		11.8	9	49.9	8.1	13	24.6	8.0	59.1	40	05 33	06 04	06 31	15 15	16 22	17 28	18 33		
27	00	179	35.2	N10	10.9	24	17.0	8.1	S13	16.6	8.0	59.0	45	05 34	06 08	06 38	15 04	16 14	17 24	18 32	
01	194	35.4		10.0	38	44.1	8.1	13	08.6	8.1	59.0	S 50	05 35	06 12	06 45	14 52	16 05	17 18	18 30		
02	209	35.6		09.2	53	11.2	8.2	13	00.5	8.2	59.0	52	05 35	06 14	06 49	14 47	16 01	17 15	18 29		
03	224	35.8	..	08.3	67	38.4	8.3	12	52.3	8.2	59.0	54	05 35	06 16	06 52	14 40	15 56	17 13	18 28		
04	239	36.0		07.4	82	05.7	8.3	12	44.1	8.4	59.0	56	05 36	06 19	06 56	14 33	15 51	17 10	18 27		
05	254	36.1		06.5	96	33.0	8.4	12	35.7	8.4	59.0	58	05 36	06 21	07 01	14 25	15 45	17 06	18 25		
06	269	36.3	N10	05.7	111	00.4	8.5	S12	27.3	8.4	59.0	S 60	05 35	06 24	07 06	14 16	15 39	17 02	18 24		
07	284	36.5		04.8	125	27.9	8.5	12	18.9	8.6	58.9	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna					
08	299	36.7		03.9	139	55.4	8.5	12	10.3	8.6	58.9	26	h m	h m	h m	27	h m	h m	h m	h m	
09	314	36.9	..	03.0	154	22.9	8.6	12	01.7	8.7	58.9	28	20 24	22 07	////	25 20	01 20	03 19	05 12		
10	329	37.0		02.2	168	50.5	8.7	11	53.0	8.7	58.9	N 72	20 07	21 29	////	25 46	01 46	03 35	05 19		
11	344	37.2		01.3	183	18.2	8.7	11	44.3	8.8	58.9	N 70	19 54	21 04	23 33	00 27	02 06	03 47	05 25		
12	359	37.4	N10	00.4	197	45.9	8.8	S11	35.5	8.9	58.8	68	19 43	20 44	22 23	00 49	02 22	03 57	05 30		
13	14	37.6	9	59.5	212	13.7	8.8	11	26.6	8.9	58.8	66	19 34	20 29	21 49	01 06	02 35	04 05	05 34		
14	29	37.8		58.6	226	41.5	8.9	11	17.7	9.0	58.8	64	19 26	20 16	21 25	01 21	02 45	04 12	05 38		
15	44	37.9	..	57.8	241	09.4	9.0	11	08.7	9.0	58.8	62	19 19	20 05	21 07	01 33	02 55	04 18	05 41		
16	59	38.1		56.9	255	37.4	9.0	10	59.7	9.1	58.8	60	19 13	19 56	20 52	01 43	03 03	04 23	05 44		
17	74	38.3		56.0	270	05.4	9.0	10	50.6	9.2	58.7	N 58	19 08	19 48	20 39	01 52	03 10	04 28	05 46		
18	89	38.5	N 9	55.1	284	33.4	9.1	S10	41.4	9.2	58.7	56	19 03	19 41	20 29	02 00	03 16	04 32	05 48		
19	104	38.7		54.2	299	01.5	9.2	10	32.2	9.3	58.7	54	18 59	19 35	20 19	02 08	03 21	04 36	05 50		
20	119	38.9		53.4	313	29.7	9.3	10	22.9	9.4	58.7	52	18 55	19 29	20 11	02 14	03 27	04 40	05 52		
21	134	39.0	..	52.5	327	58.0	9.2	10	13.5	9.3	58.7	50	18 47	19 17	19 54	02 28	03 37	04 47	05 56		
22	149	39.2		51.6	342	26.2	9.4	10	04.2	9.5	58.6	45	18 40	19 08	19 41	02 39	03 46	04 54	05 59		
23	164	39.4		50.7	356	54.6	9.4	9	54.7	9.5	58.6	35	18 34	19 00	19 31	02 49	03 54	04 59	06 02		
DOMINGO	28	00	179	39.6	N 9	49.9	11	23.0	9.4	S 9	45.2	9.5	58.6	N 40	18 40	19 08	19 41	02 59	03 46	04 54	05 59
	01	194	39.8		49.0	25	51.4	9.6	9	35.7	9.6	58.6	35	18 29	18 53	19 22	02 58	04 01	05 04	06 05	
	02	209	40.0		48.1	40	20.0	9.5	9	26.1	9.6	58.6	30	18 20	18 42	19 08	03 12	04 13	05 12	06 09	
	03	224	40.1	..	47.2	54	48.5	9.7	9	16.5	9.7	58.5	20	18 12	18 33	18 58	03 25	04 23	05 19	06 13	
	04	239	40.3		46.3	69	17.2	9.6	9	06.8	9.7	58.5	N 10	18 12	18 33	18 58	03 25	04 23	05 19	06 13	
	05	254	40.5		45.4	83	45.8	9.8	8	57.1	9.8	58.5	0	18 05	18 26	18 50	03 37	04 32	05 25	06 16	
	06	269	40.7	N 9	44.6	98	14.6	9.8	S 8	47.3	9.8	58.5	S 10	17 58	18 19	18 44	03 49	04 42	05 32	06 19	
	07	284	40.9		43.7	112	43.4	9.8	8	37.5	9.9	58.5	20	17 50	18 13	18 38	04 01	04 52	05 39	06 23	
	08	299	41.1		42.8	127	12.2	9.9	8	27.6	9.8	58.4	30	17 42	18 06	18 34	04 15	05 03	05 46	06 27	
	09	314	41.2	..	41.9	141	41.1	10.0	8	17.8	10.0	58.4	35	17 37	18 03	18 33	04 24	05 09	05 51	06 29	
	10	329	41.4		41.0	156	10.1	10.0	8	07.8	9.9	58.4	40	17 32	18 00	18 31	04 33	05 17	05 56	06 32	
11	344	41.6		40.1	170	39.1	10.0	7	57.9	10.0	58.4	45	17 26	17 56	18 30	04 44	05 25	06 02</			

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.		Dec.	v	A.H.G.		Dec.	d		P.H.	Náut.		Civil	29	30	31	1	
	h	m			h	m						h						m
29 L U N E S	179	44.0	N 9	28.6	359	00.9	10.7	S 5	45.4	10.4	58.0	N 72	03 50	19 13	19 08	19 02	18 57	
	194	44.2		27.8	13	30.6	10.8	5	35.0	10.4	58.0	N 70	02 47	19 10	19 10	19 10	19 11	
	209	44.4		26.9	28	00.4	10.8	5	24.6	10.4	58.0	68	01 07	19 07	19 12	19 17	19 22	
	224	44.6		26.0	42	30.2	10.9	5	14.2	10.4	58.0	66	01 56	19 05	19 14	19 22	19 32	
	239	44.8		25.1	57	00.1	10.9	5	03.8	10.5	57.9	64	02 25	19 03	19 15	19 27	19 40	
	254	45.0		24.2	71	30.0	11.0	4	53.3	10.4	57.9	62	02 47	19 01	19 16	19 31	19 47	
	269	45.1	N 9	23.3	86	00.0	11.0	S 4	42.9	10.5	57.9	60	03 04	19 00	19 17	19 34	19 53	
	284	45.3		22.4	100	30.0	11.0	4	32.4	10.5	57.9	N 58	03 18	18 58	19 18	19 38	19 58	
	299	45.5		21.5	115	00.0	11.1	4	21.9	10.5	57.8	56	03 29	18 57	19 19	19 40	20 03	
	314	45.7		20.7	129	30.1	11.2	4	11.4	10.5	57.8	54	03 40	18 56	19 20	19 43	20 07	
	329	45.9		19.8	144	00.3	11.2	4	00.9	10.6	57.8	52	03 48	18 55	19 20	19 45	20 11	
	344	46.1		18.9	158	30.5	11.2	3	50.3	10.5	57.7	50	03 56	18 54	19 21	19 47	20 15	
	359	46.3	N 9	18.0	173	00.7	11.3	S 3	39.8	10.6	57.7	45	04 12	18 52	19 22	19 52	20 22	
	14	46.5		17.1	187	31.0	11.3	3	29.2	10.5	57.7	N 40	04 24	18 50	19 23	19 56	20 29	
	29	46.6		16.2	202	01.3	11.4	3	18.7	10.6	57.7	35	04 34	18 49	19 24	19 59	20 34	
	44	46.8		15.3	216	31.7	11.4	3	08.1	10.5	57.6	30	04 42	18 48	19 25	20 02	20 39	
	59	47.0		14.4	231	02.1	11.4	3	08.1	10.5	57.6	20	04 55	18 45	19 27	20 07	20 48	
	74	47.2		13.5	245	32.5	11.5	2	47.0	10.6	57.6	N 10	05 05	18 44	19 28	20 12	20 55	
	89	47.4	N 9	12.6	260	03.0	11.5	S 2	36.4	10.6	57.6	0	05 12	18 42	19 30	20 16	21 03	
	104	47.6		11.7	274	33.5	11.6	2	25.8	10.6	57.5	S 10	05 18	18 40	19 31	20 21	21 10	
	119	47.8		10.9	289	04.1	11.6	2	15.2	10.5	57.5	20	05 22	18 38	19 32	20 26	21 17	
	134	48.0		10.0	303	34.7	11.7	2	04.7	10.6	57.5	30	05 26	18 36	19 34	20 31	21 26	
	149	48.2		09.1	318	05.4	11.7	1	54.1	10.6	57.4	20	05 27	18 35	19 35	20 34	21 31	
164	48.4		08.2	332	36.1	11.7	1	43.5	10.6	57.4	35	05 27	18 35	19 35	20 34	21 31		
179	48.5	N 9	07.3	347	06.8	11.7	S 1	32.9	10.6	57.4	40	05 28	18 33	19 36	20 38	21 37		
194	48.7		06.4	1	37.5	11.8	1	22.3	10.5	57.4	45	05 29	18 32	19 38	20 42	21 44		
209	48.9		05.5	16	08.3	11.9	1	11.8	10.6	57.3	S 50	05 29	18 30	19 39	20 47	21 52		
224	49.1		04.6	30	39.2	11.9	1	01.2	10.5	57.3	52	05 29	18 29	19 40	20 49	21 56		
239	49.3		03.7	45	10.1	11.9	0	50.7	10.6	57.3	54	05 29	18 28	19 41	20 52	22 00		
254	49.5		02.8	59	41.0	11.9	0	40.1	10.5	57.2	56	05 28	18 27	19 42	20 54	22 05		
269	49.7	N 9	01.9	74	11.9	12.0	S 0	29.6	10.6	57.2	58	05 28	18 25	19 43	20 57	22 10		
284	49.9		01.0	88	42.9	12.0	0	19.0	10.5	57.2	S 60	05 27	18 24	19 44	21 01	22 16		
299	50.1	9	00.1	103	13.9	12.0	S 0	08.5	10.5	57.2	Lat.	Ocaso Sol	Ocaso Luna					
314	50.3	8	59.2	117	44.9	12.1	N 0	02.0	10.5	57.1	Civil		29	30	31	1		
329	50.5		58.3	132	16.0	12.1	0	12.5	10.5	57.1	Náut.		h m	h m	h m	h m		
344	50.6		57.4	146	47.1	12.2	0	23.0	10.5	57.1	29	20 07	05 12	07 00	08 44	10 26		
359	50.8	N 8	56.6	161	18.3	12.2	N 0	33.5	10.5	57.0	N 70	19 53	05 19	07 00	08 38	10 13		
14	51.0		55.7	175	49.5	12.2	0	44.0	10.4	57.0	68	19 41	05 25	07 01	08 33	10 03		
29	51.2		54.8	190	20.7	12.2	0	54.4	10.4	57.0	66	19 31	05 30	07 01	08 29	09 55		
44	51.4		53.9	204	51.9	12.3	1	04.8	10.5	57.0	64	19 23	05 34	07 01	08 26	09 48		
59	51.6		53.0	219	23.2	12.3	1	15.3	10.4	56.9	62	19 16	05 38	07 02	08 23	09 42		
74	51.8		52.1	233	54.5	12.3	1	25.7	10.3	56.9	60	19 10	05 41	07 02	08 21	09 37		
89	52.0	N 8	51.2	248	25.8	12.3	N 1	36.0	10.4	56.9	N 58	19 05	05 44	07 02	08 18	09 32		
104	52.2		50.3	262	57.1	12.4	1	46.4	10.3	56.8	56	19 00	05 46	07 02	08 17	09 28		
119	52.4		49.4	277	28.5	12.4	1	56.7	10.4	56.8	54	18 56	05 48	07 03	08 15	09 25		
134	52.6		48.5	291	59.9	12.5	2	07.1	10.3	56.8	52	18 52	05 50	07 03	08 13	09 21		
149	52.8		47.6	306	31.4	12.4	2	17.4	10.2	56.8	50	18 49	05 52	07 03	08 12	09 18		
164	53.0		46.7	321	02.8	12.5	2	27.6	10.3	56.7	45	18 41	05 56	07 03	08 09	09 12		
31 M I E R C O L E S	179	53.1	N 8	45.8	335	34.3	12.5	N 2	37.9	10.2	56.7	N 40	18 35	05 59	07 04	08 06	09 06	
	194	53.3		44.9	350	05.8	12.5	2	48.1	10.2	56.7	35	18 30	06 02	07 04	08 04	09 02	
	209	53.5		44.0	4	37.3	12.6	2	58.3	10.2	56.6	30	18 25	06 05	07 04	08 02	08 58	
	224	53.7		43.1	19	08.9	12.6	3	08.5	10.2	56.6	20	18 17	06 09	07 04	07 58	08 51	
	239	53.9		42.2	33	40.5	12.6	3	18.7	10.1	56.6	N 10	18 10	06 13	07 05	07 55	08 44	
	254	54.1		41.3	48	12.1	12.6	3	28.8	10.1	56.6	0	18 04	06 16	07 05	07 52	08 39	
	269	54.3	N 8	40.4	62	43.7	12.7	N 3	38.9	10.0	56.5	S 10	17 58	06 19	07 05	07 49	08 33	
	284	54.5		39.5	77	15.4	12.6	3	48.9	10.1	56.5	20	17 51	06 23	07 05	07 46	08 27	
	299	54.7		38.6	91	47.0	12.7	3	59.0	10.0	56.5	30	17 44	06 27	07 05	07 43	08 20	
	314	54.9		37.7	106	18.7	12.7	4	09.0	10.0	56.4	35	17 40	06 29	07 06	07 41	08 16	
	329	55.1		36.8	120	50.4	12.8	4	19.0	9.9	56.4	40	17 35	06 32	07 06	07 38	08 11	
	344	55.3		35.9	135	22.2	12.7	4	28.9	9.9	56.4	45	17 29	06 35	07 06	07 36	08 06	
	359	55.5	N 8	35.0	149	53.9	12.8	N 4	38.8	9.9	56.4	S 50	17 23	06 38	07 06	07 33	07 59	
	14	55.7		34.1	164	25.7	12.8	4	48.7	9.9	56.3	52	17 20	06 40	07 06	07 31	07 57	
	29	55.9		33.2	178	57.5	12.8	4	58.6	9.8	56.3	54	17 17	06 42	07 06	07 30	07 53	
	44	56.1		32.3	193	29.3	12.8	5	08.4	9.7	56.3	56	17 13	06 44	07 06	07 28	07 50	
	59	56.3		31.4	208	01.1	12.8	5	18.1	9.8	56.2	58	17 09	06 46	07 06	07 26	07 46	
	74	56.5		30.5	222	32.9	12.9	5	27.9	9.7	56.2	S 60	17 05	06 48	07 06	07 24	07 42	
	89	56.7	N 8	29.6	237	04.8	12.9	N 5	37.6	9.7	56.2	Día	SOL E.T. (-)		LUNA			
	104	56.9		28.7	251	36.7	12.8	5	47.3	9.6	56.2	00 ^h		Pas. Mer.	Pas. Mer. Sup.	Mer. Inf.	Edad.	Fase
	119	57.0		27.8	266	08.5	12.9	5	56.9	9.6	56.1	12 ^h						
	134	57.2		26.9	280	40.4	13.0	6	06.5	9.5	56.1	m s						
	149	57.4		25.9	295	12.4	12.9	6	16.0	9.5	56.1	h m						
164	57.6		25.0	309	44.3	12.9	6	25.5	9.5	56.0	h m							
	S.D.	15.9	d	0.9	S.D.	15.7	15.5	15.4	31	01 04	00 55	12 01	00 04	12 29	15	○		
									29	00 46	00 37	12 01	00 53	13 17	16			
									30	00 28	00 18	12 00	01 41	14 04	17			

T. M. G.	ARIES		VENUS -3.4		MARTE +1.0		JUPITER -1.7		SATURNO +0.7		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
1 00	340 02.6	213 46.1	N19 05.9	250 03.1	N23 28.4	248 03.1	N23 01.8	194 34.2	N14 54.6	Acamar	315 38.6	S40 23.4	
01	355 05.1	228 45.5	05.3	265 03.9	28.4	263 05.1	01.8	209 36.3	54.5	Achernar	335 46.5	S57 20.8	
02	10 07.5	243 44.9	04.8	280 04.7	28.5	278 07.2	01.8	224 38.5	54.4	AcruX	173 40.0	S62 58.6	
03	25 10.0	258 44.3	04.2	295 05.5	28.5	293 09.2	01.8	239 40.6	54.3	Adhara	255 33.9	S28 56.4	
04	40 12.4	273 43.6	03.6	310 06.2	28.6	308 11.3	01.8	254 42.8	54.2	Aldebaran	291 20.3	N16 27.8	
05	55 14.9	288 43.0	03.1	325 07.0	28.6	323 13.4	01.8	269 44.9	54.1				
06	70 17.4	303 42.4	N19 02.5	340 07.8	N23 28.7	338 15.4	N23 01.8	284 47.1	N14 54.0	Alioth	166 44.8	N56 05.1	
07	85 19.8	318 41.8	01.9	355 08.6	28.7	353 17.5	01.8	299 49.3	53.9	Alkaid	153 20.5	N49 25.8	
08	100 22.3	333 41.2	01.3	10 09.4	28.7	8 19.5	01.8	314 51.4	53.8	Al Na'ir	28 17.1	S47 04.0	
J 09	115 24.8	348 40.5	00.8	25 10.1	28.8	23 21.6	01.8	329 53.6	53.7	Alnilam	276 13.8	S 1 12.9	
U 10	130 27.2	3 39.9	19 00.2	40 10.9	28.8	38 23.7	01.8	344 55.7	53.6	Alphard	218 22.9	S 8 33.7	
E 11	145 29.7	18 39.3	18 59.6	55 11.7	28.9	53 25.7	01.8	359 57.9	53.5				
Y 12	160 32.2	33 38.7	N18 59.0	70 12.5	N23 28.9	68 27.8	N23 01.8	15 00.0	N14 53.4	Alphecca	126 33.9	N26 47.7	
E 13	175 34.6	48 38.0	58.5	85 13.3	28.9	83 29.9	01.8	30 02.2	53.3	Alpheratz	358 11.1	N28 58.1	
S 14	190 37.1	63 37.4	57.9	100 14.0	29.0	98 31.9	01.8	45 04.4	53.2	Altair	62 34.3	N 8 48.8	
15	205 39.6	78 36.8	57.3	115 14.8	29.0	113 34.0	01.8	60 06.5	53.1	Ankaa	353 41.9	S42 25.4	
16	220 42.0	93 36.2	56.7	130 15.6	29.1	128 36.0	01.8	75 08.7	53.0	Antares	112 59.4	S26 22.9	
17	235 44.5	108 35.6	56.1	145 16.4	29.1	143 38.1	01.8	90 10.8	52.9				
18	250 46.9	123 34.9	N18 55.6	160 17.2	N23 29.2	158 40.2	N23 01.8	105 13.0	N14 52.8	Arcturus	146 20.5	N19 18.1	
19	265 49.4	138 34.3	55.0	175 17.9	29.2	173 42.2	01.8	120 15.2	52.7	Atria	108 25.3	S68 59.5	
20	280 51.9	153 33.7	54.4	190 18.7	29.2	188 44.3	01.7	135 17.3	52.6	Avior	234 29.5	S59 26.2	
21	295 54.3	168 33.1	53.8	205 19.5	29.3	203 46.4	01.7	150 19.5	52.5	Bellatrix	279 01.0	N 6 19.8	
22	310 56.8	183 32.5	53.2	220 20.3	29.3	218 48.4	01.7	165 21.6	52.4	Betelgeuse	271 30.6	N 7 24.2	
23	325 59.3	198 31.8	52.6	235 21.1	29.3	233 50.5	01.7	180 23.8	52.3				
2 00	341 01.7	213 31.2	N18 52.0	250 21.8	N23 29.4	248 52.6	N23 01.7	195 25.9	N14 52.2	Canopus	264 08.3	S52 40.8	
01	356 04.2	228 30.6	51.5	265 22.6	29.4	263 54.6	01.7	210 28.1	52.1	Capella	281 14.4	N45 58.3	
02	11 06.7	243 30.0	50.9	280 23.4	29.5	278 56.7	01.7	225 30.3	52.0	Deneb	49 49.4	N45 12.3	
03	26 09.1	258 29.4	50.3	295 24.2	29.5	293 58.8	01.7	240 32.4	51.9	Denebola	183 01.4	N14 41.9	
04	41 11.6	273 28.7	49.7	310 25.0	29.5	309 00.8	01.7	255 34.6	51.8	Diphda	349 22.7	S18 06.4	
05	56 14.1	288 28.1	49.1	325 25.8	29.6	324 02.9	01.7	270 36.7	51.7				
06	71 16.5	303 27.5	N18 48.5	340 26.5	N23 29.6	339 05.0	N23 01.7	285 38.9	N14 51.6	Dubhe	194 25.4	N61 52.3	
07	86 19.0	318 26.9	47.9	355 27.3	29.6	354 07.0	01.7	300 41.1	51.5	Elnath	278 46.8	N28 35.2	
08	101 21.4	333 26.3	47.3	10 28.1	29.7	9 09.1	01.7	315 43.2	51.4	Eltanin	90 58.5	N51 29.9	
V 09	116 23.9	348 25.7	46.7	25 28.9	29.7	24 11.2	01.7	330 45.4	51.3	Enif	34 13.3	N 9 46.6	
10	131 26.4	3 25.0	46.1	40 29.7	29.7	39 13.2	01.7	345 47.5	51.2	Fomalhaut	15 53.3	S29 44.3	
11	146 28.8	18 24.4	45.5	55 30.5	29.8	54 15.3	01.7	0 49.7	51.1				
12	161 31.3	33 23.8	N18 44.9	70 31.2	N23 29.8	69 17.4	N23 01.7	15 51.8	N14 51.0	Gacrux	172 31.4	S56 59.4	
13	176 33.8	48 23.2	44.3	85 32.0	29.8	84 19.4	01.7	30 54.0	50.9	Gienah	176 20.3	S17 25.0	
14	191 36.2	63 22.6	43.7	100 32.8	29.9	99 21.5	01.7	45 56.2	50.8	Hadar	149 26.5	S60 16.1	
15	206 38.7	78 22.0	43.1	115 33.6	29.9	114 23.6	01.7	60 58.3	50.8	Hamal	328 31.0	N23 21.4	
16	221 41.2	93 21.3	42.5	130 34.4	29.9	129 25.6	01.7	76 00.5	50.7	Kaus Aust.	84 19.4	S34 23.7	
17	236 43.6	108 20.7	41.9	145 35.2	30.0	144 27.7	01.7	91 02.6	50.6				
18	251 46.1	123 20.1	N18 41.3	160 36.0	N23 30.0	159 29.8	N23 01.7	106 04.8	N14 50.5	Kochab	137 19.6	N74 15.2	
19	266 48.5	138 19.5	40.7	175 36.7	30.0	174 31.8	01.7	121 07.0	50.4	Markab	14 04.9	N15 05.3	
20	281 51.0	153 18.9	40.1	190 37.5	30.1	189 33.9	01.7	136 09.1	50.3	Menkar	314 43.1	N 4 00.2	
21	296 53.5	168 18.3	39.5	205 38.3	30.1	204 36.0	01.7	151 11.3	50.2	Menkent	148 39.6	S36 15.7	
22	311 55.9	183 17.6	38.9	220 39.1	30.1	219 38.0	01.7	166 13.4	50.1	Miaplacidus	221 46.1	S69 37.5	
23	326 58.4	198 17.0	38.3	235 39.9	30.2	234 40.1	01.6	181 15.6	50.0				
3 00	342 00.9	213 16.4	N18 37.7	250 40.7	N23 30.2	249 42.2	N23 01.6	196 17.8	N14 49.9	Mirfak	309 18.8	N49 46.7	
01	357 03.3	228 15.8	37.0	265 41.5	30.2	264 44.3	01.6	211 19.9	49.8	Nunki	76 31.5	S26 19.4	
02	12 05.8	243 15.2	36.4	280 42.3	30.3	279 46.3	01.6	226 22.1	49.7	Peacock	54 01.2	S56 48.4	
03	27 08.3	258 14.6	35.8	295 43.0	30.3	294 48.4	01.6	241 24.2	49.6	Pollux	244 00.9	N28 04.7	
04	42 10.7	273 14.0	35.2	310 43.8	30.3	309 50.5	01.6	256 26.4	49.5	Procyon	245 28.1	N 5 17.0	
05	57 13.2	288 13.4	34.6	325 44.6	30.4	324 52.5	01.6	271 28.6	49.4				
06	72 15.7	303 12.7	N18 34.0	340 45.4	N23 30.4	339 54.6	N23 01.6	286 30.7	N14 49.3	Rasalhague	96 31.4	N12 34.8	
07	87 18.1	318 12.1	33.4	355 46.2	30.4	354 56.7	01.6	301 32.9	49.2	Regulus	208 12.5	N12 04.6	
08	102 20.6	333 11.5	32.7	10 47.0	30.4	9 58.8	01.6	316 35.0	49.1	Rigel	281 38.0	S 8 13.5	
S 09	117 23.0	348 10.9	32.1	25 47.8	30.5	25 00.8	01.6	331 37.2	49.0	Rigil Kent.	140 28.8	S60 44.7	
A 10	132 25.5	3 10.3	31.5	40 48.6	30.5	40 02.9	01.6	346 39.4	48.9	Sabik	102 43.4	S15 41.7	
B 11	147 28.0	18 09.7	30.9	55 49.4	30.5	55 05.0	01.6	1 41.5	48.8				
A 12	162 30.4	33 09.1	N18 30.3	70 50.2	N23 30.6	70 07.1	N23 01.6	16 43.7	N14 48.7	Schedar	350 10.8	N56 24.9	
D 13	177 32.9	48 08.5	29.6	85 50.9	30.6	85 09.1	01.6	31 45.8	48.6	Shaula	96 58.4	S37 05.3	
O 14	192 35.4	63 07.8	29.0	100 51.7	30.6	100 11.2	01.6	46 48.0	48.5	Sirius	258 57.7	S16 41.1	
15	207 37.8	78 07.2	28.4	115 52.5	30.6	115 13.3	01.6	61 50.2	48.4	Spica	158 59.9	S11 02.6	
16	222 40.3	93 06.6	27.8	130 53.3	30.7	130 15.4	01.6	76 52.3	48.3	Suhail	223 12.6	S43 20.5	
17	237 42.8	108 06.0	27.1	145 54.1	30.7	145 17.4	01.6	91 54.5	48.2				
18	252 45.2	123 05.4	N18 26.5	160 54.9	N23 30.7	160 19.5	N23 01.6	106 56.6	N14 48.1	Vega	80 57.0	N38 46.1	
19	267 47.7	138 04.8	25.9	175 55.7	30.7	175 21.6	01.6	121 58.8	48.0	Zuben'ubi	137 35.4	S15 56.9	
20	282 50.2	153 04.2	25.3	190 56.5	30.8	190 23.7	01.6	137 01.0	47.9				
21	297 52.6	168 03.6	24.6	205 57.3	30.8	205 25.7	01.6	152 03.1	47.8				
22	312 55.1	183 03.0	24.0	220 58.1	30.8	220 27.8	01.6	167 05.3	47.7	Venus	232 29.5	h 46	
23	327 57.5	198 02.4	23.4	235 58.9	30.8	235 29.9	01.5	182 07.4	47.6	Marte	269 20.1	7 18	
										Júpiter	267 50.8	7 23	
										Saturno	214 24.2	10 57	
Pas. Mer.	h 15.7	v -0.6	d 0.6	v 0.8	d 0.0	v 2.1	d 0.0	v 2.2	d 0.1				

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.		Dec.	A.H.G.		v	Dec.	d		P.H.	Náut.		Civil	1	2	3	4			
	h	m		h	m									h	m	h	m	h	m	h	m
J U E V E S	1 00	179	57.8	N 8	24.1	324	16.2	13.0	N 6	35.0	9.4	56.0	N 72	///	02 37	04 05	18 57	18 51	18 44	18 35
	01	194	58.0		23.2	338	48.2	12.9	6	44.4	9.4	56.0	N 70	///	03 04	04 18	19 11	19 13	19 17	19 26
	02	209	58.2		22.3	353	20.1	13.0	6	53.8	9.4	56.0	68	01 38	03 24	04 29	19 22	19 30	19 41	19 58
	03	224	58.4		21.4	7	52.1	13.0	7	03.2	9.3	55.9	66	02 15	03 40	04 38	19 32	19 44	20 00	20 22
	04	239	58.6		20.5	22	24.1	13.0	7	12.5	9.2	55.9	64	02 39	03 52	04 45	19 40	19 56	20 15	20 40
	05	254	58.8		19.6	36	56.1	13.0	7	21.7	9.3	55.9	62	02 58	04 03	04 51	19 47	20 05	20 28	20 56
	06	269	59.0	N 8	18.7	51	28.1	13.0	N 7	31.0	9.1	55.9	60	03 14	04 12	04 57	19 53	20 14	20 38	21 08
	07	284	59.2		17.8	66	00.1	13.1	7	40.1	9.2	55.8	N 58	03 26	04 20	05 01	19 58	20 21	20 48	21 20
	08	299	59.4		16.9	80	32.2	13.0	7	49.3	9.0	55.8	56	03 37	04 26	05 06	20 03	20 28	20 56	21 29
	09	314	59.6		16.0	95	04.2	13.1	7	58.3	9.1	55.8	54	03 46	04 32	05 10	20 07	20 34	21 04	21 38
	10	329	59.8		15.1	109	36.3	13.0	8	07.4	9.0	55.8	52	03 54	04 38	05 13	20 11	20 39	21 10	21 45
	11	345	00.0		14.2	124	08.3	13.1	8	16.4	8.9	55.7	50	04 01	04 42	05 16	20 15	20 44	21 16	21 52
	12	0	00.2	N 8	13.3	138	40.4	13.0	N 8	25.3	8.9	55.7	45	04 16	04 53	05 23	20 22	20 54	21 29	22 07
	13	15	00.4		12.4	153	12.4	13.1	8	34.2	8.8	55.7	N 40	04 28	05 01	05 28	20 29	21 03	21 40	22 19
	14	30	00.6		11.4	167	44.5	13.1	8	43.0	8.8	55.6	35	04 37	05 07	05 33	20 34	21 11	21 49	22 30
	15	45	00.8		10.5	182	16.6	13.1	8	51.8	8.8	55.6	30	04 44	05 13	05 37	20 39	21 17	21 57	22 39
	16	60	01.0		09.6	196	48.7	13.1	9	00.6	8.7	55.6	20	04 56	05 22	05 45	20 48	21 29	22 11	22 55
	17	75	01.2		08.7	211	20.8	13.1	9	09.3	8.6	55.6	N 10	05 05	05 29	05 51	20 55	21 39	22 23	23 08
	18	90	01.4	N 8	07.8	225	52.9	13.1	N 9	17.9	8.6	55.5	0	05 11	05 36	05 56	21 03	21 49	22 35	23 21
	19	105	01.6		06.9	240	25.0	13.1	9	26.5	8.5	55.5	S 10	05 16	05 41	06 02	21 10	21 58	22 46	23 34
	20	120	01.8		06.0	254	57.1	13.1	9	35.0	8.5	55.5	20	05 20	05 46	06 08	21 17	22 08	22 59	23 48
	21	135	02.0		05.1	269	29.2	13.1	9	43.5	8.5	55.5	30	05 23	05 50	06 14	21 26	22 20	23 13	24 04
	22	150	02.2		04.2	284	01.3	13.1	9	52.0	8.3	55.4	35	05 23	05 53	06 18	21 31	22 27	23 21	24 14
23	165	02.4		03.3	298	33.4	13.2	10	00.3	8.4	55.4	40	05 24	05 55	06 22	21 37	22 35	23 31	24 24	
												45	05 24	05 58	06 27	21 44	22 44	23 42	24 37	
V I E R N E S	2 00	180	02.6	N 8	02.4	313	05.6	13.1	N10	08.7	8.2	55.4	S 50	05 23	06 00	06 33	21 52	22 55	23 55	24 52
	01	195	02.8		01.4	327	37.7	13.1	10	16.9	8.3	55.4	52	05 22	06 01	06 35	21 56	23 00	24 02	00 02
	02	210	03.0		00.5	342	09.8	13.1	10	25.2	8.1	55.4	54	05 22	06 03	06 38	22 00	23 06	24 09	00 09
	03	225	03.2		59.6	356	41.9	13.2	10	33.3	8.1	55.3	56	05 21	06 04	06 41	22 05	23 12	24 16	00 16
	04	240	03.4		58.7	11	14.1	13.1	10	41.4	8.1	55.3	58	05 20	06 05	06 45	22 10	23 19	24 25	00 25
	05	255	03.6		57.8	25	46.2	13.1	10	49.5	8.0	55.3	S 60	05 19	06 07	06 49	22 16	23 27	24 35	00 35
	06	270	03.8	N 7	56.9	40	18.3	13.2	N10	57.5	7.9	55.3								
	07	285	04.0		56.0	54	50.5	13.1	11	05.4	7.9	55.2								
	08	300	04.2		55.1	69	22.6	13.1	11	13.3	7.8	55.2								
	09	315	04.4		54.2	83	54.7	13.2	11	21.1	7.8	55.2								
	10	330	04.6		53.2	98	26.9	13.1	11	28.9	7.7	55.2								
	11	345	04.8		52.3	112	59.0	13.1	11	36.6	7.6	55.2								
	12	0	05.0	N 7	51.4	127	31.1	13.1	N11	44.2	7.6	55.1	N 72	19 51	21 17	///	10 26	12 08	13 50	15 37
	13	15	05.2		50.5	142	03.2	13.1	11	51.8	7.5	55.1	N 70	19 38	20 51	23 19	10 13	11 47	13 18	14 46
	14	30	05.4		49.6	156	35.3	13.2	11	59.3	7.5	55.1	68	19 28	20 32	22 13	10 03	11 31	12 55	14 14
	15	45	05.6		48.7	171	07.5	13.1	12	06.8	7.4	55.1	66	19 19	20 17	21 40	09 55	11 18	12 37	13 51
	16	60	05.8		47.8	185	39.6	13.1	12	14.2	7.3	55.0	64	19 12	20 05	21 16	09 48	11 07	12 22	13 33
	17	75	06.0		46.9	200	11.7	13.1	12	21.5	7.3	55.0	62	19 06	19 54	20 58	09 42	10 58	12 10	13 18
	18	90	06.2	N 7	45.9	214	43.8	13.1	N12	28.8	7.2	55.0	60	19 01	19 46	20 43	09 37	10 50	12 00	13 05
	19	105	06.4		45.0	229	15.9	13.1	12	36.0	7.2	55.0	N 58	18 56	19 38	20 31	09 32	10 43	11 51	12 55
	20	120	06.6		44.1	243	48.0	13.1	12	43.2	7.0	55.0	56	18 52	19 31	20 20	09 28	10 37	11 43	12 45
	21	135	06.8		43.2	258	20.1	13.1	12	50.2	7.1	54.9	54	18 49	19 26	20 11	09 25	10 32	11 36	12 37
	22	150	07.0		42.3	272	52.2	13.1	12	57.3	6.9	54.9	52	18 45	19 20	20 03	09 21	10 27	11 30	12 30
23	165	07.2		41.4	287	24.3	13.1	13	04.2	6.9	54.9	45	18 42	19 16	19 56	09 18	10 23	11 24	12 23	
												45	18 36	19 06	19 42	09 12	10 13	11 12	12 09	
S A B A D O	3 00	180	07.4	N 7	40.5	301	56.4	13.0	N13	11.1	6.8	54.9	N 40	18 30	18 58	19 31	09 06	10 05	11 02	11 57
	01	195	07.6		39.5	316	28.4	13.1	13	17.9	6.8	54.9	35	18 26	18 51	19 22	09 02	09 58	10 53	11 47
	02	210	07.8		38.6	331	00.5	13.1	13	24.7	6.7	54.9	30	18 22	18 46	19 14	08 58	09 52	10 46	11 38
	03	225	08.0		37.7	345	32.6	13.0	13	31.4	6.6	54.8	20	18 15	18 37	19 03	08 51	09 42	10 33	11 23
	04	240	08.2		36.8	0	04.6	13.1	13	38.0	6.6	54.8	N 10	18 09	18 30	18 54	08 44	09 33	10 21	11 10
	05	255	08.4		35.9	14	36.7	13.0	13	44.6	6.5	54.8	0	18 03	18 24	18 48	08 39	09 25	10 11	10 57
	06	270	08.6	N 7	35.0	29	08.7	13.1	N13	51.1	6.4	54.8	S 10	17 57	18 19	18 43	08 33	09 16	10 00	10 45
	07	285	08.8		34.0	43	40.8	13.0	13	57.5	6.4	54.8	20	17 52	18 14	18 40	08 27	09 07	09 49	10 32
	08	300	09.0		33.1	58	12.8	13.0	14	03.9	6.3	54.7	30	17 45	18 09	18 37	08 20	08 57	09 36	10 17
	09	315	09.3		32.2	72	44.8	13.0	14	10.2	6.2	54.7	35	17 42	18 07	18 37	08 16	08 51	09 29	10 08
	10	330	09.5		31.3	87	16.8	13.0	14	16.4	6.2	54.7	40	17 38	18 05	18 36	08 11	08 45	09 20	09 58
	11	345	09.7																	

T. M. G.	ARIES			VENUS -3.4			MARTE +1.0			JUPITER -1.8			SATURNO +0.7			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
DOMINGO	4 00	343 00.0	213 01.7 N18	22.7	250 59.7 N23	30.9	250 32.0 N23	01.5	197 09.6 N14	47.5	Acamar	315 38.6 S40	23.4					
	01	358 02.5	228 01.1	22.1	266 00.5	30.9	265 34.0	01.5	212 11.8	47.4	Achernar	335 46.4 S57	20.8					
	02	13 04.9	243 00.5	21.5	281 01.2	30.9	280 36.1	01.5	227 13.9	47.3	Acrux	173 40.0 S62	58.6					
	03	28 07.4	257 59.9	20.8	296 02.0	30.9	295 38.2	01.5	242 16.1	47.2	Adhara	255 33.9 S28	56.4					
	04	43 09.9	272 59.3	20.2	311 02.8	31.0	310 40.3	01.5	257 18.2	47.1	Aldebaran	291 20.3 N16	27.8					
	05	58 12.3	287 58.7	19.6	326 03.6	31.0	325 42.3	01.5	272 20.4	47.0								
	06	73 14.8	302 58.1 N18	18.9	341 04.4 N23	31.0	340 44.4 N23	01.5	287 22.6 N14	46.9	Alioth	166 44.9 N56	05.1					
	07	88 17.3	317 57.5	18.3	356 05.2	31.0	355 46.5	01.5	302 24.7	46.8	Alkaid	153 20.5 N49	25.7					
	08	103 19.7	332 56.9	17.7	11 06.0	31.0	10 48.6	01.5	317 26.9	46.7	Al Na'ir	28 17.1 S47	04.0					
	09	118 22.2	347 56.3	17.0	26 06.8	31.1	25 50.7	01.5	332 29.0	46.6	Alnilam	276 13.8 S 1	12.9					
	10	133 24.6	2 55.7	16.4	41 07.6	31.1	40 52.7	01.5	347 31.2	46.5	Alphard	218 22.9 S 8	33.6					
	11	148 27.1	17 55.1	15.7	56 08.4	31.1	55 54.8	01.5	2 33.4	46.5								
	12	163 29.6	32 54.5 N18	15.1	71 09.2 N23	31.1	70 56.9 N23	01.5	17 35.5 N14	46.4	Alphecca	126 34.0 N26	47.7					
	13	178 32.0	47 53.9	14.4	86 10.0	31.2	85 59.0	01.5	32 37.7	46.3	Alpheratz	358 11.1 N28	58.1					
	14	193 34.5	62 53.3	13.8	101 10.8	31.2	101 01.1	01.5	47 39.8	46.2	Altair	62 34.3 N 8	48.8					
	15	208 37.0	77 52.7	13.2	116 11.6	31.2	116 03.1	01.5	62 42.0	46.1	Ankaa	353 41.9 S42	25.4					
	16	223 39.4	92 52.0	12.5	131 12.4	31.2	131 05.2	01.5	77 44.2	46.0	Antares	112 59.4 S26	22.9					
	17	238 41.9	107 51.4	11.9	146 13.2	31.2	146 07.3	01.5	92 46.3	45.9								
	18	253 44.4	122 50.8 N18	11.2	161 14.0 N23	31.3	161 09.4 N23	01.5	107 48.5 N14	45.8	Arcturus	146 20.5 N19	18.1					
	19	268 46.8	137 50.2	10.6	176 14.8	31.3	176 11.5	01.5	122 50.6	45.7	Atria	108 25.4 S68	59.5					
	20	283 49.3	152 49.6	09.9	191 15.6	31.3	191 13.5	01.5	137 52.8	45.6	Avior	234 29.5 S59	26.1					
	21	298 51.8	167 49.0	09.3	206 16.4	31.3	206 15.6	01.5	152 55.0	45.5	Bellatrix	279 01.0 N 6	19.8					
	22	313 54.2	182 48.4	08.6	221 17.2	31.3	221 17.7	01.4	167 57.1	45.4	Betelgeuse	271 30.6 N 7	24.2					
23	328 56.7	197 47.8	08.0	236 18.0	31.3	236 19.8	01.4	182 59.3	45.3									
LUNES	5 00	343 59.1	212 47.2 N18	07.3	251 18.8 N23	31.4	251 21.9 N23	01.4	198 01.5 N14	45.2	Canopus	264 08.3 S52	40.8					
	01	359 01.6	227 46.6	06.6	266 19.6	31.4	266 24.0	01.4	213 03.6	45.1	Capella	281 14.3 N45	58.3					
	02	14 04.1	242 46.0	06.0	281 20.4	31.4	281 26.0	01.4	228 05.8	45.0	Deneb	49 49.4 N45	12.3					
	03	29 06.5	257 45.4	05.3	296 21.2	31.4	296 28.1	01.4	243 07.9	44.9	Denebola	183 01.4 N14	41.9					
	04	44 09.0	272 44.8	04.7	311 22.0	31.4	311 30.2	01.4	258 10.1	44.8	Diphda	349 22.6 S18	06.4					
	05	59 11.5	287 44.2	04.0	326 22.8	31.4	326 32.3	01.4	273 12.3	44.7								
	06	74 13.9	302 43.6 N18	03.4	341 23.6 N23	31.5	341 34.4 N23	01.4	288 14.4 N14	44.6	Dubhe	194 25.4 N61	52.3					
	07	89 16.4	317 43.0	02.7	356 24.4	31.5	356 36.5	01.4	303 16.6	44.5	Elnath	278 46.8 N28	35.2					
	08	104 18.9	332 42.4	02.0	11 25.2	31.5	11 38.5	01.4	318 18.7	44.4	Eltanin	90 58.5 N51	29.9					
	09	119 21.3	347 41.8	01.4	26 26.0	31.5	26 40.6	01.4	333 20.9	44.3	Enif	34 13.3 N 9	46.6					
	10	134 23.8	2 41.2	00.7	41 26.8	31.5	41 42.7	01.4	348 23.1	44.2	Fomalhaut	15 53.3 S29	44.3					
	11	149 26.3	17 40.6	18 00.0	56 27.6	31.5	56 44.8	01.4	3 25.2	44.1								
	12	164 28.7	32 40.0 N17	59.4	71 28.4 N23	31.6	71 46.9 N23	01.4	18 27.4 N14	44.0	Gacrux	172 31.4 S56	59.4					
	13	179 31.2	47 39.4	58.7	86 29.2	31.6	86 49.0	01.4	33 29.6	43.9	Gienah	176 20.3 S17	25.0					
	14	194 33.6	62 38.8	58.1	101 30.0	31.6	101 51.1	01.4	48 31.7	43.8	Hadar	149 26.6 S60	16.1					
	15	209 36.1	77 38.2	57.4	116 30.8	31.6	116 53.1	01.4	63 33.9	43.7	Hamal	328 31.0 N23	21.4					
	16	224 38.6	92 37.6	56.7	131 31.6	31.6	131 55.2	01.4	78 36.0	43.6	Kaus Aust.	84 19.4 S34	23.7					
	17	239 41.0	107 37.0	56.0	146 32.4	31.6	146 57.3	01.4	93 38.2	43.5								
	18	254 43.5	122 36.4 N17	55.4	161 33.2 N23	31.6	161 59.4 N23	01.4	108 40.4 N14	43.4	Kochab	137 19.6 N74	15.2					
	19	269 46.0	137 35.8	54.7	176 34.0	31.6	177 01.5	01.3	123 42.5	43.3	Markab	14 04.9 N15	05.3					
	20	284 48.4	152 35.2	54.0	191 34.8	31.7	192 03.6	01.3	138 44.7	43.2	Menkar	314 43.1 N 4	00.2					
	21	299 50.9	167 34.6	53.4	206 35.6	31.7	207 05.7	01.3	153 46.8	43.1	Menkent	148 39.6 S36	15.6					
	22	314 53.4	182 34.0	52.7	221 36.4	31.7	222 07.7	01.3	168 49.0	43.0	Miaplacidus	221 46.1 S69	37.5					
23	329 55.8	197 33.4	52.0	236 37.2	31.7	237 09.8	01.3	183 51.2	42.9									
MARTES	6 00	344 58.3	212 32.8 N17	51.3	251 38.0 N23	31.7	252 11.9 N23	01.3	198 53.3 N14	42.9	Mirfak	309 18.8 N49	46.8					
	01	0 00.7	227 32.2	50.7	266 38.8	31.7	267 14.0	01.3	213 55.5	42.8	Nunki	76 31.5 S26	19.4					
	02	15 03.2	242 31.6	50.0	281 39.6	31.7	282 16.1	01.3	228 57.7	42.7	Peacock	54 01.2 S56	48.4					
	03	30 05.7	257 31.0	49.3	296 40.5	31.7	297 18.2	01.3	243 59.8	42.6	Pollux	244 00.9 N28	04.7					
	04	45 08.1	272 30.4	48.6	311 41.3	31.7	312 20.3	01.3	259 02.0	42.5	Procyon	245 28.1 N 5	17.0					
	05	60 10.6	287 29.8	47.9	326 42.1	31.8	327 22.4	01.3	274 04.1	42.4								
	06	75 13.1	302 29.3 N17	47.3	341 42.9 N23	31.8	342 24.5 N23	01.3	289 06.3 N14	42.3	Rasalhague	96 31.4 N12	34.8					
	07	90 15.5	317 28.7	46.6	356 43.7	31.8	357 26.5	01.3	304 08.5	42.2	Regulus	208 12.5 N12	04.6					
	08	105 18.0	332 28.1	45.9	11 44.5	31.8	12 28.6	01.3	319 10.6	42.1	Rigel	281 38.0 S 8	13.5					
	09	120 20.5	347 27.5	45.2	26 45.3	31.8	27 30.7	01.3	334 12.8	42.0	Rigel Kent.	140 28.8 S60	44.7					
	10	135 22.9	2 26.9	44.5	41 46.1	31.8	42 32.8	01.3	349 15.0	41.9	Sabik	102 43.4 S15	41.7					
	11	150 25.4	17 26.3	43.9	56 46.9	31.8	57 34.9	01.3	4 17.1	41.8								
	12	165 27.9	32 25.7 N17	43.2	71 47.7 N23	31.8	72 37.0 N23	01.3	19 19.3 N14	41.7	Schedar	350 10.7 N56	24.9					
	13	180 30.3	47 25.1	42.5	86 48.5	31.8	87 39.1	01.3	34 21.5	41.6	Shaula	96 58.4 S37	05.3					
	14	195 32.8	62 24.5	41.8	101 49.3	31.8	102 41.2	01.3	49 23.6	41.5	Sirius	258 57.7 S16	41.1					
	15	210 35.2	77 23.9	41.1	116 50.1	31.8	117 43.3	01.2	64 25.8	41.4	Spica	158 59.9 S11	02.6					
	16	225 37.7	92 23.3	40.4	131 51.0	31.8	132 45.4	01.2	79 27.9	41.3	Suhail	223 12.6 S43	20.5					
	17	240 40.2	107 22.7	39.7	146 51.8	31.9	147 47.5	01.2	94 30.1	41.2								
	18	255 42.6	122 22.1 N17	39.0	161 52.6 N23	31.9	162 49.6 N23	01.2	109 32.3 N14	41.1	Vega	80 57.0 N38	46.1					
	19	270 45.1	137 21.5	38.3	176 53.4	31.9	177 51.6	01.2	124 34.4	41.0	Zuben'ubi	137 35.4 S15	56.9					
	20	285 47.6	152 20.9	37.6	191 54.2	31.9	192 53.7	01.2	139 36.6	40.9								
	21	300 50.0	167 20.4	37.0	206 55.0	31.9	207 55.8	01.2	154 38.8	40.8								
	22	315 52.5	182 19.8	36.3	221 55.8	31.9	222 57.9	01.2	169 40.9	40.7	Venus	228 48.1	9 49					
23	330 55.0	197 19.2	35.6	236 56.6	31.9	238 00.0	01.2	184 43.1	40.6	Marte	267 19.6	7 14						
										Júpiter	267 22.7	7 14						
										Saturno	214 02.3	10 46						
Pas. Mer.	h m	v -0.6	d 0.7	v 0.8	d 0.0	v 2.1	d 0.0	v 2.2	d 0.1									

T. M. G.	ARIES		VENUS -3.4		MARTE +1.0		JUPITER -1.8		SATURNO +0.7		ESTRELLAS																	
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.																
M I E R C O L E S	7 00	345 57.4	212 18.6 N17	34.9	251 57.4 N23	31.9	253 02.1 N23	01.2	199 45.2 N14	40.5	Acamar	315 38.6 S40	23.4															
	01	0 59.9	227 18.0	34.2	266 58.3	31.9	268 04.2	01.2	214 47.4	40.4	Achernar	335 46.4 S57	20.8															
	02	16 02.4	242 17.4	33.5	281 59.1	31.9	283 06.3	01.2	229 49.6	40.3	Acruz	173 40.0 S62	58.6															
	03	31 04.8	257 16.8	32.8	296 59.9	31.9	298 08.4	01.2	244 51.7	40.2	Adhara	255 33.9 S28	56.4															
	04	46 07.3	272 16.2	32.1	312 00.7	31.9	313 10.5	01.2	259 53.9	40.1	Aldebaran	291 20.3 N16	27.9															
	05	61 09.7	287 15.6	31.4	327 01.5	31.9	328 12.6	01.2	274 56.1	40.0																		
	06	76 12.2	302 15.0 N17	30.7	342 02.3 N23	31.9	343 14.7 N23	01.2	289 58.2 N14	39.9	Alioth	166 44.9 N56	05.0															
	07	91 14.7	317 14.5	30.0	357 03.1	31.9	358 16.8	01.2	305 00.4	39.8	Alkaid	153 20.5 N49	25.7															
	08	106 17.1	332 13.9	29.3	12 03.9	31.9	13 18.9	01.2	320 02.6	39.7	Al Na'ir	28 17.1 S47	04.0															
	09	121 19.6	347 13.3	28.6	27 04.8	31.9	28 21.0	01.2	335 04.7	39.7	Alnilam	276 13.8 S 1	12.9															
	10	136 22.1	2 12.7	27.9	42 05.6	31.9	43 23.1	01.2	350 06.9	39.6	Alphard	218 22.8 S 8	33.6															
	11	151 24.5	17 12.1	27.2	57 06.4	31.9	58 25.2	01.1	5 09.0	39.5																		
	12	166 27.0	32 11.5 N17	26.4	72 07.2 N23	31.9	73 27.3 N23	01.1	20 11.2 N14	39.4	Alphecca	126 34.0 N26	47.7															
	13	181 29.5	47 10.9	25.7	87 08.0	31.9	88 29.4	01.1	35 13.4	39.3	Alpheratz	358 11.0 N28	58.1															
	14	196 31.9	62 10.3	25.0	102 08.8	31.9	103 31.5	01.1	50 15.5	39.2	Altair	62 34.3 N 8	48.8															
	15	211 34.4	77 09.8	24.3	117 09.6	31.9	118 33.6	01.1	65 17.7	39.1	Ankaa	353 41.9 S42	25.4															
	16	226 36.8	92 09.2	23.6	132 10.5	31.9	133 35.7	01.1	80 19.9	39.0	Antares	112 59.4 S26	22.9															
	17	241 39.3	107 08.6	22.9	147 11.3	31.9	148 37.8	01.1	95 22.0	38.9																		
	18	256 41.8	122 08.0 N17	22.2	162 12.1 N23	31.9	163 39.9 N23	01.1	110 24.2 N14	38.8	Arcturus	146 20.5 N19	18.1															
	19	271 44.2	137 07.4	21.5	177 12.9	31.9	178 42.0	01.1	125 26.4	38.7	Atria	108 25.4 S68	59.5															
	20	286 46.7	152 06.8	20.8	192 13.7	31.9	193 44.1	01.1	140 28.5	38.6	Avior	234 29.4 S59	26.1															
	21	301 49.2	167 06.2	20.0	207 14.5	31.9	208 46.2	01.1	155 30.7	38.5	Bellatrix	279 01.0 N 6	19.8															
	22	316 51.6	182 05.7	19.3	222 15.4	31.9	223 48.3	01.1	170 32.9	38.4	Betelgeuse	271 30.5 N 7	24.2															
23	331 54.1	197 05.1	18.6	237 16.2	31.9	238 50.4	01.1	185 35.0	38.3																			
J U E V E S	8 00	346 56.6	212 04.5 N17	17.9	252 17.0 N23	31.9	253 52.5 N23	01.1	200 37.2 N14	38.2	Canopus	264 08.3 S52	40.8															
	01	1 59.0	227 03.9	17.2	267 17.8	31.9	268 54.6	01.1	215 39.4	38.1	Capella	281 14.3 N45	58.3															
	02	17 01.5	242 03.3	16.5	282 18.6	31.9	283 56.7	01.1	230 41.5	38.0	Deneb	49 49.4 N45	12.4															
	03	32 04.0	257 02.7	15.7	297 19.5	31.9	298 58.8	01.1	245 43.7	37.9	Denebola	183 01.4 N14	41.9															
	04	47 06.4	272 02.2	15.0	312 20.3	31.9	314 00.9	01.1	260 45.8	37.8	Diphda	349 22.6 S18	06.4															
	05	62 08.9	287 01.6	14.3	327 21.1	31.9	329 03.0	01.0	275 48.0	37.7																		
	06	77 11.3	302 01.0 N17	13.6	342 21.9 N23	31.9	344 05.1 N23	01.0	290 50.2 N14	37.6	Dubhe	194 25.4 N61	52.3															
	07	92 13.8	317 00.4	12.9	357 22.7	31.9	359 07.2	01.0	305 52.3	37.5	Elnath	278 46.7 N28	35.2															
	08	107 16.3	331 59.8	12.1	12 23.6	31.9	14 09.3	01.0	320 54.5	37.4	Eltanin	90 58.5 N51	29.9															
	09	122 18.7	346 59.2	11.4	27 24.4	31.9	29 11.4	01.0	335 56.7	37.3	Enif	34 13.3 N 9	46.6															
	10	137 21.2	1 58.7	10.7	42 25.2	31.9	44 13.5	01.0	350 58.8	37.2	Fomalhaut	15 53.3 S29	44.3															
	11	152 23.7	16 58.1	10.0	57 26.0	31.9	59 15.6	01.0	6 01.0	37.1																		
	12	167 26.1	31 57.5 N17	09.2	72 26.8 N23	31.9	74 17.7 N23	01.0	21 03.2 N14	37.0	Gacrux	172 31.4 S56	59.4															
	13	182 28.6	46 56.9	08.5	87 27.7	31.9	89 19.8	01.0	36 05.3	36.9	Gienah	176 20.3 S17	25.0															
	14	197 31.1	61 56.3	07.8	102 28.5	31.9	104 21.9	01.0	51 07.5	36.9	Hadar	149 26.6 S60	16.1															
	15	212 33.5	76 55.8	07.0	117 29.3	31.9	119 24.0	01.0	66 09.7	36.8	Hamal	328 31.0 N23	21.4															
	16	227 36.0	91 55.2	06.3	132 30.1	31.9	134 26.1	01.0	81 11.8	36.7	Kaus Aust.	84 19.4 S34	23.7															
	17	242 38.5	106 54.6	05.6	147 30.9	31.9	149 28.2	01.0	96 14.0	36.6																		
	18	257 40.9	121 54.0 N17	04.8	162 31.8 N23	31.8	164 30.3 N23	01.0	111 16.2 N14	36.5	Kochab	137 19.7 N74	15.2															
	19	272 43.4	136 53.4	04.1	177 32.6	31.8	179 32.4	01.0	126 18.3	36.4	Markab	14 04.8 N15	05.3															
	20	287 45.8	151 52.9	03.4	192 33.4	31.8	194 34.5	01.0	141 20.5	36.3	Menkar	314 43.1 N 4	00.2															
	21	302 48.3	166 52.3	02.6	207 34.2	31.8	209 36.6	01.0	156 22.7	36.2	Menkent	148 39.6 S36	15.6															
	22	317 50.8	181 51.7	01.9	222 35.1	31.8	224 38.7	01.0	171 24.8	36.1	Miaplacidus	221 46.1 S69	37.5															
23	332 53.2	196 51.1	01.2	237 35.9	31.8	239 40.8	00.9	186 27.0	36.0																			
V I E R N E S	9 00	347 55.7	211 50.6 N17	00.4	252 36.7 N23	31.8	254 42.9 N23	00.9	201 29.2 N14	35.9	Mirfak	309 18.8 N49	46.8															
	01	2 58.2	226 50.0	16 59.7	267 37.5	31.8	269 45.0	00.9	216 31.3	35.8	Nunki	76 31.5 S26	19.4															
	02	18 00.6	241 49.4	59.0	282 38.4	31.8	284 47.2	00.9	231 33.5	35.7	Peacock	54 01.2 S56	48.4															
	03	33 03.1	256 48.8	58.2	297 39.2	31.8	299 49.3	00.9	246 35.7	35.6	Pollux	244 00.9 N28	04.7															
	04	48 05.6	271 48.2	57.5	312 40.0	31.8	314 51.4	00.9	261 37.8	35.5	Procyon	245 28.1 N 5	17.0															
	05	63 08.0	286 47.7	56.7	327 40.8	31.8	329 53.5	00.9	276 40.0	35.4																		
	06	78 10.5	301 47.1 N16	56.0	342 41.7 N23	31.7	344 55.6 N23	00.9	291 42.2 N14	35.3	Rasalhague	96 31.4 N12	34.8															
	07	93 12.9	316 46.5	55.2	357 42.5	31.7	359 57.7	00.9	306 44.3	35.2	Regulus	208 12.5 N12	04.6															
	08	108 15.4	331 45.9	54.5	12 43.3	31.7	14 59.8	00.9	321 46.5	35.1	Rigel	281 38.0 S 8	13.5															
	09	123 17.9	346 45.4	53.8	27 44.1	31.7	30 01.9	00.9	336 48.7	35.0	Rigel Kent.	140 28.9 S60	44.7															
	10	138 20.3	1 44.8	53.0	42 45.0	31.7	45 04.0	00.9	351 50.8	34.9	Sabik	102 43.4 S15	41.7															
	11	153 22.8	16 44.2	52.3	57 45.8	31.7	60 06.1	00.9	6 53.0	34.8																		
	12	168 25.3	31 43.6 N16	51.5	72 46.6 N23	31.7	75 08.2 N23	00.9	21 55.2 N14	34.7	Schedar	350 10.7 N56	24.9															
	13	183 27.7	46 43.1	50.8	87 47.5	31.7	90 10.3	00.9	36 57.3	34.6	Shaula	96 58.4 S37	05.3															
	14	198 30.2	61 42.5	50.0	102 48.3	31.7	105 12.5	00.9	51 59.5	34.5	Sirius	258 57.6 S16	41.0															
	15	213 32.7	76 41.9	49.3	117 49.1	31.7	120 14.6	00.9	67 01.7	34.4	Spica	158 59.9 S11	02.6															
	16	228 35.1	91 41.3	48.5	132 49.9	31.6	135 16.7	00.9	82 03.8	34.3	Suhail	223 12.6 S43	20.4															
	17	243 37.6	106 40.8	47.8	147 50.8	31.6	150 18.8	00.8	97 06.0	34.3																		
	18	258 40.1	121 40.2 N16	47.0	162 51.6 N23	31.6	165 20.9 N23	00.8	112 08.2 N14	34.2	Vega	80 57.0 N38	46.2															
	19	273 42.5	136 39.6	46.3	177 52.4	31.6	180 23.0	00.8	127 10.3	34.1	Zuben'ubi	137 35.4 S15	56.9															
	20	288 45.0	151 39.1	45.5	192 53.3	31.6	195 25.1	00.8	142 12.5	34.0																		
	21	303 47.4	166 38.5	44.7	207 54.1	31.6	210 27.2	00.8	157 14.7	33.9																		
	22	318 49.9	181 37.9	44.0	222 54.9	31.6	225 29.3	00.8	172 16.8	33.8																		
23	333 52.4	196 37.3	43.2	237 55.8	31.5	240 31.5	00.8	187 19.0	33.7																			
Pas. Mer.		0 52.1		v -0.6 d 0.7		v 0.8 d 0.0		v 2.1 d 0.0		v 2.2 d 0.1		<table border="0"> <tr> <td></td> <td>A. H. S.</td> <td>Pas. Mer.</td> </tr> <tr> <td>Venus</td> <td>225 07.9</td> <td>9 52</td> </tr> <tr> <td>Marte</td> <td>265 20.4</td> <td>7 10</td> </tr> <tr> <td>Júpiter</td> <td>266 55.9</td> <td>7 04</td> </tr> <tr> <td>Saturno</td> <td>213 40.6</td> <td>10 36</td> </tr> </table>			A. H. S.	Pas. Mer.	Venus	225 07.9	9 52	Marte	265 20.4	7 10	Júpiter	266 55.9	7 04	Saturno	213 40.6	10 36
	A. H. S.	Pas. Mer.																										
Venus	225 07.9	9 52																										
Marte	265 20.4	7 10																										
Júpiter	266 55.9	7 04																										
Saturno	213 40.6	10 36																										

T. M. G.	SOL			LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna															
	A.H.G.	Dec.		A.H.G.	v	Dec.	d		P. H.	Náut.		Civil	7	8	9	10											
	h	m	°	h	m	°	h	m	h	m	h	m	h	m	h	m	h	m									
M I E R C O L E S	7 00	180	27.3	N 6	11.6	256	30.3	12.1	N18	25.9	0.7	54.4	N 72	00	31	03	15	04	34	20	05	22	06	23	55	25	42
	01	195	27.6		10.7	271	01.4	12.1	18	25.2	0.7	54.4	N 70	01	46	03	35	04	43	21	29	22	52	24	24	00	24
	02	210	27.8		09.8	285	32.5	12.0	18	24.5	0.9	54.4	68	02	22	03	50	04	51	22	07	23	21	24	45	00	45
	03	225	28.0		08.8	300	03.5	12.1	18	23.6	1.0	54.4	66	02	47	04	02	04	57	22	34	23	44	25	02	01	02
	04	240	28.2		07.9	314	34.6	12.1	18	22.6	1.0	54.4	64	03	05	04	12	05	02	22	55	24	01	00	01	01	15
	05	255	28.4		07.0	329	05.7	12.1	18	21.6	1.1	54.4	62	03	20	04	20	05	07	23	11	24	15	00	15	01	27
	06	270	28.6	N 6	06.0	343	36.8	12.0	N18	20.5	1.2	54.4	60	03	32	04	27	05	11	23	25	24	28	00	28	01	37
	07	285	28.8		05.1	358	07.8	12.1	18	19.3	1.3	54.4	N 58	03	43	04	34	05	14	23	37	24	38	00	38	01	45
	08	300	29.0		04.1	12	38.9	12.0	18	18.0	1.4	54.5	56	03	52	04	39	05	17	23	47	24	47	00	47	01	53
	09	315	29.3		03.2	27	09.9	12.0	18	16.6	1.4	54.5	54	03	59	04	44	05	20	23	56	24	55	00	55	01	59
	10	330	29.5		02.3	41	40.9	12.1	18	15.2	1.6	54.5	52	04	06	04	48	05	23	24	04	00	04	01	02	02	05
	11	345	29.7		01.3	56	12.0	12.0	18	13.6	1.6	54.5	50	04	12	04	52	05	25	24	12	00	12	01	09	02	10
	12	0	29.9	N 6	00.4	70	43.0	12.0	N18	12.0	1.7	54.5	45	04	24	05	00	05	30	24	27	00	27	01	23	02	22
	13	15	30.1	5	59.5	85	14.0	12.0	18	10.3	1.8	54.5	N 40	04	34	05	07	05	34	24	40	00	40	01	34	02	32
	14	30	30.3		58.5	99	45.0	12.1	18	08.5	1.9	54.5	35	04	42	05	12	05	38	00	01	00	51	01	44	02	40
	15	45	30.5		57.6	114	16.1	12.0	18	06.6	2.0	54.5	30	04	48	05	16	05	41	00	10	01	00	01	53	02	47
	16	60	30.7		56.7	128	47.1	12.0	18	04.6	2.1	54.6	20	04	58	05	24	05	46	00	27	01	17	02	07	02	59
	17	75	31.0		55.7	143	18.1	12.0	18	02.5	2.1	54.6	N 10	05	05	05	29	05	50	00	42	01	31	02	20	03	10
	18	90	31.2	N 5	54.8	157	49.1	11.9	N18	00.4	2.2	54.6	0	05	10	05	34	05	54	00	56	01	44	02	32	03	20
	19	105	31.4		53.8	172	20.0	12.0	17	58.2	2.4	54.6	S 10	05	13	05	37	05	58	01	10	01	57	02	44	03	30
	20	120	31.6		52.9	186	51.0	12.0	17	55.8	2.4	54.6	20	05	15	05	40	06	03	01	25	02	12	02	57	03	41
	21	135	31.8		52.0	201	22.0	12.0	17	53.4	2.5	54.6	30	05	16	05	43	06	07	01	42	02	28	03	12	03	54
	22	150	32.0		51.0	215	53.0	12.0	17	50.9	2.5	54.6	35	05	15	05	44	06	10	01	52	02	37	03	20	04	01
23	165	32.2		50.1	230	24.0	11.9	17	48.4	2.7	54.7	40	05	14	05	46	06	13	02	03	02	48	03	30	04	09	
8 00	180	32.5	N 5	49.2	244	54.9	12.0	N17	45.7	2.8	54.7	45	05	13	05	47	06	16	02	17	03	01	03	41	04	18	
01	195	32.7		48.2	259	25.9	11.9	17	42.9	2.8	54.7	S 50	05	10	05	48	06	20	02	33	03	16	03	55	04	29	
02	210	32.9		47.3	273	56.8	12.0	17	40.1	2.9	54.7	52	05	09	05	48	06	22	02	41	03	23	04	01	04	35	
03	225	33.1		46.3	288	27.8	11.9	17	37.2	3.0	54.7	54	05	08	05	48	06	24	02	49	03	31	04	08	04	40	
04	240	33.3		45.4	302	58.7	12.0	17	34.2	3.1	54.7	56	05	06	05	49	06	26	02	59	03	40	04	16	04	47	
05	255	33.5		44.5	317	29.7	11.9	17	31.1	3.2	54.8	58	05	04	05	49	06	28	03	10	03	51	04	25	04	54	
06	270	33.7	N 5	43.5	332	00.6	12.0	N17	27.9	3.2	54.8	S 60	05	01	05	49	06	31	03	22	04	02	04	35	05	02	
07	285	34.0		42.6	346	31.6	11.9	17	24.7	3.4	54.8																
08	300	34.2		41.6	1	02.5	12.0	17	21.3	3.4	54.8	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna											
09	315	34.4		40.7	15	33.5	11.9	17	17.9	3.5	54.8					7	8	9	10								
10	330	34.6		39.8	30	04.4	11.9	17	14.4	3.6	54.8																
11	345	34.8		38.8	44	35.3	12.0	17	10.8	3.7	54.9																
12	0	35.0	N 5	37.9	59	06.3	11.9	N17	07.1	3.8	54.9	N 72	19	18	20	36	23	01	19	02	18	42	18	33	18	27	
13	15	35.2		36.9	73	37.2	11.9	17	03.3	3.8	54.9	N 70	19	09	20	17	22	01	17	39	17	56	18	03	18	07	
14	30	35.5		36.0	88	08.1	11.9	16	59.5	3.9	54.9	68	19	02	20	03	21	28	17	00	17	25	17	41	17	52	
15	45	35.7		35.1	102	39.0	11.9	16	55.6	4.1	54.9	66	18	56	19	51	21	05	16	33	17	03	17	24	17	39	
16	60	35.9		34.1	117	09.9	12.0	16	51.5	4.1	54.9	64	18	51	19	41	20	47	16	12	16	45	17	09	17	29	
17	75	36.1		33.2	131	40.9	11.9	16	47.4	4.1	55.0	62	18	47	19	33	20	33	15	55	16	30	16	57	17	20	
18	90	36.3	N 5	32.2	146	11.8	11.9	N16	43.3	4.3	55.0	60	18	43	19	26	20	21	15	41	16	17	16	47	17	12	
19	105	36.5		31.3	160	42.7	11.9	16	39.0	4.4	55.0	N 58	18	40	19	20	20	11	15	29	16	07	16	38	17	05	
20	120	36.7		30.3	175	13.6	11.9	16	34.6	4.4	55.0	56	18	37	19	15	20	02	15	19	15	57	16	30	16	59	
21	135	37.0		29.4	189	44.5	11.9	16	30.2	4.5	55.0	54	18	34	19	10	19	54	15	09	15	49	16	23	16	53	
22	150	37.2		28.5	204	15.4	11.9	16	25.7	4.6	55.1	52	18	32	19	06	19	48	15	01	15	41	16	17	16	48	
23	165	37.4		27.5	218	46.3	11.9	16	21.1	4.7	55.1	50	18	29	19	02	19	42	14	54	15	35	16	11	16	44	
9 00	180	37.6	N 5	26.6	233	17.2	11.9	N16	16.4	4.7	55.1	45	18	25	18	54	19	30	14	38	15	20	15	59	16	34	
01	195	37.8		25.6	247	48.1	11.9	16	11.7	4.9	55.1	N 40	18	21	18	48	19	20	14	25	15	08	15	48	16	26	
02	210	38.0		24.7	262	19.0	11.9	16	06.8	4.9	55.2	35	18	17	18	43	19	13	14	14	14	58	15	40	16	19	
03	225	38.2		23.8	276	49.9	11.9	16	01.9	5.0	55.2	30	18	14	18	38											

T. M. G.	SOL		LUNA				Lot.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P. H.	Náut.		Civil	10	11	12	13
	h m	°	h m	°	h m	°		h m	h m	h m	h m	h m	h m	h m	
10 ^d 00	180 42.8 N	5 03.9	221 38.7	11.9	N14 00.2	6.6	55.7	N 72	01 25	03 33	04 48	25 42	01 42	03 28	05 15
01	195 43.0	03.0	236 09.6	11.9	13 53.6	6.7	55.7	N 70	02 11	03 49	04 55	00 24	02 00	03 38	05 19
02	210 43.2	02.0	250 40.5	11.8	13 46.9	6.8	55.7	68	02 40	04 02	05 02	00 45	02 14	03 47	05 22
03	225 43.4	01.1	265 11.3	11.9	13 40.1	6.9	55.7	66	03 01	04 13	05 07	01 02	02 26	03 53	05 24
04	240 43.7	5 00.1	279 42.2	11.9	13 33.2	6.9	55.8	64	03 17	04 21	05 11	01 15	02 35	03 59	05 26
05	255 43.9	4 59.2	294 13.1	11.9	13 26.3	7.0	55.8	62	03 30	04 29	05 15	01 27	02 44	04 04	05 27
06	270 44.1 N	4 58.2	308 44.0	11.9	N13 19.3	7.1	55.8	60	03 41	04 35	05 18	01 37	02 51	04 08	05 29
07	285 44.3	57.3	323 14.9	11.8	13 12.2	7.2	55.8	N 58	03 51	04 40	05 21	01 45	02 57	04 12	05 30
08	300 44.5	56.3	337 45.7	11.9	13 05.0	7.2	55.9	56	03 59	04 45	05 23	01 53	03 02	04 16	05 31
S 09	315 44.7	55.4	352 16.6	11.9	12 57.8	7.3	55.9	54	04 06	04 49	05 26	01 59	03 07	04 19	05 32
A 10	330 45.0	54.4	6 47.5	11.9	12 50.5	7.3	55.9	52	04 12	04 53	05 28	02 05	03 12	04 21	05 33
B 11	345 45.2	53.5	21 18.4	11.8	12 43.2	7.5	55.9	50	04 17	04 57	05 29	02 10	03 16	04 24	05 34
A 12	0 45.4 N	4 52.5	35 49.2	11.9	N12 35.7	7.4	56.0	45	04 28	05 04	05 34	02 22	03 24	04 29	05 36
D 13	15 45.6	51.6	50 20.1	11.9	12 28.3	7.6	56.0	N 40	04 37	05 10	05 37	02 32	03 32	04 34	05 38
O 14	30 45.8	50.7	64 51.0	11.8	12 20.7	7.7	56.0	35	04 44	05 14	05 40	02 40	03 38	04 38	05 39
15	45 46.0	49.7	79 21.8	11.9	12 13.0	7.7	56.1	30	04 50	05 18	05 42	02 47	03 43	04 41	05 40
16	60 46.3	48.8	93 52.7	11.9	12 05.3	7.7	56.1	20	04 59	05 24	05 46	02 59	03 53	04 47	05 42
17	75 46.5	47.8	108 23.6	11.8	11 57.6	7.9	56.1	N 10	05 04	05 29	05 50	03 10	04 01	04 52	05 44
18	90 46.7 N	4 46.9	122 54.4	11.9	N11 49.7	7.9	56.1	0	05 09	05 33	05 53	03 20	04 09	04 57	05 46
19	105 46.9	45.9	137 25.3	11.8	11 41.8	7.9	56.2	S 10	05 11	05 36	05 57	03 30	04 16	05 02	05 48
20	120 47.1	45.0	151 56.1	11.9	11 33.9	8.1	56.2	20	05 12	05 38	06 00	03 41	04 24	05 07	05 49
21	135 47.3	44.0	166 27.0	11.8	11 25.8	8.1	56.2	30	05 12	05 40	06 03	03 54	04 34	05 13	05 52
22	150 47.6	43.1	180 57.8	11.9	11 17.7	8.1	56.2	35	05 11	05 40	06 06	04 01	04 39	05 16	05 53
23	165 47.8	42.1	195 28.7	11.8	11 09.6	8.3	56.3	40	05 09	05 41	06 08	04 09	04 45	05 20	05 54
11 ^d 00	180 48.0 N	4 41.2	209 59.5	11.9	N11 01.3	8.3	56.3	45	05 07	05 41	06 10	04 18	04 52	05 25	05 56
01	195 48.2	40.2	224 30.4	11.8	10 53.0	8.3	56.3	S 50	05 04	05 41	06 13	04 29	05 01	05 30	05 58
02	210 48.4	39.3	239 01.2	11.8	10 44.7	8.4	56.4	52	05 02	05 41	06 15	04 35	05 05	05 32	05 59
03	225 48.7	38.3	253 32.0	11.8	10 36.3	8.5	56.4	54	05 00	05 41	06 16	04 40	05 09	05 35	06 00
04	240 48.9	37.4	268 02.8	11.9	10 27.8	8.5	56.4	56	04 58	05 41	06 18	04 47	05 14	05 38	06 01
05	255 49.1	36.4	282 33.7	11.8	10 19.3	8.6	56.4	58	04 55	05 41	06 20	04 54	05 19	05 41	06 02
06	270 49.3 N	4 35.5	297 04.5	11.8	N10 10.7	8.7	56.5	S 60	04 52	05 41	06 22	05 02	05 25	05 45	06 03
07	285 49.5	34.5	311 35.3	11.8	10 02.0	8.7	56.5	Lot.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna			
08	300 49.7	33.6	326 06.1	11.8	9 53.3	8.8	56.5	10	h m	h m	h m	10	11	12	13
09	315 50.0	32.6	340 36.9	11.8	9 44.5	8.8	56.5	N 72	19 02	20 17	22 17	18 27	18 21	18 16	18 10
10	330 50.2	31.7	355 07.7	11.8	9 35.7	8.9	56.6	N 70	18 55	20 01	21 36	18 07	18 09	18 10	18 10
11	345 50.4	30.7	9 38.5	11.8	9 26.8	9.0	56.6	68	18 49	19 48	21 09	17 52	17 59	18 05	18 10
12	0 50.6 N	4 29.8	24 09.3	11.8	N 9 17.8	9.0	56.6	66	18 45	19 38	20 49	17 39	17 51	18 01	18 10
13	15 50.8	28.8	38 40.1	11.7	9 08.8	9.0	56.7	64	18 41	19 30	20 33	17 29	17 44	17 58	18 10
14	30 51.1	27.9	53 10.8	11.8	8 59.8	9.1	56.7	62	18 37	19 23	20 20	17 20	17 38	17 55	18 10
15	45 51.3	26.9	67 41.6	11.8	8 50.7	9.2	56.7	60	18 34	19 17	20 10	17 12	17 33	17 52	18 10
16	60 51.5	25.9	82 12.4	11.7	8 41.5	9.2	56.7	N 58	18 31	19 11	20 01	17 05	17 28	17 50	18 10
17	75 51.7	25.0	96 43.1	11.8	8 32.3	9.3	56.8	56	18 29	19 07	19 53	16 59	17 24	17 47	18 10
18	90 51.9 N	4 24.0	111 13.9	11.7	N 8 23.0	9.3	56.8	54	18 27	19 02	19 46	16 53	17 20	17 46	18 10
19	105 52.2	23.1	125 44.6	11.7	8 13.7	9.4	56.8	52	18 25	18 59	19 40	16 48	17 17	17 44	18 10
20	120 52.4	22.1	140 15.3	11.8	8 04.3	9.4	56.9	50	18 23	18 56	19 35	16 44	17 14	17 42	18 10
21	135 52.6	21.2	154 46.1	11.7	7 54.9	9.5	56.9	45	18 19	18 49	19 24	16 34	17 07	17 39	18 10
22	150 52.8	20.2	169 16.8	11.7	7 45.4	9.5	56.9	N 40	18 16	18 43	19 15	16 26	17 01	17 36	18 10
23	165 53.0	19.3	183 47.5	11.7	7 35.9	9.6	56.9	35	18 13	18 38	19 08	16 19	16 57	17 33	18 10
12 ^d 00	180 53.2 N	4 18.3	198 18.2	11.7	N 7 26.3	9.6	57.0	30	18 11	18 35	19 03	16 13	16 52	17 31	18 10
01	195 53.5	17.4	212 48.9	11.6	7 16.7	9.6	57.0	20	18 07	18 29	18 54	16 02	16 45	17 27	18 10
02	210 53.7	16.4	227 19.5	11.7	7 07.1	9.7	57.0	N 10	18 03	18 24	18 49	15 52	16 38	17 24	18 10
03	225 53.9	15.5	241 50.2	11.7	6 57.4	9.8	57.0	0	18 00	18 21	18 45	15 43	16 32	17 20	18 09
04	240 54.1	14.5	256 20.9	11.6	6 47.6	9.8	57.1	S 10	17 57	18 18	18 42	15 34	16 25	17 17	18 09
05	255 54.3	13.6	270 51.5	11.6	6 37.8	9.8	57.1	20	17 54	18 16	18 41	15 25	16 19	17 13	18 09
06	270 54.6 N	4 12.6	285 22.1	11.7	N 6 28.0	9.9	57.1	30	17 50	18 14	18 42	15 14	16 11	17 09	18 09
07	285 54.8	11.7	299 52.8	11.6	6 18.1	10.0	57.2	35	17 48	18 14	18 43	15 07	16 06	17 07	18 09
08	300 55.0	10.7	314 23.4	11.6	6 08.1	9.9	57.2	40	17 46	18 13	18 45	15 00	16 01	17 04	18 09
L 09	315 55.2	09.7	328 54.0	11.6	5 58.2	10.0	57.2	45	17 44	18 13	18 47	14 52	15 55	17 01	18 09
U 10	330 55.4	08.8	343 24.6	11.5	5 48.2	10.1	57.2	S 50	17 41	18 13	18 50	14 41	15 48	16 57	18 08
N 11	345 55.7	07.8	357 55.1	11.6	5 38.1	10.1	57.3	52	17 39	18 13	18 52	14 36	15 45	16 55	18 08
E 12	0 55.9 N	4 06.9	12 25.7	11.5	N 5 28.0	10.1	57.3	54	17 38	18 13	18 54	14 31	15 41	16 53	18 08
S 13	15 56.1	05.9	26 56.2	11.6	5 17.9	10.1	57.3	56	17 36	18 13	18 57	14 25	15 37	16 51	18 08
14	30 56.3	05.0	41 26.8	11.5	5 07.8	10.2	57.4	58	17 35	18 14	18 59	14 19	15 32	16 49	18 08
15	45 56.5	04.0	55 57.3	11.5	4 57.6	10.3	57.4	S 60	17 33	18 14	19 03	14 11	15 27	16 46	18 08
16	60 56.8	03.1	70 27.8	11.5	4 47.3	10.2	57.4	Día	SOL E.T. (+)		LUNA				
17	75 57.0	02.1	84 58.3	11.5	4 37.1	10.3	57.4	00 ^h	12 ^h	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
18	90 57.2 N	4 01.2	99 28.8	11.4	N 4 26.8	10.4	57.5	10	m s	m s	h m	h m	h m	d	

T. M. G.	ARIES			VENUS -3.4			MARTE +0.9			JUPITER -1.8			SATURNO +0.8			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
M A R T E S	13 ⁰⁰	351 52.3	210 56.4 N15	45.8	253 57.2 N23	29.8	258 06.4 N23	00.4	204 57.3 N14	26.7						Acamar	315 38.6 S40	23.4
	01	6 54.7	225 55.9	45.0	268 58.1	29.8	273 08.5	00.4	219 59.5	26.6						Achernar	335 46.4 S57	20.8
	02	21 57.2	240 55.3	44.1	283 58.9	29.8	288 10.6	00.4	235 01.7	26.5						Acrux	173 40.0 S62	58.6
	03	36 59.6	255 54.8	43.3	298 59.8	29.8	303 12.8	00.3	250 03.9	26.4						Adhara	255 33.8 S28	56.3
	04	52 02.1	270 54.2	42.5	314 00.6	29.7	318 14.9	00.3	265 06.0	26.3						Aldebaran	291 20.2 N16	27.9
	05	67 04.6	285 53.7	41.7	329 01.5	29.7	333 17.0	00.3	280 08.2	26.2								
	06	82 07.0	300 53.1 N15	40.9	344 02.3 N23	29.7	348 19.2 N23	00.3	295 10.4 N14	26.1						Alioth	166 44.9 N56	05.0
	07	97 09.5	315 52.6	40.0	359 03.2	29.6	3 21.3	00.3	310 12.5	26.0						Alkaid	153 20.5 N49	25.7
	08	112 12.0	330 52.0	39.2	14 04.0	29.6	18 23.4	00.3	325 14.7	26.0						Al Na'ir	28 17.1 S47	04.1
	09	127 14.4	345 51.5	38.4	29 04.9	29.5	33 25.6	00.3	340 16.9	25.9						Alnilam	276 13.7 S 1	12.9
	10	142 16.9	0 50.9	37.6	44 05.8	29.5	48 27.7	00.3	355 19.1	25.8						Alphard	218 22.8 S 8	33.6
	11	157 19.4	15 50.4	36.8	59 06.6	29.5	63 29.8	00.3	10 21.2	25.7								
	12	172 21.8	30 49.9 N15	35.9	74 07.5 N23	29.4	78 32.0 N23	00.3	25 23.4 N14	25.6						Alphecca	126 34.0 N26	47.7
	13	187 24.3	45 49.3	35.1	89 08.3	29.4	93 34.1	00.3	40 25.6	25.5						Alpheratz	358 11.0 N28	58.2
	14	202 26.8	60 48.8	34.3	104 09.2	29.4	108 36.3	00.3	55 27.7	25.4						Altair	62 34.3 N 8	48.8
	15	217 29.2	75 48.2	33.4	119 10.0	29.3	123 38.4	00.3	70 29.9	25.3						Ankaa	353 41.9 S42	25.4
	16	232 31.7	90 47.7	32.6	134 10.9	29.3	138 40.5	00.3	85 32.1	25.2						Antares	112 59.4 S26	22.9
	17	247 34.1	105 47.1	31.8	149 11.8	29.3	153 42.7	00.3	100 34.3	25.1								
	18	262 36.6	120 46.6 N15	31.0	164 12.6 N23	29.2	168 44.8 N23	00.3	115 36.4 N14	25.0						Arcturus	146 20.6 N19	18.1
	19	277 39.1	135 46.0	30.1	179 13.5	29.2	183 46.9	00.2	130 38.6	24.9						Atria	108 25.5 S68	59.4
	20	292 41.5	150 45.5	29.3	194 14.3	29.2	198 49.1	00.2	145 40.8	24.8						Avior	234 29.4 S59	26.1
	21	307 44.0	165 44.9	28.5	209 15.2	29.1	213 51.2	00.2	160 42.9	24.7						Bellatrix	279 00.9 N 6	19.8
	22	322 46.5	180 44.4	27.6	224 16.1	29.1	228 53.3	00.2	175 45.1	24.6						Betelgeuse	271 30.5 N 7	24.2
23	337 48.9	195 43.9	26.8	239 16.9	29.0	243 55.5	00.2	190 47.3	24.5									
M I E R C O L E S	14 ⁰⁰	352 51.4	210 43.3 N15	26.0	254 17.8 N23	29.0	258 57.6 N23	00.2	205 49.5 N14	24.4						Canopus	264 08.2 S52	40.8
	01	7 53.9	225 42.8	25.1	269 18.6	29.0	273 59.8	00.2	220 51.6	24.3						Capella	281 14.3 N45	58.4
	02	22 56.3	240 42.2	24.3	284 19.5	28.9	289 01.9	00.2	235 53.8	24.3						Deneb	49 49.5 N45	12.4
	03	37 58.8	255 41.7	23.5	299 20.4	28.9	304 04.0	00.2	250 56.0	24.2						Denebola	183 01.4 N14	41.9
	04	53 01.2	270 41.2	22.6	314 21.2	28.9	319 06.2	00.2	265 58.2	24.1						Diphda	349 22.6 S18	06.4
	05	68 03.7	285 40.6	21.8	329 22.1	28.8	334 08.3	00.2	281 00.3	24.0								
	06	83 06.2	300 40.1 N15	20.9	344 22.9 N23	28.8	349 10.5 N23	00.2	296 02.5 N14	23.9						Dubhe	194 25.4 N61	52.3
	07	98 08.6	315 39.5	20.1	359 23.8	28.7	4 12.6	00.2	311 04.7	23.8						Elnath	278 46.7 N28	35.2
	08	113 11.1	330 39.0	19.3	14 24.7	28.7	19 14.7	00.2	326 06.9	23.7						Eltanin	90 58.6 N51	29.9
	09	128 13.6	345 38.4	18.4	29 25.5	28.7	34 16.9	00.2	341 09.0	23.6						Enif	34 13.3 N 9	46.6
	10	143 16.0	0 37.9	17.6	44 26.4	28.6	49 19.0	00.1	356 11.2	23.5						Fomalhaut	15 53.3 S29	44.3
	11	158 18.5	15 37.4	16.7	59 27.3	28.6	64 21.2	00.1	11 13.4	23.4								
	12	173 21.0	30 36.8 N15	15.9	74 28.1 N23	28.5	79 23.3 N23	00.1	26 15.5 N14	23.3						Gacrux	172 31.5 S56	59.3
	13	188 23.4	45 36.3	15.0	89 29.0	28.5	94 25.4	00.1	41 17.7	23.2						Gienah	176 20.4 S17	25.0
	14	203 25.9	60 35.8	14.2	104 29.8	28.4	109 27.6	00.1	56 19.9	23.1						Hadar	149 26.6 S60	16.0
	15	218 28.4	75 35.2	13.4	119 30.7	28.4	124 29.7	00.1	71 22.1	23.0						Hamal	328 30.9 N23	21.5
	16	233 30.8	90 34.7	12.5	134 31.6	28.4	139 31.9	00.1	86 24.2	22.9						Kaus Aust.	84 19.4 S34	23.7
	17	248 33.3	105 34.1	11.7	149 32.4	28.3	154 34.0	00.1	101 26.4	22.8								
	18	263 35.7	120 33.6 N15	10.8	164 33.3 N23	28.3	169 36.2 N23	00.1	116 28.6 N14	22.7						Kochab	137 19.8 N74	15.1
	19	278 38.2	135 33.1	10.0	179 34.2	28.2	184 38.3	00.1	131 30.8	22.6						Markab	14 04.8 N15	05.3
	20	293 40.7	150 32.5	09.1	194 35.0	28.2	199 40.5	00.1	146 32.9	22.6						Menkar	314 43.1 N 4	00.2
	21	308 43.1	165 32.0	08.3	209 35.9	28.2	214 42.6	00.1	161 35.1	22.5						Menkent	148 39.7 S36	15.6
	22	323 45.6	180 31.5	07.4	224 36.8	28.1	229 44.7	00.1	176 37.3	22.4						Miaplacidus	221 46.0 S69	37.4
23	338 48.1	195 30.9	06.6	239 37.6	28.1	244 46.9	00.1	191 39.5	22.3									
J U E V E S	15 ⁰⁰	353 50.5	210 30.4 N15	05.7	254 38.5 N23	28.0	259 49.0 N23	00.1	206 41.6 N14	22.2						Mirfak	309 18.7 N49	46.8
	01	8 53.0	225 29.8	04.9	269 39.4	28.0	274 51.2	00.1	221 43.8	22.1						Nunki	76 31.6 S26	19.4
	02	23 55.5	240 29.3	04.0	284 40.2	27.9	289 53.3	00.0	236 46.0	22.0						Peacock	54 01.2 S56	48.5
	03	38 57.9	255 28.8	03.1	299 41.1	27.9	304 55.5	00.0	251 48.2	21.9						Pollux	244 00.9 N28	04.7
	04	54 00.4	270 28.2	02.3	314 42.0	27.8	319 57.6	00.0	266 50.3	21.8						Procyon	245 28.1 N 5	17.0
	05	69 02.9	285 27.7	01.4	329 42.9	27.8	334 59.8	00.0	281 52.5	21.7								
	06	84 05.3	300 27.2 N15	00.6	344 43.7 N23	27.8	350 01.9 N23	00.0	296 54.7 N14	21.6						Rasalhague	96 31.5 N12	34.8
	07	99 07.8	315 26.6	14 59.7	359 44.6	27.7	5 04.1	00.0	311 56.9	21.5						Regulus	208 12.5 N12	04.6
	08	114 10.2	330 26.1	58.9	14 45.5	27.7	20 06.2	00.0	326 59.0	21.4						Rigel	281 37.9 S 8	13.5
	09	129 12.7	345 25.6	58.0	29 46.3	27.6	35 08.3	00.0	342 01.2	21.3						Rigil Kent.	140 28.9 S60	44.7
	10	144 15.2	0 25.0	57.1	44 47.2	27.6	50 10.5	00.0	357 03.4	21.2						Sabik	102 43.5 S15	41.7
	11	159 17.6	15 24.5	56.3	59 48.1	27.5	65 12.6	00.0	12 05.6	21.1								
	12	174 20.1	30 24.0 N14	55.4	74 48.9 N23	27.5	80 14.8 N23	00.0	27 07.7 N14	21.1						Schedar	350 10.7 N56	24.9
	13	189 22.6	45 23.4	54.5	89 49.8	27.4	95 16.9	00.0	42 09.9	21.0						Shaula	96 58.5 S37	05.3
	14	204 25.0	60 22.9	53.7	104 50.7	27.4	110 19.1	00.0	57 12.1	20.9						Sirius	258 57.6 S16	41.0
	15	219 27.5	75 22.4	52.8	119 51.6	27.3	125 21.2	00.0	72 14.3	20.8						Spica	158 59.9 S11	02.6
	16	234 30.0	90 21.9	52.0	134 52.4	27.3	140 23.4	23 00.0	87 16.4	20.7						Suhail	223 12.6 S43	20.4
	17	249 32.4	10															

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d	P.H.	Náut.		Civil	13		14		15		16	
											h	m	h	m	h	m	h	m
MARTES	13 00	180 58.5 N 3	55.4	186 31.3 11.3 N	3	24.3	10.5	57.6	N 72	01 57	03 49	05 02	05 15	07 05	08 57	10 54		
	01	195 58.7	54.5	201 01.6 11.4	3	13.8	10.5	57.6	N 70	02 32	04 03	05 08	05 19	07 01	08 47	10 34		
	02	210 59.0	53.5	215 32.0 11.3	3	03.3	10.6	57.7	68	02 56	04 14	05 12	05 22	06 59	08 38	10 19		
	03	225 59.2	52.6	230 02.3 11.3	2	52.7	10.6	57.7	66	03 14	04 23	05 16	05 24	06 56	08 31	10 07		
	04	240 59.4	51.6	244 32.6 11.3	2	42.1	10.6	57.7	64	03 28	04 31	05 20	05 26	06 55	08 25	09 57		
	05	255 59.6	50.6	259 02.9 11.2	2	31.5	10.6	57.7	62	03 40	04 37	05 22	05 27	06 53	08 20	09 48		
	06	270 59.8 N 3	49.7	273 33.1 11.3 N	2	20.9	10.7	57.8	60	03 50	04 42	05 25	05 29	06 51	08 16	09 40		
	07	286 00.1	48.7	288 03.4 11.2	2	10.2	10.7	57.8	N 58	03 58	04 47	05 27	05 30	06 50	08 12	09 34		
	08	301 00.3	47.8	302 33.6 11.2	1	59.5	10.7	57.8	56	04 05	04 51	05 29	05 31	06 49	08 08	09 28		
	09	316 00.5	46.8	317 03.8 11.2	1	48.8	10.7	57.8	54	04 12	04 55	05 31	05 32	06 48	08 05	09 23		
	10	331 00.7	45.9	331 34.0 11.1	1	38.1	10.7	57.9	52	04 17	04 58	05 33	05 33	06 47	08 02	09 18		
	11	346 00.9	44.9	346 04.1 11.2	1	27.4	10.7	57.9	50	04 22	05 01	05 34	05 34	06 46	08 00	09 14		
	12	1 01.2 N 3	43.9	0 34.3 11.1 N	1	16.7	10.8	57.9	45	04 32	05 08	05 37	05 36	06 45	07 54	09 05		
	13	16 01.4	43.0	15 04.4 11.1	1	05.9	10.8	57.9	N 40	04 40	05 12	05 40	05 38	06 43	07 50	08 58		
	14	31 01.6	42.0	29 34.5 11.0	0	55.1	10.8	58.0	35	04 47	05 16	05 42	05 39	06 42	07 46	08 51		
	15	46 01.8	41.1	44 04.5 11.1	0	44.3	10.8	58.0	30	04 52	05 20	05 44	05 40	06 41	07 43	08 45		
	16	61 02.0	40.1	58 34.6 11.0	0	33.5	10.8	58.0	20	04 59	05 25	05 47	05 42	06 39	07 37	08 36		
	17	76 02.3	39.2	73 04.6 11.0	0	22.7	10.8	58.0	N 10	05 04	05 29	05 50	05 44	06 37	07 31	08 27		
	18	91 02.5 N 3	38.2	87 34.6 10.9 N	0	11.9	10.9	58.1	0	05 08	05 32	05 52	05 46	06 36	07 27	08 19		
	19	106 02.7	37.2	102 04.5 11.0 N	0	01.0	10.8	58.1	S 10	05 09	05 34	05 55	05 48	06 34	07 22	08 12		
	20	121 02.9	36.3	116 34.5 10.9 S	0	09.8	10.8	58.1	20	05 10	05 35	05 57	05 49	06 33	07 17	08 03		
	21	136 03.1	35.3	131 04.4 10.8	0	20.6	10.9	58.1	30	05 08	05 36	06 00	05 52	06 31	07 11	07 54		
	22	151 03.4	34.4	145 34.2 10.9	0	31.5	10.9	58.2	35	05 07	05 36	06 01	05 53	06 30	07 08	07 49		
23	166 03.6	33.4	160 04.1 10.8	0	42.4	10.8	58.2	40	05 05	05 36	06 03	05 54	06 29	07 04	07 42			
14 00	181 03.8 N 3	32.4	174 33.9 10.8 S	0	53.2	10.9	58.2	45	05 02	05 36	06 05	05 56	06 27	07 00	07 35			
01	196 04.0	31.5	189 03.7 10.8	1	04.1	10.9	58.2	S 50	04 57	05 35	06 07	05 58	06 26	06 55	07 27			
02	211 04.2	30.5	203 33.5 10.7	1	15.0	10.9	58.3	52	04 55	05 34	06 08	05 59	06 25	06 53	07 23			
03	226 04.5	29.6	218 03.2 10.8	1	25.9	10.8	58.3	54	04 53	05 34	06 09	06 00	06 24	06 50	07 19			
04	241 04.7	28.6	232 33.0 10.6	1	36.7	10.9	58.3	56	04 50	05 33	06 10	06 01	06 24	06 47	07 14			
05	256 04.9	27.6	247 02.6 10.7	1	47.6	10.9	58.3	58	04 47	05 32	06 11	06 02	06 23	06 44	07 09			
06	271 05.1 N 3	26.7	261 32.3 10.6 S	1	58.5	10.8	58.3	S 60	04 43	05 32	06 13	06 03	06 22	06 41	07 03			
07	286 05.3	25.7	276 01.9 10.6	2	09.3	10.9	58.4											
08	301 05.6	24.8	290 31.5 10.6	2	20.2	10.9	58.4	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna						
09	316 05.8	23.8	305 01.1 10.5	2	31.1	10.8	58.4			Civil	Náut.	13	14	15	16			
10	331 06.0	22.8	319 30.6 10.5	2	41.9	10.9	58.4											
11	346 06.2	21.9	334 00.1 10.5	2	52.8	10.8	58.4											
12	1 06.5 N 3	20.9	348 29.6 10.4 S	3	03.6	10.8	58.5	N 72	18 47	19 59	21 46	18 10	18 05	17 59	17 53			
13	16 06.7	20.0	2 59.0 10.4	3	14.4	10.8	58.5	N 70	18 41	19 45	21 14	18 10	18 11	18 12	18 14			
14	31 06.9	19.0	17 28.4 10.3	3	25.2	10.8	58.5	68	18 37	19 35	20 51	18 10	18 16	18 22	18 30			
15	46 07.1	18.0	31 57.7 10.4	3	36.0	10.8	58.5	66	18 33	19 26	20 34	18 10	18 20	18 30	18 44			
16	61 07.3	17.1	46 27.1 10.3	3	46.8	10.8	58.5	64	18 30	19 19	20 20	18 10	18 23	18 37	18 55			
17	76 07.6	16.1	60 56.4 10.2	3	57.6	10.8	58.6	62	18 27	19 12	20 09	18 10	18 26	18 44	19 05			
18	91 07.8 N 3	15.2	75 25.6 10.2 S	4	08.4	10.7	58.6	60	18 25	19 07	19 59	18 10	18 29	18 49	19 13			
19	106 08.0	14.2	89 54.8 10.2	4	19.1	10.7	58.6	N 58	18 23	19 02	19 51	18 10	18 31	18 54	19 20			
20	121 08.2	13.2	104 24.0 10.2	4	29.8	10.7	58.6	56	18 21	18 58	19 44	18 10	18 33	18 58	19 27			
21	136 08.4	12.3	118 53.2 10.1	4	40.5	10.7	58.6	54	18 19	18 55	19 38	18 10	18 35	19 02	19 32			
22	151 08.7	11.3	133 22.3 10.1	4	51.2	10.7	58.7	52	18 18	18 52	19 32	18 10	18 37	19 05	19 38			
23	166 08.9	10.4	147 51.4 10.0	5	01.9	10.6	58.7	50	18 16	18 49	19 28	18 10	18 38	19 09	19 42			
15 00	181 09.1 N 3	09.4	162 20.4 10.0 S	5	12.5	10.7	58.7	45	18 13	18 43	19 18	18 10	18 42	19 16	19 53			
01	196 09.3	08.4	176 49.4 10.0	5	23.2	10.6	58.7	N 40	18 11	18 38	19 10	18 10	18 45	19 21	20 01			
02	211 09.5	07.5	191 18.4 9.9	5	33.8	10.5	58.7	35	18 09	18 34	19 04	18 10	18 47	19 26	20 08			
03	226 09.8	06.5	205 47.3 9.9	5	44.3	10.6	58.8	30	18 07	18 31	18 59	18 10	18 49	19 31	20 15			
04	241 10.0	05.6	220 16.2 9.8	5	54.9	10.5	58.8	20	18 04	18 26	18 52	18 10	18 53	19 38	20 26			
05	256 10.2	04.6	234 45.0 9.9	6	05.4	10.5	58.8	N 10	18 01	18 22	18 47	18 10	18 57	19 45	20 36			
06	271 10.4 N 3	03.6	249 13.9 9.7 S	6	15.9	10.4	58.8	0	17 59	18 20	18 44	18 09	19 00	19 52	20 45			
07	286 10.7	02.7	263 42.6 9.7	6	26.3	10.4	58.8	S 10	17 57	18 18	18 42	18 09	19 03	19 58	20 55			
08	301 10.9	01.7	278 11.3 9.7	6	36.7	10.4	58.8	20	17 54	18 16	18 42	18 09	19 06	20 05	21 04			
09	316 11.1	00.7	292 40.0 9.7	6	47.1	10.4	58.9	30	17 52	18 16	18 43	18 09	19 10	20 12	21 16			
10	331 11.3	00.0	307 08.7 9.6	6	57.5	10.3	58.9	35	17 50	18 16	18 45	18 09	19 12	20 17	21 22			
11	346 11.5	00.0	321 37.3 9.6	7	07.8	10.3	58.9	40	17 49	18 16	18 47	18 09	19 15	20 22	21 30			
12	1 11.8 N 2	57.9	336 05.9 9.5 S	7	18.1	10.2	58.9	45	17 47	18 16	18 51	18 09	19 18	20 28	21 38			
13	16 12.0	56.9	350 34.4 9.5	7	28.3	10.2	58.9	S 50	17 45	18 17	18 55	18 08	19 21	20 35	21 49			
14	31 12.2	55.9	5 02.9 9.4	7	38.5	10.2	58.9	52	17 44	18 18	18 57	18 08	19 23	20 38	21 54			
15	46 12.4	55.0	19 31.3 9.4	7	48.7	10.1	58.9	54	17 43	18 18	19 00							

T. M. G.	ARIES		VENUS -3.4		MARTE +0.9		JUPITER -1.8		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
16 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	354 49.7	210 17.6 N14	45.0	254 59.4 N23	26.9	260 40.6 N22	59.9	207 33.8 N14	19.9	Acamar	315 38.5 S40	23.4	
	9 52.1	225 17.1	44.1	270 00.3	26.9	275 42.7	59.9	222 36.0	19.8	Achernar	335 46.3 S57	20.8	
	24 54.6	240 16.6	43.3	285 01.2	26.8	290 44.9	59.9	237 38.2	19.7	Acrux	173 40.0 S62	58.6	
	39 57.1	255 16.0	42.4	300 02.1	26.8	305 47.1	59.9	252 40.4	19.6	Adhara	255 33.8 S28	56.3	
	54 59.5	270 15.5	41.5	315 02.9	26.7	320 49.2	59.9	267 42.5	19.6	Aldebaran	291 20.2 N16	27.9	
	70 02.0	285 15.0	40.6	330 03.8	26.7	335 51.4	59.9	282 44.7	19.5				
	85 04.5	300 14.5 N14	39.8	345 04.7 N23	26.6	350 53.5 N22	59.9	297 46.9 N14	19.4	Alioth	166 44.9 N56	05.0	
	100 06.9	315 13.9	38.9	0 05.6	26.6	5 55.7	59.9	312 49.1	19.3	Alkaid	153 20.6 N49	25.7	
	115 09.4	330 13.4	38.0	15 06.4	26.5	20 57.8	59.8	327 51.2	19.2	Al Na'ir	28 17.1 S47	04.1	
	130 11.8	345 12.9	37.1	30 07.3	26.5	36 00.0	59.8	342 53.4	19.1	Alnilam	276 13.7 S 1	12.9	
	145 14.3	0 12.4	36.3	45 08.2	26.4	51 02.1	59.8	357 55.6	19.0	Alphard	218 22.8 S 8	33.6	
	160 16.8	15 11.8	35.4	60 09.1	26.4	66 04.3	59.8	12 57.8	18.9				
	175 19.2	30 11.3 N14	34.5	75 10.0 N23	26.3	81 06.4 N22	59.8	27 59.9 N14	18.8	Alphecca	126 34.0 N26	47.7	
	190 21.7	45 10.8	33.6	90 10.8	26.2	96 08.6	59.8	43 02.1	18.7	Alpheratz	358 11.0 N28	58.2	
	205 24.2	60 10.3	32.7	105 11.7	26.2	111 10.7	59.8	58 04.3	18.6	Altair	62 34.3 N 8	48.8	
	220 26.6	75 09.7	31.9	120 12.6	26.1	126 12.9	59.8	73 06.5	18.5	Ankaa	353 41.9 S42	25.5	
	235 29.1	90 09.2	31.0	135 13.5	26.1	141 15.1	59.8	88 08.7	18.4	Antares	112 59.4 S26	22.9	
	250 31.6	105 08.7	30.1	150 14.4	26.0	156 17.2	59.8	103 10.8	18.3				
	265 34.0	120 08.2 N14	29.2	165 15.2 N23	26.0	171 19.4 N22	59.8	118 13.0 N14	18.2	Arcturus	146 20.6 N19	18.1	
	280 36.5	135 07.6	28.3	180 16.1	25.9	186 21.5	59.8	133 15.2	18.2	Atria	108 25.5 S68	59.4	
	295 39.0	150 07.1	27.4	195 17.0	25.9	201 23.7	59.8	148 17.4	18.1	Avior	234 29.4 S59	26.1	
	310 41.4	165 06.6	26.6	210 17.9	25.8	216 25.8	59.8	163 19.5	18.0	Bellatrix	279 00.9 N 6	19.8	
	325 43.9	180 06.1	25.7	225 18.8	25.8	231 28.0	59.8	178 21.7	17.9	Betelgeuse	271 30.5 N 7	24.2	
340 46.3	195 05.5	24.8	240 19.7	25.7	246 30.2	59.7	193 23.9	17.8					
17 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	355 48.8	210 05.0 N14	23.9	255 20.5 N23	25.7	261 32.3 N22	59.7	208 26.1 N14	17.7	Canopus	264 08.2 S52	40.8	
	10 51.3	225 04.5	23.0	270 21.4	25.6	276 34.5	59.7	223 28.2	17.6	Capella	281 14.2 N45	58.4	
	25 53.7	240 04.0	22.1	285 22.3	25.5	291 36.6	59.7	238 30.4	17.5	Deneb	49 49.5 N45	12.4	
	40 56.2	255 03.5	21.2	300 23.2	25.5	306 38.8	59.7	253 32.6	17.4	Denebola	183 01.4 N14	41.9	
	55 58.7	270 02.9	20.3	315 24.1	25.4	321 41.0	59.7	268 34.8	17.3	Diphda	349 22.6 S18	06.4	
	71 01.1	285 02.4	19.4	330 25.0	25.4	336 43.1	59.7	283 37.0	17.2				
	86 03.6	300 01.9 N14	18.6	345 25.8 N23	25.3	351 45.3 N22	59.7	298 39.1 N14	17.1	Dubhe	194 25.4 N61	52.2	
	101 06.1	315 01.4	17.7	0 26.7	25.3	6 47.4	59.7	313 41.3	17.0	Elnath	278 46.7 N28	35.2	
	116 08.5	330 00.9	16.8	15 27.6	25.2	21 49.6	59.7	328 43.5	16.9	Eltanin	90 58.6 N51	29.9	
	131 11.0	345 00.4	15.9	30 28.5	25.2	36 51.8	59.7	343 45.7	16.8	Enif	34 13.3 N 9	46.6	
	146 13.4	359 59.8	15.0	45 29.4	25.1	51 53.9	59.7	358 47.8	16.8	Fomalhaut	15 53.3 S29	44.3	
	161 15.9	14 59.3	14.1	60 30.3	25.0	66 56.1	59.7	13 50.0	16.7				
	176 18.4	29 58.8 N14	13.2	75 31.2 N23	25.0	81 58.2 N22	59.7	28 52.2 N14	16.6	Gacrux	172 31.5 S56	59.3	
	191 20.8	44 58.3	12.3	90 32.1	24.9	97 00.4	59.7	43 54.4	16.5	Gienah	176 20.4 S17	25.0	
	206 23.3	59 57.8	11.4	105 32.9	24.9	112 02.6	59.6	58 56.6	16.4	Hadar	149 26.6 S60	16.0	
	221 25.8	74 57.2	10.5	120 33.8	24.8	127 04.7	59.6	73 58.7	16.3	Hamal	328 30.9 N23	21.5	
	236 28.2	89 56.7	09.6	135 34.7	24.8	142 06.9	59.6	89 00.9	16.2	Kaus Aust.	84 19.5 S34	23.7	
	251 30.7	104 56.2	08.7	150 35.6	24.7	157 09.1	59.6	104 03.1	16.1				
	266 33.2	119 55.7 N14	07.8	165 36.5 N23	24.6	172 11.2 N22	59.6	119 05.3 N14	16.0	Kochab	137 19.8 N74	15.1	
	281 35.6	134 55.2	06.9	180 37.4	24.6	187 13.4	59.6	134 07.4	15.9	Markab	14 04.8 N15	05.3	
	296 38.1	149 54.7	06.0	195 38.3	24.5	202 15.6	59.6	149 09.6	15.8	Menkar	314 43.0 N 4	00.2	
	311 40.6	164 54.2	05.1	210 39.2	24.5	217 17.7	59.6	164 11.8	15.7	Menkent	148 39.7 S36	15.6	
	326 43.0	179 53.6	04.2	225 40.1	24.4	232 19.9	59.6	179 14.0	15.6	Miaplacidus	221 46.0 S69	37.4	
341 45.5	194 53.1	03.3	240 41.0	24.3	247 22.0	59.6	194 16.2	15.5					
18 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	356 47.9	209 52.6 N14	02.4	255 41.8 N23	24.3	262 24.2 N22	59.6	209 18.3 N14	15.5	Mirfak	309 18.7 N49	46.8	
	11 50.4	224 52.1	01.5	270 42.7	24.2	277 26.4	59.6	224 20.5	15.4	Nunki	76 31.6 S26	19.4	
	26 52.9	239 51.6	14 00.6	285 43.6	24.2	292 28.5	59.6	239 22.7	15.3	Peacock	54 01.2 S56	48.5	
	41 55.3	254 51.1	13 59.6	300 44.5	24.1	307 30.7	59.6	254 24.9	15.2	Pollux	244 00.8 N28	04.7	
	56 57.8	269 50.6	58.7	315 45.4	24.0	322 32.9	59.5	269 27.1	15.1	Procyon	245 28.1 N 5	17.0	
	72 00.3	284 50.0	57.8	330 46.3	24.0	337 35.0	59.5	284 29.2	15.0				
	87 02.7	299 49.5 N13	56.9	345 47.2 N23	23.9	352 37.2 N22	59.5	299 31.4 N14	14.9	Rasalhague	96 31.5 N12	34.9	
	102 05.2	314 49.0	56.0	0 48.1	23.9	7 39.4	59.5	314 33.6	14.8	Regulus	208 12.5 N12	04.6	
	117 07.7	329 48.5	55.1	15 49.0	23.8	22 41.5	59.5	329 35.8	14.7	Rigel	281 37.9 S 8	13.5	
	132 10.1	344 48.0	54.2	30 49.9	23.7	37 43.7	59.5	344 38.0	14.6	Rigil Kent.	140 28.9 S60	44.6	
	147 12.6	359 47.5	53.3	45 50.8	23.7	52 45.9	59.5	359 40.1	14.5	Sabik	102 43.5 S15	41.7	
	162 15.1	14 47.0	52.4	60 51.7	23.6	67 48.0	59.5	14 42.3	14.4				
	177 17.5	29 46.5 N13	51.4	75 52.6 N23	23.5	82 50.2 N22	59.5	29 44.5 N14	14.3	Schedar	350 10.7 N56	24.9	
	192 20.0	44 46.0	50.5	90 53.5	23.5	97 52.4	59.5	44 46.7	14.3	Shaula	96 58.5 S37	05.3	
	207 22.4	59 45.4	49.6	105 54.4	23.4	112 54.6	59.5	59 48.9	14.2	Sirius	258 57.6 S16	41.0	
	222 24.9	74 44.9	48.7	120 55.3	23.4	127 56.7	59.5	74 51.0	14.1	Spica	158 59.9 S11	02.6	
	237 27.4	89 44.4	47.8	135 56.2	23.3	142 58.9	59.5	89 53.2	14.0	Suhail	223 12.6 S43	20.4	
	252 29.8	104 43.9	46.9	150 57.0	23.2	158 01.1	59.5	104 55.4	13.9				
	267 32.3	119 43.4 N13	46.0	165 57.9 N23	23.2	173 03.2 N22	59.5	119 57.6 N14	13.8	Vega	80 57.1 N38	46.2	
	282 34.8	134 42.9	45.0	180 58.8	23.1	188 05.4	59.4	134 59.8	13.7	Zuben'ubi	137 35.5 S15	56.9	
	297 37.2	149 42.4	44.1	195 59.7	23.0	203 07.6	59.4	150 01.9	13.6				
	312 39.7	164 41.9	43.2	211 00.6	23.0	218 09.8	59.4	165 04.1	13.5				
	327 42.2	179 41.4	42.3	226 01.5	22.9	233 11.9	59.4	180 06.3	13.4	Venus	214 16.2	10 00	
342 44.6	194 40.9	41.4	241 02.4	22.8	248 14.1	59.4	195 08.5	13.3	Marte	259 31.7	6 58		
									Júpiter	265 43.5	6 33		
									Saturno	212 37.3	10 05		

Pas. Mer. 0 16.7

v -0.5 d 0.9

v 0.9 d 0.1

v 2.2 d 0.0

v 2.2 d 0.1

A.H.S. Pas. Mer.
h m
Venus 214 16.2 10 00
Marte 259 31.7 6 58
Júpiter 265 43.5 6 33
Saturno 212 37.3 10 05

T.M.G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna														
	A.H.G.		Dec.	A.H.G.		v	Dec.	d		P.H.	Náut.		Civil	19		20		21		22							
	°	'		°	'									°	'	h	m	h	m		h	m	h	m	h	m	
19 LUNES	00	181	30.4	N 1	36.7	109	34.6	6.3	S17	37.7	3.3	59.4	N 72	02	44	04	19	05	29	■	■	18	01	17	47		
	01	196	30.6		35.7	123	59.9	6.3	17	41.0	3.2	59.4	N 70	03	07	04	29	05	31	15	43	16	40	17	05	17	15
	02	211	30.8		34.8	138	25.2	6.2	17	44.2	3.0	59.4	68	03	24	04	37	05	33	14	58	15	57	16	32	16	51
	03	226	31.0	..	33.8	152	50.4	6.3	17	47.2	3.0	59.4	66	03	38	04	43	05	35	14	29	15	27	16	07	16	33
	04	241	31.3		32.8	167	15.7	6.2	17	50.2	2.8	59.4	64	03	49	04	49	05	37	14	06	15	05	15	48	16	18
	05	256	31.5		31.8	181	40.9	6.2	17	53.0	2.7	59.4	62	03	59	04	53	05	38	13	48	14	47	15	32	16	05
	06	271	31.7	N 1	30.9	196	06.1	6.2	S17	55.7	2.6	59.4	60	04	06	04	57	05	39	13	34	14	33	15	19	15	55
	07	286	31.9		29.9	210	31.3	6.2	17	58.3	2.5	59.4	N 58	04	13	05	01	05	40	13	21	14	20	15	08	15	45
	08	301	32.2		28.9	224	56.5	6.2	18	00.8	2.3	59.4	56	04	19	05	04	05	41	13	10	14	09	14	58	15	37
	09	316	32.4	..	28.0	239	21.7	6.2	18	03.1	2.3	59.4	54	04	24	05	06	05	42	13	01	13	59	14	49	15	30
	10	331	32.6		27.0	253	46.9	6.2	18	05.4	2.1	59.4	52	04	28	05	09	05	42	12	52	13	51	14	41	15	23
	11	346	32.8		26.0	268	12.1	6.1	18	07.5	2.0	59.3	50	04	32	05	11	05	43	12	44	13	43	14	34	15	17
	12	1	33.0	N 1	25.1	282	37.2	6.2	S18	09.5	1.9	59.3	45	04	40	05	15	05	44	12	28	13	27	14	19	15	04
	13	16	33.3		24.1	297	02.4	6.1	18	11.4	1.7	59.3	N 40	04	47	05	18	05	45	12	15	13	14	14	06	14	54
	14	31	33.5		23.1	311	27.5	6.2	18	13.1	1.6	59.3	35	04	51	05	21	05	46	12	04	13	02	13	56	14	44
	15	46	33.7	..	22.1	325	52.7	6.1	18	14.7	1.6	59.3	30	04	55	05	23	05	47	11	54	12	52	13	47	14	36
	16	61	33.9		21.2	340	17.8	6.1	18	16.3	1.3	59.3	20	05	01	05	26	05	48	11	37	12	35	13	31	14	23
	17	76	34.2		20.2	354	42.9	6.2	18	17.6	1.3	59.3	N 10	05	04	05	28	05	49	11	22	12	20	13	17	14	10
	18	91	34.4	N 1	19.2	9	08.1	6.1	S18	18.9	1.2	59.3	0	05	06	05	30	05	50	11	08	12	06	13	03	13	59
	19	106	34.6		18.3	23	33.2	6.1	18	20.1	1.0	59.3	S 10	05	06	05	30	05	51	10	54	11	52	12	50	13	48
	20	121	34.8		17.3	37	58.3	6.2	18	21.1	0.9	59.3	20	05	04	05	30	05	52	10	40	11	37	12	36	13	36
	21	136	35.0	..	16.3	52	23.5	6.1	18	22.0	0.8	59.3	30	05	01	05	28	05	52	10	23	11	20	12	20	13	22
	22	151	35.3		15.4	66	48.6	6.1	18	22.8	0.6	59.3	35	04	58	05	27	05	53	10	13	11	10	12	11	13	13
23	166	35.5		14.4	81	13.7	6.2	18	23.4	0.6	59.3	40	04	55	05	26	05	53	10	02	10	59	12	00	13	04	
2000	181	35.7	N 1	13.4	95	38.9	6.1	S18	24.0	0.4	59.3	45	04	50	05	24	05	53	09	49	10	46	11	48	12	53	
01	196	35.9		12.4	110	04.0	6.2	18	24.4	0.3	59.3	S 50	04	44	05	22	05	54	09	33	10	30	11	33	12	40	
02	211	36.1		11.5	124	29.2	6.1	18	24.7	0.2	59.3	52	04	41	05	20	05	54	09	26	10	22	11	25	12	34	
03	226	36.4	..	10.5	138	54.3	6.2	18	24.9	0.0	59.3	54	04	37	05	19	05	54	09	18	10	14	11	17	12	27	
04	241	36.6		09.5	153	19.5	6.1	18	24.9	0.0	59.3	56	04	34	05	17	05	54	09	09	10	04	11	09	12	20	
05	256	36.8		08.6	167	44.6	6.2	18	24.9	0.2	59.2	58	04	29	05	15	05	54	08	58	09	53	10	59	12	11	
06	271	37.0	N 1	07.6	182	09.8	6.2	S18	24.7	0.3	59.2	S 60	04	24	05	13	05	55	08	46	09	41	10	47	12	02	
07	286	37.2		06.6	196	35.0	6.2	18	24.4	0.4	59.2		Lat.	Ocaso Sol	Crepúsculo Civil		Ocaso Luna										
08	301	37.5		05.6	211	00.2	6.2	18	24.0	0.6	59.2																
09	316	37.7	..	04.7	225	25.4	6.3	18	23.4	0.7	59.2																
10	331	37.9		03.7	239	50.7	6.2	18	22.7	0.8	59.2																
11	346	38.1		02.7	254	15.9	6.3	18	21.9	0.9	59.2																
12	1	38.4	N 1	01.8	268	41.2	6.2	S18	21.0	1.0	59.2	N 72	18	16	19	24	20	58	■	■	20	42	22	50			
13	16	38.6		00.8	283	06.4	6.3	18	20.0	1.2	59.2	N 70	18	13	19	15	20	36	18	59	20	02	21	36	23	21	
14	31	38.8	0	59.8	297	31.7	6.3	18	18.8	1.2	59.2	68	18	11	19	08	20	19	19	44	20	46	22	10	23	44	
15	46	39.0	..	58.8	311	57.0	6.4	18	17.6	1.4	59.2	66	18	10	19	01	20	06	20	14	21	15	22	34	24	02	
16	61	39.2		57.9	326	22.4	6.3	18	16.2	1.5	59.2	64	18	09	18	56	19	55	20	36	21	37	22	52	24	16	
17	76	39.5		56.9	340	47.7	6.4	18	14.7	1.6	59.2	62	18	07	18	52	19	46	20	54	21	55	23	08	24	28	
18	91	39.7	N 0	55.9	355	13.1	6.4	S18	13.1	1.8	59.2	60	18	06	18	48	19	39	21	09	22	09	23	20	24	38	
19	106	39.9		55.0	9	38.5	6.4	18	11.3	1.9	59.1	N 58	18	06	18	45	19	32	21	21	22	22	23	31	24	47	
20	121	40.1		54.0	24	03.9	6.4	18	09.4	1.9	59.1	56	18	05	18	42	19	26	21	32	22	33	23	41	24	55	
21	136	40.3	..	53.0	38	29.3	6.5	18	07.5	2.1	59.1	54	18	04	18	39	19	22	21	42	22	42	23	49	25	02	
22	151	40.6		52.0	52	54.8	6.5	18	05.4	2.2	59.1	52	18	04	18	37	19	17	21	51	22	50	23	57	25	08	
23	166	40.8		51.1	67	20.3	6.5	18	03.2	2.4	59.1	50	18	03	18	35	19	13	21	58	22	58	24	04	00	04	
2100	181	41.0	N 0	50.1	81	45.8	6.5	S18	00.8	2.4	59.1	45	18	02	18	31	19	06	22	15	23	14	24	18	00	18	
01	196	41.2		49.1	96	11.3	6.6	17	58.4	2.6	59.1	N 40	18	01	18	28	19	00	22	28	23	27	24	30	00	30	
02	211	41.4		48.2	110	36.9	6.6	17	55.8	2.7	59.1	35	18	00	18	25	18	55	22	40	23	39	24	40	00	40	
03	226	41.7	..	47.2	125	02.5	6.6	17	53.1	2.8	59.1	30	17	59	18	23	18	51	2								

T. M. G.	ARIES			VENUS -3.4			MARTE +0.9			JUPITER -1.9			SATURNO +0.8			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
22 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	0	44.5	209 04.7 N12	32.3	257 09.0 N23	17.5	265 53.5 N22	58.9	212 47.8 N14	06.7			212 47.8 N14	06.7		Acamar	315 38.5 S40	23.4	
	15	47.0	224 04.2	31.3	272 10.0	17.4	280 55.6	58.9	227 50.0	06.6			227 50.0	06.6		Achernar	335 46.3 S57	20.8	
	30	49.4	239 03.7	30.4	287 10.9	17.4	295 57.8	58.9	242 52.2	06.5			242 52.2	06.5		Acrux	173 40.0 S62	58.5	
	45	51.9	254 03.2	29.4	302 11.8	17.3	311 00.0	58.9	257 54.4	06.4			257 54.4	06.4		Adhara	255 33.8 S28	56.3	
	60	54.4	269 02.7	28.4	317 12.7	17.2	326 02.2	58.9	272 56.6	06.3			272 56.6	06.3		Aldebaran	291 20.2 N16	27.9	
	75	56.8	284 02.2	27.4	332 13.7	17.1	341 04.4	58.9	287 58.8	06.2			287 58.8	06.2					
	90	59.3	299 01.8 N12	26.5	347 14.6 N23	17.0	356 06.6 N22	58.9	303 01.0 N14	06.1			303 01.0 N14	06.1		Alioth	166 44.9 N56	05.0	
	106	01.7	314 01.3	25.5	2 15.5	17.0	11 08.8	58.9	318 03.1	06.0			318 03.1	06.0		Alkaid	153 20.6 N49	25.7	
	121	04.2	329 00.8	24.5	17 16.4	16.9	26 11.0	58.9	333 05.3	05.9			333 05.3	05.9		Al Na'ir	28 17.1 S47	04.1	
	136	06.7	344 00.3	23.5	32 17.4	16.8	41 13.2	58.9	348 07.5	05.8			348 07.5	05.8		Alnilam	276 13.7 S 1	12.9	
	151	09.1	358 59.8	22.6	47 18.3	16.7	56 15.4	58.9	3 09.7	05.7			3 09.7	05.7		Alphard	218 22.8 S 8	33.6	
	166	11.6	13 59.3	21.6	62 19.2	16.6	71 17.6	58.8	18 11.9	05.7			18 11.9	05.7					
	181	14.1	28 58.9 N12	20.6	77 20.2 N23	16.6	86 19.8 N22	58.8	33 14.1 N14	05.6			33 14.1 N14	05.6		Alphecca	126 34.0 N26	47.7	
	196	16.5	43 58.4	19.6	92 21.1	16.5	101 22.0	58.8	48 16.3	05.5			48 16.3	05.5		Alpheratz	358 11.0 N28	58.2	
	211	19.0	58 57.9	18.7	107 22.0	16.4	116 24.2	58.8	63 18.5	05.4			63 18.5	05.4		Altair	62 34.3 N 8	48.8	
	226	21.5	73 57.4	17.7	122 22.9	16.3	131 26.4	58.8	78 20.6	05.3			78 20.6	05.3		Ankaa	353 41.8 S42	25.5	
	241	23.9	88 56.9	16.7	137 23.9	16.2	146 28.6	58.8	93 22.8	05.2			93 22.8	05.2		Antares	112 59.5 S26	22.9	
	256	26.4	103 56.5	15.7	152 24.8	16.1	161 30.8	58.8	108 25.0	05.1			108 25.0	05.1					
	271	28.9	118 56.0 N12	14.7	167 25.7 N23	16.1	176 33.0 N22	58.8	123 27.2 N14	05.0			123 27.2 N14	05.0		Arcturus	146 20.6 N19	18.1	
	286	31.3	133 55.5	13.8	182 26.7	16.0	191 35.2	58.8	138 29.4	04.9			138 29.4	04.9		Atria	108 25.6 S68	59.4	
	301	33.8	148 55.0	12.8	197 27.6	15.9	206 37.4	58.8	153 31.6	04.8			153 31.6	04.8		Avior	234 29.3 S59	26.1	
	316	36.2	163 54.5	11.8	212 28.5	15.8	221 39.6	58.8	168 33.8	04.8			168 33.8	04.8		Bellatrix	279 00.8 N 6	19.8	
	331	38.7	178 54.1	10.8	227 29.5	15.7	236 41.8	58.8	183 36.0	04.7			183 36.0	04.7		Betelgeuse	271 30.4 N 7	24.2	
346	41.2	193 53.6	09.8	242 30.4	15.6	251 44.0	58.8	198 38.1	04.6			198 38.1	04.6						
23 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	1	43.6	208 53.1 N12	08.8	257 31.3 N23	15.5	266 46.2 N22	58.8	213 40.3 N14	04.5			213 40.3 N14	04.5		Canopus	264 08.1 S52	40.8	
	16	46.1	223 52.6	07.9	272 32.3	15.5	281 48.4	58.8	228 42.5	04.4			228 42.5	04.4		Capella	281 14.2 N45	58.4	
	31	48.6	238 52.1	06.9	287 33.2	15.4	296 50.6	58.7	243 44.7	04.3			243 44.7	04.3		Deneb	49 49.5 N45	12.4	
	46	51.0	253 51.7	05.9	302 34.1	15.3	311 52.8	58.7	258 46.9	04.2			258 46.9	04.2		Denebola	183 01.4 N14	41.9	
	61	53.5	268 51.2	04.9	317 35.1	15.2	326 55.0	58.7	273 49.1	04.1			273 49.1	04.1		Diphda	349 22.6 S18	06.4	
	76	56.0	283 50.7	03.9	332 36.0	15.1	341 57.2	58.7	288 51.3	04.0			288 51.3	04.0					
	91	58.4	298 50.2 N12	02.9	347 36.9 N23	15.0	356 59.4 N22	58.7	303 53.5 N14	03.9			303 53.5 N14	03.9		Dubhe	194 25.3 N61	52.2	
	107	00.9	313 49.8	01.9	2 37.9	14.9	12 01.6	58.7	318 55.6	03.9			318 55.6	03.9		Elnath	278 46.6 N28	35.2	
	122	03.4	328 49.3	01.0	17 38.8	14.9	27 03.8	58.7	333 57.8	03.8			333 57.8	03.8		Eltanin	90 58.7 S51	29.9	
	137	05.8	343 48.8	12 00.0	32 39.7	14.8	42 06.0	58.7	349 00.0	03.7			349 00.0	03.7		Enif	34 13.3 N 9	46.6	
	152	08.3	358 48.3	11 59.0	47 40.7	14.7	57 08.2	58.7	4 02.2	03.6			4 02.2	03.6		Fomalhaut	15 53.3 S29	44.3	
	167	10.7	13 47.9	58.0	62 41.6	14.6	72 10.4	58.7	19 04.4	03.5			19 04.4	03.5					
	182	13.2	28 47.4 N11	57.0	77 42.6 N23	14.5	87 12.6 N22	58.7	34 06.6 N14	03.4			34 06.6 N14	03.4		Gacrux	172 31.5 S56	59.3	
	197	15.7	43 46.9	56.0	92 43.5	14.4	102 14.8	58.7	49 08.8	03.3			49 08.8	03.3		Gienah	176 20.3 S17	25.0	
	212	18.1	58 46.4	55.0	107 44.4	14.3	117 17.0	58.7	64 11.0	03.2			64 11.0	03.2		Hadar	149 26.7 S60	16.0	
	227	20.6	73 46.0	54.0	122 45.4	14.2	132 19.2	58.7	79 13.2	03.1			79 13.2	03.1		Hamal	328 30.9 N23	21.5	
	242	23.1	88 45.5	53.0	137 46.3	14.2	147 21.4	58.7	94 15.3	03.0			94 15.3	03.0		Kaus Aust.	84 19.5 S34	23.7	
	257	25.5	103 45.0	52.0	152 47.3	14.1	162 23.7	58.6	109 17.5	03.0			109 17.5	03.0					
	272	28.0	118 44.5 N11	51.0	167 48.2 N23	14.0	177 25.9 N22	58.6	124 19.7 N14	02.9			124 19.7 N14	02.9		Kochab	137 19.9 N74	15.1	
	287	30.5	133 44.1	50.0	182 49.1	13.9	192 28.1	58.6	139 21.9	02.8			139 21.9	02.8		Markab	14 04.8 N15	05.3	
	302	32.9	148 43.6	49.0	197 50.1	13.8	207 30.3	58.6	154 24.1	02.7			154 24.1	02.7		Menkar	314 43.0 N 4	00.2	
	317	35.4	163 43.1	48.0	212 51.0	13.7	222 32.5	58.6	169 26.3	02.6			169 26.3	02.6		Menkent	148 39.7 S36	15.6	
	332	37.8	178 42.6	47.0	227 52.0	13.6	237 34.7	58.6	184 28.5	02.5			184 28.5	02.5		Miaplacidus	221 45.9 S69	37.4	
347	40.3	193 42.2	46.0	242 52.9	13.5	252 36.9	58.6	199 30.7	02.4			199 30.7	02.4						
24 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	2	42.8	208 41.7 N11	45.0	257 53.8 N23	13.4	267 39.1 N22	58.6	214 32.9 N14	02.3			214 32.9 N14	02.3		Mirfak	309 18.6 N49	46.8	
	17	45.2	223 41.2	44.0	272 54.8	13.4	282 41.3	58.6	229 35.0	02.2			229 35.0	02.2		Nunki	76 31.6 S26	19.4	
	32	47.7	238 40.8	43.0	287 55.7	13.3	297 43.5	58.6	244 37.2	02.2			244 37.2	02.2		Peacock	54 01.3 S56	48.5	
	47	50.2	253 40.3	42.0	302 56.7	13.2	312 45.7	58.6	259 39.4	02.1			259 39.4	02.1		Pollux	244 00.8 N28	04.7	
	62	52.6	268 39.8	41.0	317 57.6	13.1	327 47.9	58.6	274 41.6	02.0			274 41.6	02.0		Procyon	245 28.0 N 5	17.0	
	77	55.1	283 39.3	40.0	332 58.6	13.0	342 50.2	58.6	289 43.8	01.9			289 43.8	01.9					
	92	57.6	298 38.9 N11	39.0	347 59.5 N23	12.9	357 52.4 N22	58.6	304 46.0 N14	01.8			304 46.0 N14	01.8		Rasalhague	96 31.5 N12	34.9	
	108	00.0	313 38.4	38.0	3 00.5	12.8	12 54.6	58.6	319 48.2	01.7			319 48.2	01.7		Regulus	208 12.4 N12	04.6	
	123	02.5	328 37.9	37.0	18 01.4	12.7	27 56.8	58.5	334 50.4	01.6			334 50.4	01.6		Rigel	281 37.9 S 8	13.5	
	138	05.0	343 37.5	36.0	33 02.3	12.6	42 59.0	58.5	349 52.6	01.5			349 52.6	01.5		Rigel Kent.	140 29.0 S60	44.6	
	153	07.4	358 37.0	35.0	48 03.3	12.5	58 01.2	58.5	4 54.8	01.4			4 54.8	01.4		Sabik	102 43.5 S15	41.7	
	168	09.9	13 36.5	34.0	63 04.2	12.5	73 03.4	58.5	19 56.9	01.3			19 56.9	01.3					
	183	12.3	28 36.1 N11	33.0	78 05.2 N23	12.4	88 05.6 N22	58.5	34 59.1 N14	01.3			34 59.1 N14	01.3		Schedar	350 10.7 N56	25.0	
	198	14.8	43 35.6	32.0	93 06.1	12.3	103 07.8	58.5	50 01.3	01.2			50 01.3	01.2		Shaula	96 58.5 S37	05.3	
	213	17.3	58 35.1	31.0	108 07.1	12.2	118 10.1	58.5	65 03.5	01.1			65 03.5	01.1		Sirius	258 57.5 S16	41.0	
	228	19.7	73 34.6	30.0	123 08.0	12.1	133 12.3	58.5	80 05.7	01.0			80 05.7	01.0		Spica	158 59.9 S11	02.6	
	243	22.2	88 34.2	29.0	138 09.0	12.0	148 14.5	58.5	95 07.9	00.9			95 07.9	00.9		Suhail	223 12.5 S43	20.4	
	258	24.7	103 33.7	28.0	153 09.9	11.9	163 16.7	58.5	110 10.1	00.8			110 10.1	00.8					

T. M. G.	ARIES			VENUS -3.4			MARTE +0.8			JUPITER -1.9			SATURNO +0.8			ESTRELLAS															
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.													
25 D O M I N G O	00	3 41.9	208 30.4 N11	20.9	258 16.6 N23	11.2	268 32.2 N22	58.4	215 25.4 N14	00.2	Acamar	315 38.5 S40	23.4																		
	01	18 44.4	223 30.0	19.9	273 17.5	11.1	283 34.4	58.4	230 27.6	00.1	Achernar	335 46.3 S57	20.8																		
	02	33 46.8	238 29.5	18.9	288 18.5	11.1	298 36.6	58.4	245 29.8	14 00.0	Acrux	173 40.0 S62	58.5																		
	03	48 49.3	253 29.1 ..	17.9	303 19.4 ..	11.0	313 38.8 ..	58.4	260 32.0	13 59.9	Adhara	255 33.7 S28	56.3																		
	04	63 51.8	268 28.6	16.8	318 20.4	10.9	328 41.1	58.4	275 34.2	59.8	Aldebaran	291 20.2 N16	27.9																		
	05	78 54.2	283 28.1	15.8	333 21.3	10.8	343 43.3	58.4	290 36.4	59.7																					
	06	93 56.7	298 27.7 N11	14.8	348 22.3 N23	10.7	358 45.5 N22	58.4	305 38.6 N13	59.7	Alioth	166 44.9 N56	04.9																		
	07	108 59.2	313 27.2	13.8	3 23.2	10.6	13 47.7	58.4	320 40.8	59.6	Alkaid	153 20.6 N49	25.7																		
	08	124 01.6	328 26.7	12.8	18 24.2	10.5	28 49.9	58.4	335 43.0	59.5	Al Na'ir	28 17.1 S47	04.1																		
	09	139 04.1	343 26.3 ..	11.8	33 25.2 ..	10.4	43 52.2 ..	58.4	350 45.2 ..	59.4	Alnilam	276 13.6 S 1	12.9																		
	10	154 06.6	358 25.8	10.7	48 26.1	10.3	58 54.4	58.4	5 47.3	59.3	Alphard	218 22.8 S 8	33.6																		
	11	169 09.0	13 25.3	09.7	63 27.1	10.2	73 56.6	58.4	20 49.5	59.2																					
	12	184 11.5	28 24.9 N11	08.7	78 28.0 N23	10.1	88 58.8 N22	58.4	35 51.7 N13	59.1	Alphecca	126 34.1 N26	47.7																		
	13	199 13.9	43 24.4	07.7	93 29.0	10.0	104 01.0	58.4	50 53.9	59.0	Alpheratz	358 11.0 N28	58.2																		
	14	214 16.4	58 24.0	06.7	108 29.9	09.9	119 03.3	58.4	65 56.1	58.9	Altair	62 34.4 N 8	48.8																		
	15	229 18.9	73 23.5 ..	05.6	123 30.9 ..	09.8	134 05.5 ..	58.3	80 58.3 ..	58.9	Ankaa	353 41.8 S42	25.5																		
	16	244 21.3	88 23.0	04.6	138 31.8	09.7	149 07.7	58.3	96 00.5	58.8	Antares	112 59.5 S26	22.9																		
	17	259 23.8	103 22.6	03.6	153 32.8	09.6	164 09.9	58.3	111 02.7	58.7																					
	18	274 26.3	118 22.1 N11	02.6	168 33.8 N23	09.5	179 12.1 N22	58.3	126 04.9 N13	58.6	Arcturus	146 20.6 N19	18.1																		
	19	289 28.7	133 21.7	01.5	183 34.7	09.4	194 14.4	58.3	141 07.1	58.5	Atria	108 25.6 S68	59.4																		
	20	304 31.2	148 21.2 11	00.5	198 35.7	09.3	209 16.6	58.3	156 09.3	58.4	Avior	234 29.3 S59	26.1																		
	21	319 33.7	163 20.7 10	59.5	213 36.6 ..	09.2	224 18.8 ..	58.3	171 11.5 ..	58.3	Bellatrix	279 00.8 N 6	19.8																		
	22	334 36.1	178 20.3	58.5	228 37.6	09.1	239 21.0	58.3	186 13.7	58.2	Betelgeuse	271 30.4 N 7	24.2																		
23	349 38.6	193 19.8	57.4	243 38.6	09.0	254 23.2	58.3	201 15.9	58.2																						
26 L U N E S	00	4 41.1	208 19.4 N10	56.4	258 39.5 N23	08.9	269 25.5 N22	58.3	216 18.0 N13	58.1	Canopus	264 08.1 S52	40.8																		
	01	19 43.5	223 18.9	55.4	273 40.5	08.8	284 27.7	58.3	231 20.2	58.0	Capella	281 14.1 N45	58.4																		
	02	34 46.0	238 18.4	54.4	288 41.4	08.7	299 29.9	58.3	246 22.4	57.9	Deneb	49 49.5 N45	12.4																		
	03	49 48.4	253 18.0 ..	53.3	303 42.4 ..	08.6	314 32.1 ..	58.3	261 24.6 ..	57.8	Denebola	183 01.4 N14	41.9																		
	04	64 50.9	268 17.5	52.3	318 43.4	08.5	329 34.4	58.3	276 26.8	57.7	Diphda	349 22.6 S18	06.4																		
	05	79 53.4	283 17.1	51.3	333 44.3	08.4	344 36.6	58.3	291 29.0	57.6																					
	06	94 55.8	298 16.6 N10	50.3	348 45.3 N23	08.3	359 38.8 N22	58.2	306 31.2 N13	57.5	Dubhe	194 25.3 N61	52.2																		
	07	109 58.3	313 16.1	49.2	3 46.2	08.2	14 41.0	58.2	321 33.4	57.4	Elnath	278 46.6 N28	35.2																		
	08	125 00.8	328 15.7	48.2	18 47.2	08.1	29 43.3	58.2	336 35.6	57.4	Eltanin	90 58.7 N51	29.9																		
	09	140 03.2	343 15.2 ..	47.2	33 48.2 ..	08.0	44 45.5 ..	58.2	351 37.8 ..	57.3	Enif	34 13.3 N 9	46.6																		
	10	155 05.7	358 14.8	46.1	48 49.1	07.9	59 47.7	58.2	6 40.0	57.2	Fomalhaut	15 53.3 S29	44.3																		
	11	170 08.2	13 14.3	45.1	63 50.1	07.8	74 49.9	58.2	21 42.2	57.1																					
	12	185 10.6	28 13.9 N10	44.1	78 51.1 N23	07.7	89 52.2 N22	58.2	36 44.4 N13	57.0	Gacrux	172 31.5 S56	59.3																		
	13	200 13.1	43 13.4	43.0	93 52.0	07.6	104 54.4	58.2	51 46.6	56.9	Gienah	176 20.3 S17	25.0																		
	14	215 15.6	58 13.0	42.0	108 53.0	07.5	119 56.6	58.2	66 48.8	56.8	Hadar	149 26.7 S60	16.0																		
	15	230 18.0	73 12.5 ..	41.0	123 54.0 ..	07.4	134 58.9 ..	58.2	81 51.0 ..	56.7	Hamal	328 30.9 N23	21.5																		
	16	245 20.5	88 12.0	39.9	138 54.9	07.3	150 01.1	58.2	96 53.1	56.7	Kaus Aust.	84 19.5 S34	23.7																		
	17	260 22.9	103 11.6	38.9	153 55.9	07.2	165 03.3	58.2	111 55.3	56.6																					
	18	275 25.4	118 11.1 N10	37.9	168 56.9 N23	07.1	180 05.5 N22	58.2	126 57.5 N13	56.5	Kochab	137 20.0 N74	15.1																		
	19	290 27.9	133 10.7	36.8	183 57.8	07.0	195 07.8	58.2	141 59.7	56.4	Markab	14 04.8 N15	05.3																		
	20	305 30.3	148 10.2	35.8	198 58.8	06.9	210 10.0	58.2	157 01.9	56.3	Menkar	314 43.0 N 4	00.2																		
	21	320 32.8	163 09.8 ..	34.7	213 59.8 ..	06.8	225 12.2 ..	58.2	172 04.1 ..	56.2	Menkent	148 39.7 S36	15.6																		
	22	335 35.3	178 09.3	33.7	229 00.7	06.7	240 14.5	58.1	187 06.3	56.1	Miaplacidus	221 45.9 S69	37.4																		
23	350 37.7	193 08.9	32.7	244 01.7	06.6	255 16.7	58.1	202 08.5	56.0																						
27 M A R T E S	00	5 40.2	208 08.4 N10	31.6	259 02.7 N23	06.5	270 18.9 N22	58.1	217 10.7 N13	56.0	Mirfak	309 18.6 N49	46.8																		
	01	20 42.7	223 08.0	30.6	274 03.6	06.4	285 21.2	58.1	232 12.9	55.9	Nunki	76 31.6 S26	19.4																		
	02	35 45.1	238 07.5	29.5	289 04.6	06.3	300 23.4	58.1	247 15.1	55.8	Peacock	54 01.3 S56	48.5																		
	03	50 47.6	253 07.1 ..	28.5	304 05.6 ..	06.2	315 25.6 ..	58.1	262 17.3 ..	55.7	Pollux	244 00.8 N28	04.7																		
	04	65 50.1	268 06.6	27.5	319 06.6	06.1	330 27.9	58.1	277 19.5	55.6	Procyon	245 28.0 N 5	17.0																		
	05	80 52.5	283 06.1	26.4	334 07.5	06.0	345 30.1	58.1	292 21.7	55.5																					
	06	95 55.0	298 05.7 N10	25.4	349 08.5 N23	05.9	0 32.3 N22	58.1	307 23.9 N13	55.4	Rasalhague	96 31.5 N12	34.8																		
	07	110 57.4	313 05.2	24.3	4 09.5	05.8	15 34.6	58.1	322 26.1	55.3	Regulus	208 12.4 N12	04.6																		
	08	125 59.9	328 04.8	23.3	19 10.4	05.7	30 36.8	58.1	337 28.3	55.3	Rigel	281 37.9 S 8	13.5																		
	09	141 02.4	343 04.3 ..	22.2	34 11.4 ..	05.6	45 39.0 ..	58.1	352 30.5 ..	55.2	Rigel Kent.	140 29.0 S60	44.6																		
	10	156 04.8	358 03.9	21.2	49 12.4	05.5	60 41.3	58.1	7 32.7	55.1	Sabik	102 43.5 S15	41.7																		
	11	171 07.3	13 03.4	20.2	64 13.4	05.4	75 43.5	58.1	22 34.9	55.0																					
	12	186 09.8	28 03.0 N10	19.1	79 14.3 N23	05.3	90 45.7 N22	58.1	37 37.1 N13	54.9	Schedar	350 10.6 N56	25.0																		
	13	201 12.2	43 02.5	18.1	94 15.3	05.2	105 48.0	58.1	52 39.3	54.8	Shaula	96 58.6 S37	05.3																		
	14	216 14.7	58 02.1	17.0	109 16.3	05.1	120 50.2	58.0	67 41.5	54.7	Sirius	258 57.5 S16	41.0																		
	15	231 17.2	73 01.6 ..	16.0	124 17.3 ..	05.0	135 52.4 ..	58.0	82 43.7 ..	54.6	Spica	159 00.0 S11	02.6																		
	16	246 19.6	88 01.2	14.9	139 18.2	04.9	150 54.7	58.0	97 45.8	54.6	Suhail	223 12.5 S43	20.4																		
	17	261 22.1	103 00.7	13.9	154 19.2	04.7	165 56.9	58.0	112 48.0	54.5																					
	18	276 24.5	118 00.3 N10	12.8	169 20.2 N23	04.6	180 59.1 N22	58.0	127 50.2 N13	54.4	Vega	80 57.1 N38	46.2																		
	19	291 27.0	132 59.8	11.8	184 21.2	04.5	196 01.4	58.0	142 52.4	54.3	Zuben'ubi	137 35.5 S15	56.9																		
	20	306 29.5	147 59.4	10.7	199 22.1	04.4	211 03.6	58.0	157 54.6	54.2																					
	21	321 31.9	162 59.0 ..	09.7	214 23.1 ..	04.3	226 05.8 ..	58.0	172 56.8 ..	54.1																					
	22	336 34.4	177 58.5	08.6	229 24.1	04.2	241 08.1	58.0	187 59.0	54.0																					
23	351 36.9	192 58.1	07.6	244 25.1	04.1	256 10.3	58.0	203 01.2	53.9																						
Pas. Mer. 23 37.4		v -0.5 d 1.0			v 1.0 d 0.1			v 2.2 d 0.0			v 2.2 d 0.1			<table border="0"> <tr> <td></td> <td>A. H. S.</td> <td>Pas. Mer.</td> </tr> <tr> <td>Venus</td> <td>203 38.3</td> <td>10 07</td> </tr> <tr> <td>Marte</td> <td>253 58.5</td> <td>6 45</td> </tr> <tr> <td>Júpiter</td> <td>264 44.4</td> <td>6 01</td> </tr> <tr> <td>Saturno</td> <td>211 37.0</td> <td>9 33</td> </tr> </table>				A. H. S.	Pas. Mer.	Venus	203 38.3	10 07	Marte	253 58.5	6 45	Júpiter	264 44.4	6 01	Saturno	211 37.0	9 33
	A. H. S.	Pas. Mer.																													
Venus	203 38.3	10 07																													
Marte	253 58.5	6 45																													
Júpiter	264 44.4	6 01																													
Saturno	211 37.0	9 33																													

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	V	Dec.	d P. H.		Náut.	Civil		25	26	27	28
											h m	h m	h m	h m
DOMINGO	25 00	182 02.0 S 0 43.3	29 56.4 11.0 S 7 03.7 9.9 57.7	N 72	03 21	04 48	05 56	17 28	17 22	17 17	17 12			
	01	197 02.3 44.3	44 26.4 11.0 6 53.8 9.9 57.7	N 70	03 37	04 54	05 55	17 22	17 22	17 23	17 23			
	02	212 02.5 45.3	58 56.4 11.0 6 43.9 10.0 57.7	68	03 50	04 59	05 54	17 17	17 22	17 27	17 33			
	03	227 02.7 46.3	73 26.4 11.1 6 33.9 10.0 57.7	66	04 01	05 03	05 54	17 13	17 22	17 31	17 40			
	04	242 02.9 47.2	87 56.5 11.1 6 23.9 10.0 57.6	64	04 09	05 06	05 54	17 10	17 22	17 34	17 47			
	05	257 03.1 48.2	102 26.6 11.2 6 13.9 10.1 57.6	62	04 16	05 09	05 53	17 07	17 22	17 37	17 52			
	06	272 03.3 S 0 49.2	116 56.8 11.1 S 6 03.8 10.1 57.6	60	04 22	05 12	05 53	17 04	17 22	17 39	17 57			
	07	287 03.6 50.1	131 26.9 11.3 5 53.7 10.1 57.6	N 58	04 27	05 14	05 53	17 02	17 22	17 41	18 02			
	08	302 03.8 51.1	145 57.2 11.3 5 43.6 10.1 57.6	56	04 32	05 16	05 53	17 00	17 22	17 43	18 06			
	09	317 04.0 52.1	160 27.5 11.3 5 33.5 10.2 57.5	54	04 36	05 17	05 52	16 58	17 22	17 45	18 09			
	10	332 04.2 53.1	174 57.8 11.3 5 23.3 10.2 57.5	52	04 39	05 19	05 52	16 56	17 22	17 47	18 12			
	11	347 04.4 54.0	189 28.1 11.4 5 13.1 10.1 57.5	50	04 42	05 20	05 52	16 55	17 22	17 48	18 15			
	12	2 04.6 S 0 55.0	203 58.5 11.4 S 5 03.0 10.3 57.5	45	04 48	05 22	05 52	16 51	17 22	17 51	18 22			
	13	17 04.9 56.0	218 28.9 11.5 4 52.7 10.2 57.5	N 40	04 53	05 24	05 51	16 48	17 22	17 54	18 27			
	14	32 05.1 57.0	232 59.4 11.5 4 42.5 10.2 57.4	35	04 56	05 26	05 51	16 46	17 22	17 56	18 31			
	15	47 05.3 57.9	247 29.9 11.6 4 32.3 10.3 57.4	30	04 59	05 27	05 50	16 44	17 22	17 59	18 36			
	16	62 05.5 58.9	262 00.5 11.5 4 22.0 10.3 57.4	20	05 02	05 28	05 50	16 40	17 22	18 02	18 43			
	17	77 05.7 0 59.9	276 31.0 11.6 4 11.7 10.3 57.4	N 10	05 04	05 28	05 49	16 37	17 22	18 05	18 49			
	18	92 05.9 S 1 00.9	291 01.6 11.7 S 4 01.4 10.3 57.3	0	05 03	05 27	05 48	16 34	17 22	18 08	18 55			
	19	107 06.2 01.8	305 32.3 11.7 3 51.1 10.3 57.3	S 10	05 02	05 26	05 47	16 30	17 22	18 12	19 01			
	20	122 06.4 02.8	320 03.0 11.7 3 40.8 10.4 57.3	20	04 59	05 24	05 46	16 27	17 22	18 15	19 07			
	21	137 06.6 03.8	334 33.7 11.7 3 30.4 10.3 57.3	30	04 53	05 21	05 45	16 23	17 22	18 19	19 15			
	22	152 06.8 04.8	349 04.4 11.8 3 20.1 10.3 57.3	35	04 49	05 19	05 44	16 21	17 22	18 21	19 19			
23	167 07.0 05.7	3 35.2 11.8 3 09.8 10.4 57.2	40	04 44	05 16	05 43	16 19	17 22	18 23	19 24				
LUNES	26 00	182 07.2 S 1 06.7	18 06.0 11.9 S 2 59.4 10.4 57.2	45	04 38	05 13	05 42	16 16	17 22	18 26	19 29			
	01	197 07.4 07.7	32 36.9 11.9 2 49.0 10.4 57.2	S 50	04 30	05 08	05 41	16 12	17 22	18 30	19 36			
	02	212 07.7 08.7	47 07.8 11.9 2 38.6 10.3 57.2	52	04 26	05 06	05 40	16 11	17 22	18 32	19 39			
	03	227 07.9 09.6	61 38.7 11.9 2 28.3 10.4 57.2	54	04 22	05 04	05 39	16 09	17 22	18 33	19 43			
	04	242 08.1 10.6	76 09.6 12.0 2 17.9 10.4 57.1	56	04 17	05 01	05 38	16 07	17 22	18 35	19 47			
	05	257 08.3 11.6	90 40.6 12.0 2 07.5 10.4 57.1	58	04 11	04 58	05 37	16 05	17 22	18 37	19 51			
	06	272 08.5 S 1 12.5	105 11.6 12.0 S 1 57.1 10.4 57.1	S 60	04 04	04 55	05 36	16 03	17 22	18 40	19 56			
	07	287 08.7 13.5	119 42.6 12.1 1 46.7 10.4 57.1											
	08	302 08.9 14.5	134 13.7 12.1 1 36.3 10.4 57.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna						
	09	317 09.2 15.5	148 44.8 12.1 1 25.9 10.4 57.0			Civil	Náut.	25	26	27	28			
	10	332 09.4 16.4	163 15.9 12.1 1 15.5 10.4 57.0					h m	h m	h m	h m			
	11	347 09.6 17.4	177 47.0 12.2 1 05.1 10.4 57.0	N 72	17 45	18 52	20 17	02 17	04 27	06 11	07 54			
	12	2 09.8 S 1 18.4	192 18.2 12.2 S 0 54.7 10.4 57.0	N 70	17 46	18 46	20 02	02 50	04 31	06 08	07 44			
	13	17 10.0 19.4	206 49.4 12.2 0 44.3 10.4 56.9	68	17 46	18 42	19 49	02 58	04 33	06 06	07 36			
	14	32 10.2 20.3	221 20.6 12.3 0 33.9 10.4 56.9	66	17 47	18 38	19 40	03 05	04 36	06 04	07 30			
	15	47 10.4 21.3	235 51.9 12.3 0 23.5 10.3 56.9	64	17 47	18 35	19 31	03 11	04 37	06 02	07 25			
	16	62 10.7 22.3	250 23.2 12.3 0 13.2 10.4 56.9	62	17 48	18 32	19 25	03 16	04 39	06 01	07 20			
	17	77 10.9 23.3	264 54.5 12.3 S 0 02.8 10.4 56.8	60	17 48	18 30	19 19	03 20	04 41	05 59	07 16			
	18	92 11.1 S 1 24.2	279 25.8 12.3 N 0 07.6 10.3 56.8	N 58	17 49	18 28	19 14	03 24	04 42	05 58	07 13			
	19	107 11.3 25.2	293 57.1 12.4 0 17.9 10.3 56.8	56	17 49	18 26	19 10	03 27	04 43	05 57	07 09			
	20	122 11.5 26.2	308 28.5 12.4 0 28.2 10.4 56.8	54	17 49	18 24	19 06	03 30	04 44	05 56	07 07			
	21	137 11.7 27.2	322 59.9 12.4 0 38.6 10.3 56.8	52	17 50	18 23	19 03	03 33	04 45	05 55	07 04			
	22	152 11.9 28.1	337 31.3 12.4 0 48.9 10.3 56.7	50	17 50	18 22	19 00	03 36	04 46	05 55	07 02			
23	167 12.2 29.1	352 02.7 12.5 0 59.2 10.3 56.7	45	17 50	18 20	18 54	03 41	04 48	05 53	06 57				
MARTES	27 00	182 12.4 S 1 30.1	6 34.2 12.5 N 1 09.5 10.3 56.7	N 40	17 51	18 18	18 49	03 45	04 49	05 51	06 53			
	01	197 12.6 31.1	21 05.7 12.5 1 19.8 10.2 56.7	35	17 51	18 17	18 46	03 49	04 50	05 50	06 49			
	02	212 12.8 32.0	35 37.2 12.5 1 30.0 10.3 56.6	30	17 52	18 16	18 43	03 52	04 51	05 49	06 46			
	03	227 13.0 33.0	50 08.7 12.5 1 40.3 10.2 56.6	20	17 53	18 15	18 40	03 58	04 53	05 47	06 40			
	04	242 13.2 34.0	64 40.2 12.6 1 50.5 10.2 56.6	N 10	17 54	18 15	18 39	04 03	04 55	05 46	06 35			
	05	257 13.4 34.9	79 11.8 12.6 2 00.7 10.2 56.6	0	17 55	18 15	18 39	04 08	04 57	05 44	06 31			
	06	272 13.7 S 1 35.9	93 43.4 12.5 N 2 10.9 10.2 56.5	S 10	17 56	18 17	18 41	04 13	04 58	05 43	06 26			
	07	287 13.9 36.9	108 14.9 12.7 2 21.1 10.2 56.5	20	17 57	18 19	18 45	04 18	05 00	05 41	06 21			
	08	302 14.1 37.9	122 46.6 12.6 2 31.3 10.1 56.5	30	17 58	18 22	18 50	04 23	05 02	05 39	06 16			
	09	317 14.3 38.8	137 18.2 12.6 2 41.4 10.1 56.5	35	17 59	18 25	18 54	04 26	05 03	05 38	06 13			
	10	332 14.5 39.8	151 49.8 12.7 2 51.5 10.1 56.5	40	18 00	18 27	18 59	04 30	05 04	05 37	06 09			
	11	347 14.7 40.8	166 21.5 12.7 3 01.6 10.1 56.4	45	18 02	18 31	19 06	04 34	05 05	05 35	06 05			
	12	2 14.9 S 1 41.8	180 53.2 12.6 N 3 11.7 10.1 56.4	S 50	18 03	18 36	19 14	04 39	05 07	05 33	06 00			
	13	17 15.1 42.7	195 24.8 12.8 3 21.8 10.0 56.4	52	18 04	18 38	19 18	04 41	05 07	05 33	05 58			
	14	32 15.4 43.7	209 56.6 12.7 3 31.8 10.0 56.4	54	18 05	18 40	19 23	04 44	05 08	05 32	05 55			
	15	47 15.6 44.7	224 28.3 12.7 3 41.8 10.0 56.3	56	18 06	18 43	19 28	04 46	05 09	05 31	05 53			
	16	62 15.8 45.7	239 00.0 12.7 3 51.8 9.9 56.3	58	18 07	18 46	19 34	04 49	05 10	05 30	05 50			
	17	77 16.0 46.6	253 31.7 12.8 4 01.7 9.9 56.3	S 60	18 08	18 50	19 41	04 53	05 11	05 29	05 46			
	18	92 16.2 S 1 47.6	268 03.5 12.8 N 4 11.6 9.9 56.3											
	19	107 16.4 48.6	282 35.3 12.8 4 21.5 9.9 56.3											
	20	122 16.6 49.5	297 07.1 12.8 4 31.4 9.8 56.2											
	21	137 16.8 50.5	311 38.9 12.8 4 41.2 9.8 56.2											
	22	152 17.0 51.5	326 10.7 12.8 4 51.0 9.8 56.2											
23	167 17.3 52.5	340 42.5 12.8 5 00.8 9.7 56.2												
	S.D. 16.0 d 1.0	S.D. 15.7 15.5 15.4												
			Día	SOL E.T. (+)		Pas. Mer.	LUNA		Pas. Mer.		Edad.	Fase		
				00 ⁿ	12 ⁿ	Mer.	Sup.	Inf.						
			25	08 08	08 18	11 52	22 45	10 21	12					
			26	08 28	08 39	11 51	23 33	11 09	13					
			27	08 49	08 59	11 51	24 20	11 56	14			○		

T. M. G.	ARIES		VENUS -3.4		MARTE +0.8		JUPITER -1.9		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
M I E R C O L E S	28 00	6 39.3	207 57.6	N10 06.5	259 26.1	N23 04.0	271 12.6	N22 58.0	218 03.4	N13 53.9	Acamar	315 38.5	S40 23.5
	01	21 41.8	222 57.2	05.5	274 27.0	03.9	286 14.8	58.0	233 05.6	53.8	Achernar	335 46.3	S57 20.8
	02	36 44.3	237 56.7	04.4	289 28.0	03.8	301 17.0	58.0	248 07.8	53.7	Acruz	173 40.0	S62 58.5
	03	51 46.7	252 56.3	03.4	304 29.0	03.7	316 19.3	58.0	263 10.0	53.6	Adhara	255 33.7	S28 56.3
	04	66 49.2	267 55.8	02.3	319 30.0	03.6	331 21.5	58.0	278 12.2	53.5	Aldebaran	291 20.1	N16 27.9
	05	81 51.7	282 55.4	01.2	334 31.0	03.5	346 23.8	58.0	293 14.4	53.4			
	06	96 54.1	297 54.9	N10 00.2	349 31.9	N23 03.4	1 26.0	N22 57.9	308 16.6	N13 53.3	Alioth	166 44.9	N56 04.9
	07	111 56.6	312 54.5	9 59.1	4 32.9	03.3	16 28.2	57.9	323 18.8	53.2	Alkaid	153 20.6	N49 25.6
	08	126 59.0	327 54.0	58.1	19 33.9	03.1	31 30.5	57.9	338 21.0	53.2	Al Na'ir	28 17.1	S47 04.1
	09	142 01.5	342 53.6	57.0	34 34.9	03.0	46 32.7	57.9	353 23.2	53.1	Alnilam	276 13.6	S 1 12.9
	10	157 04.0	357 53.1	56.0	49 35.9	02.9	61 35.0	57.9	8 25.4	53.0	Alphard	218 22.8	S 8 33.6
	11	172 06.4	12 52.7	54.9	64 36.8	02.8	76 37.2	57.9	23 27.6	52.9			
	12	187 08.9	27 52.3	N 9 53.9	79 37.8	N23 02.7	91 39.4	N22 57.9	38 29.8	N13 52.8	Alphecca	126 34.1	N26 47.6
	13	202 11.4	42 51.8	52.8	94 38.8	02.6	106 41.7	57.9	53 32.0	52.7	Alpheratz	358 11.0	N28 58.2
	14	217 13.8	57 51.4	51.7	109 39.8	02.5	121 43.9	57.9	68 34.2	52.6	Altair	62 34.4	N 8 48.8
	15	232 16.3	72 50.9	50.7	124 40.8	02.4	136 46.2	57.9	83 36.4	52.6	Ankaa	353 41.8	S42 25.5
	16	247 18.8	87 50.5	49.6	139 41.8	02.3	151 48.4	57.9	98 38.6	52.5	Antares	112 59.5	S26 22.9
	17	262 21.2	102 50.0	48.6	154 42.8	02.2	166 50.7	57.9	113 40.8	52.4			
	18	277 23.7	117 49.6	N 9 47.5	169 43.7	N23 02.1	181 52.9	N22 57.9	128 43.0	N13 52.3	Arcturus	146 20.6	N19 18.1
	19	292 26.2	132 49.2	46.4	184 44.7	01.9	196 55.2	57.9	143 45.2	52.2	Atria	108 25.7	S68 59.4
	20	307 28.6	147 48.7	45.4	199 45.7	01.8	211 57.4	57.9	158 47.4	52.1	Avior	234 29.3	S59 26.1
	21	322 31.1	162 48.3	44.3	214 46.7	01.7	226 59.6	57.9	173 49.6	52.0	Bellatrix	279 00.8	N 6 19.8
	22	337 33.5	177 47.8	43.2	229 47.7	01.6	242 01.9	57.9	188 51.8	51.9	Betelgeuse	271 30.4	N 7 24.2
23	352 36.0	192 47.4	42.2	244 48.7	01.5	257 04.1	57.8	203 54.0	51.9				
J U E V E S	29 00	7 38.5	207 46.9	N 9 41.1	259 49.7	N23 01.4	272 06.4	N22 57.8	218 56.2	N13 51.8	Canopus	264 08.1	S52 40.8
	01	22 40.9	222 46.5	40.0	274 50.6	01.3	287 08.6	57.8	233 58.4	51.7	Capella	281 14.1	N45 58.4
	02	37 43.4	237 46.1	39.0	289 51.6	01.2	302 10.9	57.8	249 00.6	51.6	Deneb	49 49.5	N45 12.4
	03	52 45.9	252 45.6	37.9	304 52.6	01.1	317 13.1	57.8	264 02.8	51.5	Denebola	183 01.4	N14 41.9
	04	67 48.3	267 45.2	36.8	319 53.6	01.0	332 15.4	57.8	279 05.0	51.4	Diphda	349 22.6	S18 06.4
	05	82 50.8	282 44.7	35.8	334 54.6	00.8	347 17.6	57.8	294 07.2	51.3			
	06	97 53.3	297 44.3	N 9 34.7	349 55.6	N23 00.7	2 19.9	N22 57.8	309 09.4	N13 51.3	Dubhe	194 25.3	N61 52.2
	07	112 55.7	312 43.9	33.6	4 56.6	00.6	17 22.1	57.8	324 11.6	51.2	Elnath	278 46.6	N28 35.2
	08	127 58.2	327 43.4	32.6	19 57.6	00.5	32 24.4	57.8	339 13.8	51.1	Eltanin	90 58.7	N51 29.9
	09	143 00.6	342 43.0	31.5	34 58.6	00.4	47 26.6	57.8	354 16.0	51.0	Enif	34 13.3	N 9 46.6
	10	158 03.1	357 42.5	30.4	49 59.6	00.3	62 28.9	57.8	9 18.2	50.9	Fomalhaut	15 53.3	S29 44.3
	11	173 05.6	12 42.1	29.4	65 00.6	00.2	77 31.1	57.8	24 20.4	50.8			
	12	188 08.0	27 41.7	N 9 28.3	80 01.5	N23 00.1	92 33.4	N22 57.8	39 22.6	N13 50.7	Gacrux	172 31.5	S56 59.3
	13	203 10.5	42 41.2	27.2	95 02.5	22 59.9	107 35.6	57.8	54 24.8	50.7	Gienah	176 20.3	S17 25.0
	14	218 13.0	57 40.8	26.2	110 03.5	59.8	122 37.0	57.8	69 27.0	50.6	Hadar	149 26.7	S60 16.0
	15	233 15.4	72 40.3	25.1	125 04.5	59.7	137 40.1	57.8	84 29.2	50.5	Hamal	328 30.9	N23 21.5
	16	248 17.9	87 39.9	24.0	140 05.5	59.6	152 42.4	57.7	99 31.4	50.4	Kaus Aust.	84 19.5	S34 23.7
	17	263 20.4	102 39.5	22.9	155 06.5	59.5	167 44.6	57.7	114 33.6	50.3			
	18	278 22.8	117 39.0	N 9 21.9	170 07.5	N22 59.4	182 46.9	N22 57.7	129 35.8	N13 50.2	Kochab	137 20.0	N74 15.1
	19	293 25.3	132 38.6	20.8	185 08.5	59.3	197 49.1	57.7	144 38.0	50.1	Markab	14 04.8	N15 05.3
	20	308 27.8	147 38.2	19.7	200 09.5	59.1	212 51.4	57.7	159 40.2	50.1	Menkar	314 43.0	N 4 00.2
	21	323 30.2	162 37.7	18.6	215 10.5	59.0	227 53.6	57.7	174 42.4	50.0	Menkent	148 39.7	S36 15.6
	22	338 32.7	177 37.3	17.6	230 11.5	58.9	242 55.9	57.7	189 44.6	49.9	Miaplacidus	221 45.8	S69 37.4
23	353 35.1	192 36.9	16.5	245 12.5	58.8	257 58.1	57.7	204 46.8	49.8				
V I E R N E S	30 00	8 37.6	207 36.4	N 9 15.4	260 13.5	N22 58.7	273 00.4	N22 57.7	219 49.0	N13 49.7	Mirfak	309 18.6	N49 46.8
	01	23 40.1	222 36.0	14.3	275 14.5	58.6	288 02.6	57.7	234 51.2	49.6	Nunki	76 31.6	S26 19.4
	02	38 42.5	237 35.5	13.3	290 15.5	58.5	303 04.9	57.7	249 53.4	49.5	Peacock	54 01.3	S56 48.5
	03	53 45.0	252 35.1	12.2	305 16.5	58.3	318 07.2	57.7	264 55.6	49.5	Pollux	244 00.7	N28 04.7
	04	68 47.5	267 34.7	11.1	320 17.5	58.2	333 09.4	57.7	279 57.8	49.4	Procyon	245 28.0	N 5 17.0
	05	83 49.9	282 34.2	10.0	335 18.5	58.1	348 11.7	57.7	295 00.0	49.3			
	06	98 52.4	297 33.8	N 9 08.9	350 19.5	N22 58.0	3 13.9	N22 57.7	310 02.2	N13 49.2	Rasalhague	96 31.5	N12 34.8
	07	113 54.9	312 33.4	07.9	5 20.5	57.9	18 16.2	57.7	325 04.4	49.1	Regulus	208 12.4	N12 04.6
	08	128 57.3	327 32.9	06.8	20 21.5	57.8	33 18.4	57.7	340 06.6	49.0	Rigel	281 37.8	S 8 13.5
	09	143 59.8	342 32.5	05.7	35 22.5	57.7	48 20.7	57.6	355 08.8	48.9	Rigil Kent.	140 29.0	S60 44.6
	10	159 02.3	357 32.1	04.6	50 23.5	57.5	63 22.9	57.6	10 11.0	48.9	Sabik	102 43.5	S15 41.7
	11	174 04.7	12 31.6	03.5	65 24.5	57.4	78 25.2	57.6	25 13.2	48.8			
	12	189 07.2	27 31.2	N 9 02.5	80 25.5	N22 57.3	93 27.5	N22 57.6	40 15.4	N13 48.7	Schedar	350 10.6	N56 25.0
	13	204 09.6	42 30.8	01.4	95 26.5	57.2	108 29.7	57.6	55 17.6	48.6	Shaula	96 58.6	S37 05.3
	14	219 12.1	57 30.3	9 00.3	110 27.5	57.1	123 32.0	57.6	70 19.8	48.5	Sirius	258 57.5	S16 41.0
	15	234 14.6	72 29.9	8 59.2	125 28.5	57.0	138 34.2	57.6	85 22.0	48.4	Spica	159 00.0	S11 02.6
	16	249 17.0	87 29.5	58.1	140 29.5	56.8	153 36.5	57.6	100 24.2	48.3	Suhail	223 12.5	S43 20.4
	17	264 19.5	102 29.0	57.0	155 30.5	56.7	168 38.8	57.6	115 26.4	48.3			
	18	279 22.0	117 28.6	N 8 56.0	170 31.5	N22 56.6	183 41.0	N22 57.6	130 28.6	N13 48.2	Vega	80 57.2	N38 46.2
	19	294 24.4	132 28.2	54.9	185 32.5	56.5	198 43.3	57.6	145 30.8	48.1	Zuben'ubi	137 35.5	S15 56.9
	20	309 26.9	147 27.7	53.8	200 33.5	56.4	213 45.5	57.6	160 33.1	48.0			
	21	324 29.4	162 27.3	52.7	215 34.5	56.3	228 47.8	57.6	175 35.3	47.9			
	22	339 31.8	177 26.9	51.6	230 35.5	56.1	243 50.1	57.6	190 37.5	47.8	Venus	200 08.5	10 09
23	354 34.3	192 26.4	50.5	245 36.5	56.0	258 52.3	57.6	205 39.7	47.8	Marte	252 11.2	6 40	
										Júpiter	264 27.9	5 51	
										Saturno	211 17.7	9 23	
Pas. Mer.													

Pas. Mer. 23 25.6

v -0.4 d 1.1

v 1.0 d 0.1

v 2.3 d 0.0

v 2.2 d 0.1

A. H. S. Pas. Mer.
h m h m

T. M. G.	SOL			LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	°	A.H.G.	v	Dec.	d		P. H.	Naut.		Civil	28		29		30		1
											h		m	h	m	h	m	h	m
28 M I E R C O L E S	182	17.5	S 1	355	14.3	12.8	N 5	10.5	9.7	56.1	N 72	03 38	05 02	06 09	17 12	17 07	17 01	16 54	
	01	197	17.7	54.4	9	46.1	12.9	5	20.2	9.7	56.1	N 70	03 52	05 06	06 07	17 23	17 25	17 28	17 35
	02	212	17.9	55.4	24	18.0	12.8	5	29.9	9.7	56.1	68	04 02	05 10	06 05	17 33	17 40	17 49	18 04
	03	227	18.1	56.4	38	49.8	12.9	5	39.6	9.6	56.1	66	04 11	05 13	06 04	17 40	17 51	18 06	18 25
	04	242	18.3	57.3	53	21.7	12.9	5	49.2	9.5	56.0	64	04 18	05 15	06 02	17 47	18 01	18 19	18 42
	05	257	18.5	58.3	67	53.6	12.9	5	58.7	9.6	56.0	62	04 25	05 17	06 01	17 52	18 10	18 31	18 56
	06	272	18.7	S 1	82	25.5	12.8	N 6	08.3	9.5	56.0	60	04 30	05 19	06 00	17 57	18 17	18 40	19 08
	07	287	18.9	2	96	57.3	12.9	6	17.8	9.4	56.0	N 58	04 34	05 20	05 59	18 02	18 24	18 49	19 19
	08	302	19.2	01.2	111	29.2	12.9	6	27.2	9.4	56.0	56	04 38	05 22	05 59	18 06	18 30	18 57	19 28
	09	317	19.4	02.2	126	01.1	13.0	6	36.6	9.4	55.9	54	04 41	05 23	05 58	18 09	18 35	19 03	19 36
	10	332	19.6	03.2	140	33.1	12.9	6	46.0	9.3	55.9	52	04 44	05 24	05 57	18 12	18 39	19 09	19 43
	11	347	19.8	04.1	155	05.0	12.9	6	55.3	9.3	55.9	50	04 47	05 24	05 57	18 15	18 44	19 15	19 50
	12	2	20.0	S 2	169	36.9	12.9	N 7	04.6	9.3	55.9	45	04 52	05 26	05 55	18 22	18 53	19 27	20 04
	13	17	20.2	06.1	184	08.8	12.9	7	13.9	9.2	55.8	N 40	04 56	05 27	05 54	18 27	19 01	19 37	20 15
	14	32	20.4	07.1	198	40.7	13.0	7	23.1	9.2	55.8	35	04 58	05 28	05 53	18 31	19 07	19 45	20 25
	15	47	20.6	08.0	213	12.7	12.9	7	32.3	9.1	55.8	30	05 00	05 28	05 52	18 36	19 13	19 53	20 34
	16	62	20.8	09.0	227	44.6	13.0	7	41.4	9.1	55.8	20	05 03	05 28	05 50	18 43	19 24	20 06	20 49
	17	77	21.0	10.0	242	16.6	12.9	7	50.5	9.1	55.8	N 10	05 03	05 28	05 49	18 49	19 33	20 17	21 02
	18	92	21.3	S 2	256	48.5	12.9	N 7	59.6	9.0	55.7	0	05 02	05 26	05 47	18 55	19 41	20 28	21 14
	19	107	21.5	11.9	271	20.4	13.0	8	08.6	8.9	55.7	S 10	05 00	05 24	05 45	19 01	19 50	20 38	21 27
	20	122	21.7	12.9	285	52.4	13.0	8	17.5	8.9	55.7	20	04 56	05 21	05 43	19 07	19 59	20 50	21 40
	21	137	21.9	13.9	300	24.4	12.9	8	26.4	8.9	55.7	30	04 49	05 17	05 41	19 15	20 09	21 03	21 55
	22	152	22.1	14.8	314	56.3	13.0	8	35.3	8.8	55.6	35	04 45	05 14	05 40	19 19	20 16	21 11	22 04
23	167	22.3	15.8	329	28.3	12.9	8	44.1	8.8	55.6	40	04 39	05 11	05 38	19 24	20 23	21 20	22 14	
29	182	22.5	S 2	344	00.2	13.0	N 8	52.9	8.7	55.6	45	04 32	05 07	05 36	19 29	20 31	21 30	22 26	
01	197	22.7	17.8	358	32.2	12.9	9	01.6	8.6	55.6	S 50	04 23	05 02	05 34	19 36	20 40	21 42	22 41	
02	212	22.9	18.7	13	04.1	13.0	9	10.2	8.7	55.6	52	04 19	04 59	05 33	19 39	20 45	21 48	22 48	
03	227	23.1	19.7	27	36.1	13.0	9	18.9	8.5	55.5	54	04 14	04 56	05 32	19 43	20 50	21 55	22 55	
04	242	23.3	20.7	42	08.1	12.9	9	27.4	8.5	55.5	56	04 08	04 53	05 30	19 47	20 56	22 02	23 04	
05	257	23.6	21.6	56	40.0	13.0	9	35.9	8.5	55.5	58	04 01	04 49	05 29	19 51	21 02	22 10	23 13	
06	272	23.8	S 2	71	12.0	13.0	N 9	44.4	8.4	55.5	S 60	03 54	04 45	05 27	19 56	21 09	22 19	23 24	
07	287	24.0	23.6	85	44.0	12.9	9	52.8	8.4	55.4	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	302	24.2	24.6	100	15.9	13.0	10	01.2	8.3	55.4			Civil	Naut.	28	29	30	1	
09	317	24.4	25.5	114	47.9	12.9	10	09.5	8.2	55.4									
10	332	24.6	26.5	129	19.8	13.0	10	17.7	8.2	55.4									
11	347	24.8	27.5	143	51.8	12.9	10	25.9	8.2	55.4	N 72	17 29	18 36	19 59	07 54	09 35	11 18	13 02	
12	2	25.0	S 2	158	23.7	13.0	N10	34.1	8.1	55.3	N 70	17 32	18 32	19 46	07 44	09 18	10 51	12 21	
13	17	25.2	29.4	172	55.7	12.9	10	42.2	8.0	55.3	68	17 34	18 29	19 35	07 36	09 05	10 31	11 53	
14	32	25.4	30.4	187	27.6	13.0	10	50.2	8.0	55.3	66	17 35	18 26	19 27	07 30	08 54	10 16	11 32	
15	47	25.6	31.4	201	59.6	12.9	10	58.2	7.9	55.3	64	17 37	18 24	19 20	07 25	08 45	10 03	11 16	
16	62	25.8	32.3	216	31.5	13.0	11	06.1	7.8	55.3	62	17 38	18 22	19 14	07 20	08 37	09 52	11 02	
17	77	26.0	33.3	231	03.5	12.9	11	13.9	7.8	55.2	60	17 39	18 20	19 09	07 16	08 31	09 43	10 50	
18	92	26.3	S 2	245	35.4	13.0	N11	21.7	7.8	55.2	N 58	17 40	18 19	19 05	07 13	08 25	09 35	10 40	
19	107	26.5	35.3	260	07.4	12.9	11	29.5	7.7	55.2	56	17 41	18 18	19 01	07 09	08 20	09 27	10 32	
20	122	26.7	36.2	274	39.3	12.9	11	37.2	7.6	55.2	54	17 42	18 17	18 58	07 07	08 15	09 21	10 24	
21	137	26.9	37.2	289	11.2	12.9	11	44.8	7.6	55.2	52	17 43	18 16	18 55	07 04	08 11	09 16	10 17	
22	152	27.1	38.2	303	43.1	13.0	11	52.4	7.5	55.1	50	17 43	18 15	18 53	07 02	08 07	09 10	10 11	
23	167	27.3	39.1	318	15.1	12.9	11	59.9	7.4	55.1	45	17 45	18 14	18 48	06 57	07 59	08 59	09 57	
30	182	27.5	S 2	332	47.0	12.9	N12	07.3	7.4	55.1	N 40	17 46	18 13	18 44	06 53	07 52	08 50	09 46	
01	197	27.7	41.1	347	18.9	12.9	12	14.7	7.3	55.1	35	17 47	18 12	18 42	06 49	07 46	08 42	09 37	
02	212	27.9	42.1	1	50.8	12.9	12	22.0	7.3	55.1	30	17 48	18 12	18 40	06 46	07 41	08 35	09 29	
03	227	28.1	43.0	16	22.7	12.9	12	29.3	7.2	55.0	20	17 50	18 12	18 38	06 40	07 32	08 24	09 14	
04	242	28.3	44.0	30	54.6	12.9	12	36.5	7.1	55.0	N 10	17 52	18 13	18 37	06 35	07 24	08 13	09 02	
05	257	28.5	45.0	45	26.5	12.8	12	43.6	7.0	55.0	0	17 54	18 14	18 38	06 31	07 17	08 04	08 50	
06	272	28.7	S 2	59	58.3	12.9	N12	50.6	7.1	55.0	S 10	17 55	18 16	18 41	06 26	07 10	07 54	08 39	
07	287	28.9	46.9	74	30.2	12.9	12	57.7	6.9	55.0	20	17 58	18 20	18 45	06 21	07 02	07 44	08 26	
08	302	29.1	47.9	89	02.1	12.9	13	04.6	6.9	55.0	30	18 00	18 24	18 52	06 16	06 53	07 32	08 12	
09	317	29.3	48.8	103	34.0	12.8	13	11.5	6.8	54.9	35	18 02	18 27	18 57	06 13	06 48	07 25	08 04	
10	332	29.6	49.8	118	05.8	12.9	13	18.3	6.7	54.9	40	18 03	18 30	19 02	06 09	06 42	07 17	07 54	
11	347	29.8	50.8	132	37.7	12.8	13	25.0	6.7	54.9	45	18 05	18 35	19 10	06 05	06 36	07 08	07 44	
12	2	30.0	S 2	147	09.5	12.8	N13	31.7	6.6	54.9	S 50	18 08	18 40	19 19	06 00	06 28	06 58	07 30	
13	17	30.2	52.7	161	41.3	12.9	13	38.3	6.5	54.9	52	18 09	18 43	19 24	05 58	06 24	06 53	07 24	
14	32	30.4	53.7	176	13.2	12.8	13	44.8	6.5	54.9	54	18 10	18 46	19 29	05 55	06 20	06 47	07 18	
15	47	30.6	54.7	190	45.0	12.8	13	51.3	6.4	54.8	56	18 12	18 49	19 35	05 53	06 16	06 41	07 10	
16	62	30.8	55.6	205	16.8	12.8	13	57.7	6.3	54.8	58	18 13	18 53	19 41	05 50	06 11	06 34	07 02	
17	77	31.0	56.6	219	48.6	12.8	14	04.0	6.3	54.8	S 60	18 15	18 57	19 49	05 46	06 05	06 27	06 52	
18	92	31.2	S 2	234	20.4	12.8	N14	10.3	6.2	54.8									
19	107	31.4	58.6	248	52.2	12.8	14	16.5	6.1	54.8									
20	122	31.6	59.5	263	24.0	12.8	14	22.6	6.1	54.8									

T. M. G.	ARIES			VENUS -3.4			MARTE +0.8			JUPITER -1.9			SATURNO +0.8			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
1 00 01 02 03 04 05 06 07 08 S A B A D O 15 16 17 18 19 20 21 22 23	9 36.7	207 26.0 N 8	49.4	260 37.6 N22	55.9		273 54.6 N22	57.6		220 41.9 N13	47.7		Acomar	315 38.4 S40	23.5				
	24 39.2	222 25.6	48.4	275 38.6	55.8		288 56.8	57.6		235 44.1	47.6		Achernar	335 46.3 S57	20.9				
	39 41.7	237 25.1	47.3	290 39.6	55.7		303 59.1	57.6		250 46.3	47.5		Acrux	173 40.0 S62	58.5				
	54 44.1	252 24.7	46.2	305 40.6	55.5		319 01.4	57.5		265 48.5	47.4		Adhara	255 33.7 S28	56.3				
	69 46.6	267 24.3	45.1	320 41.6	55.4		334 03.6	57.5		280 50.7	47.3		Aldebaran	291 20.1 N16	27.9				
	84 49.1	282 23.9	44.0	335 42.6	55.3		349 05.9	57.5		295 52.9	47.2								
	99 51.5	297 23.4 N 8	42.9	350 43.6 N22	55.2		4 08.2 N22	57.5		310 55.1 N13	47.2		Alioth	166 44.9 N56	04.9				
	114 54.0	312 23.0	41.8	5 44.6	55.1		19 10.4	57.5		325 57.3	47.1		Alkaid	153 20.6 N49	25.6				
	129 56.5	327 22.6	40.7	20 45.6	54.9		34 12.7	57.5		340 59.5	47.0		Al Na'ir	28 17.1 S47	04.1				
	144 58.9	342 22.1	39.6	35 46.6	54.8		49 15.0	57.5		356 01.7	46.9		Alnilam	276 13.6 S 1	12.9				
	160 01.4	357 21.7	38.5	50 47.7	54.7		64 17.2	57.5		11 03.9	46.8		Alphard	218 22.7 S 8	33.6				
	175 03.9	12 21.3	37.5	65 48.7	54.6		79 19.5	57.5		26 06.1	46.7								
	190 06.3	27 20.9 N 8	36.4	80 49.7 N22	54.5		94 21.8 N22	57.5		41 08.3 N13	46.6		Alphecca	126 34.1 N26	47.6				
	205 08.8	42 20.4	35.3	95 50.7	54.4		109 24.0	57.5		56 10.5	46.6		Alpheratz	358 11.0 N28	58.2				
	220 11.2	57 20.0	34.2	110 51.7	54.2		124 26.3	57.5		71 12.7	46.5		Altair	62 34.4 N 8	48.8				
	235 13.7	72 19.6	33.1	125 52.7	54.1		139 28.6	57.5		86 14.9	46.4		Ankaa	353 41.8 S42	25.5				
	250 16.2	87 19.1	32.0	140 53.7	54.0		154 30.8	57.5		101 17.1	46.3		Antares	112 59.5 S26	22.9				
	265 18.6	102 18.7	30.9	155 54.7	53.9		169 33.1	57.5		116 19.3	46.2								
	280 21.1	117 18.3 N 8	29.8	170 55.8 N22	53.7		184 35.4 N22	57.5		131 21.6 N13	46.1		Arcturus	146 20.6 N19	18.1				
	295 23.6	132 17.9	28.7	185 56.8	53.6		199 37.6	57.5		146 23.8	46.1		Atria	108 25.7 S68	59.4				
	310 26.0	147 17.4	27.6	200 57.8	53.5		214 39.9	57.5		161 26.0	46.0		Avior	234 29.2 S59	26.1				
	325 28.5	162 17.0	26.5	215 58.8	53.4		229 42.2	57.4		176 28.2	45.9		Bellatrix	279 00.8 N 6	19.8				
	340 31.0	177 16.6	25.4	230 59.8	53.3		244 44.4	57.4		191 30.4	45.8		Betelgeuse	271 30.4 N 7	24.2				
355 33.4	192 16.2	24.3	246 00.8	53.1		259 46.7	57.4		206 32.6	45.7									
2 00 01 02 03 04 05 06 07 D O M I N I O 12 13 14 15 16 17 18 19 20 21 22 23	10 35.9	207 15.7 N 8	23.2	261 01.9 N22	53.0		274 49.0 N22	57.4		221 34.8 N13	45.6		Canopus	264 08.0 S52	40.8				
	25 38.4	222 15.3	22.1	276 02.9	52.9		289 51.2	57.4		236 37.0	45.6		Capella	281 14.1 N45	58.4				
	40 40.8	237 14.9	21.0	291 03.9	52.8		304 53.5	57.4		251 39.2	45.5		Deneb	49 49.6 N45	12.4				
	55 43.3	252 14.4	19.9	306 04.9	52.7		319 55.8	57.4		266 41.4	45.4		Denebola	183 01.4 N14	41.9				
	70 45.7	267 14.0	18.8	321 05.9	52.5		334 58.1	57.4		281 43.6	45.3		Diphda	349 22.6 S18	06.4				
	85 48.2	282 13.6	17.7	336 06.9	52.4		350 00.3	57.4		296 45.8	45.2								
	100 50.7	297 13.2 N 8	16.6	351 08.0 N22	52.3		5 02.6 N22	57.4		311 48.0 N13	45.1		Dubhe	194 25.3 N61	52.2				
	115 53.1	312 12.7	15.5	6 09.0	52.2		20 04.9	57.4		326 50.2	45.0		Elnath	278 46.5 N28	35.2				
	130 55.6	327 12.3	14.4	21 10.0	52.0		35 07.1	57.4		341 52.4	45.0		Eltanin	90 58.8 N51	29.9				
	145 58.1	342 11.9	13.3	36 11.0	51.9		50 09.4	57.4		356 54.6	44.9		Enif	34 13.3 N 9	46.6				
	161 00.5	357 11.5	12.2	51 12.1	51.8		65 11.7	57.4		11 56.9	44.8		Fomalhaut	15 53.3 S29	44.3				
	176 03.0	12 11.0	11.1	66 13.1	51.7		80 14.0	57.4		26 59.1	44.7								
	191 05.5	27 10.6 N 8	10.0	81 14.1 N22	51.5		95 16.2 N22	57.4		42 01.3 N13	44.6		Gacrux	172 31.5 S56	59.2				
	206 07.9	42 10.2	08.9	96 15.1	51.4		110 18.5	57.4		57 03.5	44.5		Gienah	176 20.3 S17	25.0				
	221 10.4	57 09.8	07.8	111 16.1	51.3		125 20.8	57.4		72 05.7	44.5		Hadar	149 26.7 S60	16.0				
	236 12.8	72 09.4	06.7	126 17.2	51.2		140 23.1	57.4		87 07.9	44.4		Hamal	328 30.8 N23	21.5				
	251 15.3	87 08.9	05.6	141 18.2	51.1		155 25.3	57.4		102 10.1	44.3		Kaus Aust.	84 19.5 S34	23.7				
	266 17.8	102 08.5	04.5	156 19.2	50.9		170 27.6	57.3		117 12.3	44.2								
	281 20.2	117 08.1 N 8	03.4	171 20.2 N22	50.8		185 29.9 N22	57.3		132 14.5 N13	44.1		Kochab	137 20.0 N74	15.1				
	296 22.7	132 07.7	02.3	186 21.3	50.7		200 32.2	57.3		147 16.7	44.0		Markab	14 04.8 N15	05.3				
	311 25.2	147 07.2	01.1	201 22.3	50.6		215 34.4	57.3		162 18.9	44.0		Menkar	314 43.0 N 4	00.2				
	326 27.6	162 06.8	00.0	216 23.3	50.4		230 36.7	57.3		177 21.1	43.9		Menkent	148 39.7 S36	15.6				
	341 30.1	177 06.4	58.9	231 24.3	50.3		245 39.0	57.3		192 23.3	43.8		Miaplacidus	221 45.8 S69	37.4				
356 32.6	192 06.0	57.8	246 25.4	50.2		260 41.3	57.3		207 25.6	43.7									
3 00 01 02 03 04 05 06 07 08 L U N E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	11 35.0	207 05.6 N 7	56.7	261 26.4 N22	50.1		275 43.5 N22	57.3		222 27.8 N13	43.6		Mirfak	309 18.6 N49	46.8				
	26 37.5	222 05.1	55.6	276 27.4	49.9		290 45.8	57.3		237 30.0	43.5		Nunki	76 31.6 S26	19.4				
	41 40.0	237 04.7	54.5	291 28.5	49.8		305 48.1	57.3		252 32.2	43.5		Peacock	54 01.3 S56	48.5				
	56 42.4	252 04.3	53.4	306 29.5	49.7		320 50.4	57.3		267 34.4	43.4		Pollux	244 00.7 N28	04.7				
	71 44.9	267 03.9	52.3	321 30.5	49.6		335 52.7	57.3		282 36.6	43.3		Procyon	245 28.0 N 5	16.9				
	86 47.3	282 03.4	51.2	336 31.5	49.4		350 54.9	57.3		297 38.8	43.2								
	101 49.8	297 03.0 N 7	50.1	351 32.6 N22	49.3		5 57.2 N22	57.3		312 41.0 N13	43.1		Rasalhague	96 31.5 N12	34.8				
	116 52.3	312 02.6	48.9	6 33.6	49.2		20 59.5	57.3		327 43.2	43.0		Regulus	208 12.4 N12	04.6				
	131 54.7	327 02.2	47.8	21 34.6	49.1		36 01.8	57.3		342 45.4	43.0		Rigel	281 37.8 S 8	13.5				
	146 57.2	342 01.8	46.7	36 35.7	48.9		51 04.1	57.3		357 47.6	42.9		Rigel Kent.	140 29.0 S60	44.6				
	161 59.7	357 01.3	45.6	51 36.7	48.8		66 06.3	57.3		12 49.8	42.8		Sabik	102 43.6 S15	41.7				
	177 02.1	12 00.9	44.5	66 37.7	48.7		81 08.6	57.3		27 52.1	42.7								
	192 04.6	27 00.5 N 7	43.4	81 38.8 N22	48.5		96 10.9 N22	57.3		42 54.3 N13	42.6		Schedar	350 10.6 N56	25.0				
	207 07.1	42 00.1	42.3	96 39.8	48.4		111 13.2	57.2		57 56.5	42.5		Shaula	96 58.6 S37	05.3				
	222 09.5	56 59.7	41.1	111 40.8	48.3		126 15.5	57.2		72 58.7	42.5		Sirius	258 57.5 S16	41.0				
	237 12.0	71 59.3	40.0	126 41.9	48.2		141 17.8	57.2		88 00.9	42.4		Spica	159 00.0 S11	02.6				
	252 14.5	86 58.8	38.9	141 42.9	48.0		156 20.0	57.2		103 03.1	42.3		Suhail						

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		1	2	3	4
											h m	h m	h m	h m
S A B A D O	1 00	182 32.4 S 3 03.4	321 31.1 12.8	N14 46.4	5.8	54.7	N 72	03 53	05 15	06 22	16 54	16 42	□	□
	01	197 32.6 04.4	336 02.9 12.7	14 52.2	5.7	54.7	N 70	04 05	05 18	06 19	17 35	17 50	18 20	19 13
	02	212 32.8 05.3	350 34.6 12.8	14 57.9	5.7	54.7	68	04 14	05 20	06 16	18 04	18 26	19 02	19 54
	03	227 33.0 06.3	5 06.4 12.7	15 03.6	5.5	54.6	66	04 22	05 22	06 13	18 25	18 52	19 31	20 22
	04	242 33.2 07.3	19 38.1 12.7	15 09.1	5.5	54.6	64	04 28	05 24	06 11	18 42	19 12	19 52	20 43
	05	257 33.4 08.3	34 09.8 12.7	15 14.6	5.4	54.6	62	04 33	05 25	06 09	18 56	19 29	20 10	21 00
	06	272 33.6 S 3 09.2	48 41.5 12.7	N15 20.0	5.4	54.6	60	04 37	05 26	06 07	19 08	19 42	20 24	21 14
	07	287 33.8 10.2	63 13.2 12.7	15 25.4	5.2	54.6	N 58	04 41	05 27	06 06	19 19	19 54	20 37	21 27
	08	302 34.0 11.2	77 44.9 12.7	15 30.6	5.2	54.6	56	04 44	05 27	06 05	19 28	20 04	20 47	21 37
	09	317 34.2 12.1	92 16.6 12.7	15 35.8	5.1	54.6	54	04 47	05 28	06 03	19 36	20 13	20 57	21 46
	10	332 34.4 13.1	106 48.3 12.7	15 40.9	5.1	54.5	52	04 49	05 29	06 02	19 43	20 21	21 05	21 55
	11	347 34.6 14.1	121 20.0 12.6	15 46.0	4.9	54.5	50	04 51	05 29	06 01	19 50	20 29	21 13	22 02
	12	2 34.8 S 3 15.0	135 51.6 12.7	N15 50.9	4.9	54.5	45	04 56	05 30	05 59	20 04	20 44	21 29	22 18
	13	17 35.0 16.0	150 23.3 12.6	15 55.8	4.8	54.5	N 40	04 59	05 30	05 57	20 15	20 57	21 42	22 31
	14	32 35.2 17.0	164 54.9 12.7	16 00.6	4.8	54.5	35	05 01	05 30	05 55	20 25	21 08	21 53	22 42
	15	47 35.4 18.0	179 26.6 12.6	16 05.4	4.7	54.5	30	05 02	05 30	05 54	20 34	21 17	22 03	22 52
	16	62 35.6 18.9	193 58.2 12.6	16 10.1	4.5	54.5	20	05 03	05 29	05 51	20 49	21 34	22 20	23 08
	17	77 35.8 19.9	208 29.8 12.7	16 14.6	4.6	54.5	N 10	05 03	05 28	05 49	21 02	21 48	22 35	23 23
	18	92 36.1 S 3 20.9	223 01.5 12.6	N16 19.2	4.4	54.4	0	05 01	05 25	05 46	21 14	22 02	22 49	23 36
	19	107 36.3 21.8	237 33.1 12.6	16 23.6	4.3	54.4	S 10	04 58	05 23	05 44	21 27	22 15	23 03	23 50
	20	122 36.5 22.8	252 04.7 12.6	16 27.9	4.3	54.4	20	04 53	05 19	05 41	21 40	22 29	23 18	24 04
	21	137 36.7 23.8	266 36.3 12.6	16 32.2	4.2	54.4	30	04 45	05 13	05 37	21 55	22 46	23 35	24 21
	22	152 36.9 24.7	281 07.9 12.5	16 36.4	4.2	54.4	35	04 40	05 10	05 35	22 04	22 56	23 45	24 31
23	167 37.1 25.7	295 39.4 12.6	16 40.6	4.0	54.4	40	04 34	05 06	05 33	22 14	23 07	23 56	24 42	
2000	182 37.3 S 3 26.7	310 11.0 12.6	N16 44.6	4.0	54.4	45	04 26	05 01	05 31	22 26	23 20	24 09	00 09	
01	197 37.5 27.6	324 42.6 12.5	16 48.6	3.9	54.4	S 50	04 16	04 55	05 27	22 41	23 36	24 26	00 26	
02	212 37.7 28.6	339 14.1 12.6	16 52.5	3.8	54.4	52	04 11	04 52	05 26	22 48	23 43	24 33	00 33	
03	227 37.9 29.6	353 45.7 12.5	16 56.3	3.7	54.4	54	04 05	04 48	05 24	22 55	23 51	24 42	00 42	
04	242 38.1 30.5	8 17.2 12.6	17 00.0	3.6	54.3	56	03 59	04 45	05 22	23 04	24 01	00 01	00 51	
05	257 38.3 31.5	22 48.8 12.5	17 03.6	3.6	54.3	58	03 52	04 41	05 20	23 13	24 11	00 11	01 02	
06	272 38.5 S 3 32.5	37 20.3 12.5	N17 07.2	3.5	54.3	S 60	03 43	04 36	05 18	23 24	24 23	00 23	01 15	
07	287 38.7 33.4	51 51.8 12.5	17 10.7	3.4	54.3									
08	302 38.8 34.4	66 23.3 12.5	17 14.1	3.4	54.3	Lat.	Ocaso Sol	Crepúsculo Civil Náut.		Ocaso Luna				
09	317 39.0 35.4	80 54.8 12.5	17 17.5	3.2	54.3					1	2	3	4	
10	332 39.2 36.4	95 26.3 12.5	17 20.7	3.2	54.3					h m	h m	h m	h m	
11	347 39.4 37.3	109 57.8 12.5	17 23.9	3.1	54.3	N 72	17 14	18 21	19 42	13 02	14 51	□	□	
12	2 39.6 S 3 38.3	124 29.3 12.5	N17 27.0	3.0	54.3	N 70	17 18	18 18	19 31	12 21	13 44	14 52	15 37	
13	17 39.8 39.3	139 00.8 12.5	17 30.0	2.9	54.3	68	17 21	18 16	19 22	11 53	13 08	14 10	14 56	
14	32 40.0 40.2	153 32.3 12.4	17 32.9	2.9	54.3	66	17 24	18 15	19 15	11 32	12 42	13 42	14 28	
15	47 40.2 41.2	168 03.7 12.5	17 35.8	2.7	54.3	64	17 26	18 13	19 09	11 16	12 22	13 20	14 07	
16	62 40.4 42.2	182 35.2 12.4	17 38.5	2.7	54.3	62	17 28	18 12	19 04	11 02	12 06	13 03	13 50	
17	77 40.6 43.1	197 06.6 12.5	17 41.2	2.6	54.2	60	17 30	18 11	19 00	10 50	11 53	12 48	13 35	
18	92 40.8 S 3 44.1	211 38.1 12.4	N17 43.8	2.5	54.2	N 58	17 32	18 11	18 56	10 40	11 41	12 36	13 23	
19	107 41.0 45.1	226 09.5 12.5	17 46.3	2.5	54.2	56	17 33	18 10	18 53	10 32	11 31	12 25	13 12	
20	122 41.2 46.0	240 41.0 12.4	17 48.8	2.3	54.2	54	17 34	18 10	18 51	10 24	11 22	12 16	13 03	
21	137 41.4 47.0	255 12.4 12.4	17 51.1	2.3	54.2	52	17 36	18 09	18 48	10 17	11 15	12 07	12 55	
22	152 41.6 48.0	269 43.8 12.4	17 53.4	2.2	54.2	50	17 37	18 09	18 46	10 11	11 07	12 00	12 47	
23	167 41.8 48.9	284 15.2 12.4	17 55.6	2.1	54.2	45	17 39	18 08	18 42	09 57	10 52	11 44	12 31	
3000	182 42.0 S 3 49.9	298 46.6 12.4	N17 57.7	2.0	54.2	N 40	17 41	18 08	18 39	09 46	10 40	11 31	12 18	
01	197 42.2 50.9	313 18.0 12.4	17 59.7	2.0	54.2	35	17 43	18 08	18 37	09 37	10 29	11 19	12 07	
02	212 42.4 51.8	327 49.4 12.4	18 01.7	1.8	54.2	30	17 45	18 08	18 36	09 29	10 20	11 10	11 57	
03	227 42.6 52.8	342 20.8 12.4	18 03.5	1.8	54.2	20	17 47	18 09	18 35	09 14	10 04	10 53	11 40	
04	242 42.8 53.8	356 52.2 12.4	18 05.3	1.7	54.2	N 10	17 50	18 11	18 35	09 02	09 50	10 38	11 26	
05	257 43.0 54.7	11 23.6 12.4	18 07.0	1.6	54.2	0	17 53	18 13	18 37	08 50	09 37	10 24	11 12	
06	272 43.2 S 3 55.7	25 55.0 12.4	N18 08.6	1.5	54.2	S 10	17 55	18 16	18 41	08 39	09 24	10 11	10 58	
07	287 43.4 56.7	40 26.4 12.3	18 10.1	1.5	54.2	20	17 58	18 20	18 46	08 26	09 10	09 56	10 43	
08	302 43.6 57.6	54 57.7 12.4	18 11.6	1.3	54.2	30	18 02	18 26	18 54	08 12	08 54	09 39	10 26	
09	317 43.8 58.6	69 29.1 12.4	18 12.9	1.3	54.2	35	18 04	18 29	18 59	08 04	08 45	09 29	10 16	
10	332 44.0 59.6	84 00.5 12.3	18 14.2	1.2	54.2	40	18 06	18 33	19 06	07 54	08 35	09 18	10 05	
11	347 44.2 60.5	98 31.8 12.4	18 15.4	1.1	54.2	45	18 09	18 39	19 14	07 44	08 22	09 05	09 52	
12	2 44.4 S 4 01.5	113 03.2 12.3	N18 16.5	1.0	54.2	S 50	18 12	18 45	19 24	07 30	08 07	08 49	09 35	
13	17 44.6 02.5	127 34.5 12.4	18 17.5	1.0	54.2	52	18 14	18 48	19 29	07 24	08 00	08 41	09 28	
14	32 44.8 03.4	142 05.9 12.3	18 18.5	0.8	54.2	54	18 16	18 52	19 35	07 18	07 52	08 33	09 19	
15	47 44.9 04.4	156 37.2 12.3	18 19.3	0.8	54.2	56	18 18	18 55	19 41	07 10	07 44	08 23	09 10	
16	62 45.1 05.4	171 08.5 12.4	18 20.1	0.7	54.2	58	18 20	19 00	19 49	07 02	07 34	08 13	08 59	
17	77 45.3 06.3	185 39.9 12.3	18 20.8	0.6	54.2	S 60	18 22	19 05	19 57	06 52	07 23	08 00	08 46	
18	92 45.5 S 4 07.3	200 11.2 12.3	N18 21.4	0.5	54.2									
19	107 45.7 08.3	214 42.5 12.4	18 21.9	0.4	54.2									
20	122 45.9 09.2	229 13.9 12.3	18 22.3	0.4	54.2									
21	137 46.1 10.2	243 45.2 12.3	18 22.7	0.3	54.2									
22	152 46.3 11.1	258 16.5 12.3	18 23.0	0.1	54.2									
23	167 46.5 12.1	272 47.8 12.3	18 23.1	0.1	54.2									
	S.D. 16.0 d 1.0	S.D. 14.9	14.8	14.8		Día	SOL E.T. (+) 00 ^h 12 ^h		Pas. Mer.	LUNA Pas. Sup. Mer. Inf.		Edad.	Fase	

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna						
	A.H.G.		Dec.	v	A.H.G.		Dec.	d		P.H.	Náut.		Civil	4	5	6	7		
	h	m			h	m												h	m
4 00	182	46.7	S 4	13.1	287	19.1	12.3	N18	23.2	0.0	54.2	N 72	04 08	05 29	06 36	□	19 33	21 21	23 06
01	197	46.9		14.0	301	50.4	12.4	18	23.2	0.0	54.2	N 70	04 18	05 30	06 31	19 13	20 29	21 56	23 29
02	212	47.1		15.0	316	21.8	12.3	18	23.2	0.2	54.2	68	04 25	05 31	06 26	19 54	21 02	22 20	23 46
03	227	47.3	..	16.0	330	53.1	12.3	18	23.0	0.2	54.2	66	04 32	05 32	06 23	20 22	21 26	22 39	24 00
04	242	47.5		16.9	345	24.4	12.3	18	22.8	0.4	54.2	64	04 37	05 32	06 20	20 43	21 45	22 55	24 11
05	257	47.6		17.9	359	55.7	12.3	18	22.4	0.4	54.2	62	04 41	05 33	06 17	21 00	22 00	23 07	24 21
06	272	47.8	S 4	18.9	14	27.0	12.3	N18	22.0	0.5	54.2	60	04 45	05 33	06 15	21 14	22 13	23 18	24 29
07	287	48.0		19.8	28	58.3	12.3	18	21.5	0.5	54.2	N 58	04 48	05 33	06 12	21 27	22 24	23 27	24 36
08	302	48.2		20.8	43	29.6	12.3	18	21.0	0.7	54.2	56	04 50	05 33	06 11	21 37	22 33	23 36	24 43
M 09	317	48.4	..	21.8	58	00.9	12.3	18	20.3	0.7	54.2	54	04 52	05 34	06 09	21 46	22 42	23 43	24 48
A 10	332	48.6		22.7	72	32.2	12.3	18	19.6	0.9	54.2	52	04 54	05 34	06 07	21 55	22 50	23 49	24 53
R 11	347	48.8		23.7	87	03.5	12.3	18	18.7	0.9	54.3	50	04 56	05 34	06 06	22 02	22 56	23 55	24 58
T 12	2 49.0	S 4	24.7	101	34.8	12.3	N18	17.8	1.0	54.3	45	04 59	05 33	06 03	22 18	23 11	24 08	00 08	
E 13	17 49.2		25.6	116	06.1	12.3	18	16.8	1.1	54.3	N 40	05 02	05 33	06 00	22 31	23 23	24 18	00 18	
S 14	32 49.4		26.6	130	37.4	12.2	18	15.7	1.2	54.3	35	05 03	05 32	05 58	22 42	23 33	24 27	00 27	
15	47 49.6	..	27.5	145	08.6	12.3	18	14.5	1.2	54.3	30	05 04	05 32	05 56	22 52	23 42	24 35	00 35	
16	62 49.7		28.5	159	39.9	12.3	18	13.3	1.4	54.3	20	05 04	05 30	05 52	23 08	23 58	24 48	00 48	
17	77 49.9		29.5	174	11.2	12.3	18	11.9	1.4	54.3	N 10	05 03	05 27	05 48	23 23	24 11	00 11	01 00	
18	92 50.1	S 4	30.4	188	42.5	12.3	N18	10.5	1.5	54.3	0	05 00	05 24	05 45	23 36	24 24	00 24	01 11	
19	107 50.3		31.4	203	13.8	12.3	18	09.0	1.6	54.3	S 10	04 56	05 21	05 42	23 50	24 36	00 36	01 22	
20	122 50.5		32.4	217	45.1	12.3	18	07.4	1.7	54.3	20	04 50	05 16	05 38	24 04	00 04	00 50	01 34	
21	137 50.7	..	33.3	232	16.4	12.3	18	05.7	1.7	54.3	30	04 42	05 10	05 34	24 21	00 21	01 05	01 47	
22	152 50.9		34.3	246	47.7	12.3	18	04.0	1.9	54.3	35	04 36	05 06	05 31	24 31	00 31	01 14	01 55	
23	167 51.1		35.2	261	19.0	12.3	18	02.1	1.9	54.4	40	04 29	05 01	05 28	24 42	00 42	01 24	02 04	
5 00	182 51.3	S 4	36.2	275	50.3	12.3	N18	00.2	2.0	54.4	45	04 20	04 55	05 25	00 09	00 55	01 36	02 14	
01	197 51.5		37.2	290	21.6	12.3	17	58.2	2.1	54.4	S 50	04 09	04 48	05 21	00 26	01 10	01 51	02 26	
02	212 51.6		38.1	304	52.9	12.2	17	56.1	2.2	54.4	52	04 03	04 45	05 19	00 33	01 18	01 57	02 32	
03	227 51.8	..	39.1	319	24.1	12.3	17	53.9	2.2	54.4	54	03 57	04 41	05 17	00 42	01 26	02 05	02 38	
04	242 52.0		40.1	333	55.4	12.3	17	51.7	2.4	54.4	56	03 50	04 37	05 15	00 51	01 35	02 13	02 45	
05	257 52.2		41.0	348	26.7	12.3	17	49.3	2.4	54.4	58	03 42	04 32	05 12	01 02	01 46	02 22	02 53	
06	272 52.4	S 4	42.0	2	58.0	12.3	N17	46.9	2.5	54.4	S 60	03 33	04 26	05 09	01 15	01 58	02 33	03 02	
07	287 52.6		42.9	17	29.3	12.3	17	44.4	2.6	54.4									
M 08	302 52.8		43.9	32	00.6	12.3	17	41.8	2.7	54.5	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
09	317 53.0	..	44.9	46	31.9	12.3	17	39.1	2.8	54.5			Civil	Náut.	4	5	6	7	
A 10	332 53.1		45.8	61	03.2	12.3	17	36.3	2.8	54.5					h m	h m	h m	h m	
R 11	347 53.3		46.8	75	34.5	12.3	17	33.5	2.9	54.5	N 72	16 59	18 06	19 25	□	16 56	16 47	16 41	
T 12	2 53.5	S 4	47.8	90	05.8	12.3	N17	30.6	3.0	54.5	N 70	17 04	18 05	19 16	15 37	16 00	16 12	16 17	
E 13	17 53.7		48.7	104	37.1	12.3	17	27.6	3.1	54.5	68	17 09	18 04	19 09	14 56	15 27	15 46	15 59	
S 14	32 53.9		49.7	119	08.4	12.3	17	24.5	3.2	54.5	66	17 13	18 03	19 03	14 28	15 02	15 27	15 44	
15	47 54.1	..	50.6	133	39.7	12.3	17	21.3	3.3	54.5	64	17 16	18 03	18 58	14 07	14 43	15 11	15 32	
16	62 54.3		51.6	148	11.0	12.3	17	18.0	3.3	54.6	62	17 19	18 03	18 54	13 50	14 28	14 58	15 22	
17	77 54.4		52.6	162	42.3	12.3	17	14.7	3.4	54.6	60	17 21	18 02	18 51	13 35	14 14	14 46	15 13	
18	92 54.6	S 4	53.5	177	13.6	12.3	N17	11.3	3.5	54.6	N 58	17 23	18 02	18 48	13 23	14 03	14 37	15 05	
19	107 54.8		54.5	191	44.9	12.3	17	07.8	3.6	54.6	56	17 25	18 02	18 45	13 12	13 53	14 28	14 58	
20	122 55.0		55.4	206	16.2	12.4	17	04.2	3.7	54.6	54	17 27	18 02	18 43	13 03	13 45	14 20	14 52	
21	137 55.2	..	56.4	220	47.6	12.3	17	00.5	3.7	54.6	52	17 29	18 02	18 41	12 55	13 37	14 14	14 46	
22	152 55.4		57.4	235	18.9	12.3	16	56.8	3.8	54.7	50	17 30	18 02	18 40	12 47	13 30	14 07	14 41	
23	167 55.6		58.3	249	50.2	12.3	16	53.0	4.0	54.7	45	17 34	18 03	18 37	12 31	13 15	13 54	14 30	
6 00	182 55.7	S 4	59.3	264	21.5	12.3	N16	49.0	3.9	54.7	N 40	17 36	18 03	18 35	12 18	13 02	13 43	14 21	
01	197 55.9	5	00.2	278	52.8	12.3	16	45.1	4.1	54.7	35	17 39	18 04	18 33	12 07	12 52	13 34	14 13	
02	212 56.1		01.2	293	24.1	12.4	16	41.0	4.2	54.7	30	17 41	18 05	18 33	11 57	12 42	13 25	14 06	
03	227 56.3	..	02.2	307	55.5	12.3	16	36.8	4.2	54.7	20	17 45	18 07	18 32	11 40	12 26	13 11	13 54	
04	242 56.5		03.1	322	26.8	12.3	16	32.6	4.3	54.8	N 10	17 48	18 09	18 34	11 26	12 12	12 58	13 44	
05	257 56.7		04.1	336	58.1	12.3	16	28.3	4.4	54.8	0	17 52	18 12	18 37	11 12	11 59	12 47	13 34	
06	272 56.8	S 5	05.0	351	29.4	12.3	N16	23.9	4.5	54.8	S 10	17 55	18 16	18 41	10 58	11 46	12 35	13 24	
07	287 57.0		06.0	6	00.7	12.4	16	19.4	4.5	54.8	20	17 59	18 21	18 47	10 43	11 32	12 22	13 13	
08	302 57.2		07.0	20	32.1	12.3	16	14.9	4.6	54.8	30	18 04	18 28	18 56	10 26	11 16	12 07	13 01	
J 09	317 57.4	..	07.9	35	03.4	12.3	16	10.3	4.7	54.9	35	18 06	18 32	19 02	10 16	11 06	11 59	12 54	
U 10	332 57.6		08.9	49	34.7	12.3	16	05.6	4.8	54.9	40	18 09	18 37	19 09	10 05	10 55	11 49	12 46	
E 11	347 57.8		09.8	64	06.0	12.4	16	00.8	4.9	54.9	45	18 13	18 43	19 18	09 52	10 43	11 38	12 36	
V 12	2 57.9	S 5	10.8	78	37.4	12.3	N15	55.9	4.9	54.9	S 50	18 17	18 50	19 29	09 35	10 27	11 24	12 25	
E 13	17 58.1		11.8	93	08.7														

T. M. G.	ARIES		VENUS -3.4		MARTE +0.7		JUPITER -2.0		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
7 ^h 00	15 31.6	206 25.9 N	6 08.4	263 07.1 N22	37.5	279 23.8 N22	56.9	226 00.2 N13	35.8	Acamar	315 38.4	S40 23.5	
01	30 34.0	221 25.5	07.3	278 08.1	37.3	294 26.1	56.9	241 02.4	35.7	Achernar	335 46.3	S57 20.9	
02	45 36.5	236 25.1	06.1	293 09.2	37.2	309 28.4	56.9	256 04.6	35.6	Acrux	173 40.0	S62 58.5	
03	60 39.0	251 24.7	05.0	308 10.3	37.0	324 30.7	56.9	271 06.9	35.5	Adhara	255 33.7	S28 56.3	
04	75 41.4	266 24.3	03.8	323 11.3	36.9	339 33.0	56.9	286 09.1	35.4	Aldebaran	291 20.1	N16 27.9	
05	90 43.9	281 23.9	02.7	338 12.4	36.8	354 35.4	56.9	301 11.3	35.4				
06	105 46.4	296 23.4 N	6 01.5	353 13.5 N22	36.6	9 37.7 N22	56.9	316 13.5 N13	35.3	Alioth	166 44.9	N56 04.9	
07	120 48.8	311 23.0	6 00.4	8 14.6	36.5	24 40.0	56.9	331 15.7	35.2	Alkaid	153 20.6	N49 25.6	
08	135 51.3	326 22.6	5 59.2	23 15.6	36.4	39 42.3	56.9	346 18.0	35.1	Al Na'ir	28 17.2	S47 04.1	
V 09	150 53.8	341 22.2	5 58.1	38 16.7	36.2	54 44.6	56.9	1 20.2	35.0	Alnilam	276 13.6	S 1 12.9	
I 10	165 56.2	356 21.8	56.9	53 17.8	36.1	69 46.9	56.9	16 22.4	35.0	Alphard	218 22.7	S 8 33.6	
E 11	180 58.7	11 21.4	55.8	68 18.9	35.9	84 49.2	56.9	31 24.6	34.9				
N 12	196 01.1	26 21.0 N	5 54.6	83 19.9 N22	35.8	99 51.6 N22	56.8	46 26.8 N13	34.8	Alphecca	126 34.1	N26 47.6	
13	211 03.6	41 20.6	53.5	98 21.0	35.7	114 53.9	56.8	61 29.0	34.7	Alpheratz	358 11.0	N28 58.2	
14	226 06.1	56 20.2	52.3	113 22.1	35.5	129 56.2	56.8	76 31.3	34.6	Altair	62 34.4	N 8 48.8	
S 15	241 08.5	71 19.8	51.2	128 23.2	35.4	144 58.5	56.8	91 33.5	34.6	Ankaa	353 41.8	S42 25.5	
16	256 11.0	86 19.4	50.0	143 24.2	35.3	160 00.8	56.8	106 35.7	34.5	Antares	112 59.5	S26 22.9	
17	271 13.5	101 19.0	48.9	158 25.3	35.1	175 03.1	56.8	121 37.9	34.4				
18	286 15.9	116 18.6 N	5 47.7	173 26.4 N22	35.0	190 05.4 N22	56.8	136 40.1 N13	34.3	Arcturus	146 20.6	N19 18.1	
19	301 18.4	131 18.2	46.6	188 27.5	34.8	205 07.8	56.8	151 42.4	34.2	Atria	108 25.8	S68 59.4	
20	316 20.9	146 17.8	45.4	203 28.5	34.7	220 10.1	56.8	166 44.6	34.2	Avior	234 29.2	S59 26.1	
21	331 23.3	161 17.4	44.3	218 29.6	34.6	235 12.4	56.8	181 46.8	34.1	Bellatrix	279 00.7	N 6 19.8	
22	346 25.8	176 17.0	43.1	233 30.7	34.4	250 14.7	56.8	196 49.0	34.0	Betelgeuse	271 30.3	N 7 24.2	
23	1 28.3	191 16.6	41.9	248 31.8	34.3	265 17.0	56.8	211 51.2	33.9				
8 ^h 00	16 30.7	206 16.2 N	5 40.8	263 32.9 N22	34.1	280 19.4 N22	56.8	226 53.5 N13	33.9	Canopus	264 08.0	S52 40.8	
01	31 33.2	221 15.8	39.6	278 33.9	34.0	295 21.7	56.8	241 55.7	33.8	Capella	281 14.0	N45 58.4	
02	46 35.6	236 15.4	38.5	293 35.0	33.9	310 24.0	56.8	256 57.9	33.7	Deneb	49 49.6	N45 12.4	
03	61 38.1	251 15.0	37.3	308 36.1	33.7	325 26.3	56.8	272 00.1	33.6	Denebola	183 01.4	N14 41.8	
04	76 40.6	266 14.6	36.2	323 37.2	33.6	340 28.6	56.8	287 02.3	33.5	Diphda	349 22.6	S18 06.4	
05	91 43.0	281 14.2	35.0	338 38.3	33.4	355 31.0	56.8	302 04.6	33.5				
06	106 45.5	296 13.8 N	5 33.9	353 39.4 N22	33.3	10 33.3 N22	56.8	317 06.8 N13	33.4	Dubhe	194 25.3	N61 52.1	
07	121 48.0	311 13.4	32.7	8 40.4	33.2	25 35.6	56.8	332 09.0	33.3	Elnath	278 46.5	N28 35.2	
08	136 50.4	326 13.0	31.5	23 41.5	33.0	40 37.9	56.8	347 11.2	33.2	Eltanin	90 58.8	N51 29.9	
S 09	151 52.9	341 12.6	30.4	38 42.6	32.9	55 40.2	56.8	2 13.4	33.1	Enif	34 13.3	N 9 46.6	
A 10	166 55.4	356 12.2	29.2	53 43.7	32.7	70 42.6	56.8	17 15.7	33.1	Fomalhaut	15 53.3	S29 44.3	
B 11	181 57.8	11 11.8	28.1	68 44.8	32.6	85 44.9	56.8	32 17.9	33.0				
A 12	197 00.3	26 11.4 N	5 26.9	83 45.9 N22	32.5	100 47.2 N22	56.8	47 20.1 N13	32.9	Gacrux	172 31.4	S56 59.2	
D 13	212 02.8	41 11.0	25.8	98 47.0	32.3	115 49.5	56.8	62 22.3	32.8	Gienah	176 20.3	S17 25.0	
14	227 05.2	56 10.6	24.6	113 48.1	32.2	130 51.9	56.8	77 24.6	32.7	Hadar	149 26.7	S60 15.9	
O 15	242 07.7	71 10.2	23.4	128 49.1	32.0	145 54.2	56.8	92 26.8	32.7	Hamal	328 30.8	N23 21.5	
16	257 10.1	86 09.8	22.3	143 50.2	31.9	160 56.5	56.8	107 29.0	32.6	Kaus Aust.	84 19.6	S34 23.7	
17	272 12.6	101 09.4	21.1	158 51.3	31.8	175 58.8	56.8	122 31.2	32.5				
18	287 15.1	116 09.0 N	5 20.0	173 52.4 N22	31.6	191 01.2 N22	56.7	137 33.4 N13	32.4	Kochab	137 20.1	N74 15.0	
19	302 17.5	131 08.6	18.8	188 53.5	31.5	206 03.5	56.7	152 35.7	32.4	Markab	14 04.9	N15 05.4	
20	317 20.0	146 08.2	17.6	203 54.6	31.3	221 05.8	56.7	167 37.9	32.3	Menkar	314 42.9	N 4 00.2	
21	332 22.5	161 07.8	16.5	218 55.7	31.2	236 08.1	56.7	182 40.1	32.2	Menkent	148 39.7	S36 15.6	
22	347 24.9	176 07.4	15.3	233 56.8	31.0	251 10.5	56.7	197 42.3	32.1	Miaplacidus	221 45.7	S69 37.3	
23	2 27.4	191 07.0	14.2	248 57.9	30.9	266 12.8	56.7	212 44.6	32.0				
9 ^h 00	17 29.9	206 06.6 N	5 13.0	263 59.0 N22	30.8	281 15.1 N22	56.7	227 46.8 N13	32.0	Mirfak	309 18.5	N49 46.9	
01	32 32.3	221 06.2	11.8	279 00.0	30.6	296 17.4	56.7	242 49.0	31.9	Nunki	76 31.7	S26 19.4	
02	47 34.8	236 05.8	10.7	294 01.1	30.5	311 19.8	56.7	257 51.2	31.8	Peacock	54 01.4	S56 48.5	
03	62 37.2	251 05.4	09.5	309 02.2	30.3	326 22.1	56.7	272 53.4	31.7	Pollux	244 00.7	N28 04.7	
04	77 39.7	266 05.0	08.3	324 03.3	30.2	341 24.4	56.7	287 55.7	31.6	Procyon	245 27.9	N 5 16.9	
05	92 42.2	281 04.6	07.2	339 04.4	30.0	356 26.8	56.7	302 57.9	31.6				
06	107 44.6	296 04.2 N	5 06.0	354 05.5 N22	29.9	11 29.1 N22	56.7	318 00.1 N13	31.5	Rasalhague	96 31.6	N12 34.8	
07	122 47.1	311 03.8	04.9	9 06.6	29.8	26 31.4	56.7	333 02.3	31.4	Regulus	208 12.4	N12 04.6	
08	137 49.6	326 03.4	03.7	24 07.7	29.6	41 33.7	56.7	348 04.6	31.3	Rigel	281 37.8	S 8 13.5	
O 09	152 52.0	341 03.0	02.5	39 08.8	29.5	56 36.1	56.7	3 06.8	31.3	Rigil Kent.	140 29.0	S60 44.6	
M 10	167 54.5	356 02.6	01.4	54 09.9	29.3	71 38.4	56.7	18 09.0	31.2	Sabik	102 43.6	S15 41.7	
I 11	182 57.0	11 02.2	5 00.2	69 11.0	29.2	86 40.7	56.7	33 11.2	31.1				
N 12	197 59.4	26 01.8 N	4 59.0	84 12.1 N22	29.0	101 43.1 N22	56.7	48 13.5 N13	31.0	Schedar	350 10.6	N56 25.0	
13	213 01.9	41 01.4	57.9	99 13.2	28.9	116 45.4	56.7	63 15.7	30.9	Shaula	96 58.6	S37 05.3	
O 14	228 04.4	56 01.0	56.7	114 14.3	28.8	131 47.7	56.7	78 17.9	30.9	Sirius	258 57.4	S16 41.0	
15	243 06.8	71 00.6	55.5	129 15.4	28.6	146 50.1	56.7	93 20.1	30.8	Spica	159 00.0	S11 02.6	
16	258 09.3	86 00.2	54.4	144 16.5	28.5	161 52.4	56.7	108 22.4	30.7	Suhail	223 12.4	S43 20.4	
17	273 11.7	100 59.8	53.2	159 17.6	28.3	176 54.7	56.7	123 24.6	30.6				
18	288 14.2	115 59.4 N	4 52.0	174 18.7 N22	28.2	191 57.1 N22	56.7	138 26.8 N13	30.6	Vega	80 57.2	N38 46.2	
19	303 16.7	130 59.0	50.9	189 19.8	28.0	206 59.4	56.7	153 29.0	30.5	Zuben'ubi	137 35.5	S15 56.8	
20	318 19.1	145 58.6	49.7	204 20.9	27.9	222 01.7	56.7	168 31.3	30.4				
21	333 21.6	160 58.2	48.5	219 22.0	27.8	237 04.1	56.7	183 33.5	30.3				
22	348 24.1	175 57.8	47.4	234 23.1	27.6	252 06.4	56.7	198 35.7	30.2	Venus	189 45.5	h 15	
23	3 26.5	190 57.4	46.2	249 24.2	27.5	267 08.7	56.7	213 37.9	30.2	Marte	247 02.1	6 25	
										Júpiter	263 48.6	5 18	
										Saturno	210 22.7	8 51	
Pas. Mer.	22 50.2	v -0.4	d 1.2	v 1.1	d 0.1	v 2.3	d 0.0	v 2.2	d 0.1				

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	P.H.	A.H.G.	v	Dec.		Naut.	Civil		7		8		9		10	
											h	m	h	m	h	m	h	m
7 00	183 00.1 S	5 22.3	252 53.3 12.3	N14 51.5	5.9	55.2	N 72	04 23	05 42	06 50	23 06	24 51	00 51	02 37				
01	198 00.3	23.3	267 24.6 12.4	14 45.6	5.9	55.2	N 70	04 30	05 42	06 43	23 29	25 05	01 05	02 44				
02	213 00.5	24.2	281 56.0 12.3	14 39.7	6.0	55.2	68	04 37	05 41	06 37	23 46	25 16	01 16	02 49				
03	228 00.7	25.2	296 27.3 12.3	14 33.7	6.1	55.3	66	04 42	05 41	06 33	24 00	00 00	01 25	02 53				
04	243 00.8	26.1	310 58.6 12.4	14 27.6	6.2	55.3	64	04 46	05 41	06 28	24 11	00 11	01 32	02 57				
05	258 01.0	27.1	325 30.0 12.3	14 21.4	6.2	55.3	62	04 49	05 40	06 25	24 21	00 21	01 39	03 00				
06	273 01.2 S	5 28.1	340 01.3 12.3	N14 15.2	6.3	55.3	60	04 52	05 40	06 22	24 29	00 29	01 44	03 03				
07	288 01.4	29.0	354 32.6 12.3	14 08.9	6.4	55.4	N 58	04 54	05 40	06 19	24 36	00 36	01 49	03 05				
08	303 01.6	30.0	9 03.9 12.3	14 02.5	6.5	55.4	56	04 56	05 39	06 17	24 43	00 43	01 53	03 08				
V 09	318 01.7	30.9	23 35.2 12.4	13 56.0	6.5	55.4	54	04 58	05 39	06 14	24 48	00 48	01 57	03 09				
I 10	333 01.9	31.9	38 06.6 12.3	13 49.5	6.6	55.4	52	04 59	05 39	06 12	24 53	00 53	02 01	03 11				
E 11	348 02.1	32.8	52 37.9 12.3	13 42.9	6.7	55.5	50	05 01	05 38	06 10	24 58	00 58	02 04	03 13				
R 12	3 02.3 S	5 33.8	67 09.2 12.3	N13 36.2	6.7	55.5	45	05 03	05 37	06 06	00 08	01 08	02 11	03 16				
N 13	18 02.4	34.7	81 40.5 12.3	13 29.5	6.8	55.5	N 40	05 05	05 36	06 03	00 18	01 16	02 17	03 19				
E 14	33 02.6	35.7	96 11.8 12.3	13 22.7	6.9	55.5	35	05 05	05 35	06 00	00 27	01 23	02 22	03 22				
S 15	48 02.8	36.7	110 43.1 12.3	13 15.8	7.0	55.6	30	05 06	05 33	05 57	00 35	01 30	02 26	03 24				
16	63 03.0	37.6	125 14.4 12.3	13 08.8	7.0	55.6	20	05 05	05 31	05 53	00 48	01 40	02 34	03 28				
17	78 03.2	38.6	139 45.7 12.3	13 01.8	7.1	55.6	N 10	05 03	05 27	05 48	01 00	01 50	02 40	03 31				
18	93 03.3 S	5 39.5	154 17.0 12.3	N12 54.7	7.1	55.7	0	04 59	05 24	05 44	01 11	01 59	02 46	03 35				
19	108 03.5	40.5	168 48.3 12.3	12 47.6	7.3	55.7	S 10	04 54	05 19	05 40	01 22	02 07	02 53	03 38				
20	123 03.7	41.4	183 19.6 12.2	12 40.3	7.3	55.7	20	04 47	05 13	05 36	01 34	02 17	02 59	03 41				
21	138 03.9	42.4	197 50.8 12.3	12 33.0	7.3	55.7	30	04 38	05 06	05 30	01 47	02 27	03 07	03 45				
22	153 04.0	43.3	212 22.1 12.3	12 25.7	7.5	55.8	35	04 31	05 02	05 27	01 55	02 34	03 11	03 48				
23	168 04.2	44.3	226 53.4 12.3	12 18.2	7.5	55.8	40	04 24	04 56	05 24	02 04	02 41	03 16	03 50				
8 00	183 04.4 S	5 45.3	241 24.7 12.2	N12 10.7	7.5	55.8	45	04 14	04 50	05 19	02 14	02 49	03 21	03 53				
01	198 04.6	46.2	255 55.9 12.3	12 03.2	7.7	55.9	S 50	04 02	04 41	05 14	02 26	02 58	03 28	03 57				
02	213 04.7	47.2	270 27.2 12.2	11 55.5	7.7	55.9	52	03 56	04 38	05 12	02 32	03 03	03 31	03 58				
03	228 04.9	48.1	284 58.4 12.3	11 47.8	7.8	55.9	54	03 49	04 33	05 10	02 38	03 08	03 35	04 00				
04	243 05.1	49.1	299 29.7 12.2	11 40.0	7.8	56.0	56	03 41	04 28	05 07	02 45	03 13	03 38	04 02				
05	258 05.3	50.0	314 00.9 12.2	11 32.2	7.9	56.0	58	03 32	04 23	05 04	02 53	03 19	03 43	04 04				
06	273 05.4 S	5 51.0	328 32.1 12.2	N11 24.3	8.0	56.0	S 60	03 22	04 17	05 00	03 02	03 26	03 47	04 06				
07	288 05.6	51.9	343 03.3 12.2	11 16.3	8.0	56.0	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna							
08	303 05.8	52.9	357 34.5 12.2	11 08.3	8.1	56.1	7	8	9	10								
S 09	318 06.0	53.9	12 05.7 12.2	11 00.2	8.1	56.1	N 72	16 43	17 51	19 09	16 41	16 35	16 30	16 25				
A 10	333 06.1	54.8	26 36.9 12.2	10 52.1	8.2	56.1	N 70	16 50	17 51	19 02	16 17	16 20	16 21	16 22				
A 11	348 06.3	55.8	41 08.1 12.2	10 43.9	8.3	56.2	68	16 56	17 52	18 56	15 59	16 08	16 14	16 20				
D 12	3 06.5 S	5 56.7	55 39.3 12.2	N10 35.6	8.4	56.2	66	17 01	17 52	18 52	15 44	15 57	16 08	16 18				
O 13	18 06.7	57.7	70 10.5 12.1	10 27.2	8.4	56.2	64	17 05	17 53	18 48	15 32	15 49	16 03	16 16				
14	33 06.8	58.6	84 41.6 12.2	10 18.8	8.4	56.3	62	17 09	17 53	18 44	15 22	15 41	15 59	16 15				
15	48 07.0	59.6	99 12.8 12.1	10 10.4	8.5	56.3	60	17 12	17 54	18 42	15 13	15 35	15 55	16 13				
16	63 07.2	60.5	113 43.9 12.2	10 01.9	8.6	56.3	N 58	17 15	17 54	18 39	15 05	15 29	15 51	16 12				
17	78 07.4	61.5	128 15.1 12.1	9 53.3	8.7	56.4	56	17 18	17 55	18 38	14 58	15 24	15 48	16 11				
18	93 07.5 S	6 02.4	142 46.2 12.1	N 9 44.6	8.6	56.4	54	17 20	17 55	18 36	14 52	15 20	15 46	16 10				
19	108 07.7	63.4	157 17.3 12.1	9 36.0	8.8	56.4	52	17 22	17 56	18 35	14 46	15 16	15 43	16 10				
20	123 07.9	64.3	171 48.4 12.1	9 27.2	8.8	56.5	50	17 24	17 56	18 33	14 41	15 12	15 41	16 09				
21	138 08.0	65.3	186 19.5 12.0	9 18.4	8.9	56.5	45	17 28	17 57	18 31	14 30	15 04	15 36	16 07				
22	153 08.2	66.2	200 50.5 12.1	9 09.5	8.9	56.5	N 40	17 32	17 59	18 30	14 21	14 57	15 32	16 06				
23	168 08.4	67.2	215 21.6 12.0	9 00.6	9.0	56.6	35	17 35	18 00	18 29	14 13	14 51	15 28	16 04				
9 00	183 08.6 S	6 08.1	229 52.6 12.1	N 8 51.6	9.0	56.6	30	17 37	18 01	18 29	14 06	14 46	15 25	16 03				
01	198 08.7	09.1	244 23.7 12.0	8 42.6	9.1	56.6	20	17 42	18 04	18 30	13 54	14 37	15 19	16 01				
02	213 08.9	10.0	258 54.7 12.0	8 33.5	9.2	56.7	N 10	17 47	18 08	18 32	13 44	14 29	15 14	16 00				
03	228 09.1	11.0	273 25.7 12.0	8 24.3	9.2	56.7	0	17 51	18 12	18 36	13 34	14 21	15 09	15 58				
04	243 09.2	12.0	287 56.7 11.9	8 15.1	9.2	56.7	S 10	17 55	18 16	18 41	13 24	14 14	15 05	15 57				
05	258 09.4	12.9	302 27.6 12.0	8 05.9	9.3	56.8	20	18 00	18 22	18 48	13 13	14 06	14 59	15 55				
06	273 09.6 S	6 13.9	316 58.6 11.9	N 7 56.6	9.4	56.8	30	18 05	18 30	18 58	13 01	13 56	14 54	15 53				
07	288 09.8	14.8	331 29.5 12.0	7 47.2	9.4	56.8	35	18 09	18 34	19 04	12 54	13 51	14 50	15 51				
D 08	303 09.9	15.8	346 00.5 11.9	7 37.8	9.4	56.9	40	18 12	18 40	19 12	12 46	13 45	14 46	15 50				
O 09	318 10.1	16.7	0 31.4 11.8	7 28.4	9.5	56.9	45	18 17	18 47	19 22	12 36	13 38	14 42	15 49				
I 10	333 10.3	17.7	15 02.2 11.9	7 18.9	9.6	56.9	S 50	18 22	18 55	19 35	12 25	13 29	14 36	15 47				
N 11	348 10.4	18.6	29 33.1 11.9	7 09.3	9.6	57.0	52	18 24	18 59	19 41	12 19	13 25	14 34	15 46				
12	3 10.6 S	6 19.6	44 04.0 11.8	N 6 59.7	9.6	57.0	54	18 27	19 03	19 48	12 13	13 21	14 31	15 45				
13	18 10.8	20.5	58 34.8 11.8	6 50.1	9.7	57.0	56	18 30	19 08	19 56	12 07	13 16	14 28	15 44				
14	33 10.9	21.5	73 05.6 11.8	6 40.4	9.8	57.1	58	18 33	19 14	20 05	11 59	13 10	14 25	15 42				
15	48 11.1	22.4	87 36.4 11.8	6 30.6	9.7	57.1	S 60	18 37	19 20	20 16	11 51	13 04	14 21	15 41				
16	63 11.3	23.4	102 07.2 11.7	6 20.9	9.9	57.1	Día	SOL E.T. (+)		Pas. Mer.	LUNA							
17	78 11.5	24.3	116 37															

T. M. G.	ARIES			VENUS -3.4			MARTE +0.7			JUPITER -2.0			SATURNO +0.8			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
L U N E S	10 ^h 00	18 29.0	205 57.0 N 4	45.0	264 25.3 N22	27.3	282 11.1 N22	56.7		228 40.2 N13	30.1		Acamar	315 38.4	S40	23.5		
	01	33 31.5	220 56.6	43.8	279 26.4	27.2	297 13.4	56.7		243 42.4	30.0		Achernar	335 46.2	S57	20.9		
	02	48 33.9	235 56.2	42.7	294 27.5	27.0	312 15.7	56.7		258 44.6	29.9		Acrux	173 40.0	S62	58.5		
	03	63 36.4	250 55.8	41.5	309 28.6	26.9	327 18.1	56.7		273 46.8	29.9		Adhara	255 33.6	S28	56.3		
	04	78 38.9	265 55.4	40.3	324 29.7	26.7	342 20.4	56.7		288 49.1	29.8		Aldebaran	291 20.1	N16	27.9		
	05	93 41.3	280 55.0	39.2	339 30.8	26.6	357 22.8	56.7		303 51.3	29.7							
	06	108 43.8	295 54.6 N 4	38.0	354 32.0 N22	26.5	12 25.1 N22	56.7		318 53.5 N13	29.6		Alioth	166 44.9	N56	04.9		
	07	123 46.2	310 54.2	36.8	9 33.1	26.3	27 27.4	56.7		333 55.7	29.5		Alkaid	153 20.6	N49	25.6		
	08	138 48.7	325 53.8	35.6	24 34.2	26.2	42 29.8	56.6		348 58.0	29.5		Al Na'ir	28 17.2	S47	04.2		
	09	153 51.2	340 53.5	34.5	39 35.3	26.0	57 32.1	56.6		4 00.2	29.4		Alnilam	276 13.5	S 1	12.9		
	10	168 53.6	355 53.1	33.3	54 36.4	25.9	72 34.5	56.6		19 02.4	29.3		Alphard	218 22.7	S 8	33.6		
	11	183 56.1	10 52.7	32.1	69 37.5	25.7	87 36.8	56.6		34 04.6	29.2							
	12	198 58.6	25 52.3 N 4	31.0	84 38.6 N22	25.6	102 39.1 N22	56.6		49 06.9 N13	29.2		Alphecca	126 34.1	N26	47.6		
	13	214 01.0	40 51.9	29.8	99 39.7	25.4	117 41.5	56.6		64 09.1	29.1		Alpheratz	358 11.0	N28	58.2		
	14	229 03.5	55 51.5	28.6	114 40.8	25.3	132 43.8	56.6		79 11.3	29.0		Altair	62 34.4	N 8	48.8		
	15	244 06.0	70 51.1	27.4	129 41.9	25.1	147 46.2	56.6		94 13.5	28.9		Ankaa	353 41.8	S42	25.5		
	16	259 08.4	85 50.7	26.3	144 43.0	25.0	162 48.5	56.6		109 15.8	28.8		Antares	112 59.5	S26	22.9		
	17	274 10.9	100 50.3	25.1	159 44.2	24.9	177 50.8	56.6		124 18.0	28.8							
	18	289 13.3	115 49.9 N 4	23.9	174 45.3 N22	24.7	192 53.2 N22	56.6		139 20.2 N13	28.7		Arcturus	146 20.6	N19	18.1		
	19	304 15.8	130 49.5	22.7	189 46.4	24.6	207 55.5	56.6		154 22.5	28.6		Atria	108 25.8	S68	59.4		
	20	319 18.3	145 49.1	21.6	204 47.5	24.4	222 57.9	56.6		169 24.7	28.5		Avior	234 29.1	S59	26.1		
	21	334 20.7	160 48.7	20.4	219 48.6	24.3	238 00.2	56.6		184 26.9	28.5		Bellatrix	279 00.7	N 6	19.8		
	22	349 23.2	175 48.3	19.2	234 49.7	24.1	253 02.6	56.6		199 29.1	28.4		Betelgeuse	271 30.3	N 7	24.2		
23	4 25.7	190 47.9	18.0	249 50.8	24.0	268 04.9	56.6		214 31.4	28.3								
M A R T E S	11 00	19 28.1	205 47.5 N 4	16.9	264 52.0 N22	23.8	283 07.3 N22	56.6		229 33.6 N13	28.2		Canopus	264 08.0	S52	40.8		
	01	34 30.6	220 47.1	15.7	279 53.1	23.7	298 09.6	56.6		244 35.8	28.1		Capella	281 14.0	N45	58.4		
	02	49 33.1	235 46.7	14.5	294 54.2	23.5	313 11.9	56.6		259 38.1	28.1		Deneb	49 49.6	N45	12.4		
	03	64 35.5	250 46.3	13.4	309 55.3	23.4	328 14.3	56.6		274 40.3	28.0		Denebola	183 01.4	N14	41.8		
	04	79 38.0	265 45.9	12.2	324 56.4	23.2	343 16.6	56.6		289 42.5	27.9		Diphda	349 22.6	S18	06.4		
	05	94 40.5	280 45.5	11.0	339 57.5	23.1	358 19.0	56.6		304 44.7	27.8							
	06	109 42.9	295 45.2 N 4	09.8	354 58.7 N22	22.9	13 21.3 N22	56.6		319 47.0 N13	27.8		Dubhe	194 25.2	N61	52.1		
	07	124 45.4	310 44.8	08.7	9 59.8	22.8	28 23.7	56.6		334 49.2	27.7		Elnath	278 46.5	N28	35.2		
	08	139 47.8	325 44.4	07.5	25 00.9	22.7	43 26.0	56.6		349 51.4	27.6		Eltanin	90 58.8	N51	29.9		
	09	154 50.3	340 44.0	06.3	40 02.0	22.5	58 28.4	56.6		4 53.7	27.5		Enif	34 13.3	N 9	46.6		
	10	169 52.8	355 43.6	05.1	55 03.1	22.4	73 30.7	56.6		19 55.9	27.5		Fomalhaut	15 53.3	S29	44.3		
	11	184 55.2	10 43.2	03.9	70 04.3	22.2	88 33.1	56.5		34 58.1	27.4							
	12	199 57.7	25 42.8 N 4	02.8	85 05.4 N22	22.1	103 35.4 N22	56.5		50 00.3 N13	27.3		Gacrux	172 31.4	S56	59.2		
	13	215 00.2	40 42.4	01.6	100 06.5	21.9	118 37.8	56.5		65 02.6	27.2		Gienah	176 20.3	S17	25.0		
	14	230 02.6	55 42.0	00.4	115 07.6	21.8	133 40.1	56.5		80 04.8	27.2		Hadar	149 26.7	S60	15.9		
	15	245 05.1	70 41.6	3 59.2	130 08.8	21.6	148 42.5	56.5		95 07.0	27.1		Hamal	328 30.8	N23	21.5		
	16	260 07.6	85 41.2	58.0	145 09.9	21.5	163 44.8	56.5		110 09.3	27.0		Kaus Aust.	84 19.6	S34	23.7		
	17	275 10.0	100 40.8	56.9	160 11.0	21.3	178 47.2	56.5		125 11.5	26.9							
	18	290 12.5	115 40.5 N 3	55.7	175 12.1 N22	21.2	193 49.5 N22	56.5		140 13.7 N13	26.9		Kochab	137 20.1	N74	15.0		
	19	305 15.0	130 40.1	54.5	190 13.3	21.0	208 51.9	56.5		155 15.9	26.8		Markab	14 04.9	N15	05.4		
	20	320 17.4	145 39.7	53.3	205 14.4	20.9	223 54.2	56.5		170 18.2	26.7		Menkar	314 42.9	N 4	00.2		
	21	335 19.9	160 39.3	52.1	220 15.5	20.7	238 56.6	56.5		185 20.4	26.6		Menkent	148 39.7	S36	15.6		
	22	350 22.3	175 38.9	51.0	235 16.6	20.6	253 58.9	56.5		200 22.6	26.5		Miaplacidus	221 45.7	S69	37.3		
23	5 24.8	190 38.5	49.8	250 17.8	20.4	269 01.3	56.5		215 24.9	26.5								
M I E R C O L E S	12 00	20 27.3	205 38.1 N 3	48.6	265 18.9 N22	20.3	284 03.6 N22	56.5		230 27.1 N13	26.4		Mirfak	309 18.5	N49	46.9		
	01	35 29.7	220 37.7	47.4	280 20.0	20.1	299 06.0	56.5		245 29.3	26.3		Nunki	76 31.7	S26	19.4		
	02	50 32.2	235 37.3	46.2	295 21.2	20.0	314 08.3	56.5		260 31.6	26.2		Peacock	54 01.4	S56	48.5		
	03	65 34.7	250 36.9	45.1	310 22.3	19.8	329 10.7	56.5		275 33.8	26.2		Pollux	244 00.6	N28	04.7		
	04	80 37.1	265 36.5	43.9	325 23.4	19.7	344 13.0	56.5		290 36.0	26.1		Procyon	245 27.9	N 5	16.9		
	05	95 39.6	280 36.1	42.7	340 24.5	19.5	359 15.4	56.5		305 38.3	26.0							
	06	110 42.1	295 35.8 N 3	41.5	355 25.7 N22	19.4	14 17.7 N22	56.5		320 40.5 N13	25.9		Rasalhague	96 31.6	N12	34.8		
	07	125 44.5	310 35.4	40.3	10 26.8	19.2	29 20.1	56.5		335 42.7	25.9		Regulus	208 12.3	N12	04.6		
	08	140 47.0	325 35.0	39.1	25 27.9	19.1	44 22.5	56.5		350 45.0	25.8		Rigel	281 37.8	S 8	13.5		
	09	155 49.5	340 34.6	38.0	40 29.1	18.9	59 24.8	56.5		5 47.2	25.7		Rigil Kent.	140 29.0	S60	44.6		
	10	170 51.9	355 34.2	36.8	55 30.2	18.8	74 27.2	56.5		20 49.4	25.6		Sabik	102 43.6	S15	41.7		
	11	185 54.4	10 33.8	35.6	70 31.3	18.6	89 29.5	56.5		35 51.6	25.6							
	12	200 56.8	25 33.4 N 3	34.4	85 32.5 N22	18.5	104 31.9 N22	56.5		50 53.9 N13	25.5		Schedar	350 10.6	N56	25.1		
	13	215 59.3	40 33.0	33.2	100 33.6	18.3	119 34.2	56.5		65 56.1	25.4		Shaula	96 58.6	S37	05.3		
	14	231 01.8	55 32.6	32.0	115 34.7	18.2	134 36.6	56.5		80 58.3	25.3		Sirius	258 57.4	S16	41.0		
	15	246 04.2	70 32.2	30.8	130 35.9	18.0	149 39.0	56.5		96 00.6	25.3		Spica	159 00.0	S11	02.6		
	16	261 06.7	85 31.8	29.7	145 37.0	17.9	164 41.3	56.5		111 02.8	25.2		Suhail	223 12.4	S43	20.4		
	17	276 09.2	100 31.5															

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna																	
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Naut.	Civil		10		11		12		13											
											h	m	h	m	h	m	h	m	h	m								
10 00 01 02 03 04 05 06 07 08 L 09 U 10 N 11 E 12 S 13 14 15 16 17 18 19 20 21 22 23	183	12.6	S	6	31.0	218	12.6	11.6	N	5	01.0	10.1	57.4	N 72	04	37	05	55	07	04	02	37	04	25	06	18	08	15
	198	12.8			31.9	232	43.2	11.5		4	50.9	10.2	57.4	N 70	04	43	05	53	06	55	02	44	04	25	06	11	08	00
	213	13.0			32.9	247	13.7	11.6		4	40.7	10.3	57.5	68	04	47	05	52	06	48	02	49	04	25	06	05	07	47
	228	13.1			33.8	261	44.3	11.5		4	30.4	10.2	57.5	66	04	51	05	51	06	42	02	53	04	25	06	00	07	37
	243	13.3			34.7	276	14.8	11.4		4	20.2	10.3	57.5	64	04	54	05	49	06	37	02	57	04	25	05	56	07	29
	258	13.5			35.7	290	45.2	11.5		4	09.9	10.4	57.6	62	04	57	05	48	06	33	03	00	04	25	05	52	07	22
	273	13.6	S	6	36.6	305	15.7	11.4	N	3	59.5	10.4	57.6	60	04	59	05	47	06	29	03	03	04	25	05	49	07	16
	288	13.8			37.6	319	46.1	11.4		3	49.1	10.4	57.6	N 58	05	01	05	46	06	26	03	05	04	25	05	47	07	10
	303	14.0			38.5	334	16.5	11.3		3	38.7	10.4	57.7	56	05	02	05	45	06	23	03	08	04	25	05	44	07	06
	318	14.1			39.5	348	46.8	11.4		3	28.3	10.5	57.7	54	05	04	05	44	06	20	03	09	04	25	05	42	07	01
	333	14.3			40.4	3	17.2	11.3		3	17.8	10.5	57.7	52	05	05	05	44	06	17	03	11	04	25	05	40	06	58
	348	14.5			41.4	17	47.5	11.3		3	07.3	10.5	57.8	50	05	05	05	43	06	15	03	13	04	24	05	38	06	54
	3	14.6	S	6	42.3	32	17.8	11.2	N	2	56.8	10.6	57.8	45	05	07	05	41	06	10	03	16	04	24	05	35	06	47
	18	14.8			43.3	46	48.0	11.2		2	46.2	10.6	57.8	N 40	05	08	05	39	06	06	03	19	04	24	05	31	06	40
	33	15.0			44.2	61	18.2	11.2		2	35.6	10.6	57.9	35	05	08	05	37	06	02	03	22	04	24	05	29	06	35
	48	15.1			45.2	75	48.4	11.2		2	25.0	10.6	57.9	30	05	07	05	35	05	59	03	24	04	24	05	26	06	30
	63	15.3			46.1	90	18.6	11.1		2	14.4	10.7	58.0	20	05	06	05	31	05	53	03	28	04	24	05	22	06	22
	78	15.5			47.1	104	48.7	11.1		2	03.7	10.7	58.0	N 10	05	03	05	27	05	48	03	31	04	24	05	19	06	15
	93	15.6	S	6	48.0	119	18.8	11.0	N	1	53.0	10.7	58.0	0	04	58	05	23	05	43	03	35	04	24	05	15	06	08
	108	15.8			49.0	133	48.8	11.0		1	42.3	10.8	58.1	S 10	04	53	05	17	05	38	03	38	04	24	05	12	06	02
	123	15.9			49.9	148	18.8	11.0		1	31.5	10.7	58.1	20	04	45	05	11	05	33	03	41	04	24	05	09	05	55
	138	16.1			50.8	162	48.8	11.0		1	20.8	10.8	58.1	30	04	34	05	03	05	27	03	45	04	24	05	05	05	47
	153	16.3			51.8	177	18.8	10.9		1	10.0	10.8	58.2	35	04	27	04	57	05	23	03	48	04	24	05	02	05	43
168	16.4			52.7	191	48.7	10.9		0	59.2	10.8	58.2	40	04	19	04	51	05	19	03	50	04	24	05	00	05	38	
183	16.6	S	6	53.7	206	18.6	10.8	N	0	48.4	10.8	58.2	45	04	08	04	44	05	14	03	53	04	24	04	57	05	32	
198	16.7			54.6	220	48.4	10.8		0	37.6	10.9	58.3	S 50	03	54	04	35	05	08	03	57	04	25	04	54	05	25	
213	16.9			55.6	235	18.2	10.8		0	26.7	10.9	58.3	52	03	48	04	30	05	05	03	58	04	25	04	52	05	22	
228	17.1			56.5	249	48.0	10.7		0	15.8	10.8	58.3	54	03	40	04	26	05	02	04	00	04	25	04	50	05	18	
243	17.2			57.4	264	17.7	10.7	N	0	05.0	10.9	58.4	56	03	32	04	20	04	59	04	02	04	25	04	48	05	14	
258	17.4			58.4	278	47.4	10.7	S	0	05.9	10.9	58.4	58	03	22	04	14	04	55	04	04	04	25	04	46	05	10	
273	17.5	S	6	59.3	293	17.1	10.6	S	0	16.8	11.0	58.4	S 60	03	11	04	07	04	51	04	06	04	25	04	44	05	05	
288	17.7			7 00.3	307	46.7	10.6		0	27.8	10.9	58.4																
303	17.9			01.2	322	16.3	10.5		0	38.7	10.9	58.5	Lat.	Ocaso Sol	Crepúsculo			Ocaso Luna										
318	18.0			02.2	336	45.8	10.5		0	49.6	11.0	58.5			Civil	Naut.	10	11	12	13								
333	18.2			03.1	351	15.3	10.5		1	00.6	10.9	58.5	N 72	16	28	17	36	18	54	16	25	16	19	16	14	16	08	
348	18.3			04.1	5	44.8	10.4		1	11.5	11.0	58.6	N 70	16	36	17	38	18	48	16	22	16	22	16	23	16	25	
3	18.5	S	7	05.0	20	14.2	10.4	S	1	22.5	10.9	58.6	68	16	44	17	40	18	44	16	20	16	25	16	31	16	39	
18	18.7			05.9	34	43.6	10.3		1	33.4	11.0	58.6	66	16	50	17	41	18	40	16	18	16	27	16	37	16	50	
33	18.8			06.9	49	12.9	10.3		1	44.4	11.0	58.7	64	16	55	17	43	18	37	16	16	16	29	16	43	16	59	
48	19.0			07.8	63	42.2	10.2		1	55.4	10.9	58.7	62	16	59	17	44	18	35	16	15	16	30	16	48	17	07	
63	19.1			08.8	78	11.4	10.2		2	06.3	11.0	58.7	60	17	03	17	45	18	33	16	13	16	32	16	52	17	14	
78	19.3			09.7	92	40.6	10.2		2	17.3	11.0	58.8	N 58	17	07	17	46	18	31	16	12	16	33	16	55	17	21	
93	19.4	S	7	10.7	107	09.8	10.1	S	2	28.3	10.9	58.8	56	17	10	17	47	18	30	16	11	16	34	16	59	17	26	
108	19.6			11.6	121	38.9	10.1		2	39.2	11.0	58.8	54	17	13	17	48	18	29	16	10	16	35	17	02	17	31	
123	19.8			12.5	136	08.0	10.0		2	50.2	10.9	58.8	52	17	15	17	49	18	28	16	10	16	36	17	04	17	36	
138	19.9			13.5	150	37.0	10.0		3	01.1	11.0	58.9	50	17	18	17	50	18	27	16	09	16	37	17	07	17	40	
153	20.1			14.4	165	06.0	9.9		3	12.1	10.9	58.9	45	17	23	17	52	18	26	16	07	16	39	17	12	17	49	
168	20.2			15.4	179	34.9	9.9		3	23.0	11.0	58.9	N 40	17	27	17	54	18	25	16	06	16	40	17	17	17	56	
183	20.4	S	7	16.3	194	03.8	9.9	S	3	34.0	10.9	59.0	35	17	31	17	56	18	25	16	04	16	42	17	21	18	02	
198	20.5			17.2	208	32.7	9.7		3	44.9	10.9	59.0	30	17	34	17	58	18	26	16	03	16	43	17	24	18	08	
213	20.7			18.2	223	01.4	9.8		3	55.8	10.9	59.0	20	17	40	18	02	18	28	16	01	16	45	17	30	18	18	
228	20.9			19.1	237	30.2	9.7		4	06.7	10.9	59.1	N 10	17	45	18	06	18	31	16	00	16	47	17	35	18	26	
243	21.0			20.1	251	58.9	9.6		4	17.6	10.9	59.1	0	17	50	18	11	18	35	15	58	16	48	17	40	18	35	
258	21.2			21.0	266	27.5	9.6		4	28.5	10.8	59.1	S 10	17	55	18	16	18	41	15	57	16	50	17	45	18	43	
273	21.3	S	7	21.9	280	56.1	9.6	S	4	39.3	10.9	59.1	20	18	01	18	23	18	49	15	55	16	52	17	51	18	51	
288	21.5			22.9	295	24.7	9.5		4	50.2	10.8	59.2	30	18	07	18	32	19	00	15	53	16	54	17	57	19	01	
303	21.6			23.8	309	53.2	9.4		5	01.0	10.8	59.2	35	18	11	18	37	19	07	15	51	16	55	18	00	19	07	

T. M. G.	ARIES			VENUS -3.4			MARTE +0.7			JUPITER -2.0			SATURNO +0.8			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
13 00	21 26.4	205 28.7 N 3	20.2	265 46.1 N22	16.7		285 00.2 N22	56.5		231 20.7 N13	24.6		231 20.7 N13	24.6		Acamar	315 38.4 S40	23.5
01	36 28.9	220 28.3	19.0	280 47.3	16.5		300 02.6	56.5		246 22.9	24.5		246 22.9	24.5		Achernar	335 46.2 S57	20.9
02	51 31.3	235 27.9	17.8	295 48.4	16.4		315 04.9	56.5		261 25.1	24.4		261 25.1	24.4		Acrux	173 40.0 S62	58.4
03	66 33.8	250 27.5	16.6	310 49.5	16.2		330 07.3	56.5		276 27.4	24.4		276 27.4	24.4		Adhara	255 33.6 S28	56.3
04	81 36.3	265 27.2	15.4	325 50.7	16.1		345 09.7	56.5		291 29.6	24.3		291 29.6	24.3		Aldebaran	291 20.0 N16	27.9
05	96 38.7	280 26.8	14.2	340 51.8	15.9		0 12.0	56.5		306 31.8	24.2		306 31.8	24.2				
06	111 41.2	295 26.4 N 3	13.0	355 53.0 N22	15.8		15 14.4 N22	56.5		321 34.1 N13	24.1		321 34.1 N13	24.1		Alioth	166 44.9 N56	04.8
07	126 43.7	310 26.0	11.9	10 54.1	15.6		30 16.8	56.5		336 36.3	24.1		336 36.3	24.1		Alkaid	153 20.6 N49	25.6
08	141 46.1	325 25.6	10.7	25 55.3	15.5		45 19.1	56.5		351 38.5	24.0		351 38.5	24.0		Al Na'ir	28 17.2 S47	04.2
J 09	156 48.6	340 25.2	09.5	40 56.4	15.3		60 21.5	56.5		6 40.8	23.9		6 40.8	23.9		Alnilam	276 13.5 S 1	12.9
U 10	171 51.1	355 24.8	08.3	55 57.5	15.2		75 23.8	56.4		21 43.0	23.8		21 43.0	23.8		Alphard	218 22.7 S 8	33.6
E 11	186 53.5	10 24.4	07.1	70 58.7	15.0		90 26.2	56.4		36 45.2	23.8		36 45.2	23.8				
V 12	201 56.0	25 24.0 N 3	05.9	85 59.8 N22	14.9		105 28.6 N22	56.4		51 47.5 N13	23.7		51 47.5 N13	23.7		Alphecca	126 34.1 N26	47.6
E 13	216 58.4	40 23.6	04.7	101 01.0	14.7		120 30.9	56.4		66 49.7	23.6		66 49.7	23.6		Alpheratz	358 11.0 N28	58.3
S 14	232 00.9	55 23.3	03.5	116 02.1	14.6		135 33.3	56.4		81 52.0	23.5		81 52.0	23.5		Altair	62 34.4 N 8	48.8
15	247 03.4	70 22.9	02.3	131 03.3	14.4		150 35.7	56.4		96 54.2	23.5		96 54.2	23.5		Ankaa	353 41.8 S42	25.6
16	262 05.8	85 22.5	01.2	146 04.4	14.3		165 38.0	56.4		111 56.4	23.4		111 56.4	23.4		Antares	112 59.5 S26	22.9
17	277 08.3	100 22.1	00.0	161 05.6	14.1		180 40.4	56.4		126 58.7	23.3		126 58.7	23.3				
18	292 10.8	115 21.7 N 2	58.8	176 06.7 N22	14.0		195 42.8 N22	56.4		142 00.9 N13	23.2		142 00.9 N13	23.2		Arcturus	146 20.6 N19	18.1
19	307 13.2	130 21.3	57.6	191 07.9	13.8		210 45.2	56.4		157 03.1	23.2		157 03.1	23.2		Atria	108 25.9 S68	59.4
20	322 15.7	145 20.9	56.4	206 09.0	13.7		225 47.5	56.4		172 05.4	23.1		172 05.4	23.1		Avior	234 29.1 S59	26.1
21	337 18.2	160 20.5	55.2	221 10.2	13.5		240 49.9	56.4		187 07.6	23.0		187 07.6	23.0		Bellatrix	279 00.7 N 6	19.8
22	352 20.6	175 20.1	54.0	236 11.3	13.4		255 52.3	56.4		202 09.8	23.0		202 09.8	23.0		Betelgeuse	271 30.3 N 7	24.2
23	7 23.1	190 19.7	52.8	251 12.5	13.2		270 54.6	56.4		217 12.1	22.9		217 12.1	22.9				
14 00	22 25.6	205 19.4 N 2	51.6	266 13.6 N22	13.1		285 57.0 N22	56.4		232 14.3 N13	22.8		232 14.3 N13	22.8		Canopus	264 07.9 S52	40.8
01	37 28.0	220 19.0	50.4	281 14.8	12.9		300 59.4	56.4		247 16.5	22.7		247 16.5	22.7		Capella	281 14.0 N45	58.4
02	52 30.5	235 18.6	49.2	296 15.9	12.8		316 01.7	56.4		262 18.8	22.7		262 18.8	22.7		Deneb	49 49.6 N45	12.5
03	67 32.9	250 18.2	48.0	311 17.1	12.6		331 04.1	56.4		277 21.0	22.6		277 21.0	22.6		Denebola	183 01.4 N14	41.8
04	82 35.4	265 17.8	46.9	326 18.2	12.5		346 06.5	56.4		292 23.3	22.5		292 23.3	22.5		Diphda	349 22.6 S18	06.4
05	97 37.9	280 17.4	45.7	341 19.4	12.3		1 08.9	56.4		307 25.5	22.4		307 25.5	22.4				
06	112 40.3	295 17.0 N 2	44.5	356 20.5 N22	12.2		16 11.2 N22	56.4		322 27.7 N13	22.4		322 27.7 N13	22.4		Dubhe	194 25.2 N61	52.1
07	127 42.8	310 16.6	43.3	11 21.7	12.0		31 13.6	56.4		337 30.0	22.3		337 30.0	22.3		Elnath	278 46.5 N28	35.2
08	142 45.3	325 16.2	42.1	26 22.9	11.9		46 16.0	56.4		352 32.2	22.2		352 32.2	22.2		Eltanin	90 58.9 N51	29.9
V 09	157 47.7	340 15.9	40.9	41 24.0	11.7		61 18.4	56.4		7 34.4	22.1		7 34.4	22.1		Enif	34 13.4 N 9	46.6
I 10	172 50.2	355 15.5	39.7	56 25.2	11.6		76 20.7	56.4		22 36.7	22.1		22 36.7	22.1		Fomalhaut	15 53.4 S29	44.3
R 11	187 52.7	10 15.1	38.5	71 26.3	11.4		91 23.1	56.4		37 38.9	22.0		37 38.9	22.0				
N 12	202 55.1	25 14.7 N 2	37.3	86 27.5 N22	11.2		106 25.5 N22	56.4		52 41.2 N13	21.9		52 41.2 N13	21.9		Gacrux	172 31.4 S56	59.2
E 13	217 57.6	40 14.3	36.1	101 28.6	11.1		121 27.9	56.4		67 43.4	21.8		67 43.4	21.8		Gienah	176 20.3 S17	25.0
N 14	233 00.0	55 13.9	34.9	116 29.8	10.9		136 30.2	56.4		82 45.6	21.8		82 45.6	21.8		Hadar	149 26.7 S60	15.9
S 15	248 02.5	70 13.5	33.7	131 31.0	10.8		151 32.6	56.4		97 47.9	21.7		97 47.9	21.7		Hamal	328 30.8 N23	21.5
16	263 05.0	85 13.1	32.5	146 32.1	10.6		166 35.0	56.4		112 50.1	21.6		112 50.1	21.6		Kaus Aust.	84 19.6 S34	23.7
17	278 07.4	100 12.7	31.3	161 33.3	10.5		181 37.4	56.4		127 52.3	21.6		127 52.3	21.6				
18	293 09.9	115 12.4 N 2	30.1	176 34.4 N22	10.3		196 39.7 N22	56.4		142 54.6 N13	21.5		142 54.6 N13	21.5		Kochab	137 20.2 N74	15.0
19	308 12.4	130 12.0	28.9	191 35.6	10.2		211 42.1	56.4		157 56.8	21.4		157 56.8	21.4		Markab	14 04.9 N15	05.4
20	323 14.8	145 11.6	27.7	206 36.8	10.0		226 44.5	56.4		172 59.1	21.3		172 59.1	21.3		Menkar	314 42.9 N 4	00.2
21	338 17.3	160 11.2	26.6	221 37.9	09.9		241 46.9	56.4		188 01.3	21.3		188 01.3	21.3		Menkent	148 39.7 S36	15.6
22	353 19.8	175 10.8	25.4	236 39.1	09.7		256 49.3	56.4		203 03.5	21.2		203 03.5	21.2		Miaplacidus	221 45.6 S69	37.3
23	8 22.2	190 10.4	24.2	251 40.3	09.6		271 51.6	56.4		218 05.8	21.1		218 05.8	21.1				
15 00	23 24.7	205 10.0 N 2	23.0	266 41.4 N22	09.4		286 54.0 N22	56.4		233 08.0 N13	21.0		233 08.0 N13	21.0		Mirfak	309 18.5 N49	46.9
01	38 27.2	220 09.6	21.8	281 42.6	09.3		301 56.4	56.4		248 10.3	21.0		248 10.3	21.0		Nunki	76 31.7 S26	19.4
02	53 29.6	235 09.2	20.6	296 43.8	09.1		316 58.8	56.4		263 12.5	20.9		263 12.5	20.9		Peacock	54 01.4 S56	48.5
03	68 32.1	250 08.9	19.4	311 44.9	08.9		332 01.2	56.4		278 14.7	20.8		278 14.7	20.8		Pollux	244 00.6 N28	04.7
04	83 34.5	265 08.5	18.2	326 46.1	08.8		347 03.5	56.4		293 17.0	20.8		293 17.0	20.8		Procyon	245 27.9 N 5	16.9
05	98 37.0	280 08.1	17.0	341 47.3	08.6		2 05.9	56.4		308 19.2	20.7		308 19.2	20.7				
06	113 39.5	295 07.7 N 2	15.8	356 48.4 N22	08.5		17 08.3 N22	56.4		323 21.5 N13	20.6		323 21.5 N13	20.6		Rasalhague	96 31.6 N12	34.8
07	128 41.9	310 07.3	14.6	11 49.6	08.3		32 10.7	56.4		338 23.7	20.5		338 23.7	20.5		Regulus	208 12.3 N12	04.6
08	143 44.4	325 06.9	13.4	26 50.8	08.2		47 13.1	56.4		353 25.9	20.5		353 25.9	20.5		Rigel	281 37.7 S 8	13.6
S 09	158 46.9	340 06.5	12.2	41 51.9	08.0		62 15.4	56.4		8 28.2	20.4		8 28.2	20.4		Rigil Kent.	140 29.1 S60	44.5
A 10	173 49.3	355 06.1	11.0	56 53.1	07.9		77 17.8	56.4		23 30.4	20.3		23 30.4	20.3		Sabik	102 43.6 S15	41.7
B 11	188 51.8	10 05.8	09.8	71 54.3	07.7	</												

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna													
	A.H.G.		Dec.	A.H.G.		v	Dec.	d		P.H.	Náut.		Civil	13		14		15		16						
	h	m		h	m							h		m	h	m	h	m	h		m	h	m	h	m	
13 00 01 02 03 04 05 06 07 08 J U E V E S 15 16 17 18 19 20 21 22 23	183	24.1	S 7	38.8	181	22.2	8.6	S 7	50.7	10.3	59.6	N 72	04	50	06	08	07	18	08	15	10	19	12	32	■	
	198	24.2		39.8	195	49.8	8.5	8	01.0	10.3	59.6	N 70	04	55	06	05	07	08	08	00	09	52	11	44	13	27
	213	24.4		40.7	210	17.3	8.5	8	11.3	10.2	59.6	68	04	58	06	02	06	59	07	47	09	32	11	14	12	45
	228	24.5	..	41.6	224	44.8	8.5	8	21.5	10.2	59.6	66	05	01	06	00	06	52	07	37	09	16	10	51	12	16
	243	24.7		42.6	239	12.3	8.4	8	31.7	10.2	59.7	64	05	03	05	58	06	46	07	29	09	03	10	33	11	55
	258	24.8		43.5	253	39.7	8.3	8	41.9	10.1	59.7	62	05	05	05	56	06	41	07	22	08	52	10	19	11	37
	273	25.0	S 7	44.4	268	07.0	8.3	S 8	52.0	10.0	59.7	60	05	06	05	54	06	36	07	16	08	43	10	07	11	23
	288	25.1		45.4	282	34.3	8.2	9	02.0	10.0	59.7	N 58	05	07	05	53	06	32	07	10	08	35	09	56	11	11
	303	25.3		46.3	297	01.5	8.2	9	12.0	10.0	59.7	56	05	08	05	51	06	29	07	06	08	28	09	47	11	00
	318	25.4	..	47.3	311	28.7	8.1	9	22.0	9.9	59.8	54	05	09	05	50	06	26	07	01	08	21	09	39	10	51
	333	25.6		48.2	325	55.8	8.1	9	31.9	9.8	59.8	52	05	10	05	49	06	23	06	58	08	15	09	31	10	43
	348	25.7		49.1	340	22.9	8.0	9	41.7	9.8	59.8	50	05	10	05	47	06	20	06	54	08	10	09	25	10	35
	3	25.9	S 7	50.1	354	49.9	8.0	S 9	51.5	9.7	59.8	45	05	11	05	45	06	14	06	47	07	59	09	11	10	19
	18	26.0		51.0	9	16.9	7.9	10	01.2	9.7	59.8	N 40	05	11	05	42	06	09	06	40	07	50	08	59	10	06
	33	26.2		51.9	23	43.8	7.8	10	10.9	9.6	59.8	35	05	10	05	39	06	05	06	35	07	42	08	50	09	55
	48	26.3	..	52.9	38	10.6	7.8	10	20.5	9.6	59.9	30	05	09	05	37	06	01	06	30	07	36	08	41	09	45
	63	26.5		53.8	52	37.4	7.7	10	30.1	9.5	59.9	20	05	07	05	32	05	54	06	22	07	24	08	26	09	29
	78	26.6		54.7	67	04.1	7.7	10	39.6	9.4	59.9	N 10	05	03	05	27	05	48	06	15	07	14	08	14	09	14
	93	26.8	S 7	55.7	81	30.8	7.6	S 10	49.0	9.4	59.9	0	04	58	05	22	05	43	06	08	07	04	08	02	09	01
	108	26.9		56.6	95	57.4	7.6	10	58.4	9.3	59.9	S 10	04	51	05	16	05	37	06	02	06	54	07	50	08	47
	123	27.1		57.5	110	24.0	7.5	11	07.7	9.2	59.9	20	04	42	05	08	05	31	05	55	06	44	07	37	08	33
	138	27.2	..	58.5	124	50.5	7.5	11	16.9	9.2	60.0	30	04	30	04	59	05	23	05	47	06	33	07	23	08	17
	153	27.4		59.4	139	17.0	7.4	11	26.1	9.1	60.0	35	04	23	04	53	05	19	05	43	06	26	07	14	08	07
168	27.5	8	00.3	153	43.4	7.4	11	35.2	9.0	60.0	40	04	13	04	47	05	14	05	38	06	19	07	05	07	56	
183	27.7	S 8	01.3	168	09.8	7.3	S 11	44.2	9.0	60.0	45	04	02	04	38	05	09	05	32	06	10	06	54	07	44	
198	27.8		02.2	182	36.1	7.2	11	53.2	8.8	60.0	S 50	03	47	04	28	05	02	05	25	06	00	06	41	07	28	
213	27.9		03.1	197	02.3	7.2	12	02.0	8.9	60.0	52	03	40	04	23	04	59	05	22	05	55	06	35	07	21	
228	28.1	..	04.0	211	28.5	7.2	12	10.9	8.7	60.0	54	03	32	04	18	04	55	05	18	05	50	06	28	07	13	
243	28.2		05.0	225	54.7	7.1	12	19.6	8.6	60.0	56	03	23	04	12	04	51	05	14	05	44	06	20	07	04	
258	28.4		05.9	240	20.8	7.0	12	28.2	8.6	60.1	58	03	12	04	05	04	47	05	10	05	38	06	12	06	54	
273	28.5	S 8	06.8	254	46.8	7.0	S 12	36.8	8.5	60.1	S 60	02	59	03	57	04	42	05	05	05	31	06	02	06	43	
288	28.7		07.8	269	12.8	6.9	12	45.3	8.4	60.1	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna											
303	28.8		08.7	283	38.7	6.9	12	53.7	8.4	60.1			Civil	Náut.	13	14	15	16								
318	29.0	..	09.6	298	04.6	6.9	13	02.1	8.2	60.1																
333	29.1		10.6	312	30.5	6.7	13	10.3	8.2	60.1																
348	29.2		11.5	326	56.2	6.8	13	18.5	8.1	60.1																
3	29.4	S 8	12.4	341	22.0	6.7	S 13	26.6	7.9	60.1	N 72	16	12	17	22	18	39	16	08	16	01	15	49	■		
18	29.5		13.4	355	47.7	6.6	13	34.5	8.0	60.1	N 70	16	22	17	25	18	35	16	25	16	29	16	37	16	59	
33	29.7		14.3	10	13.3	6.6	13	42.5	7.8	60.1	68	16	31	17	28	18	32	16	39	16	50	17	09	17	41	
48	29.8	..	15.2	24	38.9	6.5	13	50.3	7.7	60.1	66	16	38	17	30	18	29	16	50	17	07	17	32	18	10	
63	30.0		16.1	39	04.4	6.5	13	58.0	7.6	60.1	64	16	45	17	33	18	27	16	59	17	21	17	50	18	32	
78	30.1		17.1	53	29.9	6.5	14	05.6	7.6	60.2	62	16	50	17	35	18	26	17	07	17	32	18	05	18	49	
93	30.2	S 8	18.0	67	55.4	6.4	S 14	13.2	7.4	60.2	60	16	55	17	37	18	25	17	14	17	42	18	18	19	04	
108	30.4		18.9	82	20.8	6.3	14	20.6	7.4	60.2	N 58	16	59	17	38	18	23	17	21	17	51	18	29	19	16	
123	30.5		19.9	96	46.1	6.4	14	28.0	7.2	60.2	56	17	02	17	40	18	23	17	26	17	59	18	38	19	27	
138	30.7	..	20.8	111	11.5	6.2	14	35.2	7.2	60.2	54	17	06	17	41	18	22	17	31	18	06	18	47	19	37	
153	30.8		21.7	125	36.7	6.2	14	42.4	7.0	60.2	52	17	09	17	43	18	22	17	36	18	12	18	54	19	45	
168	31.0		22.6	140	01.9	6.2	14	49.4	7.0	60.2	50	17	11	17	44	18	21	17	40	18	17	19	01	19	53	
183	31.1	S 8	23.6	154	27.1	6.2	S 14	56.4	6.8	60.2	45	17	17	17	47	18	21	17	49	18	29	19	16	20	09	
198	31.2		24.5	168	52.3	6.1	15	03.2	6.8	60.2	N 40	17	22	17	50	18	21	17	56	18	40	19	28	20	22	
213	31.4		25.4	183	17.4	6.0	15	10.0	6.7	60.2	35	17	27	17	52	18	21	18	02	18	48	19	38	20	33	
228	31.5	..	26.3	197	42.4	6.1	15	16.7	6.5	60.2	30	17	31	17	55	18	22	18	08	18	56	19	48	20	43	
243	31.7		27.3	212	07.5	5.9	15	23.2	6.5	60.2	20	17	37	18	00	18	25	18	18	19	09	20	03	21	00	
258	31.8		28.2	226	32.4	6.0	15	29.7	6.3	60.2	N 10	17	44	18	05	18	29	18	26	19	20	20	17	21	15	
273	31.9	S 8	29.1	240	57.4	5.9	S 15	36.0	6.2	60.2	0	17	49	18	10	18	34	18	35	19	31	20	30	21	29	
288	32.1		30.0	255	22.3	5.9	15	42.2	6.2	60.2	S 10	17	55	18	17	18	41	18	43	19	42	20	42	21	43	
303	32.2		31.0	269	47.2	5.8	15	48.4	6.0	60.2	20	18	02	18	24	18	50	18	51	19	53	20	56	21	58	
318	32.3	..	31.9	284	12.0	5.8	15	54.4	5.9	60.2	30	18	09	18	34	19	02	19	01	20	07	21	12	22	15	
333	32.5		32.8	298	36.8	5.8	16	00.3	5.8	60.2	35	18	14	18	39	19	10	19	07	20	14	21	21	22	25	
348	32.6		33.7	313	01.6	5.7	16	06.1	5.7	60.2	40	18	19	18	46</											

T. M. G.	ARIES		VENUS -3.4		MARTE +0.6		JUPITER -2.0		SATURNO +0.8		ESTRELLAS																										
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.																							
D O M I N G O	16 ^d 00	24 23.8	205 00.7 N 1	54.2	267 09.5 N22	05.7	287 51.2 N22	56.4	234 01.8 N13	19.3	Acomar	315 38.4 S40	23.5																								
	01	39 26.3	220 00.3	53.0	282 10.7	05.6	302 53.6	56.4	249 04.0	19.2	Achernar	335 46.2 S57	20.9																								
	02	54 28.8	234 59.9	51.8	297 11.9	05.4	317 56.0	56.4	264 06.3	19.2	Acrux	173 40.0 S62	58.4																								
	03	69 31.2	249 59.6	50.6	312 13.1	05.3	332 58.4	56.4	279 08.5	19.1	Adhara	255 33.6 S28	56.4																								
	04	84 33.7	264 59.2	49.4	327 14.3	05.1	348 00.8	56.4	294 10.8	19.0	Aldebaran	291 20.0 N16	27.9																								
	05	99 36.1	279 58.8	48.2	342 15.4	04.9	3 03.2	56.4	309 13.0	18.9																											
	06	114 38.6	294 58.4 N 1	47.0	357 16.6 N22	04.8	18 05.6 N22	56.4	324 15.2 N13	18.9	Alioth	166 44.9 N56	04.8																								
	07	129 41.1	309 58.0	45.8	12 17.8	04.6	33 08.0	56.4	339 17.5	18.8	Alkaid	153 20.6 N49	25.6																								
	08	144 43.5	324 57.6	44.6	27 19.0	04.5	48 10.4	56.4	354 19.7	18.7	Al Na'ir	28 17.2 S47	04.2																								
	09	159 46.0	339 57.2	43.4	42 20.2	04.3	63 12.7	56.4	9 22.0	18.7	Alnilam	276 13.5 S 1	12.9																								
	10	174 48.5	354 56.8	42.2	57 21.3	04.2	78 15.1	56.4	24 24.2	18.6	Alphard	218 22.6 S 8	33.6																								
	11	189 50.9	9 56.5	41.0	72 22.5	04.0	93 17.5	56.4	39 26.5	18.5																											
	12	204 53.4	24 56.1 N 1	39.8	87 23.7 N22	03.9	108 19.9 N22	56.4	54 28.7 N13	18.4	Alphecca	126 34.1 N26	47.6																								
	13	219 55.9	39 55.7	38.6	102 24.9	03.7	123 22.3	56.4	69 30.9	18.4	Alpheratz	358 11.0 N28	58.3																								
	14	234 58.3	54 55.3	37.4	117 26.1	03.5	138 24.7	56.4	84 33.2	18.3	Altair	62 34.5 N 8	48.8																								
	15	250 00.8	69 54.9	36.2	132 27.3	03.4	153 27.1	56.3	99 35.4	18.2	Ankaa	353 41.8 S42	25.6																								
	16	265 03.3	84 54.5	35.0	147 28.4	03.2	168 29.5	56.3	114 37.7	18.2	Antares	112 59.5 S26	22.9																								
	17	280 05.7	99 54.1	33.8	162 29.6	03.1	183 31.9	56.3	129 39.9	18.1																											
	18	295 08.2	114 53.7 N 1	32.6	177 30.8 N22	02.9	198 34.3 N22	56.3	144 42.2 N13	18.0	Arcturus	146 20.6 N19	18.0																								
	19	310 10.6	129 53.4	31.4	192 32.0	02.8	213 36.7	56.3	159 44.4	17.9	Atria	108 25.9 S68	59.4																								
	20	325 13.1	144 53.0	30.2	207 33.2	02.6	228 39.1	56.3	174 46.6	17.9	Avior	234 29.0 S59	26.1																								
	21	340 15.6	159 52.6	29.0	222 34.4	02.5	243 41.5	56.3	189 48.9	17.8	Bellatrix	279 00.7 N 6	19.8																								
	22	355 18.0	174 52.2	27.8	237 35.6	02.3	258 43.9	56.3	204 51.1	17.7	Betelgeuse	271 30.3 N 7	24.2																								
23	10 20.5	189 51.8	26.6	252 36.8	02.1	273 46.3	56.3	219 53.4	17.7																												
L U N E S	17 00	25 23.0	204 51.4 N 1	25.3	267 38.0 N22	02.0	288 48.7 N22	56.3	234 55.6 N13	17.6	Canopus	264 07.9 S52	40.8																								
	01	40 25.4	219 51.0	24.1	282 39.1	01.8	303 51.1	56.3	249 57.9	17.5	Capella	281 13.9 N45	58.4																								
	02	55 27.9	234 50.6	22.9	297 40.3	01.7	318 53.5	56.3	265 00.1	17.4	Deneb	49 49.7 N45	12.5																								
	03	70 30.4	249 50.3	21.7	312 41.5	01.5	333 55.9	56.3	280 02.4	17.4	Denebola	183 01.4 N14	41.8																								
	04	85 32.8	264 49.9	20.5	327 42.7	01.4	348 58.3	56.3	295 04.6	17.3	Diphda	349 22.6 S18	06.4																								
	05	100 35.3	279 49.5	19.3	342 43.9	01.2	4 00.7	56.3	310 06.9	17.2																											
	06	115 37.8	294 49.1 N 1	18.1	357 45.1 N22	01.1	19 03.1 N22	56.3	325 09.1 N13	17.2	Dubhe	194 25.2 N61	52.1																								
	07	130 40.2	309 48.7	16.9	12 46.3	00.9	34 05.5	56.3	340 11.3	17.1	Elnath	278 46.4 N28	35.2																								
	08	145 42.7	324 48.3	15.7	27 47.5	00.7	49 07.9	56.3	355 13.6	17.0	Eltanin	90 58.9 N51	29.9																								
	09	160 45.1	339 47.9	14.5	42 48.7	00.6	64 10.3	56.3	10 15.8	17.0	Enif	34 13.4 N 9	46.6																								
	10	175 47.6	354 47.5	13.3	57 49.9	00.4	79 12.7	56.3	25 18.1	16.9	Fomalhaut	15 53.4 S29	44.4																								
	11	190 50.1	9 47.2	12.1	72 51.1	00.3	94 15.1	56.3	40 20.3	16.8																											
	12	205 52.5	24 46.8 N 1	10.9	87 52.3 N22	00.1	109 17.5 N22	56.3	55 22.6 N13	16.7	Gacrux	172 31.4 S56	59.2																								
	13	220 55.0	39 46.4	09.7	102 53.5	00.0	124 19.9	56.3	70 24.8	16.7	Gienah	176 20.3 S17	25.0																								
	14	235 57.5	54 46.0	08.5	117 54.7	21 59.8	139 22.3	56.3	85 27.1	16.6	Hadar	149 26.7 S60	15.9																								
	15	250 59.9	69 45.6	07.3	132 55.9	07.7	154 24.7	56.3	100 29.3	16.5	Hamal	328 30.8 N23	21.5																								
	16	266 02.4	84 45.2	06.1	147 57.1	59.5	169 27.1	56.3	115 31.6	16.5	Kaus Aust.	84 19.6 S34	23.7																								
	17	281 04.9	99 44.8	04.9	162 58.3	59.3	184 29.5	56.3	130 33.8	16.4																											
	18	296 07.3	114 44.5 N 1	03.7	177 59.5 N21	59.2	199 31.9 N22	56.3	145 36.1 N13	16.3	Kochab	137 20.2 N74	15.0																								
	19	311 09.8	129 44.1	02.5	193 00.7	59.0	214 34.3	56.3	160 38.3	16.2	Markab	14 04.9 N15	05.4																								
	20	326 12.2	144 43.7	01.2	208 01.9	58.9	229 36.7	56.3	175 40.5	16.2	Menkar	314 42.9 N 4	00.2																								
	21	341 14.7	159 43.3	00.0	223 03.1	58.7	244 39.1	56.3	190 42.8	16.1	Menkent	148 39.7 S36	15.5																								
	22	356 17.2	174 42.9	0 58.8	238 04.3	58.6	259 41.5	56.3	205 45.0	16.0	Miaplacidus	221 45.6 S69	37.3																								
23	11 19.6	189 42.5	57.6	253 05.5	58.4	274 43.9	56.3	220 47.3	16.0																												
M A R T E S	18 00	26 22.1	204 42.1 N 0	56.4	268 06.7 N21	58.2	289 46.3 N22	56.3	235 49.5 N13	15.9	Mirfak	309 18.4 N49	46.9																								
	01	41 24.6	219 41.7	55.2	283 07.9	58.1	304 48.7	56.3	250 51.8	15.8	Nunki	76 31.7 S26	19.4																								
	02	56 27.0	234 41.4	54.0	298 09.1	57.9	319 51.1	56.3	265 54.0	15.8	Peacock	54 01.5 S56	48.5																								
	03	71 29.5	249 41.0	52.8	313 10.3	57.8	334 53.5	56.3	280 56.3	15.7	Pollux	244 00.6 N28	04.7																								
	04	86 32.0	264 40.6	51.6	328 11.5	57.6	349 55.9	56.3	295 58.5	15.6	Procyon	245 27.9 N 5	16.9																								
	05	101 34.4	279 40.2	50.4	343 12.7	57.5	4 58.3	56.3	311 00.8	15.6																											
	06	116 36.9	294 39.8 N 0	49.2	358 13.9 N21	57.3	20 00.8 N22	56.3	326 03.0 N13	15.5	Rasalhague	96 31.6 N12	34.8																								
	07	131 39.4	309 39.4	48.0	13 15.1	57.1	35 03.2	56.3	341 05.3	15.4	Regulus	208 12.3 N12	04.6																								
	08	146 41.8	324 39.0	46.8	28 16.3	57.0	50 05.6	56.3	356 07.5	15.3	Rigel	281 37.7 S 8	13.6																								
	09	161 44.3	339 38.6	45.6	43 17.5	56.8	65 08.0	56.3	11 09.8	15.3	Rigel Kent.	140 29.1 S60	44.5																								
	10	176 46.7	354 38.3	44.3	58 18.8	56.7	80 10.4	56.3	26 12.0	15.2	Sabik	102 43.6 S15	41.7																								
	11	191 49.2	9 37.9	43.1	73 20.0	56.5	95 12.8	56.3	41 14.3	15.1																											
	12	206 51.7	24 37.5 N 0	41.9	88 21.2 N21	56.4	110 15.2 N22	56.3	56 16.5 N13	15.1	Schedar	350 10.6 N56	25.1																								
	13	221 54.1	39 37.1	40.7	103 22.4	56.2	125 17.6	56.3	71 18.8	15.0	Shaula	96 58.7 S37	05.3																								
	14	236 56.6	54 36.7	39.5	118 23.6	56.0	140 20.0	56.3	86 21.0	14.9	Sirius	258 57.4 S16	41.1																								
	15	251 59.1	69 36.3	38.3	133 24.8	55.9	155 22.4	56.3	101 23.3	14.9	Spica	158 59.9 S11	02.6																								
	16	267 01.5	84 35.9	37.1	148 26.0	55.7	170 24.9	56.3	116 25.5	14.8	Suhail	223 12.3 S43	20.4																								
	17	282 04.0	99 35.6	35.9	163 27.2	55.6	185 27.3	56.3	131 27.8	14.7																											
	18	297 06.5	114 35.2 N 0	34.7	178 28.5 N21	55.4	200 29.7 N22	56.3	146 30.0 N13	14.6	Vega	80 57.3 N38	46.2																								
	19	312 08.9	129 34.8	33.5	193 29.7	55.3	215 32.1	56.3	161 32.3	14.6	Zuben'ubi	137 35.5 S15	56.8																								
	20	327 11.4	144 34.4	32.3	208 30.9	55.1	230 34.5	56.3	176 34.5	14.5																											
	21	342 13.9	159 34.0	31.0	223 32.1	54.9	245 36.9	56.3	191 36.8	14.4																											
	22	357 16.3	174 33.6	29.8	238 33.3	54.8	260 39.3	56.3	206 39.0	14.4																											
23	12 18.8	189 33.2	28.6	253 34.5	54.6	275 41.8	56.3	221 41.3	14.3																												
Pas. Mer.		22 14.8	v -0.4 d 1.2	v 1.2 d 0.2	v 2.4 d 0.0	v 2.2 d 0.1					<table border="0"> <tr> <td></td> <td></td> <td>A. H. S.</td> <td>Pas. Mer.</td> </tr> <tr> <td></td> <td></td> <td>o / h m</td> <td>h m</td> </tr> <tr> <td>Venus</td> <td>179 28.5</td> <td>10 21</td> <td></td> </tr> <tr> <td>Marte</td> <td>242 15.0</td> <td>6 09</td> <td></td> </tr> <tr> <td>Júpiter</td> <td>263 25.7</td> <td>4 44</td> <td></td> </tr> <tr> <td>Saturno</td> <td>209 32.7</td> <td>8 19</td> <td></td> </tr> </table>					A. H. S.	Pas. Mer.			o / h m	h m	Venus	179 28.5	10 21		Marte	242 15.0	6 09		Júpiter	263 25.7	4 44		Saturno	209 32.7	8 19	
		A. H. S.	Pas. Mer.																																		
		o / h m	h m																																		
Venus	179 28.5	10 21																																			
Marte	242 15.0	6 09																																			
Júpiter	263 25.7	4 44																																			
Saturno	209 32.7	8 19																																			

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna																
	A.H.G.		Dec.	A.H.G.		v	Dec.	d		P. H.	Náut.		Civil	16	17	18	19												
	h	m		h	m									h	m	h	m	h	m	h	m	h	m						
DOMINGO	16 00	183	34.4	S 8	45.8	140	20.9	5.4	S17	11.2	4.1	60.2	N 72	05	03	06	22	07	33	13	27	14	39	15	12	15	25		
	01	198	34.5		46.7	154	45.3	5.4	17	15.3	4.1	60.2	N 70	05	06	06	17	07	21	12	45	13	53	14	35	14	59		
	02	213	34.7		47.6	169	09.7	5.3	17	19.4	3.9	60.2	68	05	08	06	13	07	11	12	16	13	23	14	09	14	39		
	03	228	34.8	..	48.5	183	34.0	5.4	17	23.3	3.9	60.1	66	05	10	06	09	07	02	12	16	11	55	13	01	13	49	14	22
	04	243	34.9		49.4	197	58.4	5.3	17	27.2	3.7	60.1	64	05	11	06	06	06	55	11	55	13	01	13	49	14	22		
	05	258	35.1		50.4	212	22.7	5.3	17	30.9	3.5	60.1	62	05	12	06	04	06	49	11	37	12	43	13	32	14	09		
	06	273	35.2	S 8	51.3	226	47.0	5.3	S17	34.4	3.5	60.1	60	05	13	06	01	06	44	11	23	12	28	13	19	13	57		
	07	288	35.3		52.2	241	11.3	5.3	17	37.9	3.3	60.1	N 58	05	14	05	59	06	39	11	11	12	15	13	07	13	47		
	08	303	35.5		53.1	255	35.6	5.3	17	41.2	3.2	60.1	56	05	14	05	57	06	35	11	00	12	04	12	56	13	39		
	09	318	35.6	..	54.0	269	59.9	5.3	17	44.4	3.1	60.1	54	05	14	05	55	06	31	10	51	11	54	12	47	13	31		
	10	333	35.7		55.0	284	24.2	5.2	17	47.5	2.9	60.1	52	05	15	05	54	06	28	10	43	11	46	12	39	13	24		
	11	348	35.9		55.9	298	48.4	5.3	17	50.4	2.9	60.1	50	05	15	05	52	06	25	10	35	11	38	12	32	13	18		
	12	3	36.0	S 8	56.8	313	12.7	5.2	S17	53.3	2.7	60.1	45	05	14	05	48	06	18	10	19	11	21	12	16	13	04		
	13	18	36.1		57.7	327	36.9	5.3	17	56.0	2.6	60.1	N 40	05	14	05	45	06	12	10	06	11	08	12	04	12	04		
	14	33	36.2		58.6	342	01.2	5.2	17	58.6	2.4	60.1	35	05	12	05	42	06	07	09	55	10	56	11	53	12	43		
	15	48	36.4	8	59.6	356	25.4	5.3	18	01.0	2.4	60.0	30	05	11	05	39	06	03	09	45	10	46	11	43	12	35		
	16	63	36.5	9	00.5	10	49.7	5.2	18	03.4	2.2	60.0	20	05	07	05	33	05	55	09	29	10	29	11	27	12	20		
	17	78	36.6		01.4	25	13.9	5.3	18	05.6	2.0	60.0	N 10	05	03	05	27	05	49	09	14	10	14	11	12	12	07		
	18	93	36.8	S 9	02.3	39	38.2	5.2	S18	07.6	2.0	60.0	0	04	57	05	21	05	42	09	01	10	00	10	59	11	55		
	19	108	36.9		03.2	54	02.4	5.3	18	09.6	1.8	60.0	S 10	04	49	05	14	05	35	08	47	09	46	10	45	11	43		
	20	123	37.0		04.1	68	26.7	5.2	18	11.4	1.7	60.0	20	04	40	05	06	05	28	08	33	09	31	10	31	11	31		
	21	138	37.2	..	05.1	82	50.9	5.3	18	13.1	1.6	60.0	30	04	27	04	56	05	20	08	17	09	14	10	14	11	16		
	22	153	37.3		06.0	97	15.2	5.3	18	14.7	1.4	60.0	35	04	18	04	49	05	15	08	07	09	04	10	05	11	07		
23	168	37.4		06.9	111	39.5	5.2	18	16.1	1.3	60.0	40	04	08	04	42	05	10	07	56	08	53	09	54	10	58			
17 00	183	37.5	S 9	07.8	126	03.7	5.3	S18	17.4	1.2	59.9	45	03	56	04	33	05	03	07	44	08	40	09	41	10	46			
01	198	37.7		08.7	140	28.0	5.3	18	18.6	1.1	59.9	S 50	03	40	04	22	04	56	07	28	08	23	09	25	10	32			
02	213	37.8		09.6	154	52.3	5.3	18	19.7	0.9	59.9	52	03	32	04	16	04	52	07	21	08	16	09	18	10	26			
03	228	37.9	..	10.6	169	16.6	5.4	18	20.6	0.8	59.9	54	03	23	04	10	04	48	07	13	08	07	09	10	10	19			
04	243	38.1		11.5	183	41.0	5.3	18	21.4	0.7	59.9	56	03	13	04	04	04	44	07	04	07	58	09	01	10	11			
05	258	38.2		12.4	198	05.3	5.4	18	22.1	0.6	59.9	58	03	02	03	56	04	39	06	54	07	47	08	50	10	02			
06	273	38.3	S 9	13.3	212	29.7	5.3	S18	22.7	0.4	59.9	S 60	02	47	03	48	04	33	06	43	07	35	08	39	09	51			
07	288	38.4		14.2	226	54.0	5.4	18	23.1	0.3	59.8																		
08	303	38.6		15.1	241	18.4	5.4	18	23.4	0.2	59.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna													
09	318	38.7	..	16.1	255	42.8	5.5	18	23.6	0.0	59.8			Civil	Náut.	16	17	18	19										
10	333	38.8		17.0	270	07.3	5.4	18	23.6	0.1	59.8					h	m	h	m	h	m	h	m	h	m	h	m		
11	348	38.9		17.9	284	31.7	5.5	18	23.5	0.2	59.8	N 72	15	56	17	07	18	25	18	11	18	11	20	26					
12	3	39.1	S 9	18.8	298	56.2	5.5	S18	23.3	0.3	59.8	N 70	16	08	17	12	18	22	16	59	17	51	19	19	21	03			
13	18	39.2		19.7	313	20.7	5.5	18	23.0	0.4	59.8	68	16	19	17	16	18	20	17	41	18	37	19	56	21	28			
14	33	39.3		20.6	327	45.2	5.5	18	22.6	0.6	59.7	66	16	27	17	20	18	19	18	10	19	07	20	21	21	48			
15	48	39.4	..	21.5	342	09.7	5.6	18	22.0	0.7	59.7	64	16	34	17	23	18	18	18	32	19	29	20	41	22	03			
16	63	39.6		22.4	356	34.3	5.6	18	21.3	0.8	59.7	62	16	40	17	26	18	17	18	49	19	47	20	57	22	16			
17	78	39.7		23.4	10	58.9	5.7	18	20.5	1.0	59.7	60	16	46	17	28	18	16	19	04	20	02	21	11	22	27			
18	93	39.8	S 9	24.3	25	23.6	5.6	S18	19.5	1.1	59.7	N 58	16	51	17	30	18	16	19	16	20	15	21	22	22	37			
19	108	39.9		25.2	39	48.2	5.7	18	18.4	1.2	59.7	56	16	55	17	33	18	16	19	27	20	26	21	32	22	45			
20	123	40.1		26.1	54	12.9	5.7	18	17.2	1.3	59.6	54	16	59	17	34	18	15	19	37	20	35	21	41	22	52			
21	138	40.2	..	27.0	68	37.6	5.8	18	15.9	1.4	59.6	52	17	02	17	36	18	15	19	45	20	44	21	49	22	59			
22	153	40.3		27.9	83	02.4	5.8	18	14.5	1.6	59.6	50	17	05	17	38	18	15	19	53	20	51	21	56	23	05			
23	168	40.4		28.8	97	27.2	5.8	18	12.9	1.7	59.6	45	17	12	17	42	18	16	20	09	21	08	22	11	23	18			
18 00	183	40.6	S 9	29.7	111	52.0	5.9	S18	11.2	1.8	59.6	N 40	17	18	17	45	18	17	20	22	21	21	22	24	23	28			
01	198	40.7		30.7	126	16.9	5.9	18	09.4	1.9	59.6	35	17	23	17	48	18	18	20	33	21	33	22	34	23	37			
02	213	40.8		31.6	140	41.8	6.0	18	07.5	2.0	59.5	30	17	27	17	51	18	19	20	43	21	42	22	44	23	45			
03	228	40.9	..	32.5	155	06.8	6.0	18																					

T. M. G.	ARIES			VENUS -3.4			MARTE +0.6			JUPITER -2.0			SATURNO +0.8			ESTRELLAS			
	A.H.G.			A.H.G. Dec.			A.H.G. Dec.			A.H.G. Dec.			A.H.G. Dec.			Nombre	A. H. S.	Dec.	
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	
M I E R C O L E S	19 00	27	21.2	204	32.8	N 0 27.4	268	35.7	N21 54.5	290	44.2	N22 56.3	236	43.5	N13 14.2	Acamar	315	38.4	S40 23.5
	01	42	23.7	219	32.5	26.2	283	37.0	54.3	305	46.6	56.3	251	45.8	14.2	Achernar	335	46.2	S57 20.9
	02	57	26.2	234	32.1	25.0	298	38.2	54.2	320	49.0	56.3	266	48.0	14.1	Acruz	173	40.0	S62 58.4
	03	72	28.6	249	31.7	23.8	313	39.4	54.0	335	51.4	56.3	281	50.3	14.0	Adhara	255	33.6	S28 56.4
	04	87	31.1	264	31.3	22.6	328	40.6	53.8	350	53.8	56.3	296	52.5	14.0	Aldebaran	291	20.0	N16 27.9
	05	102	33.6	279	30.9	21.4	343	41.8	53.7	5	56.2	56.3	311	54.8	13.9				
	06	117	36.0	294	30.5	N 0 20.2	358	43.1	N21 53.5	20	58.7	N22 56.3	326	57.0	N13 13.8	Alioth	166	44.9	N56 04.8
	07	132	38.5	309	30.1	19.0	13	44.3	53.4	36	01.1	56.3	341	59.3	13.8	Alkaid	153	20.6	N49 25.5
	08	147	41.0	324	29.7	17.7	28	45.5	53.2	51	03.5	56.3	357	01.5	13.7	Al Na'ir	28	17.2	S47 04.2
	09	162	43.4	339	29.4	16.5	43	46.7	53.1	66	05.9	56.3	12	03.8	13.6	Alnilam	276	13.5	S 1 12.9
	10	177	45.9	354	29.0	15.3	58	47.9	52.9	81	08.3	56.3	27	06.0	13.5	Alphard	218	22.6	S 8 33.7
	11	192	48.3	9	28.6	14.1	73	49.2	52.7	96	10.8	56.3	42	08.3	13.5				
	12	207	50.8	24	28.2	N 0 12.9	88	50.4	N21 52.6	111	13.2	N22 56.3	57	10.5	N13 13.4	Alphecca	126	34.1	N26 47.6
	13	222	53.3	39	27.8	11.7	103	51.6	52.4	126	15.6	56.3	72	12.8	13.3	Alpheratz	358	11.0	N28 58.3
	14	237	55.7	54	27.4	10.5	118	52.8	52.3	141	18.0	56.3	87	15.0	13.3	Altair	62	34.5	N 8 48.8
	15	252	58.2	69	27.0	09.3	133	54.1	52.1	156	20.4	56.3	102	17.3	13.2	Ankaa	353	41.8	S42 25.6
	16	268	00.7	84	26.6	08.1	148	55.3	51.9	171	22.9	56.3	117	19.5	13.1	Antares	112	59.6	S26 22.9
	17	283	03.1	99	26.3	06.8	163	56.5	51.8	186	25.3	56.3	132	21.8	13.1				
	18	298	05.6	114	25.9	N 0 05.6	178	57.7	N21 51.6	201	27.7	N22 56.3	147	24.1	N13 13.0	Arcturus	146	20.6	N19 18.0
	19	313	08.1	129	25.5	04.4	193	59.0	51.5	216	30.1	56.3	162	26.3	12.9	Atria	108	25.9	S68 59.4
	20	328	10.5	144	25.1	03.2	209	00.2	51.3	231	32.5	56.3	177	28.6	12.9	Avior	234	29.0	S59 26.1
	21	343	13.0	159	24.7	02.0	224	01.4	51.2	246	35.0	56.3	192	30.8	12.8	Bellatrix	279	00.7	N 6 19.8
	22	358	15.5	174	24.3	N 0 00.8	239	02.7	51.0	261	37.4	56.3	207	33.1	12.7	Betelgeuse	271	30.2	N 7 24.2
23	13	17.9	189	23.9	S 0 00.4	254	03.9	50.8	276	39.8	56.3	222	35.3	12.7					
J U E V E S	20 00	28	20.4	204	23.5	S 0 01.6	269	05.1	N21 50.7	291	42.2	N22 56.3	237	37.6	N13 12.6	Canopus	264	07.9	S52 40.8
	01	43	22.8	219	23.2	02.8	284	06.4	50.5	306	44.7	56.3	252	39.8	12.5	Capella	281	13.9	N45 58.4
	02	58	25.3	234	22.8	04.1	299	07.6	50.4	321	47.1	56.3	267	42.1	12.5	Deneb	49	49.7	N45 12.5
	03	73	27.8	249	22.4	05.3	314	08.8	50.2	336	49.5	56.3	282	44.3	12.4	Denebola	183	01.4	N14 41.8
	04	88	30.2	264	22.0	06.5	329	10.1	50.0	351	51.9	56.3	297	46.6	12.3	Diphda	349	22.6	S18 06.4
	05	103	32.7	279	21.6	07.7	344	11.3	49.9	6	54.4	56.3	312	48.8	12.3				
	06	118	35.2	294	21.2	S 0 08.9	359	12.5	N21 49.7	21	56.8	N22 56.3	327	51.1	N13 12.2	Dubhe	194	25.2	N61 52.1
	07	133	37.6	309	20.8	10.1	14	13.8	49.6	36	59.2	56.3	342	53.4	12.1	Elnath	278	46.4	N28 35.2
	08	148	40.1	324	20.4	11.3	29	15.0	49.4	52	01.6	56.3	357	55.6	12.1	Eltanin	90	58.9	N51 29.9
	09	163	42.6	339	20.1	12.5	44	16.2	49.3	67	04.1	56.3	12	57.9	12.0	Enif	34	13.4	N 9 46.6
	10	178	45.0	354	19.7	13.8	59	17.5	49.1	82	06.5	56.3	28	00.1	11.9	Fomalhaut	15	53.4	S29 44.4
	11	193	47.5	9	19.3	15.0	74	18.7	48.9	97	08.9	56.3	43	02.4	11.9				
	12	208	50.0	24	18.9	S 0 16.2	89	19.9	N21 48.8	112	11.4	N22 56.4	58	04.6	N13 11.8	Gacrux	172	31.4	S56 59.2
	13	223	52.4	39	18.5	17.4	104	21.2	48.6	127	13.8	56.4	73	06.9	11.7	Gienah	176	20.3	S17 25.0
	14	238	54.9	54	18.1	18.6	119	22.4	48.5	142	16.2	56.4	88	09.1	11.7	Hadar	149	26.7	S60 15.9
	15	253	57.3	69	17.7	19.8	134	23.6	48.3	157	18.6	56.4	103	11.4	11.6	Hamal	328	30.8	N23 21.5
	16	268	59.8	84	17.3	21.0	149	24.9	48.1	172	21.1	56.4	118	13.6	11.5	Kaus Aust.	84	19.6	S34 23.7
	17	284	02.3	99	16.9	22.2	164	26.1	48.0	187	23.5	56.4	133	15.9	11.4				
	18	299	04.7	114	16.6	S 0 23.5	179	27.4	N21 47.8	202	25.9	N22 56.4	148	18.2	N13 11.4	Kochab	137	20.2	N74 15.0
	19	314	07.2	129	16.2	24.7	194	28.6	47.7	217	28.4	56.4	163	20.4	11.3	Markab	14	04.9	N15 05.4
	20	329	09.7	144	15.8	25.9	209	29.9	47.5	232	30.8	56.4	178	22.7	11.2	Menkar	314	42.9	N 4 00.2
	21	344	12.1	159	15.4	27.1	224	31.1	47.4	247	33.2	56.4	193	24.9	11.2	Menkent	148	39.7	S36 15.5
	22	359	14.6	174	15.0	28.3	239	32.3	47.2	262	35.7	56.4	208	27.2	11.1	Miaplacidus	221	45.5	S69 37.3
23	14	17.1	189	14.6	29.5	254	33.6	47.0	277	38.1	56.4	223	29.4	11.0					
V I E	21 00	29	19.5	204	14.2	S 0 30.7	269	34.8	N21 46.9	292	40.5	N22 56.4	238	31.7	N13 11.0	Mirfak	309	18.4	N49 46.9
	01	44	22.0	219	13.8	31.9	284	36.1	46.7	307	43.0	56.4	253	34.0	10.9	Nunki	76	31.7	S26 19.4
	02	59	24.4	234	13.4	33.2	299	37.3	46.6	322	45.4	56.4	268	36.2	10.8	Peacock	54	01.5	S56 48.5
	03	74	26.9	249	13.1	34.4	314	38.6	46.4	337	47.8	56.4	283	38.5	10.8	Pollux	244	00.6	N28 04.7
	04	89	29.4	264	12.7	35.6	329	39.8	46.2	352	50.3	56.4	298	40.7	10.7	Procyon	245	27.8	N 5 16.9
	05	104	31.8	279	12.3	36.8	344	41.1	46.1	7	52.7	56.4	313	43.0	10.6				
	06	119	34.3	294	11.9	S 0 38.0	359	42.3	N21 45.9	22	55.1	N22 56.4	328	45.2	N13 10.6	Rasalhague	96	31.6	N12 34.8
	07	134	36.8	309	11.5	39.2	14	43.5	45.8	37	57.6	56.4	343	47.5	10.5	Regulus	208	12.3	N12 04.5
	08	149	39.2	324	11.1	40.4	29	44.8	45.6	53	00.0	56.4	358	49.8	10.4	Rigel	281	37.7	S 8 13.6
	09	164	41.7	339	10.7	41.6	44	46.0	45.4	68	02.4	56.4	13	52.0	10.4	Rigel Kent.	140	29.1	S60 44.5
	10	179	44.2	354	10.3	42.9	59	47.3	45.3	83	04.9	56.4	28	54.3	10.3	Sabik	102	43.6	S15 41.7
	11	194	46.6	9	09.9	44.1	74	48.5	45.1	98	07.3	56.4	43	56.5	10.2				
	12	209	49.1	24	09.6	S 0 45.3	89	49.8	N21 45.0	113	09.7	N22 56.4	58	58.8	N13 10.2	Schedar	350	10.6	N56 25.1
	13	224	51.6	39	09.2	46.5	104	51.0	44.8	128	12.2	56.4	74	01.0	10.1	Shaula	96	58.7	S37 05.3
	14	239	54.0	54	08.8	47.7	119	52.3	44.7	143	14.6	56.4	89	03.3	10.1	Sirius	258	57.3	S16 41.1
	15	254	56.5	69	0														

T.M.G.	SOL			LUNA				Lat.	Crepúsculo			Orto Sol		Orto Luna											
	A.H.G.	Dec.	°	A.H.G.	v	Dec.	d		P.H.	Náut.	Civil	h	m	19	20	21	22								
																		h	m	h	m	h	m	h	m
19 M I E R C O L E S	183	43.4	S 9	98	01.2	7.0	S16	55.9	4.5	59.1	N 72	05	16	06	35	07	48	16	03	15	54	15	48	15	42
	198	43.5		112	27.2	7.1	16	51.4	4.6	59.1	N 70	05	18	06	29	07	34	15	25	15	31	15	33	15	34
	213	43.7		126	53.3	7.1	16	46.8	4.8	59.1	68	05	19	06	23	07	22	14	59	15	13	15	22	15	28
	228	43.8		141	19.4	7.2	16	42.0	4.8	59.0	66	05	19	06	19	07	12	14	39	14	58	15	12	15	22
	243	43.9		155	45.6	7.2	16	37.2	4.9	59.0	64	05	20	06	15	07	04	14	22	14	46	15	04	15	18
	258	44.0		170	11.8	7.3	16	32.3	5.0	59.0	62	05	20	06	12	06	57	14	09	14	36	14	57	15	14
	273	44.1	S 9	184	38.1	7.4	S16	27.3	5.2	59.0	60	05	20	06	08	06	51	13	57	14	27	14	51	15	10
	288	44.2		199	04.5	7.4	16	22.1	5.2	58.9	N 58	05	20	06	06	06	46	13	47	14	19	14	45	15	07
	303	44.3		213	30.9	7.5	16	16.9	5.3	58.9	56	05	20	06	03	06	41	13	39	14	13	14	40	15	05
	318	44.5	9	227	57.4	7.5	16	11.6	5.4	58.9	54	05	20	06	01	06	37	13	31	14	06	14	36	15	02
	333	44.6	10	242	23.9	7.6	16	06.2	5.6	58.9	52	05	19	05	59	06	33	13	24	14	01	14	32	15	00
	348	44.7		256	50.5	7.7	16	00.6	5.6	58.9	50	05	19	05	57	06	30	13	18	13	56	14	29	14	58
	3	44.8	S10	271	17.2	7.7	S15	55.0	5.7	58.8	45	05	18	05	52	06	22	13	04	13	45	14	21	14	53
	18	44.9		285	43.9	7.8	15	49.3	5.8	58.8	N 40	05	17	05	48	06	16	12	53	13	36	14	14	14	50
	33	45.0		300	10.7	7.8	15	43.5	5.9	58.8	35	05	15	05	44	06	10	12	43	13	28	14	09	14	46
	48	45.1		314	37.5	7.9	15	37.6	5.9	58.8	30	05	13	05	41	06	05	12	35	13	21	14	04	14	43
	63	45.2		329	04.4	8.0	15	31.7	6.1	58.8	20	05	08	05	34	05	56	12	20	13	09	13	55	14	38
	78	45.4		343	31.4	8.0	15	25.6	6.2	58.7	N 10	05	03	05	27	05	49	12	07	12	59	13	48	14	34
	93	45.5	S10	357	58.4	8.1	S15	19.4	6.2	58.7	0	04	56	05	20	05	41	11	55	12	49	13	41	14	30
	108	45.6		12	25.5	8.1	15	13.2	6.4	58.7	S 10	04	48	05	13	05	34	11	43	12	40	13	34	14	26
	123	45.7		26	52.6	8.2	15	06.8	6.4	58.7	20	04	37	05	04	05	26	11	31	12	29	13	26	14	21
	138	45.8		41	19.8	8.3	15	00.4	6.5	58.6	30	04	23	04	52	05	17	11	16	12	17	13	17	14	16
	153	45.9		55	47.1	8.3	14	53.9	6.6	58.6	35	04	14	04	45	05	11	11	07	12	10	13	12	14	13
168	46.0		70	14.4	8.4	14	47.3	6.7	58.6	40	04	04	04	37	05	05	10	58	12	02	13	07	14	10	
183	46.1	S10	84	41.8	8.5	S14	40.6	6.7	58.6	45	03	50	04	27	04	58	10	46	11	53	13	00	14	06	
198	46.2		99	09.3	8.5	14	33.9	6.9	58.5	S 50	03	33	04	15	04	49	10	32	11	42	12	52	14	02	
213	46.4		113	36.8	8.6	14	27.0	6.9	58.5	52	03	24	04	09	04	45	10	26	11	37	12	48	14	00	
228	46.5		128	04.4	8.6	14	20.1	7.0	58.5	54	03	15	04	03	04	41	10	19	11	31	12	44	13	57	
243	46.6		142	32.0	8.7	14	13.1	7.1	58.5	56	03	04	03	56	04	36	10	11	11	25	12	40	13	55	
258	46.7		156	59.7	8.8	14	06.0	7.1	58.5	58	02	51	03	47	04	31	10	02	11	18	12	35	13	52	
273	46.8	S10	171	27.5	8.8	S13	58.9	7.3	58.4	0	02	35	03	38	04	24	09	51	11	09	12	29	13	49	
288	46.9		185	55.3	8.9	13	51.6	7.3	58.4	Lat.	Ocaso Sol	Crepúsculo			Ocaso Luna										
303	47.0		200	23.2	9.0	13	44.3	7.3	58.4			Civil	Náut.	19	20	21	22								
318	47.1		214	51.2	9.0	13	37.0	7.5	58.4					h	m	h	m	h	m	h	m				
333	47.2		229	19.2	9.1	13	29.5	7.5	58.3	N 72	15	39	16	53	18	11	20	26	22	26	24	17	00	17	
348	47.3		243	47.3	9.1	13	22.0	7.6	58.3	N 70	15	54	16	59	18	10	21	03	22	47	24	30	00	30	
3	47.4	S10	258	15.4	9.2	S13	14.4	7.7	58.3	68	16	06	17	05	18	09	21	28	23	04	24	40	00	40	
18	47.5		272	43.6	9.3	13	06.7	7.7	58.3	66	16	16	17	09	18	09	21	48	23	18	24	48	00	48	
33	47.6		287	11.9	9.3	12	59.0	7.8	58.3	64	16	24	17	13	18	08	22	03	23	29	24	56	00	56	
48	47.8		301	40.2	9.4	12	51.2	7.9	58.2	62	16	31	17	17	18	08	22	16	23	39	25	02	01	02	
63	47.9		316	08.6	9.4	12	43.3	8.0	58.2	60	16	37	17	20	18	08	22	27	23	47	25	07	01	07	
78	48.0		330	37.0	9.5	12	35.3	8.0	58.2	N 58	16	43	17	23	18	08	22	37	23	54	25	11	01	11	
93	48.1	S10	345	05.5	9.6	S12	27.3	8.1	58.2	56	16	47	17	25	18	09	22	45	24	00	00	00	01	15	
108	48.2		359	34.1	9.6	12	19.2	8.1	58.1	54	16	52	17	28	18	09	22	52	24	06	00	06	01	19	
123	48.3		14	02.7	9.7	12	11.1	8.2	58.1	52	16	56	17	30	18	09	22	59	24	11	00	11	01	22	
138	48.4		28	31.4	9.8	12	02.9	8.2	58.1	50	16	59	17	32	18	10	23	05	24	15	00	15	01	25	
153	48.5		43	00.2	9.8	11	54.7	8.4	58.1	45	17	07	17	37	18	11	23	18	24	25	00	25	01	32	
168	48.6		57	29.0	9.8	11	46.3	8.4	58.0	N 40	17	14	17	41	18	13	23	28	24	33	00	33	01	37	
183	48.7	S10	71	57.8	9.9	S11	37.9	8.4	58.0	35	17	19	17	45	18	14	23	37	24	40	00	40	01	42	
198	48.8		86	26.7	10.0	11	29.5	8.5	58.0	30	17	24	17	48	18	16	23	45	24	46	00	46	01	46	
213	48.9		100	55.7	10.1	11	21.0	8.5	58.0	20	17	33	17	55	18	21	23	59	24	57	00	57	01	53	
228	49.0		115	24.8	10.1	11	12.5	8.7	58.0	N 10	17	41	18	02	18	27	24	10	00	10	01	06	01	59	
243	49.1		129	53.9	10.1	11	03.8	8.6	57.9	0	17	48	18	09	18	34	24	21	00	21	01	14	02	04	
258	49.2		144	23.0	10.2	10	55.2	8.7	57.9	S 10	17	56	18	17	18	42	24	32	00	32	01	23	02	10	
273	49.3	S10	158	52.2	10.3	S10	46.5	8.8	57.9	20	18	04	18	26	18	53	24	44	00	44	01	32	02	16	
288	49.4		173	21.5	10.3	10	37.7	8.8	57.9	30	18	13	18	38	19	07	00	08	00	57	01	42	02	23	
303	49.5		187	50.8	10.4	10	28.9	8.9	57.8	35	18	19	18	45	19	16	00	17	01	05	01	48	02	27	
318	49.6		202	20.2	10.5	10	20.0	8.9	57.8	40	18	25	18	53	19	27	00	27	01	13	01	54	02	31	
333	49.7		216	49.7	10.4	10	11.1	9.0	57.8	45	18	32	19	03	19	41	00	39	01	23	02	02	02	36	
348	49.8		231	19.1	10.6	10	02.1	9.0	57.8	S 50	18	41	19	16	19	58	00	54	01	35	02	11	02	42	
3	49.9	S10	245	48.7	10.6	S 9	53.1	9.1	57.7	52	18	45	19	22	20	07	01	00	01	41	02	15	02	45	
18	50.0		260	18.3	10.6	9	44.0	9.1	57.7	54	18	50	19	28	20	17	01	08	01	47	02	20	02	48	
33	50.1		274	47.9	10																				

T. M. G.	ARIES			VENUS -3.4			MARTE +0.5			JUPITER -2.1			SATURNO +0.8			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
22	00	30 18.7	204 04.9 S 0	59.9	270 04.9 N21	43.1	293 39.0 N22	56.4	239 25.9 N13	09.4	Acamar	315 38.4 S40	23.5					
	01	45 21.1	219 04.5 1	01.1	285 06.1	42.9	308 41.5	56.4	254 28.2	09.3	Achernar	335 46.2 S57	21.0					
	02	60 23.6	234 04.1	02.3	300 07.4	42.7	323 43.9	56.4	269 30.4	09.3	Acrux	173 39.9 S62	58.4					
	03	75 26.1	249 03.7	03.5	315 08.6	42.6	338 46.4	56.4	284 32.7	09.2	Adhara	255 33.5 S28	56.4					
	04	90 28.5	264 03.3	04.7	330 09.9	42.4	353 48.8	56.4	299 34.9	09.1	Aldebaran	291 20.0 N16	27.9					
	05	105 31.0	279 02.9	05.9	345 11.2	42.3	8 51.2	56.4	314 37.2	09.1								
	06	120 33.4	294 02.5 S 1	07.1	0 12.4 N21	42.1	23 53.7 N22	56.4	329 39.5 N13	09.0	Alioth	166 44.9 N56	04.8					
	07	135 35.9	309 02.1	08.4	15 13.7	41.9	38 56.1	56.4	344 41.7	08.9	Alkaid	153 20.6 N49	25.5					
	08	150 38.4	324 01.8	09.6	30 14.9	41.8	53 58.6	56.4	359 44.0	08.9	Al Na'ir	28 17.2 S47	04.2					
	09	165 40.8	339 01.4	10.8	45 16.2	41.6	69 01.0	56.4	14 46.2	08.8	Alnilam	276 13.5 S 1	12.9					
	10	180 43.3	354 01.0	12.0	60 17.5	41.5	84 03.5	56.4	29 48.5	08.7	Alphard	218 22.6 S 8	33.7					
	11	195 45.8	9 00.6	13.2	75 18.7	41.3	99 05.9	56.4	44 50.8	08.7								
	12	210 48.2	24 00.2 S 1	14.4	90 20.0 N21	41.2	114 08.4 N22	56.4	59 53.0 N13	08.6	Alphecca	126 34.1 N26	47.6					
	13	225 50.7	38 59.8	15.6	105 21.3	41.0	129 10.8	56.4	74 55.3	08.5	Alpheratz	358 11.0 N28	58.3					
	14	240 53.2	53 59.4	16.9	120 22.5	40.8	144 13.2	56.4	89 57.5	08.5	Altair	62 34.5 N 8	48.8					
	15	255 55.6	68 59.0	18.1	135 23.8	40.7	159 15.7	56.4	104 59.8	08.4	Ankaa	353 41.8 S42	25.6					
	16	270 58.1	83 58.6	19.3	150 25.1	40.5	174 18.1	56.4	120 02.1	08.3	Antares	112 59.6 S26	22.9					
	17	286 00.5	98 58.2	20.5	165 26.3	40.4	189 20.6	56.4	135 04.3	08.3								
	18	301 03.0	113 57.8 S 1	21.7	180 27.6 N21	40.2	204 23.0 N22	56.4	150 06.6 N13	08.2	Arcturus	146 20.6 N19	18.0					
	19	316 05.5	128 57.4	22.9	195 28.9	40.0	219 25.5	56.4	165 08.9	08.2	Atria	108 25.9 S68	59.4					
	20	331 07.9	143 57.1	24.1	210 30.1	39.9	234 27.9	56.4	180 11.1	08.1	Avior	234 29.0 S59	26.1					
	21	346 10.4	158 56.7	25.4	225 31.4	39.7	249 30.4	56.4	195 13.4	08.0	Bellatrix	279 00.6 N 6	19.8					
	22	1 12.9	173 56.3	26.6	240 32.7	39.6	264 32.8	56.4	210 15.6	08.0	Betelgeuse	271 30.2 N 7	24.2					
23	16 15.3	188 55.9	27.8	255 33.9	39.4	279 35.3	56.4	225 17.9	07.9									
23	00	31 17.8	203 55.5 S 1	29.0	270 35.2 N21	39.2	294 37.7 N22	56.4	240 20.2 N13	07.8	Canopus	264 07.8 S52	40.8					
	01	46 20.3	218 55.1	30.2	285 36.5	39.1	309 40.2	56.4	255 22.4	07.8	Capella	281 13.9 N45	58.4					
	02	61 22.7	233 54.7	31.4	300 37.8	38.9	324 42.6	56.4	270 24.7	07.7	Deneb	49 49.7 N45	12.5					
	03	76 25.2	248 54.3	32.6	315 39.0	38.8	339 45.1	56.4	285 27.0	07.6	Denebola	183 01.3 N14	41.8					
	04	91 27.7	263 53.9	33.9	330 40.3	38.6	354 47.5	56.4	300 29.2	07.6	Diphda	349 22.6 S18	06.4					
	05	106 30.1	278 53.5	35.1	345 41.6	38.4	9 50.0	56.4	315 31.5	07.5								
	06	121 32.6	293 53.1 S 1	36.3	0 42.9 N21	38.3	24 52.5 N22	56.4	330 33.8 N13	07.4	Dubhe	194 25.1 N61	52.1					
	07	136 35.0	308 52.7	37.5	15 44.1	38.1	39 54.9	56.4	345 36.0	07.4	Elnath	278 46.4 N28	35.2					
	08	151 37.5	323 52.3	38.7	30 45.4	38.0	54 57.4	56.4	0 38.3	07.3	Eltanin	90 58.9 N51	29.9					
	09	166 40.0	338 52.0	39.9	45 46.7	37.8	69 59.8	56.4	15 40.5	07.3	Enif	34 13.4 N 9	46.6					
	10	181 42.4	353 51.6	41.1	60 48.0	37.7	85 02.3	56.4	30 42.8	07.2	Fomalhaut	15 53.4 S29	44.4					
	11	196 44.9	8 51.2	42.4	75 49.2	37.5	100 04.7	56.5	45 45.1	07.1								
	12	211 47.4	23 50.8 S 1	43.6	90 50.5 N21	37.3	115 07.2 N22	56.5	60 47.3 N13	07.1	Gacrux	172 31.4 S56	59.2					
	13	226 49.8	38 50.4	44.8	105 51.8	37.2	130 09.6	56.5	75 49.6	07.0	Gienah	176 20.3 S17	25.0					
	14	241 52.3	53 50.0	46.0	120 53.1	37.0	145 12.1	56.5	90 51.9	06.9	Hadar	149 26.7 S60	15.9					
	15	256 54.8	68 49.6	47.2	135 54.4	36.9	160 14.5	56.5	105 54.1	06.9	Hamal	328 30.8 N23	21.5					
	16	271 57.2	83 49.2	48.4	150 55.6	36.7	175 17.0	56.5	120 56.4	06.8	Kaus Aust.	84 19.6 S34	23.7					
	17	286 59.7	98 48.8	49.7	165 56.9	36.5	190 19.5	56.5	135 58.7	06.7								
	18	302 02.2	113 48.4 S 1	50.9	180 58.2 N21	36.4	205 21.9 N22	56.5	151 00.9 N13	06.7	Kochab	137 20.2 N74	14.9					
	19	317 04.6	128 48.0	52.1	195 59.5	36.2	220 24.4	56.5	166 03.2	06.6	Markab	14 04.9 N15	05.4					
	20	332 07.1	143 47.6	53.3	211 00.8	36.1	235 26.8	56.5	181 05.5	06.6	Menkar	314 42.9 N 4	00.2					
	21	347 09.5	158 47.2	54.5	226 02.1	35.9	250 29.3	56.5	196 07.7	06.5	Menkent	148 39.7 S36	15.5					
	22	2 12.0	173 46.8	55.7	241 03.3	35.7	265 31.8	56.5	211 10.0	06.4	Miaplacidus	221 45.5 S69	37.3					
23	17 14.5	188 46.4	56.9	256 04.6	35.6	280 34.2	56.5	226 12.3	06.4									
24	00	32 16.9	203 46.0 S 1	58.2	271 05.9 N21	35.4	295 36.7 N22	56.5	241 14.5 N13	06.3	Mirfak	309 18.4 N49	46.9					
	01	47 19.4	218 45.6	59.4	286 07.2	35.3	310 39.1	56.5	256 16.8	06.2	Nunki	76 31.7 S26	19.4					
	02	62 21.9	233 45.3	00.6	301 08.5	35.1	325 41.6	56.5	271 19.1	06.2	Peacock	54 01.5 S56	48.5					
	03	77 24.3	248 44.9	01.8	316 09.8	34.9	340 44.1	56.5	286 21.3	06.1	Pollux	244 00.5 N28	04.7					
	04	92 26.8	263 44.5	03.0	331 11.1	34.8	355 46.5	56.5	301 23.6	06.0	Procyon	245 27.8 N 5	16.9					
	05	107 29.3	278 44.1	04.2	346 12.4	34.6	10 49.0	56.5	316 25.9	06.0								
	06	122 31.7	293 43.7 S 2	05.4	1 13.6 N21	34.5	25 51.4 N22	56.5	331 28.1 N13	05.9	Rasalhague	96 31.6 N12	34.8					
	07	137 34.2	308 43.3	06.7	16 14.9	34.3	40 53.9	56.5	346 30.4	05.9	Regulus	208 12.3 S12	04.5					
	08	152 36.7	323 42.9	07.9	31 16.2	34.2	55 56.4	56.5	1 32.7	05.8	Rigel	281 37.7 S 8	13.6					
	09	167 39.1	338 42.5	09.1	46 17.5	34.0	70 58.8	56.5	16 34.9	05.7	Rigel Kent.	140 29.1 S60	44.5					
	10	182 41.6	353 42.1	10.3	61 18.8	33.8	86 01.3	56.5	31 37.2	05.7	Sabik	102 43.6 S15	41.7					
	11	197 44.0	8 41.7	11.5	76 20.1	33.7	101 03.8	56.5	46 39.5	05.6								
	12	212 46.5	23 41.3 S 2	12.7	91 21.4 N21	33.5	116 06.2 N22	56.5	61 41.7 N13	05.5	Schedar	350 10.6 N56	25.1					
	13	227 49.0	38 40.9	13.9	106 22.7	33.4	131 08.7	56.5	76 44.0	05.5	Shaula	96 58.7 S37	05.3					
	14	242 51.4	53 40.5	15.2	121 24.0	33.2	146 11.1	56.5	91 46.3	05.4	Sirius	258 57.3 S16	41.1					
	15	257 53.9	68 40.1	16.4	136 25.3	33.0	161 13.6	56.5	106 48.5	05.4	Spica	158 59.9 S11	02.6					
	16	272 56.4	83 39.7	17.6	151 26.6	32.9	176 16.1	56.5	121 50.8	05.3	Suhail	223 12.3 S43	20.4					
	17	287 58.8	98 39.3	18.8	166 27.9	32.7	191 18.5	56.5	136 53.1	05.2								
	18	303 01.3	113 38.9 S 2	20.0	181 29.2 N21	32.6	206 21.0 N22	56.5	151 55.3 N13	05.2	Vega	80 57.3 N38	46.2					
	19	318 03.8	128 38.5	21.2	196 30.5	32.4	221 23.5	56.5	166 57.6	05.1	Zuben'ubi	137 35.5 S15	56.8					
	20	333 06.2	143 38.1	22.4	211 31.8	32.2	236 25.9	56.5	181 59.9	05.0								
	21	348 08.7	158 37.7	23.7	226 33.1	32.1	251 28.4	56.5	197 02.1	05.0								
	22	3 11.1	173 37.3	24.9	241 34.4	31.9	266 30.9	56.5	212 04.4	04.9	Venus	172 37.7	10 25					
23	18 13.6	188 36.9	26.1	256 35.7	31.8	281 33.3	56.5	227 06.7	04.9	Marte	239 17.4	5 57						
										Júpiter	263 19.9	4 21						
										Saturno	209 02.4	7 57						
Pas. Mer.	21 51.2	v -0.4	d 1.2	v 1.3	d 0.2	v 2.5	d 0.0	v 2.3	d 0.1									

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna																				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P. H.	Náut.		Civil	22	23	24	25																
										h		m	h	m	h	m	h	m													
22 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	183	51.1	S10	56.0	59	47.3	11.2	S	8	01.5	9.5	57.5	N 72	05	29	06	48	08	04	15	42	15	37	15	31	15	26				
	198	51.2		56.9	74	17.5	11.3		7	52.0	9.6	57.5	N 70	05	29	06	40	07	47	15	34	15	35	15	35	15	35	15	35		
	213	51.3		57.8	88	47.8	11.3		7	42.4	9.6	57.4	68	05	29	06	34	07	34	15	28	15	33	15	38	15	43	15	43		
	228	51.4		58.7	103	18.1	11.4		7	32.8	9.7	57.4	66	05	28	06	28	07	23	15	22	15	31	15	40	15	49	15	49		
	243	51.5	10	59.6	117	48.5	11.4		7	23.1	9.7	57.4	64	05	28	06	23	07	14	15	18	15	30	15	42	15	54	15	54		
	258	51.6	11	00.4	132	18.9	11.4		7	13.4	9.7	57.4	62	05	28	06	19	07	06	15	14	15	29	15	44	15	59	15	59		
	273	51.7	S11	01.3	146	49.3	11.5	S	7	03.7	9.7	57.3	60	05	27	06	16	06	59	15	10	15	28	15	45	16	03	16	03		
	288	51.8		02.2	161	19.8	11.5		6	54.0	9.8	57.3	N 58	05	26	06	12	06	53	15	07	15	27	15	47	16	06	16	06		
	303	51.9		03.1	175	50.3	11.6		6	44.2	9.8	57.3	56	05	26	06	09	06	48	15	05	15	27	15	48	16	09	16	09		
	318	52.0		04.0	190	20.9	11.6		6	34.4	9.8	57.3	54	05	25	06	06	06	43	15	02	15	26	15	49	16	12	16	12		
	333	52.0		04.9	204	51.5	11.7		6	24.6	9.9	57.3	52	05	24	06	04	06	38	15	00	15	25	15	50	16	15	16	15		
	348	52.1		05.7	219	22.2	11.7		6	14.7	9.8	57.2	50	05	24	06	01	06	35	14	58	15	25	15	51	16	17	16	17		
	3	52.2	S11	06.6	233	52.9	11.7	S	6	04.9	9.9	57.2	45	05	22	05	56	06	26	14	53	15	24	15	53	16	22	16	22		
	18	52.3		07.5	248	23.6	11.8		5	55.0	10.0	57.2	N 40	05	20	05	51	06	19	14	50	15	23	15	55	16	27	16	27		
	33	52.4		08.4	262	54.4	11.9		5	45.0	9.9	57.2	35	05	17	05	47	06	13	14	46	15	22	15	56	16	30	16	30		
	48	52.5		09.3	277	25.3	11.8		5	35.1	10.0	57.1	30	05	15	05	43	06	07	14	43	15	21	15	57	16	34	16	34		
	63	52.6		10.2	291	56.1	11.9		5	25.1	10.0	57.1	20	05	09	05	35	05	58	14	38	15	20	16	00	16	40	16	40		
	78	52.7		11.0	306	27.0	12.0		5	15.1	10.0	57.1	N 10	05	03	05	28	05	49	14	34	15	18	16	02	16	45	16	45		
	93	52.8	S11	11.9	320	58.0	12.0	S	5	05.1	10.0	57.1	0	04	55	05	20	05	41	14	30	15	17	16	04	16	50	16	50		
	108	52.9		12.8	335	29.0	12.0		4	55.1	10.0	57.1	S 10	04	46	05	11	05	33	14	26	15	16	16	06	16	55	16	55		
	123	53.0		13.7	350	00.0	12.0		4	45.1	10.1	57.0	20	04	35	05	01	05	24	14	21	15	15	16	08	17	00	17	00		
	138	53.1		14.6	4	31.0	12.1		4	35.0	10.1	57.0	30	04	20	04	49	05	14	14	16	15	14	16	10	17	06	17	06		
	153	53.2		15.4	19	02.1	12.2		4	24.9	10.1	57.0	35	04	10	04	42	05	08	14	13	15	13	16	12	17	09	17	09		
168	53.2		16.3	33	33.3	12.1		4	14.8	10.1	57.0	40	03	59	04	33	05	01	14	10	15	12	16	13	17	13	17	13			
45				33	33.3	12.1		4	14.8	10.1	57.0	45	03	44	04	22	04	53	14	06	15	11	16	15	17	18	17	18			
23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	183	53.3	S11	17.2	48	04.4	12.2	S	4	04.7	10.1	56.9	S 50	03	26	04	09	04	44	14	02	15	10	16	17	17	23	17	23		
	198	53.4		18.1	62	35.6	12.3		3	54.6	10.1	56.9	52	03	17	04	03	04	39	14	00	15	10	16	19	17	26	17	26		
	213	53.5		19.0	77	06.9	12.2		3	44.5	10.2	56.9	54	03	06	03	56	04	34	13	57	15	09	16	20	17	29	17	29		
	228	53.6		19.8	91	38.1	12.3		3	34.3	10.1	56.9	56	02	54	03	48	04	29	13	55	15	08	16	21	17	32	17	32		
	243	53.7		20.7	106	09.4	12.4		3	24.2	10.2	56.9	58	02	40	03	39	04	23	13	52	15	08	16	22	17	36	17	36		
	258	53.8		21.6	120	40.8	12.3		3	14.0	10.1	56.8	S 60	02	23	03	28	04	16	13	49	15	07	16	24	17	39	17	39		
	273	53.9	S11	22.5	135	12.1	12.4	S	3	03.9	10.2	56.8																			
	288	54.0		23.3	149	43.5	12.5		2	53.7	10.2	56.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna														
	303	54.0		24.2	164	15.0	12.4		2	43.5	10.2	56.8			Civil	Náut.	22	23	24	25											
	318	54.1		25.1	178	46.4	12.5		2	33.3	10.2	56.8																			
	333	54.2		26.0	193	17.9	12.5		2	23.1	10.2	56.7	N 72	15	23	16	39	17	58	00	17	02	04	03	47	05	28	05	28		
	348	54.3		26.8	207	49.4	12.5		2	12.9	10.2	56.7	N 70	15	40	16	47	17	58	00	30	02	09	03	46	05	21	05	21		
	3	54.4	S11	27.7	222	20.9	12.6	S	2	02.7	10.2	56.7	68	15	54	16	53	17	58	00	40	02	14	03	45	05	15	05	15		
	18	54.5		28.6	236	52.5	12.6		1	52.5	10.2	56.7	66	16	05	16	59	17	59	00	48	02	18	03	45	05	10	05	10		
	33	54.6		29.5	251	24.1	12.6		1	42.3	10.3	56.6	64	16	14	17	04	17	59	00	56	02	21	03	44	05	06	05	06		
	48	54.7		30.3	265	55.7	12.7		1	32.0	10.2	56.6	62	16	22	17	08	18	00	01	02	02	23	03	44	05	03	05	03		
	63	54.7		31.2	280	27.4	12.6		1	21.8	10.2	56.6	60	16	29	17	12	18	01	01	07	02	26	03	44	05	00	05	00		
	78	54.7		32.1	294	59.0	12.7		1	11.6	10.2	56.6	N 58	16	35	17	16	18	01	01	11	02	28	03	43	04	57	04	57		
	302	02.4	S11	33.0	309	30.7	12.8	S	1	01.4	10.2	56.6	56	16	40	17	19	18	02	01	15	02	30	03	43	04	55	04	55		
	317	04.6		33.8	324	02.5	12.7		0	51.2	10.2	56.5	54	16	45	17	21	18	03	01	19	02	32	03	43	04	53	04	53		
	332	07.1		34.7	338	34.2	12.8		0	41.0	10.2	56.5	52	16	49	17	24	18	03	01	22	02	33	03	43	04	51	04	51		
	347	09.5		35.6	353	06.0	12.7		0	30.8	10.2	56.5	50	16	53	17	27	18	04	01	25	02	34	03	42	04	49	04	49		
	2	12.0		36.5	7	37.7	12.9		0	20.6	10.2	56.5	45	17	02	17	32	18	06	01	32	02	37	03	42	04	45	04	45		
17	14.5		37.3	22	09.6	12.8</																									

T. M. G.	ARIES		VENUS -3.4		MARTE +0.5		JUPITER -2.1		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
25 ^d 00 01 02 03 04 05 06 07 08 M A R T E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	33 16.1	203 36.5 S	2 27.3	271 37.0 N21	31.6	296 35.8 N22	56.5	242 08.9 N13	04.8	Acomar	315 38.4 S40	23.6	
	48 18.5	218 36.1	28.5	286 38.3	31.5	311 38.3	56.5	257 11.2	04.7	Achernar	335 46.2 S57	21.0	
	63 21.0	233 35.7	29.7	301 39.6	31.3	326 40.8	56.5	272 13.5	04.7	Acrux	173 39.9 S62	58.4	
	78 23.5	248 35.3	30.9	316 40.9	31.1	341 43.2	56.5	287 15.8	04.6	Adhara	255 33.5 S28	56.4	
	93 25.9	263 34.9	32.2	331 42.2	31.0	356 45.7	56.5	302 18.0	04.5	Aldebaran	291 20.0 N16	27.9	
	108 28.4	278 34.5	33.4	346 43.5	30.8	11 48.2	56.6	317 20.3	04.5				
	123 30.9	293 34.2 S	2 34.6	1 44.8 N21	30.7	26 50.6 N22	56.6	332 22.6 N13	04.4	Alioth	166 44.9 N56	04.8	
	138 33.3	308 33.8	35.8	16 46.1	30.5	41 53.1	56.6	347 24.8	04.4	Alkaid	153 20.6 N49	25.5	
	153 35.8	323 33.4	37.0	31 47.4	30.3	56 55.6	56.6	2 27.1	04.3	Al Na'ir	28 17.3 S47	04.2	
	M 168 38.3	338 33.0	38.2	46 48.7	30.2	71 58.1	56.6	17 29.4	04.2	Alnilam	276 13.4 S 1	12.9	
	A 183 40.7	353 32.6	39.4	61 50.0	30.0	87 00.5	56.6	32 31.6	04.2	Alphard	218 22.6 S 8	33.7	
	T 198 43.2	8 32.2	40.7	76 51.3	29.9	102 03.0	56.6	47 33.9	04.1				
	E 213 45.6	23 31.8 S	2 41.9	91 52.6 N21	29.7	117 05.5 N22	56.6	62 36.2 N13	04.1	Alphecca	126 34.1 N26	47.6	
	S 228 48.1	38 31.4	43.1	106 53.9	29.5	132 07.9	56.6	77 38.5	04.0	Alpheratz	358 11.0 N28	58.3	
	243 50.6	53 31.0	44.3	121 55.2	29.4	147 10.4	56.6	92 40.7	03.9	Altair	62 34.5 N 8	48.8	
	258 53.0	68 30.6	45.5	136 56.5	29.2	162 12.9	56.6	107 43.0	03.9	Ankaa	353 41.9 S42	25.6	
	273 55.5	83 30.2	46.7	151 57.8	29.1	177 15.4	56.6	122 45.3	03.8	Antares	112 59.6 S26	22.9	
	288 58.0	98 29.8	47.9	166 59.2	28.9	192 17.8	56.6	137 47.5	03.7				
	304 00.4	113 29.4 S	2 49.1	182 00.5 N21	28.8	207 20.3 N22	56.6	152 49.8 N13	03.7	Arcturus	146 20.6 N19	18.0	
	319 02.9	128 29.0	50.4	197 01.8	28.6	222 22.8	56.6	167 52.1	03.6	Atria	108 26.0 S68	59.3	
	334 05.4	143 28.6	51.6	212 03.1	28.4	237 25.3	56.6	182 54.4	03.6	Avior	234 28.9 S59	26.1	
	349 07.8	158 28.2	52.8	227 04.4	28.3	252 27.8	56.6	197 56.6	03.5	Bellatrix	279 00.6 N 6	19.8	
	4 10.3	173 27.8	54.0	242 05.7	28.1	267 30.2	56.6	212 58.9	03.4	Betelgeuse	271 30.2 N 7	24.2	
19 12.8	188 27.4	55.2	257 07.0	28.0	282 32.7	56.6	228 01.2	03.4					
26 ^d 00 01 02 03 04 05 06 07 08 M I E R C O L E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	34 15.2	203 27.0 S	2 56.4	272 08.3 N21	27.8	297 35.2 N22	56.6	243 03.5 N13	03.3	Canopus	264 07.8 S52	40.8	
	49 17.7	218 26.6	57.6	287 09.7	27.6	312 37.7	56.6	258 05.7	03.3	Capella	281 13.9 N45	58.4	
	64 20.1	233 26.2	58.9	302 11.0	27.5	327 40.1	56.6	273 08.0	03.2	Deneb	49 49.7 N45	12.5	
	79 22.6	248 25.8	00.1	317 12.3	27.3	342 42.6	56.6	288 10.3	03.1	Denebola	183 01.3 N14	41.8	
	94 25.1	263 25.4	01.3	332 13.6	27.2	357 45.1	56.6	303 12.5	03.1	Diphda	349 22.6 S18	06.4	
	109 27.5	278 25.0	02.5	347 14.9	27.0	12 47.6	56.6	318 14.8	03.0				
	124 30.0	293 24.6 S	3 03.7	2 16.2 N21	26.9	27 50.1 N22	56.6	333 17.1 N13	02.9	Dubhe	194 25.1 N61	52.0	
	139 32.5	308 24.2	04.9	17 17.6	26.7	42 52.5	56.6	348 19.4	02.9	Elnath	278 46.4 N28	35.2	
	154 34.9	323 23.8	06.1	32 18.9	26.5	57 55.0	56.6	3 21.6	02.8	Eltanin	90 59.0 N51	29.9	
	M 169 37.4	338 23.3	07.3	47 20.2	26.4	72 57.5	56.6	18 23.9	02.8	Enif	34 13.4 N 9	46.6	
	I 184 39.9	353 22.9	08.6	62 21.5	26.2	88 00.0	56.6	33 26.2	02.7	Fomalhaut	15 53.4 S29	44.4	
	199 42.3	8 22.5	09.8	77 22.8	26.1	103 02.5	56.6	48 28.5	02.6				
	214 44.8	23 22.1 S	3 11.0	92 24.2 N21	25.9	118 04.9 N22	56.6	63 30.7 N13	02.6	Gacrux	172 31.4 S56	59.2	
	229 47.2	38 21.7	12.2	107 25.5	25.8	133 07.4	56.6	78 33.0	02.5	Gienah	176 20.3 S17	25.0	
	244 49.7	53 21.3	13.4	122 26.8	25.6	148 09.9	56.7	93 35.3	02.5	Hadar	149 26.7 S60	15.9	
	259 52.2	68 20.9	14.6	137 28.1	25.4	163 12.4	56.7	108 37.6	02.4	Hamal	328 30.8 N23	25.5	
	274 54.6	83 20.5	15.8	152 29.5	25.3	178 14.9	56.7	123 39.8	02.3	Kaus Aust.	84 19.7 S31	30.8	
	289 57.1	98 20.1	17.0	167 30.8	25.1	193 17.4	56.7	138 42.1	02.3				
	304 59.6	113 19.7 S	3 18.3	182 32.1 N21	25.0	208 19.8 N22	56.7	153 44.4 N13	02.2	Kochab	137 30.7 S56	59.2	
	320 02.0	128 19.3	19.5	197 33.4	24.8	223 22.3	56.7	168 46.7	02.2	Markab	76 19.9 S17	74.9	
	335 04.5	143 18.9	20.7	212 34.8	24.6	238 24.8	56.7	183 48.9	02.1	Menkar	0.5 4 N 4	00.2	
	350 07.0	158 18.5	21.9	227 36.1	24.5	253 27.3	56.7	198 51.2	02.0	Menken	328 S36	S36 15.5	
	5 09.4	173 18.1	23.1	242 37.4	24.3	268 29.8	56.7	213 53.5	02.0	Miaplac	84 25.4 S69	37.3	
20 11.9	188 17.7	24.3	257 38.7	24.2	283 32.3	56.7	228 55.8	01.9					
27 ^d 00 01 02 03 04 05 06 07 08 J U E V E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	35 14.4	203 17.3 S	3 25.5	272 40.1 N21	24.0	298 34.8 N22	56.7	243 58.0 N13	01.9	Mirfak	309 18.4 N49	46.9	
	50 16.8	218 16.9	26.7	287 41.4	23.9	313 37.3	56.7	259 00.3	01.8	Nunki	76 31.8 S26	19.4	
	65 19.3	233 16.5	27.9	302 42.7	23.7	328 39.7	56.7	274 02.6	01.7	Peacock	54 01.5 S56	48.5	
	80 21.7	248 16.1	29.2	317 44.1	23.5	343 42.2	56.7	289 04.9	01.7	Pollux	244 00.5 N22	52.5	
	95 24.2	263 15.7	30.4	332 45.4	23.4	358 44.7	56.7	304 07.1	01.6	Procyon	245 27.5 N22	52.5	
	110 26.7	278 15.3	31.6	347 46.7	23.2	13 47.2	56.7	319 09.4	01.6				
	125 29.1	293 14.9 S	3 32.8	2 48.1 N21	23.1	28 49.7 N22	56.7	334 11.7 N13	01.5	Rasalhague	96 31.6 N12	34.8	
	140 31.6	308 14.5	34.0	17 49.4	22.9	43 52.2	56.7	349 14.0	01.4	Regulus	208 12.3 N12	04.5	
	155 34.1	323 14.1	35.2	32 50.7	22.8	58 54.7	56.7	4 16.2	01.4	Rigel	281 37.7 S 8	13.6	
	J 170 36.5	338 13.7	36.4	47 52.1	22.6	73 57.2	56.7	19 18.5	01.3	Rigel Kent.	140 29.1 S60	44.5	
	U 185 39.0	353 13.2	37.6	62 53.4	22.4	88 59.7	56.7	34 20.8	01.3	Sabik	102 43.6 S15	41.7	
	200 41.5	8 12.8	38.8	77 54.7	22.3	104 02.1	56.7	49 23.1	01.2				
	215 43.9	23 12.4 S	3 40.1	92 56.1 N21	22.1	119 04.6 N22	56.7	64 25.4 N13	01.2	Schedar	350 10.6 N56	25.1	
	230 46.4	38 12.0	41.3	107 57.4	22.0	134 07.1	56.7	79 27.6	01.1	Shaula	96 58.7 S37	05.3	
	245 48.9	53 11.6	42.5	122 58.8	21.8	149 09.6	56.7	94 29.9	01.0	Sirius	258 57.3 S16	41.1	
	260 51.3	68 11.2	43.7	138 00.1	21.7	164 12.1	56.7	109 32.2	01.0	Spica	158 59.9 S11	02.6	
	275 53.8	83 10.8	44.9	153 01.4	21.5	179 14.6	56.7	124 34.5	00.9	Suhail	223 12.3 S43	20.4	
	290 56.2	98 10.4	46.1	168 02.8	21.3	194 17.1	56.8	139 36.7	00.9				
	305 58.7	113 10.0 S	3 47.3	183 04.1 N21	21.2	209 19.6 N22	56.8	154 39.0 N13	00.8	Vega	80 57.3 N38	46.2	
	321 01.2	128 09.6	48.5	198 05.5	21.0	224 22.1	56.8	169 41.3	00.7	Zuben'ubi	137 35.5 S15	56.8	
	336 03.6	143 09.2	49.7	213 06.8	20.9	239 24.6	56.8	184 43.6	00.7				
	351 06.1	158 08.8	51.0	228 08.1	20.7	254 27.1	56.8	199 45.9	00.6				
	6 08.6	173 08.4	52.2	243 09.5	20.6	269 29.6	56.8	214 48.1	00.6				
21 11.0	188 08.0	53.4	258 10.8	20.4	284 32.1	56.8	229 50.4	00.5					
Pas. Mer.	21 39.4	v -0.4	d 1.2	v 1.3	d 0.2	v 2.5	d 0.0	v 2.3	d 0.1				
										A. H. S.	Pas. Mer.		
										h m	h m		
										Venus	169 11.7	10 26	
										Marte	237 53.1	5 51	
										Júpiter	263 20.0	4 09	
										Saturno	208 48.2	7 47	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna															
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		25		26		27		28									
											h	m	h	m	h	m	h	m	h	m						
25 00 01 02 03 04 05 06 07 08 M A R T E S 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	183	57.3	S11	59.0	25	30.0	13.2	N 4	00.7	9.8	55.9	N 72	05	41	07	02	08	21	15	26	15	21	15	15	15	09
	198	57.4	11	59.9	40	02.2	13.2	4	10.5	9.8	55.9	N 70	05	40	06	52	08	01	15	35	15	36	15	39	15	44
	213	57.5	12	00.8	54	34.4	13.2	4	20.3	9.7	55.9	68	05	39	06	44	07	46	15	43	15	49	15	57	16	09
	228	57.5	..	01.6	69	06.6	13.1	4	30.0	9.7	55.9	66	05	37	06	38	07	33	15	49	15	59	16	12	16	29
	243	57.6		02.5	83	38.7	13.2	4	39.7	9.7	55.9	64	05	36	06	32	07	23	15	54	16	08	16	24	16	44
	258	57.7		03.3	98	10.9	13.2	4	49.4	9.7	55.9	62	05	35	06	27	07	14	15	59	16	15	16	34	16	58
	273	57.8	S12	04.2	112	43.1	13.2	N 4	59.1	9.6	55.8	60	05	34	06	23	07	06	16	03	16	21	16	43	17	09
	288	57.8		05.1	127	15.3	13.3	5	08.7	9.6	55.8	N 58	05	33	06	19	07	00	16	06	16	27	16	51	17	19
	303	57.9		05.9	141	47.6	13.2	5	18.3	9.6	55.8	56	05	32	06	15	06	54	16	09	16	32	16	58	17	27
	318	58.0	..	06.8	156	19.8	13.2	5	27.9	9.5	55.8	54	05	30	06	12	06	49	16	12	16	37	17	04	17	35
	333	58.1		07.7	170	52.0	13.2	5	37.4	9.5	55.8	52	05	29	06	09	06	44	16	15	16	41	17	09	17	41
	348	58.1		08.5	185	24.2	13.2	5	46.9	9.5	55.7	50	05	28	06	06	06	39	16	17	16	45	17	15	17	48
	3	58.2	S12	09.4	199	56.4	13.2	N 5	56.4	9.4	55.7	45	05	25	06	00	06	30	16	22	16	53	17	25	18	01
	18	58.3		10.2	214	28.6	13.3	6	05.8	9.4	55.7	N 40	05	23	05	54	06	22	16	27	17	00	17	35	18	12
	33	58.3		11.1	229	00.9	13.2	6	15.2	9.4	55.7	35	05	20	05	49	06	15	16	30	17	06	17	42	18	21
	48	58.4	..	12.0	243	33.1	13.2	6	24.6	9.4	55.7	30	05	17	05	45	06	09	16	34	17	11	17	49	18	30
	63	58.5		12.8	258	05.3	13.2	6	34.0	9.3	55.6	20	05	10	05	36	05	59	16	40	17	20	18	01	18	44
	78	58.6		13.7	272	37.5	13.3	6	43.3	9.2	55.6	N 10	05	03	05	28	05	49	16	45	17	28	18	12	18	57
	93	58.6	S12	14.5	287	09.8	13.2	N 6	52.5	9.3	55.6	0	04	55	05	19	05	41	16	50	17	36	18	22	19	08
	108	58.7		15.4	301	42.0	13.2	7	01.8	9.1	55.6	S 10	04	45	05	10	05	32	16	55	17	43	18	32	19	20
	123	58.8		16.2	316	14.2	13.2	7	10.9	9.2	55.6	20	04	33	04	59	05	22	17	00	17	51	18	42	19	33
	138	58.8	..	17.1	330	46.4	13.3	7	20.1	9.1	55.5	30	04	17	04	46	05	11	17	06	18	01	18	55	19	48
	153	58.9		18.0	345	18.7	13.2	7	29.2	9.1	55.5	35	04	06	04	38	05	04	17	09	18	06	19	02	19	56
168	59.0		18.8	359	50.9	13.2	7	38.3	9.0	55.5	40	03	54	04	28	04	57	17	13	18	12	19	10	20	06	
183	59.0	S12	19.7	14	23.1	13.2	N 7	47.3	9.0	55.5	45	03	39	04	17	04	48	17	18	18	19	19	19	20	17	
198	59.1		20.5	28	55.3	13.2	7	56.3	8.9	55.5	S 50	03	19	04	03	04	38	17	23	18	28	19	31	20	31	
213	59.2		21.4	43	27.5	13.2	8	05.3	8.9	55.5	52	03	09	03	56	04	33	17	26	18	32	19	36	20	37	
228	59.2	..	22.2	57	59.7	13.2	8	14.2	8.8	55.4	54	02	58	03	48	04	28	17	29	18	37	19	42	20	45	
243	59.3		23.1	72	31.9	13.3	8	23.0	8.8	55.4	56	02	45	03	40	04	22	17	32	18	41	19	49	20	53	
258	59.4		24.0	87	04.2	13.1	8	31.8	8.8	55.4	58	02	29	03	30	04	15	17	36	18	47	19	56	21	02	
273	59.4	S12	24.8	101	36.3	13.2	N 8	40.6	8.8	55.4	S 60	02	10	03	18	04	07	17	39	18	53	20	04	21	12	
288	59.5		25.7	116	08.5	13.2	8	49.4	8.6	55.4	Lat.	Ocaso Sol	Crepúsculo Civil		Ocaso Luna											
303	59.6		26.5	130	40.7	13.2	8	58.0	8.7	55.3	Náut.	25	26	27	28											
318	59.6	..	27.4	145	12.9	13.2	9	06.7	8.6	55.3	N 72	15	06	16	25	17	45	05	28	07	09	08	50	10	34	
333	59.7		28.2	159	45.1	13.2	9	15.3	8.5	55.3	N 70	15	26	16	34	17	46	05	21	06	55	08	28	09	59	
348	59.8		29.1	174	17.3	13.1	9	23.8	8.5	55.3	68	15	41	16	42	17	48	05	15	06	44	08	10	09	34	
3	59.8	S12	29.9	188	49.4	13.2	N 9	32.3	8.5	55.3	66	15	54	16	49	17	49	05	10	06	35	07	57	09	16	
18	59.9		30.8	203	21.6	13.1	9	40.8	8.3	55.3	64	16	04	16	55	17	50	05	06	06	27	07	45	09	00	
34	00.0		31.6	217	53.7	13.2	9	49.1	8.4	55.2	62	16	13	17	00	17	52	05	03	06	20	07	36	08	48	
49	00.0	..	32.5	232	25.9	13.1	9	57.5	8.3	55.2	60	16	21	17	04	17	53	05	00	06	15	07	27	08	37	
64	00.1		33.3	246	58.0	13.2	10	05.8	8.2	55.2	N 58	16	27	17	08	17	54	04	57	06	10	07	20	08	28	
79	00.2		34.2	261	30.2	13.1	10	14.0	8.2	55.2	56	16	33	17	12	17	55	04	55	06	05	07	14	08	19	
94	00.2	S12	35.0	276	02.3	13.1	N10	22.2	8.2	55.2	54	16	39	17	15	17	57	04	53	06	01	07	08	08	12	
109	00.3		35.9	290	34.4	13.1	10	30.4	8.1	55.2	52	16	43	17	18	17	58	04	51	05	58	07	03	08	06	
124	00.3		36.7	305	06.5	13.1	10	38.5	8.0	55.1	50	16	48	17	21	17	59	04	49	05	55	06	58	08	00	
139	00.4	..	37.6	319	38.6	13.1	10	46.5	8.0	55.1	45	16	57	17	28	18	02	04	45	05	48	06	48	07	47	
154	00.5		38.4	334	10.7	13.1	10	54.5	7.9	55.1	N 40	17	05	17	33	18	05	04	42	05	42	06	40	07	37	
169	00.5		39.3	348	42.8	13.1	11	02.4	7.9	55.1	35	17	12	17	38	18	08	04	39	05	37	06	33	07	28	
184	00.6	S12	40.1	3	14.9	13.0	N11	10.3	7.8	55.1	30	17	18	17	43	18	11	04	37	05	32	06	27	07	20	
199	00.7		41.0	17	46.9	13.1	11	18.1	7.8	55.1	20	17	29	17	51	18	17	04	33	05	25	06	16	07	07	
214	00.7		41.8	32	19.0	13.0	11	25.9	7.7	55.0	N 10	17	38	18	00	18	25	04	29	05	18	06	07	06	55	
229	00.8	..	42.7	46	51.0	13.1	11	33.6	7.6	55.0	0	17	47	18	09	18	33	04	26	05	12	05	58	06	44	
244	00.8		43.5	61	23.1	13.0	11	41.2	7.6	55.0	S 10	17	56	18	18	18	43	04	22	05	05	05	49	06	33	
259	00.9		44.4	75	55.1	13.0	11	48.8	7.5	55.0	20	18	06	18	29	18	56	04	19	04	59	05	40	06	22	
274	00.9	S12	45.2	90	27.1	13.0	N11	56.3	7.5	55.0	30	18	18	18	43	19	12	04	14	04	51	05	29	06	08	
289	01.0		46.1	104	59.1	13.0	12	03.8	7.4	55.0	35	18	24	18	51	19	22	04	12	04	47	05	23	06	01	
304	01.1		46.9	119	31.1	13.0	12	11.2	7.3	54.9	40	18	32	19	00	19	35	04	09	04	42	05	16	05	52	
319	01.1	..	47.8	134	03.1	13.0	12	18.5	7.3	54.9	45	18	41	19	12	19	51	04	06	04	36	05	08	05	42	
334	01.2		48.6	148	35.1	13.0	12	25.8	7.3	54.9	S 50	18	51	19	27	20	11	04	02	04	29	04	58	05	29	
349	01.2																									

T. M. G.	ARIES			VENUS -3.4			MARTE +0.5			JUPITER -2.1			SATURNO +0.8			ESTRELLAS																				
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.																					
28	00	36 13.5	203 07.5 S 3	273 12.2 N21	20.2	299 34.6 N22	56.8	244 52.7 N13	00.4	Acomar	315 38.3 S40	23.6																								
	01	51 16.0	218 07.1	288 13.5	20.1	314 37.1	56.8	259 55.0	00.4	Achernar	335 46.2 S57	21.0																								
	02	66 18.4	233 06.7	303 14.9	19.9	329 39.6	56.8	274 57.3	00.3	Acrux	173 39.9 S62	58.4																								
	03	81 20.9	248 06.3	318 16.2	19.8	344 42.1	56.8	289 59.5	00.3	Adhara	255 33.5 S28	56.4																								
	04	96 23.3	263 05.9	333 17.6	19.6	359 44.6	56.8	305 01.8	00.2	Aldebaran	291 20.0 N16	27.9																								
	05	111 25.8	278 05.5	348 18.9	19.5	14 47.1	56.8	320 04.1	00.2																											
	06	126 28.3	293 05.1 S 4	3 20.3 N21	19.3	29 49.6 N22	56.8	335 06.4 N13	00.1	Alioth	166 44.9 N56	04.8																								
	07	141 30.7	308 04.7	18 21.6	19.1	44 52.0	56.8	350 08.7	00.0	Alkaid	153 20.6 N49	25.5																								
	08	156 33.2	323 04.3	33 23.0	19.0	59 54.5	56.8	5 10.9	13 00.0	Al Na'ir	28 17.3 S47	04.2																								
	V 09	171 35.7	338 03.9	48 24.3	18.8	74 57.0	56.8	20 13.2	12 59.9	Alnilam	276 13.4 S 1	12.9																								
	I 10	186 38.1	353 03.5	63 25.7	18.7	89 59.5	56.8	35 15.5	59.9	Alphard	218 22.6 S 8	33.7																								
	E 11	201 40.6	8 03.0	78 27.0	18.5	105 02.0	56.8	50 17.8	59.8																											
	R 12	216 43.1	23 02.6 S 4	93 28.4 N21	18.4	120 04.5 N22	56.8	65 20.1 N12	59.7	Alphecca	126 34.1 N26	47.6																								
	N 13	231 45.5	38 02.2	108 29.7	18.2	135 07.0	56.8	80 22.3	59.7	Alpheratz	358 11.0 N28	58.3																								
	E 14	246 48.0	53 01.8	123 31.1	18.1	150 09.6	56.8	95 24.6	59.6	Altair	62 34.5 N 8	48.8																								
	S 15	261 50.5	68 01.4	138 32.4	17.9	165 12.1	56.8	110 26.9	59.6	Ankaa	353 41.9 S42	25.6																								
	16	276 52.9	83 01.0	153 33.8	17.7	180 14.6	56.8	125 29.2	59.5	Antares	112 59.6 S26	22.9																								
	17	291 55.4	98 00.6	168 35.1	17.6	195 17.1	56.8	140 31.5	59.5																											
	18	306 57.8	113 00.2 S 4	183 36.5 N21	17.4	210 19.6 N22	56.9	155 33.7 N12	59.4	Arcturus	146 20.6 N19	18.0																								
	19	322 00.3	127 59.8	198 37.8	17.3	225 22.1	56.9	170 36.0	59.3	Atria	108 26.0 S68	59.3																								
	20	337 02.8	142 59.3	213 39.2	17.1	240 24.6	56.9	185 38.3	59.3	Avior	234 28.9 S59	26.1																								
	21	352 05.2	157 58.9	228 40.6	17.0	255 27.1	56.9	200 40.6	59.2	Bellatrix	279 00.6 N 6	19.8																								
	22	7 07.7	172 58.5	243 41.9	16.8	270 29.6	56.9	215 42.9	59.2	Betelgeuse	271 30.2 N 7	24.2																								
23	22 10.2	187 58.1	258 43.3	16.7	285 32.1	56.9	230 45.2	59.1																												
29	00	37 12.6	202 57.7 S 4	273 44.6 N21	16.5	300 34.6 N22	56.9	245 47.4 N12	59.1	Canopus	264 07.8 S52	40.9																								
	01	52 15.1	217 57.3	288 46.0	16.3	315 37.1	56.9	260 49.7	59.0	Capella	281 13.8 N45	58.4																								
	02	67 17.6	232 56.9	303 47.4	16.2	330 39.6	56.9	275 52.0	58.9	Deneb	49 49.7 N45	12.5																								
	03	82 20.0	247 56.4	318 48.7	16.0	345 42.1	56.9	290 54.3	58.9	Denebola	183 01.3 N14	41.8																								
	04	97 22.5	262 56.0	333 50.1	15.9	0 44.6	56.9	305 56.6	58.8	Diphda	349 22.6 S18	06.4																								
	05	112 25.0	277 55.6	348 51.4	15.7	15 47.1	56.9	320 58.9	58.8																											
	06	127 27.4	292 55.2 S 4	3 52.8 N21	15.6	30 49.6 N22	56.9	336 01.1 N12	58.7	Dubhe	194 25.1 N61	52.0																								
	07	142 29.9	307 54.8	18 54.2	15.4	45 52.1	56.9	351 03.4	58.7	Elnath	278 46.3 N28	35.2																								
	08	157 32.3	322 54.4	33 55.5	15.3	60 54.6	56.9	6 05.7	58.6	Eltanin	90 59.0 N51	29.9																								
	S 09	172 34.8	337 54.0	48 56.9	15.1	75 57.1	56.9	21 08.0	58.5	Enif	34 13.4 N 9	46.6																								
	A 10	187 37.3	352 53.5	63 58.3	14.9	90 59.7	56.9	36 10.3	58.5	Fomalhaut	15 53.4 S29	44.4																								
	B 11	202 39.7	7 53.1	78 59.6	14.8	106 02.2	56.9	51 12.6	58.4																											
	A 12	217 42.2	22 52.7 S 4	94 01.0 N21	14.6	121 04.7 N22	56.9	66 14.8 N12	58.4	Gacrux	172 31.3 S56	59.1																								
	D 13	232 44.7	37 52.3	109 02.4	14.5	136 07.2	56.9	81 17.1	58.3	Gienah	176 20.2 S17	25.0																								
	O 14	247 47.1	52 51.9	124 03.7	14.3	151 09.7	56.9	96 19.4	58.3	Hadar	149 26.7 S60	15.9																								
	15	262 49.6	67 51.5	139 05.1	14.2	166 12.2	56.9	111 21.7	58.2	Hamal	328 30.8 N23	21.5																								
	16	277 52.1	82 51.1	154 06.5	14.0	181 14.7	57.0	126 24.0	58.1	Kaus Aust.	84 19.7 S34	23.7																								
	17	292 54.5	97 50.6	169 07.8	13.9	196 17.2	57.0	141 26.3	58.1																											
	18	307 57.0	112 50.2 S 4	184 09.2 N21	13.7	211 19.7 N22	57.0	156 28.6 N12	58.0	Kochab	137 20.3 N74	14.9																								
	19	322 59.4	127 49.8	199 10.6	13.5	226 22.3	57.0	171 30.8	58.0	Markab	14 04.9 N15	05.4																								
	20	338 01.9	142 49.4	214 12.0	13.4	241 24.8	57.0	186 33.1	57.9	Menkar	314 42.9 N 4	00.2																								
	21	353 04.4	157 49.0	229 13.3	13.2	256 27.3	57.0	201 35.4	57.9	Menkent	148 39.7 S36	15.5																								
	22	8 06.8	172 48.6	244 14.7	13.1	271 29.8	57.0	216 37.7	57.8	Miaplacidus	221 45.4 S69	37.3																								
23	23 09.3	187 48.1	259 16.1	12.9	286 32.3	57.0	231 40.0	57.7																												
30	00	38 11.8	202 47.7 S 4	274 17.5 N21	12.8	301 34.8 N22	57.0	246 42.3 N12	57.7	Mirfak	309 18.4 N49	46.9																								
	01	53 14.2	217 47.3	289 18.8	12.6	316 37.3	57.0	261 44.6	57.6	Nunki	76 31.8 S26	19.4																								
	02	68 16.7	232 46.9	304 20.2	12.5	331 39.9	57.0	276 46.8	57.6	Peacock	54 01.6 S56	48.5																								
	03	83 19.2	247 46.5	319 21.6	12.3	346 42.4	57.0	291 49.1	57.5	Pollux	244 00.5 N28	04.7																								
	04	98 21.6	262 46.0	334 23.0	12.2	1 44.9	57.0	306 51.4	57.5	Procyon	245 27.8 N 5	16.9																								
	05	113 24.1	277 45.6	349 24.3	12.0	16 47.4	57.0	321 53.7	57.4																											
	06	128 26.6	292 45.2 S 4	4 25.7 N21	11.8	31 49.9 N22	57.0	336 56.0 N12	57.4	Rasalhague	96 31.6 N12	34.8																								
	07	143 29.0	307 44.8	19 27.1	11.7	46 52.4	57.0	351 58.3	57.3	Regulus	208 12.2 N12	04.5																								
	D 08	158 31.5	322 44.4	34 28.5	11.5	61 55.0	57.0	7 00.6	57.2	Rigel	281 37.7 S 8	13.6																								
	O 09	173 33.9	337 43.9	49 29.9	11.4	76 57.5	57.0	22 02.8	57.2	Rigil Kent.	140 29.1 S60	44.5																								
	M 10	188 36.4	352 43.5	64 31.2	11.2	92 00.0	57.0	37 05.1	57.1	Sabik	102 43.6 S15	41.7																								
	I 11	203 38.9	7 43.1	79 32.6	11.1	107 02.5	57.0	52 07.4	57.1																											
	N 12	218 41.3	22 42.7 S 5	94 34.0 N21	10.9	122 05.0 N22	57.1	67 09.7 N12	57.0	Schedar	350 10.6 N56	25.1																								
	G 13	233 43.8	37 42.3	109 35.4	10.8	137 07.5	57.1	82 12.0	57.0	Shaula	96 58.7 S37	05.2																								
	O 14	248 46.3	52 41.8	124 36.8	10.6	152 10.1	57.1	97 14.3	56.9	Sirius	258 57.3 S16	41.1																								
	15	263 48.7	67 41.4	139 38.2	10.5	167 12.6	57.1	112 16.6	56.9	Spica	158 59.9 S11	02.6																								
	16	278 51.2	82 41.0	154 39.6	10.3	182 15.1	57.1	127 18.9	56.8	Suhail	223 12.2 S43	20.4																								
	17	293 53.7	97 40.6	169 40.9	10.2	197 17.6	57.1	142 21.1	56.7																											
	18	308 56.1	112 40.2 S 5	184 42.3 N21	10.0	212 20.1 N22	57.1	157 23.4 N12	56.7	Vega	80 57.4 N38	46.1																								
	19	323 58.6	127 39.7	199 43.7	09.9	227 22.7	57.1	172 25.7	56.6	Zuben'ubi	137 35.5 S15	56.8																								
	20	339 01.1	142 39.3	214 45.1	09.7	242 25.2	57.1	187 28.0	56.6																											
	21	354 03.5	157 38.9	229 46.5	09.5	257 27.7	57.1	202 30.3	56.5																											
	22	9 06.0	172 38.5	244 47.9	09.4	272 30.2	57.1	217 32.6	56.5																											
23	24 08.4	187 38.0	259 49.3	09.2	287 32.8	57.1	232 34.9	56.4																												
Pas. Mer.		21 27.6	v -0.4 d 1.2	v 1.4 d 0.2	v 2.5 d 0.0	v 2.3 d 0.1	<table border="1"> <thead> <tr> <th colspan="2">A. H. S.</th> <th colspan="2">Pas. Mer.</th> </tr> <tr> <th>o</th> <th>'</th> <th>h</th> <th>m</th> </tr> </thead> <tbody> <tr> <td>Venus</td> <td>165 45.1</td> <td>10</td> <td>28</td> </tr> <tr> <td>Marte</td> <td>236 32.0</td> <td>5</td> <td>45</td> </tr> <tr> <td>Júpiter</td> <td>263 22.0</td> <td>3</td> <td>57</td> </tr> <tr> <td>Saturno</td> <td>208 34.8</td> <td>7</td> <td>36</td> </tr> </tbody> </table>						A. H. S.		Pas. Mer.		o	'	h	m	Venus	165 45.1	10	28	Marte	236 32.0	5	45	Júpiter	263 22.0	3	57	Saturno	208 34.8	7	36
A. H. S.		Pas. Mer.																																		
o	'	h	m																																	
Venus	165 45.1	10	28																																	
Marte	236 32.0	5	45																																	
Júpiter	263 22.0	3	57																																	
Saturno	208 34.8	7	36																																	

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.		Dec.		A.H.G.		Dec.			Náut.			Civil		28		29		30		31
	h	m	°	'	h	m	°	'		h	m	h	m	h	m	h	m	h	m	h	m
28 V I E R N E S	00	184	02.0	S13	00.4	352	01.7	12.8	N14	01.3	6.3	54.7	N 72	05 54	07 15	08 38	15 09	14 59	□	□	
	01	199	02.0		01.2	6	33.5	12.8	14	07.6	6.3	54.7	N 70	05 51	07 04	08 15	15 44	15 55	16 17	17 00	
	02	214	02.1		02.1	21	05.3	12.8	14	13.9	6.2	54.7	68	05 48	06 55	07 58	16 09	16 28	16 58	17 43	
	03	229	02.1	..	02.9	35	37.1	12.7	14	20.1	6.1	54.7	66	05 46	06 47	07 44	16 29	16 52	17 26	18 12	
	04	244	02.2		03.8	50	08.8	12.8	14	26.2	6.0	54.6	64	05 44	06 40	07 32	16 44	17 12	17 47	18 34	
	05	259	02.2		04.6	64	40.6	12.8	14	32.2	6.0	54.6	62	05 42	06 35	07 23	16 58	17 27	18 05	18 51	
	06	274	02.3	S13	05.4	79	12.4	12.7	N14	38.2	5.9	54.6	60	05 41	06 30	07 14	17 09	17 40	18 19	19 06	
	07	289	02.3		06.3	93	44.1	12.8	14	44.1	5.9	54.6	N 58	05 39	06 25	07 07	17 19	17 52	18 31	19 18	
	08	304	02.4		07.1	108	15.9	12.7	14	50.0	5.7	54.6	56	05 37	06 21	07 00	17 27	18 01	18 42	19 29	
	09	319	02.4	..	07.9	122	47.6	12.7	14	55.7	5.7	54.6	54	05 36	06 17	06 54	17 35	18 10	18 51	19 38	
	10	334	02.5		08.8	137	19.3	12.7	15	01.4	5.7	54.6	52	05 34	06 14	06 49	17 41	18 18	19 00	19 47	
	11	349	02.5		09.6	151	51.0	12.7	15	07.1	5.5	54.5	50	05 33	06 11	06 44	17 48	18 25	19 07	19 54	
	12	4	02.6	S13	10.5	166	22.7	12.7	N15	12.6	5.5	54.5	45	05 29	06 04	06 34	18 01	18 40	19 23	20 10	
	13	19	02.6		11.3	180	54.4	12.6	15	18.1	5.4	54.5	N 40	05 26	05 58	06 25	18 12	18 52	19 36	20 24	
	14	34	02.7		12.1	195	26.0	12.7	15	23.5	5.3	54.5	35	05 22	05 52	06 18	18 21	19 03	19 48	20 35	
	15	49	02.7	..	13.0	209	57.7	12.6	15	28.8	5.3	54.5	30	05 19	05 47	06 11	18 30	19 12	19 57	20 45	
	16	64	02.8		13.8	224	29.3	12.7	15	34.1	5.2	54.5	20	05 11	05 37	06 00	18 44	19 28	20 14	21 02	
	17	79	02.8		14.6	239	01.0	12.6	15	39.3	5.1	54.5	N 10	05 03	05 28	05 50	18 57	19 42	20 29	21 16	
	18	94	02.9	S13	15.5	253	32.6	12.6	N15	44.4	5.0	54.5	0	04 54	05 19	05 40	19 08	19 55	20 43	21 30	
	19	109	02.9		16.3	268	04.2	12.6	15	49.4	5.0	54.5	S 10	04 44	05 09	05 31	19 20	20 09	20 57	21 44	
	20	124	02.9		17.1	282	35.8	12.6	15	54.4	4.9	54.4	20	04 31	04 57	05 20	19 33	20 23	21 11	21 59	
	21	139	03.0	..	18.0	297	07.4	12.6	15	59.3	4.8	54.4	30	04 13	04 43	05 08	19 48	20 39	21 28	22 16	
	22	154	03.0		18.8	311	39.0	12.6	16	04.1	4.7	54.4	35	04 02	04 34	05 01	19 56	20 48	21 38	22 26	
23	169	03.1		19.6	326	10.6	12.6	16	08.8	4.7	54.4	40	03 49	04 24	04 53	20 06	20 59	21 50	22 37		
24												45	03 33	04 12	04 44	20 17	21 12	22 03	22 50		
29 S A B A D O M I N G O	00	184	03.1	S13	20.5	340	42.2	12.5	N16	13.5	4.6	54.4	S 50	03 12	03 57	04 32	20 31	21 27	22 19	23 06	
	01	199	03.2		21.3	355	13.7	12.6	16	18.1	4.5	54.4	52	03 01	03 49	04 27	20 37	21 35	22 27	23 14	
	02	214	03.2		22.1	9	45.3	12.5	16	22.6	4.4	54.4	54	02 49	03 41	04 21	20 45	21 43	22 35	23 22	
	03	229	03.3	..	22.9	24	16.8	12.5	16	27.0	4.4	54.4	56	02 35	03 32	04 14	20 53	21 52	22 45	23 32	
	04	244	03.3		23.8	38	48.3	12.5	16	31.4	4.3	54.4	58	02 17	03 21	04 07	21 02	22 02	22 56	23 42	
	05	259	03.4		24.6	53	19.8	12.6	16	35.7	4.2	54.3	S 60	01 56	03 08	03 59	21 12	22 14	23 08	23 55	
	06	274	03.4	S13	25.4	67	51.4	12.5	N16	39.9	4.1	54.3									
	07	289	03.4		26.3	82	22.9	12.4	16	44.0	4.0	54.3	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna				
	08	304	03.5		27.1	96	54.3	12.5	16	48.0	4.0	54.3				28	29	30	31		
	09	319	03.5	..	27.9	111	25.8	12.5	16	52.0	3.9	54.3				h m	h m	h m	h m		
	10	334	03.6		28.8	125	57.3	12.5	16	55.9	3.8	54.3	N 72	14 48	16 11	17 32	10 34	12 21	□	□	
	11	349	03.6		29.6	140	28.8	12.4	16	59.7	3.7	54.3	N 70	15 11	16 22	17 35	09 59	11 26	12 42	13 37	
	12	4	03.6	S13	30.4	155	00.2	12.5	N17	03.4	3.6	54.3	68	15 28	16 31	17 38	09 34	10 53	12 01	12 54	
	13	19	03.7		31.2	169	31.7	12.4	17	07.0	3.6	54.3	66	15 42	16 39	17 40	09 16	10 29	11 33	12 25	
	14	34	03.7		32.1	184	03.1	12.5	17	10.6	3.5	54.3	64	15 54	16 46	17 42	09 00	10 10	11 12	12 03	
	15	49	03.8	..	32.9	198	34.6	12.4	17	14.1	3.4	54.2	62	16 04	16 52	17 44	08 48	09 55	10 54	11 45	
	16	64	03.8		33.7	213	06.0	12.4	17	17.5	3.3	54.2	60	16 12	16 57	17 46	08 37	09 42	10 40	11 31	
	17	79	03.8		34.5	227	37.4	12.5	17	20.8	3.3	54.2	N 58	16 20	17 01	17 48	08 28	09 31	10 28	11 18	
	18	94	03.9	S13	35.4	242	08.9	12.4	N17	24.1	3.1	54.2	56	16 26	17 06	17 49	08 19	09 21	10 18	11 08	
	19	109	03.9		36.2	256	40.3	12.4	17	27.2	3.1	54.2	54	16 32	17 09	17 51	08 12	09 13	10 08	10 58	
	20	124	04.0		37.0	271	11.7	12.4	17	30.3	3.0	54.2	52	16 38	17 13	17 52	08 06	09 05	10 00	10 50	
	21	139	04.0	..	37.8	285	43.1	12.4	17	33.3	2.9	54.2	50	16 42	17 16	17 54	08 00	08 58	09 53	10 42	
	22	154	04.0		38.7	300	14.5	12.3	17	36.2	2.8	54.2	45	16 53	17 23	17 58	07 47	08 44	09 37	10 26	
23	169	04.1		39.5	314	45.8	12.4	17	39.0	2.8	54.2	N 40	17 02	17 29	18 01	07 37	08 32	09 24	10 13		
00	184	04.1	S13	40.3	329	17.2	12.4	N17	41.8	2.7	54.2	35	17 09	17 35	18 05	07 28	08 21	09 13	10 01		
01	199	04.1		41.1	343	48.6	12.4	17	44.5	2.6	54.2	30	17 16	17 40	18 08	07 20	08 13	09 03	09 51		
02	214	04.2		41.9	358	20.0	12.4	17	47.1	2.5	54.2	20	17 27	17 50	18 16	07 07	07 57	08 46	09 34		
03	229	04.2	..	42.8	12	51.4	12.3	17	49.6	2.4	54.2	N 10	17 37	17 59	18 24	06 55	07 44	08 32	09 20		
04	244	04.3		43.6	27	22.7	12.4	17	52.0	2.3	54.1	0	17 47	18 08	18 33	06 44	07 31	08 18	09 06		
05	259	04.3		44.4	41	54.1	12.3	17	54.3	2.3	54.1	S 10	17 57	18 19	18 44	06 33	07 18	08 05	08 52		
06	274	04.3	S13	45.2	56	25.4	12.4	N17	56.6	2.2	54.1	20	18 08	18 30	18 57	06 22	07 05	07 50	08 37		
07	289	04.4		46.1	70	56.8	12.3	17	58.8	2.1	54.1	30	18 20	18 45	19 15	06 08	06 50	07 34	08 20		
08	304	04.4		46.9	85	28.1	12.4	18	00.9	2.0	54.1	35	18 27	18 54	19 26	06 01	06 41	07 24	08 10		
09	319	04.4	..	47.7	99	59.5	12.3	18	02.9	1.9	54.1	40	18 35	19 04	19 39	05 52	06 31	07 13	07 58		
10	334	04.5		48.5	114	30.8	12.4	18	04.8	1.8	54.1	45	18 45	19 17	19 56	05 42	06 19	07 00	07 45		
11																					

T. M. G.	ARIES			VENUS -3.4			MARTE +0.4			JUPITER -2.1			SATURNO +0.8			ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.	
L U N E S	31 ^d 00 ^h	39 10.9	202 37.6 S 5	21.4	274 50.7 N21	09.1	302 35.3 N22	57.1	247 37.2 N12	56.4			Acomar	315 38.3 S40	23.6				
	01	54 13.4	217 37.2	22.6	289 52.1	08.9	317 37.8	57.1	262 39.5	56.3			Achernar	335 46.2 S57	21.0				
	02	69 15.8	232 36.8	23.8	304 53.4	08.8	332 40.3	57.1	277 41.8	56.3			Acruz	173 39.9 S62	58.4				
	03	84 18.3	247 36.4	25.0	319 54.8	08.6	347 42.9	57.1	292 44.0	56.2			Adhara	255 33.5 S28	56.4				
	04	99 20.8	262 35.9	26.2	334 56.2	08.5	2 45.4	57.1	307 46.3	56.1			Aldebaran	291 19.9 N16	27.9				
	05	114 23.2	277 35.5	27.4	349 57.6	08.3	17 47.9	57.1	322 48.6	56.1									
	06	129 25.7	292 35.1 S 5	28.6	4 59.0 N21	08.2	32 50.4 N22	57.1	337 50.9 N12	56.0			Alioth	166 44.8 N56	04.7				
	07	144 28.2	307 34.7	29.8	20 00.4	08.0	47 53.0	57.2	352 53.2	56.0			Alkaid	153 20.6 N49	25.5				
	08	159 30.6	322 34.2	31.0	35 01.8	07.9	62 55.5	57.2	7 55.5	55.9			Al Na'ir	28 17.3 S47	04.2				
	09	174 33.1	337 33.8	32.2	50 03.2	07.7	77 58.0	57.2	22 57.8	55.9			Alnilam	276 13.4 S 1	12.9				
	10	189 35.5	352 33.4	33.4	65 04.6	07.6	93 00.5	57.2	38 00.1	55.8			Alphard	218 22.5 S 8	33.7				
	11	204 38.0	7 33.0	34.6	80 06.0	07.4	108 03.1	57.2	53 02.4	55.8									
	12	219 40.5	22 32.5 S 5	35.8	95 07.4 N21	07.3	123 05.6 N22	57.2	68 04.7 N12	55.7			Alphecca	126 34.1 N26	47.5				
	13	234 42.9	37 32.1	37.0	110 08.8	07.1	138 08.1	57.2	83 06.9	55.7			Alpheratz	358 11.0 N28	58.3				
	14	249 45.4	52 31.7	38.2	125 10.2	07.0	153 10.6	57.2	98 09.2	55.6			Altair	62 34.5 N 8	48.8				
	15	264 47.9	67 31.3	39.3	140 11.6	06.8	168 13.2	57.2	113 11.5	55.5			Ankaa	353 41.9 S42	25.6				
	16	279 50.3	82 30.8	40.5	155 13.0	06.7	183 15.7	57.2	128 13.8	55.5			Antares	112 59.6 S26	22.9				
	17	294 52.8	97 30.4	41.7	170 14.4	06.5	198 18.2	57.2	143 16.1	55.4									
	18	309 55.3	112 30.0 S 5	42.9	185 15.8 N21	06.3	213 20.8 N22	57.2	158 18.4 N12	55.4			Arcturus	146 20.6 N19	18.0				
	19	324 57.7	127 29.5	44.1	200 17.2	06.2	228 23.3	57.2	173 20.7	55.3			Atria	108 26.0 S68	59.3				
	20	340 00.2	142 29.1	45.3	215 18.6	06.0	243 25.8	57.2	188 23.0	55.3			Avior	234 28.9 S59	26.1				
	21	355 02.7	157 28.7	46.5	230 20.0	05.9	258 28.4	57.2	203 25.3	55.2			Bellatrix	279 00.6 N 6	19.8				
	22	10 05.1	172 28.3	47.7	245 21.4	05.7	273 30.9	57.2	218 27.6	55.2			Betelgeuse	271 30.2 N 7	24.2				
23	25 07.6	187 27.8	48.9	260 22.8	05.6	288 33.4	57.2	233 29.9	55.1										
M A R T E S	1 00	40 10.0	202 27.4 S 5	50.1	275 24.3 N21	05.4	303 36.0 N22	57.2	248 32.2 N12	55.1			Canopus	264 07.8 S52	40.9				
	01	55 12.5	217 27.0	51.3	290 25.7	05.3	318 38.5	57.3	263 34.5	55.0			Capella	281 13.8 N45	58.4				
	02	70 15.0	232 26.5	52.5	305 27.1	05.1	333 41.0	57.3	278 36.8	55.0			Deneb	49 49.8 N45	12.5				
	03	85 17.4	247 26.1	53.7	320 28.5	05.0	348 43.6	57.3	293 39.0	54.9			Denebola	183 01.3 N14	41.8				
	04	100 19.9	262 25.7	54.9	335 29.9	04.8	3 46.1	57.3	308 41.3	54.8			Diphda	349 22.6 S18	06.4				
	05	115 22.4	277 25.3	56.1	350 31.3	04.7	18 48.6	57.3	323 43.6	54.8									
	06	130 24.8	292 24.8 S 5	57.3	5 32.7 N21	04.5	33 51.2 N22	57.3	338 45.9 N12	54.7			Dubhe	194 25.0 N61	52.0				
	07	145 27.3	307 24.4	58.5	20 34.1	04.4	48 53.7	57.3	353 48.2	54.7			Elnath	278 46.3 N28	35.3				
	08	160 29.8	322 24.0	59.7	35 35.5	04.2	63 56.2	57.3	8 50.5	54.6			Eltanin	90 59.0 N51	29.9				
	09	175 32.2	337 23.5	6 00.9	50 37.0	04.1	78 58.8	57.3	23 52.8	54.6			Enif	34 13.4 N 9	46.6				
	10	190 34.7	352 23.1	02.1	65 38.4	03.9	94 01.3	57.3	38 55.1	54.5			Fomalhaut	15 53.4 S29	44.4				
	11	205 37.2	7 22.7	03.3	80 39.8	03.8	109 03.8	57.3	53 57.4	54.5									
	12	220 39.6	22 22.2 S 6	04.5	95 41.2 N21	03.6	124 06.4 N22	57.3	68 59.7 N12	54.4			Gacrux	172 31.3 S56	59.1				
	13	235 42.1	37 21.8	05.7	110 42.6	03.5	139 08.9	57.3	84 02.0	54.4			Gienah	176 20.2 S17	25.0				
	14	250 44.5	52 21.4	06.8	125 44.0	03.3	154 11.4	57.3	99 04.3	54.3			Hadar	149 26.7 S60	15.8				
	15	265 47.0	67 20.9	08.0	140 45.5	03.2	169 14.0	57.3	114 06.6	54.3			Hamal	328 30.8 N23	21.6				
	16	280 49.5	82 20.5	09.2	155 46.9	03.0	184 16.5	57.3	129 08.9	54.2			Kaus Aust.	84 19.7 S34	23.7				
	17	295 51.9	97 20.1	10.4	170 48.3	02.9	199 19.1	57.3	144 11.2	54.2									
	18	310 54.4	112 19.6 S 6	11.6	185 49.7 N21	02.7	214 21.6 N22	57.4	159 13.5 N12	54.1			Kochab	137 20.3 N74	14.9				
	19	325 56.9	127 19.2	12.8	200 51.1	02.6	229 24.1	57.4	174 15.8	54.1			Markab	14 04.9 N15	05.4				
	20	340 59.3	142 18.8	14.0	215 52.6	02.4	244 26.7	57.4	189 18.1	54.0			Menkar	314 42.9 N 4	00.2				
	21	356 01.8	157 18.3	15.2	230 54.0	02.3	259 29.2	57.4	204 20.4	53.9			Menkent	148 39.7 S36	15.5				
	22	11 04.3	172 17.9	16.4	245 55.4	02.1	274 31.8	57.4	219 22.6	53.9			Miaplacidus	221 45.3 S69	37.3				
23	26 06.7	187 17.5	17.6	260 56.8	02.0	289 34.3	57.4	234 24.9	53.8										
M I E R C O L E S	2 00	41 09.2	202 17.0 S 6	18.8	275 58.2 N21	01.8	304 36.8 N22	57.4	249 27.2 N12	53.8			Mirfak	309 18.4 N49	46.9				
	01	56 11.6	217 16.6	20.0	290 59.7	01.7	319 39.4	57.4	264 29.5	53.7			Nunki	76 31.8 S26	19.4				
	02	71 14.1	232 16.2	21.2	306 01.1	01.5	334 41.9	57.4	279 31.8	53.7			Peacock	54 01.6 S56	48.5				
	03	86 16.6	247 15.7	22.3	321 02.5	01.4	349 44.5	57.4	294 34.1	53.6			Pollux	244 00.5 N28	04.7				
	04	101 19.0	262 15.3	23.5	336 03.9	01.2	4 47.0	57.4	309 36.4	53.6			Procyon	245 27.7 N 5	16.9				
	05	116 21.5	277 14.9	24.7	351 05.4	01.1	19 49.6	57.4	324 38.7	53.5									
	06	131 24.0	292 14.4 S 6	25.9	6 06.8 N21	00.9	34 52.1 N22	57.4	339 41.0 N12	53.5			Rasalhague	96 31.7 N12	34.8				
	07	146 26.4	307 14.0	27.1	21 08.2	00.8	49 54.6	57.4	354 43.3	53.4			Regulus	208 12.2 N12	04.5				
	08	161 28.9	322 13.6	28.3	36 09.7	00.6	64 57.2	57.4	9 45.6	53.4			Rigel	281 37.6 S 8	13.6				
	09	176 31.4	337 13.1	29.5	51 11.1	00.5	79 59.7	57.4	24 47.9	53.3			Rigil Kent.	140 29.0 S60	44.5				
	10	191 33.8	352 12.7	30.7	66 12.5	00.3	95 02.3	57.5	39 50.2	53.3			Sabik	102 43.6 S15	41.7				
	11	206 36.3	7 12.2	31.9	81 14.0	00.2	110 04.8	57.5	54 52.5	53.2									
	12	221 38.8	22 11.8 S 6	33.1	96 15.4 N21	00.1	125 07.4 N22	57.5	69 54.8 N12	53.2			Schedar	350 10.6 N56	25.2				
	13	236 41.2	37 11.4	34.2	111 16.8	20 59.9	140 09.9	57.5	84 57.1	53.1			Shaula	96 58.7 S37	05.2				
	14	251 43.7	52 10.9	35.4	126 18.3	59.8	155 12.5	57.5	99 59.4	53.1			Sirius	258 57.3 S16	41.1				
	15	266 46.1	67 10.5	36.6	141 19.7	59.6	170 15.0	57.5	115 01.7	53.0			Spica	158 59.9 S11	02.6				
	16	281 48.6	82 10.0	37.8	156 21.1	59.5	185 17.6	57.5	130 04.0	53.0			Suhail	223 12.2 S43	20.4				

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	d	A. H. G. v	Dec.	P. H.		Naut.	Civil		31					
										h	m	h	m	h	m	h	m
LUNES	31 ^d 00	184 04.9	S13 59.9	317 49.5	12.3	N18 22.9	0.7	54.1	N 72	06 06	07 29	08 56	□	16 57	18 48	20 33
	01	199 04.9	14 00.8	332 20.8	12.3	18 23.6	0.6	54.1	N 70	06 02	07 16	08 30	17 00	18 08	19 30	21 00
	02	214 05.0	01.6	346 52.1	12.3	18 24.2	0.5	54.1	68	05 58	07 05	08 10	17 43	18 45	19 59	21 20
	03	229 05.0	02.4	1 23.4	12.4	18 24.7	0.4	54.1	66	05 55	06 56	07 55	18 12	19 11	20 20	21 36
	04	244 05.0	03.2	15 54.8	12.3	18 25.1	0.3	54.1	64	05 52	06 49	07 42	18 34	19 31	20 37	21 49
	05	259 05.0	04.0	30 26.1	12.3	18 25.4	0.2	54.1	62	05 50	06 42	07 31	18 51	19 47	20 51	22 00
	06	274 05.1	S14 04.8	44 57.4	12.4	N18 25.6	0.2	54.1	60	05 47	06 37	07 22	19 06	20 01	21 02	22 10
	07	289 05.1	05.6	59 28.8	12.3	18 25.8	0.1	54.1	N 58	05 45	06 32	07 14	19 18	20 12	21 13	22 18
	08	304 05.1	06.4	74 00.1	12.4	18 25.9	0.0	54.1	56	05 43	06 27	07 07	19 29	20 22	21 21	22 25
	09	319 05.1	07.2	88 31.5	12.3	18 25.9	0.1	54.1	54	05 41	06 23	07 00	19 38	20 31	21 29	22 32
	10	334 05.2	08.1	103 02.8	12.4	18 25.8	0.2	54.1	52	05 39	06 19	06 55	19 47	20 39	21 36	22 37
	11	349 05.2	08.9	117 34.2	12.3	18 25.6	0.3	54.1	50	05 37	06 15	06 49	19 54	20 46	21 43	22 43
	12	4 05.2	S14 09.7	132 05.5	12.4	N18 25.3	0.3	54.1	45	05 33	06 08	06 38	20 10	21 02	21 56	22 54
	13	19 05.2	10.5	146 36.9	12.3	18 25.0	0.4	54.1	N 40	05 29	06 01	06 29	20 24	21 14	22 07	23 03
	14	34 05.3	11.3	161 08.2	12.4	18 24.6	0.6	54.1	35	05 25	05 55	06 21	20 35	21 25	22 17	23 11
	15	49 05.3	12.1	175 39.6	12.4	18 24.0	0.6	54.1	30	05 21	05 49	06 14	20 45	21 34	22 25	23 18
	16	64 05.3	12.9	190 11.0	12.3	18 23.4	0.6	54.1	20	05 13	05 39	06 01	21 02	21 50	22 40	23 30
	17	79 05.3	13.7	204 42.3	12.4	18 22.8	0.8	54.1	N 10	05 04	05 29	05 51	21 16	22 04	22 52	23 41
	18	94 05.4	S14 14.5	219 13.7	12.4	N18 22.0	0.9	54.1	0	04 54	05 19	05 40	21 30	22 17	23 04	23 51
	19	109 05.4	15.3	233 45.1	12.4	18 21.1	0.9	54.1	S 10	04 43	05 08	05 30	21 44	22 30	23 16	24 00
	20	124 05.4	16.1	248 16.5	12.4	18 20.2	1.0	54.1	20	04 29	04 56	05 19	21 59	22 44	23 28	24 11
	21	139 05.4	16.9	262 47.9	12.4	18 19.2	1.1	54.1	30	04 10	04 40	05 06	22 16	23 00	23 43	24 23
	22	154 05.4	17.7	277 19.3	12.4	18 18.1	1.2	54.1	35	03 59	04 31	04 58	22 26	23 10	23 51	24 30
23	169 05.5	18.5	291 50.7	12.4	18 16.9	1.3	54.1	40	03 45	04 20	04 49	22 37	23 20	24 00	00 00	
1	00	184 05.5	S14 19.3	306 22.1	12.4	N18 15.6	1.3	54.1	45	03 27	04 07	04 39	22 50	23 33	24 11	00 11
01	199 05.5	20.2	320 53.5	12.4	18 14.3	1.5	54.1	S 50	03 05	03 51	04 27	23 06	23 48	24 25	00 25	
02	214 05.5	21.0	335 24.9	12.5	18 12.8	1.5	54.1	52	02 53	03 43	04 21	23 14	23 55	24 31	00 31	
03	229 05.5	21.8	349 56.4	12.4	18 11.3	1.6	54.1	54	02 40	03 34	04 15	23 22	24 03	00 03	00 38	
04	244 05.6	22.6	4 27.8	12.4	18 09.7	1.7	54.1	56	02 25	03 24	04 08	23 32	24 11	00 11	00 45	
05	259 05.6	23.4	18 59.2	12.5	18 08.0	1.8	54.1	58	02 06	03 12	04 00	23 42	24 21	00 21	00 54	
06	274 05.6	S14 24.2	33 30.7	12.4	N18 06.2	1.8	54.1	S 60	01 41	02 59	03 50	23 55	24 33	00 33	01 04	
07	289 05.6	25.0	48 02.1	12.5	18 04.4	1.9	54.1									
08	304 05.6	25.8	62 33.6	12.5	18 02.5	2.1	54.1	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
09	319 05.6	26.6	77 05.1	12.4	18 00.4	2.1	54.1					31	1	2	3	
10	334 05.7	27.4	91 36.5	12.5	17 58.3	2.1	54.1									
11	349 05.7	28.2	106 08.0	12.5	17 56.2	2.3	54.1									
12	4 05.7	S14 29.0	120 39.5	12.5	N17 53.9	2.4	54.2	N 72	14 30	15 57	17 20	□	15 18	15 04	14 57	
13	19 05.7	29.8	135 11.0	12.5	17 51.5	2.4	54.2	N 70	14 56	16 10	17 24	13 37	14 07	14 22	14 29	
14	34 05.7	30.6	149 42.5	12.5	17 49.1	2.5	54.2	68	15 16	16 21	17 28	12 54	13 30	13 53	14 07	
15	49 05.7	31.4	164 14.0	12.6	17 46.6	2.6	54.2	66	15 31	16 30	17 31	12 25	13 03	13 31	13 51	
16	64 05.8	32.2	178 45.6	12.5	17 44.0	2.7	54.2	64	15 44	16 37	17 34	12 03	12 43	13 14	13 37	
17	79 05.8	33.0	193 17.1	12.5	17 41.3	2.7	54.2	62	15 55	16 44	17 37	11 45	12 27	12 59	13 25	
18	94 05.8	S14 33.8	207 48.6	12.6	N17 38.6	2.8	54.2	60	16 05	16 50	17 39	11 31	12 13	12 47	13 15	
19	109 05.8	34.6	222 20.2	12.5	17 35.8	3.0	54.2	N 58	16 13	16 55	17 41	11 18	12 01	12 37	13 06	
20	124 05.8	35.4	236 51.7	12.6	17 32.8	3.0	54.2	56	16 20	16 59	17 43	11 08	11 51	12 28	12 59	
21	139 05.8	36.1	251 23.3	12.6	17 29.8	3.0	54.2	54	16 26	17 04	17 45	10 58	11 42	12 19	12 52	
22	154 05.8	36.9	265 54.9	12.6	17 26.8	3.2	54.2	52	16 32	17 08	17 47	10 50	11 34	12 12	12 46	
23	169 05.8	37.7	280 26.5	12.5	17 23.6	3.2	54.3	50	16 37	17 11	17 49	10 42	11 26	12 05	12 40	
2	00	184 05.9	S14 38.5	294 58.0	12.6	N17 20.4	3.3	54.3	45	16 48	17 19	17 54	10 26	11 11	11 51	12 28
01	199 05.9	39.3	309 29.6	12.6	17 17.1	3.4	54.3	N 40	16 58	17 26	17 58	10 13	10 58	11 40	12 18	
02	214 05.9	40.1	324 01.2	12.7	17 13.7	3.5	54.3	35	17 06	17 32	18 02	10 01	10 47	11 30	12 10	
03	229 05.9	40.9	338 32.9	12.6	17 10.2	3.6	54.3	30	17 13	17 38	18 06	09 51	10 37	11 21	12 02	
04	244 05.9	41.7	353 04.5	12.6	17 06.6	3.6	54.3	20	17 26	17 48	18 14	09 34	10 21	11 06	11 49	
05	259 05.9	42.5	7 36.1	12.7	17 03.0	3.7	54.3	N 10	17 37	17 58	18 23	09 20	10 06	10 52	11 37	
06	274 05.9	S14 43.3	22 07.8	12.6	N16 59.3	3.8	54.3	0	17 47	18 08	18 33	09 06	09 53	10 40	11 27	
07	289 05.9	44.1	36 39.4	12.7	16 55.5	3.9	54.3	S 10	17 58	18 19	18 45	08 52	09 39	10 27	11 16	
08	304 05.9	44.9	51 11.1	12.6	16 51.6	3.9	54.4	20	18 09	18 32	18 59	08 37	09 25	10 14	11 04	
09	319 05.9	45.7	65 42.7	12.7	16 47.7	4.0	54.4	30	18 22	18 47	19 17	08 20	09 08	09 59	10 51	
10	334 06.0	46.5	80 14.4	12.7	16 43.7	4.2	54.4	35	18 30	18 57	19 29	08 10	08 59	09 50	10 43	
11	349 06.0	47.2	94 46.1	12.7	16 39.5	4.1	54.4	40	18 39	19 08	19 43	07 58	08 47	09 39	10 34	
12	4 06.0	S14 48.0	109 17.8	12.7	N16 35.4	4.3	54.4	45	18 49	19 21	20 01	07 45	08 34	09 27	10 24	
13	19 06.0	48.8	123 49.5	12.7	16 31.1	4.3	54.4	S 50	19 01	19 38	20 24	07 29	08 18	09 13	10 11	
14	34 06.0	49.6	138 21.2	12.7	16 26.8	4.4	54.4	52	19 07	19 46	20 36	07 21	08 11	09 06	10 05	
15	49 06.0	50.4	152 52.9	12.7	16 22.4	4.5	54.5	54	19 14	19 55	20 49	07 13	08 03	08 58	09 58	
16	64 06.0	51.2	167 24.6	12.8	16 17.9	4.6	54.5	56	19 21	20 05	21 05	07 03	07 53	08 50	09 51	
17	79 06.0	52.0	181 56.4	12.7	16 13.3	4.6	54.5	58	19 29	20 17	21 25	06 52	07 43	08 40	09 43	
18	94 06.0	S14 52.8	196 28.1	12.8	N16 08.7	4.7	54.5	S 60	19 39	20 31	21 51	06 40	07 30	08 29	09 34	
19	109 06.0	53.5	210 59.9	12.7	16 04.0	4.8	54.5	</								

T. M. G.	ARIES		VENUS -3.4		MARTE +0.4		JUPITER -2.1		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
J U E V E S	3 00	42 08.3	202 06.5 S	6 47.3	276 32.6 N20	58.3	305 38.0 N22	57.5	250 22.4 N12	52.6	Acamar	315 38.3 S40	23.6
	01	57 10.8	217 06.1	48.5	291 34.1	58.1	320 40.5	57.5	265 24.7	52.5	Achernar	335 46.2 S57	21.0
	02	72 13.3	232 05.6	49.7	306 35.5	58.0	335 43.1	57.6	280 27.0	52.5	Acrux	173 39.8 S62	58.4
	03	87 15.7	247 05.2	50.9	321 37.0	57.8	350 45.6	57.6	295 29.3	52.4	Adhara	255 33.4 S28	56.4
	04	102 18.2	262 04.8	52.0	336 38.4	57.7	5 48.2	57.6	310 31.6	52.4	Aldebaran	291 19.9 N16	27.9
	05	117 20.6	277 04.3	53.2	351 39.8	57.5	20 50.7	57.6	325 33.9	52.3			
	06	132 23.1	292 03.9 S	6 54.4	6 41.3 N20	57.4	35 53.3 N22	57.6	340 36.2 N12	52.2	Alioth	166 44.8 N56	04.7
	07	147 25.6	307 03.4	55.6	21 42.7	57.3	50 55.8	57.6	355 38.5	52.2	Alkaid	153 20.6 N49	25.4
	08	162 28.0	322 03.0	56.8	36 44.2	57.1	65 58.4	57.6	10 40.8	52.1	Al Na'ir	28 17.3 S47	04.2
	09	177 30.5	337 02.5	58.0	51 45.6	57.0	81 00.9	57.6	25 43.1	52.1	Alnilam	276 13.4 S 1	12.9
	10	192 33.0	352 02.1	6 59.2	66 47.1	56.8	96 03.5	57.6	40 45.4	52.0	Alphard	218 22.5 S 8	33.7
	11	207 35.4	7 01.7	7 00.3	81 48.5	56.7	111 06.0	57.6	55 47.7	52.0			
	12	222 37.9	22 01.2 S	7 01.5	96 50.0 N20	56.5	126 08.6 N22	57.6	70 50.0 N12	51.9	Alphecca	126 34.1 N26	47.5
	13	237 40.4	37 00.8	02.7	111 51.4	56.4	141 11.1	57.6	85 52.3	51.9	Alpheratz	358 11.0 N28	58.3
	14	252 42.8	52 00.3	03.9	126 52.9	56.2	156 13.7	57.6	100 54.6	51.8	Altair	62 34.5 N 8	48.8
	15	267 45.3	66 59.9	05.1	141 54.3	56.1	171 16.3	57.6	115 56.9	51.8	Ankaa	353 41.9 S42	25.6
	16	282 47.7	81 59.4	06.3	156 55.8	55.9	186 18.8	57.6	130 59.2	51.7	Antares	112 59.6 S26	22.9
	17	297 50.2	96 59.0	07.4	171 57.2	55.8	201 21.4	57.7	146 01.5	51.7			
	18	312 52.7	111 58.5 S	7 08.6	186 58.7 N20	55.6	216 23.9 N22	57.7	161 03.8 N12	51.6	Arcturus	146 20.6 N19	18.0
	19	327 55.1	126 58.1	09.8	202 00.1	55.5	231 26.5	57.7	176 06.1	51.6	Atria	108 26.0 S68	59.3
	20	342 57.6	141 57.6	11.0	217 01.6	55.4	246 29.0	57.7	191 08.4	51.5	Avior	234 28.8 S59	26.1
	21	358 00.1	156 57.2	12.2	232 03.1	55.2	261 31.6	57.7	206 10.7	51.5	Bellatrix	279 00.6 N 6	19.8
	22	13 02.5	171 56.8	13.3	247 04.5	55.1	276 34.2	57.7	221 13.0	51.4	Betelgeuse	271 30.2 N 7	24.2
23	28 05.0	186 56.3	14.5	262 06.0	54.9	291 36.7	57.7	236 15.3	51.4				
V I E R N E S	4 00	43 07.5	201 55.9 S	7 15.7	277 07.4 N20	54.8	306 39.3 N22	57.7	251 17.6 N12	51.3	Canopus	264 07.7 S52	40.9
	01	58 09.9	216 55.4	16.9	292 08.9	54.6	321 41.8	57.7	266 20.0	51.3	Capella	281 13.8 N45	58.4
	02	73 12.4	231 55.0	18.1	307 10.3	54.5	336 44.4	57.7	281 22.3	51.2	Deneb	49 49.8 N45	12.5
	03	88 14.9	246 54.5	19.2	322 11.8	54.3	351 47.0	57.7	296 24.6	51.2	Denebola	183 01.3 N14	41.8
	04	103 17.3	261 54.1	20.4	337 13.3	54.2	6 49.5	57.7	311 26.9	51.2	Diphda	349 22.6 S18	06.5
	05	118 19.8	276 53.6	21.6	352 14.7	54.1	21 52.1	57.7	326 29.2	51.1			
	06	133 22.2	291 53.2 S	7 22.8	7 16.2 N20	53.9	36 54.6 N22	57.7	341 31.5 N12	51.1	Dubhe	194 25.0 N61	52.0
	07	148 24.7	306 52.7	24.0	22 17.7	53.8	51 57.2	57.8	356 33.8	51.0	Elnath	278 46.3 N28	35.3
	08	163 27.2	321 52.3	25.1	37 19.1	53.6	66 59.8	57.8	11 36.1	51.0	Eltanin	90 59.0 N51	29.9
	09	178 29.6	336 51.8	26.3	52 20.6	53.5	82 02.3	57.8	26 38.4	50.9	Enif	34 13.4 N 9	46.6
	10	193 32.1	351 51.4	27.5	67 22.0	53.3	97 04.9	57.8	41 40.7	50.9	Fomalhaut	15 53.4 S29	44.4
	11	208 34.6	6 50.9	28.7	82 23.5	53.2	112 07.5	57.8	56 43.0	50.8			
	12	223 37.0	21 50.5 S	7 29.9	97 25.0 N20	53.0	127 10.0 N22	57.8	71 45.3 N12	50.8	Gacrux	172 31.3 S56	59.1
	13	238 39.5	36 50.0	31.0	112 26.4	52.9	142 12.6	57.8	86 47.6	50.7	Gienah	176 20.2 S17	25.0
	14	253 42.0	51 49.6	32.2	127 27.9	52.8	157 15.2	57.8	101 49.9	50.7	Hadar	149 26.7 S60	15.8
	15	268 44.4	66 49.1	33.4	142 29.4	52.6	172 17.7	57.8	116 52.2	50.6	Hamal	328 30.8 N23	21.6
	16	283 46.9	81 48.6	34.6	157 30.9	52.5	187 20.3	57.8	131 54.5	50.6	Kaus Aust.	84 19.7 S34	23.7
	17	298 49.4	96 48.2	35.7	172 32.3	52.3	202 22.8	57.8	146 56.8	50.5			
	18	313 51.8	111 47.7 S	7 36.9	187 33.8 N20	52.2	217 25.4 N22	57.8	161 59.1 N12	50.5	Kochab	137 20.3 N74	14.9
	19	328 54.3	126 47.3	38.1	202 35.3	52.0	232 28.0	57.8	177 01.4	50.4	Markab	14 04.9 N15	05.4
	20	343 56.7	141 46.8	39.3	217 36.7	51.9	247 30.5	57.8	192 03.8	50.4	Menkar	314 42.8 N 4	00.2
	21	358 59.2	156 46.4	40.4	232 38.2	51.8	262 33.1	57.9	207 06.1	50.3	Menkent	148 39.7 S36	15.5
	22	14 01.7	171 45.9	41.6	247 39.7	51.6	277 35.7	57.9	222 08.4	50.3	Miaplacidus	221 45.3 S69	37.3
23	29 04.1	186 45.5	42.8	262 41.2	51.5	292 38.3	57.9	237 10.7	50.2				
S A B A D O	5 00	44 06.6	201 45.0 S	7 44.0	277 42.6 N20	51.3	307 40.8 N22	57.9	252 13.0 N12	50.2	Mirfak	309 18.3 N49	46.9
	01	59 09.1	216 44.6	45.1	292 44.1	51.2	322 43.4	57.9	267 15.3	50.1	Nunki	76 31.8 S26	19.4
	02	74 11.5	231 44.1	46.3	307 45.6	51.0	337 46.0	57.9	282 17.6	50.1	Peacock	54 01.6 S56	48.5
	03	89 14.0	246 43.7	47.5	322 47.1	50.9	352 48.5	57.9	297 19.9	50.0	Pollux	244 00.4 N28	04.7
	04	104 16.5	261 43.2	48.7	337 48.6	50.8	7 51.1	57.9	312 22.2	50.0	Procyon	245 27.7 N 5	16.9
	05	119 18.9	276 42.7	49.8	352 50.0	50.6	22 53.7	57.9	327 24.5	49.9			
	06	134 21.4	291 42.3 S	7 51.0	7 51.5 N20	50.5	37 56.2 N22	57.9	342 26.8 N12	49.9	Rasalhague	96 31.7 N12	34.8
	07	149 23.8	306 41.8	52.2	22 53.0	50.3	52 58.8	57.9	357 29.1	49.8	Regulus	208 12.2 N12	04.5
	08	164 26.3	321 41.4	53.3	37 54.5	50.2	68 01.4	57.9	12 31.4	49.8	Rigel	281 37.6 S 8	13.6
	09	179 28.8	336 40.9	54.5	52 56.0	50.1	83 04.0	57.9	27 33.8	49.7	Rigel Kent.	140 29.0 S60	44.5
	10	194 31.2	351 40.5	55.7	67 57.4	49.9	98 06.5	58.0	42 36.1	49.7	Sabik	102 43.7 S15	41.7
	11	209 33.7	6 40.0	56.9	82 58.9	49.8	113 09.1	58.0	57 38.4	49.6			
	12	224 36.2	21 39.5 S	7 58.0	98 00.4 N20	49.6	128 11.7 N22	58.0	72 40.7 N12	49.6	Schedar	350 10.6 N56	25.2
	13	239 38.6	36 39.1	7 59.2	113 01.9	49.5	143 14.2	58.0	87 43.0	49.6	Shaula	96 58.7 S37	05.2
	14	254 41.1	51 38.6	8 00.4	128 03.4	49.3	158 16.8	58.0	102 45.3	49.5	Sirius	258 57.2 S16	41.1
	15	269 43.6	66 38.2	01.5	143 04.9	49.2	173 19.4	58.0	117 47.6	49.5	Spica	158 59.9 S11	02.6
	16	284 46.0	81 37.7	02.7	158 06.4	49.1	188 22.0	58.0	132 49.9	49.4	Suhail	223 12.2 S43	20.4
	17	299 48.5	96 37.2	03.9	173 07.8	48.9	203 24.5	58.0	147 52.2	49.4			
	18	314 51.0	111 36.8 S	8 05.0	188 09.3 N20	48.8	218 27.1 N22	58.0	162 54.5 N12	49.3	Vega	80 57.4 N38	46.1
	19	329 53.4	126 36.3	06.2	203 10.8	48.6	233 29.7	58.0	177 56.9	49.3	Zuben'ubi	137 35.5 S15	56.8
	20	344 55.9	141 35.9	07.4	218 12.3	48.5	248 32.3	58.0	192 59.2	49.2			
	21	359 58.3	156 35.4	08.6	233 13.8	48.4	263 34.8	58.0	208 01.5	49.2			
	22	15 00.8	171 34.9	09.7	248 15.3	48.2	278 37.4	58.0	223 03.8	49.1	Venus	158 48.4	10 33
23	30 03.3	186 34.5	10.9	263 16.8	48.1	293 40.0	58.1	238 06.1	49.1	Marte	234 00.0	5 31	
										Júpiter	263 31.8	3 33	
										Saturno	208 10.2	7 14	
Pas. Mer.	21 04.0	v -0.5	d 1.2	v 1.5	d 0.1	v 2.6	d 0.0	v 2.3	d 0.0				

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		3	4	5	6		
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "		h m	h m	h m	h m	h m	h m	h m		
J U E V E S	3 00	184 06.0	S14 57.5	283 38.7	12.8	N15 39.3	5.2	54.6	N 72	06 17	07 42	09 15	20 33	22 15	23 58	25 43
	01	199 06.0	58.3	298 10.5	12.8	15 34.1	5.3	54.6	N 70	06 12	07 28	08 45	21 00	22 33	24 08	00 08
	02	214 06.0	59.0	312 42.3	12.8	15 28.8	5.3	54.6	68	06 07	07 16	08 23	21 20	22 46	24 16	00 16
	03	229 06.0	14 59.8	327 14.1	12.9	15 23.5	5.3	54.6	66	06 03	07 06	08 06	21 36	22 58	24 22	00 22
	04	244 06.0	15 00.6	341 46.0	12.8	15 18.2	5.5	54.7	64	06 00	06 57	07 51	21 49	23 07	24 28	00 28
	05	259 06.0	01.4	356 17.8	12.8	15 12.7	5.5	54.7	62	05 57	06 50	07 40	22 00	23 15	24 33	00 33
	06	274 06.0	S15 02.2	10 49.6	12.8	N15 07.2	5.6	54.7	60	05 54	06 44	07 30	22 10	23 22	24 37	00 37
	07	289 06.0	03.0	25 21.4	12.9	15 01.6	5.7	54.7	N 58	05 51	06 38	07 21	22 18	23 28	24 41	00 41
	08	304 06.0	03.7	39 53.3	12.8	14 55.9	5.8	54.7	56	05 48	06 33	07 13	22 25	23 33	24 44	00 44
	09	319 06.0	04.5	54 25.1	12.9	14 50.1	5.8	54.8	54	05 46	06 28	07 06	22 32	23 38	24 47	00 47
	10	334 06.0	05.3	68 57.0	12.8	14 44.3	5.9	54.8	52	05 44	06 24	07 00	22 37	23 42	24 49	00 49
	11	349 06.0	06.1	83 28.8	12.9	14 38.4	5.9	54.8	50	05 42	06 20	06 54	22 43	23 46	24 52	00 52
	12	4 06.0	S15 06.9	98 00.7	12.9	N14 32.5	6.1	54.8	45	05 37	06 11	06 42	22 54	23 54	24 57	00 57
	13	19 05.0	07.6	112 32.6	12.9	14 26.4	6.1	54.8	N 40	05 32	06 04	06 32	23 03	24 01	00 01	01 01
	14	34 06.0	08.4	127 04.5	12.8	14 20.3	6.1	54.9	35	05 27	05 57	06 24	23 11	24 07	00 07	01 05
	15	49 06.0	09.2	141 36.3	12.9	14 14.2	6.3	54.9	30	05 23	05 51	06 16	23 18	24 12	00 12	01 08
	16	64 06.0	10.0	156 08.2	12.9	14 07.9	6.3	54.9	20	05 14	05 40	06 03	23 30	24 22	00 22	01 14
	17	79 06.0	10.7	170 40.1	12.9	14 01.6	6.4	54.9	N 10	05 04	05 29	05 51	23 41	24 30	00 30	01 19
	18	94 06.0	S15 11.5	185 12.0	12.9	N13 55.2	6.4	55.0	0	04 54	05 19	05 40	23 51	24 37	00 37	01 24
	19	109 06.0	12.3	199 43.9	12.9	13 48.8	6.5	55.0	S 10	04 42	05 07	05 29	24 00	00 00	00 44	01 29
	20	124 06.0	13.1	214 15.8	12.9	13 42.3	6.6	55.0	20	04 27	04 54	05 17	24 11	00 11	00 52	01 34
	21	139 06.0	13.9	228 47.7	12.9	13 35.7	6.7	55.0	30	04 08	04 38	05 03	24 23	00 23	01 01	01 39
	22	154 06.0	14.6	243 19.6	12.9	13 29.0	6.7	55.0	35	03 55	04 28	04 55	24 30	00 30	01 07	01 42
23	169 06.0	15.4	257 51.5	12.9	13 22.3	6.8	55.1	40	03 41	04 16	04 46	00 00	00 38	01 12	01 46	
								45	03 22	04 02	04 35	00 11	00 47	01 19	01 50	
V I E R N E S	4 00	184 06.0	S15 16.2	272 23.4	12.9	N13 15.5	6.8	55.1	S 50	02 58	03 45	04 22	00 25	00 58	01 27	01 56
	01	199 06.0	17.0	286 55.3	12.9	13 08.7	6.9	55.1	52	02 46	03 37	04 15	00 31	01 03	01 31	01 58
	02	214 06.0	17.7	301 27.2	13.0	13 01.8	7.0	55.1	54	02 32	03 27	04 09	00 38	01 08	01 35	02 00
	03	229 06.0	18.5	315 59.2	12.9	12 54.8	7.1	55.2	56	02 14	03 16	04 01	00 45	01 14	01 40	02 03
	04	244 06.0	19.3	330 31.1	12.9	12 47.7	7.1	55.2	58	01 53	03 04	03 52	00 54	01 21	01 45	02 06
	05	259 06.0	20.0	345 03.0	12.9	12 40.6	7.2	55.2	S 60	01 25	02 49	03 42	01 04	01 29	01 51	02 10
	06	274 06.0	S15 20.8	359 34.9	12.9	N12 33.4	7.2	55.2								
	07	289 05.9	21.6	14 06.8	12.9	12 26.2	7.3	55.3	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	08	304 05.9	22.4	28 38.7	12.9	12 18.9	7.4	55.3			Civil	Náut.	3	4	5	6
	09	319 05.9	23.1	43 10.6	12.9	12 11.5	7.4	55.3					h m	h m	h m	h m
	10	334 05.9	23.9	57 42.5	13.0	12 04.1	7.5	55.4	N 72	14 10	15 43	17 08	14 57	14 51	14 45	14 40
	11	349 05.9	24.7	72 14.5	12.9	11 56.6	7.6	55.4	N 70	14 41	15 58	17 14	14 29	14 32	14 34	14 34
	12	4 05.9	S15 25.4	86 46.4	12.9	N11 49.0	7.6	55.4	68	15 03	16 10	17 18	14 07	14 17	14 24	14 30
	13	19 05.9	26.2	101 18.3	12.9	11 41.4	7.7	55.4	66	15 21	16 20	17 22	13 51	14 05	14 16	14 26
	14	34 05.9	27.0	115 50.2	12.9	11 33.7	7.8	55.5	64	15 35	16 29	17 26	13 37	13 55	14 09	14 22
	15	49 05.9	27.7	130 22.1	12.9	11 25.9	7.8	55.5	62	15 47	16 36	17 29	13 25	13 46	14 04	14 19
	16	64 05.9	28.5	144 54.0	12.9	11 18.1	7.8	55.5	60	15 57	16 43	17 32	13 15	13 38	13 59	14 17
	17	79 05.8	29.3	159 25.9	12.8	11 10.3	8.0	55.5	N 58	16 06	16 48	17 35	13 06	13 32	13 54	14 15
	18	94 05.8	S15 30.0	173 57.7	12.9	N11 02.3	7.9	55.6	56	16 13	16 54	17 38	12 59	13 26	13 50	14 13
	19	109 05.8	30.8	188 29.6	12.9	10 54.4	8.1	55.6	54	16 20	16 58	17 40	12 52	13 21	13 46	14 11
	20	124 05.8	31.6	203 01.5	12.9	10 46.3	8.1	55.6	52	16 27	17 02	17 43	12 46	13 16	13 43	14 09
	21	139 05.8	32.3	217 33.4	12.8	10 38.2	8.2	55.7	50	16 32	17 06	17 45	12 40	13 11	13 40	14 08
	22	154 05.8	33.1	232 05.2	12.9	10 30.0	8.2	55.7	45	16 44	17 15	17 50	12 28	13 02	13 34	14 04
23	169 05.8	33.9	246 37.1	12.8	10 21.8	8.3	55.7	N 40	16 54	17 23	17 55	12 18	12 54	13 28	14 01	
S A B A D O	5 00	184 05.7	S15 34.6	261 08.9	12.9	N10 13.5	8.3	55.8	35	17 03	17 29	17 59	12 10	12 47	13 23	13 59
	01	199 05.7	35.4	275 40.8	12.8	10 05.2	8.4	55.8	30	17 11	17 36	18 04	12 02	12 41	13 19	13 57
	02	214 05.7	36.2	290 12.6	12.8	9 56.8	8.4	55.8	20	17 24	17 47	18 13	11 49	12 31	13 12	13 53
	03	229 05.7	36.9	304 44.4	12.9	9 48.4	8.5	55.9	N 10	17 36	17 58	18 23	11 37	12 22	13 05	13 50
	04	244 05.7	37.7	319 16.3	12.8	9 39.9	8.6	55.9	0	17 47	18 09	18 33	11 27	12 13	12 59	13 46
	05	259 05.7	38.4	333 48.1	12.8	9 31.3	8.6	55.9	S 10	17 58	18 20	18 46	11 16	12 04	12 53	13 43
	06	274 05.7	S15 39.2	348 19.9	12.7	N 9 22.7	8.7	55.9	20	18 10	18 34	19 01	11 04	11 55	12 47	13 40
	07	289 05.6	40.0	2 51.6	12.8	9 14.0	8.7	56.0	30	18 25	18 50	19 20	10 51	11 44	12 39	13 36
	08	304 05.6	40.7	17 23.4	12.8	9 05.3	8.8	56.0	35	18 33	19 00	19 33	10 43	11 38	12 35	13 34
	09	319 05.6	41.5	31 55.2	12.7	8 56.5	8.8	56.0	40	18 42	19 12	19 48	10 34	11 31	12 30	13 31
	10	334 05.6	42.2	46 26.9	12.8	8 47.7	8.9	56.1	45	18 53	19 26	20 06	10 24	11 22	12 24	13 28
	11	349 05.6	43.0	60 58.7	12.7	8 38.8	8.9	56.1	S 50	19 07	19 44	20 31	10 11	11 12	12 17	13 24
	12	4 05.5	S15 43.8	75 30.4	12.7	N 8 29.9	9.0	56.1	52	19 13	19 52	20 43	10 05	11 08	12 14	13 22
	13	19 05.5	44.5	90 02.1	12.7	8 20.9	9.0	56.2	54	19 20	20 02	20 58	09 58	11 03	12 10	13 21
	14	34 05.5	45.3	104 33.8	12.7	8 11.9	9.1	56.2	56	19 28	20 13	21 15	09 51	10 57	12 06	13 19
	15	49 05.5	46.0	119 05.5	12.6	8 02.8	9.2	56.2	58	19 37	20 26	21 38	09 43	10 51	12 02	13 16
	16	64 05.5	46.8	133 37.1	12.7	7 53.6	9.1	56.3	S 60	19 47	20 41	22 08	09 34	10 43	11 57	13 14
	17	79 05.4	47.5	148 08.8	12.6	7 44.5	9.3	56.3								
	18	94 05.4	S15 48.3	162 40												

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	6		7		8		9	
												h	m	h	m	h	m	h	m
D O M I N G O	6 00	184 05.3 S15 52.8	249 49.8 12.5 N	6 38.8	9.5	56.6	N 72	06 29	07 56	09 37	25 43	01 43	03 31	05 25					
	01	199 05.3 53.6	264 21.3 12.5	6 29.3	9.6	56.6	N 70	06 22	07 39	09 01	00 08	01 46	03 28	05 14					
	02	214 05.2 54.3	278 52.8 12.4	6 19.7	9.7	56.6	68	06 17	07 26	08 36	00 16	01 49	03 25	05 06					
	03	229 05.2 55.1	293 24.2 12.4	6 10.0	9.7	56.7	66	06 12	07 15	08 17	00 22	01 51	03 23	04 59					
	04	244 05.2 55.8	307 55.6 12.4	6 00.3	9.7	56.7	64	06 08	07 06	08 01	00 28	01 53	03 21	04 52					
	05	259 05.2 56.6	322 27.0 12.4	5 50.6	9.8	56.7	62	06 04	06 58	07 48	00 33	01 54	03 19	04 47					
	06	274 05.1 S15 57.3	336 58.4 12.4 N	5 40.8	9.8	56.8	60	06 00	06 51	07 37	00 37	01 56	03 18	04 43					
	07	289 05.1 58.1	351 29.8 12.3	5 31.0	9.8	56.8	N 58	05 57	06 44	07 28	00 41	01 57	03 16	04 39					
	08	304 05.1 58.8	6 01.1 12.3	5 21.2	9.9	56.9	56	05 54	06 39	07 19	00 44	01 58	03 15	04 35					
	09	319 05.1 59.6	20 32.4 12.3	5 11.3	10.0	56.9	54	05 51	06 34	07 12	00 47	01 59	03 14	04 32					
	10	334 05.0 16 00.3	35 03.7 12.2	5 01.3	9.9	56.9	52	05 49	06 29	07 05	00 49	02 00	03 13	04 29					
	11	349 05.0 01.1	49 34.9 12.3	4 51.4	10.1	57.0	50	05 46	06 25	06 59	00 52	02 01	03 12	04 27					
	12	4 05.0 S16 01.8	64 06.2 12.2 N	4 41.3	10.0	57.0	45	05 40	06 15	06 46	00 57	02 02	03 10	04 21					
	13	19 05.0 02.6	78 37.4 12.1	4 31.3	10.1	57.0	N 40	05 35	06 07	06 36	01 01	02 04	03 09	04 16					
	14	34 04.9 03.3	93 08.5 12.2	4 21.2	10.1	57.1	35	05 30	06 00	06 27	01 05	02 05	03 07	04 12					
	15	49 04.9 04.1	107 39.7 12.1	4 11.1	10.2	57.1	30	05 25	05 53	06 18	01 08	02 06	03 06	04 09					
	16	64 04.9 04.8	122 10.8 12.0	4 00.9	10.2	57.2	20	05 15	05 41	06 04	01 14	02 08	03 04	04 03					
	17	79 04.8 05.6	136 41.8 12.1	3 50.7	10.2	57.2	N 10	05 05	05 30	05 52	01 19	02 10	03 03	03 58					
	18	94 04.8 S16 06.3	151 12.9 12.0 N	3 40.5	10.2	57.2	0	04 54	05 19	05 40	01 24	02 12	03 01	03 53					
	19	109 04.8 07.0	165 43.9 12.0	3 30.3	10.3	57.3	S 10	04 41	05 06	05 28	01 29	02 13	02 59	03 48					
	20	124 04.7 07.8	180 14.9 11.9	3 20.0	10.3	57.3	20	04 25	04 52	05 16	01 34	02 15	02 58	03 43					
	21	139 04.7 08.5	194 45.8 11.9	3 09.7	10.4	57.3	30	04 05	04 35	05 01	01 39	02 17	02 56	03 37					
	22	154 04.7 09.3	209 16.7 11.9	2 59.3	10.4	57.4	35	03 52	04 25	04 52	01 42	02 18	02 55	03 33					
23	169 04.7 10.0	223 47.6 11.8	2 48.9	10.4	57.4	40	03 37	04 13	04 42	01 46	02 19	02 54	03 30						
7 00	184 04.6 S16 10.8	238 18.4 11.9 N	2 38.5	10.4	57.5	45	03 17	03 58	04 31	01 50	02 21	02 52	03 25						
01	199 04.6 11.5	252 49.3 11.7	2 28.1	10.5	57.5	S 50	02 51	03 39	04 17	01 56	02 23	02 51	03 20						
02	214 04.6 12.2	267 20.0 11.7	2 17.6	10.5	57.5	52	02 38	03 30	04 10	01 58	02 24	02 50	03 18						
03	229 04.5 13.0	281 50.7 11.7	2 07.1	10.5	57.6	54	02 23	03 20	04 03	02 00	02 25	02 49	03 15						
04	244 04.5 13.7	296 21.4 11.7	1 56.6	10.5	57.6	56	02 04	03 09	03 55	02 03	02 26	02 48	03 13						
05	259 04.5 14.5	310 52.1 11.6	1 46.1	10.6	57.7	58	01 40	02 55	03 45	02 06	02 27	02 47	03 09						
06	274 04.4 S16 15.2	325 22.7 11.6 N	1 35.5	10.6	57.7	S 60	01 06	02 39	03 35	02 10	02 28	02 46	03 06						
07	289 04.4 15.9	339 53.3 11.5	1 24.9	10.6	57.7														
08	304 04.3 16.7	354 23.8 11.5	1 14.3	10.7	57.8	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna									
09	319 04.3 17.4	8 54.3 11.4	1 03.6	10.6	57.8					6	7	8	9						
10	334 04.3 18.2	23 24.7 11.4	0 53.0	10.7	57.9					h m	h m	h m	h m						
11	349 04.2 18.9	37 55.1 11.4	0 42.3	10.7	57.9	N 70	13 49	15 30	16 57	14 40	14 34	14 29	14 23						
12	4 04.2 S16 19.6	52 25.5 11.3 N	0 31.6	10.7	57.9	N 72	14 25	15 47	17 04	14 34	14 35	14 35	14 36						
13	19 04.2 20.4	66 55.8 11.3	0 20.9	10.7	58.0	68	14 50	16 11	17 09	14 30	14 35	14 40	14 40						
14	34 04.1 21.1	81 26.1 11.2 N	0 10.2	10.8	58.0	66	15 10	16 11	17 14	14 26	14 35	14 44	14 55						
15	49 04.1 21.8	95 56.3 11.2 S	0 00.6	10.8	58.1	64	15 25	16 21	17 19	14 22	14 35	14 48	15 02						
16	64 04.1 22.6	110 26.5 11.1	0 11.4	10.7	58.1	62	15 38	16 29	17 23	14 19	14 35	14 51	15 09						
17	79 04.0 23.3	124 56.6 11.1	0 22.1	10.8	58.1	60	15 49	16 36	17 26	14 17	14 35	14 53	15 14						
18	94 04.0 S16 24.0	139 26.7 11.0 S	0 32.9	10.8	58.2	N 58	15 59	16 42	17 30	14 15	14 35	14 56	15 19						
19	109 03.9 24.8	153 56.7 11.0	0 43.7	10.8	58.2	56	16 07	16 48	17 33	14 13	14 35	14 58	15 23						
20	124 03.9 25.5	168 26.7 10.9	0 54.5	10.9	58.3	54	16 15	16 53	17 35	14 11	14 35	15 00	15 27						
21	139 03.9 26.2	182 56.6 10.9	1 05.4	10.9	58.3	52	16 21	16 58	17 38	14 09	14 35	15 02	15 31						
22	154 03.8 27.0	197 26.5 10.8	1 16.2	10.9	58.3	50	16 27	17 02	17 41	14 08	14 35	15 03	15 34						
23	169 03.8 27.7	211 56.3 10.8	1 27.1	10.8	58.4	45	16 40	17 12	17 47	14 04	14 35	15 07	15 41						
8 00	184 03.7 S16 28.4	226 26.1 10.7 S	1 37.9	10.9	58.4	N 40	16 51	17 20	17 52	14 01	14 35	15 10	15 47						
01	199 03.7 29.2	240 55.8 10.7	1 48.8	10.8	58.4	35	17 01	17 27	17 57	13 59	14 35	15 12	15 52						
02	214 03.7 29.9	255 25.5 10.6	1 59.6	10.9	58.5	30	17 09	17 34	18 02	13 57	14 35	15 15	15 57						
03	229 03.6 30.6	269 55.1 10.6	2 10.5	10.9	58.5	20	17 23	17 46	18 12	13 53	14 35	15 18	16 05						
04	244 03.6 31.3	284 24.7 10.5	2 21.4	10.9	58.6	N 10	17 35	17 57	18 22	13 50	14 35	15 22	16 12						
05	259 03.5 32.1	298 54.2 10.5	2 32.3	10.9	58.6	0	17 47	18 09	18 34	13 46	14 35	15 25	16 18						
06	274 03.5 S16 32.8	313 23.7 10.4 S	2 43.2	10.8	58.6	S 10	17 59	18 21	18 47	13 43	14 35	15 28	16 25						
07	289 03.4 33.5	327 53.1 10.3	2 54.0	10.9	58.7	20	18 12	18 35	19 03	13 40	14 35	15 32	16 32						
08	304 03.4 34.2	342 22.4 10.3	3 04.9	10.9	58.7	30	18 27	18 53	19 23	13 36	14 35	15 36	16 39						
09	319 03.3 35.0	356 51.7 10.2	3 15.8	10.9	58.8	35	18 36	19 03	19 36	13 34	14 35	15 38	16 44						
10	334 03.3 35.7	11 20.9 10.2	3 26.7	10.8	58.8	40	18 46	19 15	19 52	13 31	14 34	15 41	16 49						
11	349 03.3 36.4	25 50.1 10.1	3 37.5	10.9	58.8	45	18 57	19 30	20 12	13 28	14 34	15 44	16 55						
12	4 03.2 S16 37.1	40 19.2 10.1 S	3 48.4	10.9	58.9	S 50	19 12	19 49	20 38	13 24	14 34	15 47	17 03						
13	19 03.2 37.9	54 48.3 10.0	3 59.3	10.8	58.9	52	19 18	19 58	20 51	13 22	14 34	15 49	17 06						
14	34 03.1 38.6	69 17.3 9.9	4 10.1	10.9	58.9	54	19 26	20 09	21 07	13 21	14 34	15 51	17 10						
15	49 03.1 39.3	83 46.2 9.8	4 21.0	10.8	59.0	56	19 34	20 21	21 26	13 19	14 34	15 53	17 14						
16	64 03.0 40.0	98 15.0 9.9	4 31.8	10.8	59.0	58	19 44	20 34	21 51	13 16	14 34	15 55	17 18						
17	79 03.0 40.8	112 43.9 9.7	4 42.6	10.8	59.1	S 60	19 55	20 51	22 27	13 14	14 34	15 57	17 23						
18	94 02.9 S16 41.5	127 12.6 9.7 S	4 53.4	10.8	59.1														
19	109 02.9 42.2	141 41.3																	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	9	10	11	12
	h m	°	h m	°	h m	h m		h m	h m	h m	h m	h m	h m	h m
M I E R C O L E S	9 00	184 02.6 S16 45.8	214 03.7 9.3 S 5 58.0 10.6 59.3	N 72	06 41	08 10	10 01	05 25	07 27	09 38	12 08			
	01	199 02.6 46.5	228 32.0 9.2 6 08.6 10.7 59.4	N 70	06 33	07 51	09 18	05 14	07 06	09 02	10 55			
	02	214 02.5 47.2	243 00.2 9.2 6 19.3 10.7 59.4	68	06 26	07 36	08 49	05 06	06 50	08 37	10 18			
	03	229 02.5 48.0	257 28.4 9.1 6 30.0 10.6 59.4	66	06 20	07 24	08 28	04 59	06 38	08 17	09 52			
	04	244 02.4 48.7	271 56.5 9.0 6 40.6 10.6 59.5	64	06 15	07 14	08 11	04 52	06 27	08 02	09 31			
	05	259 02.4 49.4	286 24.5 9.0 6 51.2 10.5 59.5	62	06 11	07 05	07 57	04 47	06 18	07 49	09 15			
	06	274 02.3 S16 50.1	300 52.5 8.8 S 7 01.7 10.6 59.5	60	06 07	06 57	07 45	04 43	06 10	07 38	09 01			
	07	289 02.3 50.8	315 20.3 8.9 7 12.3 10.5 59.6	N 58	06 03	06 51	07 35	04 39	06 04	07 29	08 50			
	08	304 02.2 51.5	329 48.2 8.7 7 22.8 10.4 59.6	56	05 59	06 45	07 26	04 35	05 58	07 20	08 39			
	09	319 02.2 52.3	344 15.9 8.7 7 33.2 10.5 59.6	54	05 56	06 39	07 18	04 32	05 52	07 13	08 31			
	10	334 02.1 53.0	358 43.6 8.6 7 43.7 10.4 59.7	52	05 53	06 34	07 11	04 29	05 48	07 06	08 23			
	11	349 02.1 53.7	13 11.2 8.5 7 54.1 10.4 59.7	50	05 50	06 29	07 04	04 27	05 43	07 01	08 15			
	12	4 02.0 S16 54.4	27 38.7 8.5 S 8 04.5 10.3 59.7	45	05 44	06 19	06 51	04 21	05 34	06 48	08 00			
	13	19 02.0 55.1	42 06.2 8.4 8 14.8 10.3 59.8	N 40	05 38	06 11	06 39	04 16	05 26	06 37	07 48			
	14	34 01.9 55.8	56 33.6 8.3 8 25.1 10.2 59.8	35	05 32	06 03	06 29	04 12	05 20	06 28	07 37			
	15	49 01.8 56.5	71 00.9 8.3 8 35.3 10.2 59.8	30	05 27	05 56	06 21	04 09	05 14	06 21	07 28			
	16	64 01.8 57.2	85 28.2 8.2 8 45.5 10.2 59.9	20	05 16	05 43	06 06	04 03	05 04	06 07	07 12			
	17	79 01.7 58.0	99 55.4 8.1 8 55.7 10.1 59.9	N 10	05 06	05 31	05 53	03 58	04 55	05 56	06 58			
	18	94 01.7 S16 58.7	114 22.5 8.0 S 9 05.8 10.1 59.9	0	04 54	05 19	05 40	03 53	04 47	05 45	06 45			
	19	109 01.6 16 59.4	128 49.5 8.0 9 15.9 10.0 60.0	S 10	04 40	05 06	05 28	03 48	04 39	05 34	06 32			
	20	124 01.6 17 00.1	143 16.5 7.9 9 25.9 10.0 60.0	20	04 24	04 51	05 14	03 43	04 31	05 22	06 18			
	21	139 01.5 00.8	157 43.4 7.8 9 35.9 10.0 60.0	30	04 02	04 33	04 59	03 37	04 21	05 09	06 03			
	22	154 01.4 01.5	172 10.2 7.8 9 45.9 9.9 60.0	35	03 49	04 22	04 50	03 33	04 15	05 02	05 54			
23	169 01.4 02.2	186 37.0 7.7 9 55.8 9.8 60.1	40	03 33	04 09	04 39	03 30	04 09	04 53	05 43				
10 00	184 01.3 S17 02.9	201 03.7 7.6 S10 05.6 9.8 60.1	45	03 12	03 54	04 27	03 25	04 02	04 43	05 31				
01	199 01.3 03.6	215 30.3 7.5 10 15.4 9.7 60.1	S 50	02 45	03 34	04 12	03 20	03 53	04 32	05 17				
02	214 01.2 04.3	229 56.8 7.5 10 25.1 9.6 60.2	52	02 31	03 25	04 05	03 18	03 49	04 26	05 10				
03	229 01.1 05.0	244 23.3 7.4 10 34.7 9.6 60.2	54	02 14	03 14	03 57	03 15	03 45	04 20	05 03				
04	244 01.1 05.7	258 49.7 7.3 10 44.3 9.6 60.2	56	01 54	03 01	03 48	03 13	03 40	04 13	04 54				
05	259 01.0 06.4	273 16.0 7.2 10 53.9 9.5 60.2	58	01 26	02 47	03 38	03 09	03 35	04 06	04 45				
06	274 01.0 S17 07.1	287 42.2 7.2 S11 03.4 9.4 60.3	S 60	00 44	02 29	03 27	03 06	03 29	03 57	04 34				
07	289 00.9 07.8	302 08.4 7.1 11 12.8 9.3 60.3	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna							
08	304 00.8 08.5	316 34.5 7.0 11 22.1 9.3 60.3			Civil	Náut.	9	10	11	12				
09	319 00.8 09.2	331 00.5 7.0 11 31.4 9.3 60.4												
10	334 00.7 09.9	345 26.5 6.9 11 40.7 9.1 60.4												
11	349 00.7 10.6	359 52.4 6.8 11 49.8 9.1 60.4												
12	4 00.6 S17 11.4	14 18.2 6.7 S11 58.9 9.0 60.4	N 72	13 25	15 16	16 46	14 23	14 16	14 07	13 44				
13	19 00.5 12.1	28 43.9 6.7 12 07.9 8.9 60.5	N 70	14 09	15 35	16 54	14 36	14 38	14 43	14 57				
14	34 00.5 12.8	43 09.6 6.6 12 16.8 8.9 60.5	68	14 38	15 50	17 01	14 46	14 55	15 10	15 35				
15	49 00.4 13.4	57 35.2 6.5 12 25.7 8.8 60.5	66	14 59	16 03	17 07	14 55	15 09	15 30	16 01				
16	64 00.3 14.1	72 00.7 6.5 12 34.5 8.7 60.5	64	15 16	16 13	17 12	15 02	15 21	15 46	16 22				
17	79 00.3 14.8	86 26.2 6.4 12 43.2 8.6 60.5	62	15 30	16 22	17 16	15 09	15 31	15 59	16 39				
18	94 00.2 S17 15.5	100 51.6 6.3 S12 51.8 8.6 60.6	60	15 42	16 30	17 20	15 14	15 39	16 11	16 53				
19	109 00.1 16.2	115 16.9 6.3 13 00.4 8.4 60.6	N 58	15 52	16 37	17 24	15 19	15 47	16 21	17 05				
20	124 00.1 16.9	129 42.2 6.1 13 08.8 8.4 60.6	56	16 01	16 43	17 28	15 23	15 53	16 30	17 15				
21	139 00.0 17.6	144 07.3 6.2 13 17.2 8.3 60.6	54	16 09	16 48	17 31	15 27	15 59	16 37	17 24				
22	153 59.9 18.3	158 32.5 6.0 13 25.5 8.2 60.6	52	16 17	16 53	17 34	15 31	16 05	16 44	17 33				
23	168 59.9 19.0	172 57.5 6.0 13 33.7 8.2 60.7	50	16 23	16 58	17 37	15 34	16 09	16 51	17 40				
11 00	183 59.8 S17 19.7	187 22.5 5.9 S13 41.9 8.0 60.7	45	16 37	17 08	17 43	15 41	16 20	17 04	17 56				
01	198 59.7 20.4	201 47.4 5.8 13 49.9 8.0 60.7	N 40	16 48	17 17	17 49	15 47	16 29	17 16	18 09				
02	213 59.7 21.1	216 12.2 5.8 13 57.9 7.8 60.7	35	16 58	17 25	17 55	15 52	16 36	17 25	18 20				
03	228 59.6 21.8	230 37.0 5.8 14 05.7 7.8 60.7	30	17 07	17 32	18 01	15 57	16 43	17 34	18 29				
04	243 59.5 22.5	245 01.8 5.6 14 13.5 7.6 60.8	20	17 22	17 45	18 11	16 05	16 54	17 48	18 46				
05	258 59.5 23.2	259 26.4 5.6 14 21.1 7.6 60.8	N 10	17 35	17 57	18 22	16 12	17 05	18 01	19 01				
06	273 59.4 S17 23.9	273 51.0 5.5 S14 28.7 7.5 60.8	0	17 47	18 09	18 34	16 18	17 14	18 13	19 14				
07	288 59.3 24.6	288 15.5 5.5 14 36.2 7.4 60.8	S 10	18 00	18 22	18 48	16 25	17 24	18 25	19 28				
08	303 59.3 25.3	302 40.0 5.4 14 43.6 7.3 60.8	20	18 14	18 37	19 05	16 32	17 34	18 38	19 42				
09	318 59.2 25.9	317 04.4 5.3 14 50.9 7.1 60.8	30	18 29	18 55	19 26	16 39	17 45	18 52	19 59				
10	333 59.1 26.6	331 28.7 5.3 14 58.0 7.1 60.8	35	18 39	19 06	19 40	16 44	17 52	19 01	20 09				
11	348 59.0 27.3	345 53.0 5.3 15 05.1 7.0 60.9	40	18 49	19 19	19 56	16 49	18 00	19 11	20 20				
12	3 59.0 S17 28.0	0 17.3 5.1 S15 12.1 6.8 60.9	45	19 02	19 35	20 17	16 55	18 09	19 22	20 33				
13	18 58.9 28.7	14 41.4 5.1 15 18.9 6.8 60.9	S 50	19 17	19 55	20 45	17 03	18 20	19 36	20 48				
14	33 58.8 29.4	29 05.5 5.1 15 25.7 6.7 60.9	52	19 24	20 05	20 59	17 06	18 25	19 42	20 56				
15	48 58.7 30.1	43 29.6 5.0 15 32.4 6.5 60.9	54	19 32	20 16	21 16	17 10	18 30	19 50	21 04				
16	63 58.7 30.8	57 53.6 5.0 15 38.9 6.4 60.9	56	19 41	20 28	21 37	17 14	18 36	19 58	21 13				
17	78 58.6 31.4	72 17.6 4.9 15 45.3 6.4 60.9	58	19 51	20 43	22 06	17 18	18 43	20 07	21 24				
18	93 58.5 S17 32.1	86 41.5 4.8 S15 51.7 6.2 60.9	S 60	20 03	21 01	22 53	17 23	18 51	20 17	21 36				
19	108 58.5 32.8	101 05.3 4.8 15 57.9 6.1 61.0	Día	SOL E.T. (+)		Pas. Mer.		LUNA						
20	123 58.4 33.5	115 29.1 4.7 16 04.0 6.0 61.0		00h	12h		Pas. Sup.	Mer. Inf.	Edad.	Fase				
21	138 58.3 34.2	129 52.8 4.7 16 10.0 5.8 61.0		m s	m s	h m	h m	h m	d					
22	153 58.2 34.9	144 16.5 4.7 16 15.8 5.8 61.0	9	16 11	16 08	11 44	10 05	22 33	28					
23	168 58.1 35.6	158 40.2 4.6 16 21.6 5.6 61.0	10	16 05	16 03	11 44	11 01	23 29	29					
	S.D. 16.2 d 0.7	S.D. 16.3 16.5 16.6	11	15 59	15 56	11 44	11 59	24 29	00					

T. M. G.	ARIES		VENUS -3.4		MARTE +0.2		JUPITER -2.2		SATURNO +0.8		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
12 ^d 00	51 00.6	200 23.8	S10 56.6	282 01.6	N20 29.3	314 57.6	N22 59.3	258 42.9	N12 42.9	Acomar	315 38.3	S40 23.6		
01	66 03.0	215 23.3	57.7	297 03.2	29.2	330 00.2	59.3	273 45.2	42.9	Achernar	335 46.3	S57 21.1		
02	81 05.5	230 22.8	58.8	312 04.8	29.0	345 02.8	59.4	288 47.5	42.8	AcruX	173 39.7	S62 58.3		
03	96 08.0	245 22.3	10 59.9	327 06.4	28.9	0 05.4	59.4	303 49.9	42.8	Adhara	255 33.4	S28 56.4		
04	111 10.4	260 21.8	11 01.0	342 08.0	28.8	15 08.1	59.4	318 52.2	42.7	Aldebaran	291 19.9	N16 27.9		
05	126 12.9	275 21.3	02.1	357 09.6	28.7	30 10.7	59.4	333 54.5	42.7					
06	141 15.4	290 20.8	S11 03.3	12 11.2	N20 28.6	45 13.3	N22 59.4	348 56.9	N12 42.7	Alioth	166 44.8	N56 04.7		
07	156 17.8	305 20.2	04.4	27 12.8	28.5	60 16.0	59.4	3 59.2	42.6	Alkaid	153 20.6	N49 25.4		
08	171 20.3	320 19.7	05.5	42 14.5	28.3	75 18.6	59.4	19 01.5	42.6	Al Na'ir	28 17.4	S47 04.2		
S 09	186 22.7	335 19.2	06.6	57 16.1	28.2	90 21.2	59.4	34 03.9	42.6	Alnilam	276 13.3	S 1 13.0		
A 10	201 25.2	350 18.7	07.7	72 17.7	28.1	105 23.9	59.4	49 06.2	42.5	Alphard	218 22.4	S 8 33.7		
B 11	216 27.7	5 18.2	08.8	87 19.3	28.0	120 26.5	59.4	64 08.5	42.5					
A 12	231 30.1	20 17.7	S11 09.9	102 20.9	N20 27.9	135 29.1	N22 59.5	79 10.9	N12 42.4	Alphecca	126 34.1	N26 47.5		
D 13	246 32.6	35 17.1	11.0	117 22.5	27.8	150 31.8	59.5	94 13.2	42.4	Alpheratz	358 11.0	N28 58.3		
O 14	261 35.1	50 16.6	12.1	132 24.2	27.6	165 34.4	59.5	109 15.5	42.4	Altair	62 34.6	N 8 48.8		
15	276 37.5	65 16.1	13.2	147 25.8	27.5	180 37.0	59.5	124 17.9	42.3	Ankaa	353 41.9	S42 25.7		
16	291 40.0	80 15.6	14.4	162 27.4	27.4	195 39.7	59.5	139 20.2	42.3	Antares	112 59.6	S26 22.9		
17	306 42.5	95 15.1	15.5	177 29.0	27.3	210 42.3	59.5	154 22.6	42.3					
18	321 44.9	110 14.5	S11 16.6	192 30.7	N20 27.2	225 45.0	N22 59.5	169 24.9	N12 42.2	Arcturus	146 20.6	N19 17.9		
19	336 47.4	125 14.0	17.7	207 32.3	27.1	240 47.6	59.5	184 27.2	42.2	Atria	108 26.0	S68 59.3		
20	351 49.9	140 13.5	18.8	222 33.9	26.9	255 50.2	59.5	199 29.6	42.1	Avior	234 28.7	S59 26.1		
21	6 52.3	155 13.0	19.9	237 35.5	26.8	270 52.9	59.5	214 31.9	42.1	Bellatrix	279 00.5	N 6 19.8		
22	21 54.8	170 12.4	21.0	252 37.2	26.7	285 55.5	59.6	229 34.2	42.1	Betelgeuse	271 30.1	N 7 24.2		
23	36 57.2	185 11.9	22.1	267 38.8	26.6	300 58.1	59.6	244 36.6	42.0					
13 ^d 00	51 59.7	200 11.4	S11 23.2	282 40.4	N20 26.5	316 00.8	N22 59.6	259 38.9	N12 42.0	Canopus	264 07.6	S52 40.9		
01	67 02.2	215 10.9	24.3	297 42.0	26.4	331 03.4	59.6	274 41.3	42.0	Capella	281 13.7	N45 58.4		
02	82 04.6	230 10.4	25.4	312 43.7	26.3	346 06.1	59.6	289 43.6	41.9	Deneb	49 49.8	N45 12.5		
03	97 07.1	245 09.8	26.5	327 45.3	26.1	1 08.7	59.6	304 45.9	41.9	Denebola	183 01.2	N14 41.7		
04	112 09.6	260 09.3	27.6	342 46.9	26.0	16 11.3	59.6	319 48.3	41.8	Diphda	349 22.6	S18 06.5		
05	127 12.0	275 08.8	28.7	357 48.6	25.9	31 14.0	59.6	334 50.6	41.8					
06	142 14.5	290 08.2	S11 29.8	12 50.2	N20 25.8	46 16.6	N22 59.6	349 53.0	N12 41.8	Dubhe	194 24.9	N61 52.0		
07	157 17.0	305 07.7	30.9	27 51.8	25.7	61 19.3	59.6	4 55.3	41.7	Elnath	278 46.2	N28 35.3		
D 08	172 19.4	320 07.2	32.0	42 53.5	25.6	76 21.9	59.7	19 57.6	41.7	Eltanin	90 59.1	N51 29.8		
O 09	187 21.9	335 06.7	33.1	57 55.1	25.5	91 24.5	59.7	35 00.0	41.7	Enif	34 13.5	N 9 46.6		
M 10	202 24.4	350 06.1	34.2	72 56.8	25.3	106 27.2	59.7	50 02.3	41.6	Fomalhaut	15 53.5	S29 44.4		
I 11	217 26.8	5 05.6	35.3	87 58.4	25.2	121 29.8	59.7	65 04.6	41.6					
N 12	232 29.3	20 05.1	S11 36.4	103 00.0	N20 25.1	136 32.5	N22 59.7	80 07.0	N12 41.6	Gacrux	172 31.2	S56 59.1		
G 13	247 31.7	35 04.6	37.5	118 01.7	25.0	151 35.1	59.7	95 09.3	41.5	Gienah	176 20.2	S17 25.0		
O 14	262 34.2	50 04.0	38.6	133 03.3	24.9	166 37.7	59.7	110 11.7	41.5	Hadar	149 26.6	S60 15.8		
15	277 36.7	65 03.5	39.7	148 05.0	24.8	181 40.4	59.7	125 14.0	41.4	Hamal	328 30.7	N23 21.6		
16	292 39.1	80 03.0	40.8	163 06.6	24.7	196 43.0	59.7	140 16.4	41.4	Kaus Aust.	84 19.7	S34 23.7		
17	307 41.6	95 02.4	41.9	178 08.2	24.6	211 45.7	59.7	155 18.7	41.4					
18	322 44.1	110 01.9	S11 43.0	193 09.9	N20 24.5	226 48.3	N22 59.8	170 21.0	N12 41.3	Kochab	137 20.3	N74 14.8		
19	337 46.5	125 01.4	44.1	208 11.5	24.3	241 51.0	59.8	185 23.4	41.3	Markab	14 04.9	N15 05.4		
20	352 49.0	140 00.8	45.2	223 13.2	24.2	256 53.6	59.8	200 25.7	41.3	Menkar	314 42.8	N 4 00.2		
21	7 51.5	155 00.3	46.3	238 14.8	24.1	271 56.3	59.8	215 28.1	41.2	Menkent	148 39.6	S36 15.5		
22	22 53.9	169 09.8	47.4	253 16.5	24.0	286 58.9	59.8	230 30.4	41.2	Miaplacidus	221 45.1	S69 37.3		
23	37 56.4	184 59.2	48.5	268 18.1	23.9	302 01.6	59.8	245 32.7	41.2					
14 ^d 00	52 58.8	199 58.7	S11 49.6	283 19.8	N20 23.8	317 04.2	N22 59.8	260 35.1	N12 41.1	Mirfak	309 18.3	N49 47.0		
01	68 01.3	214 58.2	50.7	298 21.4	23.7	332 06.8	59.8	275 37.4	41.1	Nunki	76 31.8	S26 19.4		
02	83 03.8	229 57.6	51.7	313 23.1	23.6	347 09.5	59.8	290 39.8	41.1	Peacock	54 01.7	S56 48.5		
03	98 06.2	244 57.1	52.8	328 24.7	23.5	2 12.1	59.9	305 42.1	41.0	Pollux	244 00.4	N28 04.6		
04	113 08.7	259 56.6	53.9	343 26.4	23.4	17 14.8	59.9	320 44.5	41.0	Procyon	245 27.7	N 5 16.9		
05	128 11.2	274 56.0	55.0	358 28.0	23.2	32 17.4	59.9	335 46.8	40.9					
06	143 13.6	289 55.5	S11 56.1	13 29.7	N20 23.1	47 20.1	N22 59.9	350 49.1	N12 40.9	Rasalhague	96 31.7	N12 34.8		
07	158 16.1	304 55.0	57.2	28 31.3	23.0	62 22.7	59.9	5 51.5	40.9	Regulus	208 12.1	N12 04.5		
08	173 18.6	319 54.4	58.3	43 33.0	22.9	77 25.4	59.9	20 53.8	40.8	Rigel	281 37.6	S 8 13.6		
L 09	188 21.0	334 53.9	11 59.4	58 34.7	22.8	92 28.0	59.9	35 56.2	40.8	Rigel Kent.	140 29.0	S60 44.4		
U 10	203 23.5	349 53.4	12 00.5	73 36.3	22.7	107 30.7	59.9	50 58.5	40.8	Sabik	102 43.7	S15 41.7		
N 11	218 26.0	4 52.8	01.5	88 38.0	22.6	122 33.3	59.9	66 00.9	40.7					
E 12	233 28.4	19 52.3	S12 02.6	103 39.6	N20 22.5	137 36.0	N22 59.9	81 03.2	N12 40.7	Schedar	350 10.7	N56 25.2		
S 13	248 30.9	34 51.7	03.7	118 41.3	22.4	152 38.6	23 00.0	96 05.5	40.7	Shaula	96 58.7	S37 05.2		
14	263 33.3	49 51.2	04.8	133 43.0	22.3	167 41.3	00.0	111 07.9	40.6	Sirius	258 57.2	S16 41.1		
15	278 35.8	64 50.7	05.9	148 44.6	22.2	182 43.9	00.0	126 10.2	40.6	Spica	158 59.9	S11 02.6		
16	293 38.3	79 50.1	07.0	163 46.3	22.1	197 46.6	00.0	141 12.6	40.6	Suhail	223 12.1	S43 20.4		
17	308 40.7	94 49.6	08.1	178 47.9	22.0	212 49.2	00.0	156 14.9	40.5					
18	323 43.2	109 49.0	S12 09.1	193 49.6	N20 21.8	227 51.9	N23 00.0	171 17.3	N12 40.5	Vega	80 57.4	N38 46.1		
19	338 45.7	124 48.5	10.2	208 51.3	21.7	242 54.6	00.0	186 19.6	40.5	Zuben'ubi	137 35.5	S15 56.8		
20	353 48.1	139 48.0	11.3	223 52.9	21.6	257 57.2	00.0	201 22.0	40.4					
21	8 50.6	154 47.4	12.4	238 54.6	21.5	272 59.9	00.0	216 24.3	40.4					
22	23 53.1	169 46.9	13.5	253 56.3	21.4	288 02.5	00.1	231 26.6	40.4	Venus	148 11.7	10 40		
23	38 55.5	184 46.3	14.6	268 57.9	21.3	303 05.2	00.1	246 29.0	40.					

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	12	13	14	15					
												h m	h m	h m	h m					
12 00 01 02 03 04 05 06 07 08 S 09 A 10 B 11 A 12 D 13 O 14 15 16 17 18 19 20 21 22 23	183	58.1	S17	36.2	173	03.8	4.6	S16	27.2	5.6	61.0	N 72	06 52	08 24	10 32	12 08	■	■	14 23	
	198	58.0		36.9	187	27.4	4.5	16	32.8	5.4	61.0	N 70	06 42	08 03	09 36	10 55	12 28	13 18	13 37	
	213	57.9		37.6	201	50.9	4.5	16	38.2	5.2	61.0	68	06 35	07 47	09 03	10 18	11 41	12 36	13 06	
	228	57.8	..	38.3	216	14.4	4.4	16	43.4	5.2	61.0	66	06 28	07 33	08 39	09 52	11 11	12 07	12 44	
	243	57.8		39.0	230	37.8	4.4	16	48.6	5.0	61.0	64	06 22	07 22	08 21	09 31	10 48	11 46	12 26	
	258	57.7		39.6	245	01.2	4.3	16	53.6	5.0	61.0	62	06 17	07 12	08 05	09 15	10 30	11 28	12 11	
	273	57.6	S17	40.3	259	24.5	4.4	S16	58.6	4.8	61.0	60	06 13	07 04	07 53	09 01	10 14	11 13	11 58	
	288	57.5		41.0	273	47.9	4.3	17	03.4	4.6	61.0	N 58	06 09	06 57	07 42	08 50	10 02	11 01	11 47	
	303	57.4		41.7	288	11.2	4.2	17	08.0	4.6	61.0	56	06 05	06 50	07 32	08 39	09 51	10 50	11 38	
	S 09	318	57.4	..	42.3	302	34.4	4.2	17	12.6	4.4	61.0	54	06 01	06 44	07 24	08 31	09 41	10 41	11 30
	A 10	333	57.3		43.0	316	57.6	4.2	17	17.0	4.3	61.0	52	05 58	06 39	07 16	08 23	09 32	10 32	11 22
	B 11	348	57.2		43.7	331	20.8	4.2	17	21.3	4.1	61.0	50	05 55	06 34	07 09	08 15	09 24	10 25	11 15
	A 12	3	57.1	S17	44.4	345	44.0	4.1	S17	25.4	4.1	61.0	45	05 48	06 23	06 55	08 00	09 08	10 08	11 01
	D 13	18	57.0		45.1	0	07.1	4.1	17	29.5	3.9	61.0	N 40	05 41	06 14	06 43	07 48	08 54	09 55	10 49
	O 14	33	57.0		45.7	14	30.2	4.1	17	33.4	3.7	61.0	35	05 35	06 06	06 32	07 37	08 43	09 44	10 38
	15	48	56.9	..	46.4	28	53.3	4.1	17	37.1	3.7	61.0	30	05 29	05 58	06 23	07 28	08 33	09 34	10 29
	16	63	56.8		47.1	43	16.4	4.0	17	40.8	3.5	61.0	20	05 18	05 44	06 08	07 12	08 16	09 17	10 14
	17	78	56.7		47.7	57	39.4	4.0	17	44.3	3.4	61.0	N 10	05 06	05 32	05 54	06 58	08 01	09 02	10 00
	18	93	56.6	S17	48.4	72	02.4	4.0	S17	47.7	3.2	61.0	0	04 54	05 19	05 41	06 45	07 47	08 48	09 48
	19	108	56.6		49.1	86	25.4	4.0	17	50.9	3.1	61.0	S 10	04 39	05 05	05 28	06 32	07 33	08 34	09 35
	20	123	56.5		49.8	100	48.4	4.0	17	54.0	3.0	61.0	20	04 22	04 50	05 13	06 18	07 18	08 19	09 21
	21	138	56.4	..	50.4	115	11.4	3.9	17	57.0	2.9	61.0	30	04 00	04 31	04 57	06 03	07 01	08 02	09 06
	22	153	56.3		51.1	129	34.3	4.0	17	59.9	2.7	61.0	35	03 46	04 20	04 48	05 54	06 51	07 53	08 57
23	168	56.2		51.8	143	57.3	3.9	18	02.6	2.6	61.0	40	03 29	04 06	04 37	05 43	06 40	07 41	08 46	
13 00	183	56.1	S17	52.4	158	20.2	3.9	S18	05.2	2.4	61.0	45	03 07	03 50	04 24	05 31	06 26	07 28	08 34	
01	198	56.0		53.1	172	43.1	3.9	18	07.6	2.3	61.0	S 50	02 38	03 29	04 08	05 17	06 10	07 12	08 20	
02	213	56.0		53.8	187	06.0	3.9	18	09.9	2.2	61.0	52	02 23	03 19	04 00	05 10	06 03	07 04	08 13	
03	228	55.9	..	54.4	201	28.9	4.0	18	12.1	2.1	61.0	54	02 05	03 08	03 52	05 03	05 54	06 56	08 05	
04	243	55.8		55.1	215	51.9	3.9	18	14.2	1.9	61.0	56	01 43	02 54	03 43	04 54	05 45	06 46	07 57	
05	258	55.7		55.8	230	14.8	3.9	18	16.1	1.7	61.0	58	01 11	02 39	03 32	04 45	05 34	06 36	07 47	
06	273	55.6	S17	56.4	244	37.7	3.9	S18	17.8	1.7	60.9	S 60	00 06	02 20	03 20	04 34	05 22	06 23	07 36	
07	288	55.5		57.1	259	00.6	3.9	18	19.5	1.5	60.9	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	303	55.4		57.8	273	23.5	3.9	18	21.0	1.3	60.9					12	13	14	15	
09	318	55.3	..	58.4	287	46.4	3.9	18	22.3	1.3	60.9									
10	333	55.3		59.1	302	09.3	3.9	18	23.6	1.0	60.9									
11	348	55.2	17	59.8	316	32.2	4.0	18	24.6	1.0	60.9									
12	3	55.1	S18	00.4	330	55.2	3.9	S18	25.6	0.8	60.9	N 72	12 56	15 03	16 36	13 44	■	■	17 50	
13	18	55.0		01.1	345	18.1	4.0	18	26.4	0.7	60.9	N 70	13 52	15 24	16 45	14 57	15 33	16 52	18 36	
14	33	54.9		01.8	359	41.1	4.0	18	27.1	0.5	60.9	68	14 25	15 41	16 53	15 35	16 21	17 33	19 05	
15	48	54.8	..	02.4	14	04.1	4.0	18	27.6	0.5	60.8	66	14 49	15 54	16 59	16 01	16 51	18 02	19 28	
16	63	54.7		03.1	28	27.1	4.0	18	28.1	0.2	60.8	64	15 07	16 06	17 05	16 22	17 14	18 23	19 45	
17	78	54.6		03.7	42	50.1	4.0	18	28.3	0.2	60.8	62	15 23	16 15	17 10	16 39	17 32	18 40	19 59	
18	93	54.5	S18	04.4	57	13.1	4.1	S18	28.5	0.0	60.8	60	15 35	16 24	17 15	16 53	17 47	18 55	20 12	
19	108	54.4		05.1	71	36.2	4.0	18	28.5	0.2	60.8	N 58	15 46	16 31	17 19	17 05	18 00	19 07	20 22	
20	123	54.3		05.7	85	59.2	4.1	18	28.3	0.2	60.8	56	15 56	16 38	17 23	17 15	18 11	19 18	20 31	
21	138	54.3	..	06.4	100	22.3	4.2	18	28.1	0.4	60.8	54	16 04	16 44	17 27	17 24	18 21	19 27	20 39	
22	153	54.2		07.0	114	45.5	4.1	18	27.7	0.6	60.7	52	16 12	16 49	17 30	17 33	18 30	19 35	20 46	
23	168	54.1		07.7	129	08.6	4.2	18	27.1	0.7	60.7	50	16 19	16 54	17 33	17 40	18 38	19 43	20 53	
14 00	183	54.0	S18	08.3	143	31.8	4.2	S18	26.4	0.8	60.7	45	16 33	17 05	17 40	17 56	18 54	19 59	21 07	
01	198	53.9		09.0	157	55.0	4.3	18	25.6	0.9	60.7	N 40	16 46	17 14	17 47	18 09	19 08	20 12	21 18	
02	213	53.8		09.7	172	18.3	4.2	18	24.7	1.1	60.7	35	16 56	17 23	17 53	18 20	19 19	20 23	21 28	
03	228	53.7	..	10.3	186	41.5	4.4	18	23.6	1.2	60.6	30	17 05	17 30	17 59	18 29	19 29	20 32	21 36	
04	243	53.6		11.0	201	04.9	4.3	18	22.4	1.3	60.6	20	17 21	17 44	18 11	18 46	19 47	20 49	21 51	
05	258	53.5		11.6	215	28.2	4.4	18	21.1	1.5	60.6	N 10	17 35	17 57	18 22	19 01	20 02	21 03	22 03	
06	273	53.4	S18	12.3	229	51.6	4.4	S18	19.6	1.6	60.6	0	17 48	18 10	18 35	19 14	20 16	21 17	22 15	
07	288	53.3		12.9	244	15.0	4.5	18	18.0	1.7	60.6	S 10	18 01	18 23	18 49	19 28	20 30	21 30	22 27	
08	303	53.2		13.6	258	38.5	4.5	18	16.3	1.9	60.6	20	18 15	18 39	19 07	19 42	20 45	21 44	22 39	
09	318	53.1	..	14.2	273	02.0	4.6	18	14.4	2.0	60.5	30	18 32	18 58	19 29	19 59	21 02	22 01	22 54	
10	333	53.0		14.9	287	25.6	4.6	18	12.4	2.1	60.5	35	18 42	19 09	19 43	20 09	21 12	22 10	23 02	
11	348	52.9		15.5	301	49.2	4.6	18	10.3	2.3	60.5	40	18 53	19 23	20 01	20 20	21 24	22 21	23 11	
12	3	52.8	S18	16.2	316	12.8	4.7	S18	08.0	2.3	60.5	45	19 06	19 40	20 22	20 33	21 37	22 34	23 22	
13	18	52.7		16.8	330	36.5	4.8	18	05.7	2.5	60.4	S 50	19 22	20 01	20 52	20 48	21 53	22 49	23 35	
14	33	52.6		17.5	345	00.3	4.8	18	03.2	2.7	60.4	52	19 30	20 11	21 07	20 56	22 01	22 56	23 41	
15	48	52.5	..	18.1	359	24.1	4.8	18	00.5	2.7	60.4	54	19 38	20 23	21 26	21 04	22 09	23 04	23 48	
16	63	52.4		18.8	13	47.9	4.9	17	57.8	2.9	60.4	56	19 47	20 36	21 49	21 13	22 19	23 13	23 55	
17	78	52.3		19.4	28	11.8	5.0	17	54.9	3.0	60.4	58	19 58	20 52	22 22	21 24	22 30	23 23	24 04	
18	93	52.2	S18	20.1	42	35.8	5.0	S17	51.9	3.1	60.3	S 60	20 11	21 12	///	21 36	22 42	23 34	24 13	
19	108	52.1																		

T. M. G.	ARIES		VENUS -3.4		MARTE +0.2		JUPITER -2.2		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
15 00	53 58.0	199 45.8	S12 15.6	283 59.6	N20 21.2	318 07.8	N23 00.1	261 31.3	N12 40.3	Acamar	315 38.3	S40 23.6	
01	69 00.5	214 45.2	16.7	299 01.3	21.1	333 10.5	00.1	276 33.7	40.3	Achernar	335 46.3	S57 21.1	
02	84 02.9	229 44.7	17.8	314 03.0	21.0	348 13.1	00.1	291 36.0	40.2	Acrux	173 39.7	S62 58.3	
03	99 05.4	244 44.2	.. 18.9	329 04.6	.. 20.9	3 15.8	.. 00.1	306 38.4	.. 40.2	Adhara	255 33.4	S28 56.4	
04	114 07.8	259 43.6	20.0	344 06.3	20.8	18 18.4	00.1	321 40.7	40.2	Aldebaran	291 19.9	N16 27.9	
05	129 10.3	274 43.1	21.0	359 08.0	20.7	33 21.1	00.1	336 43.1	40.1				
06	144 12.8	289 42.5	S12 22.1	14 09.7	N20 20.6	48 23.8	N23 00.1	351 45.4	N12 40.1	Alioth	166 44.7	N56 04.7	
07	159 15.2	304 42.0	23.2	29 11.3	20.5	63 26.4	00.1	6 47.8	40.1	Alkaid	153 20.5	N49 25.4	
08	174 17.7	319 41.4	24.3	44 13.0	20.4	78 29.1	00.2	21 50.1	40.0	Al Na'ir	28 17.4	S47 04.2	
M 09	189 20.2	334 40.9	.. 25.3	59 14.7	.. 20.3	93 31.7	.. 00.2	36 52.5	.. 40.0	Anilam	276 13.3	S 1 13.0	
A 10	204 22.6	349 40.3	26.4	74 16.4	20.2	108 34.4	00.2	51 54.8	40.0	Alphard	218 22.4	S 8 33.7	
R 11	219 25.1	4 39.8	27.5	89 18.1	20.1	123 37.0	00.2	66 57.2	39.9				
T 12	234 27.6	19 39.2	S12 28.6	104 19.7	N20 20.0	138 39.7	N23 00.2	81 59.5	N12 39.9	Alphecca	126 34.1	N26 47.5	
E 13	249 30.0	34 38.7	29.6	119 21.4	19.9	153 42.4	00.2	97 01.9	39.9	Alpheratz	358 11.1	N28 58.3	
S 14	264 32.5	49 38.1	30.7	134 23.1	19.8	168 45.0	00.2	112 04.2	39.8	Altair	62 34.6	N 8 48.8	
15	279 35.0	64 37.6	.. 31.8	149 24.8	.. 19.7	183 47.7	.. 00.2	127 06.5	.. 39.8	Ankaa	353 41.9	S42 25.7	
16	294 37.4	79 37.0	32.9	164 26.5	19.6	198 50.3	00.2	142 08.9	39.8	Antares	112 59.6	S26 22.9	
17	309 39.9	94 36.5	33.9	179 28.2	19.5	213 53.0	00.3	157 11.2	39.7				
18	324 42.3	109 35.9	S12 35.0	194 29.8	N20 19.4	228 55.7	N23 00.3	172 13.6	N12 39.7	Arcturus	146 20.6	N19 17.9	
19	339 44.8	124 35.4	36.1	209 31.5	19.3	243 58.3	00.3	187 15.9	39.7	Atria	108 26.0	S68 59.3	
20	354 47.3	139 34.8	37.2	224 33.2	19.1	259 01.0	00.3	202 18.3	39.6	Avior	234 28.7	S59 26.1	
21	9 49.7	154 34.3	.. 38.2	239 34.9	.. 19.0	274 03.7	.. 00.3	217 20.6	.. 39.6	Bellatrix	279 00.5	N 6 19.8	
22	24 52.2	169 33.7	39.3	254 36.6	18.9	289 06.3	00.3	232 23.0	39.6	Betelgeuse	271 30.1	N 7 24.1	
23	39 54.7	184 33.2	40.4	269 38.3	18.8	304 09.0	00.3	247 25.3	39.5				
16 00	54 57.1	199 32.6	S12 41.4	284 40.0	N20 18.7	319 11.6	N23 00.3	262 27.7	N12 39.5	Canopus	264 07.6	S52 40.9	
01	69 59.6	214 32.1	42.5	299 41.7	18.6	334 14.3	00.3	277 30.0	39.5	Capella	281 13.7	N45 58.4	
02	85 02.1	229 31.5	43.6	314 43.4	18.5	349 17.0	00.4	292 32.4	39.4	Deneb	49 49.9	N45 12.5	
03	100 04.5	244 31.0	.. 44.6	329 45.1	.. 18.4	4 19.6	.. 00.4	307 34.7	.. 39.4	Denebola	183 01.2	N14 41.7	
04	115 07.0	259 30.4	45.7	344 46.8	18.3	19 22.3	00.4	322 37.1	39.4	Diphda	349 22.6	S18 06.5	
05	130 09.4	274 29.8	46.8	359 48.4	18.2	34 25.0	00.4	337 39.4	39.3				
06	145 11.9	289 29.3	S12 47.8	14 50.1	N20 18.1	49 27.6	N23 00.4	352 41.8	N12 39.3	Dubhe	194 24.9	N61 51.9	
07	160 14.4	304 28.7	48.9	29 51.8	18.1	64 30.3	00.4	7 44.1	39.3	Elnath	278 46.2	N28 35.3	
M 08	175 16.8	319 28.2	50.0	44 53.5	18.0	79 33.0	00.4	22 46.5	39.2	Eltanin	90 59.1	N51 29.8	
I 09	190 19.3	334 27.6	.. 51.0	59 55.2	.. 17.9	94 35.6	.. 00.4	37 48.9	.. 39.2	Enif	34 13.5	N 9 46.6	
E 10	205 21.8	349 27.1	52.1	74 56.9	17.8	109 38.3	00.4	52 51.2	39.2	Fomalhaut	15 53.5	S29 44.4	
R 11	220 24.2	4 26.5	53.2	89 58.6	17.7	124 41.0	00.5	67 53.6	39.1				
C 12	235 26.7	19 25.9	S12 54.2	105 00.3	N20 17.6	139 43.6	N23 00.5	82 55.9	N12 39.1	Gacrux	172 31.2	S56 59.1	
O 13	250 29.2	34 25.4	55.3	120 02.1	17.5	154 46.3	00.5	97 58.3	39.1	Gienah	176 20.1	S17 25.0	
L 14	265 31.6	49 24.8	56.3	135 03.8	17.4	169 49.0	00.5	113 00.6	39.1	Hadar	149 26.6	S60 15.8	
E 15	280 34.1	64 24.3	.. 57.4	150 05.5	.. 17.3	184 51.6	.. 00.5	128 03.0	.. 39.0	Hamal	328 30.7	N23 21.6	
S 16	295 36.6	79 23.7	58.5	165 07.2	17.2	199 54.3	00.5	143 05.3	39.0	Kaus Aust.	84 19.7	S34 23.7	
17	310 39.0	94 23.1	12 59.5	180 08.9	17.1	214 57.0	00.5	158 07.7	39.0				
18	325 41.5	109 22.6	S13 00.6	195 10.6	N20 17.0	229 59.6	N23 00.5	173 10.0	N12 38.9	Kochab	137 20.3	N74 14.8	
19	340 43.9	124 22.0	01.6	210 12.3	16.9	245 02.3	00.5	188 12.4	38.9	Markab	14 05.0	N15 05.4	
20	355 46.4	139 21.5	02.7	225 14.0	16.8	260 05.0	00.6	203 14.7	38.9	Menkar	314 42.8	N 4 00.2	
21	10 48.9	154 20.9	.. 03.8	240 15.7	.. 16.7	275 07.6	.. 00.6	218 17.1	.. 38.8	Menkent	148 39.6	S36 15.5	
22	25 51.3	169 20.3	04.8	255 17.4	16.6	290 10.3	00.6	233 19.4	38.8	Miaplacidus	221 45.1	S69 37.3	
23	40 53.8	184 19.8	05.9	270 19.1	16.5	305 13.0	00.6	248 21.8	38.8				
17 00	55 56.3	199 19.2	S13 06.9	285 20.9	N20 16.4	320 15.7	N23 00.6	263 24.1	N12 38.7	Mirfak	309 18.3	N49 47.0	
01	70 58.7	214 18.6	08.0	300 22.6	16.3	335 18.3	00.6	278 26.5	38.7	Nunki	76 31.8	S26 19.4	
02	86 01.2	229 18.1	09.0	315 24.3	16.2	350 21.0	00.6	293 28.9	38.7	Peacock	54 01.7	S56 48.5	
03	101 03.7	244 17.5	.. 10.1	330 26.0	.. 16.1	5 23.7	.. 00.6	308 31.2	.. 38.6	Pollux	244 00.3	N28 04.6	
04	116 06.1	259 16.9	11.1	345 27.7	16.0	20 26.3	00.6	323 33.6	38.6	Procyon	245 27.6	N 5 16.9	
05	131 08.6	274 16.4	12.2	0 29.4	15.9	35 29.0	00.7	338 35.9	38.6				
06	146 11.1	289 15.8	S13 13.2	15 31.2	N20 15.8	50 31.7	N23 00.7	353 38.3	N12 38.6	Rasalhague	96 31.7	N12 34.8	
07	161 13.5	304 15.2	14.3	30 32.9	15.7	65 34.4	00.7	8 40.6	38.5	Regulus	208 12.1	N12 04.5	
08	176 16.0	319 14.7	15.3	45 34.6	15.6	80 37.0	00.7	23 43.0	38.5	Rigel	281 37.6	S 8 13.6	
J 09	191 18.4	334 14.1	.. 16.4	60 36.3	.. 15.6	95 39.7	.. 00.7	38 45.3	.. 38.5	Rigil Kent.	140 29.0	S60 44.4	
U 10	206 20.9	349 13.5	17.4	75 38.0	15.5	110 42.4	00.7	53 47.7	38.4	Sabik	102 43.7	S15 41.7	
E 11	221 23.4	4 13.0	18.5	90 39.8	15.4	125 45.1	00.7	68 50.1	38.4				
V 12	236 25.8	19 12.4	S13 19.5	105 41.5	N20 15.3	140 47.7	N23 00.7	83 52.4	N12 38.4	Schedar	350 10.7	N56 25.2	
E 13	251 28.3	34 11.8	20.6	120 43.2	15.2	155 50.4	00.7	98 54.8	38.3	Shaula	96 58.7	S37 05.2	
S 14	266 30.8	49 11.2	21.6	135 44.9	15.1	170 53.1	00.8	113 57.1	38.3	Sirius	258 57.2	S16 41.1	
15	281 33.2	64 10.7	.. 22.7	150 46.7	.. 15.0	185 55.8	.. 00.8	128 59.5	.. 38.3	Spica	158 59.8	S11 02.6	
16	296 35.7	79 10.1	23.7	165 48.4	14.9	200 58.4	00.8	144 01.8	38.3	Suhail	223 12.1	S43 20.4	
17	311 38.2	94 09.5	24.8	180 50.1	14.8	216 01.1	00.8	159 04.2	38.2				
18	326 40.6	109 09.0	S13 25.8	195 51.9	N20 14.7	231 03.8	N23 00.8	174 06.5	N12 38.2	Vega	80 57.4	N38 46.1	
19	341 43.1	124 08.4	26.9	210 53.6	14.6	246 06.5	00.8	189 08.9	38.2	Zuben'ubi	137 35.5	S15 56.8	
20	356 45.5	139 07.8	27.9	225 55.3	14.5	261 09.1	00.8	204 11.3	38.1				
21	11 48.0	154 07.2	.. 29.0	240 57.0	.. 14.5	276 11.8	.. 00.8	219 13.6	.. 38.1				
22	26 50.5	169 06.7	30.0	255 58.8	14.4	291 14.5	00.8	234 16.0	38.1	Venus	144 35.5	10 42	
23	41 52.9	184 06.1	31.0	271 00.5	14.3	306 17.2	00.9	249 18.3	38.0	Marte	229 42.8	5 01	
										Júpiter	264 14.5	2 43	
										Saturno	207 30.6	6 29	
Pas. Mer.	20 16.9	v -0.6	d 1.1	v 1.7	d 0.1	v 2.7	d 0.0	v 2.4	d 0.0				

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	15		16		17		18		
										h		m	h	m	h	m	h	m	h	m	h	m
15 00 01 02 03 04 05 06 07 08 M A R T E S 15 16 17 18 19 20 21 22 23	183	51.6	S18	23.9	129	00.8	5.3	S17	31.3	3.8	60.2	N 72	07 03	08 38	11 25	14 23	14 12	14 04	13 58	
	198	51.5		24.6	143	25.1	5.5	17	27.5	4.0	60.2	N 70	06 52	08 15	09 55	13 37	13 44	13 47	13 48	
	213	51.4		25.2	157	49.6	5.5	17	23.5	4.0	60.1	68	06 43	07 57	09 17	13 06	13 23	13 33	13 40	
	228	51.3	..	25.8	172	14.1	5.5	17	19.5	4.2	60.1	66	06 36	07 42	08 50	12 44	13 07	13 22	13 33	
	243	51.2		26.5	186	38.6	5.6	17	15.3	4.3	60.1	64	06 30	07 30	08 30	12 26	12 53	13 13	13 28	
	258	51.1		27.1	201	03.2	5.7	17	11.0	4.5	60.0	62	06 24	07 20	08 14	12 11	12 42	13 05	13 23	
	273	51.0	S18	27.8	215	27.9	5.8	S17	06.5	4.5	60.0	60	06 19	07 11	08 00	11 58	12 32	12 58	13 18	
	288	50.9		28.4	229	52.7	5.8	17	02.0	4.6	60.0	N 58	06 14	07 03	07 48	11 47	12 23	12 51	13 15	
	303	50.8		29.0	244	17.5	5.9	16	57.4	4.8	60.0	56	06 10	06 56	07 38	11 38	12 16	12 46	13 11	
	318	50.7	..	29.7	258	42.4	6.0	16	52.6	4.8	59.9	54	06 06	06 50	07 29	11 30	12 09	12 41	13 08	
	333	50.6		30.3	273	07.4	6.0	16	47.8	5.0	59.9	52	06 02	06 44	07 21	11 22	12 03	12 36	13 05	
	348	50.5		31.0	287	32.4	6.1	16	42.8	5.1	59.9	50	05 59	06 38	07 14	11 15	11 57	12 32	13 03	
	3	50.4	S18	31.6	301	57.5	6.2	S16	37.7	5.2	59.9	45	05 51	06 27	06 59	11 01	11 45	12 23	12 57	
	18	50.2		32.2	316	22.7	6.3	16	32.5	5.2	59.8	N 40	05 44	06 17	06 46	10 49	11 35	12 16	12 52	
	33	50.1		32.9	330	48.0	6.3	16	27.3	5.4	59.8	35	05 38	06 08	06 35	10 38	11 27	12 10	12 48	
	48	50.0	..	33.5	345	13.3	6.4	16	21.9	5.5	59.8	30	05 31	06 00	06 26	10 29	11 19	12 04	12 45	
	63	49.9		34.1	359	38.7	6.5	16	16.4	5.6	59.7	20	05 19	05 46	06 09	10 14	11 06	11 54	12 39	
	78	49.8		34.8	14	04.2	6.5	16	10.8	5.7	59.7	N 10	05 07	05 33	05 55	10 00	10 55	11 46	12 33	
	93	49.7	S18	35.4	28	29.7	6.6	S16	05.1	5.8	59.7	0	04 54	05 19	05 41	09 48	10 44	11 38	12 28	
	108	49.6		36.0	42	55.3	6.7	15	59.3	5.9	59.6	S 10	04 39	05 05	05 27	09 35	10 34	11 30	12 23	
	123	49.5		36.7	57	21.0	6.8	15	53.4	6.0	59.6	20	04 21	04 49	05 13	09 21	10 22	11 21	12 17	
	138	49.4	..	37.3	71	46.8	6.8	15	47.4	6.1	59.6	30	03 58	04 29	04 56	09 06	10 09	11 11	12 11	
	153	49.3		37.9	86	12.6	7.0	15	41.3	6.1	59.6	35	03 43	04 17	04 45	08 57	10 02	11 05	12 07	
168	49.2		38.6	100	38.6	7.0	15	35.2	6.3	59.5	40	03 26	04 03	04 34	08 46	09 53	10 59	12 03		
183	49.0	S18	39.2	115	04.6	7.0	S15	28.9	6.4	59.5	45	03 03	03 46	04 20	08 34	09 43	10 51	11 59		
198	48.9		39.8	129	30.6	7.2	15	22.5	6.4	59.5	S 50	02 32	03 24	04 04	08 20	09 31	10 42	11 53		
213	48.8		40.4	143	56.8	7.2	15	16.1	6.6	59.4	52	02 16	03 14	03 56	08 13	09 25	10 38	11 50		
228	48.7	..	41.1	158	23.0	7.3	15	09.5	6.6	59.4	54	01 57	03 02	03 47	08 05	09 19	10 33	11 47		
243	48.6		41.7	172	49.3	7.4	15	02.9	6.7	59.4	56	01 32	02 47	03 37	07 57	09 12	10 28	11 44		
258	48.5		42.3	187	15.7	7.5	14	56.2	6.8	59.3	58	00 54	02 31	03 26	07 47	09 04	10 23	11 41		
273	48.4	S18	42.9	201	42.2	7.5	S14	49.4	6.9	59.3	S 60	///	02 10	03 12	07 36	08 55	10 16	11 37		
288	48.3		43.6	216	08.7	7.6	14	42.5	7.0	59.3	Lat.	Ocaso Sol	Crepúsculo Civil	Ocaso Luna						
303	48.1	..	44.2	230	35.3	7.7	14	35.5	7.0	59.2	15	16	17	18						
318	48.0	..	44.8	245	02.0	7.8	14	28.5	7.2	59.2	N 72	12 03	14 50	16 26	17 50	19 58	21 55	23 43		
333	47.9		45.4	259	28.8	7.8	14	21.3	7.2	59.2	N 70	13 33	15 14	16 36	18 36	20 24	22 10	23 51		
348	47.8		46.1	273	55.6	8.0	14	14.1	7.3	59.2	68	14 12	15 32	16 45	19 05	20 44	22 22	23 57		
3	47.7	S18	46.7	288	22.6	8.0	S14	06.8	7.4	59.1	66	14 38	15 46	16 53	19 28	21 00	22 32	24 03		
18	47.6		47.3	302	49.6	8.1	13	59.4	7.4	59.1	64	14 59	15 59	16 59	19 45	21 13	22 41	24 07		
33	47.5		47.9	317	16.7	8.1	13	52.0	7.6	59.1	62	15 15	16 09	17 05	19 59	21 23	22 48	24 11		
48	47.3	..	48.6	331	43.8	8.3	13	44.4	7.6	59.0	60	15 29	16 18	17 10	20 12	21 33	22 54	24 14		
63	47.2		49.2	346	11.1	8.3	13	36.8	7.7	59.0	N 58	15 41	16 26	17 15	20 22	21 41	22 59	24 17		
78	47.1		49.8	0	38.4	8.4	13	29.1	7.7	59.0	56	15 51	16 33	17 19	20 31	21 48	23 04	24 20		
93	47.0	S18	50.4	15	05.8	8.5	S13	21.4	7.8	58.9	54	16 00	16 39	17 23	20 39	21 54	23 09	24 22		
108	46.9		51.0	29	33.3	8.5	13	13.6	7.9	58.9	52	16 08	16 45	17 27	20 46	21 59	23 12	24 24		
123	46.7		51.6	44	00.8	8.7	13	05.7	8.0	58.9	50	16 15	16 51	17 30	20 53	22 05	23 16	24 26		
138	46.6	..	52.3	58	28.5	8.7	12	57.7	8.0	58.8	45	16 30	17 02	17 38	21 07	22 15	23 24	24 30		
153	46.5		52.9	72	56.2	8.8	12	49.7	8.1	58.8	N 40	16 43	17 12	17 45	21 18	22 24	23 30	24 34		
168	46.4		53.5	87	24.0	8.8	12	41.6	8.2	58.8	35	16 54	17 21	17 52	21 28	22 32	23 35	24 36		
183	46.3	S18	54.1	101	51.8	9.0	S12	33.4	8.2	58.7	30	17 04	17 29	17 58	21 36	22 39	23 40	24 39		
198	46.1		54.7	116	19.8	9.0	12	25.2	8.3	58.7	20	17 20	17 43	18 10	21 51	22 51	23 48	24 44		
213	46.0		55.3	130	47.8	9.1	12	16.9	8.3	58.7	N 10	17 35	17 57	18 22	22 03	23 01	23 55	24 47		
228	45.9	..	56.0	145	15.9	9.1	12	08.6	8.5	58.6	0	17 48	18 10	18 36	22 15	23 10	24 02	00 02		
243	45.8		56.6	159	44.0	9.3	12	00.1	8.4	58.6	S 10	18 02	18 25	18 51	22 27	23 20	24 09	00 09		
258	45.7		57.2	174	12.3	9.3	11	51.7	8.6	58.6	20	18 17	18 41	19 09	22 39	23 30	24 16	00 16		
273	45.5	S18	57.8	188	40.6	9.4	S11	43.1	8.6	58.5	30	18 34	19 01	19 32	22 54	23 41	24 24	00 24		
288	45.4		58.4	203	09.0	9.5	11	34.5	8.6	58.5	35	18 45	19 13	19 47	23 02	23 47	24 28	00 28		
303	45.3		59.0	217	37.5	9.5	11	25.9	8.7	58.5	40	18 56	19 27	20 05	23 11	23 55	24 33	00 33		
318	45.2	18	59.6	232	06.0	9.6	11	17.2	8.7	58.4	45	19 10	19 44	20 28	23 22	24 03	00 03	00 39		
333	45.1	19	00.2	246	34.6	9.7	11	08.5	8.9	58.4	S 50	19 27	20 06	20 59	23 35	24 13	00 13	00 46		
348	44.9		00.8	261	03.3	9.7	10	59.6	8.8	58.4	52	19 35	20 17	21 15	23 41	24 18	00 18	00 49		
3	44.8	S19	01.4	275	32.0	9.9	S10	50.8	8.9	58.3	54	19 44	20 30	21 35	23 48	24 23	00 23	00 53		
18	44.7		02.1	290	00.9	9.9	10	41.9	9.0	58.3	56	19 54	20 44	22 02	23 55	24 29	00 29	00 57		
33	44.6		02.7	304	29.8	9.9	10	32.9	9.0	58.2	58	20 05	21 01	22 42	24 04	00 04	00 36	01 01		
48	44.4	..	03.3	318	58.7	10.1	10	23.9	9.0	58.2	S 60	20 19	21 22	///	24 13	00 13	00 43	01 06		
63	44.3		03.9	333	27.8	10.1	10	14.9	9.2	58.2	Lat.	SOL E.T. (+)	Pas. Mer.		Pas. Mer.		Mer. Inf.	Edad.	Fase	
78	44.2		04.5	347	56.9	10.2	10	05.7	9.1	58.2	00h	12h	h	m	h	m	h	m	d	
93	44.1	S19	05.1	2	26.1	10.2	S 9	56.6	9.2	58.1	m	s	m	s	h	m	h	m	d	
108	43.9		05.7	16	55.3	10.3	9	47.4	9.2	58.1	15	27	22	11	45	16	01	03	32	04
123	43.8		06.3	31	24.6	10.4	9	38.2	9.3	58.1	16	15	11	11	45	16	57	04	30	05
138	43.7																			

T. M. G.	ARIES		VENUS -3.4		MARTE +0.1		JUPITER -2.2		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
18 ^d 00	56 55.4	199 05.5	S13 32.1	286 02.3	N20 14.2	321 19.9	N23 00.9	264 20.7	N12 38.0	Acamar	315 38.3	S40 23.7	
01	71 57.9	214 04.9	33.1	301 04.0	14.1	336 22.5	00.9	279 23.1	38.0	Achernar	335 46.3	S57 21.1	
02	87 00.3	229 04.4	34.2	316 05.7	14.0	351 25.2	00.9	294 25.4	38.0	Acrux	173 39.7	S62 58.3	
03	102 02.8	244 03.8	35.2	331 07.5	13.9	6 27.9	00.9	309 27.8	37.9	Adhara	255 33.3	S28 56.4	
04	117 05.3	259 03.2	36.3	346 09.2	13.8	21 30.6	00.9	324 30.1	37.9	Aldebaran	291 19.9	N16 27.9	
05	132 07.7	274 02.6	37.3	1 10.9	13.7	36 33.3	00.9	339 32.5	37.9				
06	147 10.2	289 02.0	S13 38.3	16 12.7	N20 13.6	51 35.9	N23 00.9	354 34.8	N12 37.8	Alioth	166 44.7	N56 04.6	
07	162 12.7	304 01.5	39.4	31 14.4	13.6	66 38.6	01.0	9 37.2	37.8	Alkaid	153 20.5	N49 25.4	
08	177 15.1	319 00.9	40.4	46 16.2	13.5	81 41.3	01.0	24 39.6	37.8	Al Na'ir	28 17.4	S47 04.2	
Y 09	192 17.6	334 00.3	41.4	61 17.9	13.4	96 44.0	01.0	39 41.9	37.8	Alnilam	276 13.3	S 1 13.0	
I 10	207 20.0	348 59.7	42.5	76 19.7	13.3	111 46.7	01.0	54 44.3	37.7	Alphard	218 22.4	S 8 33.7	
E 11	222 22.5	3 59.2	43.5	91 21.4	13.2	126 49.4	01.0	69 46.6	37.7				
R 12	237 25.0	18 58.6	S13 44.6	106 23.2	N20 13.1	141 52.0	N23 01.0	84 49.0	N12 37.7	Alphecca	126 34.1	N26 47.5	
N 13	252 27.4	33 58.0	45.6	121 24.9	13.0	156 54.7	01.0	99 51.4	37.6	Alpheratz	358 11.1	N28 58.3	
E 14	267 29.9	48 57.4	46.6	136 26.6	12.9	171 57.4	01.0	114 53.7	37.6	Altair	62 34.6	N 8 48.8	
S 15	282 32.4	63 56.8	47.7	151 28.4	12.9	187 00.1	01.0	129 56.1	37.6	Ankaa	353 41.9	S42 25.7	
16	297 34.8	78 56.2	48.7	166 30.1	12.8	202 02.8	01.1	144 58.4	37.6	Antares	112 59.6	S26 22.9	
17	312 37.3	93 55.7	49.7	181 31.9	12.7	217 05.5	01.1	160 00.8	37.5				
18	327 39.8	108 55.1	S13 50.8	196 33.7	N20 12.6	232 08.1	N23 01.1	175 03.2	N12 37.5	Arcturus	146 20.6	N19 17.9	
19	342 42.2	123 54.5	51.8	211 35.4	12.5	247 10.8	01.1	190 05.5	37.5	Atria	108 26.0	S68 59.2	
20	357 44.7	138 53.9	52.8	226 37.2	12.4	262 13.5	01.1	205 07.9	37.4	Avior	234 28.6	S59 26.1	
21	12 47.2	153 53.3	53.8	241 38.9	12.3	277 16.2	01.1	220 10.3	37.4	Bellatrix	279 00.5	N 6 19.8	
22	27 49.6	168 52.7	54.9	256 40.7	12.3	292 18.9	01.1	235 12.6	37.4	Betelgeuse	271 30.1	N 7 24.1	
23	42 52.1	183 52.1	55.9	271 42.4	12.2	307 21.6	01.1	250 15.0	37.4				
19 ^d 00	57 54.5	198 51.6	S13 56.9	286 44.2	N20 12.1	322 24.3	N23 01.1	265 17.3	N12 37.3	Canopus	264 07.6	S52 40.9	
01	72 57.0	213 51.0	58.0	301 45.9	12.0	337 26.9	01.2	280 19.7	37.3	Capella	281 13.7	N45 58.5	
02	87 59.5	228 50.4	13 59.0	316 47.7	11.9	352 29.6	01.2	295 22.1	37.3	Deneb	49 49.9	N45 12.5	
03	103 01.9	243 49.8	14 00.0	331 49.5	11.8	7 32.3	01.2	310 24.4	37.3	Denebola	183 01.2	N14 41.7	
04	118 04.4	258 49.2	01.0	346 51.2	11.8	22 35.0	01.2	325 26.8	37.2	Diphda	349 22.6	S18 06.5	
05	133 06.9	273 48.6	02.1	1 53.0	11.7	37 37.7	01.2	340 29.2	37.2				
06	148 09.3	288 48.0	S14 03.1	16 54.8	N20 11.6	52 40.4	N23 01.2	355 31.5	N12 37.2	Dubhe	194 24.8	N61 51.9	
07	163 11.8	303 47.4	04.1	31 56.5	11.5	67 43.1	01.2	10 33.9	37.1	Elnath	278 46.2	N28 35.3	
08	178 14.3	318 46.8	05.1	46 58.3	11.4	82 45.8	01.2	25 36.2	37.1	Eltanin	90 59.1	N51 29.8	
S 09	193 16.7	333 46.3	06.2	62 00.1	11.3	97 48.5	01.3	40 38.6	37.1	Enif	34 13.5	N 9 46.6	
A 10	208 19.2	348 45.7	07.2	77 01.8	11.3	112 51.1	01.3	55 41.0	37.1	Fomalhaut	15 53.5	S29 44.4	
B 11	223 21.6	3 45.1	08.2	92 03.6	11.2	127 53.8	01.3	70 43.3	37.0				
A 12	238 24.1	18 44.5	S14 09.2	107 05.4	N20 11.1	142 56.5	N23 01.3	85 45.7	N12 37.0	Gacrux	172 31.2	S56 59.1	
D 13	253 26.6	33 43.9	10.2	122 07.1	11.0	157 59.2	01.3	100 48.1	37.0	Gienah	176 20.1	S17 25.0	
O 14	268 29.0	48 43.3	11.3	137 08.9	10.9	173 01.9	01.3	115 50.4	37.0	Hadar	149 26.6	S60 15.8	
15	283 31.5	63 42.7	12.3	152 10.7	10.9	188 04.6	01.3	130 52.8	36.9	Hamal	328 30.7	N23 21.6	
16	298 34.0	78 42.1	13.3	167 12.4	10.8	203 07.3	01.3	145 55.2	36.9	Kaus Aust.	84 19.7	S34 23.7	
17	313 36.4	93 41.5	14.3	182 14.2	10.7	218 10.0	01.3	160 57.5	36.9				
18	328 38.9	108 40.9	S14 15.3	197 16.0	N20 10.6	233 12.7	N23 01.4	175 59.9	N12 36.8	Kochab	137 20.3	N74 14.8	
19	343 41.4	123 40.3	16.4	212 17.8	10.5	248 15.4	01.4	191 02.3	36.8	Markab	14 05.0	N15 05.4	
20	358 43.8	138 39.7	17.4	227 19.5	10.5	263 18.1	01.4	206 04.6	36.8	Menkar	314 42.8	N 4 00.2	
21	13 46.3	153 39.1	18.4	242 21.3	10.4	278 20.8	01.4	221 07.0	36.8	Menkent	148 39.6	S36 15.5	
22	28 48.8	168 38.5	19.4	257 23.1	10.3	293 23.5	01.4	236 09.4	36.7	Miaplacidus	221 45.0	S69 37.3	
23	43 51.2	183 37.9	20.4	272 24.9	10.2	308 26.1	01.4	251 11.7	36.7				
20 ^d 00	58 53.7	198 37.3	S14 21.4	287 26.7	N20 10.1	323 28.8	N23 01.4	266 14.1	N12 36.7	Mirfak	309 18.3	N49 47.0	
01	73 56.1	213 36.7	22.4	302 28.4	10.1	338 31.5	01.4	281 16.5	36.7	Nunki	76 31.8	S26 19.4	
02	88 58.6	228 36.1	23.4	317 30.2	10.0	353 34.2	01.5	296 18.8	36.6	Peacock	54 01.7	S56 48.5	
03	104 01.1	243 35.5	24.5	332 32.0	09.9	8 36.9	01.5	311 21.2	36.6	Pollux	244 00.3	N28 04.6	
04	119 03.5	258 34.9	25.5	347 33.8	09.8	23 39.6	01.5	326 23.6	36.6	Procyon	245 27.6	N 5 16.9	
05	134 06.0	273 34.3	26.5	2 35.6	09.8	38 42.3	01.5	341 25.9	36.6				
06	149 08.5	288 33.7	S14 27.5	17 37.4	N20 09.7	53 45.0	N23 01.5	356 28.3	N12 36.5	Rasalhague	96 31.7	N12 34.8	
07	164 10.9	303 33.1	28.5	32 39.2	09.6	68 47.7	01.5	11 30.7	36.5	Regulus	208 12.1	N12 04.5	
D 08	179 13.4	318 32.5	29.5	47 40.9	09.5	83 50.4	01.5	26 33.0	36.5	Rigel	281 37.5	S 8 13.6	
O 09	194 15.9	333 31.9	30.5	62 42.7	09.4	98 53.1	01.5	41 35.4	36.5	Rigel Kent.	140 29.0	S60 44.4	
M 10	209 18.3	348 31.3	31.5	77 44.5	09.4	113 55.8	01.5	56 37.8	36.4	Sabik	102 43.7	S15 41.7	
I 11	224 20.8	3 30.7	32.5	92 46.3	09.3	128 58.5	01.6	71 40.1	36.4				
N 12	239 23.3	18 30.1	S14 33.5	107 48.1	N20 09.2	144 01.2	N23 01.6	86 42.5	N12 36.4	Schedar	350 10.7	N56 25.2	
G 13	254 25.7	33 29.5	34.5	122 49.9	09.1	159 03.9	01.6	101 44.9	36.4	Shaula	96 58.7	S37 05.2	
O 14	269 28.2	48 28.9	35.5	137 51.7	09.1	174 06.6	01.6	116 47.2	36.3	Sirius	258 57.1	S16 41.1	
15	284 30.6	63 28.3	36.6	152 53.5	09.0	189 09.3	01.6	131 49.6	36.3	Spica	158 59.8	S11 02.6	
16	299 33.1	78 27.7	37.6	167 55.3	08.9	204 12.0	01.6	146 52.0	36.3	Suhail	223 12.0	S43 20.4	
17	314 35.6	93 27.1	38.6	182 57.1	08.8	219 14.7	01.6	161 54.3	36.3				
18	329 38.0	108 26.5	S14 39.6	197 58.9	N20 08.8	234 17.4	N23 01.6	176 56.7	N12 36.2	Vega	80 57.5	N38 46.1	
19	344 40.5	123 25.9	40.6	213 00.7	08.7	249 20.1	01.7	191 59.1	36.2	Zuben'ubi	137 35.5	S15 56.9	
20	359 43.0	138 25.3	41.6	228 02.5	08.6	264 22.8	01.7	207 01.5	36.2				
21	14 45.4	153 24.7	42.6	243 04.3	08.5	279 25.5	01.7	222 03.8	36.2				
22	29 47.9	168 24.1	43.6	258 06.1	08.5	294 28.2	01.7	237 06.2	36.1	Venus	140 57.0	10 45	
23	44 50.4	183 23.4	44.6	273 07.9	08.4	309 30.9	01.7	252 08.6	36.1	Marte	228 49.6	4 52	
										Júpiter	264 29.7	2 30	
										Saturno	207 22.8	6 18	
Pas. Mer.	h m	v -0.6	d 1.0	v 1.8	d 0.1	v 2.7	d 0.0	v 2.4	d 0.0				

T. M. G.	SOL			LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna																	
	A.H.G.		Dec.	A.H.G.		v Dec.		d P.H.	Náut.		Civil	18	19	20	21													
	h	m	°	°	°	°		°	h	m	h	m	h	m	h	m												
18 V I E R N E S	183	43.3	S19	08.7	89	22.5	10.7	S	9	00.8	9.4	57.9	N 72	07	13	08	53	■	13	58	13	52	13	47	13	41		
	01	198	43.2	09.3	103	52.2	10.7	8	51.4	9.5	57.9	N 70	07	01	08	27	10	17	13	48	13	48	13	48	13	48		
	02	213	43.0	09.9	118	21.9	10.8	8	41.9	9.5	57.9	68	06	52	08	07	09	31	13	40	13	45	13	50	13	54		
	03	228	42.9	10.5	132	51.7	10.8	8	32.4	9.5	57.8	66	06	44	07	51	09	02	13	33	13	43	13	51	13	59		
	04	243	42.8	11.1	147	21.5	10.9	8	22.9	9.6	57.8	64	06	36	07	38	08	40	13	28	13	40	13	52	14	03		
	05	258	42.6	11.7	161	51.4	11.0	8	13.3	9.6	57.8	62	06	30	07	27	08	22	13	23	13	38	13	53	14	07		
	06	273	42.5	S19	12.3	176	21.4	11.0	S	8	03.7	9.7	57.8	60	06	25	07	17	08	08	13	18	13	36	13	53	14	10
	07	288	42.4	12.9	190	51.4	11.1	7	54.0	9.7	57.7	56	06	15	07	01	07	44	13	11	13	34	13	54	14	15		
	08	303	42.3	13.5	205	21.5	11.1	7	44.3	9.7	57.7	54	06	11	06	55	07	35	13	08	13	32	13	55	14	18		
	09	318	42.1	14.1	219	51.6	11.2	7	34.6	9.7	57.7	52	06	07	06	48	07	27	13	05	13	31	13	55	14	20		
	10	333	42.0	14.7	234	21.8	11.3	7	24.9	9.8	57.6	50	06	03	06	43	07	19	13	03	13	30	13	56	14	22		
	11	348	41.9	15.3	248	52.1	11.3	7	15.1	9.8	57.6	45	05	55	06	31	07	03	12	57	13	28	13	57	14	26		
	12	3	41.7	S19	15.9	263	22.4	11.3	S	7	05.3	9.8	57.6	N 40	05	47	06	20	06	50	12	52	13	26	13	58	14	29
	13	18	41.6	16.5	277	52.7	11.5	6	55.5	9.8	57.5	35	05	40	06	11	06	38	12	48	13	24	13	58	14	32		
	14	33	41.5	17.1	292	23.2	11.5	6	45.7	9.9	57.5	30	05	34	06	03	06	28	12	45	13	23	13	59	14	35		
	15	48	41.3	17.6	306	53.7	11.5	6	35.8	9.9	57.5	20	05	21	05	48	06	11	12	39	13	20	14	00	14	40		
	16	63	41.2	18.2	321	24.2	11.6	6	25.9	9.9	57.4	N 10	05	08	05	34	05	56	12	33	13	18	14	01	14	44		
	17	78	41.1	18.8	335	54.8	11.6	6	16.0	9.9	57.4	0	04	54	05	20	05	42	12	28	13	16	14	02	14	48		
	18	93	40.9	S19	19.4	350	25.4	11.7	S	6	06.1	10.0	57.4	S 10	04	39	05	05	05	28	12	23	13	14	14	03	14	52
	19	108	40.8	20.0	4	56.1	11.8	5	56.1	9.9	57.3	20	04	20	04	48	05	12	12	17	13	12	14	04	14	56		
	20	123	40.7	20.6	19	26.9	11.8	5	46.2	10.0	57.3	30	03	56	04	28	04	54	12	11	13	09	14	05	15	01		
	21	138	40.5	21.2	33	57.7	11.9	5	36.2	10.0	57.3	35	03	41	04	15	04	44	12	07	13	08	14	06	15	03		
	22	153	40.4	21.8	48	28.6	11.9	5	26.1	10.0	57.3	40	03	23	04	01	04	32	12	03	13	06	14	07	15	07		
23	168	40.2	22.4	62	59.5	11.9	5	16.1	10.0	57.2	45	02	59	03	43	04	17	11	59	13	04	14	08	15	10			
19 S A B A D O	183	40.1	S19	23.0	77	30.4	12.0	S	5	06.1	10.1	57.2	S 50	02	27	03	20	04	00	11	53	13	02	14	09	15	15	
	01	198	40.0	23.5	92	01.4	12.1	4	56.0	10.1	57.2	52	02	09	03	09	03	52	11	50	13	01	14	10	15	17		
	02	213	39.8	24.1	106	32.5	12.1	4	45.9	10.1	57.1	54	01	48	02	56	03	42	11	47	13	00	14	10	15	19		
	03	228	39.7	24.7	121	03.6	12.1	4	35.8	10.1	57.1	56	01	20	02	41	03	32	11	44	12	58	14	11	15	22		
	04	243	39.6	25.3	135	34.7	12.2	4	25.7	10.1	57.1	58	00	32	02	23	03	20	11	41	12	57	14	12	15	24		
	05	258	39.4	25.9	150	05.9	12.2	4	15.6	10.1	57.0	S 60	///	02	00	03	06	11	37	12	55	14	12	15	28			
	06	273	39.3	S19	26.5	164	37.1	12.3	S	4	05.5	10.1	57.0	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna										
	07	288	39.1	27.0	179	08.4	12.3	3	55.4	10.2	57.0			Civil	Náut.	18	19	20	21									
	08	303	39.0	27.6	193	39.7	12.4	3	45.2	10.1	57.0	N 72	h	m	h	m	h	m	h	m	h	m	h	m	h	m		
	09	318	38.9	28.2	208	11.1	12.4	3	35.1	10.2	56.9	N 70	■	14	37	16	17	23	43	25	27	01	27	01	27	03	08	
	10	333	38.7	28.8	222	42.5	12.4	3	24.9	10.2	56.9	68	13	13	15	03	16	28	23	51	25	28	01	28	01	28	03	03
	11	348	38.6	29.4	237	13.9	12.5	3	14.7	10.1	56.9	66	13	59	15	23	16	38	23	57	25	29	01	29	02	59		
	12	3	38.4	S19	29.9	251	45.4	12.5	S	3	04.6	10.2	56.8	64	14	28	15	39	16	46	24	03	00	03	01	30	02	56
	13	18	38.3	30.5	266	16.9	12.6	2	54.4	10.2	56.8	62	14	50	15	52	16	54	24	07	00	07	01	31	02	53		
	14	33	38.2	31.1	280	48.5	12.6	2	44.2	10.2	56.8	64	14	50	15	52	16	54	24	07	00	07	01	31	02	53		
	15	48	38.0	31.7	295	20.1	12.6	2	34.0	10.2	56.8	62	15	08	16	03	17	00	24	11	00	11	01	32	02	50		
	16	63	37.9	32.3	309	51.7	12.7	2	23.8	10.2	56.7	60	15	23	16	13	17	05	24	14	00	14	01	32	02	48		
	17	78	37.7	32.8	324	23.4	12.7	2	13.6	10.2	56.7	N 58	15	35	16	21	17	11	24	17	00	17	01	33	02	46		
	18	93	37.6	S19	33.4	338	55.1	12.8	S	2	03.4	10.2	56.7	56	15	46	16	29	17	15	24	20	00	20	01	33	02	45
	19	108	37.4	34.0	353	26.9	12.7	1	53.2	10.2	56.6	54	15	55	16	36	17	19	24	22	00	22	01	33	02	43		
	20	123	37.3	34.6	7	58.6	12.8	1	43.0	10.2	56.6	52	16	04	16	42	17	23	24	24	00	24	01	34	02	42		
	21	138	37.2	35.1	22	30.4	12.9	1	32.8	10.2	56.6	50	16	11	16	47	17	27	24	26	00	26	01	34	02	41		
	22	153	37.0	35.7	37	02.3	12.9	1	22.6	10.1	56.6	50	16	11	16	47	17	27	24	26	00	26	01	34	02	41		
23	168	36.9	36.3	51	34.2	12.9	1	12.5	10.2	56.5	45	16	28	17	00	17	36	24	30	00	30	01	35	02	38			
20 D O M I N G O	183	36.7	S19	36.9	66	06.1	12.9	S	1	02.3	10.2	56.5	N 40	16	41	17	10	17	43	24	34	00	34	01	35	02	36	
	01	198	36.6	37.4	80	38.0	13.0	0	52.1	10.2	56.5	35	16	52	17	19	17	50	24	36	00	36	01	36	02	34		
	02	213	36.4	38.0	95	10.0	13.0	0	41.9	10.2	56.5	20	17	02	17	28	17	57	24	39	00	39	01	36	02	32		
	03	228	36.3	38.6	109	42.0	13.0	0	31.7	10.1	56.4	N 10	17	20	17	43	18	10	24	44	00	44	01	37	02	29		
	04	243	36.1	39.1	124	14.0	13.0	0	21.6	10.2	56.4	0	17	35	17	57	18	23	24	47	00	47	01	38	02	26		
	05	258	36.0	39.7	138	46.0	13.1	0	11.4	10.1	56.4	0	17	49	18	11	18	36	00	02	00	51	01	38	02	24		
	06	273	35.8	S19	40.3	153	18.1	13.1	S	0	01.3	10.2	56.4	S 10	18	03	18	26	18	52	00	09	00	55	01	39	02	22
	07	288	35.7	40.8	167	50.2	13.1	N	0	08.9	10.1	56.3	20	18	19	18	43	19	11	00	16	00	59	01	39	02	19	
	08	303	35.6	41.4	182	22.3	13.2	0	19.0	10.1	56.3	30	18	37	19	03	19	35	00	24	01	03	01	40	02	16		
	09	318	35.4	42.0	196	54.5	13.2	0	29.1	10.2	56.3	35	18	48	19	16	19	50	00	28	01	05	01	40	02	14		
	10	333	35.3	42																								

T. M. G.	ARIES		VENUS -3.4		MARTE +0.1		JUPITER -2.2		SATURNO +0.8		ESTRELLAS			
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
LUNES	21 00	59 52.8	198 22.8 S14	45.6	288 09.7 N20	08.3	324 33.6 N23	01.7	267 10.9 N12	36.1	Acamar	315 38.3 S40	23.7	
	01	74 55.3	213 22.2	46.6	303 11.5	08.3	339 36.3	01.7	282 13.3	36.1	Achernar	335 46.3 S57	21.1	
	02	89 57.7	228 21.6	47.6	318 13.3	08.2	354 39.0	01.7	297 15.7	36.0	Acruz	173 39.6 S62	58.3	
	03	105 00.2	243 21.0	48.6	333 15.1	08.1	9 41.7	01.8	312 18.1	36.0	Adhara	255 33.3 S28	56.5	
	04	120 02.7	258 20.4	49.5	348 16.9	08.0	24 44.4	01.8	327 20.4	36.0	Aldebaran	291 19.8 N16	27.9	
	05	135 05.1	273 19.8	50.5	3 18.7	08.0	39 47.1	01.8	342 22.8	36.0				
	06	150 07.6	288 19.2 S14	51.5	18 20.5 N20	07.9	54 49.8 N23	01.8	357 25.2 N12	35.9	Alioth	166 44.7 N56	04.6	
	07	165 10.1	303 18.6	52.5	33 22.4	07.8	69 52.5	01.8	12 27.5	35.9	Alkaid	153 20.5 N49	25.3	
	08	180 12.5	318 17.9	53.5	48 24.2	07.8	84 55.2	01.8	27 29.9	35.9	Al Na'ir	28 17.4 S47	04.2	
	09	195 15.0	333 17.3	54.5	63 26.0	07.7	99 57.9	01.8	42 32.3	35.9	Alnilam	276 13.3 S 1	13.0	
	10	210 17.5	348 16.7	55.5	78 27.8	07.6	115 00.6	01.8	57 34.7	35.8	Alphard	218 22.4 S 8	33.7	
	11	225 19.9	3 16.1	56.5	93 29.6	07.5	130 03.3	01.8	72 37.0	35.8				
	12	240 22.4	18 15.5 S14	57.5	108 31.4 N20	07.5	145 06.1 N23	01.9	87 39.4 N12	35.8	Alphecca	126 34.1 N26	47.5	
	13	255 24.9	33 14.9	58.5	123 33.2	07.4	160 08.8	01.9	102 41.8	35.8	Alpheratz	358 11.1 N28	58.3	
	14	270 27.3	48 14.2 14	59.5	138 35.1	07.3	175 11.5	01.9	117 44.1	35.7	Altair	62 34.6 N 8	48.8	
	15	285 29.8	63 13.6 15	00.5	153 36.9	07.3	190 14.2	01.9	132 46.5	35.7	Ankaa	353 41.9 S42	25.7	
	16	300 32.2	78 13.0	01.4	168 38.7	07.2	205 16.9	01.9	147 48.9	35.7	Antares	112 59.6 S26	22.9	
	17	315 34.7	93 12.4	02.4	183 40.5	07.1	220 19.6	01.9	162 51.3	35.7				
	18	330 37.2	108 11.8 S15	03.4	198 42.3 N20	07.1	235 23.3 N23	01.9	177 53.6 N12	35.6	Arcturus	146 20.5 N19	17.9	
	19	345 39.6	123 11.2	04.4	213 44.2	07.0	250 25.0	01.9	192 56.0	35.6	Atria	108 26.0 S68	59.2	
	20	0 42.1	138 10.5	05.4	228 46.0	06.9	265 27.7	02.0	207 58.4	35.6	Avior	234 28.6 S59	26.1	
	21	15 44.6	153 09.9	06.4	243 47.8	06.9	280 30.4	02.0	223 00.8	35.6	Bellatrix	279 00.5 N 6	19.7	
	22	30 47.0	168 09.3	07.4	258 49.6	06.8	295 33.1	02.0	238 03.1	35.6	Betelgeuse	271 30.0 N 7	24.1	
23	45 49.5	183 08.7	08.3	273 51.5	06.7	310 35.8	02.0	253 05.5	35.5					
MARTES	22 00	60 52.0	198 08.1 S15	09.3	288 53.3 N20	06.7	325 38.5 N23	02.0	268 07.9 N12	35.5	Canopus	264 07.6 S52	41.0	
	01	75 54.4	213 07.4	10.3	303 55.1	06.6	340 41.3	02.0	283 10.3	35.5	Capella	281 13.7 N45	58.5	
	02	90 56.9	228 06.8	11.3	318 56.9	06.5	355 44.0	02.0	298 12.6	35.5	Deneb	49 49.9 N45	12.4	
	03	105 59.4	243 06.2	12.3	333 58.8	06.5	10 46.7	02.0	313 15.0	35.4	Denebola	183 01.2 N14	41.7	
	04	121 01.8	258 05.6	13.3	349 00.6	06.4	25 49.4	02.1	328 17.4	35.4	Diphda	349 22.6 S18	06.5	
	05	136 04.3	273 04.9	14.2	4 02.4	06.3	40 52.1	02.1	343 19.8	35.4				
	06	151 06.7	288 04.3 S15	15.2	19 04.3 N20	06.3	55 54.8 N23	02.1	358 22.1 N12	35.4	Dubhe	194 24.8 N61	51.9	
	07	166 09.2	303 03.7	16.2	34 06.1	06.2	70 57.5	02.1	13 24.5	35.3	Elnath	278 46.2 N28	35.3	
	08	181 11.7	318 03.1	17.2	49 07.9	06.1	86 00.2	02.1	28 26.9	35.3	Eltanin	90 59.1 N51	29.8	
	09	196 14.1	333 02.4	18.1	64 09.8	06.1	101 02.9	02.1	43 29.3	35.3	Enif	34 13.5 N 9	46.6	
	10	211 16.6	348 01.8	19.1	79 11.6	06.0	116 05.7	02.1	58 31.6	35.3	Fomalhaut	15 53.5 S29	44.4	
	11	226 19.1	3 01.2	20.1	94 13.5	06.0	131 08.4	02.1	73 34.0	35.3				
	12	241 21.5	18 00.6 S15	21.1	109 15.3 N20	05.9	146 11.1 N23	02.2	88 36.4 N12	35.2	Gacrux	172 31.1 S56	59.1	
	13	256 24.0	32 59.9	22.0	124 17.1	05.8	161 13.8	02.2	103 38.8	35.2	Gienah	176 20.1 S17	25.0	
	14	271 26.5	47 59.3	23.0	139 19.0	05.8	176 16.5	02.2	118 41.2	35.2	Hadar	149 26.5 S60	15.8	
	15	286 28.9	62 58.7	24.0	154 20.8	05.7	191 19.2	02.2	133 43.5	35.2	Hamal	328 30.7 N23	21.6	
	16	301 31.4	77 58.0	25.0	169 22.7	05.6	206 21.9	02.2	148 45.9	35.1	Kaus Aust.	84 19.7 S34	23.7	
	17	316 33.8	92 57.4	25.9	184 24.5	05.6	221 24.7	02.2	163 48.3	35.1				
	18	331 36.3	107 56.8 S15	26.9	199 26.4 N20	05.5	236 27.4 N23	02.2	178 50.7 N12	35.1	Kochab	137 20.3 N74	14.8	
	19	346 38.8	122 56.1	27.9	214 28.2	05.5	251 30.1	02.2	193 53.0	35.1	Markab	14 05.0 N15	05.4	
	20	1 41.2	137 55.5	28.8	229 30.1	05.4	266 32.8	02.3	208 55.4	35.1	Menkar	314 42.8 N 4	00.2	
	21	16 43.7	152 54.9	29.8	244 31.9	05.3	281 35.5	02.3	223 57.8	35.0	Menkent	148 39.6 S36	15.5	
	22	31 46.2	167 54.3	30.8	259 33.8	05.3	296 38.2	02.3	239 00.2	35.0	Miaplacidus	221 45.0 S69	37.3	
23	46 48.6	182 53.6	31.7	274 35.6	05.2	311 40.9	02.3	254 02.6	35.0					
MIÉRCOLES	23 00	61 51.1	197 53.0 S15	32.7	289 37.5 N20	05.2	326 43.7 N23	02.3	269 04.9 N12	35.0	Mirfak	309 18.3 N49	47.0	
	01	76 53.6	212 52.4	33.7	304 39.3	05.1	341 46.4	02.3	284 07.3	34.9	Nunki	76 31.8 S26	19.4	
	02	91 56.0	227 51.7	34.6	319 41.2	05.0	356 49.1	02.3	299 09.7	34.9	Peacock	54 01.7 S56	48.5	
	03	106 58.5	242 51.1	35.6	334 43.0	05.0	11 51.8	02.3	314 12.1	34.9	Pollux	244 00.3 N28	04.6	
	04	122 01.0	257 50.4	36.6	349 44.9	04.9	26 54.5	02.4	329 14.5	34.9	Procyon	245 27.6 N 5	16.9	
	05	137 03.4	272 49.8	37.5	4 46.7	04.9	41 57.2	02.4	344 16.8	34.9				
	06	152 05.9	287 49.2 S15	38.5	19 48.6 N20	04.8	57 00.0 N23	02.4	359 19.2 N12	34.8	Rasalhague	96 31.7 N12	34.8	
	07	167 08.3	302 48.5	39.5	34 50.4	04.7	72 02.7	02.4	14 21.6	34.8	Regulus	208 12.1 N12	04.5	
	08	182 10.8	317 47.9	40.4	49 52.3	04.7	87 05.4	02.4	29 24.0	34.8	Rigel	281 37.5 S 8	13.6	
	09	197 13.3	332 47.3	41.4	64 54.2	04.6	102 08.1	02.4	44 26.4	34.8	Rigel Kent.	140 29.0 S60	44.4	
	10	212 15.7	347 46.6	42.3	79 56.0	04.6	117 10.8	02.4	59 28.7	34.8	Sabik	102 43.7 S15	41.7	
	11	227 18.2	2 46.0	43.3	94 57.9	04.5	132 13.6	02.4	74 31.1	34.7				
	12	242 20.7	17 45.3 S15	44.3	109 59.8 N20	04.5	147 16.3 N23	02.4	89 33.5 N12	34.7	Schedar	350 10.7 N56	25.2	
	13	257 23.1	32 44.7	45.2	125 01.6	04.4	162 19.0	02.5	104 35.9	34.7	Shaula	96 58.8 S37	05.2	
	14	272 25.6	47 44.1	46.2	140 03.5	04.3	177 21.7	02.5	119 38.3	34.7	Sirius	258 57.1 S16	41.2	
	15	287 28.1	62 43.4	47.1	155 05.4	04.3	192 24.4	02.5	134 40.6	34.7	Spica	158 59.8 S11	02.6	
	16	302 30.5	77 42.8	48.1	170 07.2	04.2	207 27.2	02.5	149 43.0	34.6	Suhail	223 12.0 S43	20.4	
	17	317 33.0	92 42.1	49.0	185 09.1	04.2	222 29.9	02.5	164 45.4	34.6				
	18	332 35.5	107 41.5 S15	50.0	200 11.0 N20	04.1	237 32.6 N23	02.5	179 47.8 N12	34.6	Vega	80 57.5 N38	46.1	
	19	347 37.9	122 40.9	50.9	215 12.8	04.1	252 35.3	02.5	194 50.2	34.6	Zuben'ubi	137 35.5 S15	56.9	
	20	2 40.4	137 40.2	51.9	230 14.7	04.0	267 38.1	02.5	209 52.6	34.6				
	21	17 42.8	152 39.6	52.8	245 16.6	04.0	282 40.8	02.6	224 54.9	34.5				
	22	32 45.3	167 38.9	53.8	260 18.5	03.9	297 43.5	02.6	239 57.3	34.5	Venus	137 16.1 10	48	
23	47 47.8	182 38.3	54.7	275 20.3	03.9	312 46.2	02.6	254 59.7	34.5	Marte	228 01.3 4	44		
										Júpiter	264 46.6 2	17		
										Saturno	207 15.9 6	07		
Pas. Mer.	h m	v -0.6	d 1.0	v 1.8	d 0.1	v 2.7	d 0.0	v 2.4	d 0.0					

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna									
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	21	22	23	24					
												h m	h m	h m	h m	h m	h m	h m	h m	
LUNES	183	33.1	S19	50.4	54	59.3	13.4	N	2	59.4	9.8	55.9	N 72	07 23	09 07	10 44	13 41	13 36	13 30	13 23
	198	33.0		51.0	69	31.7	13.5		3	09.2	9.9	55.9	N 70	07 10	08 38	10 44	13 48	13 49	13 50	13 54
	213	32.8		51.5	84	04.2	13.5		3	19.1	9.8	55.9	68	07 00	08 17	09 46	13 54	14 00	14 07	14 17
	228	32.7	..	52.1	98	36.7	13.5		3	28.9	9.8	55.8	66	06 51	07 59	09 13	13 59	14 08	14 20	14 34
	243	32.5		52.6	113	09.2	13.5		3	38.7	9.8	55.8	64	06 43	07 45	08 49	14 03	14 16	14 31	14 49
	258	32.4		53.2	127	41.7	13.5		3	48.5	9.8	55.8	62	06 36	07 34	08 30	14 07	14 22	14 40	15 01
	273	32.2	S19	53.7	142	14.2	13.5	N	3	58.3	9.7	55.8	60	06 30	07 23	08 15	14 10	14 28	14 48	15 12
	288	32.1		54.3	156	46.7	13.5		4	08.0	9.7	55.7	N 58	06 25	07 15	08 02	14 13	14 33	14 55	15 21
	303	31.9		54.8	171	19.2	13.6		4	17.7	9.7	55.7	56	06 20	07 07	07 50	14 15	14 37	15 01	15 29
	318	31.7	..	55.4	185	51.8	13.5		4	27.4	9.6	55.7	54	06 15	07 00	07 40	14 18	14 41	15 07	15 36
	333	31.6		55.9	200	24.3	13.5		4	37.0	9.7	55.7	52	06 11	06 53	07 32	14 20	14 45	15 12	15 42
	348	31.4		56.5	214	56.8	13.6		4	46.7	9.6	55.7	50	06 07	06 47	07 24	14 22	14 48	15 17	15 48
	3	31.3	S19	57.0	229	29.4	13.6	N	4	56.3	9.5	55.6	45	05 58	06 34	07 07	14 26	14 55	15 27	16 01
	18	31.1		57.6	244	02.0	13.5		5	05.8	9.6	55.6	N 40	05 50	06 23	06 53	14 29	15 01	15 35	16 11
	33	31.0		58.1	258	34.5	13.6		5	15.4	9.5	55.6	35	05 43	06 14	06 41	14 32	15 06	15 42	16 20
	48	30.8	..	58.7	273	07.1	13.6		5	24.9	9.5	55.6	30	05 36	06 05	06 31	14 35	15 11	15 48	16 28
	63	30.6		59.2	287	39.7	13.6		5	34.4	9.4	55.6	20	05 23	05 49	06 13	14 40	15 19	15 59	16 41
	78	30.5	19	59.8	302	12.3	13.6		5	43.8	9.4	55.5	N 10	05 09	05 35	05 57	14 44	15 26	16 09	16 53
	93	30.3	S20	00.3	316	44.9	13.6	N	5	53.2	9.4	55.5	0	04 55	05 21	05 43	14 48	15 33	16 18	17 04
	108	30.2		00.9	331	17.5	13.6		6	02.6	9.4	55.5	S 10	04 39	05 05	05 28	14 52	15 40	16 28	17 16
	123	30.0		01.4	345	50.1	13.6		6	12.0	9.3	55.5	20	04 20	04 48	05 12	14 56	15 47	16 37	17 28
	138	29.8	..	02.0	0	22.7	13.6		6	21.3	9.3	55.5	30	03 55	04 27	04 53	15 01	15 55	16 49	17 42
	153	29.7		02.5	14	55.3	13.6		6	30.6	9.2	55.4	35	03 39	04 14	04 42	15 03	16 00	16 55	17 50
168	29.5		03.0	29	27.9	13.6		6	39.8	9.2	55.4	40	03 20	03 59	04 30	15 07	16 05	17 03	17 59	
22	29.4	S20	03.6	44	00.5	13.6	N	6	49.0	9.2	55.4	45	02 55	03 40	04 15	15 10	16 11	17 11	18 10	
198	29.2		04.1	58	33.1	13.6		6	58.2	9.2	55.4	S 50	02 21	03 16	03 57	15 15	16 19	17 22	18 23	
213	29.0		04.7	73	05.7	13.5		7	07.4	9.1	55.4	52	02 03	03 04	03 48	15 17	16 23	17 27	18 29	
228	28.9	..	05.2	87	38.2	13.6		7	16.5	9.0	55.3	54	01 40	02 51	03 38	15 19	16 27	17 32	18 36	
243	28.7		05.7	102	10.8	13.6		7	25.5	9.1	55.3	56	01 08	02 35	03 27	15 22	16 31	17 38	18 43	
258	28.5		06.3	116	43.4	13.6		7	34.6	9.0	55.3	58	///	02 15	03 14	15 24	16 36	17 45	18 52	
273	28.4	S20	06.8	131	16.0	13.6	N	7	43.6	8.9	55.3	S 60	///	01 51	03 00	15 28	16 41	17 53	19 01	
288	28.2		07.4	145	48.6	13.6		7	52.5	8.9	55.3	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	21	22	23	24	
303	28.1		07.9	160	21.2	13.6		8	01.4	8.9	55.2	N 72	12 48	14 24	16 08	03 08	04 47	06 28	08 10	
318	27.9	..	08.4	174	53.8	13.5		8	10.3	8.8	55.2	N 70	13 45	15 15	16 32	03 03	04 36	06 09	07 40	
333	27.7		09.0	189	26.3	13.6		8	19.1	8.8	55.2	68	14 18	15 32	16 41	02 59	04 27	05 54	07 18	
348	27.6		09.5	203	58.9	13.6		8	27.9	8.7	55.2	66	14 18	15 32	16 41	02 56	04 19	05 41	07 01	
3	27.4	S20	10.0	218	31.5	13.5	N	8	36.6	8.7	55.2	64	14 42	15 46	16 48	02 53	04 13	05 31	06 47	
18	27.2		10.6	233	04.0	13.6		8	45.3	8.7	55.1	62	15 01	15 58	16 55	02 50	04 07	05 23	06 36	
33	27.1		11.1	247	36.6	13.5		8	54.0	8.6	55.1	60	15 17	16 08	17 01	02 48	04 03	05 15	06 26	
48	26.9	..	11.6	262	09.1	13.6		9	02.6	8.6	55.1	N 58	15 30	16 17	17 07	02 46	03 59	05 09	06 17	
63	26.7		12.2	276	41.7	13.5		9	11.2	8.5	55.1	56	15 41	16 25	17 12	02 45	03 55	05 03	06 10	
78	26.6		12.7	291	14.2	13.5		9	19.7	8.5	55.1	54	15 51	16 32	17 16	02 43	03 52	04 58	06 03	
93	26.4	S20	13.2	305	46.7	13.5	N	9	28.2	8.4	55.1	52	16 00	16 39	17 21	02 42	03 48	04 54	05 57	
108	26.2		13.8	320	19.2	13.5		9	36.6	8.4	55.0	50	16 08	16 45	17 25	02 41	03 46	04 49	05 51	
123	26.1		14.3	334	51.7	13.5		9	45.0	8.3	55.0	45	16 25	16 58	17 34	02 38	03 40	04 40	05 40	
138	25.9	..	14.8	349	24.2	13.5		9	53.3	8.3	55.0	N 40	16 39	17 09	17 42	02 36	03 35	04 33	05 30	
153	25.7		15.3	3	56.7	13.5		10	01.6	8.2	55.0	35	16 51	17 18	17 49	02 34	03 31	04 27	05 22	
168	25.6		15.9	18	29.2	13.5		10	09.8	8.2	55.0	30	17 01	17 27	17 56	02 32	03 27	04 21	05 14	
23	25.4	S20	16.4	33	01.7	13.4	N10	18.0	8.1	55.0	20	17 19	17 43	18 10	02 29	03 20	04 11	05 02		
198	25.2		16.9	47	34.1	13.5		10	26.1	8.1	54.9	N 10	17 35	17 57	18 23	02 26	03 15	04 03	04 51	
213	25.0		17.4	62	06.6	13.4		10	34.2	8.1	54.9	0	17 50	18 12	18 37	02 24	03 09	03 55	04 40	
228	24.9	..	18.0	76	39.0	13.4		10	42.3	7.9	54.9	S 10	18 05	18 27	18 54	02 22	03 04	03 47	04 30	
243	24.7		18.5	91	11.4	13.5		10	50.2	8.0	54.9	20	18 21	18 45	19 13	02 19	02 58	03 38	04 19	
258	24.5		19.0	105	43.9	13.4		10	58.2	7.8	54.9	30	18 40	19 06	19 38	02 16	02 52	03 29	04 07	
273	24.4	S20	19.5	120	16.3	13.3	N11	06.0	7.9	54.9	35	18 51	19 19	19 54	02 14	02 48	03 23	04 00		
288	24.2		20.1	134	48.6	13.4		11	13.9	7.7	54.8	40	19 03	19 34	20 13	02 12	02 44	03 17	03 51	
303	24.0		20.6	149	21.0	13.4		11	21.6	7.7	54.8	45	19 18	19 53	20 38	02 10	02 39	03 09	03 42	
318	23.8	..	21.1	163	53.4	13.3		11	29.3	7.7	54.8	S 50	19 37	20 17	21 13	02 07	02 33	03 01	03 31	
333	23.7		21.6	178	25.7	13.4		11	37.0	7.6	54.8	52	19 45	20 29	21 32	02 06	02 31	02 57	03 25	
348	23.5		22.1	192	58.1	13.3		11	44.6	7.6	54.8	54	19 55	20 43	21 55	02 05	02 28	02 52	03 19	
3	23.3	S20	22.7	207	30.4	13.3	N11	52.2	7.5	54.8	56	20 06	20 59	22 29	02 03	02 25	02 47	03 13		
18	23.1		23.2	222	02.7	13.3		11	59.7	7.4	54.8	58	20 19	21 19	///	02 02	02 21	02 42	03 06	
33	23.0		23.7	236	35.0	13.3		12	07.1	7.4	54.7	S 60	20 34	21 44	///	02 00	02 17	02 36	02 57	
48	22.8	..	24.2	251	07.3	13.3		12	14.5	7.3	54.7	Día	SOL E.T. (+)	Pas. Mer.	Pas. Mer. Sup.	Mer. Inf.	Edad.	Fase		
63	22.6		24.7	265	39.6	13.2		12	21.8	7.3	54.7	21	m s	m s	h m	h m	h m	d		
78	22.4		25.2	280	11.8	13.3		12	29.1	7.2	54.7	22	14 13	14 05	11 46	20 58	08 36	10	☉	
93	22.3	S20	25.8	294	44.1	13.2	N12	36.3	7.1	54.7	23	13 58	13 50	11 46	21 44	09 21	11			
108	22.1		26.3	309	16.3	13.2		12	43.4	7.1	54.7	23	13 42	13 34						

T. M. G.	ARIES		VENUS -3.4		MARTE 0.0		JUPITER -2.2		SATURNO +0.8		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
24 00	62 50.2	197 37.6	S15 55.7	290 22.2	N20 03.8	327 48.9	N23 02.6	270 02.1	N12 34.5	Acamar	315 38.3	S40 23.7	
01	77 52.7	212 37.0	56.6	305 24.1	03.7	342 51.7	02.6	285 04.5	34.5	Achernar	335 46.3	S57 21.1	
02	92 55.2	227 36.3	57.6	320 26.0	03.7	357 54.4	02.6	300 06.9	34.4	Acrux	173 39.6	S62 58.3	
03	107 57.6	242 35.7	58.5	335 27.8	03.6	12 57.1	02.6	315 09.2	34.4	Adhara	255 33.3	S28 56.5	
04	123 00.1	257 35.0	15 59.5	350 29.7	03.6	27 59.8	02.6	330 11.6	34.4	Aldebaran	291 19.8	N16 27.9	
05	138 02.6	272 34.4	16 00.4	5 31.6	03.5	43 02.6	02.7	345 14.0	34.4				
06	153 05.0	287 33.7	S16 01.4	20 33.5	N20 03.5	58 05.3	N23 02.7	0 16.4	N12 34.4	Alioth	166 44.7	N56 04.6	
07	168 07.5	302 33.1	02.3	35 35.4	03.4	73 08.0	02.7	15 18.8	34.3	Alkaid	153 20.5	N49 25.3	
08	183 10.0	317 32.4	03.3	50 37.2	03.4	88 10.7	02.7	30 21.2	34.3	Al Na'ir	28 17.4	S47 04.2	
J 09	198 12.4	332 31.8	04.2	65 39.1	03.3	103 13.5	02.7	45 23.6	34.3	Alnilam	276 13.3	S 1 13.0	
U 10	213 14.9	347 31.1	05.2	80 41.0	03.3	118 16.2	02.7	60 25.9	34.3	Alphard	218 22.4	S 8 33.7	
E 11	228 17.3	2 30.5	06.1	95 42.9	03.2	133 18.9	02.7	75 28.3	34.3				
V 12	243 19.8	17 29.8	S16 07.0	110 44.8	N20 03.2	148 21.7	N23 02.7	90 30.7	N12 34.2	Alphecca	126 34.1	N26 47.4	
E 13	258 22.3	32 29.2	08.0	125 46.7	03.1	163 24.4	02.8	105 33.1	34.2	Alpheratz	358 11.1	N28 58.3	
S 14	273 24.7	47 28.5	08.9	140 48.6	03.1	178 27.1	02.8	120 35.5	34.2	Altair	62 34.6	N 8 48.8	
15	288 27.2	62 27.9	09.9	155 50.5	03.0	193 29.8	02.8	135 37.9	34.2	Ankaa	353 42.0	S42 25.7	
16	303 29.7	77 27.2	10.8	170 52.4	03.0	208 32.6	02.8	150 40.3	34.2	Antares	112 59.6	S26 22.9	
17	318 32.1	92 26.6	11.7	185 54.3	02.9	223 35.3	02.8	165 42.6	34.1				
18	333 34.6	107 25.9	S16 12.7	200 56.2	N20 02.9	238 38.0	N23 02.8	180 45.0	N12 34.1	Arcturus	146 20.5	N19 17.9	
19	348 37.1	122 25.3	13.6	215 58.0	02.8	253 40.8	02.8	195 47.4	34.1	Atria	108 26.0	S68 59.2	
20	3 39.5	137 24.6	14.5	230 59.9	02.8	268 43.5	02.8	210 49.8	34.1	Avior	234 28.6	S59 26.1	
21	18 42.0	152 23.9	15.5	246 01.8	02.7	283 46.2	02.9	225 52.2	34.1	Bellatrix	279 00.5	N 6 19.7	
22	33 44.4	167 23.3	16.4	261 03.7	02.7	298 48.9	02.9	240 54.6	34.1	Betelgeuse	271 30.0	N 7 24.1	
23	48 46.9	182 22.6	17.3	276 05.6	02.7	313 51.7	02.9	255 57.0	34.0				
25 00	63 49.4	197 22.0	S16 18.3	291 07.5	N20 02.6	328 54.4	N23 02.9	270 59.3	N12 34.0	Canopus	264 07.6	S52 41.0	
01	78 51.8	212 21.3	19.2	306 09.4	02.6	343 57.1	02.9	286 01.7	34.0	Capella	281 13.6	N45 58.5	
02	93 54.3	227 20.7	20.1	321 11.4	02.5	358 59.9	02.9	301 04.1	34.0	Deneb	49 49.9	N45 12.4	
03	108 56.8	242 20.0	21.1	336 13.3	02.5	14 02.6	02.9	316 06.5	34.0	Denebola	183 01.1	N14 41.7	
04	123 59.2	257 19.3	22.0	351 15.2	02.4	29 05.3	02.9	331 08.9	33.9	Diphda	349 22.6	S18 06.5	
05	139 01.7	272 18.7	22.9	6 17.1	02.4	44 08.1	03.0	346 11.3	33.9				
06	154 04.2	287 18.0	S16 23.9	21 19.0	N20 02.3	59 10.8	N23 03.0	1 13.7	N12 33.9	Dubhe	194 24.7	N61 51.9	
07	169 06.6	302 17.4	24.8	36 20.9	02.3	74 13.5	03.0	16 16.1	33.9	Elnath	278 46.2	N28 35.3	
08	184 09.1	317 16.7	25.7	51 22.8	02.2	89 16.3	03.0	31 18.5	33.9	Eltanin	90 59.1	N51 29.8	
V 09	199 11.6	332 16.0	26.6	66 24.7	02.2	104 19.0	03.0	46 20.8	33.9	Enif	34 13.5	N 9 46.6	
I 10	214 14.0	347 15.4	27.6	81 26.6	02.2	119 21.7	03.0	61 23.2	33.8	Fomalhaut	15 53.5	S29 44.4	
E 11	229 16.5	2 14.7	28.5	96 28.5	02.1	134 24.5	03.0	76 25.6	33.8				
R 12	244 18.9	17 14.0	S16 29.4	111 30.4	N20 02.1	149 27.2	N23 03.0	91 28.0	N12 33.8	Gacrux	172 31.1	S56 59.1	
N 13	259 21.4	32 13.4	30.3	126 32.4	02.0	164 29.9	03.1	106 30.4	33.8	Gienah	176 20.1	S17 25.0	
E 14	274 23.9	47 12.7	31.2	141 34.3	02.0	179 32.7	03.1	121 32.8	33.8	Hadar	149 26.5	S60 15.8	
S 15	289 26.3	62 12.0	32.2	156 36.2	01.9	194 35.4	03.1	136 35.2	33.8	Hamal	328 30.7	N23 21.6	
16	304 28.8	77 11.4	33.1	171 38.1	01.9	209 38.1	03.1	151 37.6	33.7	Kaus Aust.	84 19.7	S34 23.7	
17	319 31.3	92 10.7	34.0	186 40.0	01.9	224 40.9	03.1	166 40.0	33.7				
18	334 33.7	107 10.0	S16 34.9	201 41.9	N20 01.8	239 43.6	N23 03.1	181 42.4	N12 33.7	Kochab	137 20.3	N74 14.7	
19	349 36.2	122 09.4	35.8	216 43.9	01.8	254 46.3	03.1	196 44.7	33.7	Markab	14 05.0	N15 05.4	
20	4 38.7	137 08.7	36.8	231 45.8	01.7	269 49.1	03.2	211 47.1	33.7	Menkar	314 42.8	N 4 00.2	
21	19 41.1	152 08.0	37.7	246 47.7	01.7	284 51.8	03.2	226 49.5	33.6	Menkent	148 39.6	S36 15.5	
22	34 43.6	167 07.4	38.6	261 49.6	01.7	299 54.6	03.2	241 51.9	33.6	Miaplacidus	221 44.9	S69 37.4	
23	49 46.1	182 06.7	39.5	276 51.6	01.6	314 57.3	03.2	256 54.3	33.6				
26 00	64 48.5	197 06.0	S16 40.4	291 53.5	N20 01.6	330 00.0	N23 03.2	271 56.7	N12 33.6	Mirfak	309 18.3	N49 47.0	
01	79 51.0	212 05.4	41.3	306 55.4	01.5	345 02.8	03.2	286 59.1	33.6	Nunki	76 31.8	S26 19.4	
02	94 53.4	227 04.7	42.2	321 57.3	01.5	0 05.5	03.2	302 01.5	33.6	Peacock	54 01.8	S56 48.5	
03	109 55.9	242 04.0	43.2	336 59.3	01.5	15 08.2	03.2	317 03.9	33.5	Pollux	244 00.3	N28 04.6	
04	124 58.4	257 03.3	44.1	352 01.2	01.4	30 11.0	03.3	332 06.3	33.5	Procyon	245 27.6	N 5 16.8	
05	140 00.8	272 02.7	45.0	7 03.1	01.4	45 13.7	03.3	347 08.7	33.5				
06	155 03.3	287 02.0	S16 45.9	22 05.1	N20 01.4	60 16.5	N23 03.3	2 11.1	N12 33.5	Rasalhague	96 31.7	N12 34.7	
07	170 05.8	302 01.3	46.8	37 07.0	01.3	75 19.2	03.3	17 13.5	33.5	Regulus	208 12.0	N12 04.4	
08	185 08.2	317 00.6	47.7	52 08.9	01.3	90 21.9	03.3	32 15.8	33.5	Rigel	281 37.5	S 8 13.7	
S 09	200 10.7	332 00.0	48.6	67 10.9	01.2	105 24.7	03.3	47 18.2	33.5	Rigil Kent.	140 28.9	S60 44.4	
A 10	215 13.2	346 59.3	49.5	82 12.8	01.2	120 27.4	03.3	62 20.6	33.4	Sabik	102 43.7	S15 41.7	
B 11	230 15.6	1 58.6	50.4	97 14.8	01.2	135 30.2	03.3	77 23.0	33.4				
A 12	245 18.1	16 57.9	S16 51.3	112 16.7	N20 01.1	150 32.9	N23 03.4	92 25.4	N12 33.4	Schedar	350 10.7	N56 25.2	
D 13	260 20.5	31 57.3	52.2	127 18.6	01.1	165 35.6	03.4	107 27.8	33.4	Shaula	96 58.8	S37 05.2	
O 14	275 23.0	46 56.6	53.1	142 20.6	01.1	180 38.4	03.4	122 30.2	33.4	Sirius	258 57.1	S16 41.2	
15	290 25.5	61 55.9	54.0	157 22.5	01.0	195 41.1	03.4	137 32.6	33.4	Spica	158 59.8	S11 02.6	
16	305 27.9	76 55.2	54.9	172 24.5	01.0	210 43.9	03.4	152 35.0	33.3	Suhail	223 12.0	S43 20.4	
17	320 30.4	91 54.5	55.9	187 26.4	01.0	225 46.6	03.4	167 37.4	33.3				
18	335 32.9	106 53.9	S16 56.8	202 28.4	N20 00.9	240 49.3	N23 03.4	182 39.8	N12 33.3	Vega	80 57.5	N38 46.1	
19	350 35.3	121 53.2	57.7	217 30.3	00.9	255 52.1	03.4	197 42.2	33.3	Zuben'ubi	137 35.5	S15 56.9	
20	5 37.8	136 52.5	58.5	232 32.3	00.9	270 54.8	03.5	212 44.6	33.3				
21	20 40.3	151 51.8	16 59.4	247 34.2	00.8	285 57.6	03.5	227 47.0	33.3				
22	35 42.7	166 51.1	17 00.3	262 36.2	00.8	301 00.3	03.5	242 49.4	33.2	Venus	133 32.6	10 51	
23	50 45.2	181 50.5	01.2	277 38.1	00.8	316 03.1	03.5	257 51.8	33.2	Marte	227 18.2	4 35	
										Júpiter	265 05.0	2 04	
										Saturno	207 10.0	5 55	
Pas. Mer.	h m	v -0.7	d 0.9	v 1.9	d 0.0	v 2.7	d 0.0	v 2.4	d 0.0				

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna			
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		24	25	26	27
											h m	h m	h m	h m
J U E V E S	24 00	183 21.2 S20 28.8	21 57.2 13.2	N13 18.2	6.8	54.6	N 72	07 33	09 21	11 29	13 23	13 14	12 48	14 51
	01	198 21.0 29.3	36 29.4 13.1	13 25.0	6.7	54.6	N 70	07 19	08 49	10 02	13 54	14 01	14 17	14 17
	02	213 20.9 29.9	51 01.5 13.1	13 31.7	6.6	54.6	68	07 07	08 26	09 25	14 17	14 32	14 57	15 36
	03	228 20.7 30.4	65 33.6 13.1	13 38.3	6.6	54.6	66	06 58	08 08	08 58	14 34	14 55	15 24	16 05
	04	243 20.5 30.9	80 05.7 13.1	13 44.9	6.6	54.5	64	06 49	07 53	08 58	14 49	15 13	15 45	16 27
	05	258 20.3 31.4	94 37.8 13.1	13 51.5	6.4	54.5	62	06 42	07 40	08 38	15 01	15 28	16 02	16 45
	06	273 20.1 S20 31.9	109 09.9 13.0	N13 57.9	6.4	54.5	60	06 36	07 29	08 22	15 12	15 40	16 16	17 00
	07	288 20.0 32.4	123 41.9 13.0	14 04.3	6.3	54.5	N 58	06 30	07 20	08 08	15 21	15 51	16 28	17 12
	08	303 19.8 32.9	138 13.9 13.0	14 10.6	6.3	54.5	56	06 25	07 12	07 56	15 29	16 01	16 39	17 23
	09	318 19.6 33.4	152 45.9 13.0	14 16.9	6.2	54.5	54	06 20	07 04	07 46	15 36	16 09	16 48	17 33
	10	333 19.4 33.9	167 17.9 13.0	14 23.1	6.1	54.5	52	06 15	06 58	07 36	15 42	16 17	16 56	17 41
	11	348 19.2 34.4	181 49.9 13.0	14 29.2	6.1	54.5	50	06 11	06 51	07 28	15 48	16 23	17 04	17 49
	12	3 19.1 S20 34.9	196 21.9 12.9	N14 35.3	6.0	54.5	45	06 02	06 38	07 11	16 01	16 38	17 19	18 05
	13	18 18.9 35.4	210 53.8 13.0	14 41.3	5.9	54.4	N 40	05 53	06 27	06 56	16 11	16 50	17 32	18 19
	14	33 18.7 35.9	225 25.8 12.9	14 47.2	5.8	54.4	35	05 45	06 17	06 44	16 20	17 00	17 44	18 30
	15	48 18.5 36.4	239 57.7 12.9	14 53.0	5.8	54.4	30	05 38	06 07	06 33	16 28	17 09	17 53	18 40
	16	63 18.3 36.9	254 29.6 12.9	14 58.8	5.7	54.4	20	05 24	05 51	06 15	16 41	17 25	18 10	18 57
	17	78 18.1 37.4	269 01.5 12.9	15 04.5	5.7	54.4	N 10	05 10	05 36	05 59	16 53	17 38	18 25	19 12
	18	93 18.0 S20 37.9	283 33.4 12.8	N15 10.2	5.5	54.4	0	04 56	05 21	05 43	17 04	17 51	18 38	19 26
	19	108 17.8 38.4	298 05.2 12.9	15 15.7	5.5	54.4	S 10	04 39	05 05	05 28	17 16	18 04	18 52	19 40
	20	123 17.6 38.9	312 37.1 12.8	15 21.2	5.5	54.4	20	04 19	04 47	05 11	17 28	18 18	19 07	19 55
	21	138 17.4 39.4	327 08.9 12.8	15 26.7	5.3	54.4	30	03 53	04 26	04 52	17 42	18 33	19 24	20 12
	22	153 17.2 39.9	341 40.7 12.8	15 32.0	5.3	54.3	35	03 37	04 12	04 41	17 50	18 43	19 34	20 22
23	168 17.0 40.4	356 12.5 12.8	15 37.3	5.2	54.3	40	03 17	03 57	04 28	17 59	18 53	19 45	20 33	
V I E R N E S	25 00	183 16.8 S20 40.9	10 44.3 12.7	N15 42.5	5.2	54.3	45	02 52	03 37	04 13	18 10	19 06	19 58	20 47
	01	198 16.7 41.4	25 16.0 12.8	15 47.7	5.1	54.3	S 50	02 16	03 12	03 54	18 23	19 21	20 14	21 03
	02	213 16.5 41.9	39 47.8 12.7	15 52.8	4.9	54.3	52	01 56	03 00	03 44	18 29	19 28	20 22	21 11
	03	228 16.3 42.4	54 19.5 12.7	15 57.7	5.0	54.3	54	01 31	02 46	03 34	18 36	19 35	20 30	21 20
	04	243 16.1 42.9	68 51.2 12.7	16 02.7	4.8	54.3	56	00 54	02 29	03 23	18 43	19 44	20 40	21 29
	05	258 15.9 43.4	83 22.9 12.7	16 07.5	4.8	54.3	58	////	02 08	03 09	18 52	19 54	20 51	21 40
	06	273 15.7 S20 43.9	97 54.6 12.7	N16 12.3	4.7	54.3	S 60	////	01 41	02 54	19 01	20 06	21 03	21 53
	07	288 15.5 44.3	112 26.3 12.6	16 17.0	4.6	54.3	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	24	25	26	27
	08	303 15.3 44.8	126 57.9 12.7	16 21.6	4.6	54.2	N 72	h m	h m	h m	h m	h m	h m	h m
	09	318 15.2 45.3	141 29.6 12.6	16 26.2	4.4	54.2	N 70	12 04	14 12	16 00	08 10	09 56	12 00	14 36
	10	333 15.0 45.8	156 01.2 12.6	16 30.6	4.4	54.2	68	13 31	15 07	16 14	07 40	09 09	10 31	11 36
	11	348 14.8 46.3	170 32.8 12.6	16 35.0	4.3	54.2	66	14 09	15 26	16 36	07 18	08 39	09 52	10 51
	12	3 14.6 S20 46.8	185 04.4 12.6	N16 39.3	4.3	54.2	64	14 35	15 41	16 44	06 47	07 59	09 04	10 00
	13	18 14.4 47.3	199 36.0 12.6	16 43.6	4.1	54.2	62	14 55	15 53	16 51	06 36	07 45	08 47	09 42
	14	33 14.2 47.8	214 07.6 12.6	16 47.7	4.1	54.2	60	15 12	16 04	16 58	06 26	07 32	08 33	09 27
	15	48 14.0 48.2	228 39.2 12.5	16 51.8	4.0	54.2	N 58	15 26	16 13	17 04	06 17	07 22	08 22	09 15
	16	63 13.8 48.7	243 10.7 12.5	16 55.8	4.0	54.2	56	15 38	16 22	17 09	06 10	07 13	08 11	09 04
	17	78 13.6 49.2	257 42.2 12.6	16 59.8	3.8	54.2	54	15 48	16 29	17 14	06 03	07 05	08 02	08 54
	18	93 13.4 S20 49.7	272 13.8 12.5	N17 03.6	3.8	54.2	52	15 57	16 36	17 18	05 57	06 57	07 54	08 46
	19	108 13.3 50.2	286 45.3 12.5	17 07.4	3.7	54.2	50	16 06	16 42	17 22	05 51	06 51	07 47	08 38
	20	123 13.1 50.7	301 16.8 12.5	17 11.1	3.6	54.1	45	16 23	16 56	17 32	05 40	06 37	07 31	08 22
	21	138 12.9 51.1	315 48.3 12.5	17 14.7	3.5	54.1	N 40	16 38	17 07	17 40	05 30	06 25	07 18	08 09
	22	153 12.7 51.6	330 19.8 12.4	17 18.2	3.5	54.1	35	16 50	17 17	17 48	05 22	06 15	07 07	07 57
23	168 12.5 52.1	344 51.2 12.5	17 21.7	3.3	54.1	30	17 01	17 26	17 56	05 14	06 07	06 58	07 47	
S A B A D O	26 00	183 12.3 S20 52.6	359 22.7 12.4	N17 25.0	3.3	54.1	20	17 19	17 43	18 10	05 02	05 52	06 42	07 30
	01	198 12.1 53.1	13 54.1 12.5	17 28.3	3.2	54.1	N 10	17 35	17 58	18 24	04 51	05 39	06 27	07 15
	02	213 11.9 53.5	28 25.6 12.4	17 31.5	3.2	54.1	0	17 51	18 13	18 39	04 40	05 27	06 14	07 01
	03	228 11.7 54.0	42 57.0 12.4	17 34.7	3.0	54.1	S 10	18 06	18 29	18 55	04 30	05 15	06 01	06 47
	04	243 11.5 54.5	57 28.4 12.4	17 37.7	3.0	54.1	20	18 23	18 47	19 15	04 19	05 02	05 46	06 33
	05	258 11.3 55.0	71 59.8 12.4	17 40.7	2.9	54.1	30	18 42	19 09	19 41	04 07	04 47	05 30	06 15
	06	273 11.1 S20 55.4	86 31.2 12.4	N17 43.6	2.8	54.1	35	18 53	19 22	19 57	04 00	04 39	05 21	06 05
	07	288 10.9 55.9	101 02.6 12.4	17 46.4	2.7	54.1	40	19 07	19 38	20 17	03 51	04 29	05 10	05 54
	08	303 10.7 56.4	115 34.0 12.3	17 49.1	2.6	54.1	45	19 22	19 58	20 43	03 42	04 18	04 57	05 41
	09	318 10.5 56.9	130 05.3 12.4	17 51.7	2.6	54.1	S 50	19 41	20 23	21 20	03 31	04 04	04 42	05 24
	10	333 10.3 57.3	144 36.7 12.4	17 54.3	2.5	54.1	52	19 50	20 35	21 40	03 25	03 57	04 34	05 17
	11	348 10.1 57.8	159 08.1 12.3	17 56.8	2.4	54.1	54	20 01	20 50	22 05	03 19	03 50	04 26	05 08
	12	3 09.9 S20 58.3	173 39.4 12.3	N17 59.2	2.3	54.0	56	20 12	21 07	22 45	03 13	03 43	04 17	04 59
	13	18 09.7 58.7	188 10.7 12.4	18 01.5	2.2	54.0	58	20 26	21 28	////	03 06	03 34	04 07	04 48
	14	33 09.6 59.2	202 42.1 12.3	18 03.7	2.2	54.0	S 60	20 42	21 56	////	02 57	03 23	03 56	04 35
	15	48 09.4 20 59.7	217 13.4 12.3	18 05.9	2.0	54.0	Día	SOL E.T. (+)	Pas. Mer.	Pas. Mer.	Sup.	Mer. Inf.	Edad.	Fase
	16	63 09.2 21 00.1	231 44.7 12.3	18 07.9	2.0	54.0	24	m s	m s	h m	h m	h m	d	
	17	78 09.0 00.6	246 16.0 12.4	18 09.9	1.9	54.0	25	13 25	13 17	11 47	23 16	10 52	13	
	18	93 08.8 S21 01.1	260 47.4 12.3	N18 11.8	1.8	54.0	26	13 08	12 59	11 47	24 03	11 39	14	
	19	108 08.6 01.5	275 18.7 12.3	18 13.6	1.7	54.0		12 50	12 40	11 47	00 03	12 26	15	
	20	123 08.4 02.0	289 50.0 12.3	18 15.3	1.7	54.0								
	21	138 08.2 02.5	304 21.3 12.3	18 17.0	1.5	54.0								
	22	153 08.0 02.9	318 52.6 12.2	18 18.5	1.5	54.0								
23	168 07.8 03.4	333 23.												

T. M. G.	ARIES		VENUS -3.4		MARTE -0.1		JUPITER -2.3		SATURNO +0.7		ESTRELLAS				
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
DOMINGO	27 00	65 47.7	196 49.8	S17 02.1	292 40.1	N20 00.7	331 05.8	N23 03.5	272 54.2	N12 33.2		Acamar	315 38.3	S40 23.7	
	01	80 50.1	211 49.1	03.0	307 42.0	00.7	346 08.6	03.5	287 56.6	33.2		Achernar	335 46.3	S57 21.1	
	02	95 52.6	226 48.4	03.9	322 44.0	00.7	1 11.3	03.5	302 59.0	33.2		AcruX	173 39.6	S62 58.3	
	03	110 55.0	241 47.7	04.8	337 45.9	00.6	16 14.0	03.5	318 01.4	33.2		Adhara	255 33.3	S28 56.5	
	04	125 57.5	256 47.0	05.7	352 47.9	00.6	31 16.8	03.6	333 03.8	33.2		Aldebaran	291 19.8	N16 27.9	
	05	141 00.0	271 46.4	06.6	7 49.8	00.6	46 19.5	03.6	348 06.2	33.1					
	06	156 02.4	286 45.7	S17 07.5	22 51.8	N20 00.5	61 22.3	N23 03.6	3 08.5	N12 33.1		Alioth	166 44.6	N56 04.6	
	07	171 04.9	301 45.0	08.4	37 53.8	00.5	76 25.0	03.6	18 10.9	33.1		Alkaid	153 20.5	N49 25.3	
	08	186 07.4	316 44.3	09.3	52 55.7	00.5	91 27.8	03.6	33 13.3	33.1		Al Na'ir	28 17.5	S47 04.2	
	09	201 09.8	331 43.6	10.2	67 57.7	00.5	106 30.5	03.6	48 15.7	33.1		Alnilam	276 13.3	S 1 13.0	
	10	216 12.3	346 42.9	11.1	82 59.6	00.4	121 33.3	03.6	63 18.1	33.1		Alphard	218 22.3	S 8 33.7	
	11	231 14.8	1 42.2	11.9	98 01.6	00.4	136 36.0	03.6	78 20.5	33.1					
	12	246 17.2	16 41.5	S17 12.8	113 03.6	N20 00.4	151 38.8	N23 03.7	93 22.9	N12 33.0		Alphecca	126 34.1	N26 47.4	
	13	261 19.7	31 40.9	13.7	128 05.5	00.3	166 41.5	03.7	108 25.3	33.0		Alpheratz	358 11.1	N28 58.3	
	14	276 22.2	46 40.2	14.6	143 07.5	00.3	181 44.3	03.7	123 27.7	33.0		Altair	62 34.6	N 8 48.8	
	15	291 24.6	61 39.5	15.5	158 09.5	00.3	196 47.0	03.7	138 30.1	33.0		Ankaa	353 42.0	S42 25.7	
	16	306 27.1	76 38.8	16.4	173 11.4	00.3	211 49.7	03.7	153 32.5	33.0		Antares	112 59.6	S26 22.9	
	17	321 29.5	91 38.1	17.2	188 13.4	00.2	226 52.5	03.7	168 34.9	33.0					
	18	336 32.0	106 37.4	S17 18.1	203 15.4	N20 00.2	241 55.2	N23 03.7	183 37.3	N12 33.0		Arcturus	146 20.5	N19 17.9	
	19	351 34.5	121 36.7	19.0	218 17.4	00.2	256 58.0	03.7	198 39.7	32.9		Atria	108 26.0	S68 59.2	
	20	6 36.9	136 36.0	19.9	233 19.3	00.2	272 00.7	03.8	213 42.1	32.9		Avior	234 28.5	S59 26.1	
	21	21 39.4	151 35.3	20.8	248 21.3	00.1	287 03.5	03.8	228 44.5	32.9		Bellatrix	279 00.5	N 6 19.7	
	22	36 41.9	166 34.6	21.6	263 23.3	00.1	302 06.2	03.8	243 46.9	32.9		Betelgeuse	271 30.0	N 7 24.1	
23	51 44.3	181 33.9	22.5	278 25.3	00.1	317 09.0	03.8	258 49.3	32.9						
LUNES	28 00	66 46.8	196 33.2	S17 23.4	293 27.2	N20 00.1	332 11.7	N23 03.8	273 51.7	N12 32.9		Canopus	264 07.5	S52 41.0	
	01	81 49.3	211 32.5	24.3	308 29.2	00.0	347 14.5	03.8	288 54.1	32.9		Capella	281 13.6	N45 58.5	
	02	96 51.7	226 31.8	25.2	323 31.2	00.0	2 17.2	03.8	303 56.5	32.8		Deneb	49 49.9	N45 12.4	
	03	111 54.2	241 31.1	26.0	338 33.2	00.0	17 20.0	03.8	318 58.9	32.8		Denebola	183 01.1	N14 41.7	
	04	126 56.6	256 30.4	26.9	353 35.2	20 00.0	32 22.7	03.9	334 01.3	32.8		Diphda	349 22.6	S18 06.5	
	05	141 59.1	271 29.7	27.8	8 37.2	19 59.9	47 25.5	03.9	349 03.7	32.8					
	06	157 01.6	286 29.0	S17 28.6	23 39.1	N19 59.9	62 28.2	N23 03.9	4 06.1	N12 32.8		Dubhe	194 24.7	N61 51.9	
	07	172 04.0	301 28.3	29.5	38 41.1	59.9	77 31.0	03.9	19 08.5	32.8		Elnath	278 46.2	N28 35.3	
	08	187 06.5	316 27.6	30.4	53 43.1	59.9	92 33.8	03.9	34 10.9	32.8		Eltanin	90 59.1	N51 29.7	
	09	202 09.0	331 26.9	31.3	68 45.1	59.9	107 36.5	03.9	49 13.3	32.8		Enif	34 13.5	N 9 46.6	
	10	217 11.4	346 26.2	32.1	83 47.1	59.8	122 39.3	03.9	64 15.7	32.7		Fomalhaut	15 53.5	S29 44.4	
	11	232 13.9	1 25.5	33.0	98 49.1	59.8	137 42.0	03.9	79 18.2	32.7					
	12	247 16.4	16 24.8	S17 33.9	113 51.1	N19 59.8	152 44.8	N23 04.0	94 20.6	N12 32.7		Gacrux	172 31.1	S56 59.1	
	13	262 18.8	31 24.1	34.7	128 53.1	59.8	167 47.5	04.0	109 23.0	32.7		Gienah	176 20.1	S17 25.0	
	14	277 21.3	46 23.4	35.6	143 55.1	59.8	182 50.3	04.0	124 25.4	32.7		Hadar	149 26.5	S60 15.8	
	15	292 23.8	61 22.7	36.5	158 57.1	59.7	197 53.0	04.0	139 27.8	32.7		Hamal	328 30.7	N23 21.6	
	16	307 26.2	76 22.0	37.3	173 59.1	59.7	212 55.8	04.0	154 30.2	32.7		Kaus Aust.	84 19.7	S34 23.7	
	17	322 28.7	91 21.3	38.2	189 01.1	59.7	227 58.5	04.0	169 32.6	32.7					
	18	337 31.1	106 20.6	S17 39.0	204 03.1	N19 59.7	243 01.3	N23 04.0	184 35.0	N12 32.6		Kochab	137 20.2	N74 14.7	
	19	352 33.6	121 19.9	39.9	219 05.1	59.7	258 04.0	04.1	199 37.4	32.6		Markab	14 05.0	N15 05.4	
	20	7 36.1	136 19.2	40.8	234 07.1	59.6	273 06.8	04.1	214 39.8	32.6		Menkar	314 42.8	N 4 00.2	
	21	22 38.5	151 18.5	41.6	249 09.1	59.6	288 09.6	04.1	229 42.2	32.6		Menkent	148 39.5	S36 15.5	
	22	37 41.0	166 17.8	42.5	264 11.1	59.6	303 12.3	04.1	244 44.6	32.6		Miaplacidus	221 44.9	S69 37.4	
23	52 43.5	181 17.1	43.3	279 13.1	59.6	318 15.1	04.1	259 47.0	32.6						
MARTES	29 00	67 45.9	196 16.4	S17 44.2	294 15.1	N19 59.6	333 17.8	N23 04.1	274 49.4	N12 32.6		Mirfak	309 18.3	N49 47.0	
	01	82 48.4	211 15.7	45.1	309 17.1	59.6	348 20.6	04.1	289 51.8	32.6		Nunki	76 31.8	S26 19.4	
	02	97 50.9	226 15.0	45.9	324 19.1	59.5	3 23.3	04.1	304 54.2	32.6		Peacock	54 01.8	S56 48.5	
	03	112 53.3	241 14.3	46.8	339 21.1	59.5	18 26.1	04.2	319 56.6	32.5		Pollux	244 00.3	N28 04.6	
	04	127 55.8	256 13.5	47.6	354 23.1	59.5	33 28.9	04.2	334 59.0	32.5		Procyon	245 27.5	N 5 16.8	
	05	142 58.3	271 12.8	48.5	9 25.1	59.5	48 31.6	04.2	350 01.4	32.5					
	06	158 00.7	286 12.1	S17 49.3	24 27.1	N19 59.5	63 34.4	N23 04.2	5 03.8	N12 32.5		Rasalhague	96 31.7	N12 34.7	
	07	173 03.2	301 11.4	50.2	39 29.2	59.5	78 37.1	04.2	20 06.2	32.5		Regulus	208 12.0	N12 04.4	
	08	188 05.6	316 10.7	51.0	54 31.2	59.5	93 39.9	04.2	35 08.6	32.5		Rigel	281 37.5	S 8 13.7	
	09	203 08.1	331 10.0	51.9	69 33.2	59.4	108 42.6	04.2	50 11.1	32.5		Rigil Kent.	140 28.9	S60 44.4	
	10	218 10.6	346 09.3	52.7	84 35.2	59.4	123 45.4	04.2	65 13.5	32.5		Sabik	102 43.7	S15 41.7	
	11	233 13.0	1 08.6	53.6	99 37.2	59.4	138 48.2	04.3	80 15.9	32.4					
	12	248 15.5	16 07.8	S17 54.4	114 39.2	N19 59.4	153 50.9	N23 04.3	95 18.3	N12 32.4		Schedar	350 10.7	N56 25.2	
	13	263 18.0	31 07.1	55.3	129 41.3	59.4	168 53.7	04.3	110 20.7	32.4		Shaula	96 58.7	S37 05.2	
	14	278 20.4	46 06.4	56.1	144 43.3	59.4	183 56.4	04.3	125 23.1	32.4		Sirius	258 57.1	S16 41.2	
	15	293 22.9	61 05.7	57.0	159 45.3	59.4	198 59.2	04.3	140 25.5	32.4		Spica	158 59.8	S11 02.6	
	16	308 25.4	76 05.0	57.8	174 47.3	59.3	214 02.0	04.3	155 27.9	32.4		Suhail	223 12.0	S43 20.4	
	17	323 27.8	91 04.3	58.6	189 49.4	59.3	229 04.7	04.3	170 30.3	32.4					
	18	338 30.3	106 03.5	S17 59.5	204 51.4	N19 59.3	244 07.5	N23 04.3	185 32.7	N12 32.4		Vega	80 57.5	N38 46.1	
	19	353 32.7	121 02.8	18 00.3	219 53.4	59.3	259 10.2	04.4	200 35.1	32.4		Zuben'ubi	137 35.4	S15 56.9	
	20	8 35.2	136 02.1	01.2	234 55.4	59.3	274 13.0	04.4	215 37.5	32.4					
	21	23 37.7	151 01.4	02.0	249 57.5	59.3	289 15.8	04.4	230 40.0	32.3					
	22	38 40.1	166 00.7	02.9	264 59.5	59.3	304 18.5	04.4	245 42.4	32.3					
23	53 42.6	180 59.9	03.7	280 01.5	59.3	319 21.3	04.4	260 44.8	32.3						
Pas. Mer. 19 29.7		v -0.7 d 0.9		v 2.0 d 0.0		v 2.8 d 0.0		v 2.4 d 0.0							
												A. H. S.		Pas. Mer.	
												o / h m		h m	
												Venus		129 46.4 10 54	
												Marte		226 4	

T. M. G.	ARIES			VENUS -3.4			MARTE -0.1			JUPITER -2.3			SATURNO +0.7			ESTRELLAS							
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.					
30 ^d 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	68	45.1	195	59.2	S18	04.5	295	03.6	N19	59.3	334	24.1	N23	04.4	275	47.2	N12	32.3	Acamar	315	38.3	S40	23.7
	83	47.5	210	58.5		05.4	310	05.6		59.3	349	26.8		04.4	290	49.6		32.3	Achernar	335	46.4	S57	21.1
	98	50.0	225	57.8		06.2	325	07.6		59.3	4	29.6		04.4	305	52.0		32.3	Acrux	173	39.5	S62	58.3
	113	52.5	240	57.1	..	07.0	340	09.7	..	59.2	19	32.3	..	04.5	320	54.4	..	32.3	Adhara	255	33.3	S28	56.5
	128	54.9	255	56.3		07.9	355	11.7		59.2	34	35.1		04.5	335	56.8		32.3	Aldebaran	291	19.8	N16	27.9
	143	57.4	270	55.6		08.7	10	13.7		59.2	49	37.9		04.5	350	59.2		32.3					
	158	59.9	285	54.9	S18	09.5	25	15.8	N19	59.2	64	40.6	N23	04.5	6	01.6	N12	32.3	Alioth	166	44.6	N56	04.6
	174	02.3	300	54.2		10.4	40	17.8		59.2	79	43.4		04.5	21	04.0		32.2	Alkaid	153	20.4	N49	25.3
	189	04.8	315	53.4		11.2	55	19.9		59.2	94	46.2		04.5	36	06.5		32.2	Al Na'ir	28	17.5	S47	04.2
	204	07.2	330	52.7	..	12.0	70	21.9	..	59.2	109	48.9	..	04.5	51	08.9	..	32.2	Alnilam	276	13.3	S 1	13.0
	219	09.7	345	52.0		12.9	85	24.0		59.2	124	51.7		04.6	66	11.3		32.2	Alphard	218	22.3	S 8	33.8
	234	12.2	0	51.3		13.7	100	26.0		59.2	139	54.5		04.6	81	13.7		32.2					
	249	14.6	15	50.5	S18	14.5	115	28.1	N19	59.2	154	57.2	N23	04.6	96	16.1	N12	32.2	Alphecca	126	34.1	N26	47.4
	264	17.1	30	49.8		15.3	130	30.1		59.2	170	00.0		04.6	111	18.5		32.2	Alpheratz	358	11.1	N28	58.3
	279	19.6	45	49.1		16.2	145	32.2		59.2	185	02.8		04.6	126	20.9		32.2	Altair	62	34.6	N 8	48.8
	294	22.0	60	48.4	..	17.0	160	34.2	..	59.2	200	05.5	..	04.6	141	23.3	..	32.2	Ankaa	353	42.0	S42	25.7
	309	24.5	75	47.6		17.8	175	36.3		59.2	215	08.3		04.6	156	25.8		32.2	Antares	112	59.5	S26	22.9
	324	27.0	90	46.9		18.6	190	38.3		59.2	230	11.1		04.6	171	28.2		32.1					
	339	29.4	105	46.2	S18	19.4	205	40.4	N19	59.2	245	13.8	N23	04.7	186	30.6	N12	32.1	Arcturus	146	20.5	N19	17.9
	354	31.9	120	45.4		20.3	220	42.4		59.2	260	16.6		04.7	201	33.0		32.1	Atria	108	26.0	S68	59.2
	9	34.4	135	44.7		21.1	235	44.5		59.2	275	19.4		04.7	216	35.4		32.1	Avior	234	28.5	S59	26.2
	24	36.8	150	44.0	..	21.9	250	46.5	..	59.2	290	22.1	..	04.7	231	37.8	..	32.1	Bellatrix	279	00.4	N 6	19.7
	39	39.3	165	43.2		22.7	265	48.6		59.2	305	24.9		04.7	246	40.2		32.1	Betelgeuse	271	30.0	N 7	24.1
54	41.7	180	42.5		23.5	280	50.7		59.2	320	27.7		04.7	261	42.6		32.1						
100 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	69	44.2	195	41.8	S18	24.4	295	52.7	N19	59.2	335	30.4	N23	04.7	276	45.1	N12	32.1	Canopus	264	07.5	S52	41.0
	84	46.7	210	41.0		25.2	310	54.8		59.2	350	33.2		04.7	291	47.5		32.1	Capella	281	13.6	N45	58.5
	99	49.1	225	40.3		26.0	325	56.8		59.2	5	36.0		04.8	306	49.9		32.1	Deneb	49	50.0	N45	12.4
	114	51.6	240	39.6	..	26.8	340	58.9	..	59.2	20	38.7	..	04.8	321	52.3	..	32.1	Denebola	183	01.1	N14	41.7
	129	54.1	255	38.8		27.6	356	01.0		59.2	35	41.5		04.8	336	54.7		32.1	Diphda	349	22.6	S18	06.5
	144	56.5	270	38.1		28.4	11	03.0		59.2	50	44.3		04.8	351	57.1		32.0					
	159	59.0	285	37.4	S18	29.2	26	05.1	N19	59.2	65	47.0	N23	04.8	6	59.5	N12	32.0	Dubhe	194	24.7	N61	51.9
	175	01.5	300	36.6		30.1	41	07.2		59.2	80	49.8		04.8	22	02.0		32.0	Elnath	278	46.1	N28	35.3
	190	03.9	315	35.9		30.9	56	09.2		59.2	95	52.6		04.8	37	04.4		32.0	Eltanin	90	59.1	N51	29.7
	205	06.4	330	35.1	..	31.7	71	11.3	..	59.2	110	55.4	..	04.8	52	06.8	..	32.0	Enif	34	13.5	N 9	46.6
	220	08.8	345	34.4		32.5	86	13.4		59.2	125	58.1		04.9	67	09.2		32.0	Fomalhaut	15	53.5	S29	44.4
	235	11.3	0	33.7		33.3	101	15.5		59.2	141	00.9		04.9	82	11.6		32.0					
	250	13.8	15	32.9	S18	34.1	116	17.5	N19	59.2	156	03.7	N23	04.9	97	14.0	N12	32.0	Gacrux	172	31.0	S56	59.1
	265	16.2	30	32.2		34.9	131	19.6		59.2	171	06.4		04.9	112	16.5		32.0	Gienah	176	20.0	S17	25.0
	280	18.7	45	31.5		35.7	146	21.7		59.2	186	09.2		04.9	127	18.9		32.0	Hadar	149	26.4	S60	15.8
	295	21.2	60	30.7	..	36.5	161	23.8	..	59.2	201	12.0	..	04.9	142	21.3	..	32.0	Hamal	328	30.7	N23	21.6
	310	23.6	75	30.0		37.3	176	25.9		59.2	216	14.8		04.9	157	23.7		32.0	Kaus Aust.	84	19.7	S34	23.7
	325	26.1	90	29.2		38.1	191	27.9		59.2	231	17.5		04.9	172	26.1		32.0					
	340	28.6	105	28.5	S18	38.9	206	30.0	N19	59.2	246	20.3	N23	05.0	187	28.5	N12	31.9	Kochab	137	20.2	N74	14.7
	355	31.0	120	27.7		39.7	221	32.1		59.2	261	23.1		05.0	202	31.0		31.9	Markab	14	05.0	N15	05.4
	10	33.5	135	27.0		40.5	236	34.2		59.2	276	25.9		05.0	217	33.4		31.9	Menkar	314	42.8	N 4	00.2
	25	36.0	150	26.3	..	41.3	251	36.3	..	59.2	291	28.6	..	05.0	232	35.8	..	31.9	Menkent	148	39.5	S36	15.5
	40	38.4	165	25.5		42.1	266	38.4		59.2	306	31.4		05.0	247	38.2		31.9	Miaplacidus	221	44.8	S69	37.4
55	40.9	180	24.8		42.9	281	40.4		59.2	321	34.2		05.0	262	40.6		31.9						
200 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	70	43.3	195	24.0	S18	43.7	296	42.5	N19	59.2	336	36.9	N23	05.0	277	43.0	N12	31.9	Mirfak	309	18.3	N49	47.0
	85	45.8	210	23.3		44.5	311	44.6		59.3	351	39.7		05.0	292	45.5		31.9	Nunki	76	31.8	S26	19.4
	100	48.3	225	22.5		45.3	326	46.7		59.3	6	42.5		05.1	307	47.9		31.9	Peacock	54	01.8	S56	48.5
	115	50.7	240	21.8	..	46.1	341	48.8	..	59.3	21	45.3	..	05.1	322	50.3	..	31.9	Pollux	244	00.2	N28	04.6
	130	53.2	255	21.0		46.9	356	50.9		59.3	36	48.0		05.1	337	52.7		31.9	Procyon	245	27.5	N 5	16.8
	145	55.7	270	20.3		47.7	11	53.0		59.3	51	50.8		05.1	352	55.1		31.9					
	160	58.1	285	19.5	S18	48.5	26	55.1	N19	59.3	66	53.6	N23	05.1	7	57.6	N12	31.9	Rasalhague	96	31.7	N12	34.7
	176	00.6	300	18.8		49.2	41	57.2		59.3	81	56.4		05.1	23	00.0		31.9	Regulus	208	12.0	N12	04.4
	191	03.1	315	18.0		50.0	56	59.3		59.3	96	59.1		05.1	38	02.4		31.8	Rigel	281	37.5	S 8	13.7
	206	05.5	330	17.3	..	50.8	72	01.4	..	59.3	112	01.9	..	05.2	53	04.8	..	31.8	Rigil Kent.	140	28.9	S60	44.4
	221	08.0	345	16.5		51.6	87	03.5		59.3	127	04.7		05.2	68	07.2		31.8	Sabik	102	43.7	S15	41.7
	236	10.5	0	15.8		52.4	102	05.6		59.4	142	07.5		05.2	83	09.7		31.8					
	251	12.9	15	15.0	S18	53.2	117	07.7	N19	59.4	157	10.2	N23	05.2	98	12.1	N12	31.8	Schedar	350	10.8	N56	25.3
	266	15.4	30	14.3		54.0	132	09.8		59.4	172	13.0		05.2	113	14.5		31.8	Shaula	96	58.7		

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Náut.		Civil	30	1	2	3	
	h m	° ' "	h m	° ' "	h m	° ' "		h m	h m		h m	h m	h m	h m	h m	
M I E R C O L E S	30 00	182 52.3	S21 35.3	313 40.8	12.9	N16 21.7	4.6	54.2	N 72	07 51	09 50	■	18 04	19 46	21 27	23 08
	01	197 52.0	35.7	328 12.7	12.9	16 17.1	4.7	54.2	N 70	07 34	09 11	■	18 36	20 07	21 40	23 14
	02	212 51.8	36.2	342 44.6	12.9	16 12.4	4.7	54.2	68	07 21	08 43	10 36	19 00	20 24	21 50	23 19
	03	227 51.6	36.6	357 16.5	12.9	16 07.7	4.8	54.2	66	07 10	08 23	09 46	19 18	20 37	21 59	23 23
	04	242 51.4	37.0	11 48.4	13.0	16 02.9	4.9	54.3	64	07 01	08 06	09 16	19 33	20 48	22 06	23 27
	05	257 51.1	37.4	26 20.4	12.9	15 58.0	4.9	54.3	62	06 53	07 52	08 53	19 46	20 57	22 12	23 30
	06	272 50.9	S21 37.8	40 52.3	13.0	N15 53.1	5.1	54.3	60	06 46	07 41	08 35	19 56	21 05	22 18	23 33
	07	287 50.7	38.2	55 24.3	13.0	15 48.0	5.1	54.3	N 58	06 39	07 30	08 20	20 05	21 12	22 22	23 35
	08	302 50.5	38.6	69 56.3	13.0	15 42.9	5.2	54.3	56	06 33	07 21	08 07	20 13	21 18	22 26	23 37
	09	317 50.2	39.0	84 28.3	13.0	15 37.7	5.2	54.3	54	06 28	07 13	07 55	20 20	21 24	22 30	23 39
	10	332 50.0	39.4	99 00.3	13.0	15 32.5	5.3	54.3	52	06 23	07 06	07 45	20 26	21 29	22 34	23 41
	11	347 49.8	39.8	113 32.3	13.1	15 27.2	5.4	54.3	50	06 18	06 59	07 37	20 32	21 33	22 37	23 42
	12	2 49.6	S21 40.2	128 04.4	13.0	N15 21.8	5.5	54.4	45	06 08	06 45	07 18	20 44	21 43	22 43	23 46
	13	17 49.3	40.6	142 36.4	13.1	15 16.3	5.5	54.4	N 40	05 59	06 32	07 02	20 55	21 51	22 49	23 49
	14	32 49.1	41.0	157 08.5	13.1	15 10.8	5.6	54.4	35	05 50	06 22	06 49	21 03	21 58	22 54	23 51
	15	47 48.9	41.4	171 40.6	13.1	15 05.2	5.7	54.4	30	05 43	06 12	06 38	21 11	22 04	22 58	23 53
	16	62 48.6	41.8	186 12.7	13.1	14 59.5	5.7	54.4	20	05 28	05 55	06 19	21 24	22 14	23 05	23 57
	17	77 48.4	42.2	200 44.8	13.1	14 53.8	5.8	54.4	N 10	05 13	05 39	06 01	21 36	22 23	23 12	24 00
	18	92 48.2	S21 42.6	215 16.9	13.2	N14 48.0	5.9	54.4	0	04 57	05 23	05 45	21 46	22 32	23 18	24 03
	19	107 48.0	43.0	229 49.1	13.1	14 42.1	5.9	54.5	S 10	04 40	05 06	05 29	21 57	22 41	23 23	24 06
	20	122 47.7	43.4	244 21.2	13.2	14 36.2	6.0	54.5	20	04 19	04 47	05 12	22 08	22 50	23 30	24 10
	21	137 47.5	43.8	258 53.4	13.2	14 30.2	6.1	54.5	30	03 52	04 24	04 51	22 21	23 00	23 37	24 14
	22	152 47.3	44.2	273 25.6	13.2	14 24.1	6.2	54.5	35	03 35	04 10	04 39	22 29	23 06	23 41	24 16
23	167 47.0	44.6	287 57.8	13.2	14 17.9	6.2	54.5	40	03 13	03 54	04 26	22 38	23 13	23 46	24 18	
1 00	182 46.8	S21 45.0	302 30.0	13.2	N14 11.7	6.2	54.5	45	02 46	03 33	04 09	22 47	23 21	23 51	24 21	
01	197 46.6	45.4	317 02.2	13.2	14 05.5	6.4	54.5	S 50	02 07	03 06	03 49	23 00	23 30	23 58	24 24	
02	212 46.3	45.8	331 34.4	13.2	13 59.1	6.4	54.6	52	01 45	02 53	03 39	23 05	23 34	24 01	00 01	
03	227 46.1	46.2	346 06.6	13.3	13 52.7	6.5	54.6	54	01 15	02 38	03 28	23 11	23 39	24 04	00 04	
04	242 45.9	46.6	0 38.9	13.3	13 46.2	6.5	54.6	56	00 18	02 19	03 16	23 18	23 44	24 08	00 08	
05	257 45.6	47.0	15 11.2	13.2	13 39.7	6.6	54.6	58	////	01 55	03 01	23 26	23 50	24 12	00 12	
06	272 45.4	S21 47.4	29 43.4	13.3	N13 33.1	6.7	54.6	S 60	////	01 23	02 44	23 34	23 57	24 16	00 16	
07	287 45.2	47.8	44 15.7	13.3	13 26.4	6.7	54.7									
08	302 45.0	48.1	58 48.0	13.3	13 19.7	6.8	54.7	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
09	317 44.7	48.5	73 20.3	13.3	13 12.9	6.9	54.7			Civil	Náut.	30	1	2	3	
10	332 44.5	48.9	87 52.6	13.4	13 06.0	6.9	54.7					h m	h m	h m	h m	
11	347 44.3	49.3	102 25.0	13.3	12 59.1	7.0	54.7	N 72	■	13 48	15 47	13 16	13 09	13 03	12 57	
12	2 44.0	S21 49.7	116 57.3	13.3	N12 52.1	7.0	54.7	N 70	■	14 27	16 03	12 42	12 46	12 48	12 49	
13	17 43.8	50.1	131 29.6	13.4	12 45.1	7.1	54.8	68	13 02	14 54	16 16	12 18	12 29	12 36	12 42	
14	32 43.5	50.5	146 02.0	13.4	12 38.0	7.2	54.8	66	13 51	15 15	16 27	11 59	12 15	12 27	12 36	
15	47 43.3	50.8	160 34.4	13.3	12 30.8	7.2	54.8	64	14 22	15 31	16 37	11 44	12 03	12 18	12 31	
16	62 43.1	51.2	175 06.7	13.4	12 23.6	7.3	54.8	62	14 45	15 45	16 45	11 31	11 53	12 11	12 27	
17	77 42.8	51.6	189 39.1	13.4	12 16.3	7.3	54.8	60	15 03	15 57	16 52	11 20	11 44	12 05	12 23	
18	92 42.6	S21 52.0	204 11.5	13.4	N12 09.0	7.4	54.9	N 58	15 18	16 07	16 58	11 10	11 37	12 00	12 20	
19	107 42.4	52.4	218 43.9	13.4	12 01.6	7.5	54.9	56	15 31	16 16	17 04	11 02	11 30	11 55	12 17	
20	122 42.1	52.8	233 16.3	13.4	11 54.1	7.5	54.9	54	15 42	16 25	17 10	10 54	11 24	11 50	12 14	
21	137 41.9	53.1	247 48.7	13.4	11 46.6	7.6	54.9	52	15 52	16 32	17 15	10 48	11 19	11 46	12 12	
22	152 41.7	53.5	262 21.1	13.4	11 39.0	7.6	55.0	50	16 01	16 39	17 19	10 42	11 14	11 43	12 10	
23	167 41.4	53.9	276 53.5	13.4	11 31.4	7.7	55.0	45	16 20	16 53	17 30	10 29	11 03	11 35	12 05	
2 00	182 41.2	S21 54.3	291 25.9	13.5	N11 23.7	7.8	55.0	N 40	16 35	17 05	17 39	10 18	10 54	11 28	12 01	
01	197 41.0	54.6	305 58.4	13.4	11 15.9	7.8	55.0	35	16 48	17 16	17 47	10 09	10 47	11 23	11 57	
02	212 40.7	55.0	320 30.8	13.4	11 08.1	7.9	55.0	30	17 00	17 26	17 55	10 01	10 40	11 18	11 54	
03	227 40.5	55.4	335 03.2	13.5	11 00.2	7.9	55.1	20	17 19	17 43	18 10	09 46	10 28	11 09	11 49	
04	242 40.2	55.8	349 35.7	13.4	10 52.3	7.9	55.1	N 10	17 37	17 59	18 25	09 34	10 18	11 01	11 44	
05	257 40.0	56.1	4 08.1	13.4	10 44.4	8.1	55.1	0	17 53	18 15	18 41	09 22	10 08	10 54	11 39	
06	272 39.8	S21 56.5	18 40.5	13.5	N10 36.3	8.0	55.1	S 10	18 09	18 32	18 59	09 11	09 59	10 47	11 35	
07	287 39.5	56.9	33 13.0	13.4	10 28.3	8.2	55.2	20	18 27	18 51	19 20	08 58	09 48	10 39	11 30	
08	302 39.3	57.3	47 45.4	13.5	10 20.1	8.2	55.2	30	18 47	19 14	19 47	08 44	09 36	10 30	11 24	
09	317 39.0	57.6	62 17.9	13.4	10 11.9	8.2	55.2	35	18 59	19 28	20 04	08 36	09 29	10 24	11 21	
10	332 38.8	58.0	76 50.3	13.5	10 03.7	8.3	55.2	40	19 13	19 45	20 25	08 26	09 21	10 19	11 17	
11	347 38.6	58.4	91 22.8	13.4	9 55.4	8.3	55.3	45	19 29	20 06	20 53	08 15	09 12	10 12	11 13	
12	2 38.3	S21 58.7	105 55.2	13.5	N 9 47.1	8.4	55.3	S 50	19 50	20 33	21 33	08 01	09 01	10 03	11 08	
13	17 38.1	59.1	120 27.7	13.4	9 38.7	8.5	55.3	52	20 00	20 46	21 55	07 55	08 56	09 59	11 05	
14	32 37.8	59.5	135 00.1	13.4	9 30.2	8.5	55.3	54	20 11	21 02	22 26	07 48	08 50	09 55	11 03	
15	47 37.6	21 59.8	149 32.5	13.5	9 21.7	8.5	55.4	56	20 23	21 21	23 31	07 40	08 44	09 50	11 00	
16	62 37.4	22 00.2	164 05.0	13.4	9 13.2	8.6	55.4	58	20 38	21 45	////	07 31	08 36	09 45	10 56	
17	77 37.1	00.6	178 37.4	13.4	9 04.6	8.6	55.4	S 60	20 56	22 18	////	07 21	08 28	09 39	10 53	
18	92 36.9	S22 00.9	193 09.8	13.5	N 8 56.0	8.7	55.4									
19	107 36.6	01.3	207 42.3	13.4	8 47.3											

T. M. G.	ARIES			VENUS -3.4			MARTE -0.2			JUPITER -2.3			SATURNO +0.7			ESTRELLAS							
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.					
3 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	71	42.5	195	06.0	S19	02.5	297	33.1	N19	59.5	337	43.6	N23	05.3	278	41.1	N12	31.8	Acamar	315	38.3	S40	23.7
	86	45.0	210	05.2		03.3	312	35.2		59.6	352	46.4		05.4	293	43.6		31.8	Achernar	335	46.4	S57	21.2
	101	47.4	225	04.4		04.1	327	37.3		59.6	7	49.1		05.4	308	46.0		31.7	Acrux	173	39.5	S62	58.3
	116	49.9	240	03.7		04.8	342	39.4		59.6	22	51.9		05.4	323	48.4		31.7	Adhara	255	33.3	S28	56.5
	131	52.3	255	02.9		05.6	357	41.5		59.6	37	54.7		05.4	338	50.8		31.7	Aldebaran	291	19.8	N16	27.9
	146	54.8	270	02.2		06.4	12	43.7		59.6	52	57.5		05.4	353	53.3		31.7					
	161	57.3	285	01.4	S19	07.1	27	45.8	N19	59.6	68	00.3	N23	05.4	8	55.7	N12	31.7	Alioth	166	44.6	N56	04.6
	176	59.7	300	00.6		07.9	42	47.9		59.7	83	03.0		05.4	23	58.1		31.7	Alkaid	153	20.4	N49	25.3
	192	02.2	314	59.9		08.7	57	50.1		59.7	98	05.8		05.4	39	00.5		31.7	Al Na'ir	28	17.5	S47	04.2
	207	04.7	329	59.1		09.4	72	52.2		59.7	113	08.6		05.5	54	02.9		31.7	Alnilam	276	13.2	S 1	13.0
	222	07.1	344	58.3		10.2	87	54.3		59.7	128	11.4		05.5	69	05.4		31.7	Alphard	218	22.3	S 8	33.8
	237	09.6	359	57.6		11.0	102	56.4		59.7	143	14.2		05.5	84	07.8		31.7					
	252	12.1	14	56.8	S19	11.7	117	58.6	N19	59.8	158	17.0	N23	05.5	99	10.2	N12	31.7	Alphecca	126	34.1	N26	47.4
	267	14.5	29	56.0		12.5	133	00.7		59.8	173	19.7		05.5	114	12.6		31.7	Alpheratz	358	11.1	N28	58.3
	282	17.0	44	55.3		13.3	148	02.8		59.8	188	22.5		05.5	129	15.1		31.7	Altair	62	34.6	N 8	48.8
	297	19.4	59	54.5		14.0	163	05.0		59.8	203	25.3		05.5	144	17.5		31.7	Ankaa	353	42.0	S42	25.7
	312	21.9	74	53.8		14.8	178	07.1		59.8	218	28.1		05.5	159	19.9		31.7	Antares	112	59.5	S26	22.9
	327	24.4	89	53.0		15.5	193	09.3		59.9	233	30.9		05.6	174	22.4		31.7					
	342	26.8	104	52.2	S19	16.3	208	11.4	N19	59.9	248	33.7	N23	05.6	189	24.8	N12	31.7	Arcturus	146	20.5	N19	17.8
	357	29.3	119	51.4		17.0	223	13.5		59.9	263	36.4		05.6	204	27.2		31.7	Atria	108	26.0	S68	59.2
	12	31.8	134	50.7		17.8	238	15.7	19	59.9	278	39.2		05.6	219	29.6		31.7	Avior	234	28.5	S59	26.2
	27	34.2	149	49.9		18.6	253	17.8	20	00.0	293	42.0		05.6	234	32.1		31.7	Bellatrix	279	00.4	N 6	19.7
	42	36.7	164	49.1		19.3	268	20.0		00.0	308	44.8		05.6	249	34.5		31.7	Betelgeuse	271	30.0	N 7	24.1
57	39.2	179	48.4		20.1	283	22.1		00.0	323	47.6		05.6	264	36.9		31.7						
4 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	72	41.6	194	47.6	S19	20.8	298	24.3	N20	00.0	338	50.4	N23	05.6	279	39.3	N12	31.7	Canopus	264	07.5	S52	41.0
	87	44.1	209	46.8		21.6	313	26.4		00.1	353	53.1		05.7	294	41.8		31.6	Capella	281	13.6	N45	58.5
	102	46.6	224	46.1		22.3	328	28.6		00.1	8	55.9		05.7	309	44.2		31.6	Deneb	49	50.0	N45	12.4
	117	49.0	239	45.3		23.1	343	30.7		00.1	23	58.7		05.7	324	46.6		31.6	Denebola	183	01.1	N14	41.7
	132	51.5	254	44.5		23.8	358	32.9		00.1	39	01.5		05.7	339	49.0		31.6	Diphda	349	22.6	S18	06.5
	147	53.9	269	43.7		24.6	13	35.0		00.2	54	04.3		05.7	354	51.5		31.6					
	162	56.4	284	43.0	S19	25.3	28	37.2	N20	00.2	69	07.1	N23	05.7	9	53.9	N12	31.6	Dubhe	194	24.6	N61	51.9
	177	58.9	299	42.2		26.0	43	39.4		00.2	84	09.9		05.7	24	56.3		31.6	Elnath	278	46.1	N28	35.3
	193	01.3	314	41.4		26.8	58	41.5		00.2	99	12.6		05.7	39	58.8		31.6	Eltanin	90	59.1	N51	29.7
	208	03.8	329	40.6		27.5	73	43.7		00.3	114	15.4		05.8	55	01.2		31.6	Enif	34	13.5	N 9	46.6
	223	06.3	344	39.9		28.3	88	45.8		00.3	129	18.2		05.8	70	03.6		31.6	Fomalhaut	15	53.5	S29	44.4
	238	08.7	359	39.1		29.0	103	48.0		00.3	144	21.0		05.8	85	06.0		31.6					
	253	11.2	14	38.3	S19	29.8	118	50.2	N20	00.4	159	23.8	N23	05.8	100	08.5	N12	31.6	Gacrux	172	31.0	S56	59.1
	268	13.7	29	37.5		30.5	133	52.3		00.4	174	26.6		05.8	115	10.9		31.6	Gienah	176	20.0	S17	25.0
	283	16.1	44	36.8		31.2	148	54.5		00.4	189	29.4		05.8	130	13.3		31.6	Hadar	149	26.4	S60	15.7
	298	18.6	59	36.0		32.0	163	56.7		00.4	204	32.1		05.8	145	15.8		31.6	Hamal	328	30.8	N23	21.6
	313	21.1	74	35.2		32.7	178	58.8		00.5	219	34.9		05.8	160	18.2		31.6	Kaus Aust.	84	19.7	S34	23.7
	328	23.5	89	34.4		33.4	194	01.0		00.5	234	37.7		05.9	175	20.6		31.6					
	343	26.0	104	33.6	S19	34.2	209	03.2	N20	00.5	249	40.5	N23	05.9	190	23.1	N12	31.6	Kochab	137	20.2	N74	14.7
	358	28.4	119	32.9		34.9	224	05.3		00.6	264	43.3		05.9	205	25.5		31.6	Markab	14	05.0	N15	05.4
	13	30.9	134	32.1		35.6	239	07.5		00.6	279	46.1		05.9	220	27.9		31.6	Menkar	314	42.8	N 4	00.2
	28	33.4	149	31.3		36.4	254	09.7		00.6	294	48.9		05.9	235	30.3		31.6	Menkent	148	39.5	S36	15.5
	43	35.8	164	30.5		37.1	269	11.9		00.7	309	51.7		05.9	250	32.8		31.6	Miaplacidus	221	44.8	S69	37.4
58	38.3	179	29.7		37.8	284	14.0		00.7	324	54.5		05.9	265	35.2		31.6						
5 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	73	40.8	194	28.9	S19	38.6	299	16.2	N20	00.7	339	57.2	N23	05.9	280	37.6	N12	31.6	Mirfak	309	18.3	N49	47.0
	88	43.2	209	28.2		39.3	314	18.4		00.8	355	00.0		06.0	295	40.1		31.6	Nunki	76	31.9	S26	19.4
	103	45.7	224	27.4		40.0	329	20.6		00.8	10	02.8		06.0	310	42.5		31.6	Peacock	54	01.8	S56	48.5
	118	48.2	239	26.6		40.7	344	22.8		00.8	25	05.6		06.0	325	44.9		31.6	Pollux	244	00.2	N28	04.6
	133	50.6	254	25.8		41.5	359	24.9		00.9	40	08.4		06.0	340	47.4		31.6	Procyon	245	27.5	N 5	16.8
	148	53.1	269	25.0		42.2	14	27.1		00.9	55	11.2		06.0	355	49.8		31.6					
	163	55.5	284	24.2	S19	42.9	29	29.3	N20	00.9	70	14.0	N23	06.0	10	52.2	N12	31.6	Rasalhague	96	31.7	N12	34.7
	178	58.0	299	23.5		43.6	44	31.5		01.0	85	16.8		06.0	25	54.7		31.6	Regulus	208	12.0	N12	04.4
	194	00.5	314	22.7		44.4	59	33.7		01.0	100	19.6		06.0	40	57.1		31.6	Rigel	281	37.5	S 8	13.7
	209	02.9	329	21.9		45.1	74	35.9		01.1	115	22.4		06.1	55	59.5		31.6	Rigil Kent.	140	28.9	S60	44.4
	224	05.4	344	21.1		45.8	89	38.1		01.1	130	25.1		06.1	71	02.0		31.6	Sabik	102	43.6	S15	41.7
	239	07.9	359	20.3		46.5	104	40.3		01.1	145	27.9		06.1	86	04.4		31.6					
	254	10.3	14	19.5	S19	47.2	119	42.5	N20	01.2	160	30.7	N23	06.1	101	06.8	N12	31.6	Schedar	350	10.8	N56	25.3
	269	12.8	29	18.7		48.0	134	44.6		01.2	175	33.5		06.1	116	09.3		31.6	Shaula	96	58.7	S37	05.2
	284	15.3	44	17.9		48.7	149	46.8		01.2	190	36.3											

T. M. G.	SOL		LUNA			Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.		d	P.H.		Náut.	Civil				
												3	4	5	6
3 00	182 35.4	S22 03.1	280 24.3	13.4	N 8 03.1	8.9	55.6	N 72	07 59	10 03	h m	23 08	24 51	00 51	02 38
01	197 35.2	03.5	294 56.7	13.4	7 54.2	9.1	55.6	N 70	07 41	09 20	■	23 14	24 51	00 51	02 32
02	212 34.9	03.8	309 29.1	13.4	7 45.1	9.0	55.7	68	07 28	08 51	10 55	23 19	24 51	00 51	02 26
03	227 34.7	04.2	324 01.5	13.3	7 36.1	9.1	55.7	66	07 16	08 30	09 57	23 23	24 51	00 51	02 21
04	242 34.4	04.5	338 33.8	13.4	7 27.0	9.2	55.7	64	07 06	08 12	09 24	23 27	24 51	00 51	02 18
05	257 34.2	04.9	353 06.2	13.3	7 17.8	9.1	55.8	62	06 58	07 58	09 00	23 30	24 50	00 50	02 14
06	272 33.9	S22 05.2	7 38.5	13.4	N 7 08.7	9.3	55.8	60	06 50	07 45	08 41	23 33	24 50	00 50	02 11
07	287 33.7	05.6	22 10.9	13.3	6 59.4	9.2	55.8	N 58	06 43	07 35	08 25	23 35	24 50	00 50	02 09
08	302 33.4	06.0	36 43.2	13.3	6 50.2	9.4	55.8	56	06 37	07 25	08 11	23 37	24 50	00 50	02 07
S 09	317 33.2	06.3	51 15.5	13.3	6 40.8	9.3	55.9	54	06 32	07 17	08 00	23 39	24 50	00 50	02 05
A 10	332 33.0	06.7	65 47.8	13.2	6 31.5	9.4	55.9	52	06 27	07 10	07 50	23 41	24 50	00 50	02 03
B 11	347 32.7	07.0	80 20.0	13.3	6 22.1	9.4	55.9	50	06 22	07 03	07 40	23 42	24 50	00 50	02 01
A 12	2 32.5	S22 07.4	94 52.3	13.3	N 6 12.7	9.5	56.0	45	06 11	06 48	07 21	23 46	24 50	00 50	01 57
D 13	17 32.2	07.7	109 24.6	13.2	6 03.2	9.5	56.0	N 40	06 02	06 35	07 05	23 49	24 50	00 50	01 54
O 14	32 32.0	08.1	123 56.8	13.2	5 53.7	9.6	56.0	35	05 53	06 24	06 52	23 51	24 50	00 50	01 52
15	47 31.7	08.4	138 29.0	13.2	5 44.1	9.6	56.1	30	05 45	06 14	06 40	23 53	24 50	00 50	01 50
16	62 31.5	08.8	153 01.2	13.2	5 34.5	9.6	56.1	20	05 29	05 57	06 20	23 57	24 50	00 50	01 46
17	77 31.2	09.1	167 33.4	13.1	5 24.9	9.6	56.1	N 10	05 14	05 40	06 03	24 00	00 00	00 50	01 42
18	92 31.0	S22 09.5	182 05.5	13.2	N 5 15.3	9.7	56.2	0	04 58	05 24	05 47	24 03	00 03	00 50	01 39
19	107 30.7	09.8	196 37.7	13.1	5 05.6	9.8	56.2	S 10	04 40	05 07	05 30	24 06	00 06	00 50	01 36
20	122 30.5	10.1	211 09.8	13.1	4 55.8	9.7	56.2	20	04 19	04 48	05 12	24 10	00 10	00 50	01 33
21	137 30.2	10.5	225 41.9	13.1	4 46.1	9.8	56.3	30	03 51	04 24	04 51	24 14	00 14	00 50	01 29
22	152 30.0	10.8	240 14.0	13.0	4 36.3	9.9	56.3	35	03 34	04 10	04 39	24 16	00 16	00 51	01 27
23	167 29.7	11.2	254 46.0	13.1	4 26.4	9.9	56.3	40	03 12	03 53	04 25	24 18	00 18	00 51	01 24
4 00	182 29.5	S22 11.5	269 18.1	13.0	N 4 16.6	9.9	56.4	45	02 44	03 32	04 08	24 21	00 21	00 51	01 22
01	197 29.2	11.9	283 50.1	13.0	4 06.7	9.9	56.4	S 50	02 03	03 04	03 47	24 24	00 24	00 51	01 18
02	212 29.0	12.2	298 22.1	12.9	3 56.8	10.0	56.4	52	01 40	02 50	03 37	00 01	00 26	00 51	01 17
03	227 28.7	12.5	312 54.0	12.9	3 46.8	10.0	56.5	54	01 07	02 34	03 26	00 04	00 28	00 51	01 15
04	242 28.5	12.9	327 25.9	12.9	3 36.8	10.0	56.5	56	////	02 15	03 13	00 08	00 30	00 51	01 13
05	257 28.2	13.2	341 57.8	12.9	3 26.8	10.0	56.5	58	////	01 50	02 58	00 12	00 32	00 51	01 11
06	272 28.0	S22 13.6	356 29.7	12.9	N 3 16.8	10.1	56.6	S 60	////	01 15	02 40	00 16	00 34	00 51	01 09
07	287 27.7	13.9	11 01.6	12.8	3 06.7	10.1	56.6	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
08	302 27.5	14.2	25 33.4	12.8	2 56.6	10.2	56.6		Sol	Civil	Náut.	3	4	5	6
O 09	317 27.2	14.6	40 05.2	12.7	2 46.4	10.1	56.7		h m	h m	h m	h m	h m	h m	h m
M 10	332 27.0	14.9	54 36.9	12.8	2 36.3	10.2	56.7	N 72	■	13 36	15 41	12 57	12 51	12 46	12 40
I 11	347 26.7	15.2	69 08.7	12.7	2 26.1	10.2	56.7	N 70	■	14 20	15 58	12 49	12 49	12 49	12 49
N 12	2 26.5	S22 15.6	83 40.4	12.6	N 2 15.9	10.2	56.8	68	12 45	14 49	16 12	12 42	12 47	12 51	12 56
G 13	17 26.2	15.9	98 12.0	12.6	2 05.7	10.3	56.8	66	13 43	15 10	16 24	12 36	12 45	12 53	13 03
O 14	32 25.9	16.2	112 43.6	12.6	1 55.4	10.3	56.9	64	14 16	15 28	16 34	12 31	12 43	12 55	13 08
15	47 25.7	16.6	127 15.2	12.6	1 45.1	10.3	56.9	62	14 40	15 42	16 42	12 27	12 42	12 56	13 12
16	62 25.4	16.9	141 46.8	12.5	1 34.8	10.3	56.9	60	15 00	15 55	16 50	12 23	12 41	12 58	13 16
17	77 25.2	17.2	156 18.3	12.5	1 24.5	10.3	57.0	N 58	15 15	16 05	16 57	12 20	12 39	12 59	13 20
18	92 24.9	S22 17.5	170 49.8	12.5	N 1 14.2	10.4	57.0	56	15 29	16 15	17 03	12 17	12 38	13 00	13 23
19	107 24.7	17.9	185 21.3	12.4	1 03.8	10.4	57.0	54	15 40	16 23	17 08	12 14	12 38	13 01	13 26
20	122 24.4	18.2	199 52.7	12.3	0 53.4	10.4	57.1	52	15 51	16 31	17 14	12 12	12 37	13 02	13 29
21	137 24.2	18.5	214 24.0	12.4	0 43.0	10.4	57.1	50	16 00	16 37	17 18	12 10	12 36	13 03	13 31
22	152 23.9	18.9	228 55.4	12.2	0 32.6	10.4	57.2	45	16 19	16 52	17 29	12 05	12 34	13 04	13 36
23	167 23.6	19.2	243 26.6	12.3	0 22.2	10.5	57.2	N 40	16 35	17 05	17 39	12 01	12 33	13 06	13 40
5 00	182 23.4	S22 19.5	257 57.9	12.2	N 0 11.7	10.4	57.2	35	16 48	17 16	17 47	11 57	12 32	13 07	13 44
01	197 23.1	19.8	272 29.1	12.2	N 0 01.3	10.5	57.3	30	17 00	17 26	17 56	11 54	12 31	13 08	13 47
02	212 22.9	20.1	287 00.3	12.1	S 0 09.2	10.5	57.3	20	17 20	17 44	18 11	11 49	12 29	13 10	13 53
03	227 22.6	20.5	301 31.4	12.0	0 19.7	10.5	57.4	N 10	17 37	18 00	18 26	11 44	12 27	13 12	13 58
04	242 22.4	20.8	316 02.4	12.1	0 30.2	10.5	57.4	0	17 54	18 16	18 42	11 39	12 26	13 13	14 03
05	257 22.1	21.1	330 33.5	11.9	0 40.7	10.6	57.4	S 10	18 11	18 33	19 00	11 35	12 24	13 15	14 08
06	272 21.8	S22 21.4	345 04.4	12.0	S 0 51.3	10.5	57.5	20	18 29	18 53	19 22	11 30	12 22	13 16	14 13
07	287 21.6	21.8	359 35.4	11.9	1 01.8	10.6	57.5	30	18 49	19 17	19 49	11 24	12 20	13 18	14 19
08	302 21.3	22.1	14 06.3	11.8	1 12.4	10.5	57.5	35	19 02	19 31	20 07	11 21	12 19	13 19	14 22
L 09	317 21.1	22.4	28 37.1	11.8	1 22.9	10.6	57.6	40	19 16	19 48	20 29	11 17	12 18	13 21	14 26
U 10	332 20.8	22.7	43 07.9	11.7	1 33.5	10.6	57.6	45	19 33	20 09	20 57	11 13	12 16	13 22	14 30
N 11	347 20.6	23.0	57 38.6	11.7	1 44.1	10.6	57.7	S 50	19 54	20 37	21 38	11 08	12 14	13 24	14 36
E 12	2 20.3	S22 23.3	72 09.3	11.6	S 1 54.7	10.6	57.7	52	20 04	20 51	22 02	11 05	12 14	13 24	14 38
S 13	17 20.0	23.6	86 39.9	11.6	2 05.3	10.5	57.7	54	20 15	21 07	22 36	11 03	12 13	13 25	14 41
14	32 19.8	24.0	101 10.5	11.5	2 15.8	10.6	57.8	56	20 28	21 27	////	11 00	12 12	13 26	14 44
15	47 19.5	24.3	115 41.0	11.5	2 26.4	10.6	57.8	58	20 44	21 52	////	10 56	12 10	13 27	14 47
16	62 19.3	24.6	130 11.5	11.4	2 37.0	10.6	57.9	S 60	21 02	22 29	////	10 53	12 09	13 28	14 51
17	77 19.0	24.9	144 41.9	11.4	2 47.6	10.7	57.9	Día	SOL		LUNA				
18	92 18.7	S22 25.2	159 12.3	11.3	S 2 58.3	10.6	57.9		E.T. (+)	Pas. Mer.	Pas. Mer.	Mer. Sup.	Mer. Inf.	Edad.	Fase
19	107 18.5	25.5	173 42.6	11.2	3 08.9	10.6	58.0		00 ^h	12 ^h					

T. M. G.	ARIES			VENUS -3.4			MARTE -0.3			JUPITER -2.3			SATURNO +0.7			ESTRELLAS			
	A.H.G.			A.H.G. Dec.			A.H.G. Dec.			A.H.G. Dec.			A.H.G. Dec.			Nombre	A. H. S.	Dec.	
	^o	[']	^h	^o	[']	^h	^o	[']	^h	^o	[']	^h	^o	[']	^h	^o	[']	^h	
M A R T E S	6 00	74	39.9	194	10.0	S19 55.8	300	08.9	N20 01.7	341	04.2	N23 06.2	281	36.1	N12 31.6	Acamar	315	38.3	S40 23.7
	01	89	42.4	209	09.2	56.5	315	11.1	01.7	356	07.0	06.3	296	38.5	31.6	Achernar	335	46.4	S57 21.2
	02	104	44.8	224	08.4	57.2	330	13.3	01.7	11	09.8	06.3	311	40.9	31.6	Acruz	173	39.4	S62 58.3
	03	119	47.3	239	07.6	57.9	345	15.5	01.8	26	12.6	06.3	326	43.4	31.6	Adhara	255	33.2	S28 56.5
	04	134	49.8	254	06.8	58.6	0	17.7	01.8	41	15.4	06.3	341	45.8	31.6	Aldebaran	291	19.8	N16 27.9
	05	149	52.2	269	06.0	59.3	15	19.9	01.9	56	18.2	06.3	356	48.2	31.6				
	06	164	54.7	284	05.2	S20 00.0	30	22.2	N20 01.9	71	21.0	N23 06.3	11	50.7	N12 31.6	Alioth	166	44.6	N56 04.5
	07	179	57.2	299	04.4	00.7	45	24.4	02.0	86	23.8	06.3	26	53.1	31.6	Alkaid	153	20.4	N49 25.3
	08	194	59.6	314	03.6	01.4	60	26.6	02.0	101	26.6	06.3	41	55.5	31.6	Al Na'ir	28	17.5	S47 04.2
	09	210	02.1	329	02.8	02.1	75	28.8	02.1	116	29.4	06.4	56	58.0	31.6	Alnilam	276	13.2	S 1 13.0
	10	225	04.5	344	02.0	02.8	90	31.0	02.1	131	32.2	06.4	72	00.4	31.6	Alphard	218	22.3	S 8 33.8
	11	240	07.0	359	01.2	03.5	105	33.3	02.1	146	35.0	06.4	87	02.9	31.6				
	12	255	09.5	14	00.4	S20 04.2	120	35.5	N20 02.2	161	37.8	N23 06.4	102	05.3	N12 31.6	Alphecca	126	34.1	N26 47.4
	13	270	11.9	28	59.6	04.9	135	37.7	02.2	176	40.6	06.4	117	07.7	31.6	Alpheratz	358	11.1	N28 58.3
	14	285	14.4	43	58.8	05.6	150	39.9	02.3	191	43.4	06.4	132	10.2	31.6	Altair	62	34.6	N 8 48.8
	15	300	16.9	58	58.0	06.2	165	42.2	02.3	206	46.2	06.4	147	12.6	31.6	Ankaa	353	42.0	S42 25.7
	16	315	19.3	73	57.2	06.9	180	44.4	02.4	221	49.0	06.4	162	15.1	31.6	Antares	112	59.5	S26 22.9
	17	330	21.8	88	56.4	07.6	195	46.6	02.4	236	51.8	06.5	177	17.5	31.6				
	18	345	24.3	103	55.6	S20 08.3	210	48.9	N20 02.5	251	54.6	N23 06.5	192	19.9	N12 31.6	Arcturus	146	20.5	N19 17.8
	19	0	26.7	118	54.8	09.0	225	51.1	02.5	266	57.4	06.5	207	22.4	31.6	Atria	108	26.0	S68 59.2
	20	15	29.2	133	54.0	09.7	240	53.3	02.6	282	00.2	06.5	222	24.8	31.6	Avior	234	28.5	S59 26.2
	21	30	31.6	148	53.2	10.4	255	55.6	02.6	297	03.0	06.5	237	27.3	31.6	Bellatrix	279	00.4	N 6 19.7
	22	45	34.1	163	52.4	11.1	270	57.8	02.7	312	05.8	06.5	252	29.7	31.6	Betelgeuse	271	30.0	N 7 24.1
23	60	36.6	178	51.6	11.7	286	00.0	02.7	327	08.6	06.5	267	32.1	31.6					
M I E R C O L E S	7 00	75	39.0	193	50.8	S20 12.4	301	02.3	N20 02.8	342	11.4	N23 06.5	282	34.6	N12 31.6	Canopus	264	07.5	S52 41.0
	01	90	41.5	208	50.0	13.1	316	04.5	02.8	357	14.2	06.6	297	37.0	31.6	Capella	281	13.6	N45 58.5
	02	105	44.0	223	49.2	13.8	331	06.8	02.9	12	17.0	06.6	312	39.5	31.6	Deneb	49	50.0	N45 12.4
	03	120	46.4	238	48.3	14.5	346	09.0	02.9	27	19.8	06.6	327	41.9	31.6	Denebola	183	01.1	N14 41.6
	04	135	48.9	253	47.5	15.1	1	11.3	03.0	42	22.6	06.6	342	44.3	31.6	Diphda	349	22.6	S18 06.5
	05	150	51.4	268	46.7	15.8	16	13.5	03.1	57	25.4	06.6	357	46.8	31.6				
	06	165	53.8	283	45.9	S20 16.5	31	15.8	N20 03.1	72	28.2	N23 06.6	12	49.2	N12 31.6	Dubhe	194	24.6	N61 51.9
	07	180	56.3	298	45.1	17.2	46	18.0	03.2	87	31.0	06.6	27	51.7	31.6	Elnath	278	46.1	N28 35.3
	08	195	58.8	313	44.3	17.8	61	20.3	03.2	102	33.8	06.6	42	54.1	31.6	Eltanin	90	59.1	N51 29.7
	09	211	01.2	328	43.5	18.5	76	22.5	03.3	117	36.6	06.7	57	56.5	31.6	Enif	34	13.5	N 9 46.6
	10	226	03.7	343	42.7	19.2	91	24.8	03.3	132	39.4	06.7	72	59.0	31.6	Fomalhaut	15	53.6	S29 44.5
	11	241	06.1	358	41.9	19.9	106	27.0	03.4	147	42.2	06.7	88	01.4	31.6				
	12	256	08.6	13	41.0	S20 20.5	121	29.3	N20 03.4	162	45.0	N23 06.7	103	03.9	N12 31.6	Gacrux	172	30.9	S56 59.1
	13	271	11.1	28	40.2	21.2	136	31.5	03.5	177	47.8	06.7	118	06.3	31.6	Gienah	176	20.0	S17 25.0
	14	286	13.5	43	39.4	21.9	151	33.8	03.5	192	50.6	06.7	133	08.8	31.6	Hadar	149	26.4	S60 15.7
	15	301	16.0	58	38.6	22.5	166	36.0	03.6	207	53.4	06.7	148	11.2	31.6	Hamal	328	30.8	N23 21.6
	16	316	18.5	73	37.8	23.2	181	38.3	03.7	222	56.2	06.7	163	13.6	31.6	Kaus Aust.	84	19.7	S34 23.7
	17	331	20.9	88	37.0	23.9	196	40.6	03.7	237	59.0	06.8	178	16.1	31.6				
	18	346	23.4	103	36.2	S20 24.5	211	42.8	N20 03.8	253	01.8	N23 06.8	193	18.5	N12 31.6	Kochab	137	20.2	N74 14.7
	19	1	25.9	118	35.3	25.2	226	45.1	03.8	268	04.6	06.8	208	21.0	31.6	Markab	14	05.0	N15 05.4
	20	16	28.3	133	34.5	25.9	241	47.4	03.9	283	07.4	06.8	223	23.4	31.6	Menkar	314	42.8	N 4 00.2
	21	31	30.8	148	33.7	26.5	256	49.6	04.0	298	10.2	06.8	238	25.9	31.6	Menkent	148	39.5	S36 15.5
	22	46	33.3	163	32.9	27.2	271	51.9	04.0	313	13.0	06.8	253	28.3	31.6	Miaplacidus	221	44.7	S69 37.4
23	61	35.7	178	32.1	27.8	286	54.2	04.1	328	15.8	06.8	268	30.8	31.6					
J U E V E S	8 00	76	38.2	193	31.3	S20 28.5	301	56.4	N20 04.1	343	18.6	N23 06.8	283	33.2	N12 31.6	Mirfak	309	18.3	N49 47.1
	01	91	40.6	208	30.4	29.1	316	58.7	04.2	358	21.4	06.9	298	35.6	31.6	Nunki	76	31.9	S26 19.4
	02	106	43.1	223	29.6	29.8	332	01.0	04.3	13	24.2	06.9	313	38.1	31.6	Peacock	54	01.8	S56 48.5
	03	121	45.6	238	28.8	30.5	347	03.3	04.3	28	27.0	06.9	328	40.5	31.6	Pollux	244	00.2	N28 04.6
	04	136	48.0	253	28.0	31.1	2	05.5	04.4	43	29.8	06.9	343	43.0	31.6	Procyon	245	27.5	N 5 16.8
	05	151	50.5	268	27.2	31.8	17	07.8	04.5	58	32.6	06.9	358	45.4	31.6				
	06	166	53.0	283	26.3	S20 32.4	32	10.1	N20 04.5	73	35.4	N23 06.9	13	47.9	N12 31.6	Rasalhague	96	31.7	N12 34.7
	07	181	55.4	298	25.5	33.1	47	12.4	04.6	88	38.2	06.9	28	50.3	31.7	Regulus	208	11.9	N12 04.4
	08	196	57.9	313	24.7	33.7	62	14.7	04.6	103	41.0	06.9	43	52.8	31.7	Rigel	281	37.5	S 8 13.7
	09	212	00.4	328	23.9	34.4	77	16.9	04.7	118	43.8	07.0	58	55.2	31.7	Rigel Kent.	140	28.8	S60 44.4
	10	227	02.8	343	23.0	35.0	92	19.2	04.8	133	46.6	07.0	73	57.7	31.7	Sabik	102	43.6	S15 41.7
	11	242	05.3	358	22.2	35.7	107	21.5	04.8	148	49.4	07.0	89	00.1	31.7				
	12	257	07.7	13	21.4	S20 36.3	122	23.8	N20 04.9	163	52.2	N23 07.0	104	02.6	N12 31.7	Schedar	350	10.8	N56 25.3
	13	272	10.2	28	20.6	37.0	137	26.1	05.0	178	55.0	07.0	119	05.0	31.7	Shaula	96	58.7	S37 05.2
	14	287	12.7	43	19.7	37.6	152	28.4	05.0	193	57.8	07.0	134	07.4	31.7	Sirius			

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P. H.	Naut.		Civil	6	7	8	9	
																h
M A R T E S	6 00	182 17.2	S22 27.1	246 13.2	10.9 S	4 01.8	10.6	58.2	N 72	08 06	10 17	■	02 38	04 32	06 36	08 53
	01	197 16.9	27.4	260 43.1	10.9	4 12.4	10.6	58.2	N 70	07 48	09 29	■	02 32	04 18	06 10	08 05
	02	212 16.6	27.7	275 13.0	10.8	4 23.0	10.6	58.3	68	07 33	08 59	11 18	02 26	04 06	05 50	07 35
	03	227 16.4	28.0	289 42.8	10.8	4 33.6	10.5	58.3	66	07 21	08 36	10 07	02 21	03 56	05 35	07 13
	04	242 16.1	28.3	304 12.6	10.7	4 44.1	10.6	58.4	64	07 11	08 18	09 31	02 18	03 48	05 22	06 55
	05	257 15.8	28.6	318 42.3	10.6	4 54.7	10.5	58.4	62	07 02	08 03	09 06	02 14	03 42	05 11	06 40
	06	272 15.6	S22 28.9	333 11.9	10.5 S	5 05.2	10.5	58.4	60	06 54	07 50	08 46	02 11	03 36	05 02	06 28
	07	287 15.3	29.2	347 41.4	10.5	5 15.7	10.6	58.5	N 58	06 47	07 39	08 30	02 09	03 30	04 54	06 18
	08	302 15.1	29.5	2 10.9	10.5	5 26.3	10.5	58.5	56	06 41	07 29	08 16	02 07	03 26	04 47	06 08
	09	317 14.8	29.8	16 40.4	10.3	5 36.8	10.4	58.6	54	06 35	07 21	08 04	02 05	03 22	04 41	06 00
	10	332 14.5	30.1	31 09.7	10.3	5 47.2	10.5	58.6	52	06 30	07 13	07 53	02 03	03 18	04 35	05 53
	11	347 14.3	30.4	45 39.0	10.2	5 57.7	10.5	58.6	50	06 25	07 06	07 44	02 01	03 15	04 30	05 47
	12	2 14.0	S22 30.7	60 08.2	10.1 S	6 08.2	10.4	58.7	45	06 14	06 51	07 24	01 57	03 07	04 19	05 33
	13	17 13.7	31.0	74 37.3	10.1	6 18.6	10.4	58.7	N 40	06 04	06 38	07 08	01 54	03 01	04 10	05 21
	14	32 13.5	31.3	89 06.4	10.0	6 29.0	10.4	58.8	35	05 55	06 27	06 55	01 52	02 56	04 03	05 11
	15	47 13.2	31.6	103 35.4	10.0	6 39.4	10.4	58.8	30	05 47	06 17	06 43	01 50	02 51	03 56	05 03
	16	62 12.9	31.8	118 04.4	9.8	6 49.8	10.3	58.8	20	05 31	05 58	06 22	01 46	02 44	03 45	04 48
	17	77 12.7	32.1	132 33.2	9.8	7 00.1	10.3	58.9	N 10	05 16	05 42	06 05	01 42	02 37	03 35	04 35
	18	92 12.4	S22 32.4	147 02.0	9.7 S	7 10.4	10.3	58.9	0	04 59	05 25	05 48	01 39	02 30	03 25	04 23
	19	107 12.1	32.7	161 30.7	9.6	7 20.7	10.3	59.0	S 10	04 41	05 08	05 31	01 36	02 24	03 16	04 12
	20	122 11.9	33.0	175 59.3	9.6	7 31.0	10.2	59.0	20	04 19	04 48	05 13	01 33	02 17	03 06	03 59
	21	137 11.6	33.3	190 27.9	9.5	7 41.2	10.2	59.0	30	03 51	04 24	04 51	01 29	02 10	02 55	03 45
	22	152 11.3	33.6	204 56.4	9.4	7 51.4	10.2	59.1	35	03 33	04 10	04 39	01 27	02 05	02 48	03 37
23	167 11.1	33.9	219 24.8	9.3	8 01.6	10.1	59.1	40	03 11	03 52	04 25	01 24	02 01	02 41	03 27	
7 00	182 10.8	S22 34.2	233 53.1	9.3 S	8 11.7	10.2	59.2	45	02 42	03 31	04 07	01 22	01 55	02 33	03 16	
01	197 10.5	34.5	248 21.4	9.1	8 21.9	10.0	59.2	S 50	02 00	03 02	03 46	01 18	01 48	02 22	03 03	
02	212 10.3	34.7	262 49.5	9.1	8 31.9	10.1	59.2	52	01 36	02 48	03 36	01 17	01 45	02 18	02 57	
03	227 10.0	35.0	277 17.6	9.1	8 42.0	10.0	59.3	54	01 00	02 32	03 24	01 15	01 42	02 13	02 50	
04	242 09.7	35.3	291 45.7	8.9	8 52.0	10.0	59.3	56	////	02 11	03 11	01 13	01 38	02 07	02 43	
05	257 09.5	35.6	306 13.6	8.8	9 02.0	9.9	59.4	58	////	01 45	02 55	01 11	01 34	02 01	02 34	
06	272 09.2	S22 35.9	320 41.4	8.8 S	9 11.9	9.9	59.4	S 60	////	01 07	02 36	01 09	01 29	01 54	02 25	
07	287 08.9	36.2	335 09.2	8.7	9 21.8	9.8	59.4	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna				
08	302 08.6	36.4	349 36.9	8.6	9 31.6	9.8	59.5			Civil	Naut.	6	7	8	9	
09	317 08.4	36.7	4 04.5	8.6	9 41.4	9.8	59.5					h m	h m	h m	h m	
10	332 08.1	37.0	18 32.1	8.4	9 51.2	9.7	59.6	N 70	12 25	13 26	15 37	12 40	12 33	12 25	12 12	
11	347 07.8	37.3	32 59.5	8.4	10 00.9	9.6	59.6	N 72	12 25	14 13	15 55	12 49	12 50	12 53	13 00	
12	2 07.6	S22 37.6	47 26.9	8.3 S10	10.5	9.6	59.6	68	12 25	14 44	16 09	12 56	13 03	13 13	13 31	
13	17 07.3	37.8	61 54.2	8.2	10 20.1	9.6	59.7	66	13 36	15 07	16 21	13 03	13 14	13 30	13 54	
14	32 07.0	38.1	76 21.4	8.1	10 29.7	9.5	59.7	64	14 12	15 25	16 32	13 08	13 23	13 44	14 12	
15	47 06.8	38.4	90 48.5	8.0	10 39.2	9.5	59.7	62	14 37	15 40	16 41	13 12	13 31	13 55	14 28	
16	62 06.5	38.7	105 15.5	8.0	10 48.7	9.4	59.8	60	14 57	15 53	16 48	13 16	13 38	14 05	14 40	
17	77 06.2	38.9	119 42.5	7.8	10 58.1	9.3	59.8	N 58	15 13	16 04	16 55	13 20	13 44	14 14	14 51	
18	92 05.9	S22 39.2	134 09.3	7.8 S11	10.7	9.3	59.9	56	15 27	16 13	17 02	13 23	13 49	14 21	15 01	
19	107 05.7	39.5	148 36.1	7.7	11 16.7	9.2	59.9	54	15 39	16 22	17 08	13 26	13 54	14 28	15 09	
20	122 05.4	39.8	163 02.8	7.6	11 25.9	9.2	59.9	52	15 49	16 30	17 13	13 29	13 59	14 34	15 17	
21	137 05.1	40.0	177 29.4	7.5	11 35.1	9.1	60.0	50	15 59	16 37	17 18	13 31	14 03	14 40	15 24	
22	152 04.8	40.3	191 55.9	7.5	11 44.2	9.1	60.0	45	16 19	16 52	17 29	13 36	14 11	14 51	15 39	
23	167 04.6	40.6	206 22.4	7.3	11 53.3	8.9	60.0	N 40	16 35	17 05	17 39	13 40	14 18	15 01	15 51	
8 00	182 04.3	S22 40.8	220 48.7	7.3 S12	12.2	9.0	60.1	35	16 48	17 16	17 48	13 44	14 25	15 10	16 01	
01	197 04.0	41.1	235 15.0	7.2	12 11.2	8.8	60.1	30	17 00	17 26	17 56	13 47	14 30	15 17	16 10	
02	212 03.8	41.4	249 41.2	7.1	12 20.0	8.8	60.1	20	17 21	17 44	18 12	13 53	14 40	15 30	16 26	
03	227 03.5	41.6	264 07.3	7.0	12 28.8	8.7	60.2	N 10	17 38	18 01	18 27	13 58	14 48	15 42	16 39	
04	242 03.2	41.9	278 33.3	7.0	12 37.5	8.6	60.2	0	17 55	18 18	18 44	14 03	14 56	15 52	16 52	
05	257 02.9	42.2	292 59.3	6.8	12 46.1	8.6	60.2	S 10	18 12	18 35	19 02	14 08	15 04	16 03	17 05	
06	272 02.7	S22 42.4	307 25.1	6.8 S12	14.7	8.5	60.3	20	18 30	18 55	19 24	14 13	15 12	16 15	17 19	
07	287 02.4	42.7	321 50.9	6.7	13 03.2	8.4	60.3	30	18 52	19 19	19 52	14 19	15 22	16 28	17 35	
08	302 02.1	43.0	336 16.6	6.5	13 11.6	8.3	60.3	35	19 04	19 34	20 10	14 22	15 27	16 35	17 44	
09	317 01.8	43.2	350 42.1	6.6	13 19.9	8.3	60.4	40	19 19	19 51	20 32	14 26	15 34	16 44	17 54	
10	332 01.6	43.5	5 07.7	6.4	13 28.2	8.1	60.4	45	19 36	20 13	21 01	14 30	15 41	16 54	18 06	
11	347 01.3	43.8	19 33.1	6.3	13 36.3	8.1	60.4	S 50	19 58	20 41	21 44	14 36	15 50	17 06	18 21	
12	2 01.0	S22 44.0	33 58.4	6.3 S13	14.4	8.0	60.5	52	20 08	20 55	22 09	14 38	15 54	17 12	18 28	
13	17 00.7	44.3	48 23.7	6.2	13 52.4	7.9	60.5	54	20 20	21 12	22 45	14 41	15 59	17 18	18 36	
14	32 00.5	44.5	62 48.9	6.1	14 00.3	7.9	60.5	56	20 33	21 33	////	14 44	16 04	17 25	18 45	
15	47 00.2	44.8	77 14.0	6.0	14 08.2	7.7	60.6	58	20 49	21 59	////	14 47	16 09	17 33	18 55	
16	61 59.9	45.0	91 39.0	5.9	14 15.9	7.7	60.6	S 60	21 08	22 39	////	14 51	16 16	17 42	19 06	
17	76 59.6	45.3	106 03.9	5.9	14 23.6	7.6	60.6	Lat.	SOL		LUNA					
18	91 59.3	S22 45.6	120 28.8	5.7 S14	14.2	7.4	60.7		E.T. (+)	Pas. Mer.	Pas. Mer.	Mer. Inf.	Edad.	Fase		
19	106 59.1	45.8	134 53.5	5.7	14 38.6	7.4	60.7	Día	00 ^h	12 ^h						

T. M. G.	ARIES			VENUS -3.4			MARTE -0.3			JUPITER -2.3			SATURNO +0.7			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
9 00	77 37.3	193 11.5	S20 44.0	302 51.4	N20 05.7		344 25.9	N23 07.1		284 31.9	N12 31.7		Acamar	315 38.3	S40 23.8			
01	92 39.8	208 10.6	44.6	317 53.7	05.8		359 28.7	07.1		299 34.4	31.7		Achernar	335 46.4	S57 21.2			
02	107 42.2	223 09.8	45.2	332 56.0	05.9		14 31.5	07.2		314 36.8	31.7		Acrux	173 39.4	S62 58.3			
03	122 44.7	238 09.0	45.9	347 58.3	05.9		29 34.3	07.2		329 39.3	31.7		Adhara	255 33.2	S28 56.5			
04	137 47.2	253 08.1	46.5	3 00.6	06.0		44 37.1	07.2		344 41.7	31.7		Aldebaran	291 19.8	N16 27.9			
05	152 49.6	268 07.3	47.1	18 02.9	06.1		59 39.9	07.2		359 44.2	31.7							
06	167 52.1	283 06.5	S20 47.8	33 05.2	N20 06.1		74 42.7	N23 07.2		14 46.6	N12 31.8		Alioth	166 44.5	N56 04.5			
07	182 54.6	298 05.6	48.4	48 07.5	06.2		89 45.5	07.2		29 49.1	31.8		Alkaid	153 20.4	N49 25.2			
08	197 57.0	313 04.8	49.0	63 09.8	06.3		104 48.4	07.2		44 51.5	31.8		Al Na'ir	28 17.5	S47 04.2			
V 09	212 59.5	328 04.0	49.6	78 12.2	06.4		119 51.2	07.2		59 54.0	31.8		Alnilam	276 13.2	S 1 13.0			
I 10	228 02.0	343 03.1	50.3	93 14.5	06.4		134 54.0	07.3		74 56.4	31.8		Alphard	218 22.2	S 8 33.8			
E 11	243 04.4	358 02.3	50.9	108 16.8	06.5		149 56.8	07.3		89 58.9	31.8							
N 12	258 06.9	13 01.5	S20 51.5	123 19.1	N20 06.6		164 59.6	N23 07.3		105 01.3	N12 31.8		Alphecca	126 34.1	N26 47.4			
R 13	273 09.4	28 00.6	52.1	138 21.4	06.7		180 02.4	07.3		120 03.8	31.8		Alpheratz	358 11.1	N28 58.3			
E 14	288 11.8	42 59.8	52.7	153 23.8	06.7		195 05.2	07.3		135 06.2	31.8		Altair	62 34.6	N 8 48.8			
S 15	303 14.3	57 59.0	53.4	168 26.1	06.8		210 08.0	07.3		150 08.7	31.8		Ankaa	353 42.0	S42 25.7			
16	318 16.7	72 58.1	54.0	183 28.4	06.9		225 10.8	07.3		165 11.1	31.8		Antares	112 59.5	S26 22.9			
17	333 19.2	87 57.3	54.6	198 30.7	07.0		240 13.6	07.3		180 13.6	31.8							
18	348 21.7	102 56.4	S20 55.2	213 33.1	N20 07.0		255 16.4	N23 07.4		195 16.1	N12 31.8		Arcturus	146 20.5	N19 17.8			
19	3 24.1	117 55.6	55.8	228 35.4	07.1		270 19.3	07.4		210 18.5	31.8		Atria	108 26.0	S68 59.2			
20	18 26.6	132 54.8	56.4	243 37.7	07.2		285 22.1	07.4		225 21.0	31.8		Avior	234 28.4	S59 26.2			
21	33 29.1	147 53.9	57.0	258 40.1	07.3		300 24.9	07.4		240 23.4	31.8		Bellatrix	279 00.4	N 6 19.7			
22	48 31.5	162 53.1	57.6	273 42.4	07.4		315 27.7	07.4		255 25.9	31.8		Betelgeuse	271 30.0	N 7 24.1			
23	63 34.0	177 52.2	58.3	288 44.7	07.4		330 30.5	07.4		270 28.3	31.8							
10 00	78 36.5	192 51.4	S20 58.9	303 47.1	N20 07.5		345 33.3	N23 07.4		285 30.8	N12 31.9		Canopus	264 07.5	S52 41.1			
01	93 38.9	207 50.6	20 59.5	318 49.4	07.6		0 36.1	07.4		300 33.2	31.9		Capella	281 13.6	N45 58.5			
02	108 41.4	222 49.7	21 00.1	333 51.7	07.7		15 38.9	07.4		315 35.7	31.9		Deneb	49 50.0	N45 12.4			
03	123 43.9	237 48.9	00.7	348 54.1	07.8		30 41.7	07.5		330 38.1	31.9		Denebola	183 01.0	N14 41.6			
04	138 46.3	252 48.0	01.3	3 56.4	07.8		45 44.5	07.5		345 40.6	31.9		Diphda	349 22.6	S18 06.5			
05	153 48.8	267 47.2	01.9	18 58.8	07.9		60 47.4	07.5		0 43.0	31.9							
06	168 51.2	282 46.3	S21 02.5	34 01.1	N20 08.0		75 50.2	N23 07.5		15 45.5	N12 31.9		Dubhe	194 24.5	N61 51.9			
07	183 53.7	297 45.5	03.1	49 03.5	08.1		90 53.0	07.5		30 48.0	31.9		Elnath	278 46.1	N28 35.3			
08	198 56.2	312 44.6	03.7	64 05.8	08.2		105 55.8	07.5		45 50.4	31.9		Eltanin	90 59.1	N51 29.7			
S 09	213 58.6	327 43.8	04.3	79 08.2	08.3		120 58.6	07.5		60 52.9	31.9		Enif	34 13.6	N 9 46.6			
A 10	229 01.1	342 43.0	04.9	94 10.5	08.3		136 01.4	07.5		75 55.3	31.9		Fomalhaut	15 53.6	S29 44.5			
B 11	244 03.6	357 42.1	05.5	109 12.9	08.4		151 04.2	07.6		90 57.8	31.9							
A 12	259 06.0	12 41.3	S21 06.1	124 15.2	N20 08.5		166 07.0	N23 07.6		106 00.2	N12 31.9		Gacrux	172 30.9	S56 59.1			
D 13	274 08.5	27 40.4	06.7	139 17.6	08.6		181 09.8	07.6		121 02.7	31.9		Gienah	176 20.0	S17 25.1			
O 14	289 11.0	42 39.6	07.3	154 19.9	08.7		196 12.7	07.6		136 05.1	32.0		Hadar	149 26.3	S60 15.7			
15	304 13.4	57 38.7	07.9	169 22.3	08.8		211 15.5	07.6		151 07.6	32.0		Hamal	328 30.8	N23 21.6			
16	319 15.9	72 37.9	08.5	184 24.6	08.8		226 18.3	07.6		166 10.1	32.0		Kaus Aust.	84 19.7	S34 23.7			
17	334 18.3	87 37.0	09.0	199 27.0	08.9		241 21.1	07.6		181 12.5	32.0							
18	349 20.8	102 36.2	S21 09.6	214 29.4	N20 09.0		256 23.9	N23 07.6		196 15.0	N12-32.0		Kochab	137 20.1	N74 14.6			
19	4 23.3	117 35.3	10.2	229 31.7	09.1		271 26.7	07.6		211 17.4	32.0		Markab	14 05.0	N15 05.4			
20	19 25.7	132 34.5	10.8	244 34.1	09.2		286 29.5	07.7		226 19.9	32.0		Menkar	314 42.8	N 4 00.2			
21	34 28.2	147 33.6	11.4	259 36.4	09.3		301 32.4	07.7		241 22.3	32.0		Menkent	148 39.5	S36 15.5			
22	49 30.7	162 32.8	12.0	274 38.8	09.4		316 35.2	07.7		256 24.8	32.0		Miaplacidus	221 44.7	S69 37.4			
23	64 33.1	177 31.9	12.6	289 41.2	09.5		331 38.0	07.7		271 27.3	32.0							
11 00	79 35.6	192 31.1	S21 13.2	304 43.5	N20 09.5		346 40.8	N23 07.7		286 29.7	N12 32.0		Mirfak	309 18.3	N49 47.1			
01	94 38.1	207 30.2	13.7	319 45.9	09.6		1 43.6	07.7		301 32.2	32.0		Nunki	76 31.9	S26 19.4			
02	109 40.5	222 29.4	14.3	334 48.3	09.7		16 46.4	07.7		316 34.6	32.0		Peacock	54 01.8	S56 48.5			
03	124 43.0	237 28.5	14.9	349 50.7	09.8		31 49.2	07.7		331 37.1	32.1		Pollux	244 00.2	N28 04.6			
04	139 45.5	252 27.7	15.5	4 53.0	09.9		46 52.1	07.8		346 39.6	32.1		Procyon	245 27.5	N 5 16.8			
05	154 47.9	267 26.8	16.0	19 55.4	10.0		61 54.9	07.8		1 42.0	32.1							
06	169 50.4	282 25.9	S21 16.6	34 57.8	N20 10.1		76 57.7	N23 07.8		16 44.5	N12 32.1		Rasalhague	96 31.7	N12 34.7			
07	184 52.8	297 25.1	17.2	50 00.2	10.2		92 00.5	07.8		31 46.9	32.1		Regulus	208 11.9	N12 04.4			
D 08	199 55.3	312 24.2	17.8	65 02.6	10.3		107 03.3	07.8		46 49.4	32.1		Rigel	281 37.5	S 8 13.7			
O 09	214 57.8	327 23.4	18.3	80 04.9	10.4		122 06.1	07.8		61 51.9	32.1		Rigel Kent.	140 28.8	S60 44.3			
M 10	230 00.2	342 22.5	18.9	95 07.3	10.5		137 08.9	07.8		76 54.3	32.1		Sabik	102 43.6	S15 41.7			
I 11	245 02.7	357 21.7	19.5	110 09.7	10.6		152 11.8	07.8		91 56.8	32.1							
N 12	260 05.2	12 20.8	S21 20.1	125 12.1	N20 10.6		167 14.6	N23 07.8		106 59.2	N12 32.1		Schedar	350 10.8	N56 25.3			
G 13	275 07.6	27 19.9	20.6	140 14.5	10.7		182 17.4	07.9		122 01.7	32.1		Shaula	96 58.7	S37 05.2			
O 14	290 10.1	42 19.1	21.2	155 16.9	10.8		197 20.2	07.9		137 04.2	32.1		Sirius	258 57.0	S16 41.2			
15	305 12.6	57 18.2	21.8	170 19.3	10.9		212 23.0	07.9		152 06.6	32.2		Spica	158 59.7	S11			

T. M. G.	SOL				LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna														
	A.H.G.		Dec.		A.H.G.		Dec.			Naut.	Civil		9		10		11		12								
	d	h	°	'	d	°	'	°					'	h	m	h	m	h	m	h	m	h	m				
VIERNES	9	00	181	57.7	S22	47.1	206	56.2	5.3	S15	14.6	6.9	60.8	N 72	08	12	10	29	■	08	53	■	■	12	55		
	01	196	57.4	47.3	221	20.5	5.2	15	21.5	6.8	60.8	N 70	07	53	09	37	■	08	05	08	05	09	12	10	25	11	09
	02	211	57.1	47.6	235	44.7	5.1	15	28.3	6.7	60.9	66	07	26	08	41	10	15	07	13	08	43	09	54	10	42	
	03	226	56.8	47.8	250	08.8	5.1	15	35.0	6.5	60.9	64	07	15	08	22	09	37	06	55	08	21	09	31	10	22	
	04	241	56.6	48.1	264	32.9	5.0	15	41.5	6.5	60.9	62	07	06	08	07	09	11	06	40	08	03	09	13	10	05	
	05	256	56.3	48.3	278	56.9	4.9	15	48.0	6.4	60.9	60	06	58	07	54	08	51	06	28	07	49	08	57	09	51	
	06	271	56.0	S22	48.6	293	20.8	4.9	S15	54.4	6.3	61.0	N 58	06	51	07	43	08	34	06	18	07	36	08	45	09	40
	07	286	55.7	48.8	307	44.7	4.8	16	00.7	6.1	61.0	56	06	44	07	33	08	20	06	08	07	25	08	33	09	29	
	08	301	55.4	49.0	322	08.5	4.7	16	06.8	6.0	61.0	54	06	38	07	24	08	08	06	00	07	16	08	24	09	20	
	09	316	55.2	49.3	336	32.2	4.6	16	12.8	6.0	61.0	52	06	33	07	16	07	57	05	53	07	08	08	15	09	12	
	10	331	54.9	49.5	350	55.8	4.6	16	18.8	5.8	61.1	50	06	28	07	09	07	47	05	47	07	00	08	07	09	05	
	11	346	54.6	49.8	5	19.4	4.5	16	24.6	5.7	61.1	45	06	16	06	53	07	27	05	33	06	44	07	50	08	49	
	12	1	54.3	S22	50.0	19	42.9	4.5	S16	30.3	5.6	61.1	N 40	06	06	06	40	07	11	05	21	06	31	07	37	08	36
	13	16	54.0	50.3	34	06.4	4.3	16	35.9	5.4	61.1	35	05	57	06	29	06	57	05	11	06	20	07	25	08	25	
	14	31	53.8	50.5	48	29.7	4.4	16	41.3	5.4	61.1	30	05	49	06	19	06	45	05	03	06	10	07	15	08	15	
	15	46	53.5	50.7	62	53.1	4.2	16	46.7	5.2	61.2	20	05	33	06	00	06	24	04	48	05	53	06	57	07	59	
	16	61	53.2	51.0	77	16.3	4.2	16	51.9	5.1	61.2	N 10	05	17	05	43	06	06	04	35	05	38	06	42	07	44	
	17	76	52.9	51.2	91	39.5	4.1	16	57.0	5.0	61.2	0	05	01	05	27	05	49	04	23	05	25	06	28	07	31	
	18	91	52.6	S22	51.4	106	02.6	4.1	S17	02.0	4.9	61.2	S 10	04	42	05	09	05	32	04	12	05	11	06	14	07	17
	19	106	52.4	51.7	120	25.7	4.0	17	06.9	4.7	61.2	20	04	20	04	49	05	13	03	59	04	57	05	59	07	03	
	20	121	52.1	51.9	134	48.7	4.0	17	11.6	4.6	61.2	30	03	51	04	25	04	52	03	45	04	40	05	41	06	46	
	21	136	51.8	52.2	149	11.7	3.9	17	16.2	4.5	61.3	35	03	33	04	10	04	39	03	37	04	31	05	31	06	37	
	22	151	51.5	52.4	163	34.6	3.9	17	20.7	4.4	61.3	40	03	11	03	52	04	25	03	27	04	20	05	20	06	26	
23	166	51.2	52.6	177	57.5	3.8	17	25.1	4.2	61.3	45	02	41	03	30	04	07	03	16	04	07	05	06	06	13		
SABADO	10	00	181	50.9	S22	52.9	192	20.3	3.7	S17	29.3	4.1	61.3	S 50	01	58	03	01	03	45	03	03	04	50	05	57	
	01	196	50.7	53.1	206	43.0	3.7	17	33.4	4.0	61.3	52	01	32	02	47	03	35	02	57	03	45	04	42	05	49	
	02	211	50.4	53.3	221	05.7	3.7	17	37.4	3.9	61.3	54	00	54	02	30	03	23	02	50	03	37	04	34	05	41	
	03	226	50.1	53.5	235	28.4	3.6	17	41.3	3.7	61.3	56	////	02	09	03	09	02	43	03	28	04	24	05	32		
	04	241	49.8	53.8	249	51.0	3.6	17	45.0	3.5	61.4	58	////	01	41	02	53	02	34	03	18	04	13	05	22		
	05	256	49.5	54.0	264	13.6	3.5	17	48.5	3.5	61.4	S 60	////	00	59	02	34	02	25	03	06	04	01	05	10		
	06	271	49.2	S22	54.2	278	36.1	3.5	S17	52.0	3.3	61.4	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna										
	07	286	49.0	54.5	292	58.6	3.5	17	55.3	3.2	61.4			Civil	Naut.	9	10	11	12								
	08	301	48.7	54.7	307	21.1	3.4	17	58.5	3.0	61.4	N 72	h m	h m	h m	h m	h m	h m	h m	h m							
	09	316	48.4	54.9	321	43.5	3.4	18	01.5	2.9	61.4	N 70	■	13	16	15	33	12	12	■	■	14	44				
	10	331	48.1	55.1	336	05.9	3.4	18	04.4	2.8	61.4	68	■	14	08	15	52	13	00	13	20	14	15	15	52		
	11	346	47.8	55.3	350	28.3	3.3	18	07.2	2.6	61.4	66	13	30	15	04	16	20	13	54	14	33	15	33	16	55	
	12	1	47.5	S22	55.6	4	50.6	3.3	S18	09.8	2.5	61.4	64	14	08	15	23	16	30	14	12	14	55	15	56	17	15
	13	16	47.3	55.8	19	12.9	3.3	18	12.3	2.4	61.4	62	14	34	15	38	16	39	14	28	15	13	16	15	17	31	
	14	31	47.0	56.0	33	35.2	3.2	18	14.7	2.2	61.4	60	14	55	15	51	16	47	14	40	15	28	16	30	17	45	
	15	46	46.7	56.2	47	57.4	3.2	18	16.9	2.1	61.5	N 58	15	11	16	03	16	55	14	51	15	40	16	43	17	56	
	16	61	46.4	56.5	62	19.6	3.2	18	19.0	1.9	61.5	56	15	26	16	12	17	01	15	01	15	51	16	54	18	06	
	17	76	46.1	56.7	76	41.8	3.2	18	20.9	1.8	61.5	54	15	38	16	21	17	07	15	09	16	01	17	03	18	15	
	18	91	45.8	S22	56.9	91	04.0	3.2	S18	22.7	1.7	61.5	52	15	49	16	29	17	13	15	17	16	09	17	12	18	23
	19	106	45.5	57.1	105	26.2	3.1	18	24.4	1.5	61.5	50	15	58	16	36	17	18	15	24	16	17	17	20	18	30	
	20	121	45.3	57.3	119	48.3	3.1	18	25.9	1.4	61.5	45	16	18	16	52	17	29	15	39	16	34	17	36	18	45	
	21	136	45.0	57.5	134	10.4	3.2	18	27.3	1.2	61.5	N 40	16	35	17	05	17	39	15	51	16	47	17	50	18	58	
	22	151	44.7	57.8	148	32.6	3.1	18	28.5	1.1	61.5	35	16	49	17	17	17	48	16	01	16	58	18	02	19	08	
23	166	44.4	58.0	162	54.7	3.1	18	29.6	1.0	61.5	30	17	01	17	27	17	57	16	10	17	09	18	12	19	17		
DOMINGO	11	00	181	44.1	S22	58.2	177	16.8	3.1	S18	30.6	0.8	61.5	20	17	21	17	45	18	13	16	26	17	26	18	29	
	01	196	43.8	58.4	191	38.9	3.1	18	31.4	0.6	61.5	N 10	17	39	18	02	18	29	16	39	17	41	18	44	19	47	
	02	211	43.5	58.6	206	01.0	3.1	18	32.0	0.6	61.5	0	17	57	18	19	18	45	16	52	17	55	18	58	20	00	
	03	226	43.2	58.8	220	23.1	3.1	18	32.6	0.4	61.5	S 10	18	14	18	37	19	04	17	05	18	09	19	12	20	13	
	04	241	43.0	59.0	234	45.2	3.1	18	33.0	0.2	61.5	20	18	32	18	57	19	26	17	19	18						

T. M. G.	ARIES			VENUS -3.4			MARTE -0.4			JUPITER -2.3			SATURNO +0.7			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
12 ^d 00	80 34.7	192 10.5	S21 26.8	305 40.8	N20 11.8		347 48.4	N23 08.0		287 28.8	N12 32.2					Acamar	315 38.3	S40 23.8
01	95 37.2	207 09.6	27.4	320 43.2	11.9		2 51.2	08.0		302 31.2	32.3					Achernar	335 46.4	S57 21.2
02	110 39.7	222 08.8	27.9	335 45.6	12.0		17 54.0	08.0		317 33.7	32.3					Acrux	173 39.3	S62 58.3
03	125 42.1	237 07.9	28.5	350 48.0	12.1		32 56.8	08.0		332 36.2	32.3					Adhara	255 33.2	S28 56.6
04	140 44.6	252 07.0	29.0	5 50.5	12.2		47 59.6	08.0		347 38.6	32.3					Aldebaran	291 19.8	N16 27.9
05	155 47.1	267 06.2	29.6	20 52.9	12.3		63 02.5	08.0		2 41.1	32.3							
06	170 49.5	282 05.3	S21 30.1	35 55.3	N20 12.4		78 05.3	N23 08.1		17 43.6	N12 32.3					Alioth	166 44.5	N56 04.5
07	185 52.0	297 04.4	30.7	50 57.7	12.5		93 08.1	08.1		32 46.0	32.3					Alkaid	153 20.3	N49 25.2
08	200 54.4	312 03.6	31.2	66 00.1	12.6		108 10.9	08.1		47 48.5	32.3					Al Na'ir	28 17.5	S47 04.2
L 09	215 56.9	327 02.7	31.8	81 02.5	12.7		123 13.7	08.1		62 51.0	32.3					Alnilam	276 13.2	S 1 13.0
U 10	230 59.4	342 01.8	32.3	96 04.9	12.8		138 16.5	08.1		77 53.4	32.3					Alphard	218 22.2	S 8 33.8
N 11	246 01.8	357 01.0	32.9	111 07.4	12.9		153 19.4	08.1		92 55.9	32.4							
E 12	261 04.3	12 00.1	S21 33.4	126 09.8	N20 13.0		168 22.2	N23 08.1		107 58.3	N12 32.4					Alphecca	126 34.1	N26 47.4
S 13	276 06.8	26 59.2	34.0	141 12.2	13.1		183 25.0	08.1		123 00.8	32.4					Alpheratz	358 11.1	N28 58.3
14	291 09.2	41 58.4	34.5	156 14.6	13.2		198 27.8	08.2		138 03.3	32.4					Altair	62 34.6	N 8 48.8
15	306 11.7	56 57.5	35.0	171 17.0	13.3		213 30.6	08.2		153 05.7	32.4					Ankaa	353 42.0	S42 25.7
16	321 14.2	71 56.6	35.6	186 19.5	13.4		228 33.5	08.2		168 08.2	32.4					Antares	112 59.5	S26 22.9
17	336 16.6	86 55.7	36.1	201 21.9	13.5		243 36.3	08.2		183 10.7	32.4							
18	351 19.1	101 54.9	S21 36.7	216 24.3	N20 13.7		258 39.1	N23 08.2		198 13.1	N12 32.4					Arcturus	146 20.4	N19 17.8
19	6 21.6	116 54.0	37.2	231 26.7	13.8		273 41.9	08.2		213 15.6	32.4					Atria	108 25.9	S68 59.1
20	21 24.0	131 53.1	37.7	246 29.2	13.9		288 44.7	08.2		228 18.1	32.4					Avior	234 28.4	S59 26.2
21	36 26.5	146 52.3	38.3	261 31.6	14.0		303 47.6	08.2		243 20.5	32.5					Bellatrix	279 00.4	N 6 19.7
22	51 28.9	161 51.4	38.8	276 34.0	14.1		318 50.4	08.2		258 23.0	32.5					Betelgeuse	271 30.0	N 7 24.1
23	66 31.4	176 50.5	39.3	291 36.5	14.2		333 53.2	08.3		273 25.5	32.5							
13 ^d 00	81 33.9	191 49.6	S21 39.9	306 38.9	N20 14.3		348 56.0	N23 08.3		288 27.9	N12 32.5					Canopus	264 07.5	S52 41.1
01	96 36.3	206 48.8	40.4	321 41.4	14.4		3 58.8	08.3		303 30.4	32.5					Capella	281 13.5	N45 58.5
02	111 38.8	221 47.9	40.9	336 43.8	14.5		19 01.7	08.3		318 32.9	32.5					Deneb	49 50.0	N45 12.4
03	126 41.3	236 47.0	41.4	351 46.2	14.6		34 04.5	08.3		333 35.3	32.5					Denebola	183 01.0	N14 41.6
04	141 43.7	251 46.1	42.0	6 48.7	14.7		49 07.3	08.3		348 37.8	32.5					Diphda	349 22.7	S18 06.5
05	156 46.2	266 45.3	42.5	21 51.1	14.8		64 10.1	08.3		3 40.3	32.6							
06	171 48.7	281 44.4	S21 43.0	36 53.6	N20 15.0		79 12.9	N23 08.3		18 42.7	N12 32.6					Dubhe	194 24.5	N61 51.9
07	186 51.1	296 43.5	43.5	51 56.0	15.1		94 15.8	08.3		33 45.2	32.6					Elnath	278 46.1	N28 35.3
08	201 53.6	311 42.6	44.1	66 58.5	15.2		109 18.6	08.4		48 47.7	32.6					Eltanin	90 59.1	N51 29.7
M 09	216 56.1	326 41.8	44.6	82 00.9	15.3		124 21.4	08.4		63 50.2	32.6					Enif	34 13.6	N 9 46.6
A 10	231 58.5	341 40.9	45.1	97 03.4	15.4		139 24.2	08.4		78 52.6	32.6					Fomalhaut	15 53.6	S29 44.5
R 11	247 01.0	356 40.0	45.6	112 05.8	15.5		154 27.0	08.4		93 55.1	32.6							
T 12	262 03.4	11 39.1	S21 46.1	127 08.3	N20 15.6		169 29.9	N23 08.4		108 57.6	N12 32.6					Gacrux	172 30.9	S56 59.1
E 13	277 05.9	26 38.3	46.7	142 10.7	15.7		184 32.7	08.4		124 00.0	32.6					Gienah	176 19.9	S17 25.1
S 14	292 08.4	41 37.4	47.2	157 13.2	15.9		199 35.5	08.4		139 02.5	32.7					Hadar	149 26.3	S60 15.7
15	307 10.8	56 36.5	47.7	172 15.6	16.0		214 38.3	08.4		154 05.0	32.7					Hamal	328 30.8	N23 21.6
16	322 13.3	71 35.6	48.2	187 18.1	16.1		229 41.1	08.4		169 07.4	32.7					Kaus Aust.	84 19.7	S34 23.7
17	337 15.8	86 34.7	48.7	202 20.6	16.2		244 44.0	08.5		184 09.9	32.7							
18	352 18.2	101 33.9	S21 49.2	217 23.0	N20 16.3		259 46.8	N23 08.5		199 12.4	N12 32.7					Kochab	137 20.1	N74 14.6
19	7 20.7	116 33.0	49.7	232 25.5	16.4		274 49.6	08.5		214 14.9	32.7					Markab	14 05.0	N15 05.4
20	22 23.2	131 32.1	50.2	247 27.9	16.5		289 52.4	08.5		229 17.3	32.7					Menkar	314 42.8	N 4 00.2
21	37 25.6	146 31.2	50.7	262 30.4	16.7		304 55.3	08.5		244 19.8	32.7					Menkent	148 39.4	S36 15.5
22	52 28.1	161 30.3	51.3	277 32.9	16.8		319 58.1	08.5		259 22.3	32.8					Miaplacidus	221 44.6	S69 37.4
23	67 30.5	176 29.5	51.8	292 35.3	16.9		335 00.9	08.5		274 24.7	32.8							
14 ^d 00	82 33.0	191 28.6	S21 52.3	307 37.8	N20 17.0		350 03.7	N23 08.5		289 27.2	N12 32.8					Mirfak	309 18.3	N49 47.1
01	97 35.5	206 27.7	52.8	322 40.3	17.1		5 06.5	08.5		304 29.7	32.8					Nunki	76 31.8	S26 19.4
02	112 37.9	221 26.8	53.3	337 42.8	17.3		20 09.4	08.6		319 32.2	32.8					Pallcock	54 01.8	S56 48.5
03	127 40.4	236 25.9	53.8	352 45.2	17.4		35 12.2	08.6		334 34.6	32.8					Peacock	244 00.1	N28 04.6
04	142 42.9	251 25.0	54.3	7 47.7	17.5		50 15.0	08.6		349 37.1	32.8					Procyon	245 27.4	N 5 16.8
05	157 45.3	266 24.1	54.8	22 50.2	17.6		65 17.8	08.6		4 39.6	32.9							
06	172 47.8	281 23.3	S21 55.3	37 52.7	N20 17.7		80 20.7	N23 08.6		19 42.0	N12 32.9					Rasalhague	96 31.7	N12 34.7
07	187 50.3	296 22.4	55.8	52 55.2	17.9		95 23.5	08.6		34 44.5	32.9					Regulus	208 11.9	N12 04.4
M 08	202 52.7	311 21.5	56.3	67 57.6	18.0		110 26.3	08.6		49 47.0	32.9					Rigel	281 37.5	S 8 13.7
I 09	217 55.2	326 20.6	56.8	83 00.1	18.1		125 29.1	08.6		64 49.5	32.9					Rigil Kent.	140 28.8	S60 44.3
E 10	232 57.7	341 19.7	57.2	98 02.6	18.2		140 32.0	08.6		79 51.9	32.9					Sabik	102 43.6	S15 41.7
R 11	248 00.1	356 18.8	57.7	113 05.1	18.3		155 34.8	08.7		94 54.4	32.9							
C 12	263 02.6	11 17.9	S21 58.2	128 07.6	N20 18.5		170 37.6	N23 08.7		109 56.9	N12 32.9					Schedar	350 10.8	N56 25.3
O 13	278 05.0	26 17.1	58.7	143 10.1	18.6		185 40.4	08.7		124 59.4	33.0					Shaula	96 58.7	S37 05.2
L 14	293 07.5	41 16.2	59.2	158 12.6	18.7		200 43.3	08.7		140 01.8	33.0					Sirius	258 57.0	S16 41.2
E 15	308 10.0	56 15.3	21 59.7	173 15.0	18.8		215 46.1	08.7		155 04.3	33.0					Spica	1	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P. H.	Náut.		Civil	12	13	14	15
	h m	°	h m	°	h m	h m		h m	h m	h m	h m	h m	h m	h m	
12 L U N E S	00	181 37.2 S23 03.1	162 10.0	3.6	S18 10.9	2.6	61.3	N 72	08 17	10 40	■	12 55	12 33	12 23	12 16
	01	196 36.9 03.2	176 32.6	3.5	18 08.3	2.7	61.3	N 70	07 58	09 44	■	11 46	11 57	12 02	12 03
	02	211 36.6 03.4	190 55.1	3.7	18 05.6	2.8	61.3	68	07 42	09 10	■	11 09	11 32	11 45	11 53
	03	226 36.3 .. 03.6	205 17.8	3.6	18 02.8	3.0	61.2	66	07 30	08 46	10 23	10 42	11 12	11 31	11 44
	04	241 36.0 03.8	219 40.4	3.7	17 59.8	3.1	61.2	64	07 19	08 27	09 43	10 22	10 56	11 20	11 37
	05	256 35.7 04.0	234 03.1	3.8	17 56.7	3.2	61.2	62	07 09	08 11	09 16	10 05	10 43	11 10	11 31
	06	271 35.4 S23 04.2	248 25.9	3.8	S17 53.5	3.4	61.2	60	07 01	07 58	08 55	09 51	10 32	11 02	11 25
	07	286 35.1 04.4	262 48.7	3.9	17 50.1	3.5	61.2	N 58	06 54	07 46	08 38	09 40	10 22	10 55	11 20
	08	301 34.8 04.6	277 11.6	3.9	17 46.6	3.6	61.2	56	06 47	07 36	08 23	09 29	10 13	10 48	11 16
	09	316 34.5 .. 04.8	291 34.5	4.0	17 43.0	3.8	61.1	54	06 41	07 27	08 11	09 20	10 06	10 42	11 12
	10	331 34.2 05.0	305 57.5	4.0	17 39.2	3.9	61.1	52	06 36	07 19	08 00	09 12	09 59	10 37	11 09
	11	346 34.0 05.1	320 20.5	4.1	17 35.3	4.0	61.1	50	06 30	07 12	07 50	09 05	09 53	10 32	11 05
	12	1 33.7 S23 05.3	334 43.6	4.1	S17 31.3	4.1	61.1	45	06 19	06 56	07 30	08 49	09 39	10 22	10 58
	13	16 33.4 05.5	349 06.7	4.2	17 27.2	4.3	61.1	N 40	06 09	06 43	07 13	08 36	09 28	10 13	10 53
	14	31 33.1 05.7	3 29.9	4.3	17 22.9	4.4	61.0	35	05 59	06 31	06 59	08 25	09 19	10 06	10 48
	15	46 32.8 .. 05.9	17 53.2	4.3	17 18.5	4.5	61.0	30	05 51	06 21	06 47	08 15	09 10	09 59	10 43
	16	61 32.5 06.1	32 16.5	4.4	17 14.0	4.6	61.0	20	05 35	06 02	06 26	07 59	08 56	09 48	10 35
	17	76 32.2 06.2	46 39.9	4.5	17 09.4	4.7	61.0	N 10	05 19	05 45	06 08	07 44	08 43	09 38	10 28
	18	91 31.9 S23 06.4	61 03.4	4.5	S17 04.7	4.9	60.9	0	05 02	05 28	05 50	07 31	08 31	09 28	10 22
	19	106 31.6 06.6	75 26.9	4.6	16 59.8	5.0	60.9	S 10	04 43	05 10	05 33	07 17	08 19	09 19	10 16
	20	121 31.3 06.8	89 50.5	4.6	16 54.8	5.1	60.9	20	04 21	04 50	05 14	07 03	08 07	09 09	10 09
	21	136 31.0 .. 06.9	104 14.1	4.7	16 49.7	5.2	60.9	30	03 52	04 25	04 53	06 46	07 52	08 58	10 01
	22	151 30.7 07.1	118 37.8	4.8	16 44.5	5.3	60.8	35	03 34	04 10	04 40	06 37	07 44	08 51	09 56
23	166 30.4 07.3	133 01.6	4.9	16 39.2	5.5	60.8	40	03 11	03 52	04 25	06 26	07 34	08 44	09 51	
13 M A R T E S	00	181 30.1 S23 07.5	147 25.5	4.9	S16 33.7	5.6	60.8	45	02 41	03 30	04 07	06 13	07 23	08 35	09 45
	01	196 29.8 07.6	161 49.4	5.1	16 28.1	5.6	60.8	S 50	01 56	03 01	03 45	05 57	07 09	08 24	09 38
	02	211 29.5 07.8	176 13.5	5.1	16 22.5	5.8	60.7	52	01 30	02 46	03 34	05 49	07 03	08 19	09 35
	03	226 29.3 .. 08.0	190 37.6	5.1	16 16.7	5.9	60.7	54	00 48	02 28	03 22	05 41	06 56	08 14	09 31
	04	241 29.0 08.2	205 01.7	5.3	16 10.8	6.0	60.7	56	////	02 07	03 08	05 32	06 48	08 08	09 27
	05	256 28.7 08.3	219 26.0	5.3	16 04.8	6.1	60.7	58	////	01 38	02 52	05 22	06 39	08 01	09 22
	06	271 28.4 S23 08.5	233 50.3	5.4	S15 58.7	6.2	60.6	S 60	////	00 53	02 32	05 10	06 29	07 53	09 17
	07	286 28.1 08.7	248 14.7	5.4	15 52.5	6.3	60.6	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	08	301 27.8 08.8	262 39.1	5.6	15 46.2	6.5	60.6			Civil	Náut.	12	13	14	15
	09	316 27.5 .. 09.0	277 03.7	5.6	15 39.7	6.5	60.5								
	10	331 27.2 09.2	291 28.3	5.7	15 33.2	6.6	60.5	N 72	h m	h m	h m	h m	h m	h m	h m
	11	346 26.9 09.3	305 53.0	5.8	15 26.6	6.7	60.5	N 70	■	13 08	15 31	14 44	17 11	19 18	21 14
	12	1 26.6 S23 09.5	320 17.8	5.9	S15 19.9	6.8	60.4	68	■	14 04	15 50	15 52	17 46	19 38	21 25
	13	16 26.3 09.7	334 42.7	6.0	15 13.1	6.9	60.4	66	■	14 38	16 06	16 29	18 10	19 53	21 33
	14	31 26.0 09.8	349 07.7	6.0	15 06.2	7.0	60.4	64	13 25	15 02	16 19	16 55	18 29	20 06	21 41
	15	46 25.7 .. 10.0	3 32.7	6.1	14 59.2	7.1	60.4	62	14 05	15 22	16 30	17 15	18 44	20 16	21 47
	16	61 25.4 10.2	17 57.8	6.3	14 52.1	7.2	60.3	60	14 32	15 37	16 39	17 31	18 57	20 25	21 52
	17	76 25.1 10.3	32 23.1	6.3	14 44.9	7.3	60.3	N 58	14 53	15 51	16 47	17 45	19 08	20 33	21 56
	18	91 24.8 S23 10.5	46 48.4	6.3	S14 37.6	7.4	60.3	56	15 11	16 02	16 54	17 56	19 17	20 39	22 00
	19	106 24.5 10.6	61 13.7	6.5	14 30.2	7.4	60.2	54	15 25	16 12	17 01	18 06	19 25	20 45	22 04
	20	121 24.2 10.8	75 39.2	6.5	14 22.8	7.6	60.2	52	15 37	16 21	17 07	18 15	19 32	20 50	22 07
	21	136 23.9 .. 11.0	90 04.7	6.7	14 15.2	7.6	60.2	50	15 48	16 29	17 13	18 23	19 39	20 55	22 10
	22	151 23.6 11.1	104 30.4	6.7	14 07.6	7.7	60.1	45	15 58	16 36	17 18	18 30	19 44	20 59	22 12
23	166 23.3 11.3	118 56.1	6.8	13 59.9	7.8	60.1	N 40	16 19	16 52	17 29	18 45	19 57	21 08	22 18	
14 M I E R C O L E S	00	181 23.0 S23 11.4	133 21.9	6.9	S13 52.1	7.9	60.1	35	16 35	17 06	17 40	18 58	20 07	21 16	22 23
	01	196 22.7 11.6	147 47.8	7.0	13 44.2	8.0	60.0	30	16 49	17 17	17 49	19 08	20 16	21 22	22 27
	02	211 22.4 11.7	162 13.8	7.0	13 36.2	8.0	60.0	20	17 01	17 28	17 58	19 17	20 24	21 28	22 30
	03	226 22.1 .. 11.9	176 39.8	7.2	13 28.2	8.1	59.9	N 10	17 22	17 46	18 14	19 33	20 37	21 38	22 36
	04	241 21.8 12.0	191 06.0	7.2	13 20.1	8.2	59.9	0	17 41	18 04	18 30	19 47	20 48	21 46	22 41
	05	256 21.5 12.2	205 32.2	7.4	13 11.9	8.2	59.9	S 10	17 58	18 20	18 47	20 00	20 59	21 54	22 46
	06	271 21.2 S23 12.4	219 58.6	7.4	S13 03.7	8.4	59.8	20	18 15	18 38	19 05	20 13	21 10	22 02	22 51
	07	286 20.9 12.5	234 25.0	7.5	12 55.3	8.4	59.8	30	18 34	18 59	19 28	20 26	21 21	22 11	22 56
	08	301 20.6 12.7	248 51.5	7.5	12 46.9	8.5	59.8	40	18 56	19 23	19 57	20 42	21 34	22 20	23 02
	09	316 20.3 .. 12.8	263 18.0	7.7	12 38.4	8.5	59.7	50	19 09	19 38	20 15	20 51	21 41	22 26	23 05
	10	331 20.0 12.9	277 44.7	7.8	12 29.9	8.6	59.7	60	19 24	19 56	20 38	21 01	21 50	22 32	23 09
	11	346 19.7 13.1	292 11.5	7.8	12 21.3	8.7	59.7	Lat.	19 41	20 19	21 08	21 13	21 59	22 39	23 14
	12	1 19.4 S23 13.2	306 38.3	7.9	S12 12.6	8.7	59.6		19 58	20 36	21 24	21 27	22 11	22 47	23 19
	13	16 19.1 13.4	321 05.2	8.1	12 03.9	8.8	59.6	S 50	20 04	20 48	21 53	21 27	22 11	22 47	23 19
	14	31 18.8 13.5	335 32.3	8.1	11 55.1	8.9	59.5	52	20 14	21 03	22 20	21 34	22 16	22 51	23 21
	15	46 18.5 .. 13.7	349 59.4	8.1	11 46.2	8.9	59.5	54	20 27	21 21	23 02	21 41	22 22	22 56	23 24
	16	61 18.2 13.8	4 26.5	8.3	11 37.3	9.0	59.5	56	20 41	21 42	////	21 50	22 29	23 00	23 26
	17	76 17.9 14.0	18 53.8	8.4	11 28.3	9.0	59.4	58	20 57	22 11	////	21 59	22 36	23 06	23 30
	18	91 17.6 S23 14.1	33 21.2	8.4	S11 19.3	9.1	59.4	S 60	21 17	22 58	////	22 10	22 45	23 12	23 33
	19	106 17.3 14.2	47 48.6	8.5	11 10.2	9.2	59.4								
	20	121 17.0 14.4	62 16.1	8.6	11 01.0	9.2	59.3								
	21	136 16.7 .. 14.5	76 43.7	8.7	10 51.8	9.2	59.3								

T. M. G.	ARIES		VENUS -3.4		MARTE -0.5		JUPITER -2.3		SATURNO +0.7		ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.	
15 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 J U E V E S	83 32.2	191 07.3	S22 04.0	308 37.5	N20 20.0	351 11.5	N23 08.8	290 26.6	N12 33.1	Acamar	315 38.4	S40 23.8	
	98 34.6	206 06.4	04.5	323 40.0	20.1	6 14.3	08.8	305 29.1	33.1	Achernar	335 46.4	S57 21.2	
	113 37.1	221 05.5	05.0	338 42.6	20.2	21 17.1	08.8	320 31.5	33.1	Acruz	173 39.3	S62 58.3	
	128 39.5	236 04.6	05.4	353 45.1	20.4	36 20.0	08.8	335 34.0	33.2	Adhara	255 33.2	S28 56.6	
	143 42.0	251 03.7	05.9	8 47.6	20.5	51 22.8	08.8	350 36.5	33.2	Aldebaran	291 19.8	N16 27.9	
	158 44.5	266 02.8	06.4	23 50.1	20.6	66 25.6	08.9	5 39.0	33.2				
	173 46.9	281 01.9	S22 06.9	38 52.6	N20 20.7	81 28.4	N23 08.9	20 41.4	N12 33.2	Alioth	166 44.4	N56 04.5	
	188 49.4	296 01.0	07.3	53 55.1	20.9	96 31.3	08.9	35 43.9	33.2	Alkaid	153 20.3	N49 25.2	
	203 51.9	311 00.1	07.8	68 57.6	21.0	111 34.1	08.9	50 46.4	33.2	Al Na'ir	28 17.5	S47 04.2	
	218 54.3	325 59.2	08.3	84 00.2	21.1	126 36.9	08.9	65 48.9	33.3	Alnilam	276 13.2	S 1 13.0	
	233 56.8	340 58.3	08.7	99 02.7	21.3	141 39.8	08.9	80 51.4	33.3	Alphard	218 22.2	S 8 33.8	
	248 59.3	355 57.4	09.2	114 05.2	21.4	156 42.6	08.9	95 53.8	33.3				
	264 01.7	10 56.5	S22 09.7	129 07.7	N20 21.5	171 45.4	N23 08.9	110 56.3	N12 33.3	Alphecca	126 34.0	N26 47.3	
	279 04.2	25 55.6	10.1	144 10.2	21.7	186 48.2	08.9	125 58.8	33.3	Alpheratz	358 11.2	N28 58.3	
	294 06.6	40 54.7	10.6	159 12.8	21.8	201 51.1	09.0	141 01.3	33.3	Altair	62 34.6	N 8 48.7	
	309 09.1	55 53.8	11.0	174 15.3	21.9	216 53.9	09.0	156 03.8	33.3	Ankaa	353 42.0	S42 25.8	
	324 11.6	70 52.9	11.5	189 17.8	22.1	231 56.7	09.0	171 06.2	33.4	Antares	112 59.5	S26 22.9	
	339 14.0	85 52.0	12.0	204 20.3	22.2	246 59.5	09.0	186 08.7	33.4				
	354 16.5	100 51.1	S22 12.4	219 22.9	N20 22.3	262 02.4	N23 09.0	201 11.2	N12 33.4	Arcturus	146 20.4	N19 17.8	
	9 19.0	115 50.2	12.9	234 25.4	22.5	277 05.2	09.0	216 13.7	33.4	Atria	108 25.9	S68 59.1	
	24 21.4	130 49.3	13.3	249 27.9	22.6	292 08.0	09.0	231 16.2	33.4	Avior	234 28.4	S59 26.2	
	39 23.9	145 48.4	13.8	264 30.5	22.7	307 10.8	09.0	246 18.6	33.4	Bellatrix	279 00.4	N 6 19.7	
	54 26.4	160 47.5	14.2	279 33.0	22.9	322 13.7	09.0	261 21.1	33.5	Betelgeuse	271 29.9	N 7 24.1	
69 28.8	175 46.6	14.7	294 35.6	23.0	337 16.5	09.1	276 23.6	33.5					
16 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 V I E R N E S	84 31.3	190 45.7	S22 15.1	309 38.1	N20 23.2	352 19.3	N23 09.1	291 26.1	N12 33.5	Canopus	264 07.5	S52 41.1	
	99 33.8	205 44.8	15.6	324 40.6	23.3	7 22.1	09.1	306 28.6	33.5	Capella	281 13.5	N45 58.5	
	114 36.2	220 43.9	16.0	339 43.2	23.4	22 25.0	09.1	321 31.0	33.5	Deneb	49 50.0	N45 12.4	
	129 38.7	235 43.0	16.5	354 45.7	23.6	37 27.8	09.1	336 33.5	33.5	Denebola	183 01.0	N14 41.6	
	144 41.1	250 42.1	16.9	9 48.3	23.7	52 30.6	09.1	351 36.0	33.6	Diphda	349 22.7	S18 06.5	
	159 43.6	265 41.2	17.4	24 50.8	23.8	67 33.5	09.1	6 38.5	33.6				
	174 46.1	280 40.3	S22 17.8	39 53.4	N20 24.0	82 36.3	N23 09.1	21 41.0	N12 33.6	Dubhe	194 24.4	N61 51.9	
	189 48.5	295 39.4	18.2	54 55.9	24.1	97 39.1	09.1	36 43.4	33.6	Elnath	278 46.1	N28 35.3	
	204 51.0	310 38.5	18.7	69 58.5	24.3	112 41.9	09.1	51 45.9	33.6	Eltanin	90 59.1	N51 29.6	
	219 53.5	325 37.6	19.1	85 01.0	24.4	127 44.8	09.2	66 48.4	33.6	Enif	34 13.6	N 9 46.6	
	234 55.9	340 36.7	19.6	100 03.6	24.6	142 47.6	09.2	81 50.9	33.7	Fomalhaut	15 53.6	S29 44.5	
	249 58.4	355 35.8	20.0	115 06.1	24.7	157 50.4	09.2	96 53.4	33.7				
	265 00.9	10 34.9	S22 20.4	130 08.7	N20 24.8	172 53.3	N23 09.2	111 55.9	N12 33.7	Gacrux	172 30.8	S56 59.1	
	280 03.3	25 34.0	20.9	145 11.2	25.0	187 56.1	09.2	126 58.3	33.7	Gienah	176 19.9	S17 25.1	
	295 05.8	40 33.1	21.3	160 13.8	25.1	202 58.9	09.2	142 00.8	33.7	Hadar	149 26.3	S60 15.7	
	310 08.3	55 32.2	21.7	175 16.4	25.3	218 01.7	09.2	157 03.3	33.7	Hamal	328 30.8	N23 21.6	
	325 10.7	70 31.3	22.2	190 18.9	25.4	233 04.6	09.2	172 05.8	33.8	Kaus Aust.	84 19.7	S34 23.7	
	340 13.2	85 30.4	22.6	205 21.5	25.6	248 07.4	09.2	187 08.3	33.8				
	355 15.6	100 29.5	S22 23.0	220 24.1	N20 25.7	263 10.2	N23 09.3	202 10.8	N12 33.8	Kochab	137 20.0	N74 14.6	
	10 18.1	115 28.5	23.4	235 26.6	25.8	278 13.1	09.3	217 13.2	33.8	Markab	14 05.1	N15 05.3	
	25 20.6	130 27.6	23.9	250 29.2	26.0	293 15.9	09.3	232 15.7	33.8	Menkar	314 42.8	N 4 00.2	
	40 23.0	145 26.7	24.3	265 31.8	26.1	308 18.7	09.3	247 18.2	33.8	Menkent	148 39.4	S36 15.5	
	55 25.5	160 25.8	24.7	280 34.3	26.3	323 21.5	09.3	262 20.7	33.9	Miaplacidus	221 44.6	S69 37.4	
70 28.0	175 24.9	25.1	295 36.9	26.4	338 24.4	09.3	277 23.2	33.9					
17 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 S A B A D O	85 30.4	190 24.0	S22 25.6	310 39.5	N20 26.6	353 27.2	N23 09.3	292 25.7	N12 33.9	Mirfak	309 18.3	N49 47.1	
	100 32.9	205 23.1	26.0	325 42.1	26.7	8 30.0	09.3	307 28.1	33.9	Nunki	76 31.8	S26 19.4	
	115 35.4	220 22.2	26.4	340 44.6	26.9	23 32.9	09.3	322 30.6	33.9	Peacock	54 01.9	S56 48.5	
	130 37.8	235 21.3	26.8	355 47.2	27.0	38 35.7	09.3	337 33.1	34.0	Pollux	244 00.1	N28 04.6	
	145 40.3	250 20.4	27.2	10 49.8	27.2	53 38.5	09.4	352 35.6	34.0	Procyon	245 27.4	N 5 16.8	
	160 42.8	265 19.5	27.7	25 52.4	27.3	68 41.3	09.4	7 38.1	34.0				
	175 45.2	280 18.5	S22 28.1	40 55.0	N20 27.5	83 44.2	N23 09.4	22 40.6	N12 34.0	Rasalhague	96 31.7	N12 34.7	
	190 47.7	295 17.6	28.5	55 57.6	27.6	98 47.0	09.4	37 43.1	34.0	Regulus	208 11.9	N12 04.4	
	205 50.1	310 16.7	28.9	71 00.1	27.8	113 49.8	09.4	52 45.6	34.0	Rigel	281 37.5	S 8 13.7	
	220 52.6	325 15.8	29.3	86 02.7	27.9	128 52.7	09.4	67 48.0	34.1	Rigil Kent.	140 28.7	S60 44.3	
	235 55.1	340 14.9	29.7	101 05.3	28.1	143 55.5	09.4	82 50.5	34.1	Sabik	102 43.6	S15 41.7	
	250 57.5	355 14.0	30.1	116 07.9	28.2	158 58.3	09.4	97 53.0	34.1				
	266 00.0	10 13.1	S22 30.5	131 10.5	N20 28.4	174 01.1	N23 09.4	112 55.5	N12 34.1	Schedar	350 10.8	N56 25.3	
	281 02.5	25 12.1	30.9	146 13.1	28.5	189 04.0	09.5	127 58.0	34.1	Shaula	96 58.7	S37 05.2	
	296 04.9	40 11.2	31.4	161 15.7	28.7	204 06.8	09.5	143 00.5	34.2	Sirius	258 57.0	S16 41.3	
	311 07.4	55 10.3	31.8	176 18.3	28.8	219 09.6	09.5	158 03.0	34.2	Spica	158 59.6	S11 02.7	
	326 09.9	70 09.4	32.2	191 20.9	29.0	234 12.5	09.5	173 05.5	34.2	Suhail	223 11.8	S43 20.5	
	341 12.3	85 08.5	32.6	206 23.5	29.1	249 15.3	09.5	188 07.9	34.2				
	356 14.8	100 07.6	S22 33.0	221 26.1	N20 29.3	264 18.1	N23 09.5	203 10.4	N12 34.2	Vega	80 57.5	N38 46.0	
	11 17.2	115 06.7	33.4	236 28.7	29.4	279 21.0	09.5	218 12.9	34.3	Zuben'ubi	137 35.3	S15 56.9	
	26 19.7	130 05.7	33.8	251 31.3	29.6	294 23.8	09.5	233 15.4	34.3				
	41 22.2	145 04.8	34.2	266 33.9	29.8	309 26.6	09.5	248 17.9	34.3				
	56 24.6	160 03.9	34.6	281 36.5	29.9	324 29.4	09.5	263 20.4	34.3				
71 27.1	175 03.0	34.9	296 39.1	30.1	339 32.3	09.6	278 22.9	34.3					
Pas. Mer. 18 18.9	v -0.9	d 0.4	v 2.6	d 0.1	v 2.8	d 0.0	v 2.5	d 0.0					

	A. H. S.	Pas. Mer.
	o / ' / "	h / m
Venus	106 14.4	11 18
Marte	225 06.8	3 21
Júpiter	267 48.0	0 31
Saturno	206 54.8	4 34

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P. H.	Náut		Civil	15	16	17	18	
												h m	h m	h m	h m	h m
15 00	181 15.8	S23 14.9	120 07.0	9.0	S10 23.9	9.4	59.2	N 72	08 21	10 49	■	12 16	12 10	12 04	11 59	
01	196 15.5	15.1	134 35.0	9.0	10 14.5	9.5	59.1	N 70	08 01	09 49	■	12 03	12 04	12 04	12 04	
02	211 15.2	15.2	149 03.0	9.1	10 05.0	9.5	59.1	68	07 46	09 15	■	11 53	11 59	12 03	12 08	
03	226 14.9	15.3	163 31.1	9.2	9 55.5	9.5	59.0	66	07 33	08 50	■	10 29	11 44	11 54	12 03	12 11
04	241 14.6	15.5	177 59.3	9.2	9 46.0	9.6	59.0	64	07 22	08 30	■	09 47	11 37	11 51	12 03	12 14
05	256 14.3	15.6	192 27.5	9.4	9 36.4	9.6	59.0	62	07 12	08 14	■	09 20	11 31	11 48	12 02	12 17
06	271 14.0	S23 15.7	206 55.9	9.4	S 9 26.8	9.7	58.9	60	07 04	08 01	■	08 58	11 25	11 45	12 02	12 19
07	286 13.7	15.9	221 24.3	9.5	9 17.1	9.7	58.9	N 58	06 56	07 49	■	08 41	11 20	11 42	12 02	12 21
08	301 13.4	16.0	235 52.8	9.6	9 07.4	9.8	58.9	56	06 50	07 39	■	08 26	11 16	11 40	12 02	12 23
J 09	316 13.1	16.1	250 21.4	9.6	8 57.6	9.7	58.8	54	06 44	07 30	■	08 14	11 12	11 38	12 02	12 24
U 10	331 12.8	16.3	264 50.0	9.8	8 47.9	9.9	58.8	52	06 38	07 22	■	08 02	11 09	11 36	12 02	12 26
E 11	346 12.5	16.4	279 18.8	9.8	8 38.0	9.8	58.7	50	06 33	07 14	■	07 53	11 05	11 35	12 02	12 27
V 12	1 12.2	S23 16.5	293 47.6	9.9	S 8 28.2	9.9	58.7	45	06 21	06 58	■	07 32	10 58	11 31	12 01	12 30
Y 13	16 11.9	16.6	308 16.5	9.9	8 18.3	9.9	58.7	N 40	06 11	06 45	■	07 15	10 53	11 28	12 01	12 33
S 14	31 11.6	16.8	322 45.4	10.1	8 08.4	10.0	58.6	35	06 01	06 33	■	07 01	10 48	11 25	12 01	12 35
15	46 11.3	16.9	337 14.5	10.1	7 58.4	10.0	58.6	30	05 53	06 23	■	06 49	10 43	11 23	12 01	12 37
16	61 11.0	17.0	351 43.6	10.2	7 48.4	10.0	58.5	20	05 36	06 04	■	06 28	10 35	11 19	12 00	12 40
17	76 10.7	17.1	6 12.8	10.2	7 38.4	10.1	58.5	N 10	05 20	05 46	■	06 09	10 28	11 16	12 00	12 43
18	91 10.4	S23 17.3	20 42.0	10.3	S 7 28.3	10.0	58.5	0	05 03	05 29	■	05 52	10 22	11 12	12 00	12 46
19	106 10.1	17.4	35 11.3	10.4	7 18.3	10.1	58.4	S 10	04 44	05 11	■	05 34	10 16	11 09	12 00	12 49
20	121 09.8	17.5	49 40.7	10.5	7 08.2	10.1	58.4	20	04 22	04 51	■	05 16	10 09	11 05	12 00	12 52
21	136 09.5	17.6	64 10.2	10.5	6 58.1	10.2	58.3	30	03 53	04 26	■	04 54	10 01	11 01	12 00	12 56
22	151 09.2	17.7	78 39.7	10.6	6 47.9	10.2	58.3	35	03 34	04 11	■	04 41	09 56	10 59	11 59	12 58
23	166 08.9	17.9	93 09.3	10.7	6 37.7	10.1	58.3	40	03 11	03 53	■	04 26	09 51	10 57	11 59	13 00
16 00	181 08.6	S23 18.0	107 39.0	10.8	S 6 27.6	10.3	58.2	45	02 41	03 30	■	04 08	09 45	10 53	11 59	13 03
01	196 08.3	18.1	122 08.8	10.8	6 17.3	10.2	58.2	S 50	01 56	03 01	■	03 45	09 38	10 50	11 59	13 06
02	211 08.0	18.2	136 38.6	10.8	6 07.1	10.2	58.1	52	01 28	02 46	■	03 34	09 35	10 48	11 59	13 08
03	226 07.7	18.3	151 08.4	11.0	5 56.9	10.3	58.1	54	00 44	02 28	■	03 22	09 31	10 46	11 59	13 09
04	241 07.4	18.4	165 38.4	11.0	5 46.6	10.3	58.1	56	////	02 06	■	03 08	09 27	10 44	11 59	13 11
05	256 07.1	18.5	180 08.4	11.1	5 36.3	10.3	58.0	58	////	01 37	■	02 52	09 22	10 42	11 59	13 13
06	271 06.8	S23 18.7	194 38.5	11.1	S 5 26.0	10.3	58.0	S 60	////	00 48	■	02 31	09 17	10 40	11 59	13 15
07	286 06.5	18.8	209 08.6	11.2	5 15.7	10.3	57.9	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna	15	16	17	18
08	301 06.2	18.9	223 38.8	11.2	5 05.4	10.4	57.9	h m	h m	h m	h m	h m	h m	h m	h m	h m
V 09	316 05.9	19.0	238 09.0	11.4	4 55.0	10.3	57.9	N 72	13 02	15 30	■	21 14	23 02	24 46	00 46	
E 10	331 05.6	19.1	252 39.4	11.3	4 44.7	10.4	57.8	N 70	14 02	15 50	■	21 25	23 06	24 43	00 43	
R 11	346 05.3	19.2	267 09.7	11.5	4 34.3	10.3	57.8	68	14 37	16 05	■	21 33	23 09	24 41	00 41	
N 12	1 05.0	S23 19.3	281 40.2	11.5	S 4 24.0	10.4	57.8	66	13 22	15 02	■	21 41	23 12	24 39	00 39	
S 13	16 04.6	19.4	296 10.7	11.5	4 13.6	10.4	57.7	64	14 04	15 21	■	21 47	23 14	24 38	00 38	
14	31 04.3	19.5	310 41.2	11.6	4 03.2	10.4	57.7	62	14 32	15 37	■	21 52	23 16	24 37	00 37	
15	46 04.0	19.6	325 11.8	11.7	3 52.8	10.4	57.6	60	14 53	15 51	■	21 56	23 17	24 35	00 35	
16	61 03.7	19.7	339 42.5	11.7	3 42.4	10.4	57.6	N 58	15 10	16 02	■	22 00	23 19	24 34	00 34	
17	76 03.4	19.8	354 13.2	11.8	3 32.0	10.4	57.6	56	15 25	16 12	■	22 04	23 20	24 34	00 34	
18	91 03.1	S23 19.9	8 44.0	11.8	S 3 21.6	10.4	57.5	54	15 38	16 21	■	22 07	23 21	24 33	00 33	
19	106 02.8	20.0	23 14.8	11.9	3 11.2	10.4	57.5	52	15 49	16 30	■	22 10	23 22	24 32	00 32	
20	121 02.5	20.1	37 45.7	11.9	3 00.8	10.4	57.5	50	15 59	16 37	■	22 12	23 23	24 31	00 31	
21	136 02.2	20.2	52 16.6	12.0	2 50.4	10.5	57.4	45	16 19	16 53	■	22 18	23 25	24 30	00 30	
22	151 01.9	20.3	66 47.6	12.1	2 39.9	10.4	57.4	N 40	16 36	17 06	■	22 23	23 27	24 29	00 29	
23	166 01.6	20.4	81 18.7	12.0	2 29.5	10.4	57.3	35	16 50	17 18	■	22 27	23 28	24 28	00 28	
17 00	181 01.3	S23 20.5	95 49.7	12.2	S 2 19.1	10.4	57.3	30	17 02	17 29	■	22 30	23 30	24 27	00 27	
01	196 01.0	20.6	110 20.9	12.2	2 08.7	10.4	57.3	20	17 24	17 48	■	22 36	23 32	24 25	00 25	
02	211 00.7	20.7	124 52.1	12.2	1 58.3	10.4	57.2	N 10	17 42	18 05	■	22 41	23 34	24 24	00 24	
03	226 00.4	20.8	139 23.3	12.3	1 47.9	10.4	57.2	0	17 59	18 22	■	22 46	23 35	24 22	00 22	
04	241 00.1	20.9	153 54.6	12.3	1 37.5	10.4	57.2	S 10	18 17	18 40	■	22 51	23 37	24 21	00 21	
05	255 59.8	21.0	168 25.9	12.3	1 27.1	10.4	57.1	20	18 36	19 00	■	22 56	23 39	24 19	00 19	
06	270 59.5	S23 21.1	182 57.2	12.4	S 1 16.7	10.4	57.1	30	18 58	19 25	■	23 02	23 41	24 18	00 18	
07	285 59.2	21.2	197 28.6	12.5	1 06.3	10.3	57.0	35	19 11	19 40	■	23 05	23 42	24 17	00 17	
08	300 58.9	21.3	212 00.1	12.5	0 56.0	10.4	57.0	40	19 26	19 59	■	23 09	23 43	24 16	00 16	
S 09	315 58.5	21.4	226 31.6	12.5	0 45.6	10.4	57.0	45	19 44	20 21	■	23 14	23 45	24 14	00 14	
10	330 58.2	21.5	241 03.1	12.6	0 35.2	10.3	56.9	S 50	20 06	20 51	■	23 19	23 47	24 13	00 13	
11	345 57.9	21.6	255 34.7	12.6	0 24.9	10.3	56.9	52	20 17	21 06	■	23 21	23 48	24 12	00 12	
A 12	0 57.6	S23 21.6	270 06.3	12.7	S 0 14.6	10.4	56.9	54	20 29	21 24	■	23 24	23 48	24 12	00 12	
D 13	15 57.3	21.7	284 38.0	12.6	S 0 04.2	10.3	56.8	56	20 43	21 46	■	23 26	23 49	24 11	00 11	
14	30 57.0	21.8	299 09.6	12.8	N 0 06.1	10.3	56.8	58	21 00	22 15	■	23 30	23 50	24 10	00 10	
15	45 56.7	21.9	313 41.4	12.7	0 16.4	10.3	56.8	S 60	21 21	23 05	■	23 33	23 52	24 09	00 09	
16	60 56.4	22.0	328 13.1	12.8	0 26.7	10.2	56.7	Día	SOL E.T. (+)	Pas. Mer.	LUNA Pas. Sup.	Mer. Inf.	Edad.	Fase		
17	75 56.1	22.1	342 44.9	12.9	0 36.9	10.3	56.7	00 ^h	12 ^h	h m	h m	h m	d			
18	90 55.8	S23 22.2	357 16.8	12.8</												

T. M. G.	ARIES		VENUS -3.4		MARTE -0.5		JUPITER -2.3		SATURNO +0.7		ESTRELLAS		
	A.H.G.	A.H.G. Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.
18 D O M I N G O	00	86 29.6	190 02.1 S22 35.3	311 41.7 N20 30.2	354 35.1 N23 09.6	293 25.4 N12 34.3	Acomar	315 38.4 S40 23.8					
	01	101 32.0	205 01.2 35.7	326 44.3 30.4	9 37.9 09.6	308 27.9 34.4	Achernar	335 46.5 S57 21.2					
	02	116 34.5	220 00.2 36.1	341 46.9 30.5	24 40.8 09.6	323 30.3 34.4	Acrux	173 39.3 S62 58.3					
	03	131 37.0	234 59.3 .. 36.5	356 49.6 .. 30.7	39 43.6 .. 09.6	338 32.8 .. 34.4	Adhara	255 33.2 S28 56.6					
	04	146 39.4	249 58.4 36.9	11 52.2 30.8	54 46.4 09.6	353 35.3 34.4	Aldebaran	291 19.8 N16 27.9					
	05	161 41.9	264 57.5 37.3	26 54.8 31.0	69 49.3 09.6	8 37.8 34.4							
	06	176 44.4	279 56.6 S22 37.7	41 57.4 N20 31.2	84 52.1 N23 09.6	23 40.3 N12 34.5	Alioth	166 44.4 N56 04.5					
	07	191 46.8	294 55.6 38.1	57 00.0 31.3	99 54.9 09.6	38 42.8 34.5	Alkaid	153 20.3 N49 25.2					
	08	206 49.3	309 54.7 38.4	72 02.7 31.5	114 57.8 09.6	53 45.3 34.5	Al Na'ir	28 17.6 S47 04.2					
	09	221 51.7	324 53.8 .. 38.8	87 05.3 .. 31.6	130 00.6 .. 09.7	68 47.8 .. 34.5	Alnilam	276 13.2 S 1 13.0					
	10	236 54.2	339 52.9 39.2	102 07.9 31.8	145 03.4 09.7	83 50.3 34.5	Alphard	218 22.2 S 8 33.8					
	11	251 56.7	354 52.0 39.6	117 10.5 32.0	160 06.2 09.7	98 52.8 34.6							
	12	266 59.1	9 51.0 S22 40.0	132 13.2 N20 32.1	175 09.1 N23 09.7	113 55.3 N12 34.6	Alphecca	126 34.0 N26 47.3					
	13	282 01.6	24 50.1 40.3	147 15.8 32.3	190 11.9 09.7	128 57.7 34.6	Alpheratz	358 11.2 N28 58.3					
	14	297 04.1	39 49.2 40.7	162 18.4 32.5	205 14.7 09.7	144 00.2 34.6	Altair	62 34.6 N 8 48.7					
	15	312 06.5	54 48.3 .. 41.1	177 21.1 .. 32.6	220 17.6 .. 09.7	159 02.7 .. 34.7	Ankaa	353 42.1 S42 25.8					
	16	327 09.0	69 47.3 41.5	192 23.7 32.8	235 20.4 09.7	174 05.2 34.7	Antares	112 59.5 S26 22.9					
	17	342 11.5	84 46.4 41.8	207 26.3 32.9	250 23.2 09.7	189 07.7 34.7							
	18	357 13.9	99 45.5 S22 42.2	222 29.0 N20 33.1	265 26.1 N23 09.7	204 10.2 N12 34.7	Arcturus	146 20.4 N19 17.8					
	19	12 16.4	114 44.6 42.6	237 31.6 33.3	280 28.9 09.8	219 12.7 34.7	Atria	108 25.9 S68 59.1					
	20	27 18.9	129 43.7 43.0	252 34.2 33.4	295 31.7 09.8	234 15.2 34.8	Avior	234 28.3 S59 26.3					
	21	42 21.3	144 42.7 .. 43.3	267 36.9 .. 33.6	310 34.6 .. 09.8	249 17.7 .. 34.8	Bellatrix	279 00.4 N 6 19.7					
	22	57 23.8	159 41.8 43.7	282 39.5 33.8	325 37.4 09.8	264 20.2 34.8	Betelgeuse	271 29.9 N 7 24.1					
23	72 26.2	174 40.9 44.1	297 42.2 33.9	340 40.2 09.8	279 22.7 34.8								
19 L U N E S	00	87 28.7	189 40.0 S22 44.4	312 44.8 N20 34.1	355 43.1 N23 09.8	294 25.2 N12 34.8	Canopus	264 07.5 S52 41.1					
	01	102 31.2	204 39.0 44.8	327 47.5 34.3	10 45.9 09.8	309 27.7 34.9	Capella	281 13.5 N45 58.5					
	02	117 33.6	219 38.1 45.2	342 50.1 34.4	25 48.7 09.8	324 30.2 34.9	Deneb	49 50.0 N45 12.4					
	03	132 36.1	234 37.2 .. 45.5	357 52.8 .. 34.6	40 51.5 .. 09.8	339 32.7 .. 34.9	Denebola	183 00.9 N14 41.6					
	04	147 38.6	249 36.2 45.9	12 55.4 34.8	55 54.4 09.8	354 35.1 34.9	Diphda	349 22.7 S18 06.5					
	05	162 41.0	264 35.3 46.2	27 58.1 34.9	70 57.2 09.9	9 37.6 34.9							
	06	177 43.5	279 34.4 S22 46.6	43 00.7 N20 35.1	86 00.0 N23 09.9	24 40.1 N12 35.0	Dubhe	194 24.4 N61 51.9					
	07	192 46.0	294 33.5 47.0	58 03.4 35.3	101 02.9 09.9	39 42.6 35.0	Elnath	278 46.1 N28 35.3					
	08	207 48.4	309 32.5 47.3	73 06.0 35.4	116 05.7 09.9	54 45.1 35.0	Eltanin	90 59.1 N51 29.6					
	09	222 50.9	324 31.6 .. 47.7	88 08.7 .. 35.6	131 08.5 .. 09.9	69 47.6 .. 35.0	Enif	34 13.6 N 9 46.6					
	10	237 53.3	339 30.7 48.0	103 11.3 35.8	146 11.4 09.9	84 50.1 35.1	Fomalhaut	15 53.6 S29 44.5					
	11	252 55.8	354 29.8 48.4	118 14.0 35.9	161 14.2 09.9	99 52.6 35.1							
	12	267 58.3	9 28.8 S22 48.7	133 16.7 N20 36.1	176 17.0 N23 09.9	114 55.1 N12 35.1	Gacrux	172 30.8 S56 59.1					
	13	283 00.7	24 27.9 49.1	148 19.3 36.3	191 19.9 09.9	129 57.6 35.1	Gienah	176 19.9 S17 25.1					
	14	298 03.2	39 27.0 49.4	163 22.0 36.5	206 22.7 09.9	145 00.1 35.1	Hadar	149 26.2 S60 15.7					
	15	313 05.7	54 26.0 .. 49.8	178 24.7 .. 36.6	221 25.5 .. 10.0	160 02.6 .. 35.2	Hamal	328 30.8 N23 21.6					
	16	328 08.1	69 25.1 50.1	193 27.3 36.8	236 28.4 10.0	175 05.1 35.2	Kaus Aust.	84 19.7 S34 23.6					
	17	343 10.6	84 24.2 50.5	208 30.0 37.0	251 31.2 10.0	190 07.6 35.2							
	18	358 13.1	99 23.2 S22 50.8	223 32.7 N20 37.1	266 34.0 N23 10.0	205 10.1 N12 35.2	Kochab	137 20.0 N74 14.6					
	19	13 15.5	114 22.3 51.1	238 35.4 37.3	281 36.9 10.0	220 12.6 35.3	Markab	14 05.1 N15 05.3					
	20	28 18.0	129 21.4 51.5	253 38.0 37.5	296 39.7 10.0	235 15.1 35.3	Menkar	314 42.8 N 4 00.2					
	21	43 20.5	144 20.5 .. 51.8	268 40.7 .. 37.7	311 42.5 .. 10.0	250 17.6 .. 35.3	Menkent	148 39.4 S36 15.5					
	22	58 22.9	159 19.5 52.2	283 43.4 37.8	326 45.4 10.0	265 20.1 35.3	Miaplacidus	221 44.6 S69 37.5					
23	73 25.4	174 18.6 52.5	298 46.1 38.0	341 48.2 10.0	280 22.6 35.3								
20 M A R T E S	00	88 27.8	189 17.7 S22 52.8	313 48.7 N20 38.2	356 51.0 N23 10.0	295 25.1 N12 35.4	Mirfak	309 18.3 N49 47.1					
	01	103 30.3	204 16.7 53.2	328 51.4 38.4	11 53.9 10.0	310 27.6 35.4	Nunki	76 31.8 S26 19.4					
	02	118 32.8	219 15.8 53.5	343 54.1 38.5	26 56.7 10.1	325 30.1 35.4	Peacock	54 01.9 S56 48.5					
	03	133 35.2	234 14.9 .. 53.8	358 56.8 .. 38.7	41 59.5 .. 10.1	340 32.6 .. 35.4	Pollux	244 00.1 N28 04.6					
	04	148 37.7	249 13.9 54.2	13 59.5 38.9	57 02.4 10.1	355 35.1 35.5	Procyon	245 27.4 N 5 16.8					
	05	163 40.2	264 13.0 54.5	29 02.2 39.1	72 05.2 10.1	10 37.6 35.5							
	06	178 42.6	279 12.1 S22 54.8	44 04.9 N20 39.3	87 08.0 N23 10.1	25 40.1 N12 35.5	Rasalhague	96 31.7 N12 34.7					
	07	193 45.1	294 11.1 55.2	59 07.5 39.4	102 10.9 10.1	40 42.6 35.5	Regulus	208 11.8 N12 04.4					
	08	208 47.6	309 10.2 55.5	74 10.2 39.6	117 13.7 10.1	55 45.1 35.5	Rigel	281 37.5 S 8 13.7					
	09	223 50.0	324 09.3 .. 55.8	89 12.9 .. 39.8	132 16.5 .. 10.1	70 47.6 .. 35.6	Rigil Kent.	140 28.7 S60 44.3					
	10	238 52.5	339 08.3 56.1	104 15.6 40.0	147 19.3 10.1	85 50.1 35.6	Sabik	102 43.6 S15 41.8					
	11	253 55.0	354 07.4 56.5	119 18.3 40.1	162 22.2 10.1	100 52.6 35.6							
	12	268 57.4	9 06.5 S22 56.8	134 21.0 N20 40.3	177 25.0 N23 10.2	115 55.1 N12 35.6	Schedar	350 10.9 N56 25.3					
	13	283 59.9	24 05.5 57.1	149 23.7 40.5	192 27.8 10.2	130 57.6 35.7	Shaula	96 58.7 S37 05.2					
	14	299 02.3	39 04.6 57.4	164 26.4 40.7	207 30.7 10.2	146 00.1 35.7	Sirius	258 57.0 S16 41.3					
	15	314 04.8	54 03.6 .. 57.7	179 29.1 .. 40.9	222 33.5 .. 10.2	161 02.6 .. 35.7	Spica	158 59.6 S11 02.7					
	16	329 07.3	69 02.7 58.1	194 31.8 41.1	237 36.3 10.2	176 05.1 35.7	Suhail	223 11.8 S43 20.5					
	17	344 09.7	84 01.8 58.4	209 34.5 41.2	252 39.2 10.2	191 07.6 35.8							
	18	359 12.2	99 00.8 S22 58.7	224 37.3 N20 41.4	267 42.0 N23 10.2	206 10.1 N12 35.8	Vega	80 57.5 N38 46.0					
	19	14 14.7	113 59.9 59.0	239 40.0 41.6	282 44.8 10.2	221 12.6 35.8	Zuben'ubi	137 35.3 S15 56.9					
	20	29 17.1	128 59.0 59.3	254 42.7 41.8	297 47.7 10.2	236 15.1 35.8							
	21	44 19.6	143 58.0 .. 59.6	269 45.4 .. 42.0	312 50.5 .. 10.2	251 17.6 .. 35.9							
	22	59 22.1	158 57.1 22 59.9	284 48.1 42.1	327 53.3 10.2	266 20.1 35.9	Venus	102 11.2 11 22					
23	74 24.5	173 56.1 23 00.2	299 50.8 42.3	342 56.2 10.3	281 22.6 35.9	Marte	225 16.1 3 08						
							Júpiter	268 14.3 0 17					
							Saturno	206 56.5 4 22					
Pas. Mer.	h m	v -0.9 d 0.4	v 2.7 d 0.2	v 2.8 d 0.0	v 2.5 d 0.0						A. H. S.	Pas. Mer.	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo			Orto Sol	Orto Luna								
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil	h m		18		19		20		21		
												h m	h m	h m	h m	h m	h m	h m	h m	
18 D O M I N G O	180	53.9	S23	22.6	84	28.4	13.1	N 1	48.4	10.1	56.5	N 72	08 24	10 56	■	11 59	11 53	11 47	11 41	
	01	195	53.6		22.7	99	00.5	13.1	1	58.5	10.1	56.4	N 70	08 04	09 53	■	12 04	12 04	12 05	12 07
	02	210	53.3		22.8	113	32.6	13.1	2	08.6	10.1	56.4	68	07 48	09 18	■	12 08	12 13	12 19	12 27
	03	225	53.0	..	22.9	128	04.7	13.1	2	18.7	10.1	56.4	66	07 35	08 52	10 33	12 11	12 20	12 30	12 43
	04	240	52.7		22.9	142	36.8	13.2	2	28.8	10.0	56.3	64	07 24	08 33	09 51	12 14	12 26	12 40	12 56
	05	255	52.4		23.0	157	09.0	13.2	2	38.8	10.0	56.3	62	07 15	08 17	09 22	12 17	12 32	12 48	13 08
	06	270	52.1	S23	23.1	171	41.2	13.2	N 2	48.8	10.0	56.3	60	07 06	08 03	09 01	12 19	12 36	12 55	13 17
	07	285	51.8		23.2	186	13.4	13.2	2	58.8	10.0	56.2	N 58	06 59	07 51	08 43	12 21	12 40	13 02	13 26
	08	300	51.5		23.2	200	45.6	13.3	3	08.8	9.9	56.2	56	06 52	07 41	08 28	12 23	12 44	13 07	13 33
	09	315	51.2	..	23.3	215	17.9	13.2	3	18.7	9.9	56.2	54	06 46	07 32	08 16	12 24	12 48	13 12	13 40
	10	330	50.9		23.4	229	50.1	13.3	3	28.6	9.9	56.1	52	06 40	07 24	08 05	12 26	12 51	13 17	13 45
	11	345	50.6		23.5	244	22.4	13.4	3	38.5	9.9	56.1	50	06 35	07 16	07 55	12 27	12 53	13 21	13 51
	12	0	50.3	S23	23.5	258	54.8	13.3	N 3	48.4	9.8	56.1	45	06 23	07 00	07 34	12 30	13 00	13 30	14 03
	13	15	50.0		23.6	273	27.1	13.4	3	58.2	9.9	56.1	N 40	06 13	06 47	07 17	12 33	13 05	13 37	14 12
	14	30	49.6		23.7	287	59.5	13.4	4	08.1	9.7	56.0	35	06 03	06 35	07 03	12 35	13 09	13 44	14 21
	15	45	49.3	..	23.7	302	31.9	13.4	4	17.8	9.8	56.0	30	05 54	06 24	06 51	12 37	13 13	13 50	14 28
	16	60	49.0		23.8	317	04.3	13.4	4	27.6	9.7	56.0	20	05 38	06 05	06 29	12 40	13 20	14 00	14 41
	17	75	48.7		23.8	331	36.7	13.4	4	37.3	9.7	55.9	N 10	05 22	05 48	06 11	12 43	13 26	14 08	14 52
	18	90	48.4	S23	23.9	346	09.1	13.4	N 4	47.0	9.7	55.9	0	05 05	05 31	05 53	12 46	13 32	14 17	15 02
	19	105	48.1		24.0	0	41.5	13.5	4	56.7	9.6	55.9	S 10	04 46	05 13	05 36	12 49	13 37	14 25	15 13
	20	120	47.8		24.0	15	14.0	13.5	5	06.3	9.6	55.8	20	04 23	04 52	05 17	12 52	13 43	14 34	15 24
	21	135	47.5	..	24.1	29	46.5	13.5	5	15.9	9.5	55.8	30	03 54	04 27	04 55	12 56	13 50	14 44	15 37
	22	150	47.2		24.2	44	19.0	13.5	5	25.4	9.6	55.8	35	03 35	04 12	04 42	12 58	13 55	14 50	15 45
23	165	46.9		24.2	58	51.5	13.5	5	35.0	9.5	55.8	40	03 12	03 54	04 27	13 00	13 59	14 57	15 53	
1900	180	46.6	S23	24.3	73	24.0	13.5	N 5	44.5	9.4	55.7	45	02 41	03 31	04 09	13 03	14 05	15 05	16 03	
01	195	46.3		24.3	87	56.5	13.6	5	53.9	9.4	55.7	S 50	01 56	03 01	03 46	13 06	14 11	15 14	16 16	
02	210	45.9		24.4	102	29.1	13.5	6	03.3	9.4	55.7	52	01 28	02 46	03 35	13 08	14 14	15 19	16 21	
03	225	45.6	..	24.4	117	01.6	13.6	6	12.7	9.4	55.7	54	00 41	02 28	03 23	13 09	14 17	15 24	16 28	
04	240	45.3		24.5	131	34.2	13.5	6	22.1	9.3	55.6	56	////	02 06	03 09	13 11	14 21	15 29	16 35	
05	255	45.0		24.6	146	06.7	13.6	6	31.4	9.3	55.6	58	////	01 36	02 52	13 13	14 25	15 35	16 43	
06	270	44.7	S23	24.6	160	39.3	13.6	N 6	40.7	9.2	55.6	S 60	////	00 46	02 31	13 15	14 30	15 42	16 52	
07	285	44.4		24.7	175	11.9	13.6	6	49.9	9.2	55.5									
08	300	44.1		24.7	189	44.5	13.6	6	59.1	9.2	55.5	Lat.	Ocaso Sol	Crepúsculo Civil	Náut.	Ocaso Luna				
09	315	43.8	..	24.8	204	17.1	13.6	7	08.3	9.1	55.5									
10	330	43.5		24.8	218	49.7	13.6	7	17.4	9.1	55.5									
11	345	43.2		24.9	233	22.3	13.6	7	26.5	9.0	55.4									
12	0	42.9	S23	24.9	247	54.9	13.6	N 7	35.5	9.0	55.4	N 72	■	12 59	15 30	00 46	02 27	04 06	05 47	
13	15	42.5		25.0	262	27.5	13.6	7	44.5	9.0	55.4	N 70	■	14 01	15 50	00 43	02 18	03 50	05 22	
14	30	42.2		25.0	277	00.1	13.6	7	53.5	8.9	55.4	68	■	14 37	16 06	00 41	02 10	03 37	05 03	
15	45	41.9	..	25.1	291	32.7	13.7	8	02.4	8.9	55.3	66	13 21	15 02	16 19	00 39	02 04	03 27	04 47	
16	60	41.6		25.1	306	05.4	13.6	8	11.3	8.8	55.3	64	14 04	15 22	16 30	00 38	01 59	03 18	04 35	
17	75	41.3		25.2	320	38.0	13.6	8	20.1	8.8	55.3	62	14 32	15 38	16 40	00 37	01 55	03 11	04 24	
18	90	41.0	S23	25.2	335	10.6	13.6	N 8	28.9	8.7	55.3	60	14 53	15 51	16 48	00 35	01 51	03 04	04 15	
19	105	40.7		25.2	349	43.2	13.7	8	37.6	8.7	55.3	N 58	15 11	16 03	16 56	00 34	01 48	02 59	04 08	
20	120	40.4		25.3	4	15.9	13.6	8	46.3	8.7	55.2	56	15 26	16 13	17 02	00 34	01 45	02 54	04 01	
21	135	40.1	..	25.3	18	48.5	13.6	8	55.0	8.6	55.2	54	15 38	16 22	17 09	00 33	01 42	02 49	03 54	
22	150	39.8		25.4	33	21.1	13.7	9	03.6	8.6	55.2	52	15 50	16 31	17 14	00 32	01 40	02 45	03 49	
23	165	39.5		25.4	47	53.8	13.6	9	12.2	8.5	55.2	50	15 59	16 38	17 20	00 31	01 37	02 42	03 44	
2000	180	39.1	S23	25.4	62	26.4	13.6	N 9	20.7	8.4	55.1	45	16 20	16 54	17 31	00 30	01 33	02 34	03 33	
01	195	38.8		25.5	76	59.0	13.6	9	29.1	8.4	55.1	N 40	16 37	17 08	17 42	00 29	01 29	02 27	03 24	
02	210	38.5		25.5	91	31.6	13.6	9	37.5	8.4	55.1	35	16 51	17 19	17 51	00 28	01 25	02 21	03 17	
03	225	38.2	..	25.6	106	04.2	13.6	9	45.9	8.3	55.1	30	17 04	17 30	18 00	00 27	01 22	02 16	03 10	
04	240	37.9		25.6	120	36.8	13.6	9	54.2	8.3	55.1	20	17 25	17 49	18 16	00 25	01 17	02 08	02 58	
05	255	37.6		25.6	135	09.4	13.6	10	02.5	8.2	55.0	N 10	17 43	18 06	18 33	00 24	01 12	02 00	02 48	
06	270	37.3	S23	25.7	149	42.0	13.6	N10	10.7	8.2	55.0	0	18 01	18 23	18 50	00 22	01 08	01 53	02 39	
07	285	37.0		25.7	164	14.6	13.6	10	18.9	8.1	55.0	S 10	18 18	18 42	19 09	00 21	01 04	01 46	02 29	
08	300	36.7		25.7	178	47.2	13.6	10	27.0	8.1	55.0	20	18 37	19 02	19 31	00 19	00 59	01 39	02 19	
09	315	36.4	..	25.8	193	19.8	13.6	10	35.1	8.0	54.9	30	19 00	19 27	20 00	00 18	00 54	01 30	02 08	
10	330	36.1		25.8	207	52.4	13.6	10	43.1	8.0	54.9	35	19 13	19 42	20 19	00 17	00 51	01 25	02 01	
11	345	35.7		25.8	222	25.0	13.5	10	51.1	7.9	54.9	40	19 28	20 01	20 42	00 16	00 47	01 20	01 53	
12	0	35.4	S23	25.9	236	57.5	13.6	N10	59.0	7.8	54.9	45	19 46	20 23	21 13	00 14	00 44	01 13	01 45	
13	15	35.1		25.9	251	30.1	13.5	11	06.8	7.8	54.9	S 50	20 08	20 53	21 59	00 13	00 39	01 06	01 34	
14	30	34.8		25.9	266	02.6	13.6	11	14.6	7.8	54.9	52	20 19	21 08	22 27	00 12	00 37	01 02	01 29	
15	45	34.5	..	25.9	280	35.2	13.5	11	22.4	7.7	54.8	54	20 32	21 26	23 14	00 12	00 34	00 58	01 24	
16	60	34.2		26.0	295	07.7	13.5	11	30.1	7.6	54.8	56	20 46	21 48	////	00 11	00 32	00 54	01 18	
17	75	33.9		26.0	309	40.2	13.5	11	37.7	7.6	54.8	58	21 03	22 18	////	00 10	00 29	00 49	01 11	
18	90	33.6	S23	26.0	324	12.7	13.5	N11	45.3	7.5	54.8	S 60	21 23	23 09	////	00 09	00 26	00 44	01 04	
19	105	3																		

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P. H.	Naut.		Civil	21	22	23	24
												h m	h m	h m	h m
M I E R C O L E S	21 ^d 00 ^h	180 31.7	S23 26.1	51 27.5	13.5	N12 29.6	7.2 54.7	N 72	08 26	10 58	■	11 41	11 32	11 17	□
	01	195 31.4	26.2	66 00.0	13.4	12 36.8	7.1 54.7	N 70	08 06	09 55	■	12 07	12 12	12 24	12 49
	02	210 31.1	26.2	80 32.4	13.4	12 43.9	7.1 54.6	68	07 50	09 20	■	12 27	12 40	13 00	13 33
	03	225 30.8	26.2	95 04.8	13.4	12 51.0	7.0 54.6	66	07 37	08 54	10 35	12 43	13 01	13 26	14 02
	04	240 30.5	26.2	109 37.2	13.4	12 58.0	6.9 54.6	64	07 26	08 34	09 53	12 56	13 18	13 46	14 24
	05	255 30.2	26.2	124 09.6	13.3	13 04.9	6.9 54.6	62	07 16	08 18	09 24	13 08	13 32	14 03	14 42
	06	270 29.9	S23 26.2	138 41.9	13.4	N13 11.8	6.8 54.6	60	07 08	08 05	09 03	13 17	13 44	14 16	14 57
	07	285 29.5	26.3	153 14.3	13.3	13 18.6	6.8 54.6	N 58	07 00	07 53	08 45	13 26	13 54	14 28	15 09
	08	300 29.2	26.3	167 46.6	13.3	13 25.4	6.6 54.5	56	06 53	07 43	08 30	13 33	14 03	14 38	15 20
	09	315 28.9	26.3	182 18.9	13.4	13 32.0	6.7 54.5	54	06 47	07 34	08 17	13 40	14 11	14 47	15 30
	10	330 28.6	26.3	196 51.3	13.2	13 38.7	6.5 54.5	52	06 42	07 25	08 06	13 45	14 18	14 55	15 38
	11	345 28.3	26.3	211 23.5	13.3	13 45.2	6.5 54.5	50	06 36	07 18	07 56	13 51	14 24	15 02	15 46
	12	0 28.0	S23 26.3	225 55.8	13.3	N13 51.7	6.5 54.5	45	06 24	07 02	07 36	14 03	14 38	15 18	16 02
	13	15 27.7	26.3	240 28.1	13.2	13 58.2	6.4 54.5	N 40	06 14	06 48	07 19	14 12	14 50	15 31	16 15
	14	30 27.4	26.3	255 00.3	13.3	14 04.6	6.3 54.5	35	06 05	06 36	07 05	14 21	15 00	15 42	16 27
	15	45 27.1	26.3	269 32.6	13.2	14 10.9	6.2 54.4	30	05 56	06 26	06 52	14 28	15 08	15 51	16 37
	16	60 26.8	26.3	284 04.8	13.2	14 17.1	6.2 54.4	20	05 39	06 07	06 31	14 41	15 23	16 08	16 54
	17	75 26.4	26.3	298 37.0	13.2	14 23.3	6.1 54.4	N 10	05 23	05 49	06 12	14 52	15 36	16 22	17 09
	18	90 26.1	S23 26.4	313 09.2	13.2	N14 29.4	6.1 54.4	0	05 06	05 32	05 55	15 02	15 48	16 35	17 23
	19	105 25.8	26.4	327 41.4	13.1	14 35.5	5.9 54.4	S 10	04 47	05 14	05 37	15 13	16 01	16 49	17 37
	20	120 25.5	26.4	342 13.5	13.2	14 41.4	5.9 54.4	20	04 24	04 54	05 18	15 24	16 14	17 03	17 52
	21	135 25.2	26.4	356 45.7	13.1	14 47.3	5.9 54.4	30	03 55	04 29	04 56	15 37	16 29	17 20	18 09
	22	150 24.9	26.4	11 17.8	13.1	14 53.2	5.8 54.4	35	03 37	04 13	04 43	15 45	16 38	17 30	18 19
23	165 24.6	26.4	25 49.9	13.1	14 59.0	5.7 54.3	40	03 13	03 55	04 28	15 53	16 48	17 41	18 30	
J U E V E S	22 ^d 00 ^h	180 24.3	S23 26.4	40 22.0	13.1	N15 04.7	5.6 54.3	45	02 43	03 32	04 10	16 03	17 00	17 54	18 44
	01	195 24.0	26.4	54 54.1	13.0	15 10.3	5.6 54.3	S 50	01 57	03 03	03 47	16 16	17 14	18 10	19 00
	02	210 23.6	26.4	69 26.1	13.1	15 15.9	5.5 54.3	52	01 29	02 48	03 36	16 21	17 21	18 17	19 08
	03	225 23.3	26.4	83 58.2	13.0	15 21.4	5.4 54.3	54	00 42	02 29	03 24	16 28	17 28	18 25	19 17
	04	240 23.0	26.4	98 30.2	13.0	15 26.8	5.4 54.3	56	////	02 07	03 10	16 35	17 37	18 35	19 26
	05	255 22.7	26.4	113 02.2	13.0	15 32.2	5.2 54.3	58	////	01 37	02 53	16 43	17 46	18 45	19 37
	06	270 22.4	S23 26.3	127 34.2	13.0	N15 37.4	5.3 54.3	S 60	////	00 46	02 32	16 52	17 57	18 57	19 50
	07	285 22.1	26.3	142 06.2	12.9	15 42.7	5.1 54.3	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna			
	08	300 21.8	26.3	156 38.1	13.0	15 47.8	5.1 54.2			Civil	Naut.	21	22	23	24
	09	315 21.5	26.3	171 10.1	12.9	15 52.9	5.0 54.2					h m	h m	h m	h m
	10	330 21.2	26.3	185 42.0	12.9	15 57.9	4.9 54.2	N 72	h m	h m	h m	h m	h m	h m	h m
	11	345 20.9	26.3	200 13.9	12.9	16 02.8	4.9 54.2	70	■	12 59	15 31	05 47	07 31	09 24	□
	12	0 20.5	S23 26.3	214 45.8	12.9	N16 07.7	4.7 54.2	68	■	14 02	15 51	05 22	06 52	08 17	09 30
	13	15 20.2	26.3	229 17.7	12.8	16 12.4	4.7 54.2	66	■	14 38	16 07	05 03	06 25	07 41	08 46
	14	30 19.9	26.3	243 49.5	12.9	16 17.1	4.7 54.2	64	13 22	15 03	16 20	04 47	06 04	07 15	08 17
	15	45 19.6	26.3	258 21.4	12.8	16 21.8	4.5 54.2	62	14 05	15 23	16 31	04 35	05 48	06 56	07 55
	16	60 19.3	26.3	272 53.2	12.8	16 26.3	4.5 54.2	60	14 33	15 39	16 41	04 24	05 35	06 40	07 38
	17	75 19.0	26.2	287 25.0	12.8	16 30.8	4.4 54.2	58	14 55	15 53	16 49	04 15	05 23	06 26	07 23
	18	90 18.7	S23 26.2	301 56.8	12.8	N16 35.2	4.4 54.1	N 58	15 12	16 04	16 57	04 08	05 13	06 15	07 10
	19	105 18.4	26.2	316 28.6	12.7	16 39.6	4.2 54.1	56	15 27	16 15	17 04	04 01	05 05	06 05	07 00
	20	120 18.1	26.2	331 00.3	12.8	16 43.8	4.2 54.1	54	15 40	16 24	17 10	03 54	04 57	05 56	06 50
	21	135 17.8	26.2	345 32.1	12.7	16 48.0	4.1 54.1	52	15 51	16 32	17 16	03 49	04 50	05 48	06 42
	22	150 17.4	26.2	0 03.8	12.7	16 52.1	4.0 54.1	50	16 01	16 39	17 21	03 44	04 44	05 41	06 34
23	165 17.1	26.1	14 35.5	12.7	16 56.1	4.0 54.1	45	16 22	16 55	17 33	03 33	04 31	05 26	06 18	
V I E R N E S	23 ^d 00 ^h	180 16.8	S23 26.1	29 07.2	12.7	N17 00.1	3.8 54.1	N 40	16 38	17 09	17 43	03 24	04 20	05 14	06 05
	01	195 16.5	26.1	43 38.9	12.7	17 03.9	3.8 54.1	35	16 53	17 21	17 53	03 17	04 11	05 03	05 54
	02	210 16.2	26.1	58 10.6	12.6	17 07.7	3.8 54.1	30	17 05	17 31	18 01	03 10	04 02	04 54	05 44
	03	225 15.9	26.1	72 42.2	12.6	17 11.5	3.6 54.1	20	17 26	17 50	18 18	02 58	03 48	04 38	05 27
	04	240 15.6	26.0	87 13.8	12.7	17 15.1	3.6 54.1	N 10	17 45	18 08	18 34	02 48	03 36	04 24	05 12
	05	255 15.3	26.0	101 45.5	12.6	17 18.7	3.4 54.1	0	18 02	18 25	18 51	02 39	03 25	04 11	04 58
	06	270 15.0	S23 26.0	116 17.1	12.6	N17 22.1	3.4 54.1	S 10	18 20	18 43	19 10	02 29	03 13	03 58	04 44
	07	285 14.6	26.0	130 48.7	12.5	17 25.5	3.4 54.1	20	18 39	19 04	19 33	02 19	03 01	03 44	04 30
	08	300 14.3	25.9	145 20.2	12.6	17 28.9	3.2 54.0	30	19 01	19 29	20 02	02 08	02 47	03 28	04 13
	09	315 14.0	25.9	159 51.8	12.6	17 32.1	3.2 54.0	35	19 14	19 44	20 21	02 01	02 39	03 19	04 03
	10	330 13.7	25.9	174 23.4	12.5	17 35.3	3.1 54.0	40	19 29	20 02	20 44	01 53	02 30	03 09	03 51
	11	345 13.4	25.9	188 54.9	12.5	17 38.4	3.0 54.0	45	19 47	20 25	21 15	01 45	02 19	02 56	03 38
	12	0 13.1	S23 25.8	203 26.4	12.5	N17 41.4	2.9 54.0	S 50	20 10	20 55	22 00	01 34	02 06	02 42	03 22
	13	15 12.8	25.8	217 57.9	12.5	17 44.3	2.8 54.0	52	20 21	21 10	22 28	01 29	02 00	02 35	03 15
	14	30 12.5	25.8	232 29.4	12.5	17 47.1	2.8 54.0	54	20 33	21 28	23 15	01 24	01 53	02 27	03 06
	15	45 12.2	25.7	247 00.9	12.5	17 49.9	2.7 54.0	56	20 47	21 50	////	01 18	01 46	02 18	02 57
	16	60 11.9	25.7	261 32.4	12.5	17 52.6	2.6 54.0	58	21 04	22 20	////	01 11	01 37	02 08	02 46
	17	75 11.5	25.7	276 03.9	12.4	17 55.2	2.5 54.0	S 60	21 25	23 11	////	01 04	01 28	01 57	02 34
	18	90 11.2	S23 25.6	290 35.3	12.5	N17 57.7	2.4 54.0	Día	SOL		LUNA				
	19	105 10.9	25.6	305 06.8	12.4	18 00.1	2.4 54.0		E.T. (+)	Pas. Mer.	Pas. Sup.	Mer. Inf.	Edad.	Fase	
	20	120 10.6	25.6	319 38.2	12.4	18 02.5	2.2 54.0		00 ^h	12 ^h					
	21	135 10.3	25.5	334 09.6	12.4	18 04.7	2.2 54.0	21							

T. M. G.	ARIES			VENUS -3.4			MARTE -0.7			JUPITER -2.3			SATURNO +0.6			ESTRELLAS							
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.					
24 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	92	24.4	187	47.0	S23	19.5	318	13.1	N20	56.8	1	23.0	N23	10.9	299	25.8	N12	37.9	Acamar	315	38.4	S40	23.8
	107	26.9	202	46.0		19.7	333	15.9		57.0	16	25.9		10.9	314	28.3		37.9	Achernar	335	46.5	S57	21.2
	122	29.3	217	45.1		19.9	348	18.7		57.2	31	28.7		10.9	329	30.8		37.9	Acrux	173	39.2	S62	58.3
	137	31.8	232	44.1	..	20.1	3	21.5	..	57.4	46	31.5	..	10.9	344	33.3	..	37.9	Adhara	255	33.2	S28	56.6
	152	34.3	247	43.2		20.3	18	24.4		57.6	61	34.4		10.9	359	35.8		38.0	Aldebaran	291	19.8	N16	27.9
	167	36.7	262	42.2		20.5	33	27.2		57.9	76	37.2		11.0	14	38.4		38.0					
	182	39.2	277	41.3	S23	20.7	48	30.0	N20	58.1	91	40.0	N23	11.0	29	40.9	N12	38.0	Alioth	166	44.3	N56	04.5
	197	41.7	292	40.3		21.0	63	32.9		58.3	106	42.9		11.0	44	43.4		38.1	Alkaid	153	20.2	N49	25.2
	212	44.1	307	39.4		21.2	78	35.7		58.5	121	45.7		11.0	59	45.9		38.1	Al Na'ir	28	17.6	S47	04.2
	227	46.6	322	38.4	..	21.4	93	38.5	..	58.7	136	48.5	..	11.0	74	48.4	..	38.1	Alnilam	276	13.2	S 1	13.1
	242	49.0	337	37.4		21.6	108	41.4		58.9	151	51.4		11.0	89	50.9		38.1	Alphard	218	22.1	S 8	33.8
	257	51.5	352	36.5		21.8	123	44.2		59.1	166	54.2		11.0	104	53.5		38.2					
	272	54.0	7	35.5	S23	22.0	138	47.1	N20	59.4	181	57.0	N23	11.0	119	56.0	N12	38.2	Alphecca	126	34.0	N26	47.3
	287	56.4	22	34.6		22.2	153	49.9		59.6	196	59.9		11.0	134	58.5		38.2	Alpheratz	358	11.2	N28	58.3
	302	58.9	37	33.6		22.4	168	52.7	20	59.8	212	02.7		11.0	150	01.0		38.3	Altair	62	34.6	N 8	48.7
	318	01.4	52	32.7	..	22.6	183	55.6	21	00.0	227	05.5	..	11.0	165	03.5	..	38.3	Ankaa	353	42.1	S42	25.8
	333	03.8	67	31.7		22.8	198	58.4		00.2	242	08.4		11.0	180	06.1		38.3	Antares	112	59.4	S26	22.9
	348	06.3	82	30.7		23.0	214	01.3		00.4	257	11.2		11.1	195	08.6		38.4					
	3	08.8	97	29.8	S23	23.2	229	04.1	N21	00.7	272	14.0	N23	11.1	210	11.1	N12	38.4	Arcturus	146	20.3	N19	17.8
	18	11.2	112	28.8		23.4	244	07.0		00.9	287	16.9		11.1	225	13.6		38.4	Atria	108	25.8	S68	59.1
	33	13.7	127	27.9		23.6	259	09.8		01.1	302	19.7		11.1	240	16.1		38.4	Avior	234	28.3	S59	26.3
	48	16.1	142	26.9	..	23.8	274	12.7	..	01.3	317	22.5	..	11.1	255	18.6	..	38.5	Bellatrix	279	00.4	N 6	19.7
	63	18.6	157	25.9		24.0	289	15.6		01.5	332	25.4		11.1	270	21.2		38.5	Betelgeuse	271	29.9	N 7	24.1
78	21.1	172	25.0		24.1	304	18.4		01.7	347	28.2		11.1	285	23.7		38.5						
25 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	93	23.5	187	24.0	S23	24.3	319	21.3	N21	02.0	2	31.0	N23	11.1	300	26.2	N12	38.6	Canopus	264	07.4	S52	41.1
	108	26.0	202	23.1		24.5	334	24.1		02.2	17	33.9		11.1	315	28.7		38.6	Capella	281	13.5	N45	58.5
	123	28.5	217	22.1		24.7	349	27.0		02.4	32	36.7		11.1	330	31.2		38.6	Deneb	49	50.1	N45	12.3
	138	30.9	232	21.2	..	24.9	4	29.9	..	02.6	47	39.5	..	11.1	345	33.8	..	38.7	Denebola	183	00.9	N14	41.6
	153	33.4	247	20.2		25.1	19	32.7		02.8	62	42.4		11.1	0	36.3		38.7	Diphda	349	22.7	S18	06.6
	168	35.9	262	19.2		25.3	34	35.6		03.1	77	45.2		11.2	15	38.8		38.7					
	183	38.3	277	18.3	S23	25.4	49	38.5	N21	03.3	92	48.0	N23	11.2	30	41.3	N12	38.8	Dubhe	194	24.3	N61	51.8
	198	40.8	292	17.3		25.6	64	41.3		03.5	107	50.9		11.2	45	43.9		38.8	Elmath	278	46.1	N28	35.3
	213	43.3	307	16.4		25.8	79	44.2		03.7	122	53.7		11.2	60	46.4		38.8	Eltanin	90	59.1	N51	29.6
	228	45.7	322	15.4	..	26.0	94	47.1	..	04.0	137	56.5	..	11.2	75	48.9	..	38.9	Enif	34	13.6	N 9	46.6
	243	48.2	337	14.4		26.2	109	50.0		04.2	152	59.4		11.2	90	51.4		38.9	Fomalhaut	15	53.6	S29	44.5
	258	50.6	352	13.5		26.3	124	52.8		04.4	168	02.2		11.2	105	53.9		38.9					
	273	53.1	7	12.5	S23	26.5	139	55.7	N21	04.6	183	05.0	N23	11.2	120	56.5	N12	38.9	Gacrux	172	30.7	S56	59.1
	288	55.6	22	11.5		26.7	154	58.6		04.8	198	07.9		11.2	135	59.0		39.0	Gienah	176	19.8	S17	25.1
	303	58.0	37	10.6		26.8	170	01.5		05.1	213	10.7		11.2	151	01.5		39.0	Hadar	149	26.1	S60	15.7
	319	00.5	52	09.6	..	27.0	185	04.4	..	05.3	228	13.5	..	11.2	166	04.0	..	39.0	Hamal	328	30.8	N23	21.6
	334	03.0	67	08.7		27.2	200	07.2		05.5	243	16.4		11.2	181	06.6		39.1	Kaus Aust.	84	19.7	S34	23.6
	349	05.4	82	07.7		27.4	215	10.1		05.7	258	19.2		11.2	196	09.1		39.1					
	4	07.9	97	06.7	S23	27.5	230	13.0	N21	06.0	273	22.0	N23	11.3	211	11.6	N12	39.1	Kochab	137	19.9	N74	14.6
	19	10.4	112	05.8		27.7	245	15.9		06.2	288	24.9		11.3	226	14.1		39.2	Markab	14	05.1	N15	05.3
	34	12.8	127	04.8		27.8	260	18.8		06.4	303	27.7		11.3	241	16.6		39.2	Menkar	314	42.8	N 4	00.2
	49	15.3	142	03.9	..	28.0	275	21.7	..	06.7	318	30.5	..	11.3	256	19.2	..	39.2	Menkent	148	39.3	S36	15.5
	64	17.8	157	02.9		28.2	290	24.6		06.9	333	33.3		11.3	271	21.7		39.3	Miaplacidus	221	44.5	S69	37.5
79	20.2	172	01.9		28.3	305	27.5		07.1	348	36.2		11.3	286	24.2		39.3						
26 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	94	22.7	187	01.0	S23	28.5	320	30.4	N21	07.3	3	39.0	N23	11.3	301	26.7	N12	39.3	Mirfak	309	18.3	N49	47.1
	109	25.1	202	00.0		28.7	335	33.3		07.6	18	41.8		11.3	316	29.3		39.4	Nunki	76	31.8	S26	19.4
	124	27.6	216	59.0		28.8	350	36.2		07.8	33	44.7		11.3	331	31.8		39.4	Peacock	54	01.9	S56	48.4
	139	30.1	231	58.1	..	29.0	5	39.1	..	08.0	48	47.5	..	11.3	346	34.3	..	39.4	Pollux	244	00.1	N28	04.6
	154	32.5	246	57.1		29.1	20	42.0		08.3	63	50.3		11.3	1	36.8		39.5	Procyon	245	27.4	N 5	16.8
	169	35.0	261	56.2		29.3	35	44.9		08.5	78	53.2		11.3	16	39.4		39.5					
	184	37.5	276	55.2	S23	29.4	50	47.8	N21	08.7	93	56.0	N23	11.3	31	41.9	N12	39.5	Rasalhague	96	31.6	N12	34.6
	199	39.9	291	54.2		29.6	65	50.7		08.9	108	58.8		11.4	46	44.4		39.6	Regulus	208	11.8	N12	04.4
	214	42.4	306	53.3		29.7	80	53.6		09.2	124	01.7		11.4	61	46.9		39.6	Rigel	281	37.4	S 8	13.7
	229	44.9	321	52.3	..	29.9	95	56.5	..	09.4	139	04.5	..	11.4	76	49.5	..	39.6	Rigil Kent.	140	28.6	S60	44.3
	244	47.3	336	51.3		30.0	110	59.4		09.6	154	07.3		11.4	91	52.0		39.7	Sabik	102	43.6	S15	41.8
	259	49.8	351	50.4		30.2	126	02.3		09.9	169	10.2		11.4	106	54.5		39.7					
	274	52.2	6	49.4	S23	30.3	141	05.2	N21	10.1	184	13.0	N23	11.4	121	57.1	N12	39.7	Schedar	350	10.9	N56	25.3
	289	54.7	21	48.4		30.4	156	08.1		10.3	199	15.8		11.4	136	59.6		39.7	Shaula	96	58.7	S37	05.2
	304	57.2	36																				

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna							
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		24		25		26		27	
											h m	h m	h m	h m	h m	h m	h m	h m
24 D O M I N G O	00	180 09.4 S23 25.4	17 43.8 12.4	N18 11.0	2.0	54.0	N 72	08 27	10 57	■	□	□	13 46	15 38				
	01	195 09.1 25.4	32 15.2 12.3	18 13.0	1.8	54.0	N 70	08 07	09 55	■	12 49	13 39	14 52	16 17				
	02	210 08.8 25.3	46 46.5 12.4	18 14.8	1.8	54.0	68	07 51	09 20	■	13 33	14 22	15 28	16 44				
	03	225 08.4 25.3	61 17.9 12.4	18 16.6	1.7	54.0	66	07 38	08 55	10 35	14 02	14 51	15 53	17 05				
	04	240 08.1 25.2	75 49.3 12.3	18 18.3	1.6	54.0	64	07 27	08 35	09 53	14 24	15 13	16 13	17 21				
	05	255 07.8 25.2	90 20.6 12.3	18 19.9	1.5	54.0	62	07 17	08 19	09 25	14 42	15 31	16 29	17 34				
	06	270 07.5 S23 25.2	104 51.9 12.4	N18 21.4	1.5	54.0	60	07 09	08 06	09 03	14 57	15 45	16 42	17 46				
	07	285 07.2 25.1	119 23.3 12.3	18 22.9	1.3	54.0	N 58	07 01	07 54	08 46	15 09	15 58	16 54	17 55				
	08	300 06.9 25.1	133 54.6 12.3	18 24.2	1.3	54.0	56	06 55	07 44	08 31	15 20	16 09	17 04	18 04				
	09	315 06.6 25.0	148 25.9 12.3	18 25.5	1.2	54.0	54	06 49	07 35	08 19	15 30	16 18	17 13	18 12				
	10	330 06.3 25.0	162 57.2 12.3	18 26.7	1.1	54.0	52	06 43	07 27	08 08	15 38	16 27	17 20	18 19				
	11	345 06.0 24.9	177 28.5 12.3	18 27.8	1.0	53.9	50	06 38	07 19	07 58	15 46	16 34	17 27	18 25				
	12	0 05.7 S23 24.9	191 59.8 12.3	N18 28.8	0.9	53.9	45	06 26	07 03	07 37	16 02	16 50	17 43	18 38				
	13	15 05.3 24.8	206 31.1 12.3	18 29.7	0.9	53.9	N 40	06 15	06 50	07 20	16 15	17 04	17 55	18 49				
	14	30 05.0 24.8	221 02.4 12.3	18 30.6	0.7	53.9	35	06 06	06 38	07 06	16 27	17 15	18 05	18 58				
	15	45 04.7 24.7	235 33.7 12.2	18 31.3	0.7	53.9	30	05 57	06 27	06 54	16 37	17 25	18 15	19 06				
	16	60 04.4 24.7	250 04.9 12.3	18 32.0	0.6	53.9	20	05 41	06 08	06 32	16 54	17 42	18 31	19 20				
	17	75 04.1 24.6	264 36.2 12.3	18 32.6	0.5	53.9	N 10	05 25	05 51	06 14	17 09	17 56	18 44	19 33				
	18	90 03.8 S23 24.6	279 07.5 12.2	N18 33.1	0.4	53.9	0	05 08	05 34	05 56	17 23	18 10	18 57	19 44				
	19	105 03.5 24.5	293 38.7 12.3	18 33.5	0.4	53.9	S 10	04 49	05 16	05 39	17 37	18 24	19 10	19 56				
	20	120 03.2 24.4	308 10.0 12.3	18 33.9	0.2	53.9	20	04 26	04 55	05 20	17 52	18 39	19 24	20 08				
	21	135 02.9 24.4	322 41.3 12.2	18 34.1	0.2	53.9	30	03 57	04 30	04 58	18 09	18 56	19 40	20 22				
	22	150 02.6 24.3	337 12.5 12.3	18 34.3	0.1	53.9	35	03 38	04 15	04 45	18 19	19 06	19 49	20 30				
23	165 02.2 24.3	351 43.8 12.2	18 34.4	0.0	53.9	40	03 15	03 57	04 30	18 30	19 17	20 00	20 39					
24						45	02 44	03 34	04 12	18 44	19 30	20 12	20 50					
25 D O M I N G O	00	180 01.9 S23 24.2	6 15.0 12.3	N18 34.4	0.1	53.9	S 50	01 59	03 04	03 49	19 00	19 46	20 27	21 03				
	01	195 01.6 24.2	20 46.3 12.2	18 34.3	0.2	53.9	52	01 31	02 49	03 38	19 08	19 54	20 34	21 09				
	02	210 01.3 24.1	35 17.5 12.3	18 34.1	0.2	53.9	54	00 44	02 31	03 26	19 17	20 02	20 42	21 15				
	03	225 01.0 24.0	49 48.8 12.3	18 33.9	0.4	53.9	56	////	02 09	03 12	19 26	20 12	20 50	21 23				
	04	240 00.7 24.0	64 20.1 12.2	18 33.5	0.4	53.9	58	////	01 39	02 55	19 37	20 22	21 00	21 31				
	05	255 00.4 23.9	78 51.3 12.3	18 33.1	0.5	53.9	S 60	////	00 49	02 34	19 50	20 35	21 11	21 40				
	06	270 00.1 S23 23.8	93 22.6 12.2	N18 32.6	0.6	53.9												
	07	284 59.8 23.8	107 53.8 12.3	18 32.0	0.7	53.9												
	08	299 59.5 23.7	122 25.1 12.3	18 31.3	0.8	53.9												
	09	314 59.2 23.7	136 56.4 12.2	18 30.5	0.8	54.0												
	10	329 58.8 23.6	151 27.6 12.3	18 29.7	1.0	54.0												
11	344 58.5 23.5	165 58.9 12.3	18 28.7	1.0	54.0													
12	359 58.2 S23 23.4	180 30.2 12.2	N18 27.7	1.1	54.0	N 72	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	
13	14 57.9 23.4	195 01.4 12.3	18 26.6	1.2	54.0	N 70	■	13 03	15 33	□	□	11 51	11 36					
14	29 57.6 23.3	209 32.7 12.3	18 25.4	1.2	54.0	68	■	14 05	15 53	09 30	10 19	10 44	10 56					
15	44 57.3 23.2	224 04.0 12.3	18 24.2	1.4	54.0	66	■	14 40	16 09	08 46	09 35	10 08	10 28					
16	59 57.0 23.2	238 35.3 12.3	18 22.8	1.5	54.0	64	13 25	15 05	16 22	08 17	09 06	09 42	10 07					
17	74 56.7 23.1	253 06.6 12.3	18 21.3	1.5	54.0	62	14 07	15 25	16 33	07 55	08 44	09 22	09 50					
18	89 56.4 S23 23.0	267 37.9 12.3	N18 19.8	1.6	54.0	60	14 35	15 41	16 43	07 38	08 26	09 06	09 37					
19	104 56.1 22.9	282 09.2 12.3	18 18.2	1.7	54.0	N 58	15 14	16 06	16 59	07 10	07 59	08 40	09 14					
20	119 55.8 22.9	296 40.5 12.3	18 16.5	1.8	54.0	56	15 29	16 16	17 06	07 00	07 48	08 30	09 06					
21	134 55.4 22.8	311 11.8 12.4	18 14.7	1.8	54.0	54	15 42	16 26	17 12	06 50	07 39	08 21	08 58					
22	149 55.1 22.7	325 43.2 12.3	18 12.9	2.0	54.0	52	15 53	16 34	17 17	06 42	07 30	08 13	08 50					
23	164 54.8 22.6	340 14.5 12.3	18 10.9	2.0	54.0	50	16 03	16 41	17 23	06 34	07 23	08 06	08 44					
24						45	16 23	16 57	17 34	06 18	07 06	07 50	08 30					
26 L U N E S	00	179 54.5 S23 22.6	354 45.8 12.4	N18 08.9	2.1	54.0	N 40	16 40	17 11	17 45	06 05	06 53	07 38	08 19				
	01	194 54.2 22.5	9 17.2 12.3	18 06.8	2.2	54.0	35	16 54	17 23	17 54	05 54	06 42	07 27	08 09				
	02	209 53.9 22.4	23 48.5 12.4	18 04.6	2.3	54.0	30	17 07	17 33	18 03	05 44	06 32	07 17	08 00				
	03	224 53.6 22.3	38 19.9 12.4	18 02.3	2.3	54.0	20	17 28	17 52	18 19	05 27	06 15	07 01	07 45				
	04	239 53.3 22.2	52 51.3 12.4	18 00.0	2.5	54.0	N 10	17 46	18 09	18 36	05 12	06 00	06 47	07 32				
	05	254 53.0 22.2	67 22.7 12.4	17 57.5	2.5	54.0	0	18 04	18 26	18 53	04 58	05 46	06 33	07 20				
	06	269 52.7 S23 22.1	81 54.1 12.4	N17 55.0	2.6	54.0	S 10	18 21	18 44	19 12	04 44	05 32	06 20	07 08				
	07	284 52.4 22.0	96 25.5 12.4	17 52.4	2.7	54.0	20	18 40	19 05	19 34	04 30	05 17	06 05	06 55				
	08	299 52.1 21.9	110 56.9 12.4	17 49.7	2.8	54.0	30	19 02	19 30	20 03	04 13	04 59	05 49	06 39				
	09	314 51.7 21.8	125 28.3 12.5	17 46.9	2.8	54.0	35	19 15	19 45	20 22	04 03	04 49	05 39	06 31				
	10	329 51.4 21.7	139 59.8 12.4	17 44.1	3.0	54.0	40	19 30	20 03	20 45	03 51	04 38	05 28	06 21				
11	344 51.1 21.6	154 31.2 12.5	17 41.1	3.0	54.0	45	19 48	20 26	21 16	03 38	04 24	05 15	06 09					
12	359 50.8 S23 21.6	169 02.7 12.5	N17 38.1	3.1	54.1	S 50	20 11	20 56	22 01	03 22	04 08	04 59	05 54					
13	14 50.5 21.5	183 34.2 12.5	17 35.0	3.2	54.1	52	20 22	21 11	22 29	03 15	04 00	04 51	05 48					
14	29 50.2 21.4	198 05.7 12.5	17 31.8	3.2	54.1	54	20 34	21 29	23 15	03 06	03 52	04 43	05 40					
15	44 49.9 21.3	212 37.2 12.5	17 28.6	3.4	54.1	56	20 48	21 51	////	02 57	03 4							

T. M. G.	ARIES			VENUS -3.4			MARTE -0.7			JUPITER -2.3			SATURNO +0.6			ESTRELLAS							
	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	A.H.G.	A.H.G.	Dec.	Nombre	A. H. S.	Dec.					
27 00 01 02 03 04 05 06 07 08 M 09 A 10 R 11 T 12 E 13 14 15 16 17 18 19 20 21 22 23	95	21.8	186	37.8	S23	31.9	321	40.3	N21	12.9	4	47.0	N23	11.5	302	27.4	N12	40.1	Acamar	315	38.4	S40	23.8
	110	24.3	201	36.9		32.1	336	43.2		13.1	19	49.8		11.5	317	29.9		40.2	Achernar	335	46.5	S57	21.2
	125	26.7	216	35.9		32.2	351	46.2		13.4	34	52.6		11.5	332	32.4		40.2	Acrux	173	39.1	S62	58.3
	140	29.2	231	34.9	..	32.3	6	49.1	..	13.6	49	55.5	..	11.5	347	35.0	..	40.2	Adhara	255	33.1	S28	56.6
	155	31.7	246	34.0		32.4	21	52.0		13.8	64	58.3		11.5	2	37.5		40.3	Aldebaran	291	19.8	N16	27.9
	170	34.1	261	33.0		32.6	36	55.0		14.1	80	01.1		11.5	17	40.0		40.3					
	185	36.6	276	32.0	S23	32.7	51	57.9	N21	14.3	95	04.0	N23	11.5	32	42.6	N12	40.3	Alioth	166	44.3	N56	04.5
	200	39.1	291	31.1		32.8	67	00.9		14.6	110	06.8		11.5	47	45.1		40.4	Alkaid	153	20.2	N49	25.2
	215	41.5	306	30.1		32.9	82	03.8		14.8	125	09.6		11.5	62	47.6		40.4	Al Na'ir	28	17.6	S47	04.2
	230	44.0	321	29.1	..	33.0	97	06.7	..	15.0	140	12.5	..	11.6	77	50.2	..	40.4	Alnilam	276	13.2	S	1 13.1
	245	46.5	336	28.2		33.1	112	09.7		15.3	155	15.3		11.6	92	52.7		40.5	Alphard	218	22.1	S	8 33.9
	260	48.9	351	27.2		33.3	127	12.6		15.5	170	18.1		11.6	107	55.2		40.5					
	275	51.4	6	26.2	S23	33.4	142	15.6	N21	15.8	185	20.9	N23	11.6	122	57.7	N12	40.5	Alphecca	126	34.0	N26	47.3
	290	53.9	21	25.3		33.5	157	18.5		16.0	200	23.8		11.6	138	00.3		40.6	Alpheratz	358	11.2	N28	58.3
	305	56.3	36	24.3		33.6	172	21.5		16.2	215	26.6		11.6	153	02.8		40.6	Altair	62	34.6	N	8 48.7
	320	58.8	51	23.3	..	33.7	187	24.4	..	16.5	230	29.4	..	11.6	168	05.3	..	40.6	Ankaa	353	42.1	S42	25.8
	336	01.2	66	22.4		33.8	202	27.4		16.7	245	32.3		11.6	183	07.9		40.7	Antares	112	59.4	S26	22.9
	351	03.7	81	21.4		33.9	217	30.4		17.0	260	35.1		11.6	198	10.4		40.7					
	6	06.2	96	20.4	S23	34.0	232	33.3	N21	17.2	275	37.9	N23	11.6	213	12.9	N12	40.7	Arcturus	146	20.3	N19	17.7
	21	08.6	111	19.5		34.1	247	36.3		17.4	290	40.8		11.6	228	15.5		40.8	Atria	108	25.8	S68	59.1
	36	11.1	126	18.5		34.2	262	39.2		17.7	305	43.6		11.6	243	18.0		40.8	Avior	234	28.3	S59	26.3
	51	13.6	141	17.5	..	34.3	277	42.2	..	17.9	320	46.4	..	11.6	258	20.5	..	40.8	Bellatrix	279	00.4	N	6 19.7
	66	16.0	156	16.6		34.4	292	45.2		18.2	335	49.2		11.6	273	23.1		40.9	Betelgeuse	271	29.9	N	7 24.1
81	18.5	171	15.6		34.5	307	48.1		18.4	350	52.1		11.7	288	25.6		40.9						
28 00 01 02 03 04 05 06 07 08 M 09 I 10 E 11 R 12 C 13 O 14 L 15 E 16 S 17 18 19 20 21 22 23	96	21.0	186	14.6	S23	34.6	322	51.1	N21	18.6	5	54.9	N23	11.7	303	28.1	N12	40.9	Canopus	264	07.4	S52	41.2
	111	23.4	201	13.7		34.7	337	54.1		18.9	20	57.7		11.7	318	30.7		41.0	Capella	281	13.5	N45	58.5
	126	25.9	216	12.7		34.8	352	57.0		19.1	36	00.6		11.7	333	33.2		41.0	Deneb	49	50.1	N45	12.3
	141	28.3	231	11.7	..	34.9	8	00.0	..	19.4	51	03.4	..	11.7	348	35.7	..	41.0	Denebola	183	00.9	N14	41.6
	156	30.8	246	10.7		35.0	23	03.0		19.6	66	06.2		11.7	3	38.3		41.1	Diphda	349	22.7	S18	06.6
	171	33.3	261	09.8		35.1	38	05.9		19.9	81	09.1		11.7	18	40.8		41.1					
	186	35.7	276	08.8	S23	35.2	53	08.9	N21	20.1	96	11.9	N23	11.7	33	43.3	N12	41.2	Dubhe	194	24.3	N61	51.8
	201	38.2	291	07.8		35.3	68	11.9		20.4	111	14.7		11.7	48	45.9		41.2	Elnath	278	46.1	N28	35.3
	216	40.7	306	06.9		35.4	83	14.9		20.6	126	17.5		11.7	63	48.4		41.2	Eltanin	90	59.1	N51	29.6
	231	43.1	321	05.9	..	35.5	98	17.9	..	20.8	141	20.4	..	11.7	78	50.9	..	41.3	Enif	34	13.6	N	9 46.6
	246	45.6	336	04.9		35.6	113	20.8		21.1	156	23.2		11.7	93	53.5		41.3	Fomalhaut	15	53.6	S29	44.5
	261	48.1	351	04.0		35.6	128	23.8		21.3	171	26.0		11.7	108	56.0		41.3					
	276	50.5	6	03.0	S23	35.7	143	26.8	N21	21.6	186	28.9	N23	11.7	123	58.5	N12	41.4	Gacrux	172	30.7	S56	59.1
	291	53.0	21	02.0		35.8	158	29.8		21.8	201	31.7		11.8	139	01.1		41.4	Gienah	176	19.8	S17	25.1
	306	55.5	36	01.1		35.9	173	32.8		22.1	216	34.5		11.8	154	03.6		41.4	Hadar	149	26.1	S60	15.7
	321	57.9	51	00.1	..	36.0	188	35.8	..	22.3	231	37.3	..	11.8	169	06.1	..	41.5	Hamal	328	30.8	N23	21.6
	337	00.4	65	59.1		36.0	203	38.8		22.6	246	40.2		11.8	184	08.7		41.5	Kaus Aust.	84	19.7	S34	23.6
	352	02.8	80	58.2		36.1	218	41.7		22.8	261	43.0		11.8	199	11.2		41.6					
	7	05.3	95	57.2	S23	36.2	233	44.7	N21	23.1	276	45.8	N23	11.8	214	13.8	N12	41.6	Kochab	137	19.9	N74	14.6
	22	07.8	110	56.2		36.3	248	47.7		23.3	291	48.7		11.8	229	16.3		41.6	Markab	14	05.1	N15	05.3
	37	10.2	125	55.2		36.3	263	50.7		23.6	306	51.5		11.8	244	18.8		41.7	Menkar	314	42.8	N	4 00.2
	52	12.7	140	54.3	..	36.4	278	53.7	..	23.8	321	54.3	..	11.8	259	21.4	..	41.7	Menkent	148	39.3	S36	15.5
	67	15.2	155	53.3		36.5	293	56.7		24.1	336	57.1		11.8	274	23.9		41.7	Miaplacidus	221	44.4	S69	37.5
82	17.6	170	52.3		36.5	308	59.7		24.3	352	00.0		11.8	289	26.4		41.8						
29 00 01 02 03 04 05 06 07 08 J 09 U 10 E 11 V 12 E 13 S 14 15 16 17 18 19 20 21 22 23	97	20.1	185	51.4	S23	36.6	324	02.7	N21	24.6	7	02.8	N23	11.8	304	29.0	N12	41.8	Mirfak	309	18.3	N49	47.1
	112	22.6	200	50.4		36.7	339	05.7		24.8	22	05.6		11.8	319	31.5		41.8	Nunki	76	31.8	S26	19.4
	127	25.0	215	49.4		36.7	354	08.7		25.1	37	08.5		11.8	334	34.0		41.9	Peacock	54	01.9	S56	48.4
	142	27.5	230	48.5	..	36.8	9	11.7	..	25.3	52	11.3	..	11.9	349	36.6	..	41.9	Pollux	244	00.1	N28	04.6
	157	30.0	245	47.5		36.9	24	14.7		25.6	67	14.1		11.9	4	39.1		42.0	Procyon	245	27.4	N	5 16.8
	172	32.4	260	46.5		36.9	39	17.8		25.8	82	16.9		11.9	19	41.7		42.0					
	187	34.9	275	45.5	S23	37.0	54	20.8	N21	26.1	97	19.8	N23	11.9	34	44.2	N12	42.0	Rasalhague	96	31.6	N12	34.6
	202	37.3	290	44.6		37.1	69	23.8		26.3	112	22.6		11.9	49	46.7		42.1	Regulus	208	11.8	N12	04.3
	217	39.8	305	43.6		37.1	84	26.8		26.6	127	25.4		11.9	64	49.3		42.1	Rigel	281	37.4	S	8 13.8
	232	42.3	320	42.6	..	37.2	99	29.8	..	26.8	142	28.3	..	11.9	79	51.8	..	42.1	Rigil Kent.	140	28.6	S60	44.3
	247	44.7	335	41.7		37.2	114	32.8		27.1	157	31.1		11.9	94	54.4		42.2	Sabik	102	43.6	S15	41.8
	262	47.2	350	40.7		37.3	129	35.8		27.3	172	33.9		11.9	109	56.9		42.2					
	277	49.7	5	39.7	S23	37.3	144	38.9	N21	27.6	187	36.7	N23	11.9	124	59.4	N12	42.3	Schedar	350	10.9	N56	25.3
	292	52.1	20	38.8		37.4	159	41.9		27.8	202	39.6		11.9	140	02.0		42.3	Shaula	96	58.7	S37	

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna				
	A.H.G.	Dec.	A.H.G.	v	Dec.	d		P.H.	Naut.		Civil	27	28	29	30
	h	m	h	m	h	m		h	m	h	m	h	m	h	m
M A R T E S	27 00	179 47.1 S23 20.4	343 21.3 12.6	N16 55.7	4.0	54.1	N 72	08 27	10 53	■	15 38	17 22	19 03	20 43	
	01	194 46.8 20.3	357 52.9 12.7	16 51.7	4.2	54.1	N 70	08 07	09 54	■	16 17	17 47	19 19	20 52	
	02	209 46.5 20.2	12 24.6 12.6	16 47.5	4.2	54.1	68	07 51	09 20	■	16 44	18 07	19 32	20 59	
	03	224 46.2 20.1	26 56.2 12.7	16 43.3	4.2	54.2	66	07 38	08 55	10 34	17 05	18 22	19 42	21 05	
	04	239 45.9 20.0	41 27.9 12.7	16 39.1	4.4	54.2	64	07 27	08 36	09 53	17 21	18 34	19 51	21 10	
	05	254 45.6 19.9	55 59.6 12.7	16 34.7	4.4	54.2	62	07 18	08 20	09 25	17 34	18 45	19 58	21 14	
	06	269 45.3 S23 19.8	70 31.3 12.8	N16 30.3	4.5	54.2	60	07 10	08 06	09 04	17 46	18 54	20 05	21 18	
	07	284 45.0 19.7	85 03.1 12.7	16 25.8	4.6	54.2	N 58	07 02	07 55	08 46	17 55	19 01	20 10	21 21	
	08	299 44.7 19.6	99 34.8 12.8	16 21.2	4.6	54.2	56	06 55	07 44	08 32	18 04	19 08	20 15	21 24	
	09	314 44.4 19.5	114 06.6 12.8	16 16.6	4.8	54.2	54	06 49	07 35	08 19	18 12	19 14	20 20	21 27	
	10	329 44.1 19.4	128 38.4 12.7	16 11.8	4.8	54.2	52	06 44	07 27	08 08	18 19	19 20	20 24	21 29	
	11	344 43.8 19.3	143 10.1 12.9	16 07.0	4.8	54.2	50	06 38	07 20	07 58	18 25	19 25	20 27	21 31	
	12	359 43.5 S23 19.2	157 42.0 12.8	N16 02.2	5.0	54.2	45	06 27	07 04	07 38	18 38	19 36	20 35	21 36	
	13	14 43.1 19.1	172 13.8 12.8	15 57.2	5.0	54.2	N 40	06 17	06 51	07 21	18 49	19 45	20 42	21 40	
	14	29 42.8 19.0	186 45.6 12.9	15 52.2	5.1	54.2	35	06 07	06 39	07 07	18 58	19 52	20 47	21 44	
	15	44 42.5 18.9	201 17.5 12.9	15 47.1	5.2	54.3	30	05 59	06 28	06 55	19 06	19 59	20 52	21 47	
	16	59 42.2 18.8	215 49.4 12.9	15 41.9	5.2	54.3	20	05 42	06 10	06 34	19 20	20 11	21 01	21 52	
	17	74 41.9 18.6	230 21.3 12.9	15 36.7	5.3	54.3	N 10	05 26	05 52	06 15	19 33	20 21	21 08	21 56	
	18	89 41.6 S23 18.5	244 53.2 12.9	N15 31.4	5.4	54.3	0	05 09	05 35	05 58	19 44	20 30	21 15	22 01	
	19	104 41.3 18.4	259 25.1 13.0	15 26.0	5.5	54.3	S 10	04 50	05 17	05 40	19 56	20 40	21 22	22 05	
	20	119 41.0 18.3	273 57.1 12.9	15 20.5	5.5	54.3	20	04 28	04 57	05 21	20 08	20 50	21 30	22 09	
	21	134 40.7 18.2	288 29.0 13.0	15 15.0	5.6	54.3	30	03 59	04 32	05 00	20 22	21 01	21 38	22 15	
	22	149 40.4 18.1	303 01.0 13.0	15 09.4	5.6	54.3	35	03 40	04 17	04 47	20 30	21 08	21 43	22 18	
23	164 40.1 18.0	317 33.0 13.0	15 03.8	5.8	54.3	40	03 17	03 59	04 32	20 39	21 15	21 49	22 21		
M I E R C O L E S	28 00	179 39.8 S23 17.8	332 05.0 13.0	N14 58.0	5.8	54.4	45	02 47	03 36	04 14	20 50	21 24	21 55	22 25	
	01	194 39.5 17.7	346 37.0 13.1	14 52.2	5.8	54.4	S 50	02 02	03 07	03 51	21 03	21 34	22 03	22 30	
	02	209 39.2 17.6	1 09.1 13.1	14 46.4	6.0	54.4	52	01 34	02 52	03 41	21 09	21 39	22 06	22 32	
	03	224 38.9 17.5	15 41.2 13.0	14 40.4	6.0	54.4	54	00 50	02 34	03 28	21 15	21 44	22 10	22 34	
	04	239 38.6 17.4	30 13.2 13.1	14 34.4	6.1	54.4	56	////	02 12	03 14	21 23	21 50	22 15	22 37	
	05	254 38.3 17.2	44 45.3 13.2	14 28.3	6.1	54.4	58	////	01 43	02 58	21 31	21 57	22 19	22 39	
	06	269 37.9 S23 17.1	59 17.5 13.1	N14 22.2	6.2	54.4	S 60	////	00 54	02 37	21 40	22 04	22 25	22 43	
	07	284 37.6 17.0	73 49.6 13.1	14 16.0	6.3	54.4	Lat.	Ocaso Sol	Crepúsculo Civil	Naut.	Ocaso Luna				
	08	299 37.3 16.9	88 21.7 13.2	14 09.7	6.3	54.4	27	28	29	30					
	09	314 37.0 16.7	102 53.9 13.2	14 03.4	6.4	54.5	N 72	h m	h m	h m	h m	h m	h m	h m	
	10	329 36.7 16.6	117 26.1 13.2	13 57.0	6.5	54.5	N 70	■	13 10	15 37	11 36	11 27	11 21	11 15	
	11	344 36.4 16.5	131 58.3 13.2	13 50.5	6.5	54.5	68	■	14 09	15 56	10 56	11 01	11 03	11 04	
	12	359 36.1 S23 16.4	146 30.5 13.2	N13 44.0	6.6	54.5	66	13 30	15 08	16 25	10 07	10 25	10 38	10 48	
	13	14 35.8 16.2	161 02.7 13.3	13 37.4	6.6	54.5	64	14 11	15 28	16 36	09 50	10 12	10 29	10 42	
	14	29 35.5 16.1	175 35.0 13.2	13 30.8	6.8	54.5	62	14 38	15 44	16 45	09 37	10 01	10 20	10 37	
	15	44 35.2 16.0	190 07.2 13.3	13 24.0	6.7	54.5	60	15 00	15 57	16 54	09 25	09 51	10 13	10 32	
	16	59 34.9 15.8	204 39.5 13.3	13 17.3	6.9	54.6	N 58	15 17	16 09	17 01	09 14	09 43	10 07	10 28	
	17	74 34.6 15.7	219 11.8 13.3	13 10.4	6.9	54.6	56	15 32	16 19	17 08	09 06	09 35	10 01	10 24	
	18	89 34.3 S23 15.6	233 44.1 13.3	N13 03.5	7.0	54.6	54	15 44	16 28	17 14	08 58	09 29	09 56	10 21	
	19	104 34.0 15.4	248 16.4 13.4	12 56.5	7.0	54.6	52	15 55	16 36	17 20	08 50	09 23	09 52	10 18	
	20	119 33.7 15.3	262 48.8 13.3	12 49.5	7.1	54.6	50	16 05	16 43	17 25	08 44	09 18	09 48	10 15	
	21	134 33.4 15.2	277 21.1 13.4	12 42.4	7.1	54.6	45	16 25	16 59	17 36	08 30	09 06	09 39	10 09	
	22	149 33.1 15.0	291 53.5 13.3	12 35.3	7.2	54.6	N 40	16 42	17 13	17 47	08 19	08 56	09 31	10 04	
23	164 32.8 14.9	306 25.8 13.4	12 28.1	7.3	54.7	35	16 56	17 24	17 56	08 09	08 48	09 25	10 00		
J U E V E S	29 00	179 32.5 S23 14.8	320 58.2 13.4	N12 20.8	7.3	54.7	30	17 09	17 35	18 05	08 00	08 41	09 19	09 56	
	01	194 32.2 14.6	335 30.6 13.5	12 13.5	7.4	54.7	20	17 30	17 54	18 21	07 45	08 28	09 09	09 49	
	02	209 31.9 14.5	350 03.1 13.4	12 06.1	7.4	54.7	N 10	17 48	18 11	18 37	07 32	08 17	09 00	09 43	
	03	224 31.6 14.4	4 35.5 13.4	11 58.7	7.5	54.7	0	18 05	18 28	18 54	07 20	08 06	08 52	09 37	
	04	239 31.3 14.2	19 07.9 13.5	11 51.2	7.5	54.7	S 10	18 23	18 46	19 13	07 08	07 56	08 44	09 31	
	05	254 30.9 14.1	33 40.4 13.5	11 43.7	7.6	54.7	20	18 42	19 06	19 35	06 55	07 45	08 35	09 25	
	06	269 30.6 S23 13.9	48 12.9 13.5	N11 36.1	7.7	54.8	30	19 04	19 31	20 04	06 39	07 32	08 25	09 18	
	07	284 30.3 13.8	62 45.4 13.5	11 28.4	7.7	54.8	35	19 16	19 46	20 23	06 31	07 24	08 19	09 14	
	08	299 30.0 13.6	77 17.9 13.5	11 20.7	7.8	54.8	40	19 31	20 04	20 46	06 21	07 15	08 12	09 10	
	09	314 29.7 13.5	91 50.4 13.5	11 12.9	7.8	54.8	45	19 49	20 27	21 16	06 09	07 05	08 04	09 04	
	10	329 29.4 13.4	106 22.9 13.5	11 05.1	7.9	54.8	S 50	20 12	20 56	22 01	05 54	06 53	07 55	08 58	
	11	344 29.1 13.2	120 55.4 13.5	10 57.2	7.9	54.9	52	20 22	21 11	22 28	05 48	06 48	07 50	08 55	
	12	359 28.8 S23 13.1	135 27.9 13.6	N10 49.3	8.0	54.9	54	20 35	21 29	23 12	05 40	06 41	07 45	08 52	
	13	14 28.5 12.9	150 00.5 13.5	10 41.3	8.0	54.9	56	20 49	21 51	////	05 32	06 34	07 40	08 48	
	14	29 28.2 12.8	164 33.0 13.6	10 33.3	8.1	54.9	58	21 05	22 20	////	05 22	06 26	07 34	08 44	
	15	44 27.9 12.6	179 05.6 13.6	10 25.2	8.1	54.9	S 60	21 25	23 07	////	05 11	06 17	07 27	08 39	
	16	59 27.6 12.5	193 38.2 13.6	10 17.1	8.2	54.9	Día	SOL E.T. (-)		Pas. Mer.		LUNA Pas. Mer.		Edad.	Fase
	17	74 27.3 12.3	208 10.8 13.6	10 08.9	8.2	55.0	27	00 51	01 06	12 01	01 09	13 32	17	☾	
	18	89 27.0 S23 12.2	222 43.4 13.6	N10 00.7	8.3	55.0	28	01 20	01 35	12 02	01 55	14 18	18		
	19	104 26.7 12.0	237 16.0 13.6	9 52.4	8.3	55.0	29	01 50	02 04	12 02	02 41	15 04	19		
	20	119 26.4 11.9	251 48.6 13.6	9 44.1	8.4	55.0	S.D.	16.3	d	0.1	S.D.	14.8	14.8	14.9	

T. M. G.	ARIES			VENUS -3.5			MARTE -0.8			JUPITER -2.3			SATURNO +0.6			ESTRELLAS		
	A.H.G.	A.H.G.	Dec.	A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		A.H.G.	Dec.		Nombre	A. H. S.	Dec.
30 ^d 00 01 02 03 04 05 06 07 08 Y 09 I 10 E 11 R 12 N 13 E 14 S 15 16 17 18 19 20 21 22 23	98 19.2	185 28.1	S23 37.9	325 15.2	N21 30.7		8 10.7	N23 12.0		305 29.9	N12 42.7					Acamar	315 38.4	S40 23.8
	113 21.7	200 27.1	37.9	340 18.2	30.9		23 13.5	12.0		320 32.5	42.7					Achernar	335 46.6	S57 21.2
	128 24.2	215 26.1	37.9	355 21.3	31.2		38 16.3	12.0		335 35.0	42.8					Acrux	173 39.1	S62 58.4
	143 26.6	230 25.2	38.0	10 24.3	31.4		53 19.1	12.0		350 37.5	42.8					Adhara	255 33.1	S28 56.6
	158 29.1	245 24.2	38.0	25 27.4	31.7		68 22.0	12.0		5 40.1	42.9					Aldebaran	291 19.8	N16 27.9
	173 31.6	260 23.2	38.0	40 30.4	31.9		83 24.8	12.0		20 42.6	42.9							
	188 34.0	275 22.2	S23 38.1	55 33.5	N21 32.2		98 27.6	N23 12.0		35 45.2	N12 42.9					Alioth	166 44.3	N56 04.5
	203 36.5	290 21.3	38.1	70 36.5	32.5		113 30.4	12.0		50 47.7	43.0					Alkaid	153 20.2	N49 25.2
	218 38.9	305 20.3	38.1	85 39.5	32.7		128 33.3	12.0		65 50.3	43.0					Al Na'ir	28 17.6	S47 04.2
	Y 09 233 41.4	320 19.3	38.1	100 42.6	33.0		143 36.1	12.1		80 52.8	43.1					Alnilam	276 13.2	S 1 13.1
	I 10 248 43.9	335 18.4	38.2	115 45.6	33.2		158 38.9	12.1		95 55.3	43.1					Alphard	218 22.1	S 8 33.9
	E 11 263 46.3	350 17.4	38.2	130 48.7	33.5		173 41.7	12.1		110 57.9	43.1							
	R 12 278 48.8	5 16.4	S23 38.2	145 51.8	N21 33.8		188 44.6	N23 12.1		126 00.4	N12 43.2					Alphecca	126 33.9	N26 47.3
	N 13 293 51.3	20 15.4	38.2	160 54.8	34.0		203 47.4	12.1		141 03.0	43.2					Alpheratz	358 11.2	N28 58.3
	E 14 308 53.7	35 14.5	38.3	175 57.9	34.3		218 50.2	12.1		156 05.5	43.2					Altair	62 34.6	N 8 48.7
	S 15 323 56.2	50 13.5	38.3	191 00.9	34.5		233 53.0	12.1		171 08.1	43.3					Ankaa	353 42.1	S42 25.8
	16 338 58.7	65 12.5	38.3	206 04.0	34.8		248 55.9	12.1		186 10.6	43.3					Antares	112 59.4	S26 22.9
	17 354 01.1	80 11.6	38.3	221 07.0	35.1		263 58.7	12.1		201 13.1	43.4							
	18 9 03.6	95 10.6	S23 38.3	236 10.1	N21 35.3		279 01.5	N23 12.1		216 15.7	N12 43.4					Arcturus	146 20.3	N19 17.7
	19 24 06.1	110 09.6	38.3	251 13.2	35.6		294 04.3	12.1		231 18.2	43.4					Atria	108 25.8	S68 59.1
	20 39 08.5	125 08.7	38.3	266 16.2	35.9		309 07.2	12.1		246 20.8	43.5					Avior	234 28.3	S59 26.3
	21 54 11.0	140 07.7	38.4	281 19.3	36.1		324 10.0	12.1		261 23.3	43.5					Bellatrix	279 00.4	N 6 19.7
	22 69 13.4	155 06.7	38.4	296 22.4	36.4		339 12.8	12.1		276 25.9	43.6					Betelgeuse	271 29.9	N 7 24.1
23 84 15.9	170 05.7	38.4	311 25.4	36.6		354 15.6	12.1		291 28.4	43.6								
31 ^d 00 01 02 03 04 05 06 07 08 09 S 10 A 11 A 12 D 13 O 14 15 16 17 18 19 20 21 22 23	99 18.4	185 04.8	S23 38.4	326 28.5	N21 36.9		9 18.5	N23 12.1		306 31.0	N12 43.6				Canopus	264 07.4	S52 41.2	
	114 20.8	200 03.8	38.4	341 31.6	37.2		24 21.3	12.2		321 33.5	43.7				Capella	281 13.5	N45 58.5	
	129 23.3	215 02.8	38.4	356 34.7	37.4		39 24.1	12.2		336 36.0	43.7				Deneb	49 50.1	N45 12.3	
	144 25.8	230 01.9	38.4	11 37.7	37.7		54 26.9	12.2		351 38.6	43.8				Denebola	183 00.8	N14 41.6	
	159 28.2	245 00.9	38.4	26 40.8	38.0		69 29.8	12.2		6 41.1	43.8				Diphda	349 22.7	S18 06.6	
	174 30.7	259 59.9	38.4	41 43.9	38.2		84 32.6	12.2		21 43.7	43.8							
	189 33.2	274 58.9	S23 38.4	56 47.0	N21 38.5		99 35.4	N23 12.2		36 46.2	N12 43.9					Dubhe	194 24.2	N61 51.8
	204 35.6	289 58.0	38.4	71 50.0	38.8		114 38.2	12.2		51 48.8	43.9					Elnath	278 46.1	N28 35.3
	219 38.1	304 57.0	38.4	86 53.1	39.0		129 41.1	12.2		66 51.3	44.0					Eltanin	90 59.1	N51 29.6
	S 10 234 40.6	319 56.0	38.4	101 56.2	39.3		144 43.9	12.2		81 53.9	44.0					Enif	34 13.6	N 9 46.5
	A 11 249 43.0	334 55.1	38.4	116 59.3	39.5		159 46.7	12.2		96 56.4	44.0					Fomalhaut	15 53.6	S29 44.5
	A 12 264 45.5	349 54.1	38.4	132 02.4	39.8		174 49.5	12.2		111 59.0	44.1							
	D 13 279 47.9	4 53.1	S23 38.4	147 05.5	N21 40.1		189 52.3	N23 12.2		127 01.5	N12 44.1					Gacrux	172 30.6	S56 59.1
	O 14 294 50.4	19 52.1	38.4	162 08.6	40.3		204 55.2	12.2		142 04.1	44.2					Gienah	176 19.8	S17 25.1
	15 309 52.9	34 51.2	38.3	177 11.7	40.6		219 58.0	12.2		157 06.6	44.2					Hadar	149 26.1	S60 15.7
	16 324 55.3	49 50.2	38.3	192 14.7	40.9		235 00.8	12.2		172 09.2	44.2					Hamal	328 30.8	N23 21.6
	17 339 57.8	64 49.2	38.3	207 17.8	41.1		250 03.6	12.2		187 11.7	44.3					Kaus Aust.	84 19.7	S34 23.6
	18 355 00.3	79 48.3	38.3	222 20.9	41.4		265 06.5	12.3		202 14.3	44.3							
	19 10 02.7	94 47.3	S23 38.3	237 24.0	N21 41.7		280 09.3	N23 12.3		217 16.8	N12 44.4					Kochab	137 19.8	N74 14.5
	20 25 05.2	109 46.3	38.3	252 27.1	41.9		295 12.1	12.3		232 19.4	44.4					Markab	14 05.1	N15 05.3
	21 40 07.7	124 45.3	38.2	267 30.2	42.2		310 14.9	12.3		247 21.9	44.4					Menkar	314 42.8	N 4 00.2
	22 55 10.1	139 44.4	38.2	282 33.3	42.5		325 17.7	12.3		262 24.5	44.5					Menkent	148 39.3	S36 15.5
	23 70 12.6	154 43.4	38.2	297 36.4	42.8		340 20.6	12.3		277 27.0	44.5					Miaplacidus	221 44.4	S69 37.5
I 00 85 15.0	169 42.4	38.2	312 39.5	43.0		355 23.4	12.3		292 29.5	44.6								
D 01 O 02 03 04 05 06 07 08 09 M 10 I 11 N 12 G 13 O 14 15 16 17 18 19 20 21 22 23	100 17.5	184 41.5	S23 38.2	327 42.6	N21 43.3		10 26.2	N23 12.3		307 32.1	N12 44.6				Mirfak	309 18.3	N49 47.1	
	115 20.0	199 40.5	38.1	342 45.7	43.6		25 29.0	12.3		322 34.6	44.6				Nunki	76 31.8	S26 19.4	
	130 22.4	214 39.5	38.1	357 48.9	43.8		40 31.9	12.3		337 37.2	44.7				Peacock	54 01.9	S56 48.4	
	145 24.9	229 38.5	38.1	12 52.0	44.1		55 34.7	12.3		352 39.7	44.7				Pollux	244 00.0	N28 04.6	
	160 27.4	244 37.6	38.1	27 55.1	44.4		70 37.5	12.3		7 42.3	44.8				Procyon	245 27.4	N 5 16.8	
	175 29.8	259 36.6	38.0	42 58.2	44.6		85 40.3	12.3		22 44.8	44.8							
	190 32.3	274 35.6	S23 38.0	58 01.3	N21 44.9		100 43.1	N23 12.3		37 47.4	N12 44.9					Rasalhague	96 31.6	N12 34.6
	205 34.8	289 34.7	38.0	73 04.4	45.2		115 46.0	12.3		52 49.9	44.9					Regulus	208 11.7	N12 04.3
	220 37.2	304 33.7	37.9	88 07.5	45.5		130 48.8	12.3		67 52.5	44.9					Rigel	281 37.4	S 8 13.8
	O 09 235 39.7	319 32.7	37.9	103 10.6	45.7		145 51.6	12.3		82 55.1	45.0					Rigel Kent.	140 28.5	S60 44.3
	M 10 250 42.2	334 31.7	37.9	118 13.8	46.0		160 54.4	12.4		97 57.6	45.0					Sabik	102 43.5	S15 41.8
	I 11 265 44.6	349 30.8	37.8	133 16.9	46.3		175 57.2	12.4		113 00.2	45.1							
	N 12 280 47.1	4 29.8	S23 37.8	148 20.0	N21 46.5		191 00.1	N23 12.4		128 02.7	N12 45.1					Schedar	350 11.0	N56 25.3
	G 13 295 49.5	19 28.8	37.7	163 23.1	46.8		206 02.9	12.4		143 05.3	45.1					Shaula	96 58.6	S37 05.2
	O 14 310 52.0	34 27.9	37.7	178 26.3	47.1		221 05.7	12.4		158 07.8	45.2					Sirius	258 57.0	S16 41.3
	15 325 54.5	49 26.9	37.7	193 29.4	47.4		236 08.5	12.4		173 10.4	45.2					Spica	158 59.5	S11 02.7
	16 340 56.9	64 25.9	37.6	208 32.5	47.6													

T. M. G.	SOL		LUNA				Lat.	Crepúsculo		Orto Sol	Orto Luna					
	A.H.G.	Dec.	A.H.G.	v	Dec.	d P.H.		Náut.	Civil		30	31	1		2	
													h	m	h	m
VIERNES	30 00	179 25.2 S23 11.2	309 59.1 13.6 N 9 10.3 8.6 55.1	N 72	08 25	10 46	■	20 43	22 23	24 05	00 05					
	01	194 24.9 11.1	324 31.7 13.6 9 01.7 8.6 55.1	N 70	08 06	09 51	■	20 52	22 25	24 02	00 02					
	02	209 24.6 10.9	339 04.3 13.7 8 53.1 8.6 55.1	68	07 50	09 18	■	20 59	22 28	23 59	25 33					
	03	224 24.3 10.8	353 37.0 13.6 8 44.5 8.7 55.2	66	07 38	08 54	10 30	21 05	22 29	23 56	25 26					
	04	239 24.0 10.6	8 09.6 13.7 8 35.8 8.8 55.2	64	07 27	08 35	09 51	21 10	22 31	23 54	25 20					
	05	254 23.7 10.4	22 42.3 13.7 8 27.0 8.7 55.2	62	07 18	08 19	09 24	21 14	22 32	23 52	25 15					
	06	269 23.4 S23 10.3	37 15.0 13.6 N 8 18.3 8.9 55.2	60	07 10	08 06	09 03	21 18	22 33	23 51	25 10					
	07	284 23.1 10.1	51 47.6 13.7 8 09.4 8.8 55.2	N 58	07 02	07 55	08 46	21 21	22 34	23 49	25 06					
	08	299 22.8 10.0	66 20.3 13.6 8 00.6 8.9 55.3	56	06 56	07 45	08 32	21 24	22 35	23 48	25 03					
	09	314 22.5 09.8	80 52.9 13.7 7 51.7 9.0 55.3	54	06 50	07 36	08 19	21 27	22 36	23 47	25 00					
	10	329 22.2 09.6	95 25.6 13.7 7 42.7 9.0 55.3	52	06 44	07 28	08 08	21 29	22 37	23 46	24 57					
	11	344 21.9 09.5	109 58.3 13.6 7 33.7 9.0 55.3	50	06 39	07 20	07 59	21 31	22 37	23 45	24 54					
	12	359 21.6 S23 09.3	124 30.9 13.7 N 7 24.7 9.1 55.3	45	06 27	07 05	07 38	21 36	22 39	23 43	24 49					
	13	14 21.3 09.1	139 03.6 13.6 7 15.6 9.1 55.4	N 40	06 17	06 51	07 22	21 40	22 40	23 41	24 44					
	14	29 21.0 09.0	153 36.2 13.7 7 06.5 9.1 55.4	35	06 08	06 40	07 08	21 44	22 41	23 40	24 40					
	15	44 20.7 08.8	168 08.9 13.6 6 57.4 9.2 55.4	30	06 00	06 29	06 56	21 47	22 42	23 38	24 37					
	16	59 20.4 08.6	182 41.5 13.7 6 48.2 9.2 55.4	20	05 43	06 11	06 35	21 52	22 43	23 36	24 31					
	17	74 20.1 08.5	197 14.2 13.6 6 39.0 9.3 55.5	N 10	05 27	05 54	06 16	21 56	22 45	23 34	24 26					
	18	89 19.8 S23 08.3	211 46.8 13.7 N 6 29.7 9.3 55.5	0	05 11	05 37	05 59	22 01	22 46	23 33	24 21					
	19	104 19.5 08.1	226 19.5 13.6 6 20.4 9.3 55.5	S 10	04 52	05 19	05 42	22 05	22 47	23 31	24 16					
	20	119 19.2 07.9	240 52.1 13.6 6 11.1 9.4 55.5	20	04 30	04 59	05 23	22 09	22 49	23 29	24 11					
	21	134 18.9 07.8	255 24.7 13.7 6 01.7 9.4 55.5	30	04 01	04 34	05 02	22 15	22 51	23 27	24 05					
	22	149 18.6 07.6	269 57.4 13.6 5 52.3 9.4 55.6	35	03 43	04 19	04 49	22 18	22 51	23 26	24 02					
23	164 18.3 07.4	284 30.0 13.6 5 42.9 9.5 55.6	40	03 20	04 01	04 34	22 21	22 53	23 25	23 58						
SABADO	31 00	179 18.0 S23 07.2	299 02.6 13.6 N 5 33.4 9.5 55.6	S 50	02 05	03 10	03 54	22 30	22 55	23 21	23 49					
	01	194 17.7 07.1	313 35.2 13.6 5 23.9 9.5 55.6	52	01 39	02 55	03 43	22 32	22 56	23 21	23 47					
	02	209 17.4 06.9	328 07.8 13.6 5 14.4 9.5 55.7	54	00 57	02 38	03 31	22 34	22 57	23 20	23 44					
	03	224 17.1 06.7	342 40.4 13.6 5 04.9 9.6 55.7	56	////	02 16	03 17	22 37	22 58	23 19	23 41					
	04	239 16.8 06.5	357 13.0 13.5 4 55.3 9.7 55.7	58	////	01 47	03 01	22 39	22 58	23 18	23 38					
	05	254 16.5 06.4	11 45.5 13.6 4 45.6 9.6 55.7	S 60	////	01 02	02 41	22 43	22 59	23 16	23 35					
	06	269 16.2 S23 06.2	26 18.1 13.5 N 4 36.0 9.7 55.8													
	07	284 15.9 06.0	40 50.6 13.5 4 26.3 9.7 55.8	Lat.	Ocaso Sol	Crepúsculo		Ocaso Luna								
	08	299 15.6 05.8	55 23.1 13.6 4 16.6 9.7 55.8			Civil	Náut.	30	31	1	2					
	09	314 15.3 05.6	69 55.7 13.5 4 06.9 9.8 55.9													
	10	329 15.0 05.4	84 28.2 13.5 3 57.1 9.8 55.9													
	11	344 14.7 05.3	99 00.7 13.4 3 47.3 9.8 55.9	N 72	h m	h m	h m	h m	h m	h m	h m	h m	h m			
	12	359 14.4 S23 05.1	113 33.1 13.5 N 3 37.5 9.8 55.9	N 70	■	13 20	15 41	11 15	11 09	11 04	10 58					
	13	14 14.1 04.9	128 05.6 13.4 3 27.7 9.9 56.0	68	■	14 15	16 01	11 04	11 05	11 04	11 04					
	14	29 13.8 04.7	142 38.0 13.4 3 17.8 9.9 56.0	66	■	14 48	16 16	10 56	11 00	11 05	11 09					
	15	44 13.5 04.5	157 10.4 13.4 3 07.9 9.9 56.0	64	13 36	15 12	16 29	10 48	10 57	11 05	11 14					
	16	59 13.2 04.3	171 42.8 13.4 2 58.0 9.9 56.0	62	14 16	15 32	16 39	10 42	10 54	11 05	11 17					
	17	74 12.9 04.1	186 15.2 13.4 2 48.1 10.0 56.1	60	14 43	15 47	16 49	10 37	10 52	11 06	11 20					
	18	89 12.6 S23 03.9	200 47.6 13.3 N 2 38.1 9.9 56.1	58	15 03	16 00	16 57	10 32	10 49	11 06	11 23					
	19	104 12.3 03.8	215 19.9 13.4 2 28.2 10.0 56.1	N 58	15 20	16 12	17 04	10 28	10 47	11 06	11 26					
	20	119 12.0 03.6	229 52.3 13.3 2 18.2 10.0 56.2	56	15 35	16 22	17 11	10 24	10 45	11 06	11 28					
	21	134 11.7 03.4	244 24.6 13.2 2 08.2 10.1 56.2	54	15 47	16 31	17 17	10 21	10 44	11 06	11 30					
	22	149 11.4 03.2	258 56.8 13.3 1 58.1 10.0 56.2	52	15 58	16 39	17 22	10 18	10 42	11 07	11 32					
23	164 11.1 03.0	273 29.1 13.2 1 48.1 10.1 56.2	50	16 08	16 46	17 27	10 15	10 41	11 07	11 33						
DOMINGO	1 00	179 10.8 S23 02.8	288 01.3 13.2 N 1 38.0 10.1 56.3	45	16 28	17 02	17 39	10 09	10 38	11 07	11 37					
	01	194 10.5 02.6	302 33.5 13.2 1 27.9 10.1 56.3	N 40	16 44	17 15	17 49	10 04	10 36	11 07	11 40					
	02	209 10.2 02.4	317 05.7 13.2 1 17.8 10.1 56.3	35	16 58	17 26	17 58	10 00	10 33	11 07	11 42					
	03	224 10.0 02.2	331 37.9 13.1 1 07.7 10.2 56.4	30	17 11	17 37	18 07	09 56	10 32	11 07	11 45					
	04	239 09.7 02.0	346 10.0 13.1 0 57.5 10.1 56.4	20	17 31	17 55	18 23	09 49	10 28	11 08	11 49					
	05	254 09.4 01.8	0 42.1 13.1 0 47.4 10.2 56.4	N 10	17 50	18 12	18 39	09 43	10 25	11 08	11 52					
	06	269 09.1 S23 01.6	15 14.2 13.0 N 0 37.2 10.2 56.4	0	18 07	18 29	18 55	09 37	10 22	11 08	11 55					
	07	284 08.8 01.4	29 46.2 13.0 0 27.0 10.1 56.5	S 10	18 24	18 47	19 14	09 31	10 20	11 08	11 59					
	08	299 08.5 01.2	44 18.2 13.0 0 16.9 10.2 56.5	20	18 43	19 07	19 36	09 25	10 16	11 09	12 02					
	09	314 08.2 01.0	58 50.2 12.9 N 0 06.7 10.3 56.5	30	19 04	19 32	20 05	09 18	10 13	11 09	12 06					
	10	329 07.9 00.8	73 22.1 13.0 S 0 03.6 10.2 56.6	35	19 17	19 47	20 23	09 14	10 11	11 09	12 08					
	11	344 07.6 00.6	87 54.1 12.8 0 13.8 10.2 56.6	40	19 32	20 05	20 46	09 10	10 09	11 09	12 11					
	12	359 07.3 S23 00.4	102 25.9 12.9 S 0 24.0 10.3 56.6	45	19 50	20 27	21 16	09 04	10 06	11 09	12 14					
	13	14 07.0 00.2	116 57.8 12.8 0 34.3 10.2 56.7	S 50	20 12	20 56	22 00	08 58	10 03	11 09	12 18					
	14	29 06.7 23 00.0	131 29.6 12.8 0 44.5 10.3 56.7	52	20 22	21 11	22 26	08 55	10 01	11 09	12 19					
	15	44 06.4 22 59.8	146 01.4 12.7 0 54.8 10.2 56.7	54	20 34	21 28	23 07	08 52	10 00	11 09	12 21					
	16	59 06.1 59.6	160 33.1 12.7 1 05.0 10.3 56.8	56	20 48	21 49	////	08 48	09 58	11 09	12 23					
	17	74 05.8 59.4	175 04.8 12.7 1 15.3 10.3 56.8	58	21 04	22 17	////	08 44	09 56	11 09	12 25					
	18	89 05.5 S22 59.1	189 36.5 12.6 S 1 25.6 10.3 56.8	S 60	21 24	23 02	////	08 39	09 53	11 10	12 28					
	19	104 05.2 58.9	204 08.1 12.6 1 35.9 10.3 56.9													
	20	119 04.9 58.7	218 39.7 12.6 1 46.2 10.2 56.9													
	21	134 04.6 58.5	233 11.3 12.5 1 56.4 10.3 56.9													
	22	149 04.3 58.3	247 42.8 12.4 2 06.7 10.3 57.0													
23	164 04.1 58.1	262 14.2 12.5 2 17.0 10.3 57.0														
	S.D. 16.3 d 0.2	S.D. 15.1 15.2 15.4														
				Día	SOL E.T. (-)		Pas. Mer.	LUNA Pas. Mer.		Edad.	Fase					
					00 ^h	12 ^h		Sup.	Inf.							
				30	m s	m s	h m	h m	h m	d						
				31	02 19	02 33	12 03	03 26	15 49	20						

EXPLICACIONES

FUNDAMENTO Y DISPOSICION DE LOS DATOS

1. **OBJETO:** El objeto de este Almanaque es el de proporcionar en forma conveniente los datos necesarios para la práctica de la navegación astronómica en el mar.

2. **PRINCIPIO:** Los contenidos principales del Almanaque consisten en los datos a partir de los cuales pueden obtenerse los valores del Angulo Horario de Greenwich (A. H.G.) y la Declinación (Dec.) de todos los astros usados en la navegación, para cualquier instante de *Tiempo Medio de Greenwich* (T.M.G. = Tiempo Universal T.U. = Tiempo Civil de Greenwich T.C.G.). El Angulo Horario Local (A.H.L.), puede obtenerse mediante el uso de la fórmula:

$$\text{A.H.L.} = \text{A.H.G.} \begin{array}{l} - \text{ Oeste} \\ \text{longitud} \\ + \text{ Este} \end{array}$$

Los datos restantes se refieren a: horas de orto y ocaso del Sol y la Luna, así como la duración de los crepúsculos; datos varios de calendario y otros; tablas auxiliares, incluyendo una lista de Horas Legales; correcciones que deben aplicarse a las alturas observadas

Para el Sol, la Luna y los planetas, los valores del A.H.G. y la Dec., se encuentran tabulados directamente para cada hora de T.M.G. a través del año. Para las estrellas, se indican los valores del Angulo Horario Sidéreo (A.H.S.); el A.H.G. se obtiene mediante la fórmula:

$$\text{A.H.G. estrella} = \text{A.H.G. Aries} + \text{A.H.S. estrella.}$$

El A.H.S. y la Dec. de las estrellas cambian de valor lentamente y pueden considerarse como constantes a lo largo de períodos de varios días. El A.H.G. de Aries, o Angulo Horario en Greenwich para el primer punto de Aries (Equinoccio Vernal), se encuentra tabulado para cada hora. Unas tablas permanentes dan los incrementos apropiados y las correcciones, que deben aplicarse a los valores horarios tabulados del A.H.G. y la Dec., por minutos y segundos de T.M.G.

La precisión tabular es 0'.1 para todos los datos. El argumento en las páginas diarias de este Almanaque es: 12^h + el Angulo Horario en Greenwich del Sol medio en (T.M.G.). Esta escala* puede diferir de las señales de tiempo emitidas, en una cantidad que, si se ignora, puede introducir un error de más de 0'.2 en la longitud determinada por observaciones astronómicas. (La diferencia es debida a que el argumento tiempo depende de la variación en la rotación de la Tierra, mientras que las señales de tiempo transmitidas actualmente se basan, en escalas de tiempo atómico). Se hacen ajustes escalonados, de exactamente un segundo, a las señales de tiempo (normalmente a las 24 horas del 31 de diciembre, y del 30 de junio), para que la diferencia entre las señales de tiempo y el T.M.G., que se usa en este Almanaque, no exceda de 0^s.7. Si se requieren reducir las observaciones a una precisión mayor de 1^s, debe obtenerse la corrección para las señales de tiempo, codificando éstas, o por otros medios. La corrección puede aplicarse a cada uno de los tiempos de observación; alternativamente, la longitud, cuando se determina por observaciones astronómicas, puede corregirse por la cantidad correspondiente que aparece en la siguiente tabla:

Correcciones a las
señales de tiempo.

—0^s.7
—0^s.6 a —0^s.3
—0^s.2 a +0^s.2
+0^s.3 a +0^s.6
+0^s.7

Corrección a la
longitud.

0'.2 al Este
0'.1 al Este
No se corrige
0'.1 a Oeste
0'.2 al Oeste

*El nombre de Tiempo Universal (TU) es normalmente usado en lugar del nombre Tiempo Medio de Greenwich. La escala de tiempo usada en este Almanaque se indica en TU1, mientras que la escala de señales de tiempo se indica en T.U.G.

3. **PRESENTACION:** Los datos correspondientes a tres días se presentan a lo largo de dos páginas: la página de la izquierda contiene los datos referentes a los planetas y las estrellas; la página de la derecha contiene los datos inherentes al Sol y la Luna, junto con las horas de sus ortos y ocasos y la duración de los crepúsculos.

Los datos restantes se encuentran arreglados como sigue: para facilidad de referencia, las tablas de correcciones para las alturas se encuentran en las páginas A₂, A₃, A₄, xxxiv y xxxv; el Calendario, las fases de la Luna y las notas acerca de eclipses y planetas (datos de interés general) anteceden a las tabulaciones principales y se han arreglado, hasta donde ha sido posible, en orden de importancia o frecuencia de empleo, partiendo de la página xxxv.

DATOS PRINCIPALES

4. **PAGINAS DIARIAS:** En estas páginas se encuentran los valores del A.H.G. de Aries, del A.H.G. y la Dec. del Sol, la Luna y los cuatro planetas empleados en navegación, para cada hora de T.M.G. Para la Luna también se han tabulado los valores de v y d para cada hora, a fin de facilitar la corrección del A.H.G. y la Dec. para valores intermedios; los valores v y d correspondientes al Sol y los planetas cambian tan lentamente, que se encuentran anotados al pie de la columna apropiada, solamente una vez en cada página; v vale cero para Aries, es despreciable para el Sol, y se omite. También se dan los valores de A.H.S. y la Dec. correspondientes a las 57 estrellas seleccionadas, arregladas en orden alfabético de los nombres de dichas estrellas.

5. **ESTRELLAS:** En las páginas 272-277 se han tabulado los valores mensuales de A.H.S. y Dec. correspondientes a 173 estrellas, incluyendo las 57 seleccionadas; no se necesita interpolación y los datos pueden usarse precisamente en la misma forma que se hace con los referentes a las 57 estrellas seleccionadas. Las estrellas se han arreglado en orden a su A.H.S.

La lista de 173 estrellas, incluye todas aquellas hasta la 3a. magnitud, junto con algunas menos brillantes, para cubrir claros grandes. Para las 57 estrellas seleccionadas, se ha tomado en cuenta su brillantez y distribución en el cielo; esta selección es suficiente para la mayoría de las observaciones.

Las 57 estrellas seleccionadas, son conocidas por sus nombres propios, pero también están numeradas en orden descendiente del A.H.S. En la lista de 173 estrellas, los nombres de las constelaciones, están siempre relacionadas en la parte izquierda de la página; en la cubierta posterior, se dan los nombres propios cuando existen. Los números de las estrellas seleccionadas se anotan en ambas columnas.

Las estrellas que por su declinación, no son recomendables para calcular con las Tablas de Cálculo de Altura y Azimut (H.O. 214 ó H.D. 486), son especialmente indicadas.

En la página xxxiii se encuentra un índice de estrellas seleccionadas, el cual contiene la lista de éstas, tanto en orden alfabético, como numérico; el mismo índice se halla impreso en la hoja suelta adjunta.

6. **INCREMENTOS Y CORRECCIONES:** Estas tablas, impresas en papel de color (páginas ii-xxxi) en la parte posterior del Almanaque, proporcionan los incrementos y correcciones, por minutos y segundos, que deben aplicarse a los valores horarios del A.H.G. y la Dec. Consisten de sesenta tablas, una por cada minuto, separadas en dos partes: Incrementos al A.H.G. para el Sol y planetas, Aries y Luna por cada minuto y segundo de tiempo; y, por cada minuto de arco, las correcciones que deben aplicarse al A.H.G. y a la Dec., correspondientes a los valores de v y d anotados en las páginas diarias.

Los incrementos están basados en las siguientes tasas de incremento horario del A.H.G.: Sol y planetas 15°; Aries, 15°02'.46; Luna, 14°19'.0. Los valores de v anotados en las páginas diarias se encuentran excedidos de los movimientos horarios actuales sobre los valores adoptados; son generalmente positivos, excepto para Venus. Los valores horarios tabulados del A.H.G. para el Sol, se han ajustado a fin de reducir al mínimo el error que se ocasiona al considerar a v como despreciable. Los valores de d consignados en las páginas diarias, son las diferencias horarias de la Dec. Para la Luna, se dan los valores verdaderos de v y d para cada hora; en otros casos se dan valores medios para los tres días de cada página.

7. METODO DE ENTRADA: El T.M.G. correspondiente a una observación, se expresa por un día y hora seguido por un cierto número de minutos y segundos. Por lo tanto, los valores tabulares de A.H.G., la Dec. y, donde es necesario, los valores correspondientes de v y d , se toman directamente de las páginas diarias para el día y la hora de T.M.G. Esta hora es siempre anterior a la de la observación. Los valores del A.H.S. y la Dec de las estrellas seleccionadas, también se toman de las páginas diarias.

A continuación se busca la corrección correspondiente para el minuto de T.M.G. para el A.H.G., el incremento por minutos y segundos se toma de la columna apropiada opuesta al valor de los segundos de T.M.G.; la corrección v se toma de la segunda parte de la misma tabla opuesta al valor de v dada en las páginas diarias. Tanto el incremento como la corrección de v deben agregarse al valor del A.H.G., excepto en el caso de Venus cuando v está antecedita por el signo menos y, esta corrección v , debe restarse. Para la declinación no hay incremento, pero se aplica una corrección d en la misma forma que la corrección v ; d se encuentra sin signo en la página diaria; el signo de la corrección debe deducirse por inspección de la columna de Dec. En muchos casos la corrección puede aplicarse mentalmente.

8.-EJEMPLOS.- (a) Sol y Luna, Determinar el A.H.G. y la Dec. del Sol y la Luna, para el 22 de enero de 1977 a las 15^h 47^m 13^s. T.M.G.

	SOL			LUNA			
	A.H.G.	Dec.	d	A.H.G.	v	Dec.	d
Página diaria Ene. 22 ^d 15 ^h	42 04.7	S.19 36.3	0.6	6 03.0	12.6	S.4 06.6	10.5
Incrementos por 47 ^m 13 ^s	11 48.3			11 16.0			
Correcciones por v ó d 47 ^m			-0.5	+10.0		-8.3	
Suma para Ene 22 ^d 15 ^h 47 ^m 13 ^s	53 53.0	S.19 35.8		17 29.0		S.3 58.3	

(b).- PLANETAS.- Determinar el A.H.L. y la Dec. de: (i) Venus, para el 6 de enero de 1977 a las 10^h 57^m 28^s, en Longitud E. 150° 55'; (ii) Júpiter para el 6 de enero de 1977 a las 23^h 25^m 12^s en Longitud W 55° 12'. T.M.G.

	VENUS				JUPITER			
	A.H.G.	v	Dec.	d	A.H.G.	v	Dec.	d
Página diaria Ene. 6 ^d (10 ^h) 28 ⁱ 19.3	-0.1	S.11 56.1	1.1	(23 ^h) 42 16.5	2.6	N.17 10.0	0.0	
Increm. (Planetas) (57 ^m 28 ^s)	14 22.0			(25 ^m 12 ^s) 6 18.0				
Correc. por v ó d (57 ^m)	-0.1		-1.1	(25 ^m) +1.1			0.0	
Suma = A.H.G. y Dec.	295 41.2	S.11 55.0		48 35.6		N.17 10.0		
Longitud (Este) +150 55.0				(Oeste) - 55 12.0				
Múltiplos de 360°	-360			+360				
A.H.L. Planeta	86 36.2			353 23.6				

(c) Estrellas. Determinar el A.H.G. y la Dec. de: (i) Aldebarán para el 22 de Enero de 1977 a las 15^h 55^m 13^s; (ii) Vega para el 22 de Enero de 1977 a las 16^h 02^m 45^s T.M.G.

	Aldebarán		Vega	
	A.H.G.	Dec.	A.H.G.	Dec.
Página diaria (A.H.S. y Dec.)	291 20.6	N.16 27.8	80 57.9	N.38 45.7
Página diaria (A.H.G. Aries) (15 ^h)	346 50.8		(16 ^h) 1 53.3	
Incremento (Aries) (55 ^m 13 ^s)	13 50.5		(02 ^m 45 ^s) 0 41.4	
Suma = A.H.G. Estrella	652 01.9		83 32.6	
Múltiplos de 360°	-360			
A.H.G. Estrella	292 01.9		83 32.6	

9. TABLAS DE POLAR. Las tablas contenidas en las páginas 278-280 dan los valores de las correcciones que permiten deducir la latitud partiendo de una observación de altura de Polar y también dan su azimut; su empleo se explica e ilustra en dichas páginas. Las tablas están basadas en la fórmula siguiente:

Latitud — altura de sextante corregida = $-p \cos h + \frac{1}{2} p \operatorname{sen} p \operatorname{sen}^2 h \tan (\text{latitud})$.

En la que

p = distancia polar de la Estrella Polar = $90 - \text{Dec}$.

h = ángulo horario local de polar = A.H.L. + A.H.S.

a_0 , que es una función de A.H.L. de Aries únicamente, es el valor de ambos términos de la fórmula anterior, calculada para valores medios del A.H.S. ($327^{\circ}26'$) y de la Dec. (N. $89^{\circ}09'.7$) de la Polar, para una latitud media de 50° y ajustada mediante la adición de una constante ($58'.8$). a_1 , que es una función del A.H.L. de Aries y de la latitud, es el exceso del valor del segundo término sobre su valor medio para la latitud de 50° , incrementado por una constante ($0'.6$) a fin de hacerlo siempre positivo. a_2 , que es una función del A.H.L. de Aries y de la fecha, es la corrección aplicable al primer término por la variación de la Estrella Polar a partir de su posición media adoptada; este valor está incrementado por una constante ($0'.6$) a fin de hacerlo positivo. La suma de las constantes agregadas es 1° , de tal manera que:

Latitud = altura de sextante corregida $- 1^{\circ} + a_0 + a_1 + a_2$.

FENOMENO DE ORTO Y OCASO.

10. GENERALIDADES: En el lado derecho de las páginas diarias se encuentran anotadas las horas de orto y ocaso del Sol, las de comienzo y fin de los crepúsculos civil y náutico y las del orto y ocaso de la Luna para latitudes comprendidas entre 72°N , y 60°S . Estas horas se encuentran dadas al minuto próximo, son estrictamente los T.M.G. en que ocurre el fenómeno sobre el meridiano de Greenwich; están dadas para cada día, para el fenómeno de orto y ocaso de la Luna, pero solamente para el día medio de los 3 contenidos en cada página, para el caso del fenómeno solar.

Estas horas son aproximadamente los T.M.L. del fenómeno correspondiente sobre otros meridianos; pueden interpolarse si se desea. El T.M.G. de ocurrencia de un fenómeno se obtiene a partir del T.M.L. por medio de la siguiente fórmula:

$$\text{T.M.G.} = \text{T.M.L.} \begin{array}{l} + \text{Oeste} \\ \text{Longitud} \\ - \text{Este} \end{array}$$

En la cual el valor de la longitud debe convertirse primero en tiempo, mediante el uso de la tabla contenida en la página i, o de otra forma.

La interpolación por latitud puede hacerse mentalmente, o con auxilio de la tabla I de la página xxxii.

Para indicar las condiciones bajo las cuales algunos de los fenómenos no ocurren en altas latitudes, se usan los símbolos siguientes:

□ El Sol o la Luna permanecen continuamente sobre el horizonte;

■ El Sol o la Luna permanecen continuamente por debajo del horizonte;

//// El crepúsculo dura toda la noche.

BASES PARA EL CALCULO. Para el orto y el ocaso del Sol, se adoptaron los valores de $16'$ por semidiámetro y $34'$ por refracción horizontal, de tal manera que, a las horas dadas, el limbo superior del Sol se encuentra sobre el horizonte visible; todas las horas se refieren al fenómeno, tal como se ve desde el nivel del mar con horizonte claro.

A las horas dadas para comienzo y final de los crepúsculos, la distancia cenital del Sol es de 96° para el civil y de 102° para el náutico. El grado de iluminación a las horas dadas para el crepúsculo civil (en buenas condiciones y en ausencia de otra iluminación) es tal, que las estrellas más brillantes resultan visibles y el horizonte claramente definido.

A las horas dadas por el crepúsculo náutico, el horizonte por regla general, no resulta visible y está demasiado obscuro para efectuar alguna observación con el sextante.

Por interpolación y extrapolación, pueden obtenerse las horas correspondientes a otras depresiones del Sol, no siendo de confianza las mayores de 12° ; las horas obtenidas de esta forma estarán sujetas a considerable incertidumbre cerca de las condiciones extremas.

Para el orto y el ocaso se adoptó el valor de 34' por semidiámetro, paralaje y refracción: de tal manera que, a las horas dadas, el limbo superior de la luna se encuentre sobre el horizonte visible, tal como se ve desde el nivel del mar.

11. CREPUSCULO, ORTO Y OCASO DEL SOL. Las horas tabuladas pueden considerarse, sin errores serios, como T.M.L. de ocurrencia del fenómeno, en cualquiera de los tres días contenidos en la página, y en cualquier longitud. Las horas precisas pueden obtenerse normalmente interpolando los valores tabulares por latitud y de acuerdo con el día y longitud correctos, considerando a esta última expresada como fracción de un día dividiendo su valor entre 360°; positiva para las longitudes oestes y negativas para las estes. En las condiciones extremas, cerca de los símbolos □, ■ o ///, puede no ser posible la interpolación en una dirección, pero los valores exactos son de escasa significación en estas circunstancias.

Ejemplo. Determinar el T.M. G. de: (a), el comienzo del crepúsculo matutino y el orto del Sol para el 22 de Enero de 1977 en latitud S 48° 55', longitud E 75° 18'; (b) el ocaso del Sol y el fin del crepúsculo vespertino para el 24 de Enero de 1976 en latitud N 67° 10', longitud W 168° 05'.

	CREPUSCULO						CREPUSCULO									
	(a)		Náutico *		Civil		Orto		(b)		Ocaso		Civil		Náutico	
De la pág. 25 T.M.L. para	d	h m	d	h m	d	h m	d	h m	d	h m	d	h m	d	h m	d	h m
Lat	S .45°	22 03 25	22 04 09	22 04 44	N . 66°	24 14 57	24 16 07	24 17 15								
Corr.	S .48° 55'	-27	-20	-16	N . 67° 10'	-17	-9	-6								
(pág. XXXii)																
Long. (p. i)	E .75° 18'	-5 01	-5 01	-5 01	W .168° 05'	+11 12	+11 12	+11 12								
T.M.G.		21 21 57	21 22 48	21 23 27		25 01 52	25 03 10	25 04 21								

Los T.M.L. son estrictamente para el 23 de Enero (día medio de la página) y 0° de longitud; para obtener las horas precisas es necesario interpolar:

(a) Para Enero 22^u $-75°/360° = \text{Ene. } 21^{\text{u}}.8$, o sea $1/3 (1.2) = 0.4$; aplicando esta corrección al dato obtenido en la página 23, las correcciones son: -2^{m} para el crepúsculo náutico, -2^{m} para el crepúsculo civil y -2^{m} para el orto.

* Los crepúsculos náuticos y civil empiezan o terminan, cuando el Sol está a 12° y 6° abajo del horizonte respectivamente.

(b) Para Enero 24 $+168°/360° = 24/5$, o sea, $1/3 (1.5) = 0.5$; aplicando esta corrección al dato obtenido en la página 27, las correcciones son: $+8^{\text{m}}$ para el ocaso, $+5^{\text{m}}$ para el crepúsculo civil, y $+4^{\text{m}}$ para el crepúsculo náutico.

12. ORTO Y OCASO DE LA LUNA. Raramente se necesitan las horas precisas de orto y ocaso de la Luna; una mirada a las tablas generalmente dará suficiente indicación acerca de si la Luna se encuentra en condiciones de observación y de las horas de su orto y ocaso. De ser necesario, las horas precisas pueden obtenerse como sigue: Interpolar por latitud, usando la tabla I de la página xxxii, para el día deseado, y también para el día anterior, en longitudes este, o para el día siguiente en longitudes oeste; tomar la diferencia entre estas horas e interpolar por longitud aplicando a la hora del día deseado la corrección de la tabla II de la página xxxii, de tal manera que la hora resultante queda entre las dos horas usadas.

En condiciones extremas cerca de los símbolos □ ó ■, la interpolación por latitud o longitud solamente es posible en una dirección; en estas circunstancias las horas exactas son de escaso valor.

Para facilitar esta interpolación, en cada página se encuentran registradas las horas de orto y ocaso de la Luna para cuatro días; cuando no hay ocurrencia del fenómeno durante un día particular (tal como acontece una vez al mes), la hora de ocurrencia del fenómeno para el día siguiente viene dada, aumentada en 24^h; debe tenerse mucho cuidado al interpolar entre dos valores, cuando uno de éstos excede de 24^h. En la práctica es suficiente emplear la diferencia diaria entre las horas para la latitud más próxima tabulada y, generalmente, entrar a la tabla II con los argumentos tabulares más próximos, tal como se muestra en los ejemplos que siguen:

Ejemplo. Determinar el T.M.G. del orto y ocaso de Luna en latitud S 47° 10', longitudes E 124° 00' y W 76° 31' el 22 de Enero de 1977.

	Longitud E. 124° 00'		Longitud W. 76° 31'	
	Orto	Orto	Ocaso	Ocaso
	d h m	d h m	d h m	d h m
T.M.L. para Lat. S 45°	22 08 02	22 20 59	22 08 02	22 20 59
Correc. por Lat. (pág. xxxii Tabla I)	-02	00	-02	00
Correc. por Long. (pág. xxxii Tabla II)	-23	-10	+16	+07
T.M.L. corregido	22 07 37	22 20 49	22 08 16	22 21 06
Longitud (p.i.)	-8 16	-8 16	+5 06	+5 06
T.M.G.	21 23 21	22 12 33	22 13 22	23 02 12

TABLAS DE CORRECCION DE ALTURAS

13. GENERALIDADES. En general se dan dos correcciones para aplicarse a las alturas observadas con el sextante; se necesitan correcciones adicionales para Venus y Marte; y también para alturas muy bajas.

En las páginas A₂ y xxxiv están dadas las tablas de corrección por depresión del horizonte, debido a la altura del ojo del observador sobre el nivel del mar, esta corrección debe aplicarse primero y restarse de la altura del sextante, para obtener la altura aparente, que es el argumento correcto de entrada para las otras tablas.

Se dan tablas separadas para obtener la segunda corrección para el Sol, estrellas y planetas (en las páginas A₂ y A₃) y para la Luna (en las páginas xxxiv y xxxv). Para el Sol, se dan valores para ambos limbos, superior e inferior, para dos períodos del año. Las tablas de estrellas se usan para planetas, pero se necesitan hacer correcciones adicionales para Venus y Marte (Página A₂). Las Tablas de la Luna están divididas en dos partes: La corrección principal es una función de la altura aparente únicamente, y está tabulada para el limbo inferior (deben restarse 30' para obtener la corrección del limbo superior); la otra, que viene dada para limbos superior e inferior, depende también del paralaje horizontal que debe tomarse de las páginas diarias.

Se necesita también, una corrección adicional consignada en la página A₄, para el cambio en la refracción, debida a variaciones de presión y temperatura, a partir de las condiciones normales adoptadas; ésta puede despreciarse generalmente, para alturas mayores de 10°, excepto posiblemente, en condiciones extremas. Las tablas de correcciones para Sol, estrellas y planetas, están presentadas en dos partes; solamente aquellas referentes a alturas mayores de 10° se han reimpresso en la hoja suelta adjunta.

14. TABLAS CRITICAS. Algunas de las tablas de correcciones de alturas se han dispuesto como tablas críticas. En éstas, un intervalo de altura aparente (o altura del ojo del observador) corresponde a un solo valor de la corrección; no se necesita interpolación. Para una entrada "crítica" se toma el valor superior de los dos posibles para la corrección. Por ejemplo, en la tabla de depresión, una corrección de (-) 4'.1 corresponde a todos los valores de altura del ojo de 5.3 a 5.5 metros (17.5 a 18. 3 pies) inclusive.

15. EJEMPLOS. Los ejemplos siguientes ilustran el uso de las tablas de corrección de alturas; se supone que las alturas del sextante fueron tomadas el 22 de enero de 1976 con un sextante a una altura de 5.4 mts. (18 pies), temperatura de -3°C y una presión de 782 mb. observándose la Luna alrededor de las 10^h T.M.G.

	SOL Limbo. Inf.	SOL Limbo. Sup.	LUNA Limbo. Inf.	LUNA Limbo. Sup.	VENUS	Polaris
Altura del Sextante	21 19.7	3 20.2	33 27.6	26 06.7	4 32.6	49 36.5
Depresión 5.4 m (18 pies)	-4.1	-4.1	-4.1	-4.1	-4.1	-4.1
Corrección principal	+13.8	-29.6	+57.4	+60.5	-10.8	-0.8
-30° Limb. sup. (Luna)	—	—	—	-30.0	—	—
Corr. para Luna I. S.	—	—	+4.1	+3.1	—	—
Corr. adicional para Venus	—	—	—	—	+0.2	—
Corr. adicional por refracción	-0.1	-0.3	0.0	-0.1	-0.3	0.0
Altura del Sextante Corregida	21 29.3	2 46.2	34 25.0	26 36.1	4 17.6	49 31.6

Las correcciones principales se han obtenido partiendo de la altura aparente (altura de sextante corregida por depresión) como argumento, interpolando donde fue posible. Estos refinamientos raramente se necesitan.

16. BASES DE LAS CORRECCIONES. La tabla por depresión de horizonte del mar está basada en la fórmula:

$$\text{Corrección por depresión} = -1.76\sqrt{(\text{altura del ojo en metros})} = -0.97 \times \sqrt{(\text{altura del ojo en pies})}$$

La refracción media, dada explícitamente en la tabla de corrección para estrellas y planetas e incorporada dentro de las correspondientes al Sol y la Luna, está basada en la teoría de Garfinkel y está determinada para una temperatura de 10°C (50°F.) y una presión de 1010 mb. (29.83 pulgadas).

Las correcciones adicionales por variaciones de temperatura y presión, a partir de las condiciones adoptadas como medias, también están basadas en la teoría de Garfinkel; no existe diferencia significativa entre las varias teorías con respecto a la exactitud dada.

La tabla de corrección para Sol incluye los efectos de semidiámetro y paralaje, así como la refracción media. No se incluye corrección por el efecto de irradiación.

Las correcciones adicionales para Venus y Marte son en función del paralaje y fase y están dados por: $p \cos H - k \cos \theta$; fórmula en la que H es la altura, θ el ángulo formado en el planeta por la vertical y el Sol; p y k para 1976, para Venus son:

Ene. 1	Feb. 7	Mar. 3	Mar. 19	Abr. 24	May. 10	Jun. 1	Jul. 21	Dic. 31
p	0.2	0.3	0.4	0.5	0.4	0.3	0.2	0.1
k	0.1	0.2	0.3	0.4	0.3	0.2	0.1	0.0

Las correcciones dadas en las páginas A₂ y en la hoja suelta adjunta son valores medios aplicables, en el caso de Venus, solamente cuando el Sol se encuentra debajo del horizonte. Para observaciones de Venus a la luz del día los valores observados de H y θ deben usarse para calcular la corrección directamente. El término $-k \cos \theta$ es positivo cuando el Sol está más bajo que Venus, cero cuando se hallan a la misma altura y negativo cuando el Sol está más alto.

En el caso de la Luna, la tabla de corrección incluye los efectos de semidiámetro, paralaje y aumento, así como la refracción media; no se incluye corrección por irradiación.

17. OBSERVACIONES CON SEXTANTE DE BURBUJA. Cuando se observa con sextante de burbuja no se requieren correcciones por depresión, semidiámetro o aumento. Para las estrellas y planetas, las correcciones dadas pueden usarse sin cambio y deben usarse también para el Sol; para la Luna es más fácil tomar el valor medio de las correcciones para limbos superior e inferior y restar 15' de la altura; la corrección por depresión no debe aplicarse.

DATOS AUXILIARES Y DE PLANEACION.

18. SOL Y LUNA. En las páginas diarias se encuentran anotados los semidiámetros y las horas de paso por el meridiano de Greenwich, tanto del Sol como de la Luna; la ecuación del tiempo; el paralaje horizontal y la Edad de la Luna, junto con un símbolo indicativo de su fase. Para la Luna, al pie de su columna, se encuentran los valores de los semidiámetros para cada uno de los tres días; para el Sol es suficiente un valor.

La ecuación del tiempo (E.T.), es dada con su signo, para las 00^h y 12^h de T.M.G. para cada día. Para obtener la hora verdadera, se aplica la ecuación del tiempo con su signo a la hora media.

Las horas de las fases de la Luna se dan en T.M.G. en la página 4.

19. PLANETAS. Las magnitudes de los planetas están asentadas siguiendo inmediatamente a sus nombres en los encabezados de las páginas diarias; también están dadas para el día medio de los tres de cada página, sus A.H.S. a las 00^h T.M.G. y su horas de paso por el meridiano.

Las notas y diagramas sobre planetas contenidas en las páginas 8 y 9 proporcionan una información descriptiva acerca de la posibilidad de observación de los planetas durante el año, así como de sus posiciones y movimientos.

20. ESTRELLAS. En las páginas diarias se anota la hora al 0.1^m del paso por el meridiano de Greenwich del primer punto de Aries para el día medio de los tres contenidos en cada página. El intervalo de dos pasos sucesivos por el meridiano es de 23^h56.1^m (24^h menos 3.9^m) de tal manera que pueden deducirse rápidamente las horas de paso correspondientes a días intermedios, así como las de paso por otros meridianos. Si se necesita la hora precisa, ésta puede determinarse encontrando el T.M.G. al cual corresponde un valor cero para el A.H.L. de Aries.

El paso de una estrella por el meridiano ocurre cuando su A.H.L. vale cero, esto es, cuando $A.H.L. \text{ de Aries} + A.H.S. = 360^\circ$. Una hora aproximada puede obtenerse empleando el diagrama de planetas consignado en la página 9.

Las cartas de estrellas que se muestran en las páginas 270 y 271 sirven como ayuda en su identificación. Estas cartas muestran la posición relativa de las estrellas en el cielo tal como se ven desde la Tierra e incluyen todas las 173 estrellas empleadas en el Almanaque, junto con otras más para completar la configuración de las constelaciones principales.

El meridiano local puede determinarse en la carta por medio de su A.H.S., el cual es igual a $360^\circ - A.H.L. \text{ de Aries}$, o longitud oeste $- A.H.G. \text{ de Aries}$.

21. ESFERA CELESTE. Para emplear la escala de A.H.L. de Aries, impresa en una esfera celeste, primero se fija la esfera de acuerdo con la latitud y luego se hace girar alrededor del eje polar, hasta que se lea la escala bajo el bordo del círculo meridiano el A.H.L. de Aries.

Para encontrar las posiciones del Sol, la Luna y los planetas sobre una esfera celeste, tómese la diferencia $A.H.G. \text{ de Aries} - A.H.G. \text{ del astro}$ y úsese esta diferencia a lo largo de la escala de A.H.L. de Aries junto con la declinación, para establecer la posición del astro. La diferencia $A.H.G. \text{ de Aries} - A.H.G. \text{ del astro}$ se facilita tomándola cuando el A.H.G. del astro es pequeño (menos de 15°), lo cual acontece una vez al día.

22. CALENDARIO. En la página 4 se encuentran listas de fiestas, aniversarios y fases de la Luna.

El calendario de la página 5 incluye el orden numérico progresivo de los días del año y del mes, así como el nombre correspondiente de los días de la semana.

Al pie de la página 5 se consignan notas breves acerca de los eclipses solares y lunares durante el año; las horas anotadas están expresadas en términos de T.M.G. Las características principales de los eclipses del Sol más importantes se muestran en los mapas de las páginas 6 y 7.

23. HORAS LEGALES. Las listas de las páginas 266-269 dan las horas legales usadas en la mayoría de los países. En general no se ha intentado dar detalles acerca del comienzo y final de la hora de verano por carecer de la información del cambio de la hora, con la anticipación que requiere la preparación de este Almanaque.

La Línea Internacional del Tiempo es una línea arbitraria que determina una diferencia de un día entre cada uno de sus lados; cuando se cruza esta línea en rumbo hacia el Oeste, la fecha debe adelantarse un día; cuando se cruza en rumbo al Este la fecha debe atrasarse un día. Esta línea es una modificación de la correspondiente al meridiano de 180° y se ha trazado de modo que incluya hasta donde sea posible, islas de un mismo grupo, etc., hacia el mismo lado de la línea. Puede trazarse comenzando en el Polo Sur y uniendo los siguientes puntos:

Lat.	S.	51°.0	S.	45°.0	S.	15°.0	S.	5°.0	N.	48°.0	N.	53°.0	N.	65°.5
Long.		180 .0	W.	172 .5	W.	172 .5		180 .0		180 .0	E.	170 .0	W.	169 .0

De ahí dividiendo las islas Diomedes, llega hasta la Lat. N. $68^\circ.0$, long. W. $169^\circ.0$, pasando al Este de Ostrov Vrangelya (Isla Wrangel) en Lat. N. $75^\circ.0$, Log. $180^\circ.0$, y después hacia el Polo Norte.

EXACTITUD.

24. DATOS PRINCIPALES. Las cantidades tabuladas en este Almanaque son generalmente correctas al 0'.1 más próximo; la excepción la constituye el A.H.G. del Sol, el cual está ajustado deliberadamente a 0'.15 a fin de reducir el error cometido al desprestigiar la corrección v . El A.H.G. y la Dec., para horas intermedias no pueden obtenerse con esta

precisión, ya que al menos deben agregarse dos cantidades; más aún, las correcciones v y d están basadas en valores medios de v y d y se toman de las tablas al minuto cerrado solamente. El error más grande que puede ocurrir en el A.H.G. o la Dec. de cualquier astro diferente del Sol o la Luna, es menos de 0'.2; puede llegar 0'.25 para el A.H.G. del Sol y a 0'.3 para el de la Luna.

En la práctica puede esperarse que, solamente una tercera parte de los valores tomados del A.H.G. y la Dec., tengan errores mayores de 0'.05 y menos de una décima parte tengan errores mayores de 0'.1.

25. CORRECCIONES A LAS ALTURAS. Los errores en las correcciones de las alturas son nominalmente del mismo orden que los correspondientes al A.H.G. y la Dec., en vista de que son el resultado de sumar varias cantidades, cada una de las cuales se ha redondeado correctamente al 0'.1. En caso de condiciones extremas, los valores actuales de la depresión y de la refracción a bajas alturas, pueden diferir considerablemente de los valores medios empleados en las tablas.

USO DE ESTE ALMANAQUE EN 1978

Este almanaque puede usarse para el Sol y las estrellas, en 1978, de la siguiente manera:

Para el Sol, tomar el A.H.G. y la declinación, en la misma fecha, pero para un tiempo de $5^{\text{h}} 48^{\text{m}} 00^{\text{s}}$ más temprano que el T.M.G. de observación; agregar $87^{\circ} 00'$ al A.H.G. así obtenido. El error obtenido por este método, se deberá principalmente a las perturbaciones planetarias de la tierra, y raras veces excede 0'.4.

Para las estrellas, calcúlese el A.H.G. y la declinación para la misma fecha y hora, pero substraigase $15'.1$ del A.H.G. así encontrado. El error obtenido por este método se debe a la mala corrección por precisión y nutación, y raras veces excede 0'.4. Si se prefiere, el mismo resultado puede obtenerse tomando el tiempo de $5^{\text{h}} 48^{\text{m}} 00^{\text{s}}$ más temprano que el T.M.G. de observación (como se hizo para el Sol), y agregando $86^{\circ} 59'.2$ al A.H.G. (ó agregando 87° como para el Sol y restando 0'.8 por precisión del A.H.S. de la estrella). El almanaque no puede usarse en 1978 para la luna y planetas.

HORAS LEGALES. (Corregida a Septiembre de 1974).

266 LISTA I - LUGARES CON HORA ADELANTADA AL T.M.G. (principalmente aquellos que se hallan al ESTE DE GREENWICH).

Las horas dadas } *sumarse* al T.M.G. para obtener Hora Legal.
 abajo deben } *restarse* de la Horal Legal para dar T.M.G.

	h	m		h	m
Aden (Southern Yemen) ...	03		Egypt* (United Arab Republic) ...	02	
Admiralty Islands ...	10		Ellice Islands ...	12	
Afghanistan ...	04	30	Equatorial Guinea, Republic of ...	01	
Albania* ...	01		Estonia ...	03	
Amirante Islands ...	04		Ethiopia ...	03	
Andaman Islands ...	05	30			
Angola (Portuguese West Africa) ...	01		Fernando Póo† ...	01	
Annobon Island‡ ...	01		Fiji ...	12	
Arabian Emirates, Federation of ...	04		Finland ...	02	
Australia			Formosa* (Taiwan) ...	08	
Australian Capital Territory* ...	10		France‡ ...	01	
New South Wales ¹ * ...	10		French Territory of the Afars and Issas ...	03	
Northern Territory ...	09	30	Friendly Islands ...	13	
Queensland ...	10				
South Australia* ...	09	30	Gabon ...	01	
Tasmania* ...	10		Germany ...	01	
Victoria* ...	10		Gibraltar‡ ...	01	
Western Australia ...	08		Gilbert and Ellice Islands ...	12	
Austria ...	01		Greece ...	02	
			Guam ...	10	
Balearic Islands‡* ...	01				
Bangladesh ...	06		Holland (The Netherlands) ...	01	
Belgium ...	01		Hong Kong* ...	08	
Botswana, Republic of ...	02		Hungary ...	01	
British New Guinea ...	10				
Brunei ...	08		India ...	05	30
Bulgaria ...	02		Indonesia, Republic of		
Burma ...	06	30	Bali, Bangka, Billiton, Java, Lombok, Madura, Sumatra ...	07	
Burundi ...	02		Borneo, Celebes, Flores, Sumba, Sumbawa, Timor ...	08	
			Aru, Kei, Moluccas, Tanimbar, West Irian ...	09	
Cambodia (Khmer Republic) ...	07		Iran ...	03	30
Cameroun Republic ...	01		Iraq ...	03	
Caroline Islands, east of long. E. 160° ...	12		Irish Republic† ...	01	
west of long. E. 160° ...	10		Israel ...	02	
Truk, Ponape ...	11		Italy* ...	01	
Central African Republic ...	01				
Ceylon (Sri Lanka) ...	05	30	Japan ...	09	
Chad ...	01		Jordan* ...	02	
Chagos Archipelago ...	05				
Chatham Islands‡ ...	12	45	Kamchatka Peninsula ...	12	
China ² ...	08		Kenya ...	03	
Christmas Island, Indian Ocean ...	07		Khmer Republic (Cambodia) ...	07	
Cocos Keeling Islands ...	06	30	Korea ...	09	
Comoro Islands ...	03		Kuril Islands ...	11	
Congo Republic ...	01		Kuwait ...	03	
Corsica‡ ...	01				
Crete ...	02		Laccadive Islands ...	05	30
Cyprus ...	02		Ladrone Islands ...	10	
Czechoslovakia ...	01		Laos ...	07	
			Latvia ...	03	
Dahomey, Republic of ...	01		Lebanon* ...	02	
Denmark ...	01				

* La hora de verano puede conservarse en estos países.

† La hora de invierno se conserva en este país.

‡ La hora legal puede diferir de la que se anota aquí.

1 Excepto el "Area Broker Hill", la cual conserva 09^h 30^m.

2 Toda la costa, pero algunas áreas pueden conservar la hora de verano.

LISTA I - (continúa).

	h	m		h	m
Lesotho ...	02		Sardinia ...	01	
Libya † ...	02		Saudi Arabia ...	03	
Liechtenstein ...	01		Schouten Islands ...	09	
Lithuania ...	03		Seychelles ...	04	
Lord Howe Island ...	10	30	Siam (Thailand) ...	07	
Luxembourg ...	01		Sicily* ...	01	
Macao* ...	08		Singapore ...	07	30
Malagasy Republic ...	03		Socotra ...	03	
Malawi ...	02		Solomon Islands ...	11	
Malaysia			Somali Republic ...	03	
Malaya ...	07	30	South Africa, Republic of ...	02	
Sabah, Sarawak ...	08		Southern Yemen ...	03	
Maldives Republic ...	05		South Vietnam ...	08	
Malta* ...	01		South West Africa ...	02	
Manchuria ...	09		Spain †* ...	01	
Mariana Islands ...	10		Spitsbergen (Svalbard) ...	01	
Marshall Islands ¹ ...	12		Sri Lanka (Ceylon) ...	05	30
Mauritius ...	04		Sudan, Republic of ...	02	
Monaco † ...	01		Swaziland ...	02	
Mozambique (Portuguese E. Africa) ...	02		Sweden ...	01	
Muscat and Oman, Sultanate of ...	04		Switzerland ...	01	
Nauru ...	11	30	Syria* (Syrian Arab Republic) ...	02	
Netherlands, The ...	01		Taiwan* (Formosa) ...	08	
New Caledonia ...	11		Tanzania ...	03	
New Guinea, British ...	10		Thailand ...	07	
New Hebrides † ...	12		Timor ...	08	
New Zealand* ...	12		Tonga Islands ...	13	
Nicobar Islands ...	05	30	Truk ...	11	
Niger ...	01		Tunisia ...	01	
Nigeria, Republic of ...	01		Turkey* ...	02	
Norfolk Island ...	11	30	Uganda ...	03	
North Vietnam ...	07		Union of Soviet Socialist Republics ²		
Norway ...	01		west of long. E. 40° ...	03	
Novaya Zemlya ...	05		long. E. 40° to E. 52° 30' ...	04	
Ocean Island ...	11	30	long. E. 52° 30' to E. 67° 30' ...	05	
Okinawa ...	09		long. E. 67° 30' to E. 82° 30' ...	06	
Pakistan ...	05		long. E. 82° 30' to E. 97° 30' ...	07	
Papua ...	10		long. E. 97° 30' to E. 112° 30' ...	08	
Persia (Iran) ...	03	30	long. E. 112° 30' to E. 127° 30' ...	09	
Pescadores Islands ...	08		long. E. 127° 30' to E. 142° 30' ...	10	
Philippine Republic ...	08		long. E. 142° 30' to E. 157° 30' ...	11	
Poland ...	01		long. E. 157° 30' to E. 172° 30' ...	12	
Portugal ...	01		east of long. E. 172° 30' ...	13	
Portuguese East Africa (Mozambique) ...	02		Vietnam, North ...	07	
Portuguese West Africa (Angola) ...	01		(South) Republic of ...	08	
Réunion ...	04		Wrangell Island ...	13	
Rhodesia, Republic of ...	02		Yugoslavia ...	01	
Romania ...	02		Zaire		
Rwanda ...	02		Kinshasa, Mbandaka ...	01	
Ryukyu Islands ...	09		Orientale, Kivu, Katanga, Kasai ...	02	
Sakhalin ...	11		Zambia, Republic of ...	02	
Santa Cruz Islands ...	11				

* La hora de verano puede conservarse en estos países.

† La hora legal puede diferir de la que se anota aquí.

1 Excepto en las Islas Kwajalein y Eniwetok, las cuales conservan 24^h de atraso que del resto de las otras Islas.

2 Las fronteras entre las zonas, son irregulares; las Longitudes anotadas son aproximadas.

HORAS LEGALES. (Corregida a Septiembre de 1974).
LISTA II - LUGARES QUE GUARDAN NORMALMENTE T.M.G.

Algeria	Gambia	Ifni	Mali	St. Helena	Tangier
Ascension Island	Ghana	Ireland, Northern ¹	Mauritania	São Tomé	Togo Republic
Canary Islands†*	Great Britain ¹	Ivory Coast	Morocco*	Senegal	Tristan da Cunha
Channel Islands ¹	Guinea Republic	Liberia	Principe	Sierra Leone	Upper Volta
Faeroes, The	Iceland	Madeira	Rio de Oro‡	Spanish Sahara	

* La hora de verano puede conservarse en estos países.

‡ El T. M. G. es generalmente usado durante todo el año, pero el tiempo standard legal difiere del T. M. G.

¹ La hora de verano, una hora adelante con respecto al T. M. G., se conserva desde el 20 de Marzo a las 02 hrs. hasta el 23 de Octubre a las 02 hrs. del T. M. G.

LISTA III - LUGARES CON HORA ATRASADA AL T. M. G. (OESTE DE GREENWICH)

Las horas dadas } restarse al T. M. G. para obtener Hora Standard
abajo deben } sumarse a la Hora Standard para dar T. M. G.

	h	m		h	m
Argentina	03	Chile* ... ..	...	04
Austral Islands ¹	10	Christmas Island, Pacific Ocean ...	...	10
Azores	01	Colombia ... ..	...	05
Bahamas*	05	Cook Islands, except Niue ... ..	...	10 30
Barbados	04	Costa Rica ... ..	...	06
Belize	06	Cuba* ... ..	...	05
Bermuda*	04	Curaçao Island ... ..	...	04
Bolivia	04	Dominican Republic‡ ... ..	...	04
Brazil, eastern ²	03	Dutch Guiana (Surinam) ... ..	...	03 30
Territory of Acre	05	Easter Island (I. de Pascua) ... ..	...	07
western	04	Ecuador ... ..	...	05
British Antarctic Territory ³	03	Falkland Islands ⁴ ... ..	...	04
Canada			Fanning Island ... ..	...	10
Alberta*	07	Fernando de Noronha Island ... ..	...	02
British Columbia*	08	French Guiana‡ ... ..	...	03
Labrador*	04	Galápagos Islands ... ..	...	05
Manitoba*	06	Greenland, Scoresby Sound ... ..	...	02
New Brunswick*	04	Angmagssalik and west coast ... ..	...	03
Newfoundland*	03 30	Thule area ... ..	...	04
Northwest Territories*			Grenada ... ..	...	04
east of long. W. 68°	04	Guadeloupe ... ..	...	04
long. W. 68° to W. 85°	05	Guatemala ... ..	...	06
long. W. 85° to W. 102°	06	Guiana, Dutch ... ..	...	03 30
west of long. W. 102°	07	French‡ ... ..	...	03
Nova Scotia*	04	Guyana, Republic of ... ..	...	03 45
Ontario*, east of long. W. 90°	05	Haiti ... ..	...	05
west of long. W. 90°	06	Honduras ... ..	...	06
Prince Edward Island*	04	Honduras, British (Belize) ... ..	...	06
Quebec*, east of long. W. 63°	04	Jamaica* ... ..	...	05
west of long. W. 63°	05	Jan Mayen Island ... ..	...	01
Saskatchewan*					
east of long. W. 106°	06			
west of long. W. 106°	07			
Yukon, east of long. W. 138°	08			
west of long. W. 138°	09			
Cape Verde Islands*	02			
Cayman Islands	05			

* La hora de verano puede conservarse en estos países.

† La hora legal puede diferir de la que se anota aquí.

¹ Esta es la hora legal standar, pero la hora local media es generalmente usada.

² Incluyendo toda la costa y Brasilia.

³ Excepto el Sur de Georjía que conserva 02^h.

⁴ "Puerto Stanley" conserva la hora de verano de septiembre a marzo.

HORAS LEGALES. (Corregidas a Septiembre de 1974).

LISTA III - (continúa).

	h	m		h	m
Johnston Island	10		United States of America (continued)		
Juan Fernandez Islands	04		Florida ^{3, 4}	05	
Leeward Islands	04		Georgia ³	05	
Low Archipelago	10		Hawaii	10	
Marquesas Islands ¹	09	30	Idaho ^{3, 4}	07	
Martinique	04		Illinois ³	06	
Mexico ²	06		Indiana ⁴	05	
Midway Islands	11		Iowa ³	06	
Miquelon	03		Kansas ^{3, 4}	06	
Nicaragua ^{†*}	06		Kentucky ^{3, 4}	05	
Niue Island	11		Louisiana ³	06	
Panama Canal Zone	05		Maine ³	05	
Panama, Republic of	05		Maryland ³	05	
Paraguay*	04		Massachusetts ³	05	
Peru	05		Michigan ^{3, 4}	05	
Portuguese Guinea	01		Minnesota ³	06	
Puerto Rico	04		Mississippi ³	06	
Rarotonga	10	30	Missouri ³	06	
St. Pierre and Miquelon	03		Montana ³	07	
Salvador, El	06		Nebraska ^{3, 4}	06	
Samoa	11		Nevada ³	08	
Society Islands ¹	10		New Hampshire ³	05	
South Georgia	02		New Jersey ³	05	
Surinam (Dutch Guiana)	03	30	New Mexico ³	07	
Tobago	04		New York ³	05	
Trindade Island, South Atlantic	02		North Carolina ³	05	
Trinidad	04		North Dakota ^{3, 4}	06	
Tuamotu Archipelago ¹	10		Ohio ³	05	
Tubuai Islands ¹	10		Oklahoma ³	06	
Turks and Caicos Islands	05		Oregon ^{3, 4}	08	
United States of America			Pennsylvania ³	05	
Alabama ³	06		Rhode Island ³	05	
Alaska ³ , east of long. W. 137°	08		South Carolina ³	05	
long. W. 137° to W. 141°	09		South Dakota ³ , eastern part	06	
long. W. 141° to W. 161°	10		western part	07	
long. W. 161° to W. 172° 30'	11		Tennessee ^{3, 4}	06	
Aleutian Islands	11		Texas ³	06	
Arizona	07		Utah ^{3, 4}	07	
Arkansas ³	06		Vermont ³	05	
California ³	08		Virginia ³	05	
Colorado ³	07		Washington, D.C. ³	05	
Connecticut ³	05		Washington ³	08	
Delaware ³	05		West Virginia ³	05	
District of Columbia ³	05		Wisconsin ³	06	
			Wyoming ³	07	
			Uruguay	03	
			Venezuela	04	
			Virgin Islands	04	
			Windward Islands	04	

* La hora de verano puede conservarse en estos Países.

† Esta es la hora legal standar, pero puede diferir de la que se anota aquí.

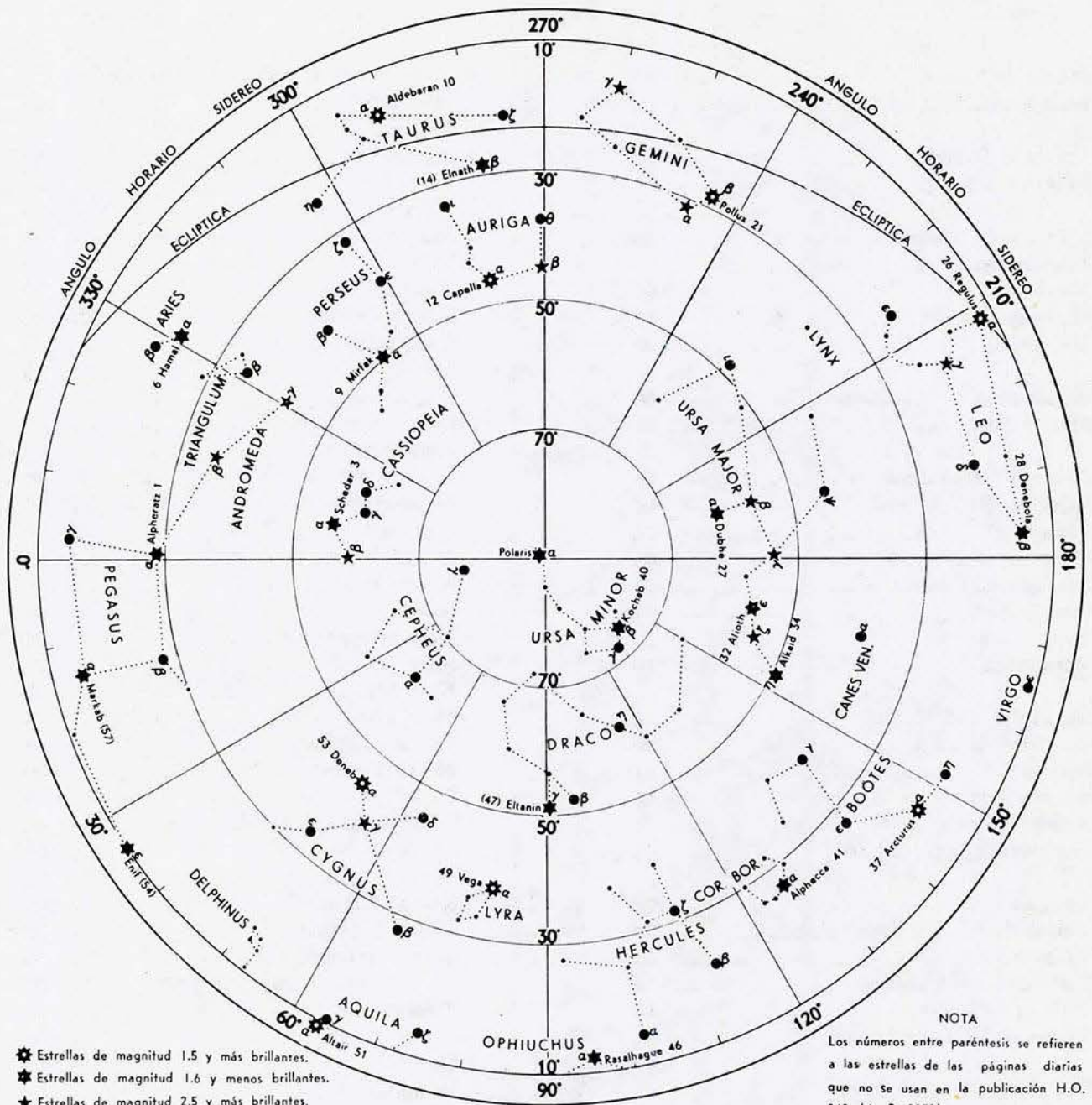
1 Esta es la hora legal standar, pero la hora local media es generalmente usada.

2 Excepto los estados de Sonora, Sinaloa, Nayarit y Baja California Sur, los cuales conservan 07^h y el Estado de Baja California Norte el cual conserva 08^h.

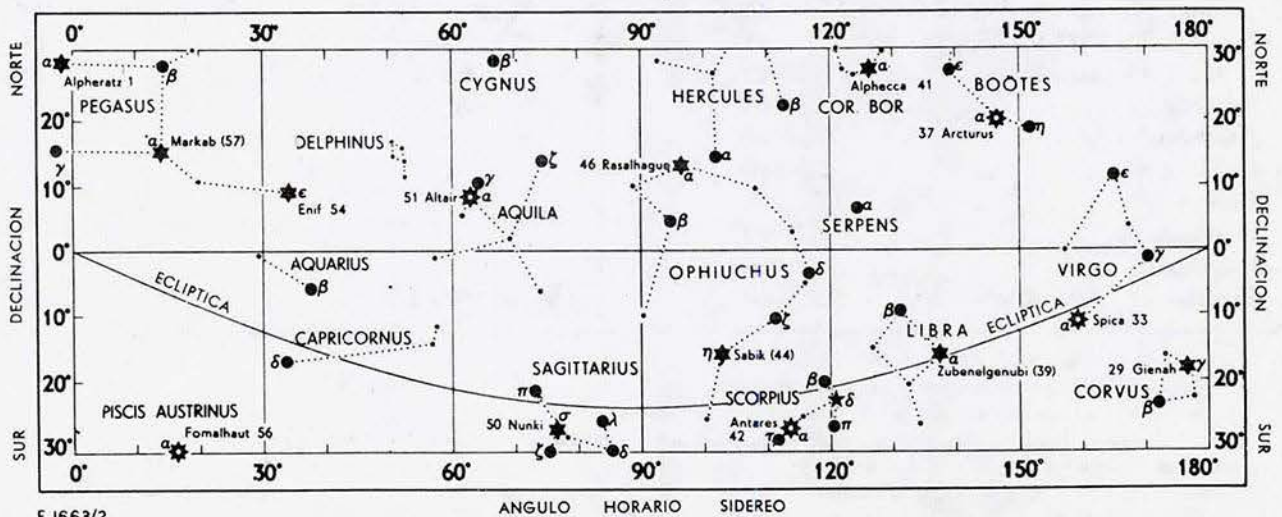
3 Ocasionalmente, la hora de verano, es una hora adelantada, de la hora dada, que se conserva efectiva, en estos estados desde las 02^h 00^m del 6 de enero de 1974, hora local. El tiempo de verano, es una hora adelantada de la hora dada y se conserva en estos estados desde el último domingo de abril hasta el último domingo de octubre, cambiando a las 02^h 00^m de la hora local.

4 Esto se aplica a la mayor parte del estado.

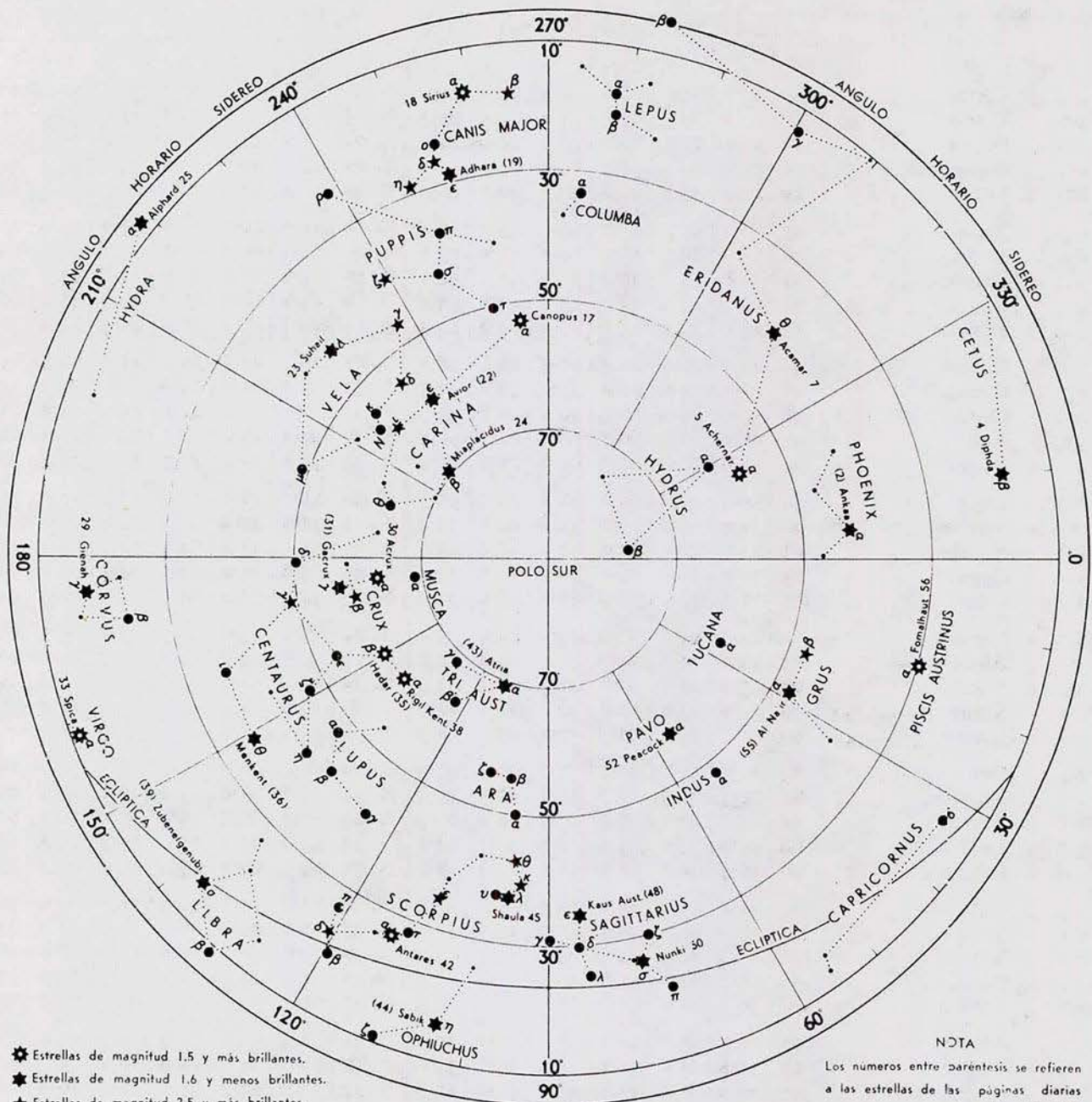
CARTA CELESTE
HEMISFERIO BOREAL



ESTRELLAS ECUATORIALES (A.H.S. DE 0° A 180°)



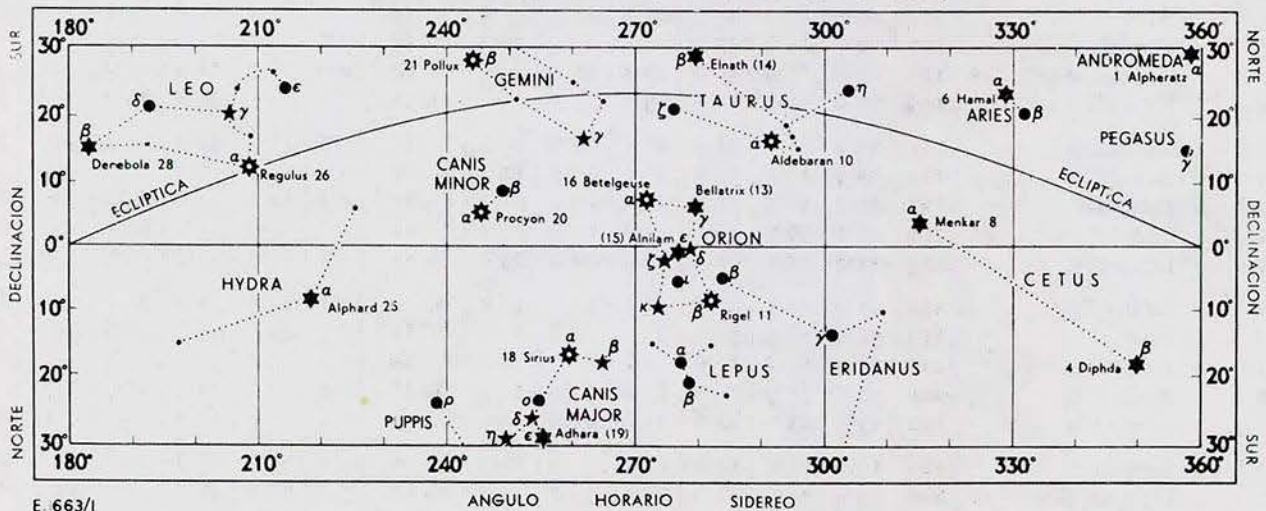
CARTA CELESTE
HEMISFERIO AUSTRAL



- ★ Estrellas de magnitud 1.5 y más brillantes.
- ★ Estrellas de magnitud 1.6 y menos brillantes.
- ★ Estrellas de magnitud 2.5 y más brillantes.
- Estrellas de magnitud 2.6 y menos brillantes.
- Estrellas no tabuladas

NOTA
Los números entre parentesis se refieren a las estrellas de las páginas diarias que no se usan en la publicación H.O. 249 (A. P. 3270)

ESTRELLAS ECUATORIALES (A.H.S. DE 180° A 360°)



Mag.	Nombres y Números	A.H.S.						Dec.								
			ENE.	FEB.	MAR.	ABR.	MAY.	JUN.		ENE.	FEB.	MAR.	ABR.	MAY.	JUN.	
3.4	γ Cephei †	5	24.1	24.6	24.8	24.5	23.9	23.1	N. 77	30.6	30.5	30.4	30.2	30.1	30.1	
2.6	α Pegasi	57	14	05.8	05.8	05.8	05.7	05.5	05.3	N. 15	05.0	04.9	04.9	04.9	04.9	05.0
2.6	β Pegasi		14	20.2	20.2	20.2	20.1	19.9	19.6	N. 27	57.7	57.6	57.5	57.4	57.4	57.5
1.3	α Piscis Aust.	56	15	54.4	54.4	54.4	54.3	54.1	53.8	S. 29	44.7	44.7	44.6	44.5	44.4	44.3
2.2	β Gruis		19	40.8	40.8	40.8	40.6	40.3	40.0	S. 46	60.4	60.3	60.2	60.1	59.9	59.9
2.9	α Tucanæ		25	46.4	46.4	46.3	46.1	45.7	45.3	S. 60	22.6	22.5	22.3	22.2	22.0	22.0
2.2	α Gruis	55	28	18.5	18.5	18.4	18.2	17.9	17.6	S. 47	04.4	04.3	04.2	04.1	04.0	03.9
3.0	δ Capricorni		33	33.6	33.5	33.4	33.3	33.1	32.8	S. 16	13.9	13.9	13.9	13.8	13.7	13.6
2.5	ϵ Pegasi	54	34	14.3	14.3	14.2	14.0	13.8	13.6	N. 9	46.3	46.2	46.2	46.2	46.2	46.3
3.1	β Aquarii		37	24.9	24.9	24.8	24.6	24.4	24.2	S. 5	40.3	40.3	40.3	40.3	40.2	40.1
2.6	α Cephei		40	29.9	29.9	29.8	29.5	29.1	28.7	N. 62	29.5	29.4	29.2	29.1	29.2	29.3
2.6	ϵ Cygni		48	41.0	41.0	40.8	40.6	40.4	40.1	N. 33	53.2	53.0	53.0	52.9	53.0	53.1
1.3	α Cygni	53	49	50.6	50.5	50.4	50.1	49.8	49.6	N. 45	12.0	11.9	11.8	11.7	11.8	11.9
3.2	α Indi		50	61.0	60.9	60.7	60.4	60.1	59.8	S. 47	22.3	22.2	22.1	22.0	22.0	22.0
2.1	α Pavonis	52	54	02.9	02.8	02.5	02.2	01.8	01.4	S. 56	48.5	48.4	48.3	48.2	48.2	48.2
2.3	γ Cygni		54	39.2	39.2	39.0	38.8	38.5	38.3	N. 40	11.1	11.0	10.9	10.8	10.9	11.0
0.9	α Aquilæ	51	62	35.3	35.2	35.0	34.8	34.6	34.4	N. 8	48.5	48.4	48.4	48.4	48.5	48.6
2.8	γ Aquilæ		63	42.7	42.6	42.4	42.2	42.0	41.8	N. 10	33.5	33.4	33.4	33.4	33.4	33.6
3.0	δ Cygni		63	56.5	56.4	56.2	55.9	55.6	55.4	N. 45	04.6	04.4	04.3	04.3	04.4	04.5
3.2	β Cygni		67	33.3	33.2	33.0	32.8	32.6	32.4	N. 27	54.7	54.6	54.5	54.5	54.6	54.8
3.0	π Sagittarii		72	54.2	54.1	53.9	53.7	53.4	53.2	S. 21	03.6	03.6	03.5	03.5	03.5	03.4
3.0	ζ Aquilæ		73	54.9	54.8	54.6	54.4	54.2	54.0	N. 13	49.8	49.7	49.7	49.7	49.7	49.9
2.7	ζ Sagittarii		74	43.0	42.8	42.6	42.3	42.1	41.9	S. 29	54.7	54.7	54.7	54.7	54.6	54.6
2.1	σ Sagittarii	50	76	32.6	32.4	32.2	32.0	31.7	31.5	S. 26	19.5	19.4	19.4	19.4	19.4	19.4
0.1	α Lyræ	49	80	57.9	57.7	57.5	57.3	57.0	56.9	N. 38	45.7	45.6	45.5	45.6	45.7	45.8
2.9	λ Sagittarii		83	21.9	21.7	21.5	21.2	21.0	20.9	S. 25	26.0	26.0	26.0	26.0	26.0	26.0
2.0	ϵ Sagittarii	48	84	20.5	20.3	20.0	19.8	19.5	19.4	S. 34	23.7	23.6	23.6	23.6	23.6	23.6
2.8	δ Sagittarii		85	07.3	07.1	06.9	06.7	06.4	06.3	S. 29	50.2	50.2	50.2	50.2	50.2	50.2
3.1	γ Sagittarii		88	55.2	55.0	54.8	54.5	54.3	54.1	S. 30	25.4	25.4	25.4	25.4	25.4	25.4
2.4	γ Draconis	47	90	59.4	59.2	58.9	58.6	58.3	58.2	N. 51	29.5	29.3	29.3	29.3	29.4	29.6
2.9	β Ophiuchi		94	25.1	24.9	24.7	24.5	24.3	24.2	N. 4	34.6	34.5	34.5	34.5	34.6	34.7
2.5	κ Scorpii		94	46.7	46.5	46.2	45.9	45.7	45.5	S. 39	01.0	01.0	01.0	01.0	01.0	01.1
2.0	θ Scorpii		96	05.2	04.9	04.6	04.3	04.1	03.9	S. 42	58.9	58.8	58.8	58.9	58.9	59.0
2.1	α Ophiuchi	46	96	32.2	32.0	31.8	31.6	31.4	31.3	N. 12	34.6	34.5	34.5	34.5	34.6	34.7
1.7	λ Scorpii	45	96	59.5	59.2	58.9	58.7	58.5	58.3	S. 37	05.1	05.1	05.1	05.1	05.2	05.2
3.0	α Aræ		97	29.3	29.0	28.6	28.3	28.0	27.9	S. 49	51.4	51.3	51.3	51.3	51.4	51.5
3.0	β Draconis		97	31.8	31.5	31.2	30.9	30.7	30.6	N. 52	19.0	18.9	18.9	18.9	19.0	19.2
2.8	ν Scorpii		97	42.2	41.9	41.6	41.4	41.2	41.0	S. 37	16.5	16.5	16.5	16.6	16.6	16.6
2.8	β Aræ		99	09.4	09.1	08.7	08.4	08.1	07.9	S. 55	30.3	30.3	30.3	30.3	30.4	30.5
Var. †	α Herculis		101	36.2	36.0	35.8	35.6	35.4	35.3	N. 14	25.0	24.9	24.8	24.9	24.9	25.0
2.6	η Ophiuchi	44	102	44.2	44.0	43.8	43.6	43.4	43.3	S. 15	41.7	41.8	41.8	41.8	41.8	41.8
3.1	ζ Aræ		105	49.5	49.1	48.7	48.4	48.1	48.0	S. 55	57.1	57.0	57.1	57.1	57.2	57.3
2.4	ϵ Scorpii		107	50.0	49.7	49.5	49.2	49.1	49.0	S. 34	15.0	15.0	15.0	15.1	15.1	15.1
1.9	α Triang. Aust.	43	108	27.0	26.4	25.9	25.4	25.0	24.8	S. 68	59.0	58.9	58.9	59.0	59.1	59.2
3.0	ζ Herculis		109	53.9	53.7	53.5	53.3	53.1	53.1	N. 31	38.6	38.5	38.4	38.5	38.6	38.7
2.7	ζ Ophiuchi		111	01.7	01.5	01.3	01.1	00.9	00.8	S. 10	31.2	31.3	31.3	31.3	31.3	31.3
2.9	τ Scorpii		111	23.3	23.1	22.8	22.6	22.5	22.4	S. 28	10.0	10.0	10.1	10.1	10.1	10.2
2.8	β Herculis		112	41.7	41.5	41.2	41.1	40.9	40.9	N. 21	32.3	32.2	32.2	32.2	32.3	32.4
1.2	α Scorpii	42	112	60.1	59.9	59.6	59.4	59.3	59.2	S. 26	22.8	22.8	22.8	22.9	22.9	22.9
2.9	η Draconis		114	05.4	05.1	04.7	04.4	04.2	04.2	N. 61	33.8	33.7	33.7	33.8	33.9	34.1
3.0	δ Ophiuchi		116	43.0	42.7	42.5	42.3	42.2	42.2	S. 3	38.1	38.2	38.2	38.2	38.2	38.1
2.8	β Scorpii		118	58.6	58.3	58.1	57.9	57.8	57.7	S. 19	44.5	44.5	44.6	44.6	44.6	44.6
2.5	δ Scorpii		120	15.4	15.2	15.0	14.8	14.6	14.6	S. 22	33.3	33.4	33.4	33.4	33.5	33.5
3.0	π Scorpii		120	38.1	37.9	37.6	37.4	37.3	37.3	S. 26	02.8	02.8	02.9	02.9	03.0	03.0
3.0	β Trianguli Aust.		121	43.5	43.0	42.6	42.2	41.9	41.9	S. 63	21.4	21.4	21.4	21.5	21.7	21.8
2.8	α Serpentis		124	13.0	12.8	12.6	12.4	12.3	12.3	N. 6	29.8	29.7	29.7	29.7	29.8	29.9
2.3	α Coronæ Bor.	41	126	34.4	34.2	33.9	33.8	33.7	33.7	N. 26	47.4	47.3	47.3	47.3	47.4	47.6
3.0	γ Lupi †		126	35.9	35.6	35.3	35.1	35.0	34.9	S. 41	05.2	05.3	05.3	05.4	05.5	05.6

† 3.0—3.7

† No debe usarse con tablas H.O. 214 (H.D. 486)

Mag.	Nombres y Números	A.H.S.						Dec.							
			JUL.	AGO.	SEP.	OCT.	NOV.	DIC.		JUL.	AGO.	SEP.	OCT.	NOV.	DIC.
3.4	γ Cephei †	5	22.4	21.8	21.6	21.7	22.1	22.8	N. 77	30.2	30.4	30.5	30.7	30.9	30.9
2.6	Markab	57	14	05.1	04.9	04.8	04.9	04.9	N. 15	05.1	05.2	05.3	05.4	05.4	05.3
2.6	Scheat	56	14	19.4	19.2	19.1	19.2	19.3	N. 27	57.6	57.8	57.9	58.0	58.0	58.0
1.3	Fomalhaut	56	15	53.6	53.4	53.3	53.4	53.5	S. 29	44.2	44.2	44.3	44.4	44.4	44.5
2.2	β Gruis	56	19	39.7	39.5	39.5	39.5	39.7	S. 46	59.8	59.9	60.0	60.1	60.2	60.2
2.9	α Tucanae	55	25	45.0	44.7	44.7	44.9	45.1	S. 60	22.0	22.1	22.2	22.3	22.4	22.4
2.2	Al Na'ir	55	28	17.3	17.1	17.1	17.2	17.4	S. 47	03.9	04.0	04.1	04.2	04.2	04.2
3.0	δ Capricorni	54	33	32.6	32.5	32.5	32.6	32.7	S. 16	13.6	13.5	13.6	13.6	13.6	13.6
2.5	Enif	54	34	13.4	13.3	13.3	13.4	13.5	N. 9	46.4	46.5	46.6	46.6	46.6	46.6
3.1	β Aquarii	54	37	24.0	23.9	23.9	24.0	24.1	S. 5	40.0	40.0	40.0	40.0	40.0	40.0
2.6	Alderamin	53	40	28.4	28.4	28.5	28.7	29.1	N. 62	29.4	29.6	29.8	29.9	29.9	29.9
2.6	ϵ Cygni	53	48	40.0	39.9	40.0	40.1	40.3	N. 33	53.2	53.4	53.5	53.6	53.6	53.5
1.3	Deneb	53	49	49.4	49.4	49.5	49.6	49.9	N. 45	12.1	12.2	12.4	12.5	12.5	12.4
3.2	α Indi	52	50	59.6	59.5	59.6	59.8	59.9	S. 47	22.0	22.1	22.2	22.2	22.2	22.2
2.1	Peacock	52	54	01.2	01.1	01.2	01.4	01.7	S. 56	48.3	48.4	48.5	48.5	48.5	48.5
2.3	γ Cygni	51	54	38.1	38.1	38.2	38.4	38.6	N. 40	11.2	11.3	11.5	11.5	11.5	11.4
0.9	Altair	51	62	34.3	34.2	34.3	34.4	34.6	N. 8	48.7	48.8	48.8	48.8	48.8	48.7
2.8	γ Aquilae	51	63	41.7	41.7	41.8	41.9	42.0	N. 10	33.7	33.7	33.8	33.8	33.8	33.7
3.0	δ Cygni	51	63	55.3	55.3	55.5	55.7	55.9	N. 45	04.7	04.8	05.0	05.0	05.0	04.9
3.2	Albireo	51	67	32.3	32.3	32.4	32.6	32.7	N. 27	54.9	55.0	55.1	55.1	55.1	55.0
3.0	π Sagittarii	50	72	53.1	53.1	53.2	53.4	53.5	S. 21	03.4	03.4	03.5	03.5	03.5	03.5
3.0	ζ Aquilae	50	73	53.9	53.9	54.0	54.2	54.3	N. 13	50.0	50.1	50.1	50.1	50.1	50.0
2.7	ζ Sagittarii	50	74	41.8	41.8	41.9	42.0	42.2	S. 29	54.6	54.7	54.7	54.7	54.7	54.7
2.1	Nunki	50	76	31.4	31.4	31.6	31.7	31.8	S. 26	19.4	19.4	19.4	19.4	19.4	19.4
0.1	Vega	49	80	56.8	56.9	57.1	57.3	57.4	N. 38	46.0	46.1	46.2	46.2	46.1	46.0
2.9	λ Sagittarii	48	83	20.8	20.8	20.9	21.1	21.2	S. 25	26.0	26.0	26.0	26.0	26.0	26.0
2.0	Kaus Australis	48	84	19.3	19.3	19.4	19.6	19.7	S. 34	23.7	23.7	23.7	23.7	23.7	23.7
2.8	δ Sagittarii	48	85	06.2	06.2	06.3	06.5	06.6	S. 29	50.2	50.2	50.2	50.2	50.2	50.2
3.1	γ Sagittarii	47	88	54.1	54.1	54.2	54.4	54.5	S. 30	25.4	25.4	25.4	25.4	25.4	25.4
2.4	Eltamin	47	90	58.2	58.4	58.6	58.9	59.1	N. 51	29.7	29.9	29.9	29.9	29.8	29.7
2.9	β Ophiuchi	46	94	24.2	24.2	24.4	24.5	24.6	N. 4	34.7	34.8	34.8	34.8	34.8	34.7
2.5	κ Scorpii	46	94	45.5	45.6	45.7	45.9	46.0	S. 39	01.1	01.1	01.2	01.1	01.1	01.0
2.0	θ Scorpii	46	96	03.9	04.0	04.1	04.3	04.4	S. 42	59.0	59.1	59.1	59.1	59.0	58.9
2.1	Rasalhague	46	96	31.3	31.3	31.5	31.6	31.7	N. 12	34.8	34.8	34.8	34.8	34.8	34.7
1.7	Shaula	45	96	58.3	58.3	58.5	58.7	58.7	S. 37	05.2	05.3	05.3	05.3	05.2	05.2
3.0	α Aræ	44	97	27.8	27.9	28.1	28.3	28.4	S. 49	51.5	51.6	51.6	51.6	51.5	51.4
3.0	β Draconis	44	97	30.7	30.8	31.1	31.3	31.5	N. 52	19.4	19.5	19.5	19.5	19.4	19.2
2.8	ν Scorpii	44	97	41.0	41.0	41.2	41.4	41.4	S. 37	16.7	16.7	16.7	16.7	16.7	16.6
2.8	β Aræ	44	99	07.9	08.0	08.2	08.4	08.5	S. 55	30.6	30.7	30.7	30.6	30.6	30.5
Var. †	α Herculis	43	101	35.3	35.4	35.5	35.7	35.7	N. 14	25.1	25.2	25.2	25.2	25.1	25.0
2.6	Sabik	44	102	43.3	43.3	43.5	43.6	43.7	S. 15	41.8	41.7	41.7	41.7	41.7	41.7
3.1	ζ Aræ	43	105	48.0	48.1	48.4	48.6	48.7	S. 55	57.4	57.4	57.5	57.4	57.3	57.2
2.4	ϵ Scorpii	43	107	48.9	49.0	49.2	49.3	49.4	S. 34	15.2	15.2	15.2	15.2	15.1	15.1
1.9	Atria	43	108	24.8	25.1	25.5	25.9	26.0	S. 68	59.4	59.4	59.4	59.4	59.3	59.1
3.0	ζ Herculis	43	109	53.1	53.2	53.4	53.5	53.6	N. 31	38.9	38.9	38.9	38.9	38.8	38.6
2.7	ζ Ophiuchi	42	111	00.8	00.9	01.1	01.2	01.1	S. 10	31.2	31.2	31.2	31.2	31.2	31.2
2.9	τ Scorpii	42	111	22.4	22.4	22.6	22.7	22.8	S. 28	10.2	10.2	10.2	10.1	10.1	10.1
2.8	β Herculis	42	112	40.9	41.0	41.1	41.3	41.3	N. 21	32.5	32.6	32.6	32.5	32.5	32.3
1.2	Antares	42	112	59.2	59.3	59.4	59.5	59.5	S. 26	22.9	22.9	22.9	22.9	22.9	22.9
2.9	η Draconis	42	114	04.4	04.6	05.0	05.3	05.5	N. 61	34.2	34.3	34.3	34.2	34.1	33.9
3.0	δ Ophiuchi	41	116	42.2	42.3	42.4	42.5	42.4	S. 3	38.1	38.1	38.1	38.1	38.1	38.2
2.8	β Scorpii	41	118	57.7	57.8	57.9	58.1	58.0	S. 19	44.6	44.6	44.6	44.6	44.6	44.6
2.5	Dschubba	41	120	14.6	14.7	14.8	14.9	15.0	S. 22	33.5	33.5	33.4	33.4	33.4	33.4
3.0	π Scorpii	41	120	37.3	37.4	37.5	37.6	37.5	S. 26	03.0	03.0	03.0	02.9	02.9	02.9
3.0	β Trianguli Aust.	41	121	42.0	42.2	42.5	42.8	42.6	S. 63	21.9	21.9	21.9	21.8	21.7	21.6
2.8	α Serpentis	41	124	12.3	12.4	12.6	12.7	12.6	N. 6	29.9	29.9	30.0	29.9	29.9	29.8
2.3	Alphecca	41	126	33.7	33.9	34.0	34.1	34.0	N. 26	47.6	47.7	47.7	47.6	47.5	47.3
3.0	γ Lupi †	41	126	35.0	35.1	35.3	35.4	35.3	S. 41	05.6	05.6	05.6	05.5	05.4	05.4

† 3.0—3.7

† No debe usarse con tablas H.O. 214 (H.D. 486)

Mag.	Nombres y Números	A.H.S.						Dec.							
			ENE.	FEB.	MAR.	ABR.	MAY.	JUN.		ENE.	FEB.	MAR.	ABR.	MAY.	JUN.
3·1	γ Ursæ Minoris †	129	49·5	48·9	48·4	48·1	48·0	48·1	N. 71	54·7	54·6	54·7	54·8	55·0	55·1
3·1	γ Trianguli Aust.	130	48·7	48·2	47·7	47·3	47·1	47·1	S. 68	35·4	35·5	35·6	35·7	35·8	36·0
2·7	β Libræ	131	03·5	03·2	03·0	02·9	02·8	02·7	S. 9	17·9	18·0	18·0	18·0	18·0	18·0
2·8	β Lupi	135	44·6	44·3	44·0	43·8	43·7	43·7	S. 43	02·3	02·4	02·5	02·6	02·7	02·7
2·2	β Ursæ Minoris 40	137	19·5	18·8	18·3	17·9	17·9	18·1	N. 74	14·7	14·6	14·7	14·8	15·0	15·1
2·9	α Libræ 39	137	35·9	35·6	35·4	35·3	35·2	35·2	S. 15	56·7	56·8	56·9	56·9	56·9	56·9
2·6	ε Bootis	138	60·3	60·1	59·9	59·7	59·7	59·7	N. 27	10·1	10·0	10·0	10·1	10·2	10·3
2·9	α Lupi	139	53·9	53·6	53·3	53·1	53·1	53·1	S. 47	17·2	17·3	17·4	17·5	17·6	17·7
0·1	α Centauri 38	140	29·2	28·8	28·5	28·2	28·2	28·2	S. 60	44·1	44·2	44·3	44·4	44·6	44·7
2·6	η Centauri	141	29·2	28·9	28·7	28·5	28·4	28·4	S. 42	03·3	03·3	03·4	03·5	03·6	03·7
3·0	γ Bootis	142	12·8	12·5	12·3	12·2	12·1	12·2	N. 38	24·3	24·2	24·2	24·3	24·5	24·6
0·2	α Bootis 37	146	20·8	20·5	20·4	20·3	20·2	20·3	N. 19	17·9	17·9	17·9	17·9	18·0	18·1
2·3	θ Centauri 36	148	39·9	39·7	39·4	39·3	39·3	39·3	S. 36	15·3	15·4	15·5	15·6	15·7	15·7
0·9	β Centauri 35	149	26·8	26·4	26·1	25·9	25·9	25·9	S. 60	15·5	15·6	15·7	15·9	16·0	16·1
3·1	ζ Centauri	151	28·3	27·9	27·7	27·6	27·5	27·6	S. 47	10·3	10·4	10·5	10·7	10·8	10·9
2·8	η Bootis	151	36·1	35·9	35·7	35·6	35·6	35·6	N. 18	30·6	30·5	30·5	30·6	30·6	30·7
1·9	η Ursæ Majoris 34	153	20·5	20·2	20·0	19·9	19·9	20·0	N. 49	25·4	25·3	25·4	25·5	25·7	25·8
2·6	ε Centauri †	155	23·3	23·0	22·7	22·6	22·6	22·7	S. 53	20·8	20·9	21·0	21·1	21·3	21·3
1·2	α Virginis 33	158	60·1	59·9	59·7	59·7	59·6	59·7	S. 11	02·5	02·6	02·7	02·7	02·7	02·7
2·2	ζ Ursæ Majoris	159	15·0	14·7	14·5	14·4	14·4	14·6	N. 55	02·4	02·4	02·4	02·6	02·7	02·8
2·9	ι Centauri	160	10·2	10·0	09·8	09·7	09·7	09·8	S. 36	35·4	35·5	35·6	35·7	35·8	35·8
3·0	ε Virginis	164	44·4	44·1	44·0	43·9	44·0	44·0	N. 11	04·8	04·7	04·7	04·7	04·8	04·9
2·9	α Canum Venat.	166	15·6	15·3	15·2	15·1	15·2	15·3	N. 38	26·2	26·2	26·3	26·4	26·5	26·6
1·7	ε Ursæ Majoris 32	166	44·6	44·3	44·1	44·1	44·2	44·3	N. 56	04·7	04·7	04·8	05·0	05·1	05·2
1·5	β Crucis	168	23·9	23·6	23·4	23·3	23·4	23·5	S. 59	33·6	33·7	33·9	34·0	34·2	34·2
2·9	γ Virginis	169	52·4	52·2	52·0	52·0	52·0	52·1	S. 1	19·5	19·6	19·6	19·6	19·6	19·6
2·4	γ Centauri	169	55·9	55·7	55·5	55·4	55·5	55·6	S. 48	49·9	50·0	50·1	50·3	50·4	50·4
2·9	α Muscæ	171	02·3	01·8	01·6	01·5	01·6	01·9	S. 69	00·3	00·4	00·6	00·8	00·9	01·0
2·8	β Corvi	171	42·0	41·8	41·7	41·7	41·7	41·8	S. 23	16·2	16·3	16·4	16·5	16·5	16·5
1·6	γ Crucis 31	172	31·2	30·9	30·7	30·7	30·8	30·9	S. 56	58·9	59·0	59·2	59·3	59·5	59·5
1·1	α Crucis 30	173	39·6	39·3	39·1	39·1	39·2	39·4	S. 62	58·1	58·3	58·4	58·6	58·7	58·8
2·8	γ Corvi 29	176	20·4	20·2	20·1	20·0	20·1	20·2	S. 17	24·9	25·0	25·1	25·1	25·2	25·2
2·9	δ Centauri	178	12·1	11·8	11·7	11·7	11·8	11·9	S. 50	35·5	35·7	35·8	36·0	36·1	36·1
2·5	γ Ursæ Majoris	181	50·4	50·1	50·0	50·0	50·1	50·3	N. 53	49·0	49·0	49·1	49·3	49·4	49·4
2·2	β Leonis 28	183	01·4	01·2	01·1	01·1	01·2	01·3	N. 14	41·8	41·8	41·8	41·8	41·9	41·9
2·6	δ Leonis	191	46·4	46·2	46·1	46·2	46·2	46·3	N. 20	38·7	38·7	38·7	38·8	38·8	38·9
3·2	ψ Ursæ Majoris	192	54·0	53·8	53·8	53·8	53·9	54·1	N. 44	37·1	37·1	37·2	37·3	37·4	37·4
2·0	α Ursæ Majoris 27	194	24·8	24·5	24·4	24·6	24·8	25·1	N. 61	52·2	52·2	52·3	52·5	52·6	52·6
2·4	β Ursæ Majoris	194	52·7	52·4	52·4	52·5	52·7	52·9	N. 56	30·0	30·1	30·2	30·3	30·4	30·4
2·8	μ Velorum	198	32·7	32·5	32·5	32·6	32·8	32·9	S. 49	17·9	18·0	18·2	18·3	18·4	18·4
3·0	θ Carinæ †	199	27·1	26·9	26·9	27·0	27·3	27·6	S. 64	16·3	16·5	16·7	16·9	16·9	17·0
2·3	γ Leonis	205	19·0	18·9	18·8	18·9	19·0	19·1	N. 19	57·2	57·2	57·2	57·3	57·3	57·4
1·3	α Leonis 26	208	12·4	12·2	12·2	12·3	12·4	12·5	N. 12	04·6	04·5	04·5	04·6	04·6	04·6
3·1	ε Leonis	213	51·3	51·2	51·2	51·3	51·4	51·5	N. 23	52·6	52·6	52·6	52·7	52·7	52·7
3·0	N Velorum	217	21·4	21·3	21·4	21·6	21·8	22·1	S. 56	56·0	56·2	56·3	56·5	56·5	56·4
2·2	α Hydræ 25	218	22·7	22·6	22·6	22·7	22·8	22·9	S. 8	33·7	33·8	33·8	33·9	33·8	33·8
2·6	κ Velorum	219	38·2	38·1	38·2	38·4	38·7	38·9	S. 54	54·8	55·0	55·1	55·2	55·2	55·2
2·2	ι Carinæ	220	52·0	52·0	52·1	52·3	52·6	52·8	S. 59	10·8	10·9	11·1	11·2	11·2	11·2
1·8	β Carinæ 24	221	44·5	44·4	44·6	45·0	45·4	45·8	S. 69	37·4	37·6	37·7	37·9	37·9	37·8
2·2	λ Velorum 23	223	12·1	12·1	12·1	12·3	12·5	12·6	S. 43	20·4	20·6	20·8	20·8	20·8	20·8
3·1	ι Ursæ Majoris	225	34·8	34·7	34·8	35·0	35·1	35·3	N. 48	07·7	07·8	07·9	07·9	07·9	07·9
2·0	δ Velorum	228	58·2	58·2	58·3	58·5	58·8	59·0	S. 54	37·5	37·7	37·8	37·9	37·9	37·9
1·7	ε Carinæ 22	234	28·5	28·5	28·7	29·0	29·3	29·5	S. 59	26·2	26·4	26·6	26·6	26·6	26·5
1·9	γ Velorum	237	47·0	47·0	47·1	47·3	47·5	47·7	S. 47	16·3	16·4	16·5	16·6	16·6	16·5
2·9	ρ Puppis	238	21·0	21·0	21·1	21·2	21·4	21·4	S. 24	14·4	14·5	14·6	14·7	14·6	14·6
2·3	ζ Puppis	239	17·8	17·8	17·9	18·1	18·2	18·4	S. 39	56·4	56·6	56·7	56·7	56·7	56·6
1·2	β Geminorum 21	244	00·8	00·8	00·9	01·0	01·1	01·2	N. 28	04·8	04·8	04·8	04·8	04·8	04·8
0·5	α Canis Minoris 20	245	28·0	28·0	28·1	28·2	28·3	28·4	N. 5	16·9	16·8	16·8	16·8	16·8	16·9

† No debe usarse con tablas H.O. 214 (H.D. 486)

Mag.	Nombres y Números	A. H. S.						Dec.							
			JUL.	AGO.	SEP.	OCT.	NOV.	DIC.		JUL.	AGO.	SEP.	OCT.	NOV.	DIC.
3.1	γ Ursæ Minoris †	129	48.5	49.0	49.5	49.9	50.1	50.0	N. 71	55.2	55.2	55.2	55.1	54.9	54.7
3.1	γ Trianguli Aust.	130	47.3	47.6	48.0	48.2	48.2	48.0	S. 68	36.0	36.1	36.0	35.9	35.8	35.7
2.7	β Libræ	131	02.8	02.9	03.0	03.1	03.1	03.0	S. 9	18.0	17.9	17.9	17.9	17.9	18.0
2.8	β Lupi	135	43.8	43.9	44.1	44.2	44.2	44.0	S. 43	02.8	02.8	02.7	02.6	02.6	02.5
2.2	Kochab 40	137	18.6	19.2	19.8	20.2	20.3	20.1	N. 74	15.2	15.2	15.1	15.0	14.8	14.6
2.9	Zubenelgenubi 39	137	35.2	35.4	35.5	35.5	35.5	35.4	S. 15	56.9	56.9	56.9	56.8	56.8	56.9
2.6	ε Bootis	138	59.8	59.9	60.0	60.1	60.1	60.0	N. 27	10.4	10.4	10.3	10.3	10.1	10.0
2.9	α Lupi	139	53.2	53.3	53.5	53.6	53.5	53.3	S. 47	17.7	17.7	17.6	17.5	17.4	17.4
0.1	Rigel Kent. 38	140	28.4	28.7	28.9	29.1	29.0	28.7	S. 60	44.7	44.7	44.6	44.5	44.4	44.3
2.6	η Centauri	141	28.5	28.7	28.8	28.9	28.8	28.7	S. 42	03.7	03.7	03.6	03.6	03.5	03.5
3.0	γ Bootis	142	12.3	12.5	12.6	12.7	12.7	12.5	N. 38	24.7	24.7	24.6	24.5	24.4	24.2
0.2	Arcturus 37	146	20.3	20.5	20.6	20.6	20.6	20.4	N. 19	18.1	18.1	18.1	18.0	17.9	17.8
2.3	Menkent 36	148	39.4	39.5	39.7	39.7	39.6	39.4	S. 36	15.7	15.7	15.6	15.5	15.5	15.5
0.9	Hadad 35	149	26.1	26.4	26.6	26.7	26.6	26.3	S. 60	16.1	16.1	16.0	15.9	15.8	15.7
3.1	ζ Centauri	151	27.7	27.9	28.0	28.1	28.0	27.7	S. 47	10.9	10.8	10.8	10.7	10.6	10.5
2.8	η Bootis	151	35.7	35.8	35.9	35.9	35.9	35.7	N. 18	30.8	30.8	30.8	30.7	30.6	30.4
1.9	Alkaid 34	153	20.2	20.4	20.5	20.6	20.5	20.3	N. 49	25.8	25.8	25.7	25.6	25.4	25.2
2.6	ε Centauri †	155	22.8	23.0	23.2	23.2	23.1	22.8	S. 53	21.4	21.3	21.2	21.1	21.0	21.0
1.2	Spica 33	158	59.8	59.9	59.9	59.9	59.8	59.6	S. 11	02.7	02.6	02.6	02.6	02.6	02.7
2.2	Mizar	159	14.8	15.0	15.2	15.2	15.1	14.9	N. 55	02.9	02.8	02.7	02.6	02.4	02.2
2.9	ι Centauri	160	09.9	10.0	10.1	10.1	10.0	09.7	S. 36	35.8	35.8	35.7	35.6	35.5	35.6
3.0	ε Virginis	164	44.1	44.2	44.3	44.3	44.1	43.9	N. 11	04.9	04.9	04.9	04.8	04.7	04.6
2.9	Cor Caroli	166	15.4	15.5	15.6	15.6	15.5	15.3	N. 38	26.6	26.6	26.5	26.4	26.2	26.1
1.7	Alioth 32	166	44.6	44.8	44.9	44.9	44.8	44.5	N. 56	05.2	05.1	05.0	04.8	04.7	04.5
1.5	Mimosa	168	23.8	24.0	24.1	24.1	23.9	23.5	S. 59	34.2	34.2	34.1	33.9	33.8	33.8
2.9	γ Virginis	169	52.2	52.2	52.3	52.3	52.1	51.9	S. 1	19.6	19.5	19.5	19.5	19.6	19.7
2.4	Muhlifain	169	55.8	55.9	56.0	56.0	55.8	55.5	S. 48	50.4	50.4	50.2	50.1	50.1	50.1
2.9	α Muscæ	171	02.3	02.6	02.8	02.8	02.5	02.0	S. 69	01.0	01.0	00.8	00.7	00.6	00.5
2.8	β Corvi	171	41.9	41.9	42.0	42.0	41.8	41.6	S. 23	16.5	16.4	16.3	16.3	16.3	16.4
1.6	Gacrux 31	172	31.1	31.3	31.5	31.4	31.2	30.8	S. 56	59.5	59.4	59.3	59.2	59.1	59.1
1.1	Acrux 30	173	39.6	39.9	40.0	40.0	39.7	39.3	S. 62	58.8	58.7	58.6	58.4	58.3	58.3
2.8	Gienah 29	176	20.2	20.3	20.4	20.3	20.2	19.9	S. 17	25.1	25.1	25.0	25.0	25.0	25.1
2.9	δ Centauri	178	12.1	12.2	12.3	12.2	12.0	11.7	S. 50	36.1	36.0	35.9	35.8	35.7	35.7
2.5	Phecda	181	50.5	50.6	50.7	50.6	50.4	50.1	N. 53	49.4	49.3	49.2	49.0	48.9	48.7
2.2	Denebola 28	183	01.4	01.4	01.4	01.4	01.2	01.0	N. 14	41.9	41.9	41.9	41.8	41.7	41.6
2.6	δ Leonis	191	46.4	46.5	46.5	46.4	46.2	45.9	N. 20	38.9	38.9	38.8	38.7	38.6	38.5
3.2	ψ Ursæ Majoris	192	54.2	54.3	54.3	54.2	53.9	53.6	N. 44	37.4	37.3	37.2	37.1	36.9	36.8
2.0	Dubhe 27	194	25.3	25.4	25.4	25.2	24.9	24.5	N. 61	52.5	52.4	52.3	52.1	51.9	51.9
2.4	Merak	194	53.0	53.1	53.1	53.0	52.7	52.3	N. 56	30.4	30.3	30.1	30.0	29.8	29.7
2.8	μ Velorum	198	33.1	33.2	33.2	33.0	32.7	32.4	S. 49	18.3	18.2	18.1	18.0	17.9	18.0
3.0	θ Carinæ †	199	27.9	28.0	28.0	27.8	27.4	27.0	S. 64	16.9	16.8	16.6	16.5	16.4	16.5
2.3	Algeiba	205	19.2	19.2	19.1	19.0	18.8	18.5	N. 19	57.4	57.3	57.3	57.2	57.1	57.0
1.3	Regulus 26	208	12.5	12.5	12.5	12.3	12.1	11.9	N. 12	04.6	04.6	04.6	04.6	04.5	04.4
3.1	ε Leonis	213	51.6	51.5	51.5	51.3	51.1	50.8	N. 23	52.7	52.7	52.6	52.5	52.4	52.4
3.0	N Velorum	217	22.2	22.2	22.1	21.9	21.5	21.2	S. 56	56.3	56.2	56.0	56.0	56.0	56.1
2.2	Alphard 25	218	22.9	22.9	22.8	22.7	22.4	22.2	S. 8	33.7	33.7	33.6	33.6	33.7	33.8
2.6	κ Velorum	219	39.0	39.0	38.9	38.7	38.3	38.0	S. 54	55.1	54.9	54.8	54.7	54.7	54.8
2.2	ι Carinæ	220	53.0	53.0	52.9	52.6	52.2	51.9	S. 59	11.1	10.9	10.8	10.7	10.7	10.8
1.8	Miaplacidus 24	221	46.1	46.2	46.0	45.6	45.1	44.6	S. 69	37.7	37.6	37.4	37.3	37.3	37.4
2.2	Suhail 23	223	12.7	12.7	12.6	12.4	12.1	11.8	S. 43	20.7	20.5	20.4	20.4	20.4	20.5
3.1	ι Ursæ Majoris	225	35.3	35.2	35.1	34.8	34.5	34.2	N. 48	07.8	07.7	07.6	07.5	07.5	07.4
2.0	δ Velorum	228	59.1	59.1	58.9	58.7	58.3	58.0	S. 54	37.7	37.6	37.5	37.4	37.4	37.5
1.7	Avior 22	234	29.6	29.6	29.4	29.1	28.7	28.4	S. 59	26.4	26.2	26.1	26.1	26.1	26.2
1.9	γ Velorum	237	47.7	47.7	47.5	47.2	46.9	46.7	S. 47	16.4	16.2	16.1	16.1	16.1	16.2
2.9	ρ Puppis	238	21.4	21.4	21.2	21.0	20.8	20.6	S. 24	14.5	14.3	14.3	14.3	14.3	14.4
2.3	ζ Puppis	239	18.4	18.3	18.2	17.9	17.6	17.4	S. 39	56.5	56.4	56.3	56.2	56.3	56.4
1.2	Pollux 21	244	01.2	01.0	00.8	00.6	00.4	00.1	N. 28	04.8	04.8	04.7	04.7	04.6	04.6
0.5	Procyon 20	245	28.3	28.2	28.1	27.9	27.6	27.4	N. 5	16.9	16.9	17.0	16.9	16.9	16.8

† No debe usarse con tablas H.O. 214 (H.D. 486)

Mag.	Nombres y Número	A.H.S.						Dec.							
			ENE.	FEB.	MAR.	ABR.	MAY.	JUN.		ENE.	FEB.	MAR.	ABR.	MAY.	JUN.
1.6	<i>a</i> Geminorum	246	42.4	42.4	42.5	42.7	42.8	42.8	N. 31	56.2	56.2	56.3	56.3	56.3	56.3
3.3	<i>σ</i> Puppis	247	51.9	51.9	52.1	52.3	52.5	52.6	S. 43	15.5	15.6	15.7	15.7	15.7	15.6
3.1	<i>β</i> Canis Minoris	248	30.9	30.9	31.0	31.2	31.3	31.3	N. 8	20.0	20.0	19.9	20.0	20.0	20.0
2.4	<i>η</i> Canis Majoris	249	11.7	11.7	11.8	12.0	12.1	12.2	S. 29	15.7	15.8	15.9	15.9	15.8	15.7
2.7	<i>π</i> Puppis	250	54.5	54.5	54.7	54.9	55.0	55.1	S. 37	03.5	03.7	03.8	03.8	03.7	03.6
2.0	<i>δ</i> Canis Majoris	253	07.6	07.7	07.8	08.0	08.1	08.2	S. 26	21.6	21.7	21.8	21.8	21.7	21.6
3.1	<i>ο</i> Canis Majoris	254	28.5	28.6	28.7	28.8	29.0	29.0	S. 23	48.2	48.3	48.3	48.3	48.3	48.2
1.6	<i>ε</i> Canis Majoris	19 255	33.7	33.7	33.8	34.0	34.1	34.2	S. 28	56.6	56.7	56.8	56.8	56.8	56.7
2.8	<i>τ</i> Puppis	257	38.9	39.0	39.2	39.5	39.7	39.8	S. 50	35.4	35.6	35.7	35.7	35.6	35.5
-1.6	<i>α</i> Canis Majoris	18 258	57.5	57.6	57.7	57.8	58.0	58.0	S. 16	41.3	41.4	41.4	41.4	41.4	41.3
1.9	<i>γ</i> Geminorum	260	53.7	53.8	53.9	54.0	54.1	54.1	N. 16	25.0	25.0	25.0	25.0	25.0	25.0
-0.9	<i>α</i> Carinae	17 264	07.8	07.9	08.1	08.4	08.6	08.7	S. 52	41.2	41.4	41.4	41.4	41.3	41.2
2.0	<i>β</i> Canis Majoris	264	34.2	34.3	34.4	34.6	34.7	34.7	S. 17	56.9	56.9	57.0	57.0	56.9	56.8
2.7	<i>θ</i> Aurigae	270	27.1	27.2	27.3	27.5	27.6	27.6	N. 37	12.6	12.7	12.7	12.7	12.6	12.6
2.1	<i>β</i> Aurigae	270	31.7	31.8	31.9	32.1	32.3	32.2	N. 44	56.7	56.8	56.8	56.8	56.7	56.7
Var. †	<i>α</i> Orionis	16 271	30.6	30.7	30.8	30.9	31.0	31.0	N. 7	24.1	24.0	24.0	24.0	24.0	24.1
2.2	<i>κ</i> Orionis	273	19.6	19.6	19.8	19.9	20.0	20.0	S. 9	40.8	40.9	40.9	40.9	40.9	40.8
1.9	<i>ζ</i> Orionis	275	05.6	05.6	05.8	05.9	06.0	06.0	S. 1	57.4	57.5	57.5	57.5	57.4	57.4
2.8	<i>α</i> Columbæ	275	17.3	17.4	17.6	17.8	17.9	17.9	S. 34	05.4	05.5	05.5	05.5	05.4	05.3
3.0	<i>ζ</i> Tauri	275	55.4	55.5	55.6	55.8	55.9	55.8	N. 21	07.7	07.7	07.7	07.7	07.6	07.6
1.8	<i>ε</i> Orionis	15 276	13.9	13.9	14.0	14.2	14.3	14.2	S. 1	13.1	13.2	13.2	13.2	13.1	13.1
2.9	<i>ι</i> Orionis	276	24.9	25.0	25.1	25.3	25.4	25.3	S. 5	55.6	55.7	55.7	55.7	55.7	55.6
2.7	<i>α</i> Leporis	277	03.8	03.9	04.1	04.2	04.3	04.3	S. 17	50.5	50.6	50.6	50.6	50.5	50.4
2.5	<i>δ</i> Orionis	277	17.1	17.2	17.3	17.4	17.5	17.5	S. 0	19.1	19.1	19.2	19.1	19.1	19.0
3.0	<i>β</i> Leporis	278	10.7	10.8	10.9	11.1	11.1	11.1	S. 20	46.9	46.9	47.0	46.9	46.9	46.8
1.8	<i>β</i> Tauri	14 278	46.9	47.0	47.1	47.3	47.3	47.3	N. 28	35.3	35.3	35.3	35.3	35.2	35.2
1.7	<i>γ</i> Orionis	13 279	01.1	01.2	01.3	01.4	01.5	01.4	N. 6	19.6	19.6	19.6	19.6	19.6	19.7
0.2	<i>α</i> Aurigae	12 281	14.5	14.6	14.8	15.0	15.1	15.0	N. 45	58.5	58.6	58.6	58.6	58.5	58.4
0.3	<i>β</i> Orionis	11 281	38.1	38.2	38.3	38.4	38.5	38.5	S. 8	13.8	13.9	13.9	13.9	13.8	13.8
2.9	<i>β</i> Eridani	283	18.8	18.9	19.0	19.1	19.2	19.2	S. 5	07.1	07.2	07.2	07.2	07.1	07.0
2.9	<i>ι</i> Aurigae †	286	07.1	07.1	07.3	07.4	07.5	07.4	N. 33	07.8	07.8	07.8	07.8	07.8	07.7
1.1	<i>α</i> Tauri	10 291	20.6	20.7	20.8	20.9	20.9	20.9	N. 16	27.8	27.7	27.7	27.7	27.7	27.7
3.2	<i>γ</i> Eridani	300	45.3	45.4	45.6	45.7	45.7	45.6	S. 13	34.6	34.6	34.6	34.6	34.5	34.4
3.0	<i>ε</i> Persei	300	54.9	55.0	55.2	55.3	55.3	55.2	N. 39	56.7	56.8	56.7	56.7	56.6	56.6
2.9	<i>ζ</i> Persei	301	49.3	49.4	49.5	49.7	49.7	49.5	N. 31	49.0	49.0	49.0	48.9	48.9	48.9
3.0	<i>η</i> Tauri	303	27.9	28.0	28.1	28.2	28.2	28.1	N. 24	02.1	02.1	02.1	02.0	02.0	02.0
1.9	<i>α</i> Persei	9 309	19.3	19.5	19.7	19.8	19.8	19.6	N. 49	47.0	47.0	46.9	46.8	46.7	46.7
Var. §	<i>β</i> Persei †	313	19.5	19.7	19.8	19.9	19.9	19.7	N. 40	52.2	52.2	52.1	52.1	52.0	52.0
2.8	<i>α</i> Ceti	8 314	43.6	43.7	43.8	43.9	43.8	43.7	N. 3	59.9	59.9	59.9	59.9	59.9	60.0
3.1	<i>θ</i> Eridani	7 315	39.0	39.1	39.3	39.4	39.4	39.3	S. 40	24.1	24.1	24.0	23.9	23.8	23.6
2.1	<i>α</i> Ursæ Minoris †	327	27.8	38.6	47.2	51.2	48.8	40.7	N. 89	09.9	09.9	09.8	09.6	09.5	09.4
3.1	<i>β</i> Trianguli	327	57.1	57.3	57.4	57.4	57.3	57.1	N. 34	52.9	52.9	52.8	52.7	52.7	52.7
2.2	<i>α</i> Arietis	6 328	31.6	31.7	31.8	31.9	31.8	31.6	N. 23	21.3	21.3	21.2	21.2	21.2	21.2
2.2	<i>γ</i> Andromedæ	329	22.4	22.6	22.7	22.7	22.6	22.4	N. 42	13.4	13.3	13.3	13.2	13.1	13.1
3.0	<i>α</i> Hydri	330	29.4	29.7	29.9	30.0	29.9	29.7	S. 61	41.2	41.2	41.1	40.9	40.7	40.6
2.7	<i>β</i> Arietis	331	39.3	39.4	39.4	39.5	39.4	39.2	N. 20	41.8	41.8	41.8	41.7	41.7	41.8
0.6	<i>α</i> Eridani	5 335	47.2	47.4	47.6	47.6	47.3	47.3	S. 57	21.5	21.5	21.3	21.2	21.0	20.8
2.8	<i>δ</i> Cassiopeïæ	338	55.1	55.4	55.5	55.5	55.4	55.0	N. 60	07.3	07.2	07.1	07.0	06.9	06.8
2.4	<i>β</i> Andromedæ	342	53.2	53.3	53.4	53.4	53.2	53.0	N. 35	30.1	30.1	30.0	29.9	29.9	29.9
Var. ||	<i>γ</i> Cassiopeïæ	346	10.1	10.3	10.4	10.4	10.2	09.8	N. 60	35.9	35.8	35.7	35.5	35.4	35.4
2.2	<i>β</i> Ceti	4 349	23.4	23.5	23.6	23.5	23.4	23.2	S. 18	06.9	06.9	06.8	06.7	06.6	06.5
2.5	<i>α</i> Cassiopeïæ	3 350	11.9	12.1	12.2	12.1	11.9	11.6	N. 56	25.0	24.9	24.8	24.7	24.6	24.6
2.4	<i>α</i> Phœnicis	2 353	42.8	43.0	43.0	43.0	42.8	42.6	S. 42	26.1	26.0	25.9	25.7	25.6	25.5
2.9	<i>β</i> Hydri †	353	52.4	53.0	53.2	53.2	52.8	52.1	S. 77	23.3	23.2	23.0	22.8	22.6	22.5
2.9	<i>γ</i> Pegasi	356	59.2	59.2	59.3	59.2	59.1	58.8	N. 15	03.4	03.4	03.3	03.3	03.4	03.4
2.4	<i>β</i> Cassiopeïæ	358	00.7	00.9	01.0	00.9	00.6	00.3	N. 59	01.7	01.6	01.5	01.3	01.3	01.3
2.2	<i>α</i> Andromedæ	1 358	12.0	12.1	12.1	12.0	11.8	11.6	N. 28	58.0	57.9	57.8	57.8	57.8	57.8

† 0.1—1.2 § 2.3—3.5 || Variable irregular ; 1974 mag 2.5 † No debe usarse con tablas H.O. 214 (H.D. 486)

Mag.	Nombres y Números	A. H. S.						Dec.							
			JUL.	AGO.	SEP.	OCT.	NOV.	DIC.		JUL.	AGO.	SEP.	OCT.	NOV.	DIC.
1.6	<i>Castor</i>	246	42.8	42.7	42.5	42.2	41.9	41.7	N. 31	56.2	56.2	56.1	56.1	56.1	56.0
3.3	σ <i>Puppis</i>	247	52.6	52.5	52.3	52.0	51.8	51.5	S. 43	15.4	15.3	15.2	15.2	15.3	15.4
3.1	β <i>Canis Minoris</i>	248	31.3	31.1	31.0	30.8	30.5	30.3	N. 8	20.0	20.1	20.1	20.0	20.0	19.9
2.4	η <i>Canis Majoris</i>	249	12.2	12.1	11.9	11.7	11.4	11.3	S. 29	15.6	15.5	15.4	15.4	15.5	15.6
2.7	π <i>Puppis</i>	250	55.1	55.0	54.8	54.5	54.3	54.1	S. 37	03.5	03.4	03.3	03.3	03.3	03.5
2.0	<i>Wezen</i>	253	08.1	08.0	07.8	07.6	07.4	07.2	S. 26	21.5	21.4	21.3	21.3	21.4	21.5
3.1	\circ <i>Canis Majoris</i>	254	29.0	28.9	28.7	28.5	28.2	28.0	S. 23	48.1	48.0	47.9	47.9	48.0	48.1
1.6	<i>Adhara</i>	19 255	34.2	34.0	33.8	33.6	33.4	33.2	S. 28	56.5	56.4	56.3	56.3	56.4	56.6
2.8	τ <i>Puppis</i>	257	39.8	39.6	39.4	39.1	38.8	38.6	S. 50	35.3	35.2	35.1	35.1	35.2	35.3
-1.6	<i>Sirius</i>	18 258	57.9	57.8	57.6	57.4	57.2	57.0	S. 16	41.2	41.1	41.0	41.1	41.1	41.3
1.9	<i>Alhena</i>	260	54.0	53.9	53.7	53.4	53.2	53.0	N. 16	25.1	25.1	25.1	25.1	25.0	25.0
-0.9	<i>Canopus</i>	17 264	08.7	08.5	08.2	07.9	07.6	07.5	S. 52	41.0	40.9	40.8	40.8	40.9	41.1
2.0	<i>Mirzam</i>	264	34.6	34.5	34.3	34.0	33.8	33.7	S. 17	56.7	56.6	56.6	56.6	56.7	56.8
2.7	θ <i>Aurigæ</i>	270	27.4	27.2	27.0	26.7	26.4	26.3	N. 37	12.6	12.5	12.5	12.5	12.5	12.6
2.1	<i>Menkalinan</i>	270	32.1	31.9	31.6	31.3	31.0	30.8	N. 44	56.6	56.6	56.5	56.5	56.6	56.6
Var. †	<i>Betelgeuse</i>	16 271	30.9	30.7	30.5	30.3	30.1	29.9	N. 7	24.1	24.2	24.2	24.2	24.1	24.1
2.2	κ <i>Orionis</i>	273	19.9	19.7	19.5	19.3	19.1	19.0	S. 9	40.7	40.6	40.5	40.6	40.6	40.7
1.9	<i>Alnitak</i>	275	05.8	05.7	05.5	05.3	05.1	04.9	S. 1	57.3	57.2	57.2	57.2	57.3	57.3
2.8	<i>Phact</i>	275	17.8	17.6	17.4	17.1	16.9	16.8	S. 34	05.1	05.0	05.0	05.0	05.1	05.3
3.0	ζ <i>Tauri</i>	275	55.7	55.5	55.3	55.0	54.8	54.7	N. 21	07.7	07.7	07.7	07.7	07.7	07.7
1.8	<i>Alnilam</i>	15 276	14.1	13.9	13.7	13.5	13.3	13.2	S. 1	13.0	12.9	12.9	12.9	13.0	13.0
2.9	ι <i>Orionis</i>	276	25.2	25.0	24.8	24.6	24.4	24.3	S. 5	55.5	55.4	55.4	55.4	55.5	55.5
2.7	α <i>Leporis</i>	277	04.2	04.0	03.8	03.6	03.4	03.3	S. 17	50.3	50.2	50.1	50.2	50.3	50.4
2.5	δ <i>Orionis</i>	277	17.3	17.2	16.9	16.7	16.5	16.4	S. 0	19.0	18.9	18.9	18.9	18.9	19.0
3.0	β <i>Leporis</i>	278	11.0	10.8	10.6	10.4	10.2	10.1	S. 20	46.6	46.5	46.5	46.5	46.6	46.7
1.8	<i>Elnath</i>	14 278	47.1	46.9	46.7	46.4	46.2	46.1	N. 28	35.2	35.2	35.2	35.2	35.3	35.3
1.7	<i>Bellatrix</i>	13 279	01.3	01.1	00.9	00.7	00.5	00.4	N. 6	19.7	19.8	19.8	19.8	19.8	19.7
0.2	<i>Capella</i>	12 281	14.8	14.6	14.3	14.0	13.7	13.5	N. 45	58.4	58.3	58.4	58.4	58.4	58.5
0.3	<i>Rigel</i>	11 281	38.3	38.2	37.9	37.7	37.6	37.5	S. 8	13.7	13.6	13.5	13.6	13.6	13.7
2.9	β <i>Eridani</i>	283	19.0	18.8	18.6	18.4	18.3	18.2	S. 5	06.9	06.9	06.8	06.8	06.9	07.0
2.9	ι <i>Aurigæ</i> †	286	07.3	07.0	06.8	06.5	06.3	06.2	N. 33	07.7	07.7	07.7	07.8	07.8	07.8
1.1	<i>Aldebaran</i>	10 291	20.7	20.5	20.2	20.0	19.9	19.8	N. 16	27.8	27.8	27.9	27.9	27.9	27.9
3.2	γ <i>Eridani</i>	300	45.4	45.2	45.0	44.8	44.7	44.7	S. 13	34.3	34.2	34.2	34.2	34.3	34.4
3.0	ϵ <i>Persei</i>	300	55.0	54.7	54.4	54.2	54.0	53.9	N. 39	56.5	56.6	56.6	56.7	56.8	56.8
2.9	ζ <i>Persei</i>	301	49.3	49.1	48.8	48.6	48.5	48.4	N. 31	48.9	48.9	49.0	49.0	49.1	49.1
3.0	<i>Alcyone</i>	303	27.9	27.6	27.4	27.2	27.1	27.0	N. 24	02.0	02.1	02.1	02.2	02.2	02.2
1.9	<i>Mirfak</i>	9 309	19.3	19.0	18.7	18.5	18.3	18.3	N. 49	46.7	46.7	46.8	46.9	47.0	47.1
Var. §	<i>Algol</i> †	313	19.5	19.2	18.9	18.7	18.6	18.6	N. 40	52.0	52.0	52.1	52.2	52.3	52.4
2.8	<i>Menkar</i>	8 314	43.5	43.3	43.1	42.9	42.8	42.8	N. 4	00.1	00.2	00.2	00.2	00.2	00.2
3.1	<i>Acamar</i>	7 315	39.1	38.8	38.6	38.4	38.3	38.3	S. 40	23.5	23.4	23.4	23.5	23.6	23.8
2.1	<i>Polaris</i> †	327	29.8	18.1	08.1	01.9	00.7	05.3	N. 89	09.3	09.4	09.5	09.7	09.9	10.0
3.1	β <i>Trianguli</i>	327	56.9	56.6	56.4	56.2	56.2	56.2	N. 34	52.7	52.8	52.9	53.0	53.1	53.1
2.2	<i>Hamal</i>	6 328	31.4	31.1	30.9	30.8	30.7	30.8	N. 23	21.3	21.4	21.5	21.5	21.6	21.6
2.2	<i>Almak</i>	329	22.1	21.8	21.6	21.5	21.4	21.5	N. 42	13.1	13.2	13.3	13.4	13.5	13.6
3.0	α <i>Hydri</i>	330	29.4	29.0	28.6	28.5	28.5	28.7	S. 61	40.4	40.4	40.5	40.6	40.8	40.9
2.7	<i>Sheratan</i>	331	39.0	38.7	38.5	38.4	38.4	38.4	N. 20	41.8	41.9	42.0	42.1	42.1	42.1
0.6	<i>Achernar</i>	5 335	47.0	46.6	46.4	46.2	46.3	46.4	S. 57	20.7	20.7	20.8	20.9	21.1	21.2
2.8	<i>Ruchbah</i>	338	54.6	54.2	54.0	53.8	53.8	54.0	N. 60	06.9	07.0	07.1	07.3	07.4	07.5
2.4	<i>Mirach</i>	342	52.7	52.5	52.3	52.2	52.2	52.3	N. 35	30.0	30.1	30.2	30.3	30.4	30.4
Var. ||	γ <i>Cassiopeia</i>	346	09.4	09.1	08.8	08.7	08.8	08.9	N. 60	35.5	35.6	35.7	35.9	36.0	36.1
2.2	<i>Diphda</i>	4 349	23.0	22.7	22.6	22.6	22.7	22.7	S. 18	06.4	06.4	06.4	06.4	06.5	06.5
2.5	<i>Schedar</i>	3 350	11.2	10.9	10.7	10.6	10.7	10.8	N. 56	24.6	24.8	24.9	25.1	25.2	25.3
2.4	<i>Ankaa</i>	2 353	42.3	42.0	41.9	41.8	41.9	42.0	S. 42	25.4	25.4	25.4	25.6	25.7	25.7
2.9	β <i>Hydri</i> †	353	51.3	50.6	50.1	50.1	50.5	51.1	S. 77	22.5	22.5	22.7	22.8	23.0	23.0
2.9	<i>Algenib</i>	356	58.6	58.4	58.3	58.3	58.3	58.4	N. 15	03.5	03.6	03.7	03.8	03.8	03.8
2.4	<i>Caph</i>	357	59.9	59.6	59.4	59.4	59.5	59.7	N. 59	01.4	01.5	01.7	01.8	02.0	02.0
2.2	<i>Alpheratz</i>	1 358	11.4	11.1	11.0	11.0	11.0	11.1	N. 28	57.9	58.0	58.2	58.3	58.3	58.3

‡ 0.1—1.2 § 2.3—3.5 || Variable irregular ; 1974 mag 2.5 † No debe usarse con tablas H.O. 214 (H.D. 486)

ESTRELLA POLAR. TABLAS PARA 1977.
DETERMINACION DE LATITUD Y AZIMUT.

A.H.L. ARIES	0°- 9°	10°- 19°	20°- 29°	30°- 39°	40°- 49°	50°- 59°	60°- 69°	70°- 79°	80°- 89°	90°- 99°	100°- 109°	110°- 119°
	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0
0	16.5	12.4	09.7	08.6	08.9	10.8	14.2	19.0	25.0	32.0	39.9	48.3
1	16.1	12.1	09.5	08.5	09.1	11.1	14.7	19.6	25.7	32.8	40.7	49.1
2	15.6	11.8	09.4	08.5	09.2	11.4	15.1	20.1	26.3	33.5	41.5	50.0
3	15.2	11.5	09.2	08.5	09.3	11.7	15.5	20.7	27.0	34.3	42.3	50.9
4	14.7	11.2	09.1	08.5	09.5	12.0	16.0	21.3	27.7	35.1	43.2	51.7
5	14.3	10.9	08.9	08.5	09.7	12.4	16.5	21.9	28.4	35.9	44.0	52.6
6	13.9	10.6	08.8	08.6	09.9	12.7	17.0	22.5	29.1	36.7	44.9	53.5
7	13.5	10.4	08.7	08.7	10.1	13.1	17.5	23.1	29.8	37.4	45.7	54.4
8	13.1	10.1	08.7	08.7	10.3	13.5	18.0	23.7	30.6	38.3	46.6	55.2
9	12.8	09.9	08.6	08.8	10.6	13.8	18.5	24.4	31.3	39.1	47.4	56.1
10	12.4	09.7	08.6	08.9	10.8	14.2	19.0	25.0	32.0	39.9	48.3	57.0
Lat.	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1
0	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.2
10	.5	.6	.6	.6	.6	.5	.5	.4	.4	.3	.3	.2
20	.5	.6	.6	.6	.6	.6	.5	.5	.4	.4	.3	.3
30	.6	.6	.6	.6	.6	.6	.5	.5	.5	.4	.4	.4
40	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
45	.6	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5
50	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
55	.6	.6	.6	.6	.6	.6	.6	.6	.7	.7	.7	.7
60	.6	.6	.6	.6	.6	.6	.7	.7	.7	.8	.8	.8
62	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8
64	.7	.6	.6	.6	.6	.6	.7	.7	.8	.8	0.9	0.9
66	.7	.6	.6	.6	.6	.7	.7	.8	.8	0.9	1.0	1.0
68	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1
Mes	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2
Ene.	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Feb.	.7	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8
Mar.	.5	.6	.6	.7	.7	.8	.8	.9	.9	.9	.9	.9
Abr.	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9
May.	.3	.3	.3	.4	.5	.5	.6	.7	.7	.8	.8	.9
Jun.	.2	.2	.3	.3	.3	.4	.4	.5	.6	.6	.7	.8
Jul.	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6
Ago.	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4
Sep..	.6	.5	.5	.4	.4	.3	.3	.3	.3	.3	.3	.3
Oct.	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3
Nov.	0.9	0.9	0.8	.8	.7	.6	.6	.5	.4	.4	.3	.3
Dic.	1.0	1.0	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4
Lat.	AZIMUTH											
0	0.4	0.3	0.1	0.0	359.8	359.7	359.6	359.4	359.3	359.3	359.2	359.2
20	0.4	0.3	0.1	0.0	359.8	359.7	359.5	359.4	359.3	359.2	359.1	359.1
40	0.5	0.3	0.1	0.0	359.8	359.6	359.4	359.3	359.1	359.0	359.0	358.9
50	0.6	0.4	0.2	359.9	359.7	359.5	359.3	359.1	359.0	358.8	358.8	358.7
55	0.7	0.4	0.2	359.9	359.7	359.4	359.2	359.0	358.8	358.7	358.6	358.5
60	0.8	0.5	0.2	359.9	359.6	359.3	359.1	358.8	358.7	358.5	358.4	358.3
65	0.9	0.6	0.3	359.9	359.6	359.2	358.9	358.6	358.4	358.2	358.1	358.0

Latitud = Altura aparente (corregida por refracción) - 1° + a_0 + a_1 + a_2

Se entra a la tabla con el valor del A. H. L. de Aries para determinar la columna que debe usarse; cada columna se refiere a un alcance de 10° a_0 se toma, mediante interpolación mental de la tabla superior con las unidades del A. H. L. de Aries en grados, como argumento; a_1 y a_2 se toman sin interpolación de la segunda y tercera tablas usando la latitud y el mes como argumento respectivamente; a_0 , a_1 y a_2 son siempre positivas. La tabla final da el azimut de la Polar.

ESTRELLA POLAR. TABLAS PARA 1977.
DETERMINACION DE LATITUD Y AZIMUT.

A.H.L. ARIES	120°- 129°	130°- 139°	140°- 149°	150°- 159°	160°- 169°	170°- 179°	180°- 189°	190°- 199°	200°- 209°	210°- 219°	220°- 229°	230°- 239°
	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0
0	0 57.0	I 05.7	I 14.3	I 22.3	I 29.7	I 36.0	I 41.3	I 45.3	I 47.9	I 49.1	I 48.7	I 46.8
1	57.9	06.6	15.1	23.1	30.3	36.6	41.8	45.6	48.1	49.1	48.6	46.6
2	58.7	07.5	15.9	23.9	31.0	37.2	42.2	45.9	48.3	49.1	48.4	46.3
3	0 59.6	08.3	16.7	24.6	31.7	37.8	42.7	46.2	48.4	49.1	48.3	46.0
4	I 00.5	09.2	17.6	25.4	32.3	38.3	43.1	46.5	48.5	49.1	48.1	45.7
5	I 01.4	I 10.0	I 18.4	I 26.1	I 33.0	I 38.8	I 43.5	I 46.8	I 48.7	I 49.1	I 47.9	I 45.4
6	02.2	10.9	19.2	26.8	33.6	39.4	43.9	47.0	48.8	49.0	47.7	45.0
7	03.1	11.7	20.0	27.5	34.2	39.9	44.3	47.3	48.9	49.0	47.5	44.7
8	04.0	12.6	20.8	28.3	34.9	40.4	44.6	47.5	48.9	48.9	47.3	44.3
9	04.9	13.4	21.5	29.0	35.5	40.8	45.0	47.7	49.0	48.8	47.1	43.9
10	I 05.7	I 14.3	I 22.3	I 29.7	I 36.0	I 41.3	I 45.3	I 47.9	I 49.1	I 48.7	I 46.8	I 43.5
Lat.	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1
0	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.5
10	.2	.2	.3	.3	.4	.5	.5	.6	.6	.6	.6	.5
20	.3	.3	.3	.4	.4	.5	.5	.6	.6	.6	.6	.6
30	.4	.4	.4	.4	.5	.5	.6	.6	.6	.6	.6	.6
40	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
45	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.6
50	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
55	.7	.7	.7	.7	.6	.6	.6	.6	.6	.6	.6	.6
60	.8	.8	.8	.7	.7	.7	.6	.6	.6	.6	.6	.6
62	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
64	0.9	0.9	.9	.8	.8	.7	.7	.6	.6	.6	.6	.6
66	1.0	1.0	0.9	.9	.8	.7	.7	.6	.6	.6	.6	.7
68	1.1	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.7
Mes.	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2
Ene	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Feb.	.8	.7	.7	.7	.6	.6	.5	.5	.5	.4	.4	.4
Mar.	0.9	0.9	0.9	.8	.8	.7	.7	.6	.6	.5	.5	.4
Abr.	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.5
May.	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.9	.9	.8	.7	.7
Jun.	.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	.9	.9	.9	.8
Jul.	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Ago.	.5	.5	.6	.7	.7	.8	.8	.8	.9	.9	.9	.9
Sep.	.3	.4	.4	.5	.5	.6	.6	.7	.7	.8	.8	.9
Oct.	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7
Nov.	.2	.2	.2	.2	.2	.2	.3	.3	.4	.4	.5	.6
Dic.	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4
Lat.	AZIMUTH											
0	359.2	359.2	359.2	359.3	359.4	359.5	359.6	359.7	359.9	0.0	0.2	0.3
20	359.1	359.1	359.2	359.2	359.3	359.5	359.6	359.7	359.9	0.0	0.2	0.3
40	358.9	358.9	359.0	359.1	359.2	359.3	359.5	359.7	359.9	0.0	0.2	0.4
50	358.7	358.7	358.8	358.9	359.0	359.2	359.4	359.6	359.8	0.1	0.3	0.5
55	358.5	358.6	358.7	358.8	358.9	359.1	359.3	359.6	359.8	0.1	0.3	0.5
60	358.3	358.4	358.5	358.6	358.8	359.0	359.2	359.5	359.8	0.1	0.4	0.6
65	358.0	358.1	358.2	358.4	358.6	358.8	359.1	359.4	359.7	0.1	0.4	0.7

EJEMPLO: El 22 de Mayo de 1977 a las 23^h 18^m 56^s T.M.G. a una Longitud Oeste 37° 14', la altura de sextante corregida de la Estrella Polar fue de 49° 31'.6

De las páginas diarias :		Alt. de Sext Corr.	49 31.6
A.H.G. de Aries (23 ^b)	225 27.1	a_0 (argumento 192° 58')	I 46.2
Incremento a (18 ^m 56 ^s)	4 44.8	a_1 (Latitud 50° aprox.)	0.6
Longitud (Oeste)	-37 14	a_2 (Mayo)	0.9
A.H.L. Aries	192 58	Suma - I° = Lat. =	50 19.3

ESTRELLA POLAR. TABLAS PARA 1977
DETERMINACION DE LATITUD Y AZIMUT.

A.H.L. ARIES	240°- 249°	250°- 259°	260°- 269°	270°- 279°	280°- 289°	290°- 299°	300°- 309°	310°- 319°	320°- 329°	330°- 339°	340°- 349°	350°- 359°
	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0	a_0
0	I 43.5	I 38.9	I 33.1	I 26.2	I 18.5	I 10.2	I 01.5	0 52.7	0 44.1	0 36.0	0 28.5	0 22.0
1	43.1	38.4	32.4	25.5	17.7	09.3	I 00.6	51.9	43.3	35.2	27.8	21.4
2	42.7	37.8	31.8	24.7	16.9	08.4	0 59.7	51.0	42.5	34.4	27.1	20.8
3	42.3	37.3	31.1	24.0	16.0	07.6	58.9	50.1	41.6	33.6	26.4	20.2
4	41.8	36.7	30.4	23.2	15.2	06.7	58.0	49.3	40.8	32.9	25.8	19.6
5	I 41.4	I 36.1	I 29.7	I 22.4	I 14.4	I 05.9	0 57.1	0 48.4	0 40.0	0 32.1	0 25.1	0 19.1
6	40.9	35.5	29.0	21.6	13.5	05.0	56.2	47.5	39.2	31.4	24.4	18.6
7	40.4	34.9	28.3	20.9	12.7	04.1	55.3	46.7	38.4	30.7	23.8	18.0
8	39.9	34.3	27.6	20.1	11.9	03.2	54.5	45.8	37.6	29.9	23.2	17.5
9	39.4	33.7	26.9	19.3	11.0	02.4	53.6	45.0	36.8	29.2	22.6	17.0
10	I 38.9	I 33.1	I 26.2	I 18.5	I 10.2	I 01.5	0 52.7	0 44.1	0 36.0	0 28.5	0 22.0	0 16.5
Lat.	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1	a_1
0	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4
10	.5	.4	.4	.3	.3	.2	.2	.2	.3	.3	.4	.5
20	.5	.5	.4	.4	.3	.3	.3	.3	.3	.4	.4	.5
30	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.5	.5
40	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
45	.6	.6	.6	.5	.5	.5	.5	.5	.5	.5	.6	.6
50	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
55	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.6	.6
60	.7	.7	.7	.8	.8	.8	.8	.8	.8	.7	.7	.7
62	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7
64	.7	.7	.8	.8	0.9	0.9	0.9	0.9	.9	.8	.8	.7
66	.7	.8	.8	0.9	1.0	1.0	1.0	1.0	0.9	.9	.8	.7
68	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.8
Mes.	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2	a_2
Ene	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Feb.	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.6	.6
Mar.	.4	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.5
Abr.	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3
May.	.6	.5	.5	.4	.4	.3	.3	.2	.2	.2	.2	.2
Jun.	.8	.7	.6	.6	.5	.4	.4	.3	.3	.3	.2	.2
Jul.	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3
Ago.	.9	.9	.9	.8	.8	.8	.7	.7	.6	.5	.5	.4
Sep.	.9	.9	.9	.9	.9	.9	.9	.8	.8	.7	.7	.6
Oct.	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Nov.	.6	.7	.8	.8	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0
Dic.	0.5	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.0	1.0	1.0
Lat.	AZIMUTH											
0	0.4	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.5
20	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.5
40	0.6	0.7	0.9	1.0	1.0	1.1	1.1	1.1	1.0	0.9	0.8	0.7
50	0.7	0.9	1.0	1.1	1.2	1.3	1.3	1.3	1.2	1.1	1.0	0.8
55	0.8	1.0	1.1	1.3	1.4	1.4	1.5	1.4	1.4	1.2	1.1	0.9
60	0.9	1.1	1.3	1.5	1.6	1.7	1.7	1.6	1.6	1.4	1.3	1.0
65	1.0	1.3	1.5	1.7	1.9	2.0	2.0	2.0	1.9	1.7	1.5	1.2

Latitud = Altura aparente (corregida por refracción) - 1° + a_0 + a_1 + a_2

Se entra a la tabla con el valor del A. H. L. de Aries para determinar la columna que debe usarse; cada columna se refiere a un alcance de 10° a_0 se toma mediante interpolación mental de la tabla superior, con las unidades del A. H. L. de Aries en grados, como argumento; a_1 y a_2 se toman sin interpolación de la segunda y tercera tablas usando la latitud y el mes como argumento respectivamente; a_0 , a_1 y a_2 son siempre positivas. La tabla final da el azimut de la Polar.

QB 8
.M48

TABLAS DE CORRECCION DE ALTURAS DE 0° - 10°, DEL SOL, ESTRELLAS Y PLANETAS A₃

9.2.2017

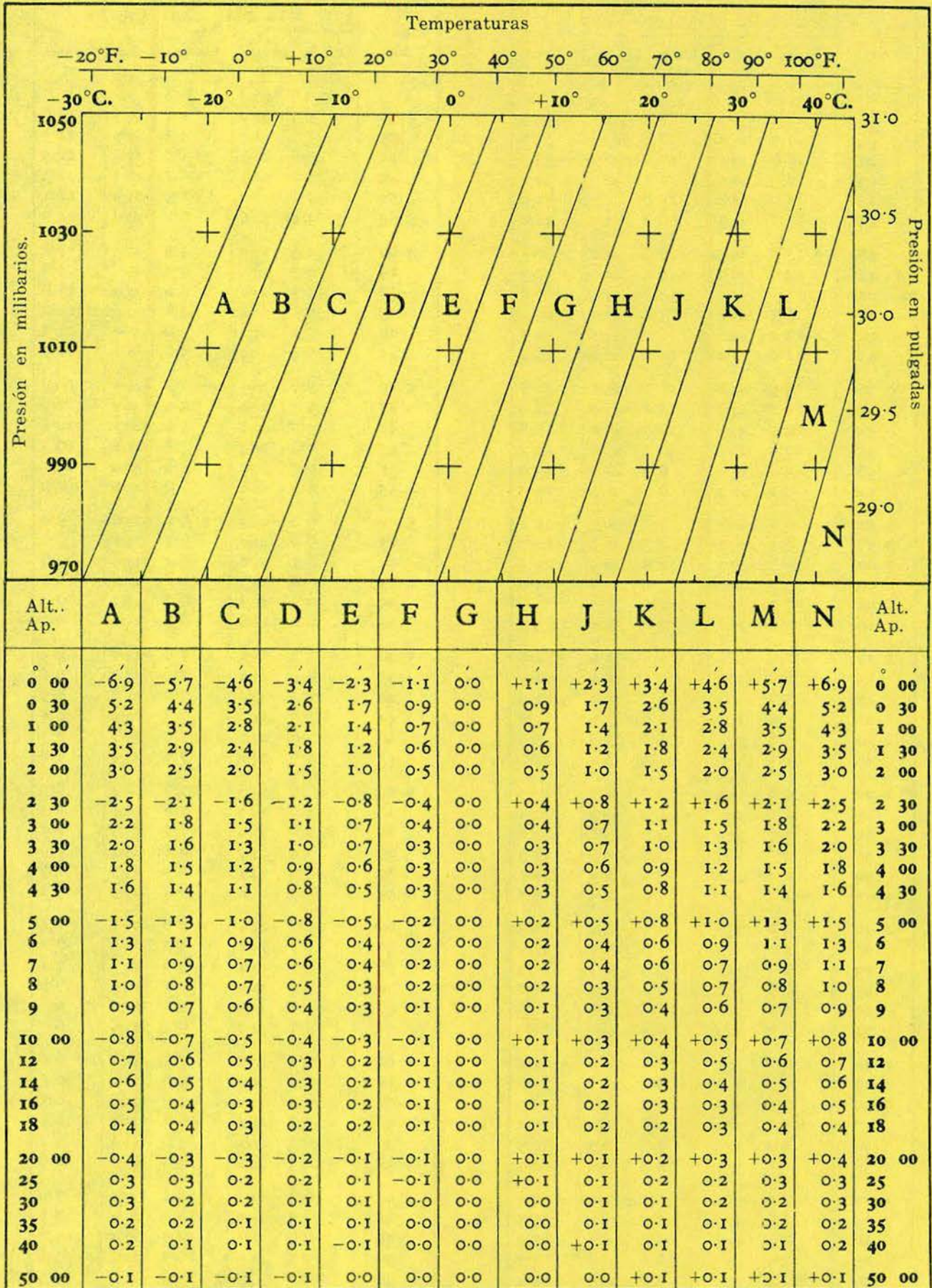
Alt. Ap.	OCT.—MAR. SOL ABR.—SEP.				ESTRELLAS PLANETAS.
	Limbo Inf.	Limbo Sup.	Limbo Inf.	Limbo Sup.	
0 00	-18.2	-50.5	-18.4	-50.2	-34.5
03	17.5	49.8	17.8	49.6	33.8
06	16.9	49.2	17.1	48.9	33.2
09	16.3	48.6	16.5	48.3	32.6
12	15.7	48.0	15.9	47.7	32.0
15	15.1	47.4	15.3	47.1	31.4
0 18	-14.5	-46.8	-14.8	-46.6	-30.8
21	14.0	46.3	14.2	46.0	30.3
24	13.5	45.8	13.7	45.5	29.8
27	12.9	45.2	13.2	45.0	29.2
30	12.4	44.7	12.7	44.5	28.7
33	11.9	44.2	12.2	44.0	28.2
0 36	-11.5	-43.8	-11.7	-43.5	-27.8
39	11.0	43.3	11.2	43.0	27.3
42	10.5	42.8	10.8	42.6	26.8
45	10.1	42.4	10.3	42.1	26.4
48	9.6	41.9	9.9	41.7	25.9
51	9.2	41.5	9.5	41.3	25.5
0 54	- 8.8	-41.1	- 9.1	-40.9	-25.1
0 57	8.4	40.7	8.7	40.5	24.7
1 00	8.0	40.3	8.3	40.1	24.3
03	7.7	40.0	7.9	39.7	24.0
06	7.3	39.6	7.5	39.3	23.6
09	6.9	39.2	7.2	39.0	23.2
1 12	- 6.6	-38.9	- 6.8	-38.6	-22.9
15	6.2	38.5	6.5	38.3	22.5
18	5.9	38.2	6.2	38.0	22.2
21	5.6	37.9	5.8	37.6	21.9
24	5.3	37.6	5.5	37.3	21.6
27	4.9	37.2	5.2	37.0	21.2
1 30	- 4.6	-36.9	- 4.9	-36.7	-20.9
35	4.2	36.5	4.4	36.2	20.5
40	3.7	36.0	4.0	35.8	20.0
45	3.2	35.5	3.5	35.3	19.5
50	2.8	35.1	3.1	34.9	19.1
1 55	2.4	34.7	2.6	34.4	18.7
2 00	- 2.0	-34.3	- 2.2	-34.0	-18.3
05	1.6	33.9	1.8	33.6	17.9
10	1.2	33.5	1.5	33.3	17.5
15	0.9	33.2	1.1	32.9	17.2
20	0.5	32.8	0.8	32.6	16.8
25	- 0.2	32.5	0.4	32.2	16.5
2 30	+ 0.2	-32.1	- 0.1	-31.9	-16.1
35	0.5	31.8	+ 0.2	31.6	15.8
40	0.8	31.5	0.5	31.3	15.5
45	1.1	31.2	0.8	31.0	15.2
50	1.4	30.9	1.1	30.7	14.9
2 55	1.6	30.7	1.4	30.4	14.7
3 00	+ 1.9	-30.4	+ 1.7	-30.1	-14.4
05	2.2	30.1	1.9	29.9	14.1
10	2.4	29.9	2.1	29.7	13.9
15	2.6	29.7	2.4	29.4	13.7
20	2.9	29.4	2.6	29.2	13.4
25	3.1	29.2	2.9	28.9	13.2
3 30	+ 3.3	-29.0	+ 3.1	-28.7	-13.0

Alt. Ap.	OCT.—MAR. SOL ABR.—SEP.				ESTRELLAS PLANETAS.
	Limbo Inf.	Limbo Sup.	Limbo Inf.	Limbo Sup.	
3 30	+ 3.3	-29.0	+ 3.1	-28.7	-13.0
35	3.6	28.7	3.3	28.5	12.7
40	3.8	28.5	3.5	28.3	12.5
45	4.0	28.3	3.7	28.1	12.3
50	4.2	28.1	3.9	27.9	12.1
3 55	4.4	27.9	4.1	27.7	11.9
4 00	+ 4.5	-27.8	+ 4.3	-27.5	-11.8
05	4.7	27.6	4.5	27.3	11.6
10	4.9	27.4	4.6	27.2	11.4
15	5.1	27.2	4.8	27.0	11.2
20	5.2	27.1	5.0	26.8	11.1
25	5.4	26.9	5.1	26.7	10.9
4 30	+ 5.6	-26.7	+ 5.3	-26.5	-10.7
35	5.7	26.6	5.5	26.3	10.6
40	5.9	26.4	5.6	26.2	10.4
45	6.0	26.3	5.8	26.0	10.3
50	6.2	26.1	5.9	25.9	10.1
4 55	6.3	26.0	6.0	25.8	10.0
5 00	+ 6.4	-25.9	+ 6.2	-25.6	- 9.9
05	6.6	25.7	6.3	25.5	9.7
10	6.7	25.6	6.4	25.4	9.6
15	6.8	25.5	6.6	25.2	9.5
20	6.9	25.4	6.7	25.1	9.4
25	7.1	25.2	6.8	25.0	9.2
5 30	+ 7.2	-25.1	+ 6.9	-24.9	- 9.1
35	7.3	25.0	7.0	24.8	9.0
40	7.4	24.9	7.2	24.6	8.9
45	7.5	24.8	7.3	24.5	8.8
50	7.6	24.7	7.4	24.4	8.7
5 55	7.7	24.6	7.5	24.3	8.6
6 00	+ 7.8	-24.5	+ 7.6	-24.2	- 8.5
10	8.0	24.3	7.8	24.0	8.3
20	8.2	24.1	8.0	23.8	8.1
30	8.4	23.9	8.1	23.7	7.9
40	8.6	23.7	8.3	23.5	7.7
6 50	8.7	23.6	8.5	23.3	7.6
7 00	+ 8.9	-23.4	+ 8.6	-23.2	- 7.4
10	9.1	23.2	8.8	23.0	7.2
20	9.2	23.1	9.0	22.8	7.1
30	9.3	23.0	9.1	22.7	7.0
40	9.5	22.8	9.2	22.6	6.8
7 50	9.6	22.7	9.4	22.4	6.7
8 00	+ 9.7	-22.6	+ 9.5	-22.3	- 6.6
10	9.9	22.4	9.6	22.2	6.4
20	10.0	22.3	9.7	22.1	6.3
30	10.1	22.2	9.8	22.0	6.2
40	10.2	22.1	10.0	21.8	6.1
8 50	10.3	22.0	10.1	21.7	6.0
9 00	+ 10.4	-21.9	+ 10.2	-21.6	- 5.9
10	10.5	21.8	10.3	21.5	5.8
20	10.6	21.7	10.4	21.4	5.7
30	10.7	21.6	10.5	21.3	5.6
40	10.8	21.5	10.6	21.2	5.5
9 50	10.9	21.4	10.6	21.2	5.4
10 00	+ 11.0	-21.3	+ 10.7	-21.1	- 5.3

SECRETARIA DE MARINA
UNIDAD DE HISTORIA
Y CULTURA NAVAL
BIBLIOTECA CENTRAL

En la página siguiente se dan correcciones adicionales por temperatura y presión. Para el caso de observaciones con sextante de burbuja, ignórese la depresión y úsense las correcciones de estrellas para Sol, planetas y estrellas.

A₄ TABLAS DE CORRECCION DE ALTURAS - CORRECCIONES ADICIONALES
CORRECCION ADICIONAL A LA REFRACCION PARA CONDICIONES NO STANDARD



Se entra a la gráfica con los valores de temperatura y presión como argumento para encontrar una letra de zona; usando como argumento esta letra de zona y la altura aparente (altura de sextante corregida por depresión), se toma una corrección de la tabla. Esta corrección debe aplicarse a la altura del sextante además de las correcciones debidas a condiciones standard (para sol, planetas y estrellas de la página A2 y para la Luna de las páginas xxxiv y xxxv).

CONVERSION DE ARCO A TIEMPO

0°-59°		60°-119°		120°-179°		180°-239°		240°-299°		300°-359°		0'00	0'25	0'50	0'75	
o	h m	o	h m	o	h m	o	h m	o	h m	o	h m	m s	m s	m s	m s	
0	0 00	60	4 00	120	8 00	180	12 00	240	16 00	300	20 00	0	0 00	0 01	0 02	0 03
1	0 04	61	4 04	121	8 04	181	12 04	241	16 04	301	20 04	1	0 04	0 05	0 06	0 07
2	0 08	62	4 08	122	8 08	182	12 08	242	16 08	302	20 08	2	0 08	0 09	0 10	0 11
3	0 12	63	4 12	123	8 12	183	12 12	243	16 12	303	20 12	3	0 12	0 13	0 14	0 15
4	0 16	64	4 16	124	8 16	184	12 16	244	16 16	304	20 16	4	0 16	0 17	0 18	0 19
5	0 20	65	4 20	125	8 20	185	12 20	245	16 20	305	20 20	5	0 20	0 21	0 22	0 23
6	0 24	66	4 24	126	8 24	186	12 24	246	16 24	306	20 24	6	0 24	0 25	0 26	0 27
7	0 28	67	4 28	127	8 28	187	12 28	247	16 28	307	20 28	7	0 28	0 29	0 30	0 31
8	0 32	68	4 32	128	8 32	188	12 32	248	16 32	308	20 32	8	0 32	0 33	0 34	0 35
9	0 36	69	4 36	129	8 36	189	12 36	249	16 36	309	20 36	9	0 36	0 37	0 38	0 39
10	0 40	70	4 40	130	8 40	190	12 40	250	16 40	310	20 40	10	0 40	0 41	0 42	0 43
11	0 44	71	4 44	131	8 44	191	12 44	251	16 44	311	20 44	11	0 44	0 45	0 46	0 47
12	0 48	72	4 48	132	8 48	192	12 48	252	16 48	312	20 48	12	0 48	0 49	0 50	0 51
13	0 52	73	4 52	133	8 52	193	12 52	253	16 52	313	20 52	13	0 52	0 53	0 54	0 55
14	0 56	74	4 56	134	8 56	194	12 56	254	16 56	314	20 56	14	0 56	0 57	0 58	0 59
15	1 00	75	5 00	135	9 00	195	13 00	255	17 00	315	21 00	15	1 00	1 01	1 02	1 03
16	1 04	76	5 04	136	9 04	196	13 04	256	17 04	316	21 04	16	1 04	1 05	1 06	1 07
17	1 08	77	5 08	137	9 08	197	13 08	257	17 08	317	21 08	17	1 08	1 09	1 10	1 11
18	1 12	78	5 12	138	9 12	198	13 12	258	17 12	318	21 12	18	1 12	1 13	1 14	1 15
19	1 16	79	5 16	139	9 16	199	13 16	259	17 16	319	21 16	19	1 16	1 17	1 18	1 19
20	1 20	80	5 20	140	9 20	200	13 20	260	17 20	320	21 20	20	1 20	1 21	1 22	1 23
21	1 24	81	5 24	141	9 24	201	13 24	261	17 24	321	21 24	21	1 24	1 25	1 26	1 27
22	1 28	82	5 28	142	9 28	202	13 28	262	17 28	322	21 28	22	1 28	1 29	1 30	1 31
23	1 32	83	5 32	143	9 32	203	13 32	263	17 32	323	21 32	23	1 32	1 33	1 34	1 35
24	1 36	84	5 36	144	9 36	204	13 36	264	17 36	324	21 36	24	1 36	1 37	1 38	1 39
25	1 40	85	5 40	145	9 40	205	13 40	265	17 40	325	21 40	25	1 40	1 41	1 42	1 43
26	1 44	86	5 44	146	9 44	206	13 44	266	17 44	326	21 44	26	1 44	1 45	1 46	1 47
27	1 48	87	5 48	147	9 48	207	13 48	267	17 48	327	21 48	27	1 48	1 49	1 50	1 51
28	1 52	88	5 52	148	9 52	208	13 52	268	17 52	328	21 52	28	1 52	1 53	1 54	1 55
29	1 56	89	5 56	149	9 56	209	13 56	269	17 56	329	21 56	29	1 56	1 57	1 58	1 59
30	2 00	90	6 00	150	10 00	210	14 00	270	18 00	330	22 00	30	2 00	2 01	2 02	2 03
31	2 04	91	6 04	151	10 04	211	14 04	271	18 04	331	22 04	31	2 04	2 05	2 06	2 07
32	2 08	92	6 08	152	10 08	212	14 08	272	18 08	332	22 08	32	2 08	2 09	2 10	2 11
33	2 12	93	6 12	153	10 12	213	14 12	273	18 12	333	22 12	33	2 12	2 13	2 14	2 15
34	2 16	94	6 16	154	10 16	214	14 16	274	18 16	334	22 16	34	2 16	2 17	2 18	2 19
35	2 20	95	6 20	155	10 20	215	14 20	275	18 20	335	22 20	35	2 20	2 21	2 22	2 23
36	2 24	96	6 24	156	10 24	216	14 24	276	18 24	336	22 24	36	2 24	2 25	2 26	2 27
37	2 28	97	6 28	157	10 28	217	14 28	277	18 28	337	22 28	37	2 28	2 29	2 30	2 31
38	2 32	98	6 32	158	10 32	218	14 32	278	18 32	338	22 32	38	2 32	2 33	2 34	2 35
39	2 36	99	6 36	159	10 36	219	14 36	279	18 36	339	22 36	39	2 36	2 37	2 38	2 39
40	2 40	100	6 40	160	10 40	220	14 40	280	18 40	340	22 40	40	2 40	2 41	2 42	2 43
41	2 44	101	6 44	161	10 44	221	14 44	281	18 44	341	22 44	41	2 44	2 45	2 46	2 47
42	2 48	102	6 48	162	10 48	222	14 48	282	18 48	342	22 48	42	2 48	2 49	2 50	2 51
43	2 52	103	6 52	163	10 52	223	14 52	283	18 52	343	22 52	43	2 52	2 53	2 54	2 55
44	2 56	104	6 56	164	10 56	224	14 56	284	18 56	344	22 56	44	2 56	2 57	2 58	2 59
45	3 00	105	7 00	165	11 00	225	15 00	285	19 00	345	23 00	45	3 00	3 01	3 02	3 03
46	3 04	106	7 04	166	11 04	226	15 04	286	19 04	346	23 04	46	3 04	3 05	3 06	3 07
47	3 08	107	7 08	167	11 08	227	15 08	287	19 08	347	23 08	47	3 08	3 09	3 10	3 11
48	3 12	108	7 12	168	11 12	228	15 12	288	19 12	348	23 12	48	3 12	3 13	3 14	3 15
49	3 16	109	7 16	169	11 16	229	15 16	289	19 16	349	23 16	49	3 16	3 17	3 18	3 19
50	3 20	110	7 20	170	11 20	230	15 20	290	19 20	350	23 20	50	3 20	3 21	3 22	3 23
51	3 24	111	7 24	171	11 24	231	15 24	291	19 24	351	23 24	51	3 24	3 25	3 26	3 27
52	3 28	112	7 28	172	11 28	232	15 28	292	19 28	352	23 28	52	3 28	3 29	3 30	3 31
53	3 32	113	7 32	173	11 32	233	15 32	293	19 32	353	23 32	53	3 32	3 33	3 34	3 35
54	3 36	114	7 36	174	11 36	234	15 36	294	19 36	354	23 36	54	3 36	3 37	3 38	3 39
55	3 40	115	7 40	175	11 40	235	15 40	295	19 40	355	23 40	55	3 40	3 41	3 42	3 43
56	3 44	116	7 44	176	11 44	236	15 44	296	19 44	356	23 44	56	3 44	3 45	3 46	3 47
57	3 48	117	7 48	177	11 48	237	15 48	297	19 48	357	23 48	57	3 48	3 49	3 50	3 51
58	3 52	118	7 52	178	11 52	238	15 52	298	19 52	358	23 52	58	3 52	3 53	3 54	3 55
59	3 56	119	7 56	179	11 56	239	15 56	299	19 56	359	23 56	59	3 56	3 57	3 58	3 59

La tabla anterior se usa para convertir expresiones en arco a sus equivalentes en tiempo; su uso principal en este Almanaque es para la conversión de valores de la longitud para aplicarse a T. M. L. (Sumadas al oeste, restadas al este) para obtener T. M. G. o viceversa, particularmente en el caso de orto y ocaso del Sol, etc.

0^m

I CORRECCIONES E INCREMENTOS

1^m

m 0	SOL		ARIES	LUNA	v o d		v o d		v o d		m 1	SOL		ARIES	LUNA	v o d		v o d		v o d	
	PLANETAS				PLANETAS		Corr ⁿ		Corr ⁿ			Corr ⁿ				PLANETAS		Corr ⁿ		Corr ⁿ	
00	0 00-0	0 00-0	0 00-0	0 00-0	0-0	0-0	6-0	0-1	12-0	0-1	00	0 15-0	0 15-0	0 14-3	0-0	0-0	6-0	0-2	12-0	0-3	
01	0 00-3	0 00-3	0 00-2	0 00-2	0-1	0-0	6-1	0-1	12-1	0-1	01	0 15-3	0 15-3	0 14-6	0-1	0-0	6-1	0-2	12-1	0-3	
02	0 00-5	0 00-5	0 00-5	0 00-5	0-2	0-0	6-2	0-1	12-2	0-1	02	0 15-5	0 15-5	0 14-8	0-2	0-0	6-2	0-2	12-2	0-3	
03	0 00-8	0 00-8	0 00-7	0 00-7	0-3	0-0	6-3	0-1	12-3	0-1	03	0 15-8	0 15-8	0 15-0	0-3	0-0	6-3	0-2	12-3	0-3	
04	0 01-0	0 01-0	0 01-0	0 01-0	0-4	0-0	6-4	0-1	12-4	0-1	04	0 16-0	0 16-0	0 15-3	0-4	0-0	6-4	0-2	12-4	0-3	
05	0 01-3	0 01-3	0 01-2	0 01-2	0-5	0-0	6-5	0-1	12-5	0-1	05	0 16-3	0 16-3	0 15-5	0-5	0-0	6-5	0-2	12-5	0-3	
06	0 01-5	0 01-5	0 01-4	0 01-4	0-6	0-0	6-6	0-1	12-6	0-1	06	0 16-5	0 16-5	0 15-7	0-6	0-0	6-6	0-2	12-6	0-3	
07	0 01-8	0 01-8	0 01-7	0 01-7	0-7	0-0	6-7	0-1	12-7	0-1	07	0 16-8	0 16-8	0 16-0	0-7	0-0	6-7	0-2	12-7	0-3	
08	0 02-0	0 02-0	0 01-9	0 01-9	0-8	0-0	6-8	0-1	12-8	0-1	08	0 17-0	0 17-0	0 16-2	0-8	0-0	6-8	0-2	12-8	0-3	
09	0 02-3	0 02-3	0 02-1	0 02-1	0-9	0-0	6-9	0-1	12-9	0-1	09	0 17-3	0 17-3	0 16-5	0-9	0-0	6-9	0-2	12-9	0-3	
10	0 02-5	0 02-5	0 02-4	0 02-4	1-0	0-0	7-0	0-1	13-0	0-1	10	0 17-5	0 17-5	0 16-7	1-0	0-0	7-0	0-2	13-0	0-3	
11	0 02-8	0 02-8	0 02-6	0 02-6	1-1	0-0	7-1	0-1	13-1	0-1	11	0 17-8	0 17-8	0 16-9	1-1	0-0	7-1	0-2	13-1	0-3	
12	0 03-0	0 03-0	0 02-9	0 02-9	1-2	0-0	7-2	0-1	13-2	0-1	12	0 18-0	0 18-0	0 17-2	1-2	0-0	7-2	0-2	13-2	0-3	
13	0 03-3	0 03-3	0 03-1	0 03-1	1-3	0-0	7-3	0-1	13-3	0-1	13	0 18-3	0 18-3	0 17-4	1-3	0-0	7-3	0-2	13-3	0-3	
14	0 03-5	0 03-5	0 03-3	0 03-3	1-4	0-0	7-4	0-1	13-4	0-1	14	0 18-5	0 18-6	0 17-7	1-4	0-0	7-4	0-2	13-4	0-3	
15	0 03-8	0 03-8	0 03-6	0 03-6	1-5	0-0	7-5	0-1	13-5	0-1	15	0 18-8	0 18-8	0 17-9	1-5	0-0	7-5	0-2	13-5	0-3	
16	0 04-0	0 04-0	0 03-8	0 03-8	1-6	0-0	7-6	0-1	13-6	0-1	16	0 19-0	0 19-1	0 18-1	1-6	0-0	7-6	0-2	13-6	0-3	
17	0 04-3	0 04-3	0 04-1	0 04-1	1-7	0-0	7-7	0-1	13-7	0-1	17	0 19-3	0 19-3	0 18-4	1-7	0-0	7-7	0-2	13-7	0-3	
18	0 04-5	0 04-5	0 04-3	0 04-3	1-8	0-0	7-8	0-1	13-8	0-1	18	0 19-5	0 19-6	0 18-6	1-8	0-0	7-8	0-2	13-8	0-3	
19	0 04-8	0 04-8	0 04-5	0 04-5	1-9	0-0	7-9	0-1	13-9	0-1	19	0 19-8	0 19-8	0 18-9	1-9	0-0	7-9	0-2	13-9	0-3	
20	0 05-0	0 05-0	0 04-8	0 04-8	2-0	0-0	8-0	0-1	14-0	0-1	20	0 20-0	0 20-1	0 19-1	2-0	0-1	8-0	0-2	14-0	0-4	
21	0 05-3	0 05-3	0 05-0	0 05-0	2-1	0-0	8-1	0-1	14-1	0-1	21	0 20-3	0 20-3	0 19-3	2-1	0-1	8-1	0-2	14-1	0-4	
22	0 05-5	0 05-5	0 05-2	0 05-2	2-2	0-0	8-2	0-1	14-2	0-1	22	0 20-5	0 20-6	0 19-6	2-2	0-1	8-2	0-2	14-2	0-4	
23	0 05-8	0 05-8	0 05-5	0 05-5	2-3	0-0	8-3	0-1	14-3	0-1	23	0 20-8	0 20-8	0 19-8	2-3	0-1	8-3	0-2	14-3	0-4	
24	0 06-0	0 06-0	0 05-7	0 05-7	2-4	0-0	8-4	0-1	14-4	0-1	24	0 21-0	0 21-1	0 20-0	2-4	0-1	8-4	0-2	14-4	0-4	
25	0 06-3	0 06-3	0 06-0	0 06-0	2-5	0-0	8-5	0-1	14-5	0-1	25	0 21-3	0 21-3	0 20-3	2-5	0-1	8-5	0-2	14-5	0-4	
26	0 06-5	0 06-5	0 06-2	0 06-2	2-6	0-0	8-6	0-1	14-6	0-1	26	0 21-5	0 21-6	0 20-5	2-6	0-1	8-6	0-2	14-6	0-4	
27	0 06-8	0 06-8	0 06-4	0 06-4	2-7	0-0	8-7	0-1	14-7	0-1	27	0 21-8	0 21-8	0 20-8	2-7	0-1	8-7	0-2	14-7	0-4	
28	0 07-0	0 07-0	0 06-7	0 06-7	2-8	0-0	8-8	0-1	14-8	0-1	28	0 22-0	0 22-1	0 21-0	2-8	0-1	8-8	0-2	14-8	0-4	
29	0 07-3	0 07-3	0 06-9	0 06-9	2-9	0-0	8-9	0-1	14-9	0-1	29	0 22-3	0 22-3	0 21-2	2-9	0-1	8-9	0-2	14-9	0-4	
30	0 07-5	0 07-5	0 07-2	0 07-2	3-0	0-0	9-0	0-1	15-0	0-1	30	0 22-5	0 22-6	0 21-5	3-0	0-1	9-0	0-2	15-0	0-4	
31	0 07-8	0 07-8	0 07-4	0 07-4	3-1	0-0	9-1	0-1	15-1	0-1	31	0 22-8	0 22-8	0 21-7	3-1	0-1	9-1	0-2	15-1	0-4	
32	0 08-0	0 08-0	0 07-6	0 07-6	3-2	0-0	9-2	0-1	15-2	0-1	32	0 23-0	0 23-1	0 22-0	3-2	0-1	9-2	0-2	15-2	0-4	
33	0 08-3	0 08-3	0 07-9	0 07-9	3-3	0-0	9-3	0-1	15-3	0-1	33	0 23-3	0 23-3	0 22-2	3-3	0-1	9-3	0-2	15-3	0-4	
34	0 08-5	0 08-5	0 08-1	0 08-1	3-4	0-0	9-4	0-1	15-4	0-1	34	0 23-5	0 23-6	0 22-4	3-4	0-1	9-4	0-2	15-4	0-4	
35	0 08-8	0 08-8	0 08-4	0 08-4	3-5	0-0	9-5	0-1	15-5	0-1	35	0 23-8	0 23-8	0 22-7	3-5	0-1	9-5	0-2	15-5	0-4	
36	0 09-0	0 09-0	0 08-6	0 08-6	3-6	0-0	9-6	0-1	15-6	0-1	36	0 24-0	0 24-1	0 22-9	3-6	0-1	9-6	0-2	15-6	0-4	
37	0 09-3	0 09-3	0 08-8	0 08-8	3-7	0-0	9-7	0-1	15-7	0-1	37	0 24-3	0 24-3	0 23-1	3-7	0-1	9-7	0-2	15-7	0-4	
38	0 09-5	0 09-5	0 09-1	0 09-1	3-8	0-0	9-8	0-1	15-8	0-1	38	0 24-5	0 24-6	0 23-4	3-8	0-1	9-8	0-2	15-8	0-4	
39	0 09-8	0 09-8	0 09-3	0 09-3	3-9	0-0	9-9	0-1	15-9	0-1	39	0 24-8	0 24-8	0 23-6	3-9	0-1	9-9	0-2	15-9	0-4	
40	0 10-0	0 10-0	0 09-5	0 09-5	4-0	0-0	10-0	0-1	16-0	0-1	40	0 25-0	0 25-1	0 23-9	4-0	0-1	10-0	0-3	16-0	0-4	
41	0 10-3	0 10-3	0 09-8	0 09-8	4-1	0-0	10-1	0-1	16-1	0-1	41	0 25-3	0 25-3	0 24-1	4-1	0-1	10-1	0-3	16-1	0-4	
42	0 10-5	0 10-5	0 10-0	0 10-0	4-2	0-0	10-2	0-1	16-2	0-1	42	0 25-5	0 25-6	0 24-3	4-2	0-1	10-2	0-3	16-2	0-4	
43	0 10-8	0 10-8	0 10-3	0 10-3	4-3	0-0	10-3	0-1	16-3	0-1	43	0 25-8	0 25-8	0 24-6	4-3	0-1	10-3	0-3	16-3	0-4	
44	0 11-0	0 11-0	0 10-5	0 10-5	4-4	0-0	10-4	0-1	16-4	0-1	44	0 26-0	0 26-1	0 24-8	4-4	0-1	10-4	0-3	16-4	0-4	
45	0 11-3	0 11-3	0 10-7	0 10-7	4-5	0-0	10-5	0-1	16-5	0-1	45	0 26-3	0 26-3	0 25-1	4-5	0-1	10-5	0-3	16-5	0-4	
46	0 11-5	0 11-5	0 11-0	0 11-0	4-6	0-0	10-6	0-1	16-6	0-1	46	0 26-5	0 26-6	0 25-3	4-6	0-1	10-6	0-3	16-6	0-4	
47	0 11-8	0 11-8	0 11-2	0 11-2	4-7	0-0	10-7	0-1	16-7	0-1	47	0 26-8	0 26-8	0 25-5	4-7	0-1	10-7	0-3	16-7	0-4	
48	0 12-0	0 12-0	0 11-5	0 11-5	4-8	0-0	10-8	0-1	16-8	0-1	48	0 27-0	0 27-1	0 25-8	4-8	0-1	10-8	0-3	16-8	0-4	
49	0 12-3	0 12-3	0 11-7	0 11-7	4-9	0-0	10-9	0-1	16-9	0-1	49	0 27-3	0 27-3	0 26-0	4-9	0-1	10-9	0-3	16-9	0-4	
50	0 12-5	0 12-5	0 11-9	0 11-9	5-0	0-0	11-0	0-1	17-0	0-1	50	0 27-5	0 27-6	0 26-2	5-0	0-1	11-0	0-3	17-0	0-4	
51	0 12-8	0 12-8	0 12-2	0 12-2	5-1	0-0	11-1	0-1	17-1	0-1	51	0 27-8	0 27-8	0 26-5	5-1	0-1	11-1	0-3	17-1	0-4	
52	0 13-0	0 13-0	0 12-4	0 12-4	5-2	0-0	11-2	0-1	17-2	0-1	52	0 28-0	0 28-1	0 26-7	5-2	0-1	11-2	0-3	17-2	0-4	
53	0 13-3	0 13-3	0 12-6	0 12-6	5-3	0-0	11-3	0-1	17-3	0-1	53	0 28-3	0 28-3	0 27-0	5-3	0-1	11-3	0-3	17-3	0-4	
54	0 13-5	0 13-5	0 12-9	0 12-9	5-4	0-0	11-4	0-1	17-4	0-1	54	0 28-5	0 28-6	0 27-2	5-4	0-1	11-4	0-3	17-4	0-4	
55	0 13-8	0 13-8	0 13-1	0 13-1	5-5	0-0	11-5	0-1	17-5	0-1	55	0 28-8	0 28-8	0 27-4	5-5	0-1	11-5	0-3	17-5	0-4	
56	0 14-0	0 14-0	0 13-4	0 13-4	5-6	0-0	11-6	0-1	17-6	0-1	56	0 29-0	0 29-1	0 27-7	5-6	0-1	11-6	0-3	17-6	0-4	
57	0 14-3	0 14-3	0 13-6	0 13-6	5-7	0-0	11-7	0-1	17-7	0-1	57	0 29-3	0 29-3	0 27-9	5-7	0-1	11-7	0-3	17-7	0-4	
58	0 14-5	0 14-5	0 13-8	0 13-8	5-8	0-0	11-8	0-1	17-8	0-1	58	0 29-5	0 29-6	0 28-2	5-8	0-1	11-8	0-3	17-8	0-4	
59	0 14-8	0 14-8	0 14-1	0 14-1	5-9	0-0	11-9	0-1	17-9	0-1	59	0 29-8	0 29-8	0 28-4	5-9	0-1	11-9	0-3	17-9	0-4	
60	0 15-0	0 15-0	0 14-3	0 14-3	6-0	0-1	12-0	0-1	18-0	0-2	60	0 30-0	0 30-1	0 28-6	6-0	0-2	12-0	0-3	1		

2 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /			o /	o /	o /	o /	o /	o /
00	0 30-0	0 30-1	0 28-6	0-0 0-0	6-0 0-3	12-0 0-5				
01	0 30-3	0 30-3	0 28-9	0-1 0-0	6-1 0-3	12-1 0-5				
02	0 30-5	0 30-6	0 29-1	0-2 0-0	6-2 0-3	12-2 0-5				
03	0 30-8	0 30-8	0 29-3	0-3 0-0	6-3 0-3	12-3 0-5				
04	0 31-0	0 31-1	0 29-6	0-4 0-0	6-4 0-3	12-4 0-5				
05	0 31-3	0 31-3	0 29-8	0-5 0-0	6-5 0-3	12-5 0-5				
06	0 31-5	0 31-6	0 30-1	0-6 0-0	6-6 0-3	12-6 0-5				
07	0 31-8	0 31-8	0 30-3	0-7 0-0	6-7 0-3	12-7 0-5				
08	0 32-0	0 32-1	0 30-5	0-8 0-0	6-8 0-3	12-8 0-5				
09	0 32-3	0 32-3	0 30-8	0-9 0-0	6-9 0-3	12-9 0-5				
10	0 32-5	0 32-6	0 31-0	1-0 0-0	7-0 0-3	13-0 0-5				
11	0 32-8	0 32-8	0 31-3	1-1 0-0	7-1 0-3	13-1 0-5				
12	0 33-0	0 33-1	0 31-5	1-2 0-1	7-2 0-3	13-2 0-6				
13	0 33-3	0 33-3	0 31-7	1-3 0-1	7-3 0-3	13-3 0-6				
14	0 33-5	0 33-6	0 32-0	1-4 0-1	7-4 0-3	13-4 0-6				
15	0 33-8	0 33-8	0 32-2	1-5 0-1	7-5 0-3	13-5 0-6				
16	0 34-0	0 34-1	0 32-5	1-6 0-1	7-6 0-3	13-6 0-6				
17	0 34-3	0 34-3	0 32-7	1-7 0-1	7-7 0-3	13-7 0-6				
18	0 34-5	0 34-6	0 32-9	1-8 0-1	7-8 0-3	13-8 0-6				
19	0 34-8	0 34-8	0 33-2	1-9 0-1	7-9 0-3	13-9 0-6				
20	0 35-0	0 35-1	0 33-4	2-0 0-1	8-0 0-3	14-0 0-6				
21	0 35-3	0 35-3	0 33-6	2-1 0-1	8-1 0-3	14-1 0-6				
22	0 35-5	0 35-6	0 33-9	2-2 0-1	8-2 0-3	14-2 0-6				
23	0 35-8	0 35-8	0 34-1	2-3 0-1	8-3 0-3	14-3 0-6				
24	0 36-0	0 36-1	0 34-4	2-4 0-1	8-4 0-4	14-4 0-6				
25	0 36-3	0 36-3	0 34-6	2-5 0-1	8-5 0-4	14-5 0-6				
26	0 36-5	0 36-6	0 34-8	2-6 0-1	8-6 0-4	14-6 0-6				
27	0 36-8	0 36-9	0 35-1	2-7 0-1	8-7 0-4	14-7 0-6				
28	0 37-0	0 37-1	0 35-3	2-8 0-1	8-8 0-4	14-8 0-6				
29	0 37-3	0 37-4	0 35-6	2-9 0-1	8-9 0-4	14-9 0-6				
30	0 37-5	0 37-6	0 35-8	3-0 0-1	9-0 0-4	15-0 0-6				
31	0 37-8	0 37-9	0 36-0	3-1 0-1	9-1 0-4	15-1 0-6				
32	0 38-0	0 38-1	0 36-3	3-2 0-1	9-2 0-4	15-2 0-6				
33	0 38-3	0 38-4	0 36-5	3-3 0-1	9-3 0-4	15-3 0-6				
34	0 38-5	0 38-6	0 36-7	3-4 0-1	9-4 0-4	15-4 0-6				
35	0 38-8	0 38-9	0 37-0	3-5 0-1	9-5 0-4	15-5 0-6				
36	0 39-0	0 39-1	0 37-2	3-6 0-2	9-6 0-4	15-6 0-7				
37	0 39-3	0 39-4	0 37-5	3-7 0-2	9-7 0-4	15-7 0-7				
38	0 39-5	0 39-6	0 37-7	3-8 0-2	9-8 0-4	15-8 0-7				
39	0 39-8	0 39-9	0 37-9	3-9 0-2	9-9 0-4	15-9 0-7				
40	0 40-0	0 40-1	0 38-2	4-0 0-2	10-0 0-4	16-0 0-7				
41	0 40-3	0 40-4	0 38-4	4-1 0-2	10-1 0-4	16-1 0-7				
42	0 40-5	0 40-6	0 38-7	4-2 0-2	10-2 0-4	16-2 0-7				
43	0 40-8	0 40-9	0 38-9	4-3 0-2	10-3 0-4	16-3 0-7				
44	0 41-0	0 41-1	0 39-1	4-4 0-2	10-4 0-4	16-4 0-7				
45	0 41-3	0 41-4	0 39-4	4-5 0-2	10-5 0-4	16-5 0-7				
46	0 41-5	0 41-6	0 39-6	4-6 0-2	10-6 0-4	16-6 0-7				
47	0 41-8	0 41-9	0 39-8	4-7 0-2	10-7 0-4	16-7 0-7				
48	0 42-0	0 42-1	0 40-1	4-8 0-2	10-8 0-5	16-8 0-7				
49	0 42-3	0 42-4	0 40-3	4-9 0-2	10-9 0-5	16-9 0-7				
50	0 42-5	0 42-6	0 40-6	5-0 0-2	11-0 0-5	17-0 0-7				
51	0 42-8	0 42-9	0 40-8	5-1 0-2	11-1 0-5	17-1 0-7				
52	0 43-0	0 43-1	0 41-0	5-2 0-2	11-2 0-5	17-2 0-7				
53	0 43-3	0 43-4	0 41-3	5-3 0-2	11-3 0-5	17-3 0-7				
54	0 43-5	0 43-6	0 41-5	5-4 0-2	11-4 0-5	17-4 0-7				
55	0 43-8	0 43-9	0 41-8	5-5 0-2	11-5 0-5	17-5 0-7				
56	0 44-0	0 44-1	0 42-0	5-6 0-2	11-6 0-5	17-6 0-7				
57	0 44-3	0 44-4	0 42-2	5-7 0-2	11-7 0-5	17-7 0-7				
58	0 44-5	0 44-6	0 42-5	5-8 0-2	11-8 0-5	17-8 0-7				
59	0 44-8	0 44-9	0 42-7	5-9 0-2	11-9 0-5	17-9 0-7				
60	0 45-0	0 45-1	0 43-0	6-0 0-3	12-0 0-5	18-0 0-8				

3 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /			o /	o /	o /	o /	o /	o /
00	0 45-0	0 45-1	0 43-0	0-0 0-0	6-0 0-4	12-0 0-7				
01	0 45-3	0 45-4	0 43-2	0-1 0-0	6-1 0-4	12-1 0-7				
02	0 45-5	0 45-6	0 43-4	0-2 0-0	6-2 0-4	12-2 0-7				
03	0 45-8	0 45-9	0 43-7	0-3 0-0	6-3 0-4	12-3 0-7				
04	0 46-0	0 46-1	0 43-9	0-4 0-0	6-4 0-4	12-4 0-7				
05	0 46-3	0 46-4	0 44-1	0-5 0-0	6-5 0-4	12-5 0-7				
06	0 46-5	0 46-6	0 44-4	0-6 0-0	6-6 0-4	12-6 0-7				
07	0 46-8	0 46-9	0 44-6	0-7 0-0	6-7 0-4	12-7 0-7				
08	0 47-0	0 47-1	0 44-9	0-8 0-0	6-8 0-4	12-8 0-7				
09	0 47-3	0 47-4	0 45-1	0-9 0-1	6-9 0-4	12-9 0-8				
10	0 47-5	0 47-6	0 45-3	1-0 0-1	7-0 0-4	13-0 0-8				
11	0 47-8	0 47-9	0 45-6	1-1 0-1	7-1 0-4	13-1 0-8				
12	0 48-0	0 48-1	0 45-8	1-2 0-1	7-2 0-4	13-2 0-8				
13	0 48-3	0 48-4	0 46-1	1-3 0-1	7-3 0-4	13-3 0-8				
14	0 48-5	0 48-6	0 46-3	1-4 0-1	7-4 0-4	13-4 0-8				
15	0 48-8	0 48-9	0 46-5	1-5 0-1	7-5 0-4	13-5 0-8				
16	0 49-0	0 49-1	0 46-8	1-6 0-1	7-6 0-4	13-6 0-8				
17	0 49-3	0 49-4	0 47-0	1-7 0-1	7-7 0-4	13-7 0-8				
18	0 49-5	0 49-6	0 47-2	1-8 0-1	7-8 0-5	13-8 0-8				
19	0 49-8	0 49-9	0 47-5	1-9 0-1	7-9 0-5	13-9 0-8				
20	0 50-0	0 50-1	0 47-7	2-0 0-1	8-0 0-5	14-0 0-8				
21	0 50-3	0 50-4	0 48-0	2-1 0-1	8-1 0-5	14-1 0-8				
22	0 50-5	0 50-6	0 48-2	2-2 0-1	8-2 0-5	14-2 0-8				
23	0 50-8	0 50-9	0 48-4	2-3 0-1	8-3 0-5	14-3 0-8				
24	0 51-0	0 51-1	0 48-7	2-4 0-1	8-4 0-5	14-4 0-8				
25	0 51-3	0 51-4	0 48-9	2-5 0-1	8-5 0-5	14-5 0-8				
26	0 51-5	0 51-6	0 49-2	2-6 0-2	8-6 0-5	14-6 0-9				
27	0 51-8	0 51-9	0 49-4	2-7 0-2	8-7 0-5	14-7 0-9				
28	0 52-0	0 52-1	0 49-6	2-8 0-2	8-8 0-5	14-8 0-9				
29	0 52-3	0 52-4	0 49-9	2-9 0-2	8-9 0-5	14-9 0-9				
30	0 52-5	0 52-6	0 50-1	3-0 0-2	9-0 0-5	15-0 0-9				
31	0 52-8	0 52-9	0 50-3	3-1 0-2	9-1 0-5	15-1 0-9				
32	0 53-0	0 53-1	0 50-6	3-2 0-2	9-2 0-5	15-2 0-9				
33	0 53-3	0 53-4	0 50-8	3-3 0-2	9-3 0-5	15-3 0-9				
34	0 53-5	0 53-6	0 51-1	3-4 0-2	9-4 0-5	15-4 0-9				
35	0 53-8	0 53-9	0 51-3	3-5 0-2	9-5 0-6	15-5 0-9				
36	0 54-0	0 54-1	0 51-5	3-6 0-2	9-6 0-6	15-6 0-9				
37	0 54-3	0 54-4	0 51-8	3-7 0-2	9-7 0-6	15-7 0-9				
38	0 54-5	0 54-6	0 52-0	3-8 0-2	9-8 0-6	15-8 0-9				
39	0 54-8	0 54-9	0 52-3	3-9 0-2	9-9 0-6	15-9 0-9				
40	0 55-0	0 55-2	0 52-5	4-0 0-2	10-0 0-6	16-0 0-9				
41	0 55-3	0 55-4	0 52-7	4-1 0-2	10-1 0-6	16-1 0-9				
42	0 55-5	0 55-7	0 53-0	4-2 0-2	10-2 0-6	16-2 0-9				
43	0 55-8	0 55-9	0 53-2	4-3 0-3	10-3 0-6	16-3 1-0				
44	0 56-0	0 56-2	0 53-4	4-4 0-3	10-4 0-6	16-4 1-0				
45	0 56-3	0 56-4	0 53-7	4-5 0-3	10-5 0-6	16-5 1-0				
46	0 56-5	0 56-7	0 53-9	4-6 0-3	10-6 0-6	16-6 1-0				
47	0 56-8	0 56-9	0 54-2	4-7 0-3	10-7 0-6	16-7 1-0				
48	0 57-0	0 57-2	0 54-4	4-8 0-3	10-8 0-6	16-8 1-0				
49	0 57-3	0 57-4	0 54-6	4-9 0-3	10-9 0-6	16-9 1-0				
50	0 57-5	0 57-7	0 54-9	5-0 0-3	11-0 0-6	17-0 1-0				
51	0 57-8	0 57-9	0 55-1	5-1 0-3	11-1 0-6	17-1 1-0				
52	0 58-0	0 58-2	0 55-4	5-2 0-3	11-2 0-7	17-2 1-0				
53	0 58-3	0 58-4	0 55-6	5-3 0-3	11-3 0-7	17-3 1-0				
54	0 58-5	0 58-7	0 55-8	5-4 0-3	11-4 0-7	17-4 1-0				
55	0 58-8	0 58-9	0 56-1	5-5 0-3	11-5 0-7	17-5 1-0				
56	0 59-0	0 59-2	0 56-3	5-6 0-3	11-6 0-7	17-6 1-0				
57	0 59-3	0 59-4	0 56-6	5-7 0-3	11-7 0-7	17-7 1-0				
58	0 59-5	0 59-7	0 56-8							

4 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v		5 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	d	o	d	o	d					o	d	o	d	o	d
00	1 00-0	1 00-2	0 57-3	0-0	0-0	6-0	0-5	12-0	0-9	00	1 15-0	1 15-2	1 11-6	0-0	0-0	6-0	0-6	12-0	1-1
01	1 00-3	1 00-4	0 57-5	0-1	0-0	6-1	0-5	12-1	0-9	01	1 15-3	1 15-5	1 11-8	0-1	0-0	6-1	0-6	12-1	1-1
02	1 00-5	1 00-7	0 57-7	0-2	0-0	6-2	0-5	12-2	0-9	02	1 15-5	1 15-7	1 12-1	0-2	0-0	6-2	0-6	12-2	1-1
03	1 00-8	1 00-9	0 58-0	0-3	0-0	6-3	0-5	12-3	0-9	03	1 15-8	1 16-0	1 12-3	0-3	0-0	6-3	0-6	12-3	1-1
04	1 01-0	1 01-2	0 58-2	0-4	0-0	6-4	0-5	12-4	0-9	04	1 16-0	1 16-2	1 12-5	0-4	0-0	6-4	0-6	12-4	1-1
05	1 01-3	1 01-4	0 58-5	0-5	0-0	6-5	0-5	12-5	0-9	05	1 16-3	1 16-5	1 12-8	0-5	0-0	6-5	0-6	12-5	1-1
06	1 01-5	1 01-7	0 58-7	0-6	0-0	6-6	0-5	12-6	0-9	06	1 16-5	1 16-7	1 13-0	0-6	0-1	6-6	0-6	12-6	1-2
07	1 01-8	1 01-9	0 58-9	0-7	0-1	6-7	0-5	12-7	1-0	07	1 16-8	1 17-0	1 13-3	0-7	0-1	6-7	0-6	12-7	1-2
08	1 02-0	1 02-2	0 59-2	0-8	0-1	6-8	0-5	12-8	1-0	08	1 17-0	1 17-2	1 13-5	0-8	0-1	6-8	0-6	12-8	1-2
09	1 02-3	1 02-4	0 59-4	0-9	0-1	6-9	0-5	12-9	1-0	09	1 17-3	1 17-5	1 13-7	0-9	0-1	6-9	0-6	12-9	1-2
10	1 02-5	1 02-7	0 59-7	1-0	0-1	7-0	0-5	13-0	1-0	10	1 17-5	1 17-7	1 14-0	1-0	0-1	7-0	0-6	13-0	1-2
11	1 02-8	1 02-9	0 59-9	1-1	0-1	7-1	0-5	13-1	1-0	11	1 17-8	1 18-0	1 14-2	1-1	0-1	7-1	0-7	13-1	1-2
12	1 03-0	1 03-2	1 00-1	1-2	0-1	7-2	0-5	13-2	1-0	12	1 18-0	1 18-2	1 14-4	1-2	0-1	7-2	0-7	13-2	1-2
13	1 03-3	1 03-4	1 00-4	1-3	0-1	7-3	0-5	13-3	1-0	13	1 18-3	1 18-5	1 14-7	1-3	0-1	7-3	0-7	13-3	1-2
14	1 03-5	1 03-7	1 00-6	1-4	0-1	7-4	0-6	13-4	1-0	14	1 18-5	1 18-7	1 14-9	1-4	0-1	7-4	0-7	13-4	1-2
15	1 03-8	1 03-9	1 00-8	1-5	0-1	7-5	0-6	13-5	1-0	15	1 18-8	1 19-0	1 15-2	1-5	0-1	7-5	0-7	13-5	1-2
16	1 04-0	1 04-2	1 01-1	1-6	0-1	7-6	0-6	13-6	1-0	16	1 19-0	1 19-2	1 15-4	1-6	0-1	7-6	0-7	13-6	1-2
17	1 04-3	1 04-4	1 01-3	1-7	0-1	7-7	0-6	13-7	1-0	17	1 19-3	1 19-5	1 15-6	1-7	0-2	7-7	0-7	13-7	1-3
18	1 04-5	1 04-7	1 01-6	1-8	0-1	7-8	0-6	13-8	1-0	18	1 19-5	1 19-7	1 15-9	1-8	0-2	7-8	0-7	13-8	1-3
19	1 04-8	1 04-9	1 01-8	1-9	0-1	7-9	0-6	13-9	1-0	19	1 19-8	1 20-0	1 16-1	1-9	0-2	7-9	0-7	13-9	1-3
20	1 05-0	1 05-2	1 02-0	2-0	0-2	8-0	0-6	14-0	1-1	20	1 20-0	1 20-2	1 16-4	2-0	0-2	8-0	0-7	14-0	1-3
21	1 05-3	1 05-4	1 02-3	2-1	0-2	8-1	0-6	14-1	1-1	21	1 20-3	1 20-5	1 16-6	2-1	0-2	8-1	0-7	14-1	1-3
22	1 05-5	1 05-7	1 02-5	2-2	0-2	8-2	0-6	14-2	1-1	22	1 20-5	1 20-7	1 16-8	2-2	0-2	8-2	0-8	14-2	1-3
23	1 05-8	1 05-9	1 02-8	2-3	0-2	8-3	0-6	14-3	1-1	23	1 20-8	1 21-0	1 17-1	2-3	0-2	8-3	0-8	14-3	1-3
24	1 06-0	1 06-2	1 03-0	2-4	0-2	8-4	0-6	14-4	1-1	24	1 21-0	1 21-2	1 17-3	2-4	0-2	8-4	0-8	14-4	1-3
25	1 06-3	1 06-4	1 03-2	2-5	0-2	8-5	0-6	14-5	1-1	25	1 21-3	1 21-5	1 17-5	2-5	0-2	8-5	0-8	14-5	1-3
26	1 06-5	1 06-7	1 03-5	2-6	0-2	8-6	0-6	14-6	1-1	26	1 21-5	1 21-7	1 17-8	2-6	0-2	8-6	0-8	14-6	1-3
27	1 06-8	1 06-9	1 03-7	2-7	0-2	8-7	0-7	14-7	1-1	27	1 21-8	1 22-0	1 18-0	2-7	0-2	8-7	0-8	14-7	1-3
28	1 07-0	1 07-2	1 03-9	2-8	0-2	8-8	0-7	14-8	1-1	28	1 22-0	1 22-2	1 18-3	2-8	0-3	8-8	0-8	14-8	1-4
29	1 07-3	1 07-4	1 04-2	2-9	0-2	8-9	0-7	14-9	1-1	29	1 22-3	1 22-5	1 18-5	2-9	0-3	8-9	0-8	14-9	1-4
30	1 07-5	1 07-7	1 04-4	3-0	0-2	9-0	0-7	15-0	1-1	30	1 22-5	1 22-7	1 18-7	3-0	0-3	9-0	0-8	15-0	1-4
31	1 07-8	1 07-9	1 04-7	3-1	0-2	9-1	0-7	15-1	1-1	31	1 22-8	1 23-0	1 19-0	3-1	0-3	9-1	0-8	15-1	1-4
32	1 08-0	1 08-2	1 04-9	3-2	0-2	9-2	0-7	15-2	1-1	32	1 23-0	1 23-2	1 19-2	3-2	0-3	9-2	0-8	15-2	1-4
33	1 08-3	1 08-4	1 05-1	3-3	0-2	9-3	0-7	15-3	1-1	33	1 23-3	1 23-5	1 19-5	3-3	0-3	9-3	0-9	15-3	1-4
34	1 08-5	1 08-7	1 05-4	3-4	0-3	9-4	0-7	15-4	1-2	34	1 23-5	1 23-7	1 19-7	3-4	0-3	9-4	0-9	15-4	1-4
35	1 08-8	1 08-9	1 05-6	3-5	0-3	9-5	0-7	15-5	1-2	35	1 23-8	1 24-0	1 19-9	3-5	0-3	9-5	0-9	15-5	1-4
36	1 09-0	1 09-2	1 05-9	3-6	0-3	9-6	0-7	15-6	1-2	36	1 24-0	1 24-2	1 20-2	3-6	0-3	9-6	0-9	15-6	1-4
37	1 09-3	1 09-4	1 06-1	3-7	0-3	9-7	0-7	15-7	1-2	37	1 24-3	1 24-5	1 20-4	3-7	0-3	9-7	0-9	15-7	1-4
38	1 09-5	1 09-7	1 06-3	3-8	0-3	9-8	0-7	15-8	1-2	38	1 24-5	1 24-7	1 20-7	3-8	0-3	9-8	0-9	15-8	1-4
39	1 09-8	1 09-9	1 06-6	3-9	0-3	9-9	0-7	15-9	1-2	39	1 24-8	1 25-0	1 20-9	3-9	0-4	9-9	0-9	15-9	1-5
40	1 10-0	1 10-2	1 06-8	4-0	0-3	10-0	0-8	16-0	1-2	40	1 25-0	1 25-2	1 21-1	4-0	0-4	10-0	0-9	16-0	1-5
41	1 10-3	1 10-4	1 07-0	4-1	0-3	10-1	0-8	16-1	1-2	41	1 25-3	1 25-5	1 21-4	4-1	0-4	10-1	0-9	16-1	1-5
42	1 10-5	1 10-7	1 07-3	4-2	0-3	10-2	0-8	16-2	1-2	42	1 25-5	1 25-7	1 21-6	4-2	0-4	10-2	0-9	16-2	1-5
43	1 10-8	1 10-9	1 07-5	4-3	0-3	10-3	0-8	16-3	1-2	43	1 25-8	1 26-0	1 21-8	4-3	0-4	10-3	0-9	16-3	1-5
44	1 11-0	1 11-2	1 07-8	4-4	0-3	10-4	0-8	16-4	1-2	44	1 26-0	1 26-2	1 22-1	4-4	0-4	10-4	1-0	16-4	1-5
45	1 11-3	1 11-4	1 08-0	4-5	0-3	10-5	0-8	16-5	1-2	45	1 26-3	1 26-5	1 22-3	4-5	0-4	10-5	1-0	16-5	1-5
46	1 11-5	1 11-7	1 08-2	4-6	0-3	10-6	0-8	16-6	1-2	46	1 26-5	1 26-7	1 22-6	4-6	0-4	10-6	1-0	16-6	1-5
47	1 11-8	1 11-9	1 08-5	4-7	0-4	10-7	0-8	16-7	1-3	47	1 26-8	1 27-0	1 22-8	4-7	0-4	10-7	1-0	16-7	1-5
48	1 12-0	1 12-2	1 08-7	4-8	0-4	10-8	0-8	16-8	1-3	48	1 27-0	1 27-2	1 23-0	4-8	0-4	10-8	1-0	16-8	1-5
49	1 12-3	1 12-4	1 09-0	4-9	0-4	10-9	0-8	16-9	1-3	49	1 27-3	1 27-5	1 23-3	4-9	0-4	10-9	1-0	16-9	1-5
50	1 12-5	1 12-7	1 09-2	5-0	0-4	11-0	0-8	17-0	1-3	50	1 27-5	1 27-7	1 23-5	5-0	0-5	11-0	1-0	17-0	1-6
51	1 12-8	1 12-9	1 09-4	5-1	0-4	11-1	0-8	17-1	1-3	51	1 27-8	1 28-0	1 23-8	5-1	0-5	11-1	1-0	17-1	1-6
52	1 13-0	1 13-2	1 09-7	5-2	0-4	11-2	0-8	17-2	1-3	52	1 28-0	1 28-2	1 24-0	5-2	0-5	11-2	1-0	17-2	1-6
53	1 13-3	1 13-5	1 09-9	5-3	0-4	11-3	0-8	17-3	1-3	53	1 28-3	1 28-5	1 24-2	5-3	0-5	11-3	1-0	17-3	1-6
54	1 13-5	1 13-7	1 10-2	5-4	0-4	11-4	0-9	17-4	1-3	54	1 28-5	1 28-7	1 24-5	5-4	0-5	11-4	1-0	17-4	1-6
55	1 13-8	1 14-0	1 10-4	5-5	0-4	11-5	0-9	17-5	1-3	55	1 28-8	1 29-0	1 24-7	5-5	0-5	11-5	1-1	17-5	1-6
56	1 14-0	1 14-2	1 10-6	5-6	0-4	11-6	0-9	17-6	1-3	56	1 29-0	1 29-2	1 24-9	5-6	0-5	11-6	1-1	17-6	1-6
57	1 14-3	1 14-5	1 10-9	5-7	0-4	11-7	0-9	17-7	1-3	57	1 29-3	1 29-5	1 25-2	5-7	0-5	11-7	1-1	17-7	1-6
58	1 14-5	1 14-7	1 11-1	5-8	0-4	11-8	0-9	17-8	1-3	58	1 29-5	1 29-7	1 25-4	5-8	0-5	11-8	1-1	17-8	1-6
59	1 14-8	1 15-0	1 11-3	5-9	0-4	11-9	0-9	17-9	1-3	59	1 29-8	1 30-0	1 25-7	5-9	0-5	11-9	1-1	17-9	1-6
60	1 15-0	1 15-2	1 11-6	6-0	0-5	12-0	0-9	18-0	1-4	60	1 30-0	1 30-2	1 25-9	6-0	0-6	12-0	1-1	18-0	1-7

6 ^m	SOL		ARIES	LUNA	v		o		d	
	PLANETAS				o	Corr ⁿ	o	Corr ⁿ	d	Corr ⁿ
00	1 30-0	1 30-2	1 25-9	0-0	0-0	6-0	0-7	12-0	1-3	
01	1 30-3	1 30-5	1 26-1	0-1	0-0	6-1	0-7	12-1	1-3	
02	1 30-5	1 30-7	1 26-4	0-2	0-0	6-2	0-7	12-2	1-3	
03	1 30-8	1 31-0	1 26-6	0-3	0-0	6-3	0-7	12-3	1-3	
04	1 31-0	1 31-2	1 26-9	0-4	0-0	6-4	0-7	12-4	1-3	
05	1 31-3	1 31-5	1 27-1	0-5	0-1	6-5	0-7	12-5	1-4	
06	1 31-5	1 31-8	1 27-3	0-6	0-1	6-6	0-7	12-6	1-4	
07	1 31-8	1 32-0	1 27-6	0-7	0-1	6-7	0-7	12-7	1-4	
08	1 32-0	1 32-3	1 27-8	0-8	0-1	6-8	0-7	12-8	1-4	
09	1 32-3	1 32-5	1 28-0	0-9	0-1	6-9	0-7	12-9	1-4	
10	1 32-5	1 32-8	1 28-3	1-0	0-1	7-0	0-8	13-0	1-4	
11	1 32-8	1 33-0	1 28-5	1-1	0-1	7-1	0-8	13-1	1-4	
12	1 33-0	1 33-3	1 28-8	1-2	0-1	7-2	0-8	13-2	1-4	
13	1 33-3	1 33-5	1 29-0	1-3	0-1	7-3	0-8	13-3	1-4	
14	1 33-5	1 33-8	1 29-2	1-4	0-2	7-4	0-8	13-4	1-5	
15	1 33-8	1 34-0	1 29-5	1-5	0-2	7-5	0-8	13-5	1-5	
16	1 34-0	1 34-3	1 29-7	1-6	0-2	7-6	0-8	13-6	1-5	
17	1 34-3	1 34-5	1 30-0	1-7	0-2	7-7	0-8	13-7	1-5	
18	1 34-5	1 34-8	1 30-2	1-8	0-2	7-8	0-8	13-8	1-5	
19	1 34-8	1 35-0	1 30-4	1-9	0-2	7-9	0-9	13-9	1-5	
20	1 35-0	1 35-3	1 30-7	2-0	0-2	8-0	0-9	14-0	1-5	
21	1 35-3	1 35-5	1 30-9	2-1	0-2	8-1	0-9	14-1	1-5	
22	1 35-5	1 35-8	1 31-1	2-2	0-2	8-2	0-9	14-2	1-5	
23	1 35-8	1 36-0	1 31-4	2-3	0-2	8-3	0-9	14-3	1-5	
24	1 36-0	1 36-3	1 31-6	2-4	0-3	8-4	0-9	14-4	1-6	
25	1 36-3	1 36-5	1 31-9	2-5	0-3	8-5	0-9	14-5	1-6	
26	1 36-5	1 36-8	1 32-1	2-6	0-3	8-6	0-9	14-6	1-6	
27	1 36-8	1 37-0	1 32-3	2-7	0-3	8-7	0-9	14-7	1-6	
28	1 37-0	1 37-3	1 32-6	2-8	0-3	8-8	1-0	14-8	1-6	
29	1 37-3	1 37-5	1 32-8	2-9	0-3	8-9	1-0	14-9	1-6	
30	1 37-5	1 37-8	1 33-1	3-0	0-3	9-0	1-0	15-0	1-6	
31	1 37-8	1 38-0	1 33-3	3-1	0-3	9-1	1-0	15-1	1-6	
32	1 38-0	1 38-3	1 33-5	3-2	0-3	9-2	1-0	15-2	1-6	
33	1 38-3	1 38-5	1 33-8	3-3	0-4	9-3	1-0	15-3	1-7	
34	1 38-5	1 38-8	1 34-0	3-4	0-4	9-4	1-0	15-4	1-7	
35	1 38-8	1 39-0	1 34-3	3-5	0-4	9-5	1-0	15-5	1-7	
36	1 39-0	1 39-3	1 34-5	3-6	0-4	9-6	1-0	15-6	1-7	
37	1 39-3	1 39-5	1 34-7	3-7	0-4	9-7	1-1	15-7	1-7	
38	1 39-5	1 39-8	1 35-0	3-8	0-4	9-8	1-1	15-8	1-7	
39	1 39-8	1 40-0	1 35-2	3-9	0-4	9-9	1-1	15-9	1-7	
40	1 40-0	1 40-3	1 35-4	4-0	0-4	10-0	1-1	16-0	1-7	
41	1 40-3	1 40-5	1 35-7	4-1	0-4	10-1	1-1	16-1	1-7	
42	1 40-5	1 40-8	1 35-9	4-2	0-5	10-2	1-1	16-2	1-8	
43	1 40-8	1 41-0	1 36-2	4-3	0-5	10-3	1-1	16-3	1-8	
44	1 41-0	1 41-3	1 36-4	4-4	0-5	10-4	1-1	16-4	1-8	
45	1 41-3	1 41-5	1 36-6	4-5	0-5	10-5	1-1	16-5	1-8	
46	1 41-5	1 41-8	1 36-9	4-6	0-5	10-6	1-1	16-6	1-8	
47	1 41-8	1 42-0	1 37-1	4-7	0-5	10-7	1-2	16-7	1-8	
48	1 42-0	1 42-3	1 37-4	4-8	0-5	10-8	1-2	16-8	1-8	
49	1 42-3	1 42-5	1 37-6	4-9	0-5	10-9	1-2	16-9	1-8	
50	1 42-5	1 42-8	1 37-8	5-0	0-5	11-0	1-2	17-0	1-8	
51	1 42-8	1 43-0	1 38-1	5-1	0-6	11-1	1-2	17-1	1-9	
52	1 43-0	1 43-3	1 38-3	5-2	0-6	11-2	1-2	17-2	1-9	
53	1 43-3	1 43-5	1 38-5	5-3	0-6	11-3	1-2	17-3	1-9	
54	1 43-5	1 43-8	1 38-8	5-4	0-6	11-4	1-2	17-4	1-9	
55	1 43-8	1 44-0	1 39-0	5-5	0-6	11-5	1-2	17-5	1-9	
56	1 44-0	1 44-3	1 39-3	5-6	0-6	11-6	1-3	17-6	1-9	
57	1 44-3	1 44-5	1 39-5	5-7	0-6	11-7	1-3	17-7	1-9	
58	1 44-5	1 44-8	1 39-7	5-8	0-6	11-8	1-3	17-8	1-9	
59	1 44-8	1 45-0	1 40-0	5-9	0-6	11-9	1-3	17-9	1-9	
60	1 45-0	1 45-3	1 40-2	6-0	0-7	12-0	1-3	18-0	2-0	

7 ^m	SOL		ARIES	LUNA	v		o		d	
	PLANETAS				o	Corr ⁿ	o	Corr ⁿ	d	Corr ⁿ
00	1 45-0	1 45-3	1 40-2	0-0	0-0	6-0	0-8	12-0	1-5	
01	1 45-3	1 45-5	1 40-5	0-1	0-0	6-1	0-8	12-1	1-5	
02	1 45-5	1 45-8	1 40-7	0-2	0-0	6-2	0-8	12-2	1-5	
03	1 45-8	1 46-0	1 40-9	0-3	0-0	6-3	0-8	12-3	1-5	
04	1 46-0	1 46-3	1 41-2	0-4	0-1	6-4	0-8	12-4	1-6	
05	1 46-3	1 46-5	1 41-4	0-5	0-1	6-5	0-8	12-5	1-6	
06	1 46-5	1 46-8	1 41-6	0-6	0-1	6-6	0-8	12-6	1-6	
07	1 46-8	1 47-0	1 41-9	0-7	0-1	6-7	0-8	12-7	1-6	
08	1 47-0	1 47-3	1 42-1	0-8	0-1	6-8	0-9	12-8	1-6	
09	1 47-3	1 47-5	1 42-4	0-9	0-1	6-9	0-9	12-9	1-6	
10	1 47-5	1 47-8	1 42-6	1-0	0-1	7-0	0-9	13-0	1-6	
11	1 47-8	1 48-0	1 42-8	1-1	0-1	7-1	0-9	13-1	1-6	
12	1 48-0	1 48-3	1 43-1	1-2	0-2	7-2	0-9	13-2	1-7	
13	1 48-3	1 48-5	1 43-3	1-3	0-2	7-3	0-9	13-3	1-7	
14	1 48-5	1 48-8	1 43-6	1-4	0-2	7-4	0-9	13-4	1-7	
15	1 48-8	1 49-0	1 43-8	1-5	0-2	7-5	0-9	13-5	1-7	
16	1 49-0	1 49-3	1 44-0	1-6	0-2	7-6	1-0	13-6	1-7	
17	1 49-3	1 49-5	1 44-3	1-7	0-2	7-7	1-0	13-7	1-7	
18	1 49-5	1 49-8	1 44-5	1-8	0-2	7-8	1-0	13-8	1-7	
19	1 49-8	1 50-1	1 44-8	1-9	0-2	7-9	1-0	13-9	1-7	
20	1 50-0	1 50-3	1 45-0	2-0	0-3	8-0	1-0	14-0	1-8	
21	1 50-3	1 50-6	1 45-2	2-1	0-3	8-1	1-0	14-1	1-8	
22	1 50-5	1 50-8	1 45-5	2-2	0-3	8-2	1-0	14-2	1-8	
23	1 50-8	1 51-1	1 45-7	2-3	0-3	8-3	1-0	14-3	1-8	
24	1 51-0	1 51-3	1 45-9	2-4	0-3	8-4	1-1	14-4	1-8	
25	1 51-3	1 51-6	1 46-2	2-5	0-3	8-5	1-1	14-5	1-8	
26	1 51-5	1 51-8	1 46-4	2-6	0-3	8-6	1-1	14-6	1-8	
27	1 51-8	1 52-1	1 46-7	2-7	0-3	8-7	1-1	14-7	1-8	
28	1 52-0	1 52-3	1 46-9	2-8	0-4	8-8	1-1	14-8	1-9	
29	1 52-3	1 52-6	1 47-1	2-9	0-4	8-9	1-1	14-9	1-9	
30	1 52-5	1 52-8	1 47-4	3-0	0-4	9-0	1-1	15-0	1-9	
31	1 52-8	1 53-1	1 47-6	3-1	0-4	9-1	1-1	15-1	1-9	
32	1 53-0	1 53-3	1 47-9	3-2	0-4	9-2	1-2	15-2	1-9	
33	1 53-3	1 53-6	1 48-1	3-3	0-4	9-3	1-2	15-3	1-9	
34	1 53-5	1 53-8	1 48-3	3-4	0-4	9-4	1-2	15-4	1-9	
35	1 53-8	1 54-1	1 48-6	3-5	0-4	9-5	1-2	15-5	1-9	
36	1 54-0	1 54-3	1 48-8	3-6	0-5	9-6	1-2	15-6	2-0	
37	1 54-3	1 54-6	1 49-0	3-7	0-5	9-7	1-2	15-7	2-0	
38	1 54-5	1 54-8	1 49-3	3-8	0-5	9-8	1-2	15-8	2-0	
39	1 54-8	1 55-1	1 49-5	3-9	0-5	9-9	1-2	15-9	2-0	
40	1 55-0	1 55-3	1 49-8	4-0	0-5	10-0	1-3	16-0	2-0	
41	1 55-3	1 55-6	1 50-0	4-1	0-5	10-1	1-3	16-1	2-0	
42	1 55-5	1 55-8	1 50-2	4-2	0-5	10-2	1-3	16-2	2-0	
43	1 55-8	1 56-1	1 50-5	4-3	0-5	10-3	1-3	16-3	2-0	
44	1 56-0	1 56-3	1 50-7	4-4	0-6	10-4	1-3	16-4	2-1	
45	1 56-3	1 56-6	1 51-0	4-5	0-6	10-5	1-3	16-5	2-1	
46	1 56-5	1 56-8	1 51-2	4-6	0-6	10-6	1-3	16-6	2-1	
47	1 56-8	1 57-1	1 51-4	4-7	0-6	10-7	1-3	16-7	2-1	
48	1 57-0	1 57-3	1 51-7	4-8	0-6	10-8	1-4	16-8	2-1	
49	1 57-3	1 57-6	1 51-9	4-9	0-6	10-9	1-4	16-9	2-1	
50	1 57-5	1 57-8	1 52-1	5-0	0-6	11-0	1-4	17-0	2-1	
51	1 57-8	1 58-1	1 52-4	5-1	0-6	11-1	1-4	17-1	2-1	
52	1 58-0	1 58-3	1 52-6	5-2	0-7	11-2	1-4	17-2	2-2	
53	1 58-3	1 58-6	1 52-9	5-3	0-7	11-3	1-4	17-3	2-2	
54	1 58-5	1 58-8	1 53-1	5-4	0-7	11-4	1-4	17-4	2-2	
55	1 58-8	1 59-1	1 53-3	5-5	0-7	11-5	1-4	17-5	2-2	
56	1 59-0	1 59-3	1 53-6	5-6	0-7	11-6	1-5	17-6	2-2	
57	1 59-3	1 59-6	1 53-8	5-7	0-7	11-7	1-5	17-7	2-2	
58	1 59-5	1 59-8	1 54-1	5-8	0-7	11-8	1-5	17-8	2-2	
59	1 59-8	2 00-1	1 54-3							

8 ^m	SOL		ARIES	LUNA	v		v		v		
	PLANETAS				o	d	o	d	o	d	o	d
00	2 00-0	2 00-3	1 54-5	0-0	0-0	6-0	0-9	12-0	1-7		
01	2 00-3	2 00-6	1 54-8	0-1	0-0	6-1	0-9	12-1	1-7		
02	2 00-5	2 00-8	1 55-0	0-2	0-0	6-2	0-9	12-2	1-7		
03	2 00-8	2 01-1	1 55-2	0-3	0-0	6-3	0-9	12-3	1-7		
04	2 01-0	2 01-3	1 55-5	0-4	0-1	6-4	0-9	12-4	1-8		
05	2 01-3	2 01-6	1 55-7	0-5	0-1	6-5	0-9	12-5	1-8		
06	2 01-5	2 01-8	1 56-0	0-6	0-1	6-6	0-9	12-6	1-8		
07	2 01-8	2 02-1	1 56-2	0-7	0-1	6-7	0-9	12-7	1-8		
08	2 02-0	2 02-3	1 56-4	0-8	0-1	6-8	1-0	12-8	1-8		
09	2 02-3	2 02-6	1 56-7	0-9	0-1	6-9	1-0	12-9	1-8		
10	2 02-5	2 02-8	1 56-9	1-0	0-1	7-0	1-0	13-0	1-8		
11	2 02-8	2 03-1	1 57-2	1-1	0-2	7-1	1-0	13-1	1-9		
12	2 03-0	2 03-3	1 57-4	1-2	0-2	7-2	1-0	13-2	1-9		
13	2 03-3	2 03-6	1 57-6	1-3	0-2	7-3	1-0	13-3	1-9		
14	2 03-5	2 03-8	1 57-9	1-4	0-2	7-4	1-0	13-4	1-9		
15	2 03-8	2 04-1	1 58-1	1-5	0-2	7-5	1-1	13-5	1-9		
16	2 04-0	2 04-3	1 58-4	1-6	0-2	7-6	1-1	13-6	1-9		
17	2 04-3	2 04-6	1 58-6	1-7	0-2	7-7	1-1	13-7	1-9		
18	2 04-5	2 04-8	1 58-8	1-8	0-3	7-8	1-1	13-8	2-0		
19	2 04-8	2 05-1	1 59-1	1-9	0-3	7-9	1-1	13-9	2-0		
20	2 05-0	2 05-3	1 59-3	2-0	0-3	8-0	1-1	14-0	2-0		
21	2 05-3	2 05-6	1 59-5	2-1	0-3	8-1	1-1	14-1	2-0		
22	2 05-5	2 05-8	1 59-8	2-2	0-3	8-2	1-2	14-2	2-0		
23	2 05-8	2 06-1	2 00-0	2-3	0-3	8-3	1-2	14-3	2-0		
24	2 06-0	2 06-3	2 00-3	2-4	0-3	8-4	1-2	14-4	2-0		
25	2 06-3	2 06-6	2 00-5	2-5	0-4	8-5	1-2	14-5	2-1		
26	2 06-5	2 06-8	2 00-7	2-6	0-4	8-6	1-2	14-6	2-1		
27	2 06-8	2 07-1	2 01-0	2-7	0-4	8-7	1-2	14-7	2-1		
28	2 07-0	2 07-3	2 01-2	2-8	0-4	8-8	1-2	14-8	2-1		
29	2 07-3	2 07-6	2 01-5	2-9	0-4	8-9	1-3	14-9	2-1		
30	2 07-5	2 07-8	2 01-7	3-0	0-4	9-0	1-3	15-0	2-1		
31	2 07-8	2 08-1	2 01-9	3-1	0-4	9-1	1-3	15-1	2-1		
32	2 08-0	2 08-4	2 02-2	3-2	0-5	9-2	1-3	15-2	2-2		
33	2 08-3	2 08-6	2 02-4	3-3	0-5	9-3	1-3	15-3	2-2		
34	2 08-5	2 08-9	2 02-6	3-4	0-5	9-4	1-3	15-4	2-2		
35	2 08-8	2 09-1	2 02-9	3-5	0-5	9-5	1-3	15-5	2-2		
36	2 09-0	2 09-4	2 03-1	3-6	0-5	9-6	1-4	15-6	2-2		
37	2 09-3	2 09-6	2 03-4	3-7	0-5	9-7	1-4	15-7	2-2		
38	2 09-5	2 09-9	2 03-6	3-8	0-5	9-8	1-4	15-8	2-2		
39	2 09-8	2 10-1	2 03-8	3-9	0-6	9-9	1-4	15-9	2-3		
40	2 10-0	2 10-4	2 04-1	4-0	0-6	10-0	1-4	16-0	2-3		
41	2 10-3	2 10-6	2 04-3	4-1	0-6	10-1	1-4	16-1	2-3		
42	2 10-5	2 10-9	2 04-6	4-2	0-6	10-2	1-4	16-2	2-3		
43	2 10-8	2 11-1	2 04-8	4-3	0-6	10-3	1-5	16-3	2-3		
44	2 11-0	2 11-4	2 05-0	4-4	0-6	10-4	1-5	16-4	2-3		
45	2 11-3	2 11-6	2 05-3	4-5	0-6	10-5	1-5	16-5	2-3		
46	2 11-5	2 11-9	2 05-5	4-6	0-7	10-6	1-5	16-6	2-4		
47	2 11-8	2 12-1	2 05-7	4-7	0-7	10-7	1-5	16-7	2-4		
48	2 12-0	2 12-4	2 06-0	4-8	0-7	10-8	1-5	16-8	2-4		
49	2 12-3	2 12-6	2 06-2	4-9	0-7	10-9	1-5	16-9	2-4		
50	2 12-5	2 12-9	2 06-5	5-0	0-7	11-0	1-6	17-0	2-4		
51	2 12-8	2 13-1	2 06-7	5-1	0-7	11-1	1-6	17-1	2-4		
52	2 13-0	2 13-4	2 06-9	5-2	0-7	11-2	1-6	17-2	2-4		
53	2 13-3	2 13-6	2 07-2	5-3	0-8	11-3	1-6	17-3	2-5		
54	2 13-5	2 13-9	2 07-4	5-4	0-8	11-4	1-6	17-4	2-5		
55	2 13-8	2 14-1	2 07-7	5-5	0-8	11-5	1-6	17-5	2-5		
56	2 14-0	2 14-4	2 07-9	5-6	0-8	11-6	1-6	17-6	2-5		
57	2 14-3	2 14-6	2 08-1	5-7	0-8	11-7	1-7	17-7	2-5		
58	2 14-5	2 14-9	2 08-4	5-8	0-8	11-8	1-7	17-8	2-5		
59	2 14-8	2 15-1	2 08-6	5-9	0-8	11-9	1-7	17-9	2-5		
60	2 15-0	2 15-4	2 08-9	6-0	0-9	12-0	1-7	18-0	2-6		

9 ^m	SOL		ARIES	LUNA	v		v		v		
	PLANETAS				o	d	o	d	o	d	o	d
00	2 15-0	2 15-4	2 08-9	0-0	0-0	6-0	1-0	12-0	1-9		
01	2 15-3	2 15-6	2 09-1	0-1	0-0	6-1	1-0	12-1	1-9		
02	2 15-5	2 15-9	2 09-3	0-2	0-0	6-2	1-0	12-2	1-9		
03	2 15-8	2 16-1	2 09-6	0-3	0-0	6-3	1-0	12-3	1-9		
04	2 16-0	2 16-4	2 09-8	0-4	0-1	6-4	1-0	12-4	2-0		
05	2 16-3	2 16-6	2 10-0	0-5	0-1	6-5	1-0	12-5	2-0		
06	2 16-5	2 16-9	2 10-3	0-6	0-1	6-6	1-0	12-6	2-0		
07	2 16-8	2 17-1	2 10-5	0-7	0-1	6-7	1-1	12-7	2-0		
08	2 17-0	2 17-4	2 10-8	0-8	0-1	6-8	1-1	12-8	2-0		
09	2 17-3	2 17-6	2 11-0	0-9	0-1	6-9	1-1	12-9	2-0		
10	2 17-5	2 17-9	2 11-2	1-0	0-2	7-0	1-1	13-0	2-1		
11	2 17-8	2 18-1	2 11-5	1-1	0-2	7-1	1-1	13-1	2-1		
12	2 18-0	2 18-4	2 11-7	1-2	0-2	7-2	1-1	13-2	2-1		
13	2 18-3	2 18-6	2 12-0	1-3	0-2	7-3	1-2	13-3	2-1		
14	2 18-5	2 18-9	2 12-2	1-4	0-2	7-4	1-2	13-4	2-1		
15	2 18-8	2 19-1	2 12-4	1-5	0-2	7-5	1-2	13-5	2-1		
16	2 19-0	2 19-4	2 12-7	1-6	0-3	7-6	1-2	13-6	2-2		
17	2 19-3	2 19-6	2 12-9	1-7	0-3	7-7	1-2	13-7	2-2		
18	2 19-5	2 19-9	2 13-1	1-8	0-3	7-8	1-2	13-8	2-2		
19	2 19-8	2 20-1	2 13-4	1-9	0-3	7-9	1-3	13-9	2-2		
20	2 20-0	2 20-4	2 13-6	2-0	0-3	8-0	1-3	14-0	2-2		
21	2 20-3	2 20-6	2 13-9	2-1	0-3	8-1	1-3	14-1	2-2		
22	2 20-5	2 20-9	2 14-1	2-2	0-3	8-2	1-3	14-2	2-2		
23	2 20-8	2 21-1	2 14-3	2-3	0-4	8-3	1-3	14-3	2-3		
24	2 21-0	2 21-4	2 14-6	2-4	0-4	8-4	1-3	14-4	2-3		
25	2 21-3	2 21-6	2 14-8	2-5	0-4	8-5	1-3	14-5	2-3		
26	2 21-5	2 21-9	2 15-1	2-6	0-4	8-6	1-4	14-6	2-3		
27	2 21-8	2 22-1	2 15-3	2-7	0-4	8-7	1-4	14-7	2-3		
28	2 22-0	2 22-4	2 15-5	2-8	0-4	8-8	1-4	14-8	2-3		
29	2 22-3	2 22-6	2 15-8	2-9	0-5	8-9	1-4	14-9	2-4		
30	2 22-5	2 22-9	2 16-0	3-0	0-5	9-0	1-4	15-0	2-4		
31	2 22-8	2 23-1	2 16-2	3-1	0-5	9-1	1-4	15-1	2-4		
32	2 23-0	2 23-4	2 16-5	3-2	0-5	9-2	1-5	15-2	2-4		
33	2 23-3	2 23-6	2 16-7	3-3	0-5	9-3	1-5	15-3	2-4		
34	2 23-5	2 23-9	2 17-0	3-4	0-5	9-4	1-5	15-4	2-4		
35	2 23-8	2 24-1	2 17-2	3-5	0-6	9-5	1-5	15-5	2-5		
36	2 24-0	2 24-4	2 17-4	3-6	0-6	9-6	1-5	15-6	2-5		
37	2 24-3	2 24-6	2 17-7	3-7	0-6	9-7	1-5	15-7	2-5		
38	2 24-5	2 24-9	2 17-9	3-8	0-6	9-8	1-6	15-8	2-5		
39	2 24-8	2 25-1	2 18-2	3-9	0-6	9-9	1-6	15-9	2-5		
40	2 25-0	2 25-4	2 18-4	4-0	0-6	10-0	1-6	16-0	2-5		
41	2 25-3	2 25-6	2 18-6	4-1	0-6	10-1	1-6	16-1	2-5		
42	2 25-5	2 25-9	2 18-9	4-2	0-7	10-2	1-6	16-2	2-6		
43	2 25-8	2 26-1	2 19-1	4-3	0-7	10-3	1-6	16-3	2-6		
44	2 26-0	2 26-4	2 19-3	4-4	0-7	10-4	1-6	16-4	2-6		
45	2 26-3	2 26-7	2 19-6	4-5	0-7	10-5	1-7	16-5	2-6		
46	2 26-5	2 26-9	2 19-8	4-6	0-7	10-6	1-7	16-6	2-6		
47	2 26-8	2 27-2	2 20-1	4-7	0-7	10-7	1-7	16-7	2-6		
48	2 27-0	2 27-4	2 20-3	4-8	0-8	10-8	1-7	16-8	2-7		
49	2 27-3	2 27-7	2 20-5	4-9	0-8	10-9	1-7	16-9	2-7		
50	2 27-5	2 27-9	2 20-8	5-0	0-8	11-0	1-7	17-0	2-7		
51	2 27-8	2 28-2	2 21-0	5-1	0-8	11-1	1-8	17-1	2-7		
52	2 28-0	2 28-4	2 21-3	5-2	0-8	11-2	1-8	17-2	2-7		
53	2 28-3	2 28-7	2 21-5	5-3	0-8	11-3	1-8	17-3	2-7		
54	2 28-5	2 28-9	2 21-7	5-4	0-9	11-4	1-8	17-4	2-8		

10 ^m				11 ^m			
S	SOL PLANETAS	ARIES	LUNA	v o d	Corr ⁿ	v o d	Corr ⁿ
00	2 30-0	2 30-4	2 23-2	0-0	0-0	6-0	1-1
01	2 30-3	2 30-7	2 23-4	0-1	0-0	6-1	1-1
02	2 30-5	2 30-9	2 23-6	0-2	0-0	6-2	1-1
03	2 30-8	2 31-2	2 23-9	0-3	0-1	6-3	1-1
04	2 31-0	2 31-4	2 24-1	0-4	0-1	6-4	1-1
05	2 31-3	2 31-7	2 24-4	0-5	0-1	6-5	1-1
06	2 31-5	2 31-9	2 24-6	0-6	0-1	6-6	1-2
07	2 31-8	2 32-2	2 24-8	0-7	0-1	6-7	1-2
08	2 32-0	2 32-4	2 25-1	0-8	0-1	6-8	1-2
09	2 32-3	2 32-7	2 25-3	0-9	0-2	6-9	1-2
10	2 32-5	2 32-9	2 25-6	1-0	0-2	7-0	1-2
11	2 32-8	2 33-2	2 25-8	1-1	0-2	7-1	1-2
12	2 33-0	2 33-4	2 26-0	1-2	0-2	7-2	1-3
13	2 33-3	2 33-7	2 26-3	1-3	0-2	7-3	1-3
14	2 33-5	2 33-9	2 26-5	1-4	0-2	7-4	1-3
15	2 33-8	2 34-2	2 26-7	1-5	0-3	7-5	1-3
16	2 34-0	2 34-4	2 27-0	1-6	0-3	7-6	1-3
17	2 34-3	2 34-7	2 27-2	1-7	0-3	7-7	1-3
18	2 34-5	2 34-9	2 27-5	1-8	0-3	7-8	1-4
19	2 34-8	2 35-2	2 27-7	1-9	0-3	7-9	1-4
20	2 35-0	2 35-4	2 27-9	2-0	0-4	8-0	1-4
21	2 35-3	2 35-7	2 28-2	2-1	0-4	8-1	1-4
22	2 35-5	2 35-9	2 28-4	2-2	0-4	8-2	1-4
23	2 35-8	2 36-2	2 28-7	2-3	0-4	8-3	1-5
24	2 36-0	2 36-4	2 28-9	2-4	0-4	8-4	1-5
25	2 36-3	2 36-7	2 29-1	2-5	0-4	8-5	1-5
26	2 36-5	2 36-9	2 29-4	2-6	0-5	8-6	1-5
27	2 36-8	2 37-2	2 29-6	2-7	0-5	8-7	1-5
28	2 37-0	2 37-4	2 29-8	2-8	0-5	8-8	1-5
29	2 37-3	2 37-7	2 30-1	2-9	0-5	8-9	1-6
30	2 37-5	2 37-9	2 30-3	3-0	0-5	9-0	1-6
31	2 37-8	2 38-2	2 30-6	3-1	0-5	9-1	1-6
32	2 38-0	2 38-4	2 30-8	3-2	0-6	9-2	1-6
33	2 38-3	2 38-7	2 31-0	3-3	0-6	9-3	1-6
34	2 38-5	2 38-9	2 31-3	3-4	0-6	9-4	1-6
35	2 38-8	2 39-2	2 31-5	3-5	0-6	9-5	1-7
36	2 39-0	2 39-4	2 31-8	3-6	0-6	9-6	1-7
37	2 39-3	2 39-7	2 32-0	3-7	0-6	9-7	1-7
38	2 39-5	2 39-9	2 32-2	3-8	0-7	9-8	1-7
39	2 39-8	2 40-2	2 32-5	3-9	0-7	9-9	1-7
40	2 40-0	2 40-4	2 32-7	4-0	0-7	10-0	1-8
41	2 40-3	2 40-7	2 32-9	4-1	0-7	10-1	1-8
42	2 40-5	2 40-9	2 33-2	4-2	0-7	10-2	1-8
43	2 40-8	2 41-2	2 33-4	4-3	0-8	10-3	1-8
44	2 41-0	2 41-4	2 33-7	4-4	0-8	10-4	1-8
45	2 41-3	2 41-7	2 33-9	4-5	0-8	10-5	1-8
46	2 41-5	2 41-9	2 34-1	4-6	0-8	10-6	1-9
47	2 41-8	2 42-2	2 34-4	4-7	0-8	10-7	1-9
48	2 42-0	2 42-4	2 34-6	4-8	0-8	10-8	1-9
49	2 42-3	2 42-7	2 34-9	4-9	0-9	10-9	1-9
50	2 42-5	2 42-9	2 35-1	5-0	0-9	11-0	1-9
51	2 42-8	2 43-2	2 35-3	5-1	0-9	11-1	1-9
52	2 43-0	2 43-4	2 35-6	5-2	0-9	11-2	2-0
53	2 43-3	2 43-7	2 35-8	5-3	0-9	11-3	2-0
54	2 43-5	2 43-9	2 36-1	5-4	0-9	11-4	2-0
55	2 43-8	2 44-2	2 36-3	5-5	1-0	11-5	2-0
56	2 44-0	2 44-4	2 36-5	5-6	1-0	11-6	2-0
57	2 44-3	2 44-7	2 36-8	5-7	1-0	11-7	2-0
58	2 44-5	2 45-0	2 37-0	5-8	1-0	11-8	2-1
59	2 44-8	2 45-2	2 37-2	5-9	1-0	11-9	2-1
60	2 45-0	2 45-5	2 37-5	6-0	1-1	12-0	2-1

m 12	SOL PLANETAS			v o d	Corr ⁿ			v o d	Corr ⁿ			v o d	Corr ⁿ			
	o	'	"/		'	"/	"/		'	"/	"/		'	"/	"/	
00	3 00-0	3 00-5	2 51-8	0-0	0-0	6-0	1-3	12-0	2-5							
01	3 00-3	3 00-7	2 52-0	0-1	0-0	6-1	1-3	12-1	2-5							
02	3 00-5	3 01-0	2 52-3	0-2	0-0	6-2	1-3	12-2	2-5							
03	3 00-8	3 01-2	2 52-5	0-3	0-1	6-3	1-3	12-3	2-6							
04	3 01-0	3 01-5	2 52-8	0-4	0-1	6-4	1-3	12-4	2-6							
05	3 01-3	3 01-7	2 53-0	0-5	0-1	6-5	1-4	12-5	2-6							
06	3 01-5	3 02-0	2 53-2	0-6	0-1	6-6	1-4	12-6	2-6							
07	3 01-8	3 02-2	2 53-5	0-7	0-1	6-7	1-4	12-7	2-6							
08	3 02-0	3 02-5	2 53-7	0-8	0-2	6-8	1-4	12-8	2-7							
09	3 02-3	3 02-7	2 53-9	0-9	0-2	6-9	1-4	12-9	2-7							
10	3 02-5	3 03-0	2 54-2	1-0	0-2	7-0	1-5	13-0	2-7							
11	3 02-8	3 03-3	2 54-4	1-1	0-2	7-1	1-5	13-1	2-7							
12	3 03-0	3 03-5	2 54-7	1-2	0-3	7-2	1-5	13-2	2-8							
13	3 03-3	3 03-8	2 54-9	1-3	0-3	7-3	1-5	13-3	2-8							
14	3 03-5	3 04-0	2 55-1	1-4	0-3	7-4	1-5	13-4	2-8							
15	3 03-8	3 04-3	2 55-4	1-5	0-3	7-5	1-6	13-5	2-8							
16	3 04-0	3 04-5	2 55-6	1-6	0-3	7-6	1-6	13-6	2-8							
17	3 04-3	3 04-8	2 55-9	1-7	0-4	7-7	1-6	13-7	2-9							
18	3 04-5	3 05-0	2 56-1	1-8	0-4	7-8	1-6	13-8	2-9							
19	3 04-8	3 05-3	2 56-3	1-9	0-4	7-9	1-6	13-9	2-9							
20	3 05-0	3 05-5	2 56-6	2-0	0-4	8-0	1-7	14-0	2-9							
21	3 05-3	3 05-8	2 56-8	2-1	0-4	8-1	1-7	14-1	2-9							
22	3 05-5	3 06-0	2 57-0	2-2	0-5	8-2	1-7	14-2	3-0							
23	3 05-8	3 06-3	2 57-3	2-3	0-5	8-3	1-7	14-3	3-0							
24	3 06-0	3 06-5	2 57-5	2-4	0-5	8-4	1-8	14-4	3-0							
25	3 06-3	3 06-8	2 57-8	2-5	0-5	8-5	1-8	14-5	3-0							
26	3 06-5	3 07-0	2 58-0	2-6	0-5	8-6	1-8	14-6	3-0							
27	3 06-8	3 07-3	2 58-2	2-7	0-6	8-7	1-8	14-7	3-1							
28	3 07-0	3 07-5	2 58-5	2-8	0-6	8-8	1-8	14-8	3-1							
29	3 07-3	3 07-8	2 58-7	2-9	0-6	8-9	1-9	14-9	3-1							
30	3 07-5	3 08-0	2 59-0	3-0	0-6	9-0	1-9	15-0	3-1							
31	3 07-8	3 08-3	2 59-2	3-1	0-6	9-1	1-9	15-1	3-1							
32	3 08-0	3 08-5	2 59-4	3-2	0-7	9-2	1-9	15-2	3-2							
33	3 08-3	3 08-8	2 59-7	3-3	0-7	9-3	1-9	15-3	3-2							
34	3 08-5	3 09-0	2 59-9	3-4	0-7	9-4	2-0	15-4	3-2							
35	3 08-8	3 09-3	3 00-2	3-5	0-7	9-5	2-0	15-5	3-2							
36	3 09-0	3 09-5	3 00-4	3-6	0-8	9-6	2-0	15-6	3-3							
37	3 09-3	3 09-8	3 00-6	3-7	0-8	9-7	2-0	15-7	3-3							
38	3 09-5	3 10-0	3 00-9	3-8	0-8	9-8	2-0	15-8	3-3							
39	3 09-8	3 10-3	3 01-1	3-9	0-8	9-9	2-1	15-9	3-3							
40	3 10-0	3 10-5	3 01-3	4-0	0-8	10-0	2-1	16-0	3-3							
41	3 10-3	3 10-8	3 01-6	4-1	0-9	10-1	2-1	16-1	3-4							
42	3 10-5	3 11-0	3 01-8	4-2	0-9	10-2	2-1	16-2	3-4							
43	3 10-8	3 11-3	3 02-1	4-3	0-9	10-3	2-1	16-3	3-4							
44	3 11-0	3 11-5	3 02-3	4-4	0-9	10-4	2-2	16-4	3-4							
45	3 11-3	3 11-8	3 02-5	4-5	0-9	10-5	2-2	16-5	3-4							
46	3 11-5	3 12-0	3 02-8	4-6	1-0	10-6	2-2	16-6	3-5							
47	3 11-8	3 12-3	3 03-0	4-7	1-0	10-7	2-2	16-7	3-5							
48	3 12-0	3 12-5	3 03-3	4-8	1-0	10-8	2-3	16-8	3-5							
49	3 12-3	3 12-8	3 03-5	4-9	1-0	10-9	2-3	16-9	3-5							
50	3 12-5	3 13-0	3 03-7	5-0	1-0	11-0	2-3	17-0	3-5							
51	3 12-8	3 13-3	3 04-0	5-1	1-1	11-1	2-3	17-1	3-6							
52	3 13-0	3 13-5	3 04-2	5-2	1-1	11-2	2-3	17-2	3-6							
53	3 13-3	3 13-8	3 04-4	5-3	1-1	11-3	2-4	17-3	3-6							
54	3 13-5	3 14-0	3 04-7	5-4	1-1	11-4	2-4	17-4	3-6							
55	3 13-8	3 14-3	3 04-9	5-5	1-1	11-5	2-4	17-5	3-6							
56	3 14-0	3 14-5	3 05-2	5-6	1-2	11-6	2-4	17-6	3-7							
57	3 14-3	3 14-8	3 05-4	5-7	1-2	11-7	2-4	17-7	3-7							
58	3 14-5	3 15-0	3 05-6	5-8	1-2	11-8	2-5	17-8	3-7							
59	3 14-8	3 15-3	3 05-9	5-9	1-2	11-9	2-5	17-9	3-7							
60	3 15-0	3 15-5	3 06-1	6-0	1-3	12-0	2-5	18-0	3-8							

s	SOL PLANETAS		ARIES	LUNA	v		v		v		
	o	'			o	'	o	'	o	'	o
00	3 30-0	3 30-6	3 20-4	0-0	0-0	6-0	1-5	12-0	2-9		
01	3 30-3	3 30-8	3 20-7	0-1	0-0	6-1	1-5	12-1	2-9		
02	3 30-5	3 31-1	3 20-9	0-2	0-0	6-2	1-5	12-2	2-9		
03	3 30-8	3 31-3	3 21-1	0-3	0-1	6-3	1-5	12-3	3-0		
04	3 31-0	3 31-6	3 21-4	0-4	0-1	6-4	1-5	12-4	3-0		
05	3 31-3	3 31-8	3 21-6	0-5	0-1	6-5	1-6	12-5	3-0		
06	3 31-5	3 32-1	3 21-9	0-6	0-1	6-6	1-6	12-6	3-0		
07	3 31-8	3 32-3	3 22-1	0-7	0-2	6-7	1-6	12-7	3-1		
08	3 32-0	3 32-6	3 22-3	0-8	0-2	6-8	1-6	12-8	3-1		
09	3 32-3	3 32-8	3 22-6	0-9	0-2	6-9	1-7	12-9	3-1		
10	3 32-5	3 33-1	3 22-8	1-0	0-2	7-0	1-7	13-0	3-1		
11	3 32-8	3 33-3	3 23-1	1-1	0-3	7-1	1-7	13-1	3-2		
12	3 33-0	3 33-6	3 23-3	1-2	0-3	7-2	1-7	13-2	3-2		
13	3 33-3	3 33-8	3 23-5	1-3	0-3	7-3	1-8	13-3	3-2		
14	3 33-5	3 34-1	3 23-8	1-4	0-3	7-4	1-8	13-4	3-2		
15	3 33-8	3 34-3	3 24-0	1-5	0-4	7-5	1-8	13-5	3-3		
16	3 34-0	3 34-6	3 24-3	1-6	0-4	7-6	1-8	13-6	3-3		
17	3 34-3	3 34-8	3 24-5	1-7	0-4	7-7	1-9	13-7	3-3		
18	3 34-5	3 35-1	3 24-7	1-8	0-4	7-8	1-9	13-8	3-3		
19	3 34-8	3 35-3	3 25-0	1-9	0-5	7-9	1-9	13-9	3-4		
20	3 35-0	3 35-6	3 25-2	2-0	0-5	8-0	1-9	14-0	3-4		
21	3 35-3	3 35-8	3 25-4	2-1	0-5	8-1	2-0	14-1	3-4		
22	3 35-5	3 36-1	3 25-7	2-2	0-5	8-2	2-0	14-2	3-4		
23	3 35-8	3 36-3	3 25-9	2-3	0-6	8-3	2-0	14-3	3-5		
24	3 36-0	3 36-6	3 26-2	2-4	0-6	8-4	2-0	14-4	3-5		
25	3 36-3	3 36-8	3 26-4	2-5	0-6	8-5	2-1	14-5	3-5		
26	3 36-5	3 37-1	3 26-6	2-6	0-6	8-6	2-1	14-6	3-5		
27	3 36-8	3 37-3	3 26-9	2-7	0-7	8-7	2-1	14-7	3-6		
28	3 37-0	3 37-6	3 27-1	2-8	0-7	8-8	2-1	14-8	3-6		
29	3 37-3	3 37-8	3 27-4	2-9	0-7	8-9	2-2	14-9	3-6		
30	3 37-5	3 38-1	3 27-6	3-0	0-7	9-0	2-2	15-0	3-6		
31	3 37-8	3 38-3	3 27-8	3-1	0-7	9-1	2-2	15-1	3-6		
32	3 38-0	3 38-6	3 28-1	3-2	0-8	9-2	2-2	15-2	3-7		
33	3 38-3	3 38-8	3 28-3	3-3	0-8	9-3	2-2	15-3	3-7		
34	3 38-5	3 39-1	3 28-5	3-4	0-8	9-4	2-3	15-4	3-7		
35	3 38-8	3 39-3	3 28-8	3-5	0-8	9-5	2-3	15-5	3-7		
36	3 39-0	3 39-6	3 29-0	3-6	0-9	9-6	2-3	15-6	3-8		
37	3 39-3	3 39-9	3 29-3	3-7	0-9	9-7	2-3	15-7	3-8		
38	3 39-5	3 40-1	3 29-5	3-8	0-9	9-8	2-4	15-8	3-8		
39	3 39-8	3 40-4	3 29-7	3-9	0-9	9-9	2-4	15-9	3-8		
40	3 40-0	3 40-6	3 30-0	4-0	1-0	10-0	2-4	16-0	3-9		
41	3 40-3	3 40-9	3 30-2	4-1	1-0	10-1	2-4	16-1	3-9		
42	3 40-5	3 41-1	3 30-5	4-2	1-0	10-2	2-5	16-2	3-9		
43	3 40-8	3 41-4	3 30-7	4-3	1-0	10-3	2-5	16-3	3-9		
44	3 41-0	3 41-6	3 30-9	4-4	1-1	10-4	2-5	16-4	4-0		
45	3 41-3	3 41-9	3 31-2	4-5	1-1	10-5	2-5	16-5	4-0		
46	3 41-5	3 42-1	3 31-4	4-6	1-1	10-6	2-6	16-6	4-0		
47	3 41-8	3 42-4	3 31-6	4-7	1-1	10-7	2-6	16-7	4-0		
48	3 42-0	3 42-6	3 31-9	4-8	1-2	10-8	2-6	16-8	4-1		
49	3 42-3	3 42-9	3 32-1	4-9	1-2	10-9	2-6	16-9	4-1		
50	3 42-5	3 43-1	3 32-4	5-0	1-2	11-0	2-7	17-0	4-1		
51	3 42-8	3 43-4	3 32-6	5-1	1-2	11-1	2-7	17-1	4-1		
52	3 43-0	3 43-6	3 32-8	5-2	1-3	11-2	2-7	17-2	4-2		
53	3 43-3	3 43-9	3 33-1	5-3	1-3	11-3	2-7	17-3	4-2		
54	3 43-5	3 44-1	3 33-3	5-4	1-3	11-4	2-8	17-4	4-2		
55	3 43-8	3 44-4	3 33-6	5-5	1-3	11-5	2-8	17-5	4-2		
56	3 44-0	3 44-6	3 33-8	5-6	1-4	11-6	2-8	17-6	4-3		
57	3 44-3	3 44-9	3 34-0	5-7	1-4	11-7	2-8	17-7	4-3		
58	3 44-5	3 45-1	3 34-3	5-8	1-4	11-8	2-9	17-8	4-3		
59	3 44-8	3 45-4	3 34-5	5-9	1-4	11-9	2-9	17-9	4-3		
60	3 45-0	3 45-6	3 34-8	6-0	1-5	12-0	2-9	18-0	4-4		

s	SOL PLANETAS		ARIES	LUNA	v		v		v		
	o	'			o	'	o	'	o	'	o
00	3 45-0	3 45-6	3 34-8	0-0	0-0	6-0	1-6	12-0	3-1		
01	3 45-3	3 45-9	3 35-0	0-1	0-0	6-1	1-6	12-1	3-1		
02	3 45-5	3 46-1	3 35-2	0-2	0-1	6-2	1-6	12-2	3-2		
03	3 45-8	3 46-4	3 35-5	0-3	0-1	6-3	1-6	12-3	3-2		
04	3 46-0	3 46-6	3 35-7	0-4	0-1	6-4	1-7	12-4	3-2		
05	3 46-3	3 46-9	3 35-9	0-5	0-1	6-5	1-7	12-5	3-2		
06	3 46-5	3 47-1	3 36-2	0-6	0-2	6-6	1-7	12-6	3-3		
07	3 46-8	3 47-4	3 36-4	0-7	0-2	6-7	1-7	12-7	3-3		
08	3 47-0	3 47-6	3 36-7	0-8	0-2	6-8	1-8	12-8	3-3		
09	3 47-3	3 47-9	3 36-9	0-9	0-2	6-9	1-8	12-9	3-3		
10	3 47-5	3 48-1	3 37-1	1-0	0-3	7-0	1-8	13-0	3-4		
11	3 47-8	3 48-4	3 37-4	1-1	0-3	7-1	1-8	13-1	3-4		
12	3 48-0	3 48-6	3 37-6	1-2	0-3	7-2	1-9	13-2	3-4		
13	3 48-3	3 48-9	3 37-9	1-3	0-3	7-3	1-9	13-3	3-4		
14	3 48-5	3 49-1	3 38-1	1-4	0-4	7-4	1-9	13-4	3-5		
15	3 48-8	3 49-4	3 38-3	1-5	0-4	7-5	1-9	13-5	3-5		
16	3 49-0	3 49-6	3 38-6	1-6	0-4	7-6	2-0	13-6	3-5		
17	3 49-3	3 49-9	3 38-8	1-7	0-4	7-7	2-0	13-7	3-5		
18	3 49-5	3 50-1	3 39-0	1-8	0-5	7-8	2-0	13-8	3-6		
19	3 49-8	3 50-4	3 39-3	1-9	0-5	7-9	2-0	13-9	3-6		
20	3 50-0	3 50-6	3 39-5	2-0	0-5	8-0	2-1	14-0	3-6		
21	3 50-3	3 50-9	3 39-8	2-1	0-5	8-1	2-1	14-1	3-6		
22	3 50-5	3 51-1	3 40-0	2-2	0-6	8-2	2-1	14-2	3-7		
23	3 50-8	3 51-4	3 40-2	2-3	0-6	8-3	2-1	14-3	3-7		
24	3 51-0	3 51-6	3 40-5	2-4	0-6	8-4	2-2	14-4	3-7		
25	3 51-3	3 51-9	3 40-7	2-5	0-6	8-5	2-2	14-5	3-7		
26	3 51-5	3 52-1	3 41-0	2-6	0-7	8-6	2-2	14-6	3-8		
27	3 51-8	3 52-4	3 41-2	2-7	0-7	8-7	2-2	14-7	3-8		
28	3 52-0	3 52-6	3 41-4	2-8	0-7	8-8	2-3	14-8	3-8		
29	3 52-3	3 52-9	3 41-7	2-9	0-7	8-9	2-3	14-9	3-8		
30	3 52-5	3 53-1	3 41-9	3-0	0-8	9-0	2-3	15-0	3-9		
31	3 52-8	3 53-4	3 42-1	3-1	0-8	9-1	2-4	15-1	3-9		
32	3 53-0	3 53-6	3 42-4	3-2	0-8	9-2	2-4	15-2	3-9		
33	3 53-3	3 53-9	3 42-6	3-3	0-9	9-3	2-4	15-3	4-0		
34	3 53-5	3 54-1	3 42-9	3-4	0-9	9-4	2-4	15-4	4-0		
35	3 53-8	3 54-4	3 43-1	3-5	0-9	9-5	2-5	15-5	4-0		
36	3 54-0	3 54-6	3 43-3	3-6	0-9	9-6	2-5	15-6	4-0		
37	3 54-3	3 54-9	3 43-6	3-7	1-0	9-7	2-5	15-7	4-1		
38	3 54-5	3 55-1	3 43-8	3-8	1-0	9-8	2-5	15-8	4-1		
39	3 54-8	3 55-4	3 44-1	3-9	1-0	9-9	2-6	15-9	4-1		
40	3 55-0	3 55-6	3 44-3	4-0	1-0	10-0	2-6	16-0	4-1		
41	3 55-3	3 55-9	3 44-5	4-1	1-1	10-1	2-6	16-1	4-2		
42	3 55-5	3 56-1	3 44-8	4-2	1-1	10-2	2-6	16-2	4-2		
43	3 55-8	3 56-4	3 45-0	4-3	1-1	10-3	2-7	16-3	4-2		
44	3 56-0	3 56-6	3 45-2	4-4	1-1	10-4	2-7	16-4	4-2		
45	3 56-3	3 56-9	3 45-5	4-5	1-2	10-5	2-7	16-5	4-3		
46	3 56-5	3 57-1	3 45-7	4-6	1-2	10-6	2-7	16-6	4-3		
47	3 56-8	3 57-4	3 46-0	4-7	1-2	10-7	2-8	16-7	4-3		
48	3 57-0	3 57-6	3 46-2	4-8	1-2	10-8	2-8	16-8	4-3		
49	3 57-3	3 57-9	3 46-4	4-9	1-3	10-9	2-8	16-9	4-4		
50	3 57-5	3 58-2	3 46-7	5-0	1-3	11-0	2-8	17-0	4-4		
51	3 57-8	3 58-4	3 46-9	5-1	1-3	11-1	2-9	17-1	4-4		
52	3 58-0	3 58-7	3 47-2	5-2	1-3	11-2	2-9	17-2	4-4		
53	3 58-3	3 58-9	3 47-4	5-3	1-4	11-3	2-9	17-3	4-5		
54	3 58-5	3 59-2	3 47-6	5-4	1-4	11-4	2-9	17-4	4-5		

16 ^m	SOL PLANETAS	ARIES	LUNA I	v		v		v	
				o	Corr ⁿ	o	Corr ⁿ	o	Corr ⁿ
00	4 00-0	4 00-7	3 49-1	0-0	0-0	6-0	1-7	12-0	3-3
01	4 00-3	4 00-9	3 49-3	0-1	0-0	6-1	1-7	12-1	3-3
02	4 00-5	4 01-2	3 49-5	0-2	0-1	6-2	1-7	12-2	3-4
03	4 00-8	4 01-4	3 49-8	0-3	0-1	6-3	1-7	12-3	3-4
04	4 01-0	4 01-7	3 50-0	0-4	0-1	6-4	1-8	12-4	3-4
05	4 01-3	4 01-9	3 50-3	0-5	0-1	6-5	1-8	12-5	3-4
06	4 01-5	4 02-2	3 50-5	0-6	0-2	6-6	1-8	12-6	3-5
07	4 01-8	4 02-4	3 50-7	0-7	0-2	6-7	1-8	12-7	3-5
08	4 02-0	4 02-7	3 51-0	0-8	0-2	6-8	1-9	12-8	3-5
09	4 02-3	4 02-9	3 51-2	0-9	0-2	6-9	1-9	12-9	3-5
10	4 02-5	4 03-2	3 51-5	1-0	0-3	7-0	1-9	13-0	3-6
11	4 02-8	4 03-4	3 51-7	1-1	0-3	7-1	2-0	13-1	3-6
12	4 03-0	4 03-7	3 51-9	1-2	0-3	7-2	2-0	13-2	3-6
13	4 03-3	4 03-9	3 52-2	1-3	0-4	7-3	2-0	13-3	3-7
14	4 03-5	4 04-2	3 52-4	1-4	0-4	7-4	2-0	13-4	3-7
15	4 03-8	4 04-4	3 52-6	1-5	0-4	7-5	2-1	13-5	3-7
16	4 04-0	4 04-7	3 52-9	1-6	0-4	7-6	2-1	13-6	3-7
17	4 04-3	4 04-9	3 53-1	1-7	0-5	7-7	2-1	13-7	3-8
18	4 04-5	4 05-2	3 53-4	1-8	0-5	7-8	2-1	13-8	3-8
19	4 04-8	4 05-4	3 53-6	1-9	0-5	7-9	2-2	13-9	3-8
20	4 05-0	4 05-7	3 53-8	2-0	0-6	8-0	2-2	14-0	3-9
21	4 05-3	4 05-9	3 54-1	2-1	0-6	8-1	2-2	14-1	3-9
22	4 05-5	4 06-2	3 54-3	2-2	0-6	8-2	2-3	14-2	3-9
23	4 05-8	4 06-4	3 54-6	2-3	0-6	8-3	2-3	14-3	3-9
24	4 06-0	4 06-7	3 54-8	2-4	0-7	8-4	2-3	14-4	4-0
25	4 06-3	4 06-9	3 55-0	2-5	0-7	8-5	2-3	14-5	4-0
26	4 06-5	4 07-2	3 55-3	2-6	0-7	8-6	2-4	14-6	4-0
27	4 06-8	4 07-4	3 55-5	2-7	0-7	8-7	2-4	14-7	4-0
28	4 07-0	4 07-7	3 55-7	2-8	0-8	8-8	2-4	14-8	4-1
29	4 07-3	4 07-9	3 56-0	2-9	0-8	8-9	2-4	14-9	4-1
30	4 07-5	4 08-2	3 56-2	3-0	0-8	9-0	2-5	15-0	4-1
31	4 07-8	4 08-4	3 56-5	3-1	0-9	9-1	2-5	15-1	4-2
32	4 08-0	4 08-7	3 56-7	3-2	0-9	9-2	2-5	15-2	4-2
33	4 08-3	4 08-9	3 56-9	3-3	0-9	9-3	2-6	15-3	4-2
34	4 08-5	4 09-2	3 57-2	3-4	0-9	9-4	2-6	15-4	4-2
35	4 08-8	4 09-4	3 57-4	3-5	1-0	9-5	2-6	15-5	4-3
36	4 09-0	4 09-7	3 57-7	3-6	1-0	9-6	2-6	15-6	4-3
37	4 09-3	4 09-9	3 57-9	3-7	1-0	9-7	2-7	15-7	4-3
38	4 09-5	4 10-2	3 58-1	3-8	1-0	9-8	2-7	15-8	4-3
39	4 09-8	4 10-4	3 58-4	3-9	1-1	9-9	2-7	15-9	4-4
40	4 10-0	4 10-7	3 58-6	4-0	1-1	10-0	2-8	16-0	4-4
41	4 10-3	4 10-9	3 58-8	4-1	1-1	10-1	2-8	16-1	4-4
42	4 10-5	4 11-2	3 59-1	4-2	1-2	10-2	2-8	16-2	4-5
43	4 10-8	4 11-4	3 59-3	4-3	1-2	10-3	2-8	16-3	4-5
44	4 11-0	4 11-7	3 59-6	4-4	1-2	10-4	2-9	16-4	4-5
45	4 11-3	4 11-9	3 59-8	4-5	1-2	10-5	2-9	16-5	4-5
46	4 11-5	4 12-2	4 00-0	4-6	1-3	10-6	2-9	16-6	4-6
47	4 11-8	4 12-4	4 00-3	4-7	1-3	10-7	2-9	16-7	4-6
48	4 12-0	4 12-7	4 00-5	4-8	1-3	10-8	3-0	16-8	4-6
49	4 12-3	4 12-9	4 00-8	4-9	1-3	10-9	3-0	16-9	4-6
50	4 12-5	4 13-2	4 01-0	5-0	1-4	11-0	3-0	17-0	4-7
51	4 12-8	4 13-4	4 01-2	5-1	1-4	11-1	3-1	17-1	4-7
52	4 13-0	4 13-7	4 01-5	5-2	1-4	11-2	3-1	17-2	4-7
53	4 13-3	4 13-9	4 01-7	5-3	1-5	11-3	3-1	17-3	4-8
54	4 13-5	4 14-2	4 02-0	5-4	1-5	11-4	3-1	17-4	4-8
55	4 13-8	4 14-4	4 02-2	5-5	1-5	11-5	3-2	17-5	4-8
56	4 14-0	4 14-7	4 02-4	5-6	1-5	11-6	3-2	17-6	4-8
57	4 14-3	4 14-9	4 02-7	5-7	1-6	11-7	3-2	17-7	4-9
58	4 14-5	4 15-2	4 02-9	5-8	1-6	11-8	3-2	17-8	4-9
59	4 14-8	4 15-4	4 03-1	5-9	1-6	11-9	3-3	17-9	4-9
60	4 15-0	4 15-7	4 03-4	6-0	1-7	12-0	3-3	18-0	5-0

17 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	Corr ⁿ	o	Corr ⁿ	o	Corr ⁿ
00	4 15-0	4 15-7	4 03-4	0-0	0-0	6-0	1-8	12-0	3-5
01	4 15-3	4 15-9	4 03-6	0-1	0-0	6-1	1-8	12-1	3-5
02	4 15-5	4 16-2	4 03-9	0-2	0-1	6-2	1-8	12-2	3-6
03	4 15-8	4 16-5	4 04-1	0-3	0-1	6-3	1-8	12-3	3-6
04	4 16-0	4 16-7	4 04-3	0-4	0-1	6-4	1-9	12-4	3-6
05	4 16-3	4 17-0	4 04-6	0-5	0-1	6-5	1-9	12-5	3-6
06	4 16-5	4 17-2	4 04-8	0-6	0-2	6-6	1-9	12-6	3-7
07	4 16-8	4 17-5	4 05-1	0-7	0-2	6-7	2-0	12-7	3-7
08	4 17-0	4 17-7	4 05-3	0-8	0-2	6-8	2-0	12-8	3-7
09	4 17-3	4 18-0	4 05-5	0-9	0-3	6-9	2-0	12-9	3-8
10	4 17-5	4 18-2	4 05-8	1-0	0-3	7-0	2-0	13-0	3-8
11	4 17-8	4 18-5	4 06-0	1-1	0-3	7-1	2-1	13-1	3-8
12	4 18-0	4 18-7	4 06-2	1-2	0-4	7-2	2-1	13-2	3-9
13	4 18-3	4 19-0	4 06-5	1-3	0-4	7-3	2-1	13-3	3-9
14	4 18-5	4 19-2	4 06-7	1-4	0-4	7-4	2-2	13-4	3-9
15	4 18-8	4 19-5	4 07-0	1-5	0-4	7-5	2-2	13-5	3-9
16	4 19-0	4 19-7	4 07-2	1-6	0-5	7-6	2-2	13-6	4-0
17	4 19-3	4 20-0	4 07-4	1-7	0-5	7-7	2-2	13-7	4-0
18	4 19-5	4 20-2	4 07-7	1-8	0-5	7-8	2-3	13-8	4-0
19	4 19-8	4 20-5	4 07-9	1-9	0-6	7-9	2-3	13-9	4-1
20	4 20-0	4 20-7	4 08-2	2-0	0-6	8-0	2-3	14-0	4-1
21	4 20-3	4 21-0	4 08-4	2-1	0-6	8-1	2-4	14-1	4-1
22	4 20-5	4 21-2	4 08-6	2-2	0-6	8-2	2-4	14-2	4-1
23	4 20-8	4 21-5	4 08-9	2-3	0-7	8-3	2-4	14-3	4-2
24	4 21-0	4 21-7	4 09-1	2-4	0-7	8-4	2-5	14-4	4-2
25	4 21-3	4 22-0	4 09-3	2-5	0-7	8-5	2-5	14-5	4-2
26	4 21-5	4 22-2	4 09-6	2-6	0-8	8-6	2-5	14-6	4-3
27	4 21-8	4 22-5	4 09-8	2-7	0-8	8-7	2-5	14-7	4-3
28	4 22-0	4 22-7	4 10-1	2-8	0-8	8-8	2-6	14-8	4-3
29	4 22-3	4 23-0	4 10-3	2-9	0-8	8-9	2-6	14-9	4-3
30	4 22-5	4 23-2	4 10-5	3-0	0-9	9-0	2-6	15-0	4-4
31	4 22-8	4 23-5	4 10-8	3-1	0-9	9-1	2-7	15-1	4-4
32	4 23-0	4 23-7	4 11-0	3-2	0-9	9-2	2-7	15-2	4-4
33	4 23-3	4 24-0	4 11-3	3-3	1-0	9-3	2-7	15-3	4-5
34	4 23-5	4 24-2	4 11-5	3-4	1-0	9-4	2-7	15-4	4-5
35	4 23-8	4 24-5	4 11-7	3-5	1-0	9-5	2-8	15-5	4-5
36	4 24-0	4 24-7	4 12-0	3-6	1-1	9-6	2-8	15-6	4-6
37	4 24-3	4 25-0	4 12-2	3-7	1-1	9-7	2-8	15-7	4-6
38	4 24-5	4 25-2	4 12-5	3-8	1-1	9-8	2-9	15-8	4-6
39	4 24-8	4 25-5	4 12-7	3-9	1-1	9-9	2-9	15-9	4-6
40	4 25-0	4 25-7	4 12-9	4-0	1-2	10-0	2-9	16-0	4-7
41	4 25-3	4 26-0	4 13-2	4-1	1-2	10-1	2-9	16-1	4-7
42	4 25-5	4 26-2	4 13-4	4-2	1-2	10-2	3-0	16-2	4-7
43	4 25-8	4 26-5	4 13-6	4-3	1-3	10-3	3-0	16-3	4-8
44	4 26-0	4 26-7	4 13-9	4-4	1-3	10-4	3-0	16-4	4-8
45	4 26-3	4 27-0	4 14-1	4-5	1-3	10-5	3-1	16-5	4-8
46	4 26-5	4 27-2	4 14-4	4-6	1-3	10-6	3-1	16-6	4-8
47	4 26-8	4 27-5	4 14-6	4-7	1-4	10-7	3-1	16-7	4-9
48	4 27-0	4 27-7	4 14-8	4-8	1-4	10-8	3-2	16-8	4-9
49	4 27-3	4 28-0	4 15-1	4-9	1-4	10-9	3-2	16-9	4-9
50	4 27-5	4 28-2	4 15-3	5-0	1-5	11-0	3-2	17-0	5-0
51	4 27-8	4 28-5	4 15-6	5-1	1-5	11-1	3-2	17-1	5-0
52	4 28-0	4 28-7	4 15-8	5-2	1-5	11-2	3-3	17-2	5-0
53	4 28-3	4 29-0	4 16-0	5-3	1-5	11-3	3-3	17-3	5-0
54	4 28-5	4 29-2	4 16-3	5-4	1-6	11-4	3-3	17-4	5-1
55	4 28-8	4 29-5	4 16-5	5-5	1-6	11-5	3-4	17-5	5-1
56	4 29-0	4 29-7	4 16-7	5-6	1-6	11-6	3-4	17-6	5-1
57	4 29-3	4 30-0	4 17-0	5-7	1-7	11-7	3-4	17-7	5-2
58	4 29-5	4 30-2	4 17-2	5-8	1-7	11-8	3-4	17-8	5-2
59	4 29-8	4 30-5	4 17-5	5-9	1-7	11-9	3-5	17-9	5-2
60	4 30-0	4 30-7	4 17-7	6-0	1-8	12-0	3-5	18-0	5-3

18 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	d	o	d	o	d
00	4 30-0	4 30-7	4 17-7	0-0	0-0	6-0	1-9	12-0	3-7
01	4 30-3	4 31-0	4 17-9	0-1	0-0	6-1	1-9	12-1	3-7
02	4 30-5	4 31-2	4 18-2	0-2	0-1	6-2	1-9	12-2	3-8
03	4 30-8	4 31-5	4 18-4	0-3	0-1	6-3	1-9	12-3	3-8
04	4 31-0	4 31-7	4 18-7	0-4	0-1	6-4	2-0	12-4	3-8
05	4 31-3	4 32-0	4 18-9	0-5	0-2	6-5	2-0	12-5	3-9
06	4 31-5	4 32-2	4 19-1	0-6	0-2	6-6	2-0	12-6	3-9
07	4 31-8	4 32-5	4 19-4	0-7	0-2	6-7	2-1	12-7	3-9
08	4 32-0	4 32-7	4 19-6	0-8	0-2	6-8	2-1	12-8	3-9
09	4 32-3	4 33-0	4 19-8	0-9	0-3	6-9	2-1	12-9	4-0
10	4 32-5	4 33-2	4 20-1	1-0	0-3	7-0	2-2	13-0	4-0
11	4 32-8	4 33-5	4 20-3	1-1	0-3	7-1	2-2	13-1	4-0
12	4 33-0	4 33-7	4 20-6	1-2	0-4	7-2	2-2	13-2	4-1
13	4 33-3	4 34-0	4 20-8	1-3	0-4	7-3	2-3	13-3	4-1
14	4 33-5	4 34-2	4 21-0	1-4	0-4	7-4	2-3	13-4	4-1
15	4 33-8	4 34-5	4 21-3	1-5	0-5	7-5	2-3	13-5	4-2
16	4 34-0	4 34-8	4 21-5	1-6	0-5	7-6	2-3	13-6	4-2
17	4 34-3	4 35-0	4 21-8	1-7	0-5	7-7	2-4	13-7	4-2
18	4 34-5	4 35-3	4 22-0	1-8	0-6	7-8	2-4	13-8	4-3
19	4 34-8	4 35-5	4 22-2	1-9	0-6	7-9	2-4	13-9	4-3
20	4 35-0	4 35-8	4 22-5	2-0	0-6	8-0	2-5	14-0	4-3
21	4 35-3	4 36-0	4 22-7	2-1	0-6	8-1	2-5	14-1	4-3
22	4 35-5	4 36-3	4 22-9	2-2	0-7	8-2	2-5	14-2	4-4
23	4 35-8	4 36-5	4 23-2	2-3	0-7	8-3	2-6	14-3	4-4
24	4 36-0	4 36-8	4 23-4	2-4	0-7	8-4	2-6	14-4	4-4
25	4 36-3	4 37-0	4 23-7	2-5	0-8	8-5	2-6	14-5	4-5
26	4 36-5	4 37-3	4 23-9	2-6	0-8	8-6	2-7	14-6	4-5
27	4 36-8	4 37-5	4 24-1	2-7	0-8	8-7	2-7	14-7	4-5
28	4 37-0	4 37-8	4 24-4	2-8	0-9	8-8	2-7	14-8	4-6
29	4 37-3	4 38-0	4 24-6	2-9	0-9	8-9	2-7	14-9	4-6
30	4 37-5	4 38-3	4 24-9	3-0	0-9	9-0	2-8	15-0	4-6
31	4 37-8	4 38-5	4 25-1	3-1	1-0	9-1	2-8	15-1	4-7
32	4 38-0	4 38-8	4 25-3	3-2	1-0	9-2	2-8	15-2	4-7
33	4 38-3	4 39-0	4 25-6	3-3	1-0	9-3	2-9	15-3	4-7
34	4 38-5	4 39-3	4 25-8	3-4	1-0	9-4	2-9	15-4	4-7
35	4 38-8	4 39-5	4 26-1	3-5	1-1	9-5	2-9	15-5	4-8
36	4 39-0	4 39-8	4 26-3	3-6	1-1	9-6	3-0	15-6	4-8
37	4 39-3	4 40-0	4 26-5	3-7	1-1	9-7	3-0	15-7	4-8
38	4 39-5	4 40-3	4 26-8	3-8	1-2	9-8	3-0	15-8	4-9
39	4 39-8	4 40-5	4 27-0	3-9	1-2	9-9	3-1	15-9	4-9
40	4 40-0	4 40-8	4 27-2	4-0	1-2	10-0	3-1	16-0	4-9
41	4 40-3	4 41-0	4 27-5	4-1	1-3	10-1	3-1	16-1	5-0
42	4 40-5	4 41-3	4 27-7	4-2	1-3	10-2	3-1	16-2	5-0
43	4 40-8	4 41-5	4 28-0	4-3	1-3	10-3	3-2	16-3	5-0
44	4 41-0	4 41-8	4 28-2	4-4	1-4	10-4	3-2	16-4	5-1
45	4 41-3	4 42-0	4 28-4	4-5	1-4	10-5	3-2	16-5	5-1
46	4 41-5	4 42-3	4 28-7	4-6	1-4	10-6	3-3	16-6	5-1
47	4 41-8	4 42-5	4 28-9	4-7	1-4	10-7	3-3	16-7	5-1
48	4 42-0	4 42-8	4 29-2	4-8	1-5	10-8	3-3	16-8	5-2
49	4 42-3	4 43-0	4 29-4	4-9	1-5	10-9	3-4	16-9	5-2
50	4 42-5	4 43-3	4 29-6	5-0	1-5	11-0	3-4	17-0	5-2
51	4 42-8	4 43-5	4 29-9	5-1	1-6	11-1	3-4	17-1	5-3
52	4 43-0	4 43-8	4 30-1	5-2	1-6	11-2	3-5	17-2	5-3
53	4 43-3	4 44-0	4 30-3	5-3	1-6	11-3	3-5	17-3	5-3
54	4 43-5	4 44-3	4 30-6	5-4	1-7	11-4	3-5	17-4	5-4
55	4 43-8	4 44-5	4 30-8	5-5	1-7	11-5	3-5	17-5	5-4
56	4 44-0	4 44-8	4 31-1	5-6	1-7	11-6	3-6	17-6	5-4
57	4 44-3	4 45-0	4 31-3	5-7	1-8	11-7	3-6	17-7	5-5
58	4 44-5	4 45-3	4 31-5	5-8	1-8	11-8	3-6	17-8	5-5
59	4 44-8	4 45-5	4 31-8	5-9	1-8	11-9	3-7	17-9	5-5
60	4 45-0	4 45-8	4 32-0	6-0	1-9	12-0	3-7	18-0	5-6

19 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	d	o	d	o	d
00	4 45-0	4 45-8	4 32-0	0-0	0-0	6-0	2-0	12-0	3-9
01	4 45-3	4 46-0	4 32-3	0-1	0-0	6-1	2-0	12-1	3-9
02	4 45-5	4 46-3	4 32-5	0-2	0-1	6-2	2-0	12-2	4-0
03	4 45-8	4 46-5	4 32-7	0-3	0-1	6-3	2-0	12-3	4-0
04	4 46-0	4 46-8	4 33-0	0-4	0-1	6-4	2-1	12-4	4-0
05	4 46-3	4 47-0	4 33-2	0-5	0-2	6-5	2-1	12-5	4-1
06	4 46-5	4 47-3	4 33-4	0-6	0-2	6-6	2-1	12-6	4-1
07	4 46-8	4 47-5	4 33-7	0-7	0-2	6-7	2-2	12-7	4-1
08	4 47-0	4 47-8	4 33-9	0-8	0-3	6-8	2-2	12-8	4-2
09	4 47-3	4 48-0	4 34-2	0-9	0-3	6-9	2-2	12-9	4-2
10	4 47-5	4 48-3	4 34-4	1-0	0-3	7-0	2-3	13-0	4-2
11	4 47-8	4 48-5	4 34-6	1-1	0-4	7-1	2-3	13-1	4-3
12	4 48-0	4 48-8	4 34-9	1-2	0-4	7-2	2-3	13-2	4-3
13	4 48-3	4 49-0	4 35-1	1-3	0-4	7-3	2-4	13-3	4-3
14	4 48-5	4 49-3	4 35-4	1-4	0-5	7-4	2-4	13-4	4-4
15	4 48-8	4 49-5	4 35-6	1-5	0-5	7-5	2-4	13-5	4-4
16	4 49-0	4 49-8	4 35-8	1-6	0-5	7-6	2-5	13-6	4-4
17	4 49-3	4 50-0	4 36-1	1-7	0-6	7-7	2-5	13-7	4-5
18	4 49-5	4 50-3	4 36-3	1-8	0-6	7-8	2-5	13-8	4-5
19	4 49-8	4 50-5	4 36-6	1-9	0-6	7-9	2-6	13-9	4-5
20	4 50-0	4 50-8	4 36-8	2-0	0-7	8-0	2-6	14-0	4-6
21	4 50-3	4 51-0	4 37-0	2-1	0-7	8-1	2-6	14-1	4-6
22	4 50-5	4 51-3	4 37-3	2-2	0-7	8-2	2-7	14-2	4-6
23	4 50-8	4 51-5	4 37-5	2-3	0-7	8-3	2-7	14-3	4-6
24	4 51-0	4 51-8	4 37-7	2-4	0-8	8-4	2-7	14-4	4-7
25	4 51-3	4 52-0	4 38-0	2-5	0-8	8-5	2-8	14-5	4-7
26	4 51-5	4 52-3	4 38-2	2-6	0-8	8-6	2-8	14-6	4-7
27	4 51-8	4 52-5	4 38-5	2-7	0-9	8-7	2-8	14-7	4-8
28	4 52-0	4 52-8	4 38-7	2-8	0-9	8-8	2-9	14-8	4-8
29	4 52-3	4 53-1	4 38-9	2-9	0-9	8-9	2-9	14-9	4-8
30	4 52-5	4 53-3	4 39-2	3-0	1-0	9-0	2-9	15-0	4-9
31	4 52-8	4 53-6	4 39-4	3-1	1-0	9-1	3-0	15-1	4-9
32	4 53-0	4 53-8	4 39-7	3-2	1-0	9-2	3-0	15-2	4-9
33	4 53-3	4 54-1	4 39-9	3-3	1-1	9-3	3-0	15-3	5-0
34	4 53-5	4 54-3	4 40-1	3-4	1-1	9-4	3-1	15-4	5-0
35	4 53-8	4 54-6	4 40-4	3-5	1-1	9-5	3-1	15-5	5-0
36	4 54-0	4 54-8	4 40-6	3-6	1-2	9-6	3-1	15-6	5-1
37	4 54-3	4 55-1	4 40-8	3-7	1-2	9-7	3-2	15-7	5-1
38	4 54-5	4 55-3	4 41-1	3-8	1-2	9-8	3-2	15-8	5-1
39	4 54-8	4 55-5	4 41-3	3-9	1-3	9-9	3-2	15-9	5-2
40	4 55-0	4 55-8	4 41-6	4-0	1-3	10-0	3-3	16-0	5-2
41	4 55-3	4 56-1	4 41-8	4-1	1-3	10-1	3-3	16-1	5-2
42	4 55-5	4 56-3	4 42-0	4-2	1-4	10-2	3-3	16-2	5-3
43	4 55-8	4 56-6	4 42-3	4-3	1-4	10-3	3-3	16-3	5-3
44	4 56-0	4 56-8	4 42-5	4-4	1-4	10-4	3-4	16-4	5-3
45	4 56-3	4 57-1	4 42-8	4-5	1-5	10-5	3-4	16-5	5-4
46	4 56-5	4 57-3	4 43-0	4-6	1-5	10-6	3-4	16-6	5-4
47	4 56-8	4 57-6	4 43-2	4-7	1-5	10-7	3-5	16-7	5-4
48	4 57-0	4 57-8	4 43-5	4-8	1-6	10-8	3-5	16-8	5-5
49	4 57-3	4 58-1	4 43-7	4-9	1-6	10-9	3-5	16-9	5-5
50	4 57-5	4 58-3	4 43-9	5-0	1-6	11-0	3-6	17-0	5-5
51	4 57-8	4 58-6	4 44-2	5-1	1-7	11-1	3-6	17-1	5-6
52	4 58-0	4 58-8	4 44-4	5-2	1-7	11-2	3-6	17-2	5-6
53	4 58-3	4 59-1	4 44-7	5-3	1-7	11-3	3-7	17-3	5-6
54	4 58-5	4 59-3	4 44-9	5-4	1-8	11-4	3-7	17-4	5-7
55	4 58-8	4 59-6	4 45-1	5-5	1-8	11-5	3-7	17-5	5-7
56	4 59-0	4 59-8	4 45-4	5-6	1-8	11-6	3-8	17-6	5-7
57	4 59-3	5 00-1	4 45-6	5-7	1-9	11-7	3-8	17-7	5-8
58	4 59-5	5 00-3	4 45-9	5-8	1-9	11-8	3-8	17-8	5-8
59	4 59-8	5 00-6	4 46-1	5-9	1-9	11-9	3-9	17-9	5-8
60	5 00-0	5 00-8	4 46-3	6-0	2-0	12-0	3-9	18-0	5-9

20 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v		21 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	d	o	d	o	d					o	d	o	d	o	d
00	5 00-0	5 00-8	4 46-3	0-0	0-0	6-0	2-1	12-0	4-1	00	5 15-1	5 15-9	5 00-7	0-0	0-0	6-0	2-2	12-0	4-3
01	5 00-3	5 01-1	4 46-6	0-1	0-0	6-1	2-1	12-1	4-1	01	5 15-3	5 16-1	5 00-9	0-1	0-0	6-1	2-2	12-1	4-3
02	5 00-5	5 01-3	4 46-8	0-2	0-1	6-2	2-1	12-2	4-2	02	5 15-5	5 16-4	5 01-1	0-2	0-1	6-2	2-2	12-2	4-4
03	5 00-8	5 01-6	4 47-0	0-3	0-1	6-3	2-2	12-3	4-2	03	5 15-8	5 16-6	5 01-4	0-3	0-1	6-3	2-3	12-3	4-4
04	5 01-0	5 01-8	4 47-3	0-4	0-1	6-4	2-2	12-4	4-2	04	5 16-0	5 16-9	5 01-6	0-4	0-1	6-4	2-3	12-4	4-4
05	5 01-3	5 02-1	4 47-5	0-5	0-2	6-5	2-2	12-5	4-3	05	5 16-3	5 17-1	5 01-8	0-5	0-2	6-5	2-3	12-5	4-5
06	5 01-5	5 02-3	4 47-8	0-6	0-2	6-6	2-3	12-6	4-3	06	5 16-5	5 17-4	5 02-1	0-6	0-2	6-6	2-4	12-6	4-5
07	5 01-8	5 02-6	4 48-0	0-7	0-2	6-7	2-3	12-7	4-3	07	5 16-8	5 17-6	5 02-3	0-7	0-3	6-7	2-4	12-7	4-6
08	5 02-0	5 02-8	4 48-2	0-8	0-3	6-8	2-3	12-8	4-4	08	5 17-0	5 17-9	5 02-6	0-8	0-3	6-8	2-4	12-8	4-6
09	5 02-3	5 03-1	4 48-5	0-9	0-3	6-9	2-4	12-9	4-4	09	5 17-3	5 18-1	5 02-8	0-9	0-3	6-9	2-5	12-9	4-6
10	5 02-5	5 03-3	4 48-7	1-0	0-3	7-0	2-4	13-0	4-4	10	5 17-5	5 18-4	5 03-0	1-0	0-4	7-0	2-5	13-0	4-7
11	5 02-8	5 03-6	4 49-0	1-1	0-4	7-1	2-4	13-1	4-5	11	5 17-8	5 18-6	5 03-3	1-1	0-4	7-1	2-5	13-1	4-7
12	5 03-0	5 03-8	4 49-2	1-2	0-4	7-2	2-5	13-2	4-5	12	5 18-0	5 18-9	5 03-5	1-2	0-4	7-2	2-6	13-2	4-7
13	5 03-3	5 04-1	4 49-4	1-3	0-4	7-3	2-5	13-3	4-5	13	5 18-3	5 19-1	5 03-8	1-3	0-5	7-3	2-6	13-3	4-8
14	5 03-5	5 04-3	4 49-7	1-4	0-5	7-4	2-5	13-4	4-6	14	5 18-5	5 19-4	5 04-0	1-4	0-5	7-4	2-7	13-4	4-8
15	5 03-8	5 04-6	4 49-9	1-5	0-5	7-5	2-6	13-5	4-6	15	5 18-8	5 19-6	5 04-2	1-5	0-5	7-5	2-7	13-5	4-8
16	5 04-0	5 04-8	4 50-2	1-6	0-5	7-6	2-6	13-6	4-6	16	5 19-0	5 19-9	5 04-5	1-6	0-6	7-6	2-7	13-6	4-9
17	5 04-3	5 05-1	4 50-4	1-7	0-6	7-7	2-6	13-7	4-7	17	5 19-3	5 20-1	5 04-7	1-7	0-6	7-7	2-8	13-7	4-9
18	5 04-5	5 05-3	4 50-6	1-8	0-6	7-8	2-7	13-8	4-7	18	5 19-5	5 20-4	5 04-9	1-8	0-6	7-8	2-8	13-8	4-9
19	5 04-8	5 05-6	4 50-9	1-9	0-6	7-9	2-7	13-9	4-7	19	5 19-8	5 20-6	5 05-2	1-9	0-7	7-9	2-8	13-9	5-0
20	5 05-0	5 05-8	4 51-1	2-0	0-7	8-0	2-7	14-0	4-8	20	5 20-0	5 20-9	5 05-4	2-0	0-7	8-0	2-9	14-0	5-0
21	5 05-3	5 06-1	4 51-3	2-1	0-7	8-1	2-8	14-1	4-8	21	5 20-3	5 21-1	5 05-7	2-1	0-8	8-1	2-9	14-1	5-1
22	5 05-5	5 06-3	4 51-6	2-2	0-8	8-2	2-8	14-2	4-9	22	5 20-5	5 21-4	5 05-9	2-2	0-8	8-2	2-9	14-2	5-1
23	5 05-8	5 06-6	4 51-8	2-3	0-8	8-3	2-8	14-3	4-9	23	5 20-8	5 21-6	5 06-1	2-3	0-8	8-3	3-0	14-3	5-1
24	5 06-0	5 06-8	4 52-1	2-4	0-8	8-4	2-9	14-4	4-9	24	5 21-0	5 21-9	5 06-4	2-4	0-9	8-4	3-0	14-4	5-2
25	5 06-3	5 07-1	4 52-3	2-5	0-9	8-5	2-9	14-5	5-0	25	5 21-3	5 22-1	5 06-6	2-5	0-9	8-5	3-0	14-5	5-2
26	5 06-5	5 07-3	4 52-5	2-6	0-9	8-6	2-9	14-6	5-0	26	5 21-5	5 22-4	5 06-9	2-6	0-9	8-6	3-1	14-6	5-2
27	5 06-8	5 07-6	4 52-8	2-7	0-9	8-7	3-0	14-7	5-0	27	5 21-8	5 22-6	5 07-1	2-7	1-0	8-7	3-1	14-7	5-3
28	5 07-0	5 07-8	4 53-0	2-8	1-0	8-8	3-0	14-8	5-1	28	5 22-0	5 22-9	5 07-3	2-8	1-0	8-8	3-2	14-8	5-3
29	5 07-3	5 08-1	4 53-3	2-9	1-0	8-9	3-0	14-9	5-1	29	5 22-3	5 23-1	5 07-6	2-9	1-0	8-9	3-2	14-9	5-3
30	5 07-5	5 08-3	4 53-5	3-0	1-0	9-0	3-1	15-0	5-1	30	5 22-5	5 23-4	5 07-8	3-0	1-1	9-0	3-2	15-0	5-4
31	5 07-8	5 08-6	4 53-7	3-1	1-1	9-1	3-1	15-1	5-2	31	5 22-8	5 23-6	5 08-0	3-1	1-1	9-1	3-3	15-1	5-4
32	5 08-0	5 08-8	4 54-0	3-2	1-1	9-2	3-1	15-2	5-2	32	5 23-0	5 23-9	5 08-3	3-2	1-1	9-2	3-3	15-2	5-4
33	5 08-3	5 09-1	4 54-2	3-3	1-1	9-3	3-2	15-3	5-2	33	5 23-3	5 24-1	5 08-5	3-3	1-2	9-3	3-3	15-3	5-5
34	5 08-5	5 09-3	4 54-4	3-4	1-2	9-4	3-2	15-4	5-3	34	5 23-5	5 24-4	5 08-8	3-4	1-2	9-4	3-4	15-4	5-5
35	5 08-8	5 09-6	4 54-7	3-5	1-2	9-5	3-2	15-5	5-3	35	5 23-8	5 24-6	5 09-0	3-5	1-3	9-5	3-4	15-5	5-6
36	5 09-0	5 09-8	4 54-9	3-6	1-2	9-6	3-3	15-6	5-3	36	5 24-0	5 24-9	5 09-2	3-6	1-3	9-6	3-4	15-6	5-6
37	5 09-3	5 10-1	4 55-2	3-7	1-3	9-7	3-3	15-7	5-4	37	5 24-3	5 25-1	5 09-5	3-7	1-3	9-7	3-5	15-7	5-6
38	5 09-5	5 10-3	4 55-4	3-8	1-3	9-8	3-3	15-8	5-4	38	5 24-5	5 25-4	5 09-7	3-8	1-4	9-8	3-5	15-8	5-7
39	5 09-8	5 10-6	4 55-6	3-9	1-3	9-9	3-4	15-9	5-4	39	5 24-8	5 25-6	5 10-0	3-9	1-4	9-9	3-5	15-9	5-7
40	5 10-0	5 10-8	4 55-9	4-0	1-4	10-0	3-4	16-0	5-5	40	5 25-0	5 25-9	5 10-2	4-0	1-4	10-0	3-6	16-0	5-7
41	5 10-3	5 11-1	4 56-1	4-1	1-4	10-1	3-5	16-1	5-5	41	5 25-3	5 26-1	5 10-4	4-1	1-5	10-1	3-6	16-1	5-8
42	5 10-5	5 11-4	4 56-4	4-2	1-4	10-2	3-5	16-2	5-5	42	5 25-5	5 26-4	5 10-7	4-2	1-5	10-2	3-7	16-2	5-8
43	5 10-8	5 11-6	4 56-6	4-3	1-5	10-3	3-5	16-3	5-6	43	5 25-8	5 26-6	5 10-9	4-3	1-5	10-3	3-7	16-3	5-8
44	5 11-0	5 11-9	4 56-8	4-4	1-5	10-4	3-6	16-4	5-6	44	5 26-0	5 26-9	5 11-1	4-4	1-6	10-4	3-7	16-4	5-9
45	5 11-3	5 12-1	4 57-1	4-5	1-5	10-5	3-6	16-5	5-6	45	5 26-3	5 27-1	5 11-4	4-5	1-6	10-5	3-8	16-5	5-9
46	5 11-5	5 12-4	4 57-3	4-6	1-6	10-6	3-6	16-6	5-7	46	5 26-5	5 27-4	5 11-6	4-6	1-6	10-6	3-8	16-6	5-9
47	5 11-8	5 12-6	4 57-5	4-7	1-6	10-7	3-7	16-7	5-7	47	5 26-8	5 27-6	5 11-9	4-7	1-7	10-7	3-8	16-7	6-0
48	5 12-0	5 12-9	4 57-8	4-8	1-6	10-8	3-7	16-8	5-7	48	5 27-0	5 27-9	5 12-1	4-8	1-7	10-8	3-9	16-8	6-0
49	5 12-3	5 13-1	4 58-0	4-9	1-7	10-9	3-7	16-9	5-8	49	5 27-3	5 28-1	5 12-3	4-9	1-8	10-9	3-9	16-9	6-1
50	5 12-5	5 13-4	4 58-3	5-0	1-7	11-0	3-8	17-0	5-8	50	5 27-5	5 28-4	5 12-6	5-0	1-8	11-0	3-9	17-0	6-1
51	5 12-8	5 13-6	4 58-5	5-1	1-7	11-1	3-8	17-1	5-8	51	5 27-8	5 28-6	5 12-8	5-1	1-8	11-1	4-0	17-1	6-1
52	5 13-0	5 13-9	4 58-7	5-2	1-8	11-2	3-8	17-2	5-9	52	5 28-0	5 28-9	5 13-1	5-2	1-9	11-2	4-0	17-2	6-2
53	5 13-3	5 14-1	4 59-0	5-3	1-8	11-3	3-9	17-3	5-9	53	5 28-3	5 29-1	5 13-3	5-3	1-9	11-3	4-0	17-3	6-2
54	5 13-5	5 14-4	4 59-2	5-4	1-8	11-4	3-9	17-4	5-9	54	5 28-5	5 29-4	5 13-5	5-4	1-9	11-4	4-1	17-4	6-2
55	5 13-8	5 14-6	4 59-5	5-5	1-9	11-5	3-9	17-5	6-0	55	5 28-8	5 29-7	5 13-8	5-5	2-0	11-5	4-1	17-5	6-3
56	5 14-0	5 14-9	4 59-7	5-6	1-9	11-6	4-0	17-6	6-0	56	5 29-0	5 29-9	5 14-0	5-6	2-0	11-6	4-2	17-6	6-3
57	5 14-3	5 15-1	4 59-9	5-7	1-9	11-7	4-0	17-7	6-0	57	5 29-3	5 30-2	5 14-3	5-7	2-0	11-7	4-2	17-7	6-3
58	5 14-5	5 15-4	5 00-2	5-8	2-0	11-8	4-0	17-8	6-1	58	5 29-5	5 30-4	5 14-5	5-8	2-1	11-8	4-2	17-8	6-4
59	5 14-8	5 15-6	5 00-4	5-9	2-0	11-9	4-1	17-9	6-1	59	5 29-8	5 30-7	5 14-7	5-9	2-1	11-9	4-3	17-9	6-4
60	5 15-0	5 15-9	5 00-7	6-0	2-1	12-0	4-1	18-0	6-2	60	5 30-0	5 30-9	5 15-0	6-0	2-2	12-0	4-3	18-0	6-5

22 ^m	SOL		ARIES	LUNA	v		v		v		
	PLANETAS				o	d	o	d	o	d	o	d
00	5 30-0	5 30-9	5 15-0	0-0	0-0	6-0	2-3	12-0	4-5		
01	5 30-3	5 31-2	5 15-2	0-1	0-0	6-1	2-3	12-1	4-5		
02	5 30-5	5 31-4	5 15-4	0-2	0-1	6-2	2-3	12-2	4-6		
03	5 30-8	5 31-7	5 15-7	0-3	0-1	6-3	2-4	12-3	4-6		
04	5 31-0	5 31-9	5 15-9	0-4	0-2	6-4	2-4	12-4	4-7		
05	5 31-3	5 32-2	5 16-2	0-5	0-2	6-5	2-4	12-5	4-7		
06	5 31-5	5 32-4	5 16-4	0-6	0-2	6-6	2-5	12-6	4-7		
07	5 31-8	5 32-7	5 16-6	0-7	0-3	6-7	2-5	12-7	4-8		
08	5 32-0	5 32-9	5 16-9	0-8	0-3	6-8	2-6	12-8	4-8		
09	5 32-3	5 33-2	5 17-1	0-9	0-3	6-9	2-6	12-9	4-8		
10	5 32-5	5 33-4	5 17-4	1-0	0-4	7-0	2-6	13-0	4-9		
11	5 32-8	5 33-7	5 17-6	1-1	0-4	7-1	2-7	13-1	4-9		
12	5 33-0	5 33-9	5 17-8	1-2	0-5	7-2	2-7	13-2	5-0		
13	5 33-3	5 34-2	5 18-1	1-3	0-5	7-3	2-7	13-3	5-0		
14	5 33-5	5 34-4	5 18-3	1-4	0-5	7-4	2-8	13-4	5-0		
15	5 33-8	5 34-7	5 18-5	1-5	0-6	7-5	2-8	13-5	5-1		
16	5 34-0	5 34-9	5 18-8	1-6	0-6	7-6	2-9	13-6	5-1		
17	5 34-3	5 35-2	5 19-0	1-7	0-6	7-7	2-9	13-7	5-1		
18	5 34-5	5 35-4	5 19-3	1-8	0-7	7-8	2-9	13-8	5-2		
19	5 34-8	5 35-7	5 19-5	1-9	0-7	7-9	3-0	13-9	5-2		
20	5 35-0	5 35-9	5 19-7	2-0	0-8	8-0	3-0	14-0	5-3		
21	5 35-3	5 36-2	5 20-0	2-1	0-8	8-1	3-0	14-1	5-3		
22	5 35-5	5 36-4	5 20-2	2-2	0-8	8-2	3-1	14-2	5-3		
23	5 35-8	5 36-7	5 20-5	2-3	0-9	8-3	3-1	14-3	5-4		
24	5 36-0	5 36-9	5 20-7	2-4	0-9	8-4	3-2	14-4	5-4		
25	5 36-3	5 37-2	5 20-9	2-5	0-9	8-5	3-2	14-5	5-4		
26	5 36-5	5 37-4	5 21-2	2-6	1-0	8-6	3-2	14-6	5-5		
27	5 36-8	5 37-7	5 21-4	2-7	1-0	8-7	3-3	14-7	5-5		
28	5 37-0	5 37-9	5 21-6	2-8	1-1	8-8	3-3	14-8	5-6		
29	5 37-3	5 38-2	5 21-9	2-9	1-1	8-9	3-3	14-9	5-6		
30	5 37-5	5 38-4	5 22-1	3-0	1-1	9-0	3-4	15-0	5-6		
31	5 37-8	5 38-7	5 22-4	3-1	1-2	9-1	3-4	15-1	5-7		
32	5 38-0	5 38-9	5 22-6	3-2	1-2	9-2	3-5	15-2	5-7		
33	5 38-3	5 39-2	5 22-8	3-3	1-2	9-3	3-5	15-3	5-7		
34	5 38-5	5 39-4	5 23-1	3-4	1-3	9-4	3-5	15-4	5-8		
35	5 38-8	5 39-7	5 23-3	3-5	1-3	9-5	3-6	15-5	5-8		
36	5 39-0	5 39-9	5 23-6	3-6	1-4	9-6	3-6	15-6	5-9		
37	5 39-3	5 40-2	5 23-8	3-7	1-4	9-7	3-6	15-7	5-9		
38	5 39-5	5 40-4	5 24-0	3-8	1-4	9-8	3-7	15-8	5-9		
39	5 39-8	5 40-7	5 24-3	3-9	1-5	9-9	3-7	15-9	6-0		
40	5 40-0	5 40-9	5 24-5	4-0	1-5	10-0	3-8	16-0	6-0		
41	5 40-3	5 41-2	5 24-7	4-1	1-5	10-1	3-8	16-1	6-0		
42	5 40-5	5 41-4	5 25-0	4-2	1-6	10-2	3-8	16-2	6-1		
43	5 40-8	5 41-7	5 25-2	4-3	1-6	10-3	3-9	16-3	6-1		
44	5 41-0	5 41-9	5 25-5	4-4	1-7	10-4	3-9	16-4	6-2		
45	5 41-3	5 42-2	5 25-7	4-5	1-7	10-5	3-9	16-5	6-2		
46	5 41-5	5 42-4	5 25-9	4-6	1-7	10-6	4-0	16-6	6-2		
47	5 41-8	5 42-7	5 26-2	4-7	1-8	10-7	4-0	16-7	6-3		
48	5 42-0	5 42-9	5 26-4	4-8	1-8	10-8	4-1	16-8	6-3		
49	5 42-3	5 43-2	5 26-7	4-9	1-8	10-9	4-1	16-9	6-3		
50	5 42-5	5 43-4	5 26-9	5-0	1-9	11-0	4-1	17-0	6-4		
51	5 42-8	5 43-7	5 27-1	5-1	1-9	11-1	4-2	17-1	6-4		
52	5 43-0	5 43-9	5 27-4	5-2	2-0	11-2	4-2	17-2	6-5		
53	5 43-3	5 44-2	5 27-6	5-3	2-0	11-3	4-2	17-3	6-5		
54	5 43-5	5 44-4	5 27-9	5-4	2-0	11-4	4-3	17-4	6-5		
55	5 43-8	5 44-7	5 28-1	5-5	2-1	11-5	4-3	17-5	6-6		
56	5 44-0	5 44-9	5 28-3	5-6	2-1	11-6	4-4	17-6	6-6		
57	5 44-3	5 45-2	5 28-6	5-7	2-1	11-7	4-4	17-7	6-6		
58	5 44-5	5 45-4	5 28-8	5-8	2-2	11-8	4-4	17-8	6-7		
59	5 44-8	5 45-7	5 29-0	5-9	2-2	11-9	4-5	17-9	6-7		
60	5 45-0	5 45-9	5 29-3	6-0	2-3	12-0	4-5	18-0	6-8		

23 ^m	SOL		ARIES	LUNA	v		v		v		
	PLANETAS				o	d	o	d	o	d	o	d
00	5 45-0	5 45-9	5 29-3	0-0	0-0	6-0	2-4	12-0	4-7		
01	5 45-3	5 46-2	5 29-5	0-1	0-0	6-1	2-4	12-1	4-7		
02	5 45-5	5 46-4	5 29-8	0-2	0-1	6-2	2-4	12-2	4-8		
03	5 45-8	5 46-7	5 30-0	0-3	0-1	6-3	2-5	12-3	4-8		
04	5 46-0	5 46-9	5 30-2	0-4	0-2	6-4	2-5	12-4	4-9		
05	5 46-3	5 47-2	5 30-5	0-5	0-2	6-5	2-5	12-5	4-9		
06	5 46-5	5 47-4	5 30-7	0-6	0-2	6-6	2-6	12-6	4-9		
07	5 46-8	5 47-7	5 31-0	0-7	0-3	6-7	2-6	12-7	5-0		
08	5 47-0	5 48-0	5 31-2	0-8	0-3	6-8	2-7	12-8	5-0		
09	5 47-3	5 48-2	5 31-4	0-9	0-4	6-9	2-7	12-9	5-1		
10	5 47-5	5 48-5	5 31-7	1-0	0-4	7-0	2-7	13-0	5-1		
11	5 47-8	5 48-7	5 31-9	1-1	0-4	7-1	2-8	13-1	5-1		
12	5 48-0	5 49-0	5 32-1	1-2	0-5	7-2	2-8	13-2	5-2		
13	5 48-3	5 49-2	5 32-4	1-3	0-5	7-3	2-9	13-3	5-2		
14	5 48-5	5 49-5	5 32-6	1-4	0-5	7-4	2-9	13-4	5-2		
15	5 48-8	5 49-7	5 32-9	1-5	0-6	7-5	2-9	13-5	5-3		
16	5 49-0	5 50-0	5 33-1	1-6	0-6	7-6	3-0	13-6	5-3		
17	5 49-3	5 50-2	5 33-3	1-7	0-7	7-7	3-0	13-7	5-4		
18	5 49-5	5 50-5	5 33-6	1-8	0-7	7-8	3-1	13-8	5-4		
19	5 49-8	5 50-7	5 33-8	1-9	0-7	7-9	3-1	13-9	5-4		
20	5 50-0	5 51-0	5 34-1	2-0	0-8	8-0	3-1	14-0	5-5		
21	5 50-3	5 51-2	5 34-3	2-1	0-8	8-1	3-2	14-1	5-5		
22	5 50-5	5 51-5	5 34-5	2-2	0-9	8-2	3-2	14-2	5-6		
23	5 50-8	5 51-7	5 34-8	2-3	0-9	8-3	3-3	14-3	5-6		
24	5 51-0	5 52-0	5 35-0	2-4	0-9	8-4	3-3	14-4	5-6		
25	5 51-3	5 52-2	5 35-2	2-5	1-0	8-5	3-3	14-5	5-7		
26	5 51-5	5 52-5	5 35-5	2-6	1-0	8-6	3-4	14-6	5-7		
27	5 51-8	5 52-7	5 35-7	2-7	1-1	8-7	3-4	14-7	5-8		
28	5 52-0	5 53-0	5 36-0	2-8	1-1	8-8	3-4	14-8	5-8		
29	5 52-3	5 53-2	5 36-2	2-9	1-1	8-9	3-5	14-9	5-8		
30	5 52-5	5 53-5	5 36-4	3-0	1-2	9-0	3-5	15-0	5-9		
31	5 52-8	5 53-7	5 36-7	3-1	1-2	9-1	3-6	15-1	5-9		
32	5 53-0	5 54-0	5 36-9	3-2	1-3	9-2	3-6	15-2	6-0		
33	5 53-3	5 54-2	5 37-2	3-3	1-3	9-3	3-6	15-3	6-0		
34	5 53-5	5 54-5	5 37-4	3-4	1-3	9-4	3-7	15-4	6-0		
35	5 53-8	5 54-7	5 37-6	3-5	1-4	9-5	3-7	15-5	6-1		
36	5 54-0	5 55-0	5 37-9	3-6	1-4	9-6	3-8	15-6	6-1		
37	5 54-3	5 55-2	5 38-1	3-7	1-4	9-7	3-8	15-7	6-1		
38	5 54-5	5 55-5	5 38-4	3-8	1-5	9-8	3-8	15-8	6-2		
39	5 54-8	5 55-7	5 38-6	3-9	1-5	9-9	3-9	15-9	6-2		
40	5 55-0	5 56-0	5 38-8	4-0	1-6	10-0	3-9	16-0	6-3		
41	5 55-3	5 56-2	5 39-1	4-1	1-6	10-1	4-0	16-1	6-3		
42	5 55-5	5 56-5	5 39-3	4-2	1-6	10-2	4-0	16-2	6-3		
43	5 55-8	5 56-7	5 39-5	4-3	1-7	10-3	4-0	16-3	6-4		
44	5 56-0	5 57-0	5 39-8	4-4	1-7	10-4	4-1	16-4	6-4		
45	5 56-3	5 57-2	5 40-0	4-5	1-8	10-5	4-1	16-5	6-5		
46	5 56-5	5 57-5	5 40-3	4-6	1-8	10-6	4-2	16-6	6-5		
47	5 56-8	5 57-7	5 40-5	4-7	1-8	10-7	4-2	16-7	6-5		
48	5 57-0	5 58-0	5 40-7	4-8	1-9	10-8	4-2	16-8	6-6		
49	5 57-3	5 58-2	5 41-0	4-9	1-9	10-9	4-3	16-9	6-6		
50	5 57-5	5 58-5	5 41-2	5-0	2-0	11-0	4-3	17-0	6-7		
51	5 57-8	5 58-7	5 41-5	5-1	2-0	11-1	4-3	17-1	6-7		
52	5 58-0	5 59-0	5 41-7	5-2	2-0	11-2	4-4	17-2	6-7		
53	5 58-3	5 59-2	5 41-9	5-3	2-1	11-3	4-4	17-3	6-8		
54	5 58-5	5 59-5	5 42-2	5-4	2-1	11-4	4				

24 ^m		SOL	ARIES	LUNA	v	Corr ⁿ	v	Corr ⁿ	v	Corr ⁿ	25 ^m		SOL	ARIES	LUNA	v	Corr ⁿ	v	Corr ⁿ	v	Corr ⁿ	
s	o	PLANETAS	o	o	o	d	o	d	o	d	s	o	o	o	o	d	o	d	o	d	o	d
00	6 00-0		6 01-0	5 43-6	0-0	0-0	6-0	2-5	12-0	4-9	00	6 15-0	6 16-0	5 57-9	0-0	0-0	6-0	2-6	12-0	5-1		
01	6 00-3		6 01-2	5 43-8	0-1	0-0	6-1	2-5	12-1	4-9	01	6 15-3	6 16-3	5 58-2	0-1	0-0	6-1	2-6	12-1	5-1		
02	6 00-5		6 01-5	5 44-1	0-2	0-1	6-2	2-5	12-2	5-0	02	6 15-5	6 16-5	5 58-4	0-2	0-1	6-2	2-6	12-2	5-2		
03	6 00-8		6 01-7	5 44-3	0-3	0-1	6-3	2-6	12-3	5-0	03	6 15-8	6 16-8	5 58-6	0-3	0-1	6-3	2-7	12-3	5-2		
04	6 01-0		6 02-0	5 44-6	0-4	0-2	6-4	2-6	12-4	5-1	04	6 16-0	6 17-0	5 58-9	0-4	0-2	6-4	2-7	12-4	5-3		
05	6 01-3		6 02-2	5 44-8	0-5	0-2	6-5	2-7	12-5	5-1	05	6 16-3	6 17-3	5 59-1	0-5	0-2	6-5	2-8	12-5	5-3		
06	6 01-5		6 02-5	5 45-0	0-6	0-2	6-6	2-7	12-6	5-1	06	6 16-5	6 17-5	5 59-3	0-6	0-3	6-6	2-8	12-6	5-4		
07	6 01-8		6 02-7	5 45-3	0-7	0-3	6-7	2-7	12-7	5-2	07	6 16-8	6 17-8	5 59-6	0-7	0-3	6-7	2-8	12-7	5-4		
08	6 02-0		6 03-0	5 45-5	0-8	0-3	6-8	2-8	12-8	5-2	08	6 17-0	6 18-0	5 59-8	0-8	0-3	6-8	2-9	12-8	5-4		
09	6 02-3		6 03-2	5 45-7	0-9	0-4	6-9	2-8	12-9	5-3	09	6 17-3	6 18-3	6 00-1	0-9	0-4	6-9	2-9	12-9	5-5		
10	6 02-5		6 03-5	5 46-0	1-0	0-4	7-0	2-9	13-0	5-3	10	6 17-5	6 18-5	6 00-3	1-0	0-4	7-0	3-0	13-0	5-5		
11	6 02-8		6 03-7	5 46-2	1-1	0-4	7-1	2-9	13-1	5-3	11	6 17-8	6 18-8	6 00-5	1-1	0-5	7-1	3-0	13-1	5-6		
12	6 03-0		6 04-0	5 46-5	1-2	0-5	7-2	2-9	13-2	5-4	12	6 18-0	6 19-0	6 00-8	1-2	0-5	7-2	3-1	13-2	5-6		
13	6 03-3		6 04-2	5 46-7	1-3	0-5	7-3	3-0	13-3	5-4	13	6 18-3	6 19-3	6 01-0	1-3	0-6	7-3	3-1	13-3	5-7		
14	6 03-5		6 04-5	5 46-9	1-4	0-6	7-4	3-0	13-4	5-5	14	6 18-5	6 19-5	6 01-3	1-4	0-6	7-4	3-1	13-4	5-7		
15	6 03-8		6 04-7	5 47-2	1-5	0-6	7-5	3-1	13-5	5-5	15	6 18-8	6 19-8	6 01-5	1-5	0-6	7-5	3-2	13-5	5-7		
16	6 04-0		6 05-0	5 47-4	1-6	0-7	7-6	3-1	13-6	5-6	16	6 19-0	6 20-0	6 01-7	1-6	0-7	7-6	3-2	13-6	5-8		
17	6 04-3		6 05-2	5 47-7	1-7	0-7	7-7	3-1	13-7	5-6	17	6 19-3	6 20-3	6 02-0	1-7	0-7	7-7	3-3	13-7	5-8		
18	6 04-5		6 05-5	5 47-9	1-8	0-7	7-8	3-2	13-8	5-6	18	6 19-5	6 20-5	6 02-2	1-8	0-8	7-8	3-3	13-8	5-9		
19	6 04-8		6 05-7	5 48-1	1-9	0-8	7-9	3-2	13-9	5-7	19	6 19-8	6 20-8	6 02-5	1-9	0-8	7-9	3-4	13-9	5-9		
20	6 05-0		6 06-0	5 48-4	2-0	0-8	8-0	3-3	14-0	5-7	20	6 20-0	6 21-0	6 02-7	2-0	0-9	8-0	3-4	14-0	6-0		
21	6 05-3		6 06-3	5 48-6	2-1	0-9	8-1	3-3	14-1	5-8	21	6 20-3	6 21-3	6 02-9	2-1	0-9	8-1	3-4	14-1	6-0		
22	6 05-5		6 06-5	5 48-8	2-2	0-9	8-2	3-3	14-2	5-8	22	6 20-5	6 21-5	6 03-2	2-2	0-9	8-2	3-5	14-2	6-0		
23	6 05-8		6 06-8	5 49-1	2-3	0-9	8-3	3-4	14-3	5-8	23	6 20-8	6 21-8	6 03-4	2-3	1-0	8-3	3-5	14-3	6-1		
24	6 06-0		6 07-0	5 49-3	2-4	1-0	8-4	3-4	14-4	5-9	24	6 21-0	6 22-0	6 03-6	2-4	1-0	8-4	3-6	14-4	6-1		
25	6 06-3		6 07-3	5 49-6	2-5	1-0	8-5	3-5	14-5	5-9	25	6 21-3	6 22-3	6 03-9	2-5	1-1	8-5	3-6	14-5	6-2		
26	6 06-5		6 07-5	5 49-8	2-6	1-1	8-6	3-5	14-6	6-0	26	6 21-5	6 22-5	6 04-1	2-6	1-1	8-6	3-7	14-6	6-2		
27	6 06-8		6 07-8	5 50-0	2-7	1-1	8-7	3-6	14-7	6-0	27	6 21-8	6 22-8	6 04-4	2-7	1-1	8-7	3-7	14-7	6-2		
28	6 07-0		6 08-0	5 50-3	2-8	1-1	8-8	3-6	14-8	6-0	28	6 22-0	6 23-0	6 04-6	2-8	1-2	8-8	3-7	14-8	6-3		
29	6 07-3		6 08-3	5 50-5	2-9	1-2	8-9	3-6	14-9	6-1	29	6 22-3	6 23-3	6 04-8	2-9	1-2	8-9	3-8	14-9	6-3		
30	6 07-5		6 08-5	5 50-8	3-0	1-2	9-0	3-7	15-0	6-1	30	6 22-5	6 23-5	6 05-1	3-0	1-3	9-0	3-8	15-0	6-4		
31	6 07-8		6 08-8	5 51-0	3-1	1-3	9-1	3-7	15-1	6-2	31	6 22-8	6 23-8	6 05-3	3-1	1-3	9-1	3-9	15-1	6-4		
32	6 08-0		6 09-0	5 51-2	3-2	1-3	9-2	3-8	15-2	6-2	32	6 23-0	6 24-0	6 05-6	3-2	1-4	9-2	3-9	15-2	6-5		
33	6 08-3		6 09-3	5 51-5	3-3	1-3	9-3	3-8	15-3	6-2	33	6 23-3	6 24-3	6 05-8	3-3	1-4	9-3	4-0	15-3	6-5		
34	6 08-5		6 09-5	5 51-7	3-4	1-4	9-4	3-8	15-4	6-3	34	6 23-5	6 24-5	6 06-0	3-4	1-4	9-4	4-0	15-4	6-5		
35	6 08-8		6 09-8	5 52-0	3-5	1-4	9-5	3-9	15-5	6-3	35	6 23-8	6 24-8	6 06-3	3-5	1-5	9-5	4-0	15-5	6-6		
36	6 09-0		6 10-0	5 52-2	3-6	1-5	9-6	3-9	15-6	6-4	36	6 24-0	6 25-1	6 06-5	3-6	1-5	9-6	4-1	15-6	6-6		
37	6 09-3		6 10-3	5 52-4	3-7	1-5	9-7	4-0	15-7	6-4	37	6 24-3	6 25-3	6 06-7	3-7	1-6	9-7	4-1	15-7	6-7		
38	6 09-5		6 10-5	5 52-7	3-8	1-6	9-8	4-0	15-8	6-5	38	6 24-5	6 25-6	6 07-0	3-8	1-6	9-8	4-2	15-8	6-7		
39	6 09-8		6 10-8	5 52-9	3-9	1-6	9-9	4-0	15-9	6-5	39	6 24-8	6 25-8	6 07-2	3-9	1-7	9-9	4-2	15-9	6-8		
40	6 10-0		6 11-0	5 53-1	4-0	1-6	10-0	4-1	16-0	6-5	40	6 25-0	6 26-1	6 07-5	4-0	1-7	10-0	4-3	16-0	6-8		
41	6 10-3		6 11-3	5 53-4	4-1	1-7	10-1	4-1	16-1	6-6	41	6 25-3	6 26-3	6 07-7	4-1	1-7	10-1	4-3	16-1	6-8		
42	6 10-5		6 11-5	5 53-6	4-2	1-7	10-2	4-2	16-2	6-6	42	6 25-5	6 26-6	6 07-9	4-2	1-8	10-2	4-3	16-2	6-9		
43	6 10-8		6 11-8	5 53-9	4-3	1-8	10-3	4-2	16-3	6-7	43	6 25-8	6 26-8	6 08-2	4-3	1-8	10-3	4-4	16-3	6-9		
44	6 11-0		6 12-0	5 54-1	4-4	1-8	10-4	4-2	16-4	6-7	44	6 26-0	6 27-1	6 08-4	4-4	1-9	10-4	4-4	16-4	7-0		
45	6 11-3		6 12-3	5 54-3	4-5	1-8	10-5	4-3	16-5	6-7	45	6 26-3	6 27-3	6 08-7	4-5	1-9	10-5	4-5	16-5	7-0		
46	6 11-5		6 12-5	5 54-6	4-6	1-9	10-6	4-3	16-6	6-8	46	6 26-5	6 27-6	6 08-9	4-6	2-0	10-6	4-5	16-6	7-1		
47	6 11-8		6 12-8	5 54-8	4-7	1-9	10-7	4-4	16-7	6-8	47	6 26-8	6 27-8	6 09-1	4-7	2-0	10-7	4-5	16-7	7-1		
48	6 12-0		6 13-0	5 55-1	4-8	2-0	10-8	4-4	16-8	6-9	48	6 27-0	6 28-1	6 09-4	4-8	2-0	10-8	4-6	16-8	7-1		
49	6 12-3		6 13-3	5 55-3	4-9	2-0	10-9	4-5	16-9	6-9	49	6 27-3	6 28-3	6 09-6	4-9	2-1	10-9	4-6	16-9	7-2		
50	6 12-5		6 13-5	5 55-5	5-0	2-0	11-0	4-5	17-0	6-9	50	6 27-5	6 28-6	6 09-8	5-0	2-1	11-0	4-7	17-0	7-2		
51	6 12-8		6 13-8	5 55-8	5-1	2-1	11-1	4-5	17-1	7-0	51	6 27-8	6 28-8	6 10-1	5-1	2-2	11-1	4-7	17-1	7-3		
52	6 13-0		6 14-0	5 56-0	5-2	2-1	11-2	4-6	17-2	7-0	52	6 28-0	6 29-1	6 10-3	5-2	2-2	11-2	4-8	17-2	7-3		
53	6 13-3		6 14-3	5 56-2	5-3	2-2	11-3	4-6	17-3	7-1	53	6 28-3	6 29-3	6 10-6	5-3	2-3	11-3	4-8	17-3	7-4		
54	6 13-5		6 14-5	5 56-5	5-4	2-2	11-4	4-7	17-4	7-1	54	6 28-5	6 29-6	6 10-8	5-4	2-3	11-4	4-8	17-4	7-4		
55	6 13-8		6 14-8	5 56-7	5-5	2-2	11-5	4-7	17-5	7-1	55	6 28-8	6 29-8	6 11-0	5-5	2-3	11-5	4-9	17-5	7-4		
56	6 14-0		6 15-0	5 57-0	5-6	2-3	11-6	4-7	17-6	7-2	56	6 29-0	6 30-1	6 11-3	5-6	2-4	11-6	4-9	17-6	7-5		
57	6 14-3		6 15-3	5 57-2	5-7	2-3	11-7	4-8	17-7	7-2	57	6 29-3	6 30-3	6 11-5	5-7	2-4	11-7	5-0	17-7	7-5		
58	6 14-5		6 15-5	5 57-4	5-8	2-4	11-8	4-8	17-8	7-3	58	6 29-5	6 30-6	6 11-8	5-8	2-5	11-8	5-0	17-8	7-6		
59	6 14-8		6 15-8	5 57-7	5-9	2-4	11-9	4-9	17-9	7-3	59	6 29-8	6 30-8	6 12-0	5-9	2-5	11-9	5-1	17-9	7-6		
60	6 15-0		6 16-0	5 57-9	6-0	2-5	12-0	4-9	18-0	7-4	60											

26 ^m	SOL PLANETAS	ARIES	LUNA	ψ o d Corr ⁿ	ψ o d Corr ⁿ	ψ o d Corr ⁿ
00	6 30-0	6 31-1	6 12-2	0-0 0-0	6-0 2-7	12-0 5-3
01	6 30-3	6 31-3	6 12-5	0-1 0-0	6-1 2-7	12-1 5-3
02	6 30-5	6 31-6	6 12-7	0-2 0-1	6-2 2-7	12-2 5-4
03	6 30-8	6 31-8	6 12-9	0-3 0-1	6-3 2-8	12-3 5-4
04	6 31-0	6 32-1	6 13-2	0-4 0-2	6-4 2-8	12-4 5-5
05	6 31-3	6 32-3	6 13-4	0-5 0-2	6-5 2-9	12-5 5-5
06	6 31-5	6 32-6	6 13-7	0-6 0-3	6-6 2-9	12-6 5-6
07	6 31-8	6 32-8	6 13-9	0-7 0-3	6-7 3-0	12-7 5-6
08	6 32-0	6 33-1	6 14-1	0-8 0-4	6-8 3-0	12-8 5-7
09	6 32-3	6 33-3	6 14-4	0-9 0-4	6-9 3-0	12-9 5-7
10	6 32-5	6 33-6	6 14-6	1-0 0-4	7-0 3-1	13-0 5-7
11	6 32-8	6 33-8	6 14-9	1-1 0-5	7-1 3-1	13-1 5-8
12	6 33-0	6 34-1	6 15-1	1-2 0-5	7-2 3-2	13-2 5-8
13	6 33-3	6 34-3	6 15-3	1-3 0-6	7-3 3-2	13-3 5-9
14	6 33-5	6 34-6	6 15-6	1-4 0-6	7-4 3-3	13-4 5-9
15	6 33-8	6 34-8	6 15-8	1-5 0-7	7-5 3-3	13-5 6-0
16	6 34-0	6 35-1	6 16-1	1-6 0-7	7-6 3-4	13-6 6-0
17	6 34-3	6 35-3	6 16-3	1-7 0-8	7-7 3-4	13-7 6-1
18	6 34-5	6 35-6	6 16-5	1-8 0-8	7-8 3-4	13-8 6-1
19	6 34-8	6 35-8	6 16-8	1-9 0-8	7-9 3-5	13-9 6-1
20	6 35-0	6 36-1	6 17-0	2-0 0-9	8-0 3-5	14-0 6-2
21	6 35-3	6 36-3	6 17-2	2-1 0-9	8-1 3-6	14-1 6-2
22	6 35-5	6 36-6	6 17-5	2-2 1-0	8-2 3-6	14-2 6-3
23	6 35-8	6 36-8	6 17-7	2-3 1-0	8-3 3-7	14-3 6-3
24	6 36-0	6 37-1	6 18-0	2-4 1-1	8-4 3-7	14-4 6-4
25	6 36-3	6 37-3	6 18-2	2-5 1-1	8-5 3-8	14-5 6-4
26	6 36-5	6 37-6	6 18-4	2-6 1-1	8-6 3-8	14-6 6-4
27	6 36-8	6 37-8	6 18-7	2-7 1-2	8-7 3-8	14-7 6-5
28	6 37-0	6 38-1	6 18-9	2-8 1-2	8-8 3-9	14-8 6-5
29	6 37-3	6 38-3	6 19-2	2-9 1-3	8-9 3-9	14-9 6-6
30	6 37-5	6 38-6	6 19-4	3-0 1-3	9-0 4-0	15-0 6-6
31	6 37-8	6 38-8	6 19-6	3-1 1-4	9-1 4-0	15-1 6-7
32	6 38-0	6 39-1	6 19-9	3-2 1-4	9-2 4-1	15-2 6-7
33	6 38-3	6 39-3	6 20-1	3-3 1-5	9-3 4-1	15-3 6-8
34	6 38-5	6 39-6	6 20-3	3-4 1-5	9-4 4-2	15-4 6-8
35	6 38-8	6 39-8	6 20-6	3-5 1-5	9-5 4-2	15-5 6-8
36	6 39-0	6 40-1	6 20-8	3-6 1-6	9-6 4-2	15-6 6-9
37	6 39-3	6 40-3	6 21-1	3-7 1-6	9-7 4-3	15-7 6-9
38	6 39-5	6 40-6	6 21-3	3-8 1-7	9-8 4-3	15-8 7-0
39	6 39-8	6 40-8	6 21-5	3-9 1-7	9-9 4-4	15-9 7-0
40	6 40-0	6 41-1	6 21-8	4-0 1-8	10-0 4-4	16-0 7-1
41	6 40-3	6 41-3	6 22-0	4-1 1-8	10-1 4-5	16-1 7-1
42	6 40-5	6 41-6	6 22-3	4-2 1-9	10-2 4-5	16-2 7-2
43	6 40-8	6 41-8	6 22-5	4-3 1-9	10-3 4-5	16-3 7-2
44	6 41-0	6 42-1	6 22-7	4-4 1-9	10-4 4-6	16-4 7-2
45	6 41-3	6 42-3	6 23-0	4-5 2-0	10-5 4-6	16-5 7-3
46	6 41-5	6 42-6	6 23-2	4-6 2-0	10-6 4-7	16-6 7-3
47	6 41-8	6 42-8	6 23-4	4-7 2-1	10-7 4-7	16-7 7-4
48	6 42-0	6 43-1	6 23-7	4-8 2-1	10-8 4-8	16-8 7-4
49	6 42-3	6 43-4	6 23-9	4-9 2-2	10-9 4-8	16-9 7-5
50	6 42-5	6 43-6	6 24-2	5-0 2-2	11-0 4-9	17-0 7-5
51	6 42-8	6 43-9	6 24-4	5-1 2-3	11-1 4-9	17-1 7-6
52	6 43-0	6 44-1	6 24-6	5-2 2-3	11-2 4-9	17-2 7-6
53	6 43-3	6 44-4	6 24-9	5-3 2-3	11-3 5-0	17-3 7-6
54	6 43-5	6 44-6	6 25-1	5-4 2-4	11-4 5-0	17-4 7-7
55	6 43-8	6 44-9	6 25-4	5-5 2-4	11-5 5-1	17-5 7-7
56	6 44-0	6 45-1	6 25-6	5-6 2-5	11-6 5-1	17-6 7-8
57	6 44-3	6 45-4	6 25-8	5-7 2-5	11-7 5-2	17-7 7-8
58	6 44-5	6 45-6	6 26-1	5-8 2-6	11-8 5-2	17-8 7-9
59	6 44-8	6 45-9	6 26-3	5-9 2-6	11-9 5-3	17-9 7-9
60	6 45-0	6 46-1	6 26-6	6-0 2-7	12-0 5-3	18-0 8-0

27 ^m	SOL PLANETAS	ARIES	LUNA	ψ o d Corr ⁿ	ψ o d Corr ⁿ	ψ o d Corr ⁿ
00	6 45-0	6 46-1	6 26-6	0-0 0-0	6-0 2-8	12-0 5-5
01	6 45-3	6 46-4	6 26-8	0-1 0-0	6-1 2-8	12-1 5-5
02	6 45-5	6 46-6	6 27-0	0-2 0-1	6-2 2-8	12-2 5-6
03	6 45-8	6 46-9	6 27-3	0-3 0-1	6-3 2-9	12-3 5-6
04	6 46-0	6 47-1	6 27-5	0-4 0-2	6-4 2-9	12-4 5-7
05	6 46-3	6 47-4	6 27-7	0-5 0-2	6-5 3-0	12-5 5-7
06	6 46-5	6 47-6	6 28-0	0-6 0-3	6-6 3-0	12-6 5-8
07	6 46-8	6 47-9	6 28-2	0-7 0-3	6-7 3-1	12-7 5-8
08	6 47-0	6 48-1	6 28-5	0-8 0-4	6-8 3-1	12-8 5-9
09	6 47-3	6 48-4	6 28-7	0-9 0-4	6-9 3-2	12-9 5-9
10	6 47-5	6 48-6	6 28-9	1-0 0-5	7-0 3-2	13-0 6-0
11	6 47-8	6 48-9	6 29-2	1-1 0-5	7-1 3-3	13-1 6-0
12	6 48-0	6 49-1	6 29-4	1-2 0-6	7-2 3-3	13-2 6-1
13	6 48-3	6 49-4	6 29-7	1-3 0-6	7-3 3-3	13-3 6-1
14	6 48-5	6 49-6	6 29-9	1-4 0-6	7-4 3-4	13-4 6-1
15	6 48-8	6 49-9	6 30-1	1-5 0-7	7-5 3-4	13-5 6-2
16	6 49-0	6 50-1	6 30-4	1-6 0-7	7-6 3-5	13-6 6-2
17	6 49-3	6 50-4	6 30-6	1-7 0-8	7-7 3-5	13-7 6-3
18	6 49-5	6 50-6	6 30-8	1-8 0-8	7-8 3-6	13-8 6-3
19	6 49-8	6 50-9	6 31-1	1-9 0-9	7-9 3-6	13-9 6-4
20	6 50-0	6 51-1	6 31-3	2-0 0-9	8-0 3-7	14-0 6-4
21	6 50-3	6 51-4	6 31-6	2-1 1-0	8-1 3-7	14-1 6-5
22	6 50-5	6 51-6	6 31-8	2-2 1-0	8-2 3-8	14-2 6-5
23	6 50-8	6 51-9	6 32-0	2-3 1-1	8-3 3-8	14-3 6-6
24	6 51-0	6 52-1	6 32-3	2-4 1-1	8-4 3-9	14-4 6-6
25	6 51-3	6 52-4	6 32-5	2-5 1-1	8-5 3-9	14-5 6-6
26	6 51-5	6 52-6	6 32-8	2-6 1-2	8-6 3-9	14-6 6-7
27	6 51-8	6 52-9	6 33-0	2-7 1-2	8-7 4-0	14-7 6-7
28	6 52-0	6 53-1	6 33-2	2-8 1-3	8-8 4-0	14-8 6-8
29	6 52-3	6 53-4	6 33-5	2-9 1-3	8-9 4-1	14-9 6-8
30	6 52-5	6 53-6	6 33-7	3-0 1-4	9-0 4-1	15-0 6-9
31	6 52-8	6 53-9	6 33-9	3-1 1-4	9-1 4-2	15-1 6-9
32	6 53-0	6 54-1	6 34-2	3-2 1-5	9-2 4-2	15-2 7-0
33	6 53-3	6 54-4	6 34-4	3-3 1-5	9-3 4-3	15-3 7-0
34	6 53-5	6 54-6	6 34-7	3-4 1-6	9-4 4-3	15-4 7-1
35	6 53-8	6 54-9	6 34-9	3-5 1-6	9-5 4-4	15-5 7-1
36	6 54-0	6 55-1	6 35-1	3-6 1-7	9-6 4-4	15-6 7-2
37	6 54-3	6 55-4	6 35-4	3-7 1-7	9-7 4-4	15-7 7-2
38	6 54-5	6 55-6	6 35-6	3-8 1-7	9-8 4-5	15-8 7-2
39	6 54-8	6 55-9	6 35-9	3-9 1-8	9-9 4-5	15-9 7-3
40	6 55-0	6 56-1	6 36-1	4-0 1-8	10-0 4-6	16-0 7-3
41	6 55-3	6 56-4	6 36-3	4-1 1-9	10-1 4-6	16-1 7-4
42	6 55-5	6 56-6	6 36-6	4-2 1-9	10-2 4-7	16-2 7-4
43	6 55-8	6 56-9	6 36-8	4-3 2-0	10-3 4-7	16-3 7-5
44	6 56-0	6 57-1	6 37-0	4-4 2-0	10-4 4-8	16-4 7-5
45	6 56-3	6 57-4	6 37-3	4-5 2-1	10-5 4-8	16-5 7-6
46	6 56-5	6 57-6	6 37-5	4-6 2-1	10-6 4-9	16-6 7-6
47	6 56-8	6 57-9	6 37-8	4-7 2-2	10-7 4-9	16-7 7-7
48	6 57-0	6 58-1	6 38-0	4-8 2-2	10-8 5-0	16-8 7-7
49	6 57-3	6 58-4	6 38-2	4-9 2-2	10-9 5-0	16-9 7-7
50	6 57-5	6 58-6	6 38-5	5-0 2-3	11-0 5-0	17-0 7-8
51	6 57-8	6 58-9	6 38-7	5-1 2-3	11-1 5-1	17-1 7-8
52	6 58-0	6 59-1	6 39-0	5-2 2-4	11-2 5-1	17-2 7-9
53	6 58-3	6 59-4	6 39-2	5-3 2-4	11-3 5-2	17-3 7-9
54	6 58-5	6 59-6	6 39-4	5-4 2-5	11-4 5-2	17-4 8-0
55	6 58-8	6 59-9	6 39-7	5-5 2-5	11-5 5-3	17-5 8-0
56	6 59-0	7 00-1	6 39-9	5-6 2-6	11-6 5-3	17-6 8-1
57	6 59-3	7 00-4	6 40-2	5-7 2-6	11-7 5-4	17-7 8-1
58	6 59-5	7 00-6	6 40-4	5-8 2-7	11-8 5-4	17-8 8-2
59	6 59-8	7 00-9	6 40-6	5-9 2-7	11-9 5-5	17-9 8-2
60	7 00-0	7 01-1	6 40-9	6-0 2-8	12-0 5-5	18-0 8-3

28 ^m				CORRECCIONES E INCREMENTOS				29 ^m						
SOL PLANETAS		ARIES	LUNA	v _d Corr ⁿ	v _d Corr ⁿ	v _d Corr ⁿ		SOL PLANETAS		ARIES	LUNA	v _d Corr ⁿ	v _d Corr ⁿ	v _d Corr ⁿ
s	o /	o /	o /	/ /	/ /	/ /	/ /	s	o /	o /	o /	/ /	/ /	/ /
00	7 00-0	7 01-1	6 40-9	0-0 0-0	6-0 2-9	12-0 5-7		00	7 15-0	7 16-2	6 55-2	0-0 0-0	6-0 3-0	12-0 5-9
01	7 00-3	7 01-4	6 41-1	0-1 0-0	6-1 2-9	12-1 5-7		01	7 15-3	7 16-4	6 55-4	0-1 0-0	6-1 3-0	12-1 5-9
02	7 00-5	7 01-7	6 41-3	0-2 0-1	6-2 2-9	12-2 5-8		02	7 15-5	7 16-7	6 55-7	0-2 0-1	6-2 3-0	12-2 6-0
03	7 00-8	7 01-9	6 41-6	0-3 0-1	6-3 3-0	12-3 5-8		03	7 15-8	7 16-9	6 55-9	0-3 0-1	6-3 3-1	12-3 6-0
04	7 01-0	7 02-2	6 41-8	0-4 0-2	6-4 3-0	12-4 5-9		04	7 16-0	7 17-2	6 56-1	0-4 0-2	6-4 3-1	12-4 6-1
05	7 01-3	7 02-4	6 42-1	0-5 0-2	6-5 3-1	12-5 5-9		05	7 16-3	7 17-4	6 56-4	0-5 0-2	6-5 3-2	12-5 6-1
06	7 01-5	7 02-7	6 42-3	0-6 0-3	6-6 3-1	12-6 6-0		06	7 16-5	7 17-7	6 56-6	0-6 0-3	6-6 3-2	12-6 6-2
07	7 01-8	7 02-9	6 42-5	0-7 0-3	6-7 3-2	12-7 6-0		07	7 16-8	7 17-9	6 56-9	0-7 0-3	6-7 3-3	12-7 6-2
08	7 02-0	7 03-2	6 42-8	0-8 0-4	6-8 3-2	12-8 6-1		08	7 17-0	7 18-2	6 57-1	0-8 0-4	6-8 3-3	12-8 6-3
09	7 02-3	7 03-4	6 43-0	0-9 0-4	6-9 3-3	12-9 6-1		09	7 17-3	7 18-4	6 57-3	0-9 0-4	6-9 3-4	12-9 6-3
10	7 02-5	7 03-7	6 43-3	1-0 0-5	7-0 3-3	13-0 6-2		10	7 17-5	7 18-7	6 57-6	1-0 0-5	7-0 3-4	13-0 6-4
11	7 02-8	7 03-9	6 43-5	1-1 0-5	7-1 3-4	13-1 6-2		11	7 17-8	7 18-9	6 57-8	1-1 0-5	7-1 3-5	13-1 6-4
12	7 03-0	7 04-2	6 43-7	1-2 0-6	7-2 3-4	13-2 6-3		12	7 18-0	7 19-2	6 58-0	1-2 0-6	7-2 3-5	13-2 6-5
13	7 03-3	7 04-4	6 44-0	1-3 0-6	7-3 3-5	13-3 6-3		13	7 18-3	7 19-4	6 58-3	1-3 0-6	7-3 3-6	13-3 6-5
14	7 03-5	7 04-7	6 44-2	1-4 0-7	7-4 3-5	13-4 6-4		14	7 18-5	7 19-7	6 58-5	1-4 0-7	7-4 3-6	13-4 6-6
15	7 03-8	7 04-9	6 44-4	1-5 0-7	7-5 3-6	13-5 6-4		15	7 18-8	7 20-0	6 58-8	1-5 0-7	7-5 3-7	13-5 6-6
16	7 04-0	7 05-2	6 44-7	1-6 0-8	7-6 3-6	13-6 6-5		16	7 19-0	7 20-2	6 59-0	1-6 0-8	7-6 3-7	13-6 6-7
17	7 04-3	7 05-4	6 44-9	1-7 0-8	7-7 3-7	13-7 6-5		17	7 19-3	7 20-5	6 59-2	1-7 0-8	7-7 3-8	13-7 6-7
18	7 04-5	7 05-7	6 45-2	1-8 0-9	7-8 3-7	13-8 6-6		18	7 19-5	7 20-7	6 59-5	1-8 0-9	7-8 3-8	13-8 6-8
19	7 04-8	7 05-9	6 45-4	1-9 0-9	7-9 3-8	13-9 6-6		19	7 19-8	7 21-0	6 59-7	1-9 0-9	7-9 3-9	13-9 6-8
20	7 05-0	7 06-2	6 45-6	2-0 1-0	8-0 3-8	14-0 6-7		20	7 20-0	7 21-2	7 00-0	2-0 1-0	8-0 3-9	14-0 6-9
21	7 05-3	7 06-4	6 45-9	2-1 1-0	8-1 3-8	14-1 6-7		21	7 20-3	7 21-5	7 00-2	2-1 1-0	8-1 4-0	14-1 6-9
22	7 05-5	7 06-7	6 46-1	2-2 1-0	8-2 3-9	14-2 6-7		22	7 20-5	7 21-7	7 00-4	2-2 1-1	8-2 4-0	14-2 7-0
23	7 05-8	7 06-9	6 46-4	2-3 1-1	8-3 3-9	14-3 6-8		23	7 20-8	7 22-0	7 00-7	2-3 1-1	8-3 4-1	14-3 7-0
24	7 06-0	7 07-2	6 46-6	2-4 1-1	8-4 4-0	14-4 6-8		24	7 21-0	7 22-2	7 00-9	2-4 1-2	8-4 4-1	14-4 7-1
25	7 06-3	7 07-4	6 46-8	2-5 1-2	8-5 4-0	14-5 6-9		25	7 21-3	7 22-5	7 01-1	2-5 1-2	8-5 4-2	14-5 7-1
26	7 06-5	7 07-7	6 47-1	2-6 1-2	8-6 4-1	14-6 6-9		26	7 21-5	7 22-7	7 01-4	2-6 1-3	8-6 4-2	14-6 7-2
27	7 06-8	7 07-9	6 47-3	2-7 1-3	8-7 4-1	14-7 7-0		27	7 21-8	7 23-0	7 01-6	2-7 1-3	8-7 4-3	14-7 7-2
28	7 07-0	7 08-2	6 47-5	2-8 1-3	8-8 4-2	14-8 7-0		28	7 22-0	7 23-2	7 01-9	2-8 1-4	8-8 4-3	14-8 7-3
29	7 07-3	7 08-4	6 47-8	2-9 1-4	8-9 4-2	14-9 7-1		29	7 22-3	7 23-5	7 02-1	2-9 1-4	8-9 4-4	14-9 7-3
30	7 07-5	7 08-7	6 48-0	3-0 1-4	9-0 4-3	15-0 7-1		30	7 22-5	7 23-7	7 02-3	3-0 1-5	9-0 4-4	15-0 7-4
31	7 07-8	7 08-9	6 48-3	3-1 1-5	9-1 4-3	15-1 7-2		31	7 22-8	7 24-0	7 02-6	3-1 1-5	9-1 4-5	15-1 7-4
32	7 08-0	7 09-2	6 48-5	3-2 1-5	9-2 4-4	15-2 7-2		32	7 23-0	7 24-2	7 02-8	3-2 1-6	9-2 4-5	15-2 7-5
33	7 08-3	7 09-4	6 48-7	3-3 1-6	9-3 4-4	15-3 7-3		33	7 23-3	7 24-5	7 03-1	3-3 1-6	9-3 4-6	15-3 7-5
34	7 08-5	7 09-7	6 49-0	3-4 1-6	9-4 4-5	15-4 7-3		34	7 23-5	7 24-7	7 03-3	3-4 1-7	9-4 4-6	15-4 7-6
35	7 08-8	7 09-9	6 49-2	3-5 1-7	9-5 4-5	15-5 7-4		35	7 23-8	7 25-0	7 03-5	3-5 1-7	9-5 4-7	15-5 7-6
36	7 09-0	7 10-2	6 49-5	3-6 1-7	9-6 4-6	15-6 7-4		36	7 24-0	7 25-2	7 03-8	3-6 1-8	9-6 4-7	15-6 7-7
37	7 09-3	7 10-4	6 49-7	3-7 1-8	9-7 4-6	15-7 7-5		37	7 24-3	7 25-5	7 04-0	3-7 1-8	9-7 4-8	15-7 7-7
38	7 09-5	7 10-7	6 49-9	3-8 1-8	9-8 4-7	15-8 7-5		38	7 24-5	7 25-7	7 04-3	3-8 1-9	9-8 4-8	15-8 7-8
39	7 09-8	7 10-9	6 50-2	3-9 1-9	9-9 4-7	15-9 7-6		39	7 24-8	7 26-0	7 04-5	3-9 1-9	9-9 4-9	15-9 7-8
40	7 10-0	7 11-2	6 50-4	4-0 1-9	10-0 4-8	16-0 7-6		40	7 25-0	7 26-2	7 04-7	4-0 2-0	10-0 4-9	16-0 7-9
41	7 10-3	7 11-4	6 50-6	4-1 1-9	10-1 4-8	16-1 7-6		41	7 25-3	7 26-5	7 05-0	4-1 2-0	10-1 5-0	16-1 7-9
42	7 10-5	7 11-7	6 50-9	4-2 2-0	10-2 4-8	16-2 7-7		42	7 25-5	7 26-7	7 05-2	4-2 2-1	10-2 5-0	16-2 8-0
43	7 10-8	7 11-9	6 51-1	4-3 2-0	10-3 4-9	16-3 7-7		43	7 25-8	7 27-0	7 05-4	4-3 2-1	10-3 5-1	16-3 8-0
44	7 11-0	7 12-2	6 51-4	4-4 2-1	10-4 4-9	16-4 7-8		44	7 26-0	7 27-2	7 05-7	4-4 2-2	10-4 5-1	16-4 8-1
45	7 11-3	7 12-4	6 51-6	4-5 2-1	10-5 5-0	16-5 7-8		45	7 26-3	7 27-5	7 05-9	4-5 2-2	10-5 5-2	16-5 8-1
46	7 11-5	7 12-7	6 51-8	4-6 2-2	10-6 5-0	16-6 7-9		46	7 26-5	7 27-7	7 06-2	4-6 2-3	10-6 5-2	16-6 8-2
47	7 11-8	7 12-9	6 52-1	4-7 2-2	10-7 5-1	16-7 7-9		47	7 26-8	7 28-0	7 06-4	4-7 2-3	10-7 5-3	16-7 8-2
48	7 12-0	7 13-2	6 52-3	4-8 2-3	10-8 5-1	16-8 8-0		48	7 27-0	7 28-2	7 06-6	4-8 2-4	10-8 5-3	16-8 8-3
49	7 12-3	7 13-4	6 52-6	4-9 2-3	10-9 5-2	16-9 8-0		49	7 27-3	7 28-5	7 06-9	4-9 2-4	10-9 5-4	16-9 8-3
50	7 12-5	7 13-7	6 52-8	5-0 2-4	11-0 5-2	17-0 8-1		50	7 27-5	7 28-7	7 07-1	5-0 2-5	11-0 5-4	17-0 8-4
51	7 12-8	7 13-9	6 53-0	5-1 2-4	11-1 5-3	17-1 8-1		51	7 27-8	7 29-0	7 07-4	5-1 2-5	11-1 5-5	17-1 8-4
52	7 13-0	7 14-2	6 53-3	5-2 2-5	11-2 5-3	17-2 8-2		52	7 28-0	7 29-2	7 07-6	5-2 2-6	11-2 5-5	17-2 8-5
53	7 13-3	7 14-4	6 53-5	5-3 2-5	11-3 5-4	17-3 8-2		53	7 28-3	7 29-5	7 07-8	5-3 2-6	11-3 5-6	17-3 8-5
54	7 13-5	7 14-7	6 53-8	5-4 2-6	11-4 5-4	17-4 8-3		54	7 28-5	7 29-7	7 08-1	5-4 2-7	11-4 5-6	17-4 8-6
55	7 13-8	7 14-9	6 54-0	5-5 2-6	11-5 5-5	17-5 8-3		55	7 28-8	7 30-0	7 08-3	5-5 2-7	11-5 5-7	17-5 8-6
56	7 14-0	7 15-2	6 54-2	5-6 2-7	11-6 5-5	17-6 8-4		56	7 29-0	7 30-2	7 08-5	5-6 2-8	11-6 5-7	17-6 8-7
57	7 14-3	7 15-4	6 54-5	5-7 2-7	11-7 5-6	17-7 8-4		57	7 29-3	7 30-5	7 08-8	5-7 2-8	11-7 5-8	17-7 8-7
58	7 14-5	7 15-7	6 54-7	5-8 2-8	11-8 5-6	17-8 8-5		58	7 29-5	7 30-7	7 09-0	5-8 2-9	11-8 5-8	17-8 8-8
59	7 14-8	7 15-9	6 54-9	5-9 2-8	11-9 5-7	17-9 8-5		59	7 29-8	7 31-0	7 09-3	5-9 2-9	11-9 5-9	17-9 8-8
60	7 15-0	7 16-2	6 55-2	6-0 2-9	12-0 5-7	18-0 8-6		60	7 30-0	7 31-2	7 09-5	6-0 3-0	12-0 5-9	18-0 8-9

30 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /			o /	o /	/ /	/ /	/ /	/ /
00	7 30-0	7 31-2	7 09-5	0-0	0-0	6-0	3-1	12-0	6-1	
01	7 30-3	7 31-5	7 09-7	0-1	0-1	6-1	3-1	12-1	6-2	
02	7 30-5	7 31-7	7 10-0	0-2	0-1	6-2	3-2	12-2	6-2	
03	7 30-8	7 32-0	7 10-2	0-3	0-2	6-3	3-2	12-3	6-3	
04	7 31-0	7 32-2	7 10-5	0-4	0-2	6-4	3-3	12-4	6-3	
05	7 31-3	7 32-5	7 10-7	0-5	0-3	6-5	3-3	12-5	6-4	
06	7 31-5	7 32-7	7 10-9	0-6	0-3	6-6	3-4	12-6	6-4	
07	7 31-8	7 33-0	7 11-2	0-7	0-4	6-7	3-4	12-7	6-5	
08	7 32-0	7 33-2	7 11-4	0-8	0-4	6-8	3-5	12-8	6-5	
09	7 32-3	7 33-5	7 11-6	0-9	0-5	6-9	3-5	12-9	6-6	
10	7 32-5	7 33-7	7 11-9	1-0	0-5	7-0	3-6	13-0	6-6	
11	7 32-8	7 34-0	7 12-1	1-1	0-6	7-1	3-6	13-1	6-7	
12	7 33-0	7 34-2	7 12-4	1-2	0-6	7-2	3-7	13-2	6-7	
13	7 33-3	7 34-5	7 12-6	1-3	0-7	7-3	3-7	13-3	6-8	
14	7 33-5	7 34-7	7 12-8	1-4	0-7	7-4	3-8	13-4	6-8	
15	7 33-8	7 35-0	7 13-1	1-5	0-8	7-5	3-8	13-5	6-9	
16	7 34-0	7 35-2	7 13-3	1-6	0-8	7-6	3-9	13-6	6-9	
17	7 34-3	7 35-5	7 13-6	1-7	0-9	7-7	3-9	13-7	7-0	
18	7 34-5	7 35-7	7 13-8	1-8	0-9	7-8	4-0	13-8	7-0	
19	7 34-8	7 36-0	7 14-0	1-9	1-0	7-9	4-0	13-9	7-1	
20	7 35-0	7 36-2	7 14-3	2-0	1-0	8-0	4-1	14-0	7-1	
21	7 35-3	7 36-5	7 14-5	2-1	1-1	8-1	4-1	14-1	7-2	
22	7 35-5	7 36-7	7 14-7	2-2	1-1	8-2	4-2	14-2	7-2	
23	7 35-8	7 37-0	7 15-0	2-3	1-2	8-3	4-2	14-3	7-3	
24	7 36-0	7 37-2	7 15-2	2-4	1-2	8-4	4-3	14-4	7-3	
25	7 36-3	7 37-5	7 15-5	2-5	1-3	8-5	4-3	14-5	7-4	
26	7 36-5	7 37-7	7 15-7	2-6	1-3	8-6	4-4	14-6	7-4	
27	7 36-8	7 38-0	7 15-9	2-7	1-4	8-7	4-4	14-7	7-5	
28	7 37-0	7 38-3	7 16-2	2-8	1-4	8-8	4-5	14-8	7-5	
29	7 37-3	7 38-5	7 16-4	2-9	1-5	8-9	4-5	14-9	7-6	
30	7 37-5	7 38-8	7 16-7	3-0	1-5	9-0	4-6	15-0	7-6	
31	7 37-8	7 39-0	7 16-9	3-1	1-6	9-1	4-6	15-1	7-7	
32	7 38-0	7 39-3	7 17-1	3-2	1-6	9-2	4-7	15-2	7-7	
33	7 38-3	7 39-5	7 17-4	3-3	1-7	9-3	4-7	15-3	7-8	
34	7 38-5	7 39-8	7 17-6	3-4	1-7	9-4	4-8	15-4	7-8	
35	7 38-8	7 40-0	7 17-9	3-5	1-8	9-5	4-8	15-5	7-9	
36	7 39-0	7 40-3	7 18-1	3-6	1-8	9-6	4-9	15-6	7-9	
37	7 39-3	7 40-5	7 18-3	3-7	1-9	9-7	4-9	15-7	8-0	
38	7 39-5	7 40-8	7 18-6	3-8	1-9	9-8	5-0	15-8	8-0	
39	7 39-8	7 41-0	7 18-8	3-9	2-0	9-9	5-0	15-9	8-1	
40	7 40-0	7 41-3	7 19-0	4-0	2-0	10-0	5-1	16-0	8-1	
41	7 40-3	7 41-5	7 19-3	4-1	2-1	10-1	5-1	16-1	8-2	
42	7 40-5	7 41-8	7 19-5	4-2	2-1	10-2	5-2	16-2	8-2	
43	7 40-8	7 42-0	7 19-8	4-3	2-2	10-3	5-2	16-3	8-3	
44	7 41-0	7 42-3	7 20-0	4-4	2-2	10-4	5-3	16-4	8-3	
45	7 41-3	7 42-5	7 20-2	4-5	2-3	10-5	5-3	16-5	8-4	
46	7 41-5	7 42-8	7 20-5	4-6	2-3	10-6	5-4	16-6	8-4	
47	7 41-8	7 43-0	7 20-7	4-7	2-4	10-7	5-4	16-7	8-5	
48	7 42-0	7 43-3	7 21-0	4-8	2-4	10-8	5-5	16-8	8-5	
49	7 42-3	7 43-5	7 21-2	4-9	2-5	10-9	5-5	16-9	8-6	
50	7 42-5	7 43-8	7 21-4	5-0	2-5	11-0	5-6	17-0	8-6	
51	7 42-8	7 44-0	7 21-7	5-1	2-6	11-1	5-6	17-1	8-7	
52	7 43-0	7 44-3	7 21-9	5-2	2-6	11-2	5-7	17-2	8-7	
53	7 43-3	7 44-5	7 22-1	5-3	2-7	11-3	5-7	17-3	8-8	
54	7 43-5	7 44-8	7 22-4	5-4	2-7	11-4	5-8	17-4	8-8	
55	7 43-8	7 45-0	7 22-6	5-5	2-8	11-5	5-8	17-5	8-9	
56	7 44-0	7 45-3	7 22-9	5-6	2-8	11-6	5-9	17-6	8-9	
57	7 44-3	7 45-5	7 23-1	5-7	2-9	11-7	5-9	17-7	9-0	
58	7 44-5	7 45-8	7 23-3	5-8	2-9	11-8	6-0	17-8	9-0	
59	7 44-8	7 46-0	7 23-6	5-9	3-0	11-9	6-0	17-9	9-1	
60	7 45-0	7 46-3	7 23-8	6-0	3-1	12-0	6-1	18-0	9-2	

31 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /			o /	c /	/ /	/ /	/ /	/ /
00	7 45-0	7 46-3	7 23-8	0-0	0-0	6-0	3-2	12-0	6-3	
01	7 45-3	7 46-5	7 24-1	0-1	0-1	6-1	3-2	12-1	6-4	
02	7 45-5	7 46-8	7 24-3	0-2	0-1	6-2	3-3	12-2	6-4	
03	7 45-8	7 47-0	7 24-5	0-3	0-2	6-3	3-3	12-3	6-5	
04	7 46-0	7 47-3	7 24-8	0-4	0-2	6-4	3-4	12-4	6-5	
05	7 46-3	7 47-5	7 25-0	0-5	0-3	6-5	3-4	12-5	6-6	
06	7 46-5	7 47-8	7 25-2	0-6	0-3	6-6	3-5	12-6	6-6	
07	7 46-8	7 48-0	7 25-5	0-7	0-4	6-7	3-5	12-7	6-7	
08	7 47-0	7 48-3	7 25-7	0-8	0-4	6-8	3-6	12-8	6-7	
09	7 47-3	7 48-5	7 26-0	0-9	0-5	6-9	3-6	12-9	6-8	
10	7 47-5	7 48-8	7 26-2	1-0	0-5	7-0	3-7	13-0	6-8	
11	7 47-8	7 49-0	7 26-4	1-1	0-6	7-1	3-7	13-1	6-9	
12	7 48-0	7 49-3	7 26-7	1-2	0-6	7-2	3-8	13-2	6-9	
13	7 48-3	7 49-5	7 26-9	1-3	0-7	7-3	3-8	13-3	7-0	
14	7 48-5	7 49-8	7 27-2	1-4	0-7	7-4	3-9	13-4	7-0	
15	7 48-8	7 50-0	7 27-4	1-5	0-8	7-5	3-9	13-5	7-1	
16	7 49-0	7 50-3	7 27-6	1-6	0-8	7-6	4-0	13-6	7-1	
17	7 49-3	7 50-5	7 27-9	1-7	0-9	7-7	4-0	13-7	7-2	
18	7 49-5	7 50-8	7 28-1	1-8	0-9	7-8	4-1	13-8	7-2	
19	7 49-8	7 51-0	7 28-4	1-9	1-0	7-9	4-1	13-9	7-3	
20	7 50-0	7 51-3	7 28-6	2-0	1-1	8-0	4-2	14-0	7-4	
21	7 50-3	7 51-5	7 28-8	2-1	1-1	8-1	4-3	14-1	7-4	
22	7 50-5	7 51-8	7 29-1	2-2	1-2	8-2	4-3	14-2	7-5	
23	7 50-8	7 52-0	7 29-3	2-3	1-2	8-3	4-4	14-3	7-5	
24	7 51-0	7 52-3	7 29-5	2-4	1-3	8-4	4-4	14-4	7-6	
25	7 51-3	7 52-5	7 29-8	2-5	1-3	8-5	4-5	14-5	7-6	
26	7 51-5	7 52-8	7 30-0	2-6	1-4	8-6	4-5	14-6	7-7	
27	7 51-8	7 53-0	7 30-3	2-7	1-4	8-7	4-6	14-7	7-7	
28	7 52-0	7 53-3	7 30-5	2-8	1-5	8-8	4-6	14-8	7-8	
29	7 52-3	7 53-5	7 30-7	2-9	1-5	8-9	4-7	14-9	7-8	
30	7 52-5	7 53-8	7 31-0	3-0	1-6	9-0	4-7	15-0	7-9	
31	7 52-8	7 54-0	7 31-2	3-1	1-6	9-1	4-8	15-1	7-9	
32	7 53-0	7 54-3	7 31-5	3-2	1-7	9-2	4-8	15-2	8-0	
33	7 53-3	7 54-5	7 31-7	3-3	1-7	9-3	4-9	15-3	8-0	
34	7 53-5	7 54-8	7 31-9	3-4	1-8	9-4	4-9	15-4	8-1	
35	7 53-8	7 55-0	7 32-2	3-5	1-8	9-5	5-0	15-5	8-1	
36	7 54-0	7 55-3	7 32-4	3-6	1-9	9-6	5-0	15-6	8-2	
37	7 54-3	7 55-5	7 32-6	3-7	1-9	9-7	5-1	15-7	8-2	
38	7 54-5	7 55-8	7 32-9	3-8	2-0	9-8	5-1	15-8	8-3	
39	7 54-8	7 56-0	7 33-1	3-9	2-0	9-9	5-2	15-9	8-3	
40	7 55-0	7 56-3	7 33-4	4-0	2-1	10-0	5-3	16-0	8-4	
41	7 55-3	7 56-6	7 33-6	4-1	2-2	10-1	5-3	16-1	8-5	
42	7 55-5	7 56-8	7 33-8	4-2	2-2	10-2	5-4	16-2	8-5	
43	7 55-8	7 57-1	7 34-1	4-3	2-3	10-3	5-4	16-3	8-6	
44	7 56-0	7 57-3	7 34-3	4-4	2-3	10-4	5-5	16-4	8-6	
45	7 56-3	7 57-6	7 34-6	4-5	2-4	10-5	5-5	16-5	8-7	
46	7 56-5	7 57-8	7 34-8	4-6	2-4	10-6	5-6	16-6	8-7	
47	7 56-8	7 58-1	7 35-0	4-7	2-5	10-7	5-6	16-7	8-8	
48	7 57-0	7 58-3	7 35-3	4-8	2-5	10-8	5-7	16-8	8-8	
49	7 57-3	7 58-6	7 35-5	4-9	2-6	10-9	5-7	16-9	8-9	
50	7 57-5	7 58-8	7 35-7	5-0	2-6	11-0	5-8	17-0	8-9	
51	7 57-8	7 59-1	7 36-0	5-1	2-7	11-1	5-8	17-1	9-0	
52	7 58-0	7 59-3	7 36-2	5-2	2-7	11-2	5-9	17-2	9-0	
53	7 58-3	7 59-6	7 36-5	5-3	2-8	11-3	5-9	17-3	9-1	
54	7 58-5	7 59-8	7 36-7	5-4	2-8	11-4	6-0	17-4	9-1	
55	7 58-8	8 00-1	7 36-9	5-5	2-9	11-5	6-0	17-5	9-2	
56	7 59-0	8 00-3	7 37-2	5-6	2-9	11-6	6-1	17-6	9-2	
57	7 59-3	8 00-6	7 37-4	5-7	3-0	11-7	6-1	17-7	9-3	
58	7 59-5	8 00-8	7 37-7	5-8						

32 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ		33 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o	'	o	'	o	'	o	'	o		'	s	o	'	o	'	o	'	o	'	o	'
00	8 00-0	8 01-3	7 38-1	0-0	0-0	6-0	3-3	12-0	6-5	00	8 15-0	8 16-4	7 52-5	0-0	0-0	6-0	3-4	12-0	6-7		
01	8 00-3	8 01-6	7 38-4	0-1	0-1	6-1	3-3	12-1	6-6	01	8 15-3	8 16-6	7 52-7	0-1	0-1	6-1	3-4	12-1	6-8		
02	8 00-5	8 01-8	7 38-6	0-2	0-1	6-2	3-4	12-2	6-6	02	8 15-5	8 16-9	7 52-9	0-2	0-1	6-2	3-5	12-2	6-8		
03	8 00-8	8 02-1	7 38-8	0-3	0-2	6-3	3-4	12-3	6-7	03	8 15-8	8 17-1	7 53-2	0-3	0-2	6-3	3-5	12-3	6-9		
04	8 01-0	8 02-3	7 39-1	0-4	0-2	6-4	3-5	12-4	6-7	04	8 16-0	8 17-4	7 53-4	0-4	0-2	6-4	3-6	12-4	6-9		
05	8 01-3	8 02-6	7 39-3	0-5	0-3	6-5	3-5	12-5	6-8	05	8 16-3	8 17-6	7 53-6	0-5	0-3	6-5	3-6	12-5	7-0		
06	8 01-5	8 02-8	7 39-6	0-6	0-3	6-6	3-6	12-6	6-8	06	8 16-5	8 17-9	7 53-9	0-6	0-3	6-6	3-7	12-6	7-0		
07	8 01-8	8 03-1	7 39-8	0-7	0-4	6-7	3-6	12-7	6-9	07	8 16-8	8 18-1	7 54-1	0-7	0-4	6-7	3-7	12-7	7-1		
08	8 02-0	8 03-3	7 40-0	0-8	0-4	6-8	3-7	12-8	6-9	08	8 17-0	8 18-4	7 54-4	0-8	0-4	6-8	3-8	12-8	7-1		
09	8 02-3	8 03-6	7 40-3	0-9	0-5	6-9	3-7	12-9	7-0	09	8 17-3	8 18-6	7 54-6	0-9	0-5	6-9	3-9	12-9	7-2		
10	8 02-5	8 03-8	7 40-5	1-0	0-5	7-0	3-8	13-0	7-0	10	8 17-5	8 18-9	7 54-8	1-0	0-6	7-0	3-9	13-0	7-3		
11	8 02-8	8 04-1	7 40-8	1-1	0-6	7-1	3-8	13-1	7-1	11	8 17-8	8 19-1	7 55-1	1-1	0-6	7-1	4-0	13-1	7-3		
12	8 03-0	8 04-3	7 41-0	1-2	0-7	7-2	3-9	13-2	7-2	12	8 18-0	8 19-4	7 55-3	1-2	0-7	7-2	4-0	13-2	7-4		
13	8 03-3	8 04-6	7 41-2	1-3	0-7	7-3	4-0	13-3	7-2	13	8 18-3	8 19-6	7 55-6	1-3	0-7	7-3	4-1	13-3	7-4		
14	8 03-5	8 04-8	7 41-5	1-4	0-8	7-4	4-0	13-4	7-3	14	8 18-5	8 19-9	7 55-8	1-4	0-8	7-4	4-1	13-4	7-5		
15	8 03-8	8 05-1	7 41-7	1-5	0-8	7-5	4-1	13-5	7-3	15	8 18-8	8 20-1	7 56-0	1-5	0-8	7-5	4-2	13-5	7-5		
16	8 04-0	8 05-3	7 42-0	1-6	0-9	7-6	4-1	13-6	7-4	16	8 19-0	8 20-4	7 56-3	1-6	0-9	7-6	4-2	13-6	7-6		
17	8 04-3	8 05-6	7 42-2	1-7	0-9	7-7	4-2	13-7	7-4	17	8 19-3	8 20-6	7 56-6	1-7	0-9	7-7	4-3	13-7	7-6		
18	8 04-5	8 05-8	7 42-4	1-8	1-0	7-8	4-2	13-8	7-5	18	8 19-5	8 20-9	7 56-9	1-8	1-0	7-8	4-4	13-8	7-7		
19	8 04-8	8 06-1	7 42-7	1-9	1-0	7-9	4-3	13-9	7-5	19	8 19-8	8 21-1	7 57-0	1-9	1-1	7-9	4-4	13-9	7-8		
20	8 05-0	8 06-3	7 42-9	2-0	1-1	8-0	4-3	14-0	7-6	20	8 20-0	8 21-4	7 57-2	2-0	1-1	8-0	4-5	14-0	7-8		
21	8 05-3	8 06-6	7 43-1	2-1	1-1	8-1	4-4	14-1	7-6	21	8 20-3	8 21-6	7 57-5	2-1	1-2	8-1	4-5	14-1	7-9		
22	8 05-5	8 06-8	7 43-4	2-2	1-2	8-2	4-4	14-2	7-7	22	8 20-5	8 21-9	7 57-7	2-2	1-2	8-2	4-6	14-2	7-9		
23	8 05-8	8 07-1	7 43-6	2-3	1-2	8-3	4-5	14-3	7-7	23	8 20-8	8 22-1	7 57-9	2-3	1-3	8-3	4-6	14-3	8-0		
24	8 06-0	8 07-3	7 43-9	2-4	1-3	8-4	4-6	14-4	7-8	24	8 21-0	8 22-4	7 58-2	2-4	1-3	8-4	4-7	14-4	8-0		
25	8 06-3	8 07-6	7 44-1	2-5	1-4	8-5	4-6	14-5	7-9	25	8 21-3	8 22-6	7 58-4	2-5	1-4	8-5	4-7	14-5	8-1		
26	8 06-5	8 07-8	7 44-3	2-6	1-4	8-6	4-7	14-6	7-9	26	8 21-5	8 22-9	7 58-7	2-6	1-5	8-6	4-8	14-6	8-2		
27	8 06-8	8 08-1	7 44-6	2-7	1-5	8-7	4-7	14-7	8-0	27	8 21-8	8 23-1	7 58-9	2-7	1-5	8-7	4-9	14-7	8-2		
28	8 07-0	8 08-3	7 44-8	2-8	1-5	8-8	4-8	14-8	8-0	28	8 22-0	8 23-4	7 59-1	2-8	1-6	8-8	4-9	14-8	8-3		
29	8 07-3	8 08-6	7 45-1	2-9	1-6	8-9	4-8	14-9	8-1	29	8 22-3	8 23-6	7 59-4	2-9	1-6	8-9	5-0	14-9	8-3		
30	8 07-5	8 08-8	7 45-3	3-0	1-6	9-0	4-9	15-0	8-1	30	8 22-5	8 23-9	7 59-6	3-0	1-7	9-0	5-0	15-0	8-4		
31	8 07-8	8 09-1	7 45-5	3-1	1-7	9-1	4-9	15-1	8-2	31	8 22-8	8 24-1	7 59-8	3-1	1-7	9-1	5-1	15-1	8-4		
32	8 08-0	8 09-3	7 45-8	3-2	1-7	9-2	5-0	15-2	8-2	32	8 23-0	8 24-4	8 00-1	3-2	1-8	9-2	5-1	15-2	8-5		
33	8 08-3	8 09-6	7 46-0	3-3	1-8	9-3	5-0	15-3	8-3	33	8 23-3	8 24-6	8 00-3	3-3	1-8	9-3	5-2	15-3	8-5		
34	8 08-5	8 09-8	7 46-2	3-4	1-8	9-4	5-1	15-4	8-3	34	8 23-5	8 24-9	8 00-6	3-4	1-9	9-4	5-2	15-4	8-6		
35	8 08-8	8 10-1	7 46-5	3-5	1-9	9-5	5-1	15-5	8-4	35	8 23-8	8 25-1	8 00-8	3-5	2-0	9-5	5-3	15-5	8-7		
36	8 09-0	8 10-3	7 46-7	3-6	2-0	9-6	5-2	15-6	8-5	36	8 24-0	8 25-4	8 01-0	3-6	2-0	9-6	5-4	15-6	8-7		
37	8 09-3	8 10-6	7 47-0	3-7	2-0	9-7	5-3	15-7	8-5	37	8 24-3	8 25-6	8 01-3	3-7	2-1	9-7	5-4	15-7	8-8		
38	8 09-5	8 10-8	7 47-2	3-8	2-1	9-8	5-3	15-8	8-6	38	8 24-5	8 25-9	8 01-5	3-8	2-1	9-8	5-5	15-8	8-8		
39	8 09-8	8 11-1	7 47-4	3-9	2-1	9-9	5-4	15-9	8-6	39	8 24-8	8 26-1	8 01-8	3-9	2-2	9-9	5-5	15-9	8-9		
40	8 10-0	8 11-3	7 47-7	4-0	2-2	10-0	5-4	16-0	8-7	40	8 25-0	8 26-4	8 02-0	4-0	2-2	10-0	5-6	16-0	8-9		
41	8 10-3	8 11-6	7 47-9	4-1	2-2	10-1	5-5	16-1	8-7	41	8 25-3	8 26-6	8 02-2	4-1	2-3	10-1	5-6	16-1	9-0		
42	8 10-5	8 11-8	7 48-2	4-2	2-3	10-2	5-5	16-2	8-8	42	8 25-5	8 26-9	8 02-5	4-2	2-3	10-2	5-7	16-2	9-0		
43	8 10-8	8 12-1	7 48-4	4-3	2-3	10-3	5-6	16-3	8-8	43	8 25-8	8 27-1	8 02-7	4-3	2-4	10-3	5-8	16-3	9-1		
44	8 11-0	8 12-3	7 48-6	4-4	2-4	10-4	5-6	16-4	8-9	44	8 26-0	8 27-4	8 02-9	4-4	2-5	10-4	5-8	16-4	9-2		
45	8 11-3	8 12-6	7 48-9	4-5	2-4	10-5	5-7	16-5	8-9	45	8 26-3	8 27-6	8 03-2	4-5	2-5	10-5	5-9	16-5	9-2		
46	8 11-5	8 12-8	7 49-1	4-6	2-5	10-6	5-7	16-6	9-0	46	8 26-5	8 27-9	8 03-4	4-6	2-6	10-6	5-9	16-6	9-3		
47	8 11-8	8 13-1	7 49-3	4-7	2-5	10-7	5-8	16-7	9-0	47	8 26-8	8 28-1	8 03-7	4-7	2-6	10-7	6-0	16-7	9-3		
48	8 12-0	8 13-3	7 49-6	4-8	2-6	10-8	5-9	16-8	9-1	48	8 27-0	8 28-4	8 03-9	4-8	2-7	10-8	6-0	16-8	9-4		
49	8 12-3	8 13-6	7 49-8	4-9	2-7	10-9	5-9	16-9	9-2	49	8 27-3	8 28-6	8 04-1	4-9	2-7	10-9	6-1	16-9	9-4		
50	8 12-5	8 13-8	7 50-1	5-0	2-7	11-0	6-0	17-0	9-2	50	8 27-5	8 28-9	8 04-4	5-0	2-8	11-0	6-1	17-0	9-5		
51	8 12-8	8 14-1	7 50-3	5-1	2-8	11-1	6-0	17-1	9-3	51	8 27-8	8 29-1	8 04-6	5-1	2-8	11-1	6-2	17-1	9-5		
52	8 13-0	8 14-3	7 50-5	5-2	2-8	11-2	6-1	17-2	9-3	52	8 28-0	8 29-4	8 04-9	5-2	2-9	11-2	6-3	17-2	9-6		
53	8 13-3	8 14-6	7 50-8	5-3	2-9	11-3	6-1	17-3	9-4	53	8 28-3	8 29-6	8 05-1	5-3	3-0	11-3	6-3	17-3	9-7		
54	8 13-5	8 14-9	7 51-0	5-4	2-9	11-4	6-2	17-4	9-4	54	8 28-5	8 29-9	8 05-3	5-4	3-0	11-4	6-4	17-4	9-7		
55	8 13-8	8 15-1	7 51-3	5-5	3-0	11-5	6-2	17-5	9-5	55	8 28-8	8 30-1	8 05-6	5-5	3-1	11-5	6-4	17-5	9-8		
56	8 14-0	8 15-4	7 51-5	5-6	3-0	11-6	6-3	17-6	9-5	56	8 29-0	8 30-4	8 05-8	5-6	3-1	11-6	6-5	17-6	9-8		
57	8 14-3	8 15-6	7 51-7	5-7	3-1	11-7	6-3	17-7	9-6	57	8 29-3	8 30-6	8 06-1	5-7	3-2	11-7	6-5	17-7	9-9		
58	8 14-5	8 15-9	7 52-0	5-8	3-1	11-8	6-4	17-8	9-6	58	8 29-5	8 30-9	8 06-3	5-8	3-2	11-8	6-6	17-8	9-9		
59	8 14-8	8 16-1	7 52-2	5-9	3-2	11-9	6-4	17-9	9-7	59	8 29-8	8 31-1	8 06-5	5-9	3-3	11-9	6-6	17-9	10-0		
60	8 15-0	8 16-4	7 52-5	6-0	3-3	12-0	6-5	18-0	9-8	60	8 30-0	8 31-4	8 06-8	6-0	3-4	12-0	6-7	18-0	10-1		

34 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	Corr ⁿ	o	Corr ⁿ	o	Corr ⁿ
00	8 30-0	8 31-4	8 06-8	0-0	0-0	6-0	3-5	12-0	6-9
01	8 30-3	8 31-6	8 07-0	0-1	0-1	6-1	3-5	12-1	7-0
02	8 30-5	8 31-9	8 07-2	0-2	0-1	6-2	3-6	12-2	7-0
03	8 30-8	8 32-1	8 07-5	0-3	0-2	6-3	3-6	12-3	7-1
04	8 31-0	8 32-4	8 07-7	0-4	0-2	6-4	3-7	12-4	7-1
05	8 31-3	8 32-6	8 08-0	0-5	0-3	6-5	3-7	12-5	7-2
06	8 31-5	8 32-9	8 08-2	0-6	0-3	6-6	3-8	12-6	7-2
07	8 31-8	8 33-2	8 08-4	0-7	0-4	6-7	3-9	12-7	7-3
08	8 32-0	8 33-4	8 08-7	0-8	0-5	6-8	3-9	12-8	7-4
09	8 32-3	8 33-7	8 08-9	0-9	0-5	6-9	4-0	12-9	7-4
10	8 32-5	8 33-9	8 09-2	1-0	0-6	7-0	4-0	13-0	7-5
11	8 32-8	8 34-2	8 09-4	1-1	0-6	7-1	4-1	13-1	7-5
12	8 33-0	8 34-4	8 09-6	1-2	0-7	7-2	4-1	13-2	7-6
13	8 33-3	8 34-7	8 09-9	1-3	0-7	7-3	4-2	13-3	7-6
14	8 33-5	8 34-9	8 10-1	1-4	0-8	7-4	4-3	13-4	7-7
15	8 33-8	8 35-2	8 10-3	1-5	0-9	7-5	4-3	13-5	7-8
16	8 34-0	8 35-4	8 10-6	1-6	0-9	7-6	4-4	13-6	7-8
17	8 34-3	8 35-7	8 10-8	1-7	1-0	7-7	4-4	13-7	7-9
18	8 34-5	8 35-9	8 11-1	1-8	1-0	7-8	4-5	13-8	7-9
19	8 34-8	8 36-2	8 11-3	1-9	1-1	7-9	4-5	13-9	8-0
20	8 35-0	8 36-4	8 11-5	2-0	1-2	8-0	4-6	14-0	8-1
21	8 35-3	8 36-7	8 11-8	2-1	1-2	8-1	4-7	14-1	8-1
22	8 35-5	8 36-9	8 12-0	2-2	1-3	8-2	4-7	14-2	8-2
23	8 35-8	8 37-2	8 12-3	2-3	1-3	8-3	4-8	14-3	8-2
24	8 36-0	8 37-4	8 12-5	2-4	1-4	8-4	4-8	14-4	8-3
25	8 36-3	8 37-7	8 12-7	2-5	1-4	8-5	4-9	14-5	8-3
26	8 36-5	8 37-9	8 13-0	2-6	1-5	8-6	4-9	14-6	8-4
27	8 36-8	8 38-2	8 13-2	2-7	1-6	8-7	5-0	14-7	8-5
28	8 37-0	8 38-4	8 13-4	2-8	1-6	8-8	5-1	14-8	8-5
29	8 37-3	8 38-7	8 13-7	2-9	1-7	8-9	5-1	14-9	8-6
30	8 37-5	8 38-9	8 13-9	3-0	1-7	9-0	5-2	15-0	8-6
31	8 37-8	8 39-2	8 14-2	3-1	1-8	9-1	5-2	15-1	8-7
32	8 38-0	8 39-4	8 14-4	3-2	1-8	9-2	5-3	15-2	8-7
33	8 38-3	8 39-7	8 14-6	3-3	1-9	9-3	5-3	15-3	8-8
34	8 38-5	8 39-9	8 14-9	3-4	2-0	9-4	5-4	15-4	8-9
35	8 38-8	8 40-2	8 15-1	3-5	2-0	9-5	5-5	15-5	8-9
36	8 39-0	8 40-4	8 15-4	3-6	2-1	9-6	5-5	15-6	9-0
37	8 39-3	8 40-7	8 15-6	3-7	2-1	9-7	5-6	15-7	9-0
38	8 39-5	8 40-9	8 15-8	3-8	2-2	9-8	5-6	15-8	9-1
39	8 39-8	8 41-2	8 16-1	3-9	2-2	9-9	5-7	15-9	9-1
40	8 40-0	8 41-4	8 16-3	4-0	2-3	10-0	5-8	16-0	9-2
41	8 40-3	8 41-7	8 16-5	4-1	2-4	10-1	5-8	16-1	9-3
42	8 40-5	8 41-9	8 16-8	4-2	2-4	10-2	5-9	16-2	9-3
43	8 40-8	8 42-2	8 17-0	4-3	2-5	10-3	5-9	16-3	9-4
44	8 41-0	8 42-4	8 17-3	4-4	2-5	10-4	6-0	16-4	9-4
45	8 41-3	8 42-7	8 17-5	4-5	2-6	10-5	6-0	16-5	9-5
46	8 41-5	8 42-9	8 17-7	4-6	2-6	10-6	6-1	16-6	9-5
47	8 41-8	8 43-2	8 18-0	4-7	2-7	10-7	6-2	16-7	9-6
48	8 42-0	8 43-4	8 18-2	4-8	2-8	10-8	6-2	16-8	9-7
49	8 42-3	8 43-7	8 18-5	4-9	2-8	10-9	6-3	16-9	9-7
50	8 42-5	8 43-9	8 18-7	5-0	2-9	11-0	6-3	17-0	9-8
51	8 42-8	8 44-2	8 18-9	5-1	2-9	11-1	6-4	17-1	9-8
52	8 43-0	8 44-4	8 19-2	5-2	3-0	11-2	6-4	17-2	9-9
53	8 43-3	8 44-7	8 19-4	5-3	3-0	11-3	6-5	17-3	9-9
54	8 43-5	8 44-9	8 19-7	5-4	3-1	11-4	6-6	17-4	10-0
55	8 43-8	8 45-2	8 19-9	5-5	3-2	11-5	6-6	17-5	10-1
56	8 44-0	8 45-4	8 20-1	5-6	3-2	11-6	6-7	17-6	10-1
57	8 44-3	8 45-7	8 20-4	5-7	3-3	11-7	6-7	17-7	10-2
58	8 44-5	8 45-9	8 20-6	5-8	3-3	11-8	6-8	17-8	10-2
59	8 44-8	8 46-2	8 20-8	5-9	3-4	11-9	6-8	17-9	10-3
60	8 45-0	8 46-4	8 21-1	6-0	3-5	12-0	6-9	18-0	10-4

35 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	Corr ⁿ	o	Corr ⁿ	o	Corr ⁿ
00	8 45-0	8 46-4	8 21-1	0-0	0-0	6-0	3-6	12-0	7-1
01	8 45-3	8 46-7	8 21-3	0-1	0-1	6-1	3-6	12-1	7-2
02	8 45-5	8 46-9	8 21-6	0-2	0-1	6-2	3-7	12-2	7-2
03	8 45-8	8 47-2	8 21-8	0-3	0-2	6-3	3-7	12-3	7-3
04	8 46-0	8 47-4	8 22-0	0-4	0-2	6-4	3-8	12-4	7-3
05	8 46-3	8 47-7	8 22-3	0-5	0-3	6-5	3-8	12-5	7-4
06	8 46-5	8 47-9	8 22-5	0-6	0-4	6-6	3-9	12-6	7-5
07	8 46-8	8 48-2	8 22-8	0-7	0-4	6-7	4-0	12-7	7-5
08	8 47-0	8 48-4	8 23-0	0-8	0-5	6-8	4-0	12-8	7-6
09	8 47-3	8 48-7	8 23-2	0-9	0-5	6-9	4-1	12-9	7-6
10	8 47-5	8 48-9	8 23-5	1-0	0-6	7-0	4-1	13-0	7-7
11	8 47-8	8 49-2	8 23-7	1-1	0-7	7-1	4-2	13-1	7-8
12	8 48-0	8 49-4	8 23-9	1-2	0-7	7-2	4-3	13-2	7-8
13	8 48-3	8 49-7	8 24-2	1-3	0-8	7-3	4-3	13-3	7-9
14	8 48-5	8 49-9	8 24-4	1-4	0-8	7-4	4-4	13-4	7-9
15	8 48-8	8 50-2	8 24-7	1-5	0-9	7-5	4-4	13-5	8-0
16	8 49-0	8 50-4	8 24-9	1-6	0-9	7-6	4-5	13-6	8-0
17	8 49-3	8 50-7	8 25-1	1-7	1-0	7-7	4-6	13-7	8-1
18	8 49-5	8 50-9	8 25-4	1-8	1-1	7-8	4-6	13-8	8-2
19	8 49-8	8 51-2	8 25-6	1-9	1-1	7-9	4-7	13-9	8-2
20	8 50-0	8 51-5	8 25-9	2-0	1-2	8-0	4-7	14-0	8-3
21	8 50-3	8 51-7	8 26-1	2-1	1-2	8-1	4-8	14-1	8-3
22	8 50-5	8 52-0	8 26-3	2-2	1-3	8-2	4-9	14-2	8-4
23	8 50-8	8 52-2	8 26-6	2-3	1-4	8-3	4-9	14-3	8-5
24	8 51-0	8 52-5	8 26-8	2-4	1-4	8-4	5-0	14-4	8-5
25	8 51-3	8 52-7	8 27-0	2-5	1-5	8-5	5-0	14-5	8-6
26	8 51-5	8 53-0	8 27-3	2-6	1-5	8-6	5-1	14-6	8-6
27	8 51-8	8 53-2	8 27-5	2-7	1-6	8-7	5-1	14-7	8-7
28	8 52-0	8 53-5	8 27-8	2-8	1-7	8-8	5-2	14-8	8-8
29	8 52-3	8 53-7	8 28-0	2-9	1-7	8-9	5-3	14-9	8-8
30	8 52-5	8 54-0	8 28-2	3-0	1-8	9-0	5-3	15-0	8-9
31	8 52-8	8 54-2	8 28-5	3-1	1-8	9-1	5-4	15-1	8-9
32	8 53-0	8 54-5	8 28-7	3-2	1-9	9-2	5-4	15-2	9-0
33	8 53-3	8 54-7	8 29-0	3-3	2-0	9-3	5-5	15-3	9-1
34	8 53-5	8 55-0	8 29-2	3-4	2-0	9-4	5-6	15-4	9-1
35	8 53-8	8 55-2	8 29-4	3-5	2-1	9-5	5-6	15-5	9-2
36	8 54-0	8 55-5	8 29-7	3-6	2-1	9-6	5-7	15-6	9-2
37	8 54-3	8 55-7	8 29-9	3-7	2-2	9-7	5-7	15-7	9-3
38	8 54-5	8 56-0	8 30-2	3-8	2-2	9-8	5-8	15-8	9-3
39	8 54-8	8 56-2	8 30-4	3-9	2-3	9-9	5-9	15-9	9-4
40	8 55-0	8 56-5	8 30-6	4-0	2-4	10-0	5-9	16-0	9-5
41	8 55-3	8 56-7	8 30-9	4-1	2-4	10-1	6-0	16-1	9-5
42	8 55-5	8 57-0	8 31-1	4-2	2-5	10-2	6-0	16-2	9-6
43	8 55-8	8 57-2	8 31-3	4-3	2-5	10-3	6-1	16-3	9-6
44	8 56-0	8 57-5	8 31-6	4-4	2-6	10-4	6-2	16-4	9-7
45	8 56-3	8 57-7	8 31-8	4-5	2-7	10-5	6-2	16-5	9-8
46	8 56-5	8 58-0	8 32-1	4-6	2-7	10-6	6-3	16-6	9-8
47	8 56-8	8 58-2	8 32-3	4-7	2-8	10-7	6-3	16-7	9-9
48	8 57-0	8 58-5	8 32-5	4-8	2-8	10-8	6-4	16-8	9-9
49	8 57-3	8 58-7	8 32-8	4-9	2-9	10-9	6-4	16-9	10-0
50	8 57-5	8 59-0	8 33-0	5-0	3-0	11-0	6-5	17-0	10-1
51	8 57-8	8 59-2	8 33-3	5-1	3-0	11-1	6-6	17-1	10-1
52	8 58-0	8 59-5	8 33-5	5-2	3-1	11-2	6-6	17-2	10-2
53	8 58-3	8 59-7	8 33-7	5-3	3-1	11-3	6-7	17-3	10-2
54	8 58-5	9 00-0	8 34-0	5-4	3-2	11-4	6-7	17-4	10-3
55	8 58-8	9 00-2	8 34-2	5-5	3-3	11-5	6-8	17-5	10-4
56	8 59-0	9 00-5	8 34-4	5-6	3-3	11-6	6-9	17-6	10-4
57	8 59-3	9 00-7	8 34-7	5-7	3-4	11-7	6-9	17-7	10-5
58	8 59-5	9 01-0	8 34-9	5-8	3-4	11-8	7-0	17-8	10-5
59	8 59-8	9 01-2	8 35-2	5-9	3-5	11-9	7-0	17-9	10-6
60	9 00-0	9 01-5	8 35-4	6-0	3-6	12-0	7-1	18-0	10-7

36 ^m		SOL PLANETAS	ARIES	LUNA	v _o Corr ⁿ d		v _o Corr ⁿ d		v _o Corr ⁿ d		37 ^m		SOL PLANETAS	ARIES	LUNA	v _o Corr ⁿ d		v _o Corr ⁿ d		v _o Corr ⁿ d	
s	o	o	o	o	o	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o
00	9 00-0	9 01-5	8 35-4	0-0	0-0	6-0	3-7	12-0	7-3	00	9 15-0	9 16-5	8 49-7	0-0	0-0	6-0	3-8	12-0	7-5	00	9 15-0
01	9 00-3	9 01-7	8 35-6	0-1	0-1	6-1	3-7	12-1	7-4	01	9 15-3	9 16-8	8 50-0	0-1	0-1	6-1	3-8	12-1	7-6	01	9 15-3
02	9 00-5	9 02-0	8 35-9	0-2	0-1	6-2	3-8	12-2	7-4	02	9 15-5	9 17-0	8 50-2	0-2	0-1	6-2	3-9	12-2	7-6	02	9 15-5
03	9 00-8	9 02-2	8 36-1	0-3	0-2	6-3	3-8	12-3	7-5	03	9 15-8	9 17-3	8 50-4	0-3	0-2	6-3	3-9	12-3	7-7	03	9 15-8
04	9 01-0	9 02-5	8 36-4	0-4	0-2	6-4	3-9	12-4	7-5	04	9 16-0	9 17-5	8 50-7	0-4	0-3	6-4	4-0	12-4	7-8	04	9 16-0
05	9 01-3	9 02-7	8 36-6	0-5	0-3	6-5	4-0	12-5	7-6	05	9 16-3	9 17-8	8 50-9	0-5	0-3	6-5	4-1	12-5	7-8	05	9 16-3
06	9 01-5	9 03-0	8 36-8	0-6	0-4	6-6	4-0	12-6	7-7	06	9 16-5	9 18-0	8 51-1	0-6	0-4	6-6	4-1	12-6	7-9	06	9 16-5
07	9 01-8	9 03-2	8 37-1	0-7	0-4	6-7	4-1	12-7	7-7	07	9 16-8	9 18-3	8 51-4	0-7	0-4	6-7	4-2	12-7	7-9	07	9 16-8
08	9 02-0	9 03-5	8 37-3	0-8	0-5	6-8	4-1	12-8	7-8	08	9 17-0	9 18-5	8 51-6	0-8	0-5	6-8	4-3	12-8	8-0	08	9 17-0
09	9 02-3	9 03-7	8 37-5	0-9	0-5	6-9	4-2	12-9	7-8	09	9 17-3	9 18-8	8 51-9	0-9	0-6	6-9	4-3	12-9	8-1	09	9 17-3
10	9 02-5	9 04-0	8 37-8	1-0	0-6	7-0	4-3	13-0	7-9	10	9 17-5	9 19-0	8 52-1	1-0	0-6	7-0	4-4	13-0	8-1	10	9 17-5
11	9 02-8	9 04-2	8 38-0	1-1	0-7	7-1	4-3	13-1	8-0	11	9 17-8	9 19-3	8 52-3	1-1	0-7	7-1	4-4	13-1	8-2	11	9 17-8
12	9 03-0	9 04-5	8 38-3	1-2	0-7	7-2	4-4	13-2	8-0	12	9 18-0	9 19-5	8 52-6	1-2	0-8	7-2	4-5	13-2	8-3	12	9 18-0
13	9 03-3	9 04-7	8 38-5	1-3	0-8	7-3	4-4	13-3	8-1	13	9 18-3	9 19-8	8 52-8	1-3	0-8	7-3	4-6	13-3	8-3	13	9 18-3
14	9 03-5	9 05-0	8 38-7	1-4	0-9	7-4	4-5	13-4	8-2	14	9 18-5	9 20-0	8 53-1	1-4	0-9	7-4	4-6	13-4	8-4	14	9 18-5
15	9 03-8	9 05-2	8 39-0	1-5	0-9	7-5	4-6	13-5	8-2	15	9 18-8	9 20-3	8 53-3	1-5	0-9	7-5	4-7	13-5	8-4	15	9 18-8
16	9 04-0	9 05-5	8 39-2	1-6	1-0	7-6	4-6	13-6	8-3	16	9 19-0	9 20-5	8 53-5	1-6	1-0	7-6	4-8	13-6	8-5	16	9 19-0
17	9 04-3	9 05-7	8 39-5	1-7	1-0	7-7	4-7	13-7	8-3	17	9 19-3	9 20-8	8 53-8	1-7	1-1	7-7	4-8	13-7	8-6	17	9 19-3
18	9 04-5	9 06-0	8 39-7	1-8	1-1	7-8	4-7	13-8	8-4	18	9 19-5	9 21-0	8 54-0	1-8	1-1	7-8	4-9	13-8	8-6	18	9 19-5
19	9 04-8	9 06-2	8 39-9	1-9	1-2	7-9	4-8	13-9	8-5	19	9 19-8	9 21-3	8 54-3	1-9	1-2	7-9	4-9	13-9	8-7	19	9 19-8
20	9 05-0	9 06-5	8 40-2	2-0	1-2	8-0	4-9	14-0	8-5	20	9 20-0	9 21-5	8 54-5	2-0	1-3	8-0	5-0	14-0	8-8	20	9 20-0
21	9 05-3	9 06-7	8 40-4	2-1	1-3	8-1	4-9	14-1	8-6	21	9 20-3	9 21-8	8 54-7	2-1	1-3	8-1	5-1	14-1	8-8	21	9 20-3
22	9 05-5	9 07-0	8 40-6	2-2	1-3	8-2	5-0	14-2	8-6	22	9 20-5	9 22-0	8 55-0	2-2	1-4	8-2	5-1	14-2	8-9	22	9 20-5
23	9 05-8	9 07-2	8 40-9	2-3	1-4	8-3	5-0	14-3	8-7	23	9 20-8	9 22-3	8 55-2	2-3	1-4	8-3	5-2	14-3	8-9	23	9 20-8
24	9 06-0	9 07-5	8 41-1	2-4	1-5	8-4	5-1	14-4	8-8	24	9 21-0	9 22-5	8 55-4	2-4	1-5	8-4	5-3	14-4	9-0	24	9 21-0
25	9 06-3	9 07-7	8 41-4	2-5	1-5	8-5	5-2	14-5	8-8	25	9 21-3	9 22-8	8 55-7	2-5	1-6	8-5	5-3	14-5	9-1	25	9 21-3
26	9 06-5	9 08-0	8 41-6	2-6	1-6	8-6	5-2	14-6	8-9	26	9 21-5	9 23-0	8 55-9	2-6	1-6	8-6	5-4	14-6	9-1	26	9 21-5
27	9 06-8	9 08-2	8 41-8	2-7	1-6	8-7	5-3	14-7	8-9	27	9 21-8	9 23-3	8 56-2	2-7	1-7	8-7	5-4	14-7	9-2	27	9 21-8
28	9 07-0	9 08-5	8 42-1	2-8	1-7	8-8	5-4	14-8	9-0	28	9 22-0	9 23-5	8 56-4	2-8	1-8	8-8	5-5	14-8	9-3	28	9 22-0
29	9 07-3	9 08-7	8 42-3	2-9	1-8	8-9	5-4	14-9	9-1	29	9 22-3	9 23-8	8 56-6	2-9	1-8	8-9	5-6	14-9	9-3	29	9 22-3
30	9 07-5	9 09-0	8 42-6	3-0	1-8	9-0	5-5	15-0	9-1	30	9 22-5	9 24-0	8 56-9	3-0	1-9	9-0	5-6	15-0	9-4	30	9 22-5
31	9 07-8	9 09-2	8 42-8	3-1	1-9	9-1	5-5	15-1	9-2	31	9 22-8	9 24-3	8 57-1	3-1	1-9	9-1	5-7	15-1	9-4	31	9 22-8
32	9 08-0	9 09-5	8 43-0	3-2	1-9	9-2	5-6	15-2	9-2	32	9 23-0	9 24-5	8 57-4	3-2	2-0	9-2	5-8	15-2	9-5	32	9 23-0
33	9 08-3	9 09-8	8 43-3	3-3	2-0	9-3	5-7	15-3	9-3	33	9 23-3	9 24-8	8 57-6	3-3	2-1	9-3	5-8	15-3	9-6	33	9 23-3
34	9 08-5	9 10-0	8 43-5	3-4	2-1	9-4	5-7	15-4	9-4	34	9 23-5	9 25-0	8 57-8	3-4	2-1	9-4	5-9	15-4	9-6	34	9 23-5
35	9 08-8	9 10-3	8 43-8	3-5	2-1	9-5	5-8	15-5	9-4	35	9 23-8	9 25-3	8 58-1	3-5	2-2	9-5	5-9	15-5	9-7	35	9 23-8
36	9 09-0	9 10-5	8 44-0	3-6	2-2	9-6	5-8	15-6	9-5	36	9 24-0	9 25-5	8 58-3	3-6	2-3	9-6	6-0	15-6	9-8	36	9 24-0
37	9 09-3	9 10-8	8 44-2	3-7	2-3	9-7	5-9	15-7	9-6	37	9 24-3	9 25-8	8 58-5	3-7	2-3	9-7	6-1	15-7	9-8	37	9 24-3
38	9 09-5	9 11-0	8 44-5	3-8	2-3	9-8	6-0	15-8	9-6	38	9 24-5	9 26-0	8 58-8	3-8	2-4	9-8	6-1	15-8	9-9	38	9 24-5
39	9 09-8	9 11-3	8 44-7	3-9	2-4	9-9	6-0	15-9	9-7	39	9 24-8	9 26-3	8 59-0	3-9	2-4	9-9	6-2	15-9	9-9	39	9 24-8
40	9 10-0	9 11-5	8 44-9	4-0	2-4	10-0	6-1	16-0	9-7	40	9 25-0	9 26-5	8 59-3	4-0	2-5	10-0	6-3	16-0	10-0	40	9 25-0
41	9 10-3	9 11-8	8 45-2	4-1	2-5	10-1	6-1	16-1	9-8	41	9 25-3	9 26-8	8 59-5	4-1	2-6	10-1	6-3	16-1	10-1	41	9 25-3
42	9 10-5	9 12-0	8 45-4	4-2	2-6	10-2	6-2	16-2	9-9	42	9 25-5	9 27-0	8 59-7	4-2	2-6	10-2	6-4	16-2	10-1	42	9 25-5
43	9 10-8	9 12-3	8 45-7	4-3	2-6	10-3	6-3	16-3	9-9	43	9 25-8	9 27-3	9 00-0	4-3	2-7	10-3	6-4	16-3	10-2	43	9 25-8
44	9 11-0	9 12-5	8 45-9	4-4	2-7	10-4	6-3	16-4	10-0	44	9 26-0	9 27-5	9 00-2	4-4	2-8	10-4	6-5	16-4	10-3	44	9 26-0
45	9 11-3	9 12-8	8 46-1	4-5	2-7	10-5	6-4	16-5	10-0	45	9 26-3	9 27-8	9 00-5	4-5	2-8	10-5	6-6	16-5	10-3	45	9 26-3
46	9 11-5	9 13-0	8 46-4	4-6	2-8	10-6	6-4	16-6	10-1	46	9 26-5	9 28-1	9 00-7	4-6	2-9	10-6	6-6	16-6	10-4	46	9 26-5
47	9 11-8	9 13-3	8 46-6	4-7	2-9	10-7	6-5	16-7	10-2	47	9 26-8	9 28-3	9 00-9	4-7	2-9	10-7	6-7	16-7	10-4	47	9 26-8
48	9 12-0	9 13-5	8 46-9	4-8	2-9	10-8	6-6	16-8	10-2	48	9 27-0	9 28-6	9 01-2	4-8	3-0	10-8	6-8	16-8	10-5	48	9 27-0
49	9 12-3	9 13-8	8 47-1	4-9	3-0	10-9	6-6	16-9	10-3	49	9 27-3	9 28-8	9 01-4	4-9	3-1	10-9	6-8	16-9	10-6	49	9 27-3
50	9 12-5	9 14-0	8 47-3	5-0	3-0	11-0	6-7	17-0	10-3	50	9 27-5	9 29-1	9 01-6	5-0	3-1	11-0	6-9	17-0	10-6	50	9 27-5
51	9 12-8	9 14-3	8 47-6	5-1	3-1	11-1	6-8	17-1	10-4	51	9 27-8	9 29-3	9 01-9	5-1	3-2	11-1	6-9	17-1	10-7	51	9 27-8
52	9 13-0	9 14-5	8 47-8	5-2	3-2	11-2	6-8	17-2	10-5	52	9 28-0	9 29-6	9 02-1	5-2	3-3	11-2	7-0	17-2	10-3	52	9 28-0
53	9 13-3	9 14-8	8 48-0	5-3	3-2	11-3	6-9	17-3	10-5	53	9 28-3	9 29-8	9 02-4	5-3	3-3	11-3	7-1	17-3	10-8	53	9 28-3
54	9 13-5	9 15-0	8 48-3	5-4	3-3	11-4	6-9	17-4	10-6	54	9 28-5	9 30-1	9 02-6	5-4	3-4	11-4	7-1	17-4	10-9	54	9 28-5
55	9 13-8	9 15-3	8 48-5	5-5	3-3	11-5	7-0	17-5	10-6	55	9 28-8	9 30-3	9 02-8	5-5	3-4	11-5	7-2	17-5	10-9	55	9 28-8
56	9 14-0	9 15-5	8 48-8	5-6	3-4	11-6	7-1	17-6	10-7	56	9 29-0	9 30-6	9 03-1	5-6	3-5	11-6	7-3	17-6	11-0	56	9 29-0
57	9 14-3	9 15-8	8 49-0	5-7	3-5	11-7	7-1	17-7	10-8	57	9 29-3	9 30-8	9 03-3	5-7	3-6	11-7	7-3	17-7	11-1	57	9 29-3
58	9 14-5	9 16-0	8 49-2	5-8	3-5	11-8															

38 ^m	SOL PLANETAS			ARIES	LUNA	v		v		v	
	s	c	'			o	d	o	d	o	d
00	9 30-0	9 31-6	9 04-0	0-0	0-0	6-0	3-9	12-0	7-7		
01	9 30-3	9 31-8	9 04-3	0-1	0-1	6-1	3-9	12-1	7-8		
02	9 30-5	9 32-1	9 04-5	0-2	0-1	6-2	4-0	12-2	7-8		
03	9 30-8	9 32-3	9 04-7	0-3	0-2	6-3	4-0	12-3	7-9		
04	9 31-0	9 32-6	9 05-0	0-4	0-3	6-4	4-1	12-4	8-0		
05	9 31-3	9 32-8	9 05-2	0-5	0-3	6-5	4-2	12-5	8-0		
06	9 31-5	9 33-1	9 05-5	0-6	0-4	6-6	4-2	12-6	8-1		
07	9 31-8	9 33-3	9 05-7	0-7	0-4	6-7	4-3	12-7	8-1		
08	9 32-0	9 33-6	9 05-9	0-8	0-5	6-8	4-4	12-8	8-2		
09	9 32-3	9 33-8	9 06-2	0-9	0-6	6-9	4-4	12-9	8-3		
10	9 32-5	9 34-1	9 06-4	1-0	0-6	7-0	4-5	13-0	8-3		
11	9 32-8	9 34-3	9 06-7	1-1	0-7	7-1	4-6	13-1	8-4		
12	9 33-0	9 34-6	9 06-9	1-2	0-8	7-2	4-6	13-2	8-5		
13	9 33-3	9 34-8	9 07-1	1-3	0-8	7-3	4-7	13-3	8-5		
14	9 33-5	9 35-1	9 07-4	1-4	0-9	7-4	4-7	13-4	8-6		
15	9 33-8	9 35-3	9 07-6	1-5	1-0	7-5	4-8	13-5	8-7		
16	9 34-0	9 35-6	9 07-9	1-6	1-0	7-6	4-9	13-6	8-7		
17	9 34-3	9 35-8	9 08-1	1-7	1-1	7-7	4-9	13-7	8-8		
18	9 34-5	9 36-1	9 08-3	1-8	1-2	7-8	5-0	13-8	8-9		
19	9 34-8	9 36-3	9 08-6	1-9	1-2	7-9	5-1	13-9	8-9		
20	9 35-0	9 36-6	9 08-8	2-0	1-3	8-0	5-1	14-0	9-0		
21	9 35-3	9 36-8	9 09-0	2-1	1-3	8-1	5-2	14-1	9-0		
22	9 35-5	9 37-1	9 09-3	2-2	1-4	8-2	5-3	14-2	9-1		
23	9 35-8	9 37-3	9 09-5	2-3	1-5	8-3	5-3	14-3	9-2		
24	9 36-0	9 37-6	9 09-8	2-4	1-5	8-4	5-4	14-4	9-2		
25	9 36-3	9 37-8	9 10-0	2-5	1-6	8-5	5-5	14-5	9-3		
26	9 36-5	9 38-1	9 10-2	2-6	1-7	8-6	5-5	14-6	9-4		
27	9 36-8	9 38-3	9 10-5	2-7	1-7	8-7	5-6	14-7	9-4		
28	9 37-0	9 38-6	9 10-7	2-8	1-8	8-8	5-6	14-8	9-5		
29	9 37-3	9 38-8	9 11-0	2-9	1-9	8-9	5-7	14-9	9-6		
30	9 37-5	9 39-1	9 11-2	3-0	1-9	9-0	5-8	15-0	9-6		
31	9 37-8	9 39-3	9 11-4	3-1	2-0	9-1	5-8	15-1	9-7		
32	9 38-0	9 39-6	9 11-7	3-2	2-1	9-2	5-9	15-2	9-8		
33	9 38-3	9 39-8	9 11-9	3-3	2-1	9-3	6-0	15-3	9-8		
34	9 38-5	9 40-1	9 12-1	3-4	2-2	9-4	6-0	15-4	9-9		
35	9 38-8	9 40-3	9 12-4	3-5	2-2	9-5	6-1	15-5	9-9		
36	9 39-0	9 40-6	9 12-6	3-6	2-3	9-6	6-2	15-6	10-0		
37	9 39-3	9 40-8	9 12-9	3-7	2-4	9-7	6-2	15-7	10-1		
38	9 39-5	9 41-1	9 13-1	3-8	2-4	9-8	6-3	15-8	10-1		
39	9 39-8	9 41-3	9 13-3	3-9	2-5	9-9	6-4	15-9	10-2		
40	9 40-0	9 41-6	9 13-6	4-0	2-6	10-0	6-4	16-0	10-3		
41	9 40-3	9 41-8	9 13-8	4-1	2-6	10-1	6-5	16-1	10-3		
42	9 40-5	9 42-1	9 14-1	4-2	2-7	10-2	6-5	16-2	10-4		
43	9 40-8	9 42-3	9 14-3	4-3	2-8	10-3	6-6	16-3	10-5		
44	9 41-0	9 42-6	9 14-5	4-4	2-8	10-4	6-7	16-4	10-5		
45	9 41-3	9 42-8	9 14-8	4-5	2-9	10-5	6-7	16-5	10-6		
46	9 41-5	9 43-1	9 15-0	4-6	3-0	10-6	6-8	16-6	10-7		
47	9 41-8	9 43-3	9 15-2	4-7	3-0	10-7	6-9	16-7	10-7		
48	9 42-0	9 43-6	9 15-5	4-8	3-1	10-8	6-9	16-8	10-8		
49	9 42-3	9 43-8	9 15-7	4-9	3-1	10-9	7-0	16-9	10-8		
50	9 42-5	9 44-1	9 16-0	5-0	3-2	11-0	7-1	17-0	10-9		
51	9 42-8	9 44-3	9 16-2	5-1	3-3	11-1	7-1	17-1	11-0		
52	9 43-0	9 44-6	9 16-4	5-2	3-3	11-2	7-2	17-2	11-0		
53	9 43-3	9 44-8	9 16-7	5-3	3-4	11-3	7-3	17-3	11-1		
54	9 43-5	9 45-1	9 16-9	5-4	3-5	11-4	7-3	17-4	11-2		
55	9 43-8	9 45-3	9 17-2	5-5	3-5	11-5	7-4	17-5	11-2		
56	9 44-0	9 45-6	9 17-4	5-6	3-6	11-6	7-4	17-6	11-3		
57	9 44-3	9 45-8	9 17-6	5-7	3-7	11-7	7-5	17-7	11-4		
58	9 44-5	9 46-1	9 17-9	5-8	3-7	11-8	7-6	17-8	11-4		
59	9 44-8	9 46-4	9 18-1	5-9	3-8	11-9	7-6	17-9	11-5		
60	9 45-0	9 46-6	9 18-4	6-0	3-9	12-0	7-7	18-0	11-6		

39 ^m	SOL PLANETAS			ARIES	LUNA	v		v		v	
	s	c	'			o	d	o	d	o	d
00	9 45-0	9 46-6	9 18-4	0-0	0-0	6-0	4-0	12-0	7-9		
01	9 45-3	9 46-9	9 18-6	0-1	0-1	6-1	4-0	12-1	8-0		
02	9 45-5	9 47-1	9 18-8	0-2	0-1	6-2	4-1	12-2	8-0		
03	9 45-8	9 47-4	9 19-1	0-3	0-2	6-3	4-1	12-3	8-1		
04	9 46-0	9 47-6	9 19-3	0-4	0-3	6-4	4-2	12-4	8-2		
05	9 46-3	9 47-9	9 19-5	0-5	0-3	6-5	4-3	12-5	8-2		
06	9 46-5	9 48-1	9 19-8	0-6	0-4	6-6	4-3	12-6	8-3		
07	9 46-8	9 48-4	9 20-0	0-7	0-5	6-7	4-4	12-7	8-4		
08	9 47-0	9 48-6	9 20-3	0-8	0-5	6-8	4-5	12-8	8-4		
09	9 47-3	9 48-9	9 20-5	0-9	0-6	6-9	4-5	12-9	8-5		
10	9 47-5	9 49-1	9 20-7	1-0	0-7	7-0	4-6	13-0	8-6		
11	9 47-8	9 49-4	9 21-0	1-1	0-7	7-1	4-7	13-1	8-6		
12	9 48-0	9 49-6	9 21-2	1-2	0-8	7-2	4-7	13-2	8-7		
13	9 48-3	9 49-9	9 21-5	1-3	0-9	7-3	4-8	13-3	8-8		
14	9 48-5	9 50-1	9 21-7	1-4	0-9	7-4	4-9	13-4	8-8		
15	9 48-8	9 50-4	9 21-9	1-5	1-0	7-5	4-9	13-5	8-9		
16	9 49-0	9 50-6	9 22-2	1-6	1-1	7-6	5-0	13-6	9-0		
17	9 49-3	9 50-9	9 22-4	1-7	1-1	7-7	5-1	13-7	9-0		
18	9 49-5	9 51-1	9 22-6	1-8	1-2	7-8	5-1	13-8	9-1		
19	9 49-8	9 51-4	9 22-9	1-9	1-3	7-9	5-2	13-9	9-2		
20	9 50-0	9 51-6	9 23-1	2-0	1-3	8-0	5-3	14-0	9-2		
21	9 50-3	9 51-9	9 23-4	2-1	1-4	8-1	5-3	14-1	9-3		
22	9 50-5	9 52-1	9 23-6	2-2	1-4	8-2	5-4	14-2	9-3		
23	9 50-8	9 52-4	9 23-8	2-3	1-5	8-3	5-5	14-3	9-4		
24	9 51-0	9 52-6	9 24-1	2-4	1-6	8-4	5-5	14-4	9-5		
25	9 51-3	9 52-9	9 24-3	2-5	1-6	8-5	5-6	14-5	9-5		
26	9 51-5	9 53-1	9 24-6	2-6	1-7	8-6	5-7	14-6	9-6		
27	9 51-8	9 53-4	9 24-8	2-7	1-8	8-7	5-7	14-7	9-7		
28	9 52-0	9 53-6	9 25-0	2-8	1-8	8-8	5-8	14-8	9-7		
29	9 52-3	9 53-9	9 25-3	2-9	1-9	8-9	5-9	14-9	9-8		
30	9 52-5	9 54-1	9 25-5	3-0	2-0	9-0	5-9	15-0	9-9		
31	9 52-8	9 54-4	9 25-7	3-1	2-0	9-1	6-0	15-1	9-9		
32	9 53-0	9 54-6	9 26-0	3-2	2-1	9-2	6-1	15-2	10-0		
33	9 53-3	9 54-9	9 26-2	3-3	2-2	9-3	6-1	15-3	10-1		
34	9 53-5	9 55-1	9 26-5	3-4	2-2	9-4	6-2	15-4	10-1		
35	9 53-8	9 55-4	9 26-7	3-5	2-3	9-5	6-3	15-5	10-2		
36	9 54-0	9 55-6	9 26-9	3-6	2-4	9-6	6-3	15-6	10-3		
37	9 54-3	9 55-9	9 27-2	3-7	2-4	9-7	6-4	15-7	10-3		
38	9 54-5	9 56-1	9 27-4	3-8	2-5	9-8	6-5	15-8	10-4		
39	9 54-8	9 56-4	9 27-7	3-9	2-6	9-9	6-5	15-9	10-5		
40	9 55-0	9 56-6	9 27-9	4-0	2-6	10-0	6-6	16-0	10-5		
41	9 55-3	9 56-9	9 28-1	4-1	2-7	10-1	6-6	16-1	10-6		
42	9 55-5	9 57-1	9 28-4	4-2	2-8	10-2	6-7	16-2	10-7		
43	9 55-8	9 57-4	9 28-6	4-3	2-8	10-3	6-8	16-3	10-7		
44	9 56-0	9 57-6	9 28-8	4-4	2-9	10-4	6-8	16-4	10-8		
45	9 56-3	9 57-9	9 29-1	4-5	3-0	10-5	6-9	16-5	10-9		
46	9 56-5	9 58-1	9 29-3	4-6	3-0	10-6	7-0	16-6	10-9		
47	9 56-8	9 58-4	9 29-6	4-7	3-1	10-7	7-0	16-7	11-0		
48	9 57-0	9 58-6	9 29-8	4-8	3-2	10-8	7-1	16-8	11-1		
49	9 57-3	9 58-9	9 30-0	4-9	3-2	10-9	7-2	16-9	11-1		
50	9 57-5	9 59-1	9 30-3	5-0	3-3	11-0	7-2	17-0	11-2		
51	9 57-8	9 59-4	9 30-5	5-1	3-4	11-1	7-3	17-1	11-3		
52	9 58-0	9 59-6	9 30-8	5-2	3-4	11-2	7-4	17-2	11-3		
53	9 58-3	9 59-9	9 31-0	5-3	3-5	11-3	7-4	17-3	11-4		
5											

40 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ		
	s	o /			d	d	d	d	d	d	d
00	10 00-0	10 01-6	9 32-7	0-0	0-0	6-0	4-1	12-0	8-1		
01	10 00-3	10 01-9	9 32-9	0-1	0-1	6-1	4-1	12-1	8-2		
02	10 00-5	10 02-1	9 33-1	0-2	0-1	6-2	4-2	12-2	8-2		
03	10 00-8	10 02-4	9 33-4	0-3	0-2	6-3	4-3	12-3	8-3		
04	10 01-0	10 02-6	9 33-6	0-4	0-3	6-4	4-3	12-4	8-4		
05	10 01-3	10 02-9	9 33-9	0-5	0-3	6-5	4-4	12-5	8-4		
06	10 01-5	10 03-1	9 34-1	0-6	0-4	6-6	4-5	12-6	8-5		
07	10 01-8	10 03-4	9 34-3	0-7	0-5	6-7	4-5	12-7	8-6		
08	10 02-0	10 03-6	9 34-6	0-8	0-5	6-8	4-6	12-8	8-6		
09	10 02-3	10 03-9	9 34-8	0-9	0-6	6-9	4-7	12-9	8-7		
10	10 02-5	10 04-1	9 35-1	1-0	0-7	7-0	4-7	13-0	8-8		
11	10 02-8	10 04-4	9 35-3	1-1	0-7	7-1	4-8	13-1	8-8		
12	10 03-0	10 04-7	9 35-5	1-2	0-8	7-2	4-9	13-2	8-9		
13	10 03-3	10 04-9	9 35-8	1-3	0-9	7-3	4-9	13-3	9-0		
14	10 03-5	10 05-2	9 36-0	1-4	0-9	7-4	5-0	13-4	9-0		
15	10 03-8	10 05-4	9 36-2	1-5	1-0	7-5	5-1	13-5	9-1		
16	10 04-0	10 05-7	9 36-5	1-6	1-1	7-6	5-1	13-6	9-2		
17	10 04-3	10 05-9	9 36-7	1-7	1-1	7-7	5-2	13-7	9-2		
18	10 04-5	10 06-2	9 37-0	1-8	1-2	7-8	5-3	13-8	9-3		
19	10 04-8	10 06-4	9 37-2	1-9	1-3	7-9	5-3	13-9	9-4		
20	10 05-0	10 06-7	9 37-4	2-0	1-4	8-0	5-4	14-0	9-5		
21	10 05-3	10 06-9	9 37-7	2-1	1-4	8-1	5-5	14-1	9-5		
22	10 05-5	10 07-2	9 37-9	2-2	1-5	8-2	5-5	14-2	9-6		
23	10 05-8	10 07-4	9 38-2	2-3	1-6	8-3	5-6	14-3	9-7		
24	10 06-0	10 07-7	9 38-4	2-4	1-6	8-4	5-7	14-4	9-7		
25	10 06-3	10 07-9	9 38-6	2-5	1-7	8-5	5-7	14-5	9-8		
26	10 06-5	10 08-2	9 38-9	2-6	1-8	8-6	5-8	14-6	9-9		
27	10 06-8	10 08-4	9 39-1	2-7	1-8	8-7	5-9	14-7	9-9		
28	10 07-0	10 08-7	9 39-3	2-8	1-9	8-8	5-9	14-8	10-0		
29	10 07-3	10 08-9	9 39-6	2-9	2-0	8-9	6-0	14-9	10-1		
30	10 07-5	10 09-2	9 39-8	3-0	2-0	9-0	6-1	15-0	10-1		
31	10 07-8	10 09-4	9 40-1	3-1	2-1	9-1	6-1	15-1	10-2		
32	10 08-0	10 09-7	9 40-3	3-2	2-2	9-2	6-2	15-2	10-3		
33	10 08-3	10 09-9	9 40-5	3-3	2-2	9-3	6-3	15-3	10-3		
34	10 08-5	10 10-2	9 40-8	3-4	2-3	9-4	6-3	15-4	10-4		
35	10 08-8	10 10-4	9 41-0	3-5	2-4	9-5	6-4	15-5	10-5		
36	10 09-0	10 10-7	9 41-3	3-6	2-4	9-6	6-5	15-6	10-5		
37	10 09-3	10 10-9	9 41-5	3-7	2-5	9-7	6-5	15-7	10-6		
38	10 09-5	10 11-2	9 41-7	3-8	2-6	9-8	6-6	15-8	10-7		
39	10 09-8	10 11-4	9 42-0	3-9	2-6	9-9	6-7	15-9	10-7		
40	10 10-0	10 11-7	9 42-2	4-0	2-7	10-0	6-8	16-0	10-8		
41	10 10-3	10 11-9	9 42-4	4-1	2-8	10-1	6-8	16-1	10-9		
42	10 10-5	10 12-2	9 42-7	4-2	2-8	10-2	6-9	16-2	10-9		
43	10 10-8	10 12-4	9 42-9	4-3	2-9	10-3	7-0	16-3	11-0		
44	10 11-0	10 12-7	9 43-2	4-4	3-0	10-4	7-0	16-4	11-1		
45	10 11-3	10 12-9	9 43-4	4-5	3-0	10-5	7-1	16-5	11-1		
46	10 11-5	10 13-2	9 43-6	4-6	3-1	10-6	7-2	16-6	11-2		
47	10 11-8	10 13-4	9 43-9	4-7	3-2	10-7	7-2	16-7	11-3		
48	10 12-0	10 13-7	9 44-1	4-8	3-2	10-8	7-3	16-8	11-3		
49	10 12-3	10 13-9	9 44-4	4-9	3-3	10-9	7-4	16-9	11-4		
50	10 12-5	10 14-2	9 44-6	5-0	3-4	11-0	7-4	17-0	11-5		
51	10 12-8	10 14-4	9 44-8	5-1	3-4	11-1	7-5	17-1	11-5		
52	10 13-0	10 14-7	9 45-1	5-2	3-5	11-2	7-6	17-2	11-6		
53	10 13-3	10 14-9	9 45-3	5-3	3-6	11-3	7-6	17-3	11-7		
54	10 13-5	10 15-2	9 45-6	5-4	3-6	11-4	7-7	17-4	11-7		
55	10 13-8	10 15-4	9 45-8	5-5	3-7	11-5	7-8	17-5	11-8		
56	10 14-0	10 15-7	9 46-0	5-6	3-8	11-6	7-8	17-6	11-9		
57	10 14-3	10 15-9	9 46-3	5-7	3-8	11-7	7-9	17-7	11-9		
58	10 14-5	10 16-2	9 46-5	5-8	3-9	11-8	8-0	17-8	12-0		
59	10 14-8	10 16-4	9 46-7	5-9	4-0	11-9	8-0	17-9	12-1		
60	10 15-0	10 16-7	9 47-0	6-0	4-1	12-0	8-1	18-0	12-2		

41 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ		
	s	o /			d	d	d	d	d	d	d
00	10 15-0	10 16-7	9 47-0	0-0	0-0	6-0	4-2	12-0	8-3		
01	10 15-3	10 16-9	9 47-2	0-1	0-1	6-1	4-2	12-1	8-4		
02	10 15-5	10 17-2	9 47-5	0-2	0-1	6-2	4-3	12-2	8-4		
03	10 15-8	10 17-4	9 47-7	0-3	0-2	6-3	4-4	12-3	8-5		
04	10 16-0	10 17-7	9 47-9	0-4	0-3	6-4	4-4	12-4	8-6		
05	10 16-3	10 17-9	9 48-2	0-5	0-3	6-5	4-5	12-5	8-6		
06	10 16-5	10 18-2	9 48-4	0-6	0-4	6-6	4-6	12-6	8-7		
07	10 16-8	10 18-4	9 48-7	0-7	0-5	6-7	4-6	12-7	8-8		
08	10 17-0	10 18-7	9 48-9	0-8	0-6	6-8	4-7	12-8	8-9		
09	10 17-3	10 18-9	9 49-1	0-9	0-6	6-9	4-8	12-9	8-9		
10	10 17-5	10 19-2	9 49-4	1-0	0-7	7-0	4-8	13-0	9-0		
11	10 17-8	10 19-4	9 49-6	1-1	0-8	7-1	4-9	13-1	9-1		
12	10 18-0	10 19-7	9 49-8	1-2	0-8	7-2	5-0	13-2	9-1		
13	10 18-3	10 19-9	9 50-1	1-3	0-9	7-3	5-0	13-3	9-2		
14	10 18-5	10 20-2	9 50-3	1-4	1-0	7-4	5-1	13-4	9-3		
15	10 18-8	10 20-4	9 50-6	1-5	1-0	7-5	5-2	13-5	9-3		
16	10 19-0	10 20-7	9 50-8	1-6	1-1	7-6	5-3	13-6	9-4		
17	10 19-3	10 20-9	9 51-0	1-7	1-2	7-7	5-3	13-7	9-5		
18	10 19-5	10 21-2	9 51-3	1-8	1-2	7-8	5-4	13-8	9-5		
19	10 19-8	10 21-4	9 51-5	1-9	1-3	7-9	5-5	13-9	9-6		
20	10 20-0	10 21-7	9 51-8	2-0	1-4	8-0	5-5	14-0	9-7		
21	10 20-3	10 21-9	9 52-0	2-1	1-5	8-1	5-6	14-1	9-8		
22	10 20-5	10 22-2	9 52-2	2-2	1-5	8-2	5-7	14-2	9-8		
23	10 20-8	10 22-4	9 52-5	2-3	1-6	8-3	5-7	14-3	9-9		
24	10 21-0	10 22-7	9 52-7	2-4	1-7	8-4	5-8	14-4	10-0		
25	10 21-3	10 23-0	9 52-9	2-5	1-7	8-5	5-9	14-5	10-0		
26	10 21-5	10 23-2	9 53-2	2-6	1-8	8-6	5-9	14-6	10-1		
27	10 21-8	10 23-5	9 53-4	2-7	1-9	8-7	6-0	14-7	10-2		
28	10 22-0	10 23-7	9 53-7	2-8	1-9	8-8	6-1	14-8	10-2		
29	10 22-3	10 24-0	9 53-9	2-9	2-0	8-9	6-2	14-9	10-3		
30	10 22-5	10 24-2	9 54-1	3-0	2-1	9-0	6-2	15-0	10-4		
31	10 22-8	10 24-5	9 54-4	3-1	2-1	9-1	6-3	15-1	10-4		
32	10 23-0	10 24-7	9 54-6	3-2	2-2	9-2	6-4	15-2	10-5		
33	10 23-3	10 25-0	9 54-9	3-3	2-3	9-3	6-4	15-3	10-6		
34	10 23-5	10 25-2	9 55-1	3-4	2-4	9-4	6-5	15-4	10-7		
35	10 23-8	10 25-5	9 55-3	3-5	2-4	9-5	6-6	15-5	10-7		
36	10 24-0	10 25-7	9 55-6	3-6	2-5	9-6	6-6	15-6	10-8		
37	10 24-3	10 26-0	9 55-8	3-7	2-6	9-7	6-7	15-7	10-9		
38	10 24-5	10 26-2	9 56-1	3-8	2-6	9-8	6-8	15-8	10-9		
39	10 24-8	10 26-5	9 56-3	3-9	2-7	9-9	6-8	15-9	11-0		
40	10 25-0	10 26-7	9 56-5	4-0	2-8	10-0	6-9	16-0	11-1		
41	10 25-3	10 27-0	9 56-8	4-1	2-8	10-1	7-0	16-1	11-1		
42	10 25-5	10 27-2	9 57-0	4-2	2-9	10-2	7-1	16-2	11-2		
43	10 25-8	10 27-5	9 57-2	4-3	3-0	10-3	7-1	16-3	11-3		
44	10 26-0	10 27-7	9 57-5	4-4	3-0	10-4	7-2	16-4	11-3		
45	10 26-3	10 28-0	9 57-7	4-5	3-1	10-5	7-3	16-5	11-4		
46	10 26-5	10 28-2	9 58-0	4-6	3-2	10-6	7-3	16-6	11-5		
47	10 26-8	10 28-5	9 58-2	4-7	3-3	10-7	7-4	16-7	11-6		
48	10 27-0	10 28-7	9 58-4	4-8	3-3	10-8	7-5	16-8	11-6		
49	10 27-3	10 29-0	9 58-7	4-9	3-4	10-9	7-5	16-9	11-7		
50	10 27-5	10 29-2	9 58-9	5-0	3-5	11-0	7-6	17-0	11-8		
51	10 27-8	10									

42 ^m	SOL PLANETAS		ARIES	LUNA	v o d		Corr ⁿ		v o d		Corr ⁿ	
	s	o			o	o	o	o	o	o	o	o
00	10 30-0	10 31-7	10 01-3	0-0	0-0	6-0	4-3	12-0	8-5			
01	10 30-3	10 32-0	10 01-5	0-1	0-1	6-1	4-3	12-1	8-6			
02	10 30-5	10 32-2	10 01-8	0-2	0-1	6-2	4-4	12-2	8-6			
03	10 30-8	10 32-5	10 02-0	0-3	0-2	6-3	4-5	12-3	8-7			
04	10 31-0	10 32-7	10 02-3	0-4	0-3	6-4	4-5	12-4	8-8			
05	10 31-3	10 33-0	10 02-5	0-5	0-4	6-5	4-6	12-5	8-9			
06	10 31-5	10 33-2	10 02-7	0-6	0-4	6-6	4-7	12-6	8-9			
07	10 31-8	10 33-5	10 03-0	0-7	0-5	6-7	4-7	12-7	9-0			
08	10 32-0	10 33-7	10 03-2	0-8	0-6	6-8	4-8	12-8	9-1			
09	10 32-3	10 34-0	10 03-4	0-9	0-6	6-9	4-9	12-9	9-1			
10	10 32-5	10 34-2	10 03-7	1-0	0-7	7-0	5-0	13-0	9-2			
11	10 32-8	10 34-5	10 03-9	1-1	0-8	7-1	5-0	13-1	9-3			
12	10 33-0	10 34-7	10 04-2	1-2	0-9	7-2	5-1	13-2	9-4			
13	10 33-3	10 35-0	10 04-4	1-3	0-9	7-3	5-2	13-3	9-4			
14	10 33-5	10 35-2	10 04-6	1-4	1-0	7-4	5-2	13-4	9-5			
15	10 33-8	10 35-5	10 04-9	1-5	1-1	7-5	5-3	13-5	9-6			
16	10 34-0	10 35-7	10 05-1	1-6	1-1	7-6	5-4	13-6	9-6			
17	10 34-3	10 36-0	10 05-4	1-7	1-2	7-7	5-5	13-7	9-7			
18	10 34-5	10 36-2	10 05-6	1-8	1-3	7-8	5-5	13-8	9-8			
19	10 34-8	10 36-5	10 05-8	1-9	1-3	7-9	5-6	13-9	9-8			
20	10 35-0	10 36-7	10 06-1	2-0	1-4	8-0	5-7	14-0	9-9			
21	10 35-3	10 37-0	10 06-3	2-1	1-5	8-1	5-7	14-1	10-0			
22	10 35-5	10 37-2	10 06-5	2-2	1-6	8-2	5-8	14-2	10-1			
23	10 35-8	10 37-5	10 06-8	2-3	1-6	8-3	5-9	14-3	10-1			
24	10 36-0	10 37-7	10 07-0	2-4	1-7	8-4	6-0	14-4	10-2			
25	10 36-3	10 38-0	10 07-3	2-5	1-8	8-5	6-0	14-5	10-3			
26	10 36-5	10 38-2	10 07-5	2-6	1-8	8-6	6-1	14-6	10-3			
27	10 36-8	10 38-5	10 07-7	2-7	1-9	8-7	6-2	14-7	10-4			
28	10 37-0	10 38-7	10 08-0	2-8	2-0	8-8	6-2	14-8	10-5			
29	10 37-3	10 39-0	10 08-2	2-9	2-1	8-9	6-3	14-9	10-6			
30	10 37-5	10 39-2	10 08-5	3-0	2-1	9-0	6-4	15-0	10-6			
31	10 37-8	10 39-5	10 08-7	3-1	2-2	9-1	6-4	15-1	10-7			
32	10 38-0	10 39-7	10 08-9	3-2	2-3	9-2	6-5	15-2	10-8			
33	10 38-3	10 40-0	10 09-2	3-3	2-3	9-3	6-6	15-3	10-8			
34	10 38-5	10 40-2	10 09-4	3-4	2-4	9-4	6-7	15-4	10-9			
35	10 38-8	10 40-5	10 09-7	3-5	2-5	9-5	6-7	15-5	11-0			
36	10 39-0	10 40-7	10 09-9	3-6	2-6	9-6	6-8	15-6	11-1			
37	10 39-3	10 41-0	10 10-1	3-7	2-6	9-7	6-9	15-7	11-1			
38	10 39-5	10 41-3	10 10-4	3-8	2-7	9-8	6-9	15-8	11-2			
39	10 39-8	10 41-5	10 10-6	3-9	2-8	9-9	7-0	15-9	11-3			
40	10 40-0	10 41-8	10 10-8	4-0	2-8	10-0	7-1	16-0	11-3			
41	10 40-3	10 42-0	10 11-1	4-1	2-9	10-1	7-2	16-1	11-4			
42	10 40-5	10 42-3	10 11-3	4-2	3-0	10-2	7-2	16-2	11-5			
43	10 40-8	10 42-5	10 11-6	4-3	3-0	10-3	7-3	16-3	11-5			
44	10 41-0	10 42-8	10 11-8	4-4	3-1	10-4	7-4	16-4	11-6			
45	10 41-3	10 43-0	10 12-0	4-5	3-2	10-5	7-4	16-5	11-7			
46	10 41-5	10 43-3	10 12-3	4-6	3-3	10-6	7-5	16-6	11-8			
47	10 41-8	10 43-5	10 12-5	4-7	3-3	10-7	7-6	16-7	11-8			
48	10 42-0	10 43-8	10 12-8	4-8	3-4	10-8	7-7	16-8	11-9			
49	10 42-3	10 44-0	10 13-0	4-9	3-5	10-9	7-7	16-9	12-0			
50	10 42-5	10 44-3	10 13-2	5-0	3-5	11-0	7-8	17-0	12-0			
51	10 42-8	10 44-5	10 13-5	5-1	3-6	11-1	7-9	17-1	12-1			
52	10 43-0	10 44-8	10 13-7	5-2	3-7	11-2	7-9	17-2	12-2			
53	10 43-3	10 45-0	10 13-9	5-3	3-8	11-3	8-0	17-3	12-3			
54	10 43-5	10 45-3	10 14-2	5-4	3-8	11-4	8-1	17-4	12-3			
55	10 43-8	10 45-5	10 14-4	5-5	3-9	11-5	8-1	17-5	12-4			
56	10 44-0	10 45-8	10 14-7	5-6	4-0	11-6	8-2	17-6	12-5			
57	10 44-3	10 46-0	10 14-9	5-7	4-0	11-7	8-3	17-7	12-5			
58	10 44-5	10 46-3	10 15-1	5-8	4-1	11-8	8-4	17-8	12-6			
59	10 44-8	10 46-5	10 15-4	5-9	4-2	11-9	8-4	17-9	12-7			
60	10 45-0	10 46-8	10 15-6	6-0	4-3	12-0	8-5	18-0	12-8			

43 ^m	SOL PLANETAS		ARIES	LUNA	v o d		Corr ⁿ		v o d		Corr ⁿ	
	s	o			o	o	o	o	o	o	o	o
00	10 45-0	10 46-8	10 15-6	0-0	0-0	6-0	4-4	12-0	8-7			
01	10 45-3	10 47-0	10 15-9	0-1	0-1	6-1	4-4	12-1	8-8			
02	10 45-5	10 47-3	10 16-1	0-2	0-1	6-2	4-5	12-2	8-8			
03	10 45-8	10 47-5	10 16-3	0-3	0-2	6-3	4-6	12-3	8-9			
04	10 46-0	10 47-8	10 16-6	0-4	0-3	6-4	4-6	12-4	9-0			
05	10 46-3	10 48-0	10 16-8	0-5	0-4	6-5	4-7	12-5	9-1			
06	10 46-5	10 48-3	10 17-0	0-6	0-4	6-6	4-8	12-6	9-1			
07	10 46-8	10 48-5	10 17-3	0-7	0-5	6-7	4-9	12-7	9-2			
08	10 47-0	10 48-8	10 17-5	0-8	0-6	6-8	4-9	12-8	9-3			
09	10 47-3	10 49-0	10 17-8	0-9	0-7	6-9	5-0	12-9	9-4			
10	10 47-5	10 49-3	10 18-0	1-0	0-7	7-0	5-1	13-0	9-4			
11	10 47-8	10 49-5	10 18-2	1-1	0-8	7-1	5-1	13-1	9-5			
12	10 48-0	10 49-8	10 18-5	1-2	0-9	7-2	5-2	13-2	9-6			
13	10 48-3	10 50-0	10 18-7	1-3	0-9	7-3	5-3	13-3	9-6			
14	10 48-5	10 50-3	10 19-0	1-4	1-0	7-4	5-4	13-4	9-7			
15	10 48-8	10 50-5	10 19-2	1-5	1-1	7-5	5-4	13-5	9-8			
16	10 49-0	10 50-8	10 19-4	1-6	1-2	7-6	5-5	13-6	9-9			
17	10 49-3	10 51-0	10 19-7	1-7	1-2	7-7	5-6	13-7	9-9			
18	10 49-5	10 51-3	10 19-9	1-8	1-3	7-8	5-7	13-8	10-0			
19	10 49-8	10 51-5	10 20-2	1-9	1-4	7-9	5-7	13-9	10-1			
20	10 50-0	10 51-8	10 20-4	2-0	1-5	8-0	5-8	14-0	10-2			
21	10 50-3	10 52-0	10 20-6	2-1	1-5	8-1	5-9	14-1	10-2			
22	10 50-5	10 52-3	10 20-9	2-2	1-6	8-2	5-9	14-2	10-3			
23	10 50-8	10 52-5	10 21-1	2-3	1-7	8-3	6-0	14-3	10-4			
24	10 51-0	10 52-8	10 21-3	2-4	1-7	8-4	6-1	14-4	10-4			
25	10 51-3	10 53-0	10 21-6	2-5	1-8	8-5	6-2	14-5	10-5			
26	10 51-5	10 53-3	10 21-8	2-6	1-9	8-6	6-2	14-6	10-6			
27	10 51-8	10 53-5	10 22-1	2-7	2-0	8-7	6-3	14-7	10-7			
28	10 52-0	10 53-8	10 22-3	2-8	2-0	8-8	6-4	14-8	10-7			
29	10 52-3	10 54-0	10 22-5	2-9	2-1	8-9	6-5	14-9	10-8			
30	10 52-5	10 54-3	10 22-8	3-0	2-2	9-0	6-5	15-0	10-9			
31	10 52-8	10 54-5	10 23-0	3-1	2-2	9-1	6-6	15-1	10-9			
32	10 53-0	10 54-8	10 23-3	3-2	2-3	9-2	6-7	15-2	11-0			
33	10 53-3	10 55-0	10 23-5	3-3	2-4	9-3	6-7	15-3	11-1			
34	10 53-5	10 55-3	10 23-7	3-4	2-5	9-4	6-8	15-4	11-2			
35	10 53-8	10 55-5	10 24-0	3-5	2-5	9-5	6-9	15-5	11-2			
36	10 54-0	10 55-8	10 24-2	3-6	2-6	9-6	7-0	15-6	11-3			
37	10 54-3	10 56-0	10 24-4	3-7	2-7	9-7	7-0	15-7	11-4			
38	10 54-5	10 56-3	10 24-7	3-8	2-8	9-8	7-1	15-8	11-5			
39	10 54-8	10 56-5	10 24-9	3-9	2-8	9-9	7-2	15-9	11-5			
40	10 55-0	10 56-8	10 25-2	4-0	2-9	10-0	7-3	16-0	11-6			
41	10 55-3	10 57-0	10 25-4	4-1	3-0	10-1	7-3	16-1	11-7			
42	10 55-5	10 57-3	10 25-6	4-2	3-0	10-2	7-4	16-2	11-7			
43	10 55-8	10 57-5	10 25-9	4-3	3-1	10-3	7-5	16-3	11-8			
44	10 56-0	10 57-8	10 26-1	4-4	3-2	10-4	7-5	16-4	11-9			
45	10 56-3	10 58-0	10 26-4	4-5	3-3	10-5	7-6	16-5	12-0			
46</												

44 ^m	SOL PLANETAS		ARIES	LUNA		v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /		o /	o /	/ /	/ /	/ /	/ /	/ /	
00	11 00-0	11 01-8	10 29-9	0-0	0-0	6-0	4-5	12-0	8-9		
01	11 00-3	11 02-1	10 30-2	0-1	0-1	6-1	4-5	12-1	9-0		
02	11 00-5	11 02-3	10 30-4	0-2	0-1	6-2	4-6	12-2	9-0		
03	11 00-8	11 02-6	10 30-6	0-3	0-2	6-3	4-7	12-3	9-1		
04	11 01-0	11 02-8	10 30-9	0-4	0-3	6-4	4-7	12-4	9-2		
05	11 01-3	11 03-1	10 31-1	0-5	0-4	6-5	4-8	12-5	9-3		
06	11 01-5	11 03-3	10 31-4	0-6	0-4	6-6	4-9	12-6	9-3		
07	11 01-8	11 03-6	10 31-6	0-7	0-5	6-7	5-0	12-7	9-4		
08	11 02-0	11 03-8	10 31-8	0-8	0-6	6-8	5-0	12-8	9-5		
09	11 02-3	11 04-1	10 32-1	0-9	0-7	6-9	5-1	12-9	9-6		
10	11 02-5	11 04-3	10 32-3	1-0	0-7	7-0	5-2	13-0	9-6		
11	11 02-8	11 04-6	10 32-6	1-1	0-8	7-1	5-3	13-1	9-7		
12	11 03-0	11 04-8	10 32-8	1-2	0-9	7-2	5-3	13-2	9-8		
13	11 03-3	11 05-1	10 33-0	1-3	1-0	7-3	5-4	13-3	9-9		
14	11 03-5	11 05-3	10 33-3	1-4	1-0	7-4	5-5	13-4	9-9		
15	11 03-8	11 05-6	10 33-5	1-5	1-1	7-5	5-6	13-5	10-0		
16	11 04-0	11 05-8	10 33-8	1-6	1-2	7-6	5-6	13-6	10-1		
17	11 04-3	11 06-1	10 34-0	1-7	1-3	7-7	5-7	13-7	10-2		
18	11 04-5	11 06-3	10 34-2	1-8	1-3	7-8	5-8	13-8	10-2		
19	11 04-8	11 06-6	10 34-5	1-9	1-4	7-9	5-9	13-9	10-3		
20	11 05-0	11 06-8	10 34-7	2-0	1-5	8-0	5-9	14-0	10-4		
21	11 05-3	11 07-1	10 34-9	2-1	1-6	8-1	6-0	14-1	10-5		
22	11 05-5	11 07-3	10 35-2	2-2	1-6	8-2	6-1	14-2	10-5		
23	11 05-8	11 07-6	10 35-4	2-3	1-7	8-3	6-2	14-3	10-6		
24	11 06-0	11 07-8	10 35-7	2-4	1-8	8-4	6-2	14-4	10-7		
25	11 06-3	11 08-1	10 35-9	2-5	1-9	8-5	6-3	14-5	10-8		
26	11 06-5	11 08-3	10 36-1	2-6	1-9	8-6	6-4	14-6	10-8		
27	11 06-8	11 08-6	10 36-4	2-7	2-0	8-7	6-5	14-7	10-9		
28	11 07-0	11 08-8	10 36-6	2-8	2-1	8-8	6-5	14-8	11-0		
29	11 07-3	11 09-1	10 36-9	2-9	2-2	8-9	6-6	14-9	11-1		
30	11 07-5	11 09-3	10 37-1	3-0	2-2	9-0	6-7	15-0	11-1		
31	11 07-8	11 09-6	10 37-3	3-1	2-3	9-1	6-7	15-1	11-2		
32	11 08-0	11 09-8	10 37-6	3-2	2-4	9-2	6-8	15-2	11-3		
33	11 08-3	11 10-1	10 37-8	3-3	2-4	9-3	6-9	15-3	11-3		
34	11 08-5	11 10-3	10 38-0	3-4	2-5	9-4	7-0	15-4	11-4		
35	11 08-8	11 10-6	10 38-3	3-5	2-6	9-5	7-0	15-5	11-5		
36	11 09-0	11 10-8	10 38-5	3-6	2-7	9-6	7-1	15-6	11-6		
37	11 09-3	11 11-1	10 38-8	3-7	2-7	9-7	7-2	15-7	11-6		
38	11 09-5	11 11-3	10 39-0	3-8	2-8	9-8	7-3	15-8	11-7		
39	11 09-8	11 11-6	10 39-2	3-9	2-9	9-9	7-3	15-9	11-8		
40	11 10-0	11 11-8	10 39-5	4-0	3-0	10-0	7-4	16-0	11-9		
41	11 10-3	11 12-1	10 39-7	4-1	3-0	10-1	7-5	16-1	11-9		
42	11 10-5	11 12-3	10 40-0	4-2	3-1	10-2	7-6	16-2	12-0		
43	11 10-8	11 12-6	10 40-2	4-3	3-2	10-3	7-6	16-3	12-1		
44	11 11-0	11 12-8	10 40-4	4-4	3-3	10-4	7-7	16-4	12-2		
45	11 11-3	11 13-1	10 40-7	4-5	3-3	10-5	7-8	16-5	12-2		
46	11 11-5	11 13-3	10 40-9	4-6	3-4	10-6	7-9	16-6	12-3		
47	11 11-8	11 13-6	10 41-1	4-7	3-5	10-7	7-9	16-7	12-4		
48	11 12-0	11 13-8	10 41-4	4-8	3-6	10-8	8-0	16-8	12-5		
49	11 12-3	11 14-1	10 41-6	4-9	3-6	10-9	8-1	16-9	12-5		
50	11 12-5	11 14-3	10 41-9	5-0	3-7	11-0	8-2	17-0	12-6		
51	11 12-8	11 14-6	10 42-1	5-1	3-8	11-1	8-2	17-1	12-7		
52	11 13-0	11 14-8	10 42-3	5-2	3-9	11-2	8-3	17-2	12-8		
53	11 13-3	11 15-1	10 42-6	5-3	3-9	11-3	8-4	17-3	12-8		
54	11 13-5	11 15-3	10 42-8	5-4	4-0	11-4	8-5	17-4	12-9		
55	11 13-8	11 15-6	10 43-1	5-5	4-1	11-5	8-5	17-5	13-0		
56	11 14-0	11 15-8	10 43-3	5-6	4-2	11-6	8-6	17-6	13-1		
57	11 14-3	11 16-1	10 43-5	5-7	4-2	11-7	8-7	17-7	13-1		
58	11 14-5	11 16-3	10 43-8	5-8	4-3	11-8	8-8	17-8	13-2		
59	11 14-8	11 16-6	10 44-0	5-9	4-4	11-9	8-8	17-9	13-3		
60	11 15-0	11 16-8	10 44-3	6-0	4-5	12-0	8-9	18-0	13-4		

45 ^m	SOL PLANETAS		ARIES	LUNA		v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /		o /	o /	/ /	/ /	/ /	/ /	/ /	
00	11 15-0	11 16-8	10 44-3	0-0	0-0	6-0	4-6	12-0	9-1		
01	11 15-3	11 17-1	10 44-5	0-1	0-1	6-1	4-6	12-1	9-2		
02	11 15-5	11 17-3	10 44-7	0-2	0-2	6-2	4-7	12-2	9-3		
03	11 15-8	11 17-6	10 45-0	0-3	0-2	6-3	4-8	12-3	9-3		
04	11 16-0	11 17-9	10 45-2	0-4	0-3	6-4	4-9	12-4	9-4		
05	11 16-3	11 18-1	10 45-4	0-5	0-4	6-5	4-9	12-5	9-5		
06	11 16-5	11 18-4	10 45-7	0-6	0-5	6-6	5-0	12-6	9-6		
07	11 16-8	11 18-6	10 45-9	0-7	0-5	6-7	5-1	12-7	9-6		
08	11 17-0	11 18-9	10 46-2	0-8	0-6	6-8	5-2	12-8	9-7		
09	11 17-3	11 19-1	10 46-4	0-9	0-7	6-9	5-2	12-9	9-8		
10	11 17-5	11 19-4	10 46-6	1-0	0-8	7-0	5-3	13-0	9-9		
11	11 17-8	11 19-6	10 46-9	1-1	0-8	7-1	5-4	13-1	9-9		
12	11 18-0	11 19-9	10 47-1	1-2	0-9	7-2	5-5	13-2	10-0		
13	11 18-3	11 20-1	10 47-4	1-3	1-0	7-3	5-5	13-3	10-1		
14	11 18-5	11 20-4	10 47-6	1-4	1-1	7-4	5-6	13-4	10-2		
15	11 18-8	11 20-6	10 47-8	1-5	1-1	7-5	5-7	13-5	10-2		
16	11 19-0	11 20-9	10 48-1	1-6	1-2	7-6	5-8	13-6	10-3		
17	11 19-3	11 21-1	10 48-3	1-7	1-3	7-7	5-8	13-7	10-4		
18	11 19-5	11 21-4	10 48-5	1-8	1-4	7-8	5-9	13-8	10-5		
19	11 19-8	11 21-6	10 48-8	1-9	1-4	7-9	6-0	13-9	10-5		
20	11 20-0	11 21-9	10 49-0	2-0	1-5	8-0	6-1	14-0	10-6		
21	11 20-3	11 22-1	10 49-3	2-1	1-6	8-1	6-1	14-1	10-7		
22	11 20-5	11 22-4	10 49-5	2-2	1-7	8-2	6-2	14-2	10-8		
23	11 20-8	11 22-6	10 49-7	2-3	1-7	8-3	6-3	14-3	10-8		
24	11 21-0	11 22-9	10 50-0	2-4	1-8	8-4	6-4	14-4	10-9		
25	11 21-3	11 23-1	10 50-2	2-5	1-9	8-5	6-4	14-5	11-0		
26	11 21-5	11 23-4	10 50-5	2-6	2-0	8-6	6-5	14-6	11-1		
27	11 21-8	11 23-6	10 50-7	2-7	2-0	8-7	6-6	14-7	11-1		
28	11 22-0	11 23-9	10 50-9	2-8	2-1	8-8	6-7	14-8	11-2		
29	11 22-3	11 24-1	10 51-2	2-9	2-2	8-9	6-7	14-9	11-3		
30	11 22-5	11 24-4	10 51-4	3-0	2-3	9-0	6-8	15-0	11-4		
31	11 22-8	11 24-6	10 51-6	3-1	2-4	9-1	6-9	15-1	11-5		
32	11 23-0	11 24-9	10 51-9	3-2	2-4	9-2	7-0	15-2	11-5		
33	11 23-3	11 25-1	10 52-1	3-3	2-5	9-3	7-1	15-3	11-6		
34	11 23-5	11 25-4	10 52-4	3-4	2-6	9-4	7-1	15-4	11-7		
35	11 23-8	11 25-6	10 52-6	3-5	2-7	9-5	7-2	15-5	11-8		
36	11 24-0	11 25-9	10 52-8	3-6	2-7	9-6	7-3	15-6	11-8		
37	11 24-3	11 26-1	10 53-1	3-7	2-8	9-7	7-4	15-7	11-9		
38	11 24-5	11 26-4	10 53-3	3-8	2-9	9-8	7-4	15-8	12-0		
39	11 24-8	11 26-6	10 53-6	3-9	3-0	9-9	7-5	15-9	12-1		
40	11 25-0	11 26-9	10 53-8	4-0	3-0	10-0	7-6	16-0	12-1		
41	11 25-3	11 27-1	10 54-0	4-1	3-1	10-1	7-7	16-1	12-2		
42	11 25-5	11 27-4	10 54-3	4-2	3-2	10-2	7-7	16-2	12-3		
43	11 25-8	11 27-6	10 54-5	4-3	3-3	10-3	7-8	16-3	12-4		
44	11 26-0	11 27-9	10 54-7	4-4	3-3	10-4	7-9	16-4	12-4		
45	11 26-3	11 28-1	10 55-0	4-5	3-4	10-5	8-0	16-5	12-5		
46	11 26-5	11 28-4	10 55-2	4-6	3-5	10-6	8-0	16-6	12-6		
47	11 26-8	11 28-6	10 55-5	4-7	3-6	10-7	8-1	16-7	12-7		
48	11 27-0	11 28-9	10 55-7	4-8	3-6	10-8	8-2	16-8	12-7		
49	11 27-3	11 29-1	10 55-9	4-9	3-7	10-9	8-3	16-9	12-8		

46 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o / ' / "	o / ' / "	o / ' / "	' / "	' / "	' / "	' / "	' / "	' / "
00	11 30-0	11 31-9	10 58-6	0-0 0-0	6-0 4-7	12-0 9-3				
01	11 30-3	11 32-1	10 58-8	0-1 0-1	6-1 4-7	12-1 9-4				
02	11 30-5	11 32-4	10 59-0	0-2 0-2	6-2 4-8	12-2 9-5				
03	11 30-8	11 32-6	10 59-3	0-3 0-2	6-3 4-9	12-3 9-5				
04	11 31-0	11 32-9	10 59-5	0-4 0-3	6-4 5-0	12-4 9-6				
05	11 31-3	11 33-1	10 59-8	0-5 0-4	6-5 5-0	12-5 9-7				
06	11 31-5	11 33-4	11 00-0	0-6 0-5	6-6 5-1	12-6 9-8				
07	11 31-8	11 33-6	11 00-2	0-7 0-5	6-7 5-2	12-7 9-8				
08	11 32-0	11 33-9	11 00-5	0-8 0-6	6-8 5-3	12-8 9-9				
09	11 32-3	11 34-1	11 00-7	0-9 0-7	6-9 5-3	12-9 10-0				
10	11 32-5	11 34-4	11 01-0	1-0 0-8	7-0 5-4	13-0 10-1				
11	11 32-8	11 34-6	11 01-2	1-1 0-9	7-1 5-5	13-1 10-2				
12	11 33-0	11 34-9	11 01-4	1-2 0-9	7-2 5-6	13-2 10-2				
13	11 33-3	11 35-1	11 01-7	1-3 1-0	7-3 5-7	13-3 10-3				
14	11 33-5	11 35-4	11 01-9	1-4 1-1	7-4 5-7	13-4 10-4				
15	11 33-8	11 35-6	11 02-1	1-5 1-2	7-5 5-8	13-5 10-5				
16	11 34-0	11 35-9	11 02-4	1-6 1-2	7-6 5-9	13-6 10-5				
17	11 34-3	11 36-2	11 02-6	1-7 1-3	7-7 6-0	13-7 10-6				
18	11 34-5	11 36-4	11 02-9	1-8 1-4	7-8 6-0	13-8 10-7				
19	11 34-8	11 36-7	11 03-1	1-9 1-5	7-9 6-1	13-9 10-8				
20	11 35-0	11 36-9	11 03-3	2-0 1-6	8-0 6-2	14-0 10-9				
21	11 35-3	11 37-2	11 03-6	2-1 1-6	8-1 6-3	14-1 10-9				
22	11 35-5	11 37-4	11 03-8	2-2 1-7	8-2 6-4	14-2 11-0				
23	11 35-8	11 37-7	11 04-1	2-3 1-8	8-3 6-4	14-3 11-1				
24	11 36-0	11 37-9	11 04-3	2-4 1-9	8-4 6-5	14-4 11-2				
25	11 36-3	11 38-2	11 04-5	2-5 1-9	8-5 6-6	14-5 11-2				
26	11 36-5	11 38-4	11 04-8	2-6 2-0	8-6 6-7	14-6 11-3				
27	11 36-8	11 38-7	11 05-0	2-7 2-1	8-7 6-7	14-7 11-4				
28	11 37-0	11 38-9	11 05-2	2-8 2-2	8-8 6-8	14-8 11-5				
29	11 37-3	11 39-2	11 05-5	2-9 2-2	8-9 6-9	14-9 11-5				
30	11 37-5	11 39-4	11 05-7	3-0 2-3	9-0 7-0	15-0 11-6				
31	11 37-8	11 39-7	11 06-0	3-1 2-4	9-1 7-1	15-1 11-7				
32	11 38-0	11 39-9	11 06-2	3-2 2-5	9-2 7-1	15-2 11-8				
33	11 38-3	11 40-2	11 06-4	3-3 2-6	9-3 7-2	15-3 11-9				
34	11 38-5	11 40-4	11 06-7	3-4 2-6	9-4 7-3	15-4 11-9				
35	11 38-8	11 40-7	11 06-9	3-5 2-7	9-5 7-4	15-5 12-0				
36	11 39-0	11 40-9	11 07-2	3-6 2-8	9-6 7-4	15-6 12-1				
37	11 39-3	11 41-2	11 07-4	3-7 2-9	9-7 7-5	15-7 12-2				
38	11 39-5	11 41-4	11 07-6	3-8 2-9	9-8 7-6	15-8 12-2				
39	11 39-8	11 41-7	11 07-9	3-9 3-0	9-9 7-7	15-9 12-3				
40	11 40-0	11 41-9	11 08-1	4-0 3-1	10-0 7-8	16-0 12-4				
41	11 40-3	11 42-2	11 08-3	4-1 3-2	10-1 7-8	16-1 12-5				
42	11 40-5	11 42-4	11 08-6	4-2 3-3	10-2 7-9	16-2 12-6				
43	11 40-8	11 42-7	11 08-8	4-3 3-3	10-3 8-0	16-3 12-6				
44	11 41-0	11 42-9	11 09-1	4-4 3-4	10-4 8-1	16-4 12-7				
45	11 41-3	11 43-2	11 09-3	4-5 3-5	10-5 8-1	16-5 12-8				
46	11 41-5	11 43-4	11 09-5	4-6 3-6	10-6 8-2	16-6 12-9				
47	11 41-8	11 43-7	11 09-8	4-7 3-6	10-7 8-3	16-7 12-9				
48	11 42-0	11 43-9	11 10-0	4-8 3-7	10-8 8-4	16-8 13-0				
49	11 42-3	11 44-2	11 10-3	4-9 3-8	10-9 8-4	16-9 13-1				
50	11 42-5	11 44-4	11 10-5	5-0 3-9	11-0 8-5	17-0 13-2				
51	11 42-8	11 44-7	11 10-7	5-1 4-0	11-1 8-6	17-1 13-3				
52	11 43-0	11 44-9	11 11-0	5-2 4-0	11-2 8-7	17-2 13-3				
53	11 43-3	11 45-2	11 11-2	5-3 4-1	11-3 8-8	17-3 13-4				
54	11 43-5	11 45-4	11 11-5	5-4 4-2	11-4 8-8	17-4 13-5				
55	11 43-8	11 45-7	11 11-7	5-5 4-3	11-5 8-9	17-5 13-6				
56	11 44-0	11 45-9	11 11-9	5-6 4-3	11-6 9-0	17-6 13-6				
57	11 44-3	11 46-2	11 12-2	5-7 4-4	11-7 9-1	17-7 13-7				
58	11 44-5	11 46-4	11 12-4	5-8 4-5	11-8 9-1	17-8 13-8				
59	11 44-8	11 46-7	11 12-6	5-9 4-6	11-9 9-2	17-9 13-9				
60	11 45-0	11 46-9	11 12-9	6-0 4-7	12-0 9-3	18-0 14-0				

47 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o / ' / "	o / ' / "	o / ' / "	' / "	' / "	' / "	' / "	' / "	' / "
00	11 45-0	11 46-9	11 12-9	0-0 0-0	6-0 4-8	12-0 9-5				
01	11 45-3	11 47-2	11 13-1	0-1 0-1	6-1 4-8	12-1 9-6				
02	11 45-5	11 47-4	11 13-4	0-2 0-2	6-2 4-9	12-2 9-7				
03	11 45-8	11 47-7	11 13-6	0-3 0-2	6-3 5-0	12-3 9-7				
04	11 46-0	11 47-9	11 13-8	0-4 0-3	6-4 5-1	12-4 9-8				
05	11 46-3	11 48-2	11 14-1	0-5 0-4	6-5 5-1	12-5 9-9				
06	11 46-5	11 48-4	11 14-3	0-6 0-5	6-6 5-2	12-6 10-0				
07	11 46-8	11 48-7	11 14-6	0-7 0-6	6-7 5-3	12-7 10-1				
08	11 47-0	11 48-9	11 14-8	0-8 0-6	6-8 5-4	12-8 10-1				
09	11 47-3	11 49-2	11 15-0	0-9 0-7	6-9 5-5	12-9 10-2				
10	11 47-5	11 49-4	11 15-3	1-0 0-8	7-0 5-5	13-0 10-3				
11	11 47-8	11 49-7	11 15-5	1-1 0-9	7-1 5-6	13-1 10-4				
12	11 48-0	11 49-9	11 15-7	1-2 1-0	7-2 5-7	13-2 10-5				
13	11 48-3	11 50-2	11 16-0	1-3 1-0	7-3 5-8	13-3 10-5				
14	11 48-5	11 50-4	11 16-2	1-4 1-1	7-4 5-9	13-4 10-6				
15	11 48-8	11 50-7	11 16-5	1-5 1-2	7-5 5-9	13-5 10-7				
16	11 49-0	11 50-9	11 16-7	1-6 1-3	7-6 6-0	13-6 10-8				
17	11 49-3	11 51-2	11 16-9	1-7 1-3	7-7 6-1	13-7 10-8				
18	11 49-5	11 51-4	11 17-2	1-8 1-4	7-8 6-2	13-8 10-9				
19	11 49-8	11 51-7	11 17-4	1-9 1-5	7-9 6-3	13-9 11-0				
20	11 50-0	11 51-9	11 17-7	2-0 1-6	8-0 6-3	14-0 11-1				
21	11 50-3	11 52-2	11 17-9	2-1 1-7	8-1 6-4	14-1 11-2				
22	11 50-5	11 52-4	11 18-1	2-2 1-7	8-2 6-5	14-2 11-2				
23	11 50-8	11 52-7	11 18-4	2-3 1-8	8-3 6-6	14-3 11-3				
24	11 51-0	11 52-9	11 18-6	2-4 1-9	8-4 6-7	14-4 11-4				
25	11 51-3	11 53-2	11 18-8	2-5 2-0	8-5 6-7	14-5 11-5				
26	11 51-5	11 53-4	11 19-1	2-6 2-1	8-6 6-8	14-6 11-6				
27	11 51-8	11 53-7	11 19-3	2-7 2-1	8-7 6-9	14-7 11-6				
28	11 52-0	11 53-9	11 19-6	2-8 2-2	8-8 7-0	14-8 11-7				
29	11 52-3	11 54-2	11 19-8	2-9 2-3	8-9 7-0	14-9 11-8				
30	11 52-5	11 54-5	11 20-0	3-0 2-4	9-0 7-1	15-0 11-9				
31	11 52-8	11 54-7	11 20-3	3-1 2-5	9-1 7-2	15-1 12-0				
32	11 53-0	11 55-0	11 20-5	3-2 2-5	9-2 7-3	15-2 12-0				
33	11 53-3	11 55-2	11 20-8	3-3 2-6	9-3 7-4	15-3 12-1				
34	11 53-5	11 55-5	11 21-0	3-4 2-7	9-4 7-4	15-4 12-2				
35	11 53-8	11 55-7	11 21-2	3-5 2-8	9-5 7-5	15-5 12-3				
36	11 54-0	11 56-0	11 21-5	3-6 2-9	9-6 7-6	15-6 12-4				
37	11 54-3	11 56-2	11 21-7	3-7 2-9	9-7 7-7	15-7 12-4				
38	11 54-5	11 56-5	11 22-0	3-8 3-0	9-8 7-8	15-8 12-5				
39	11 54-8	11 56-7	11 22-2	3-9 3-1	9-9 7-8	15-9 12-6				
40	11 55-0	11 57-0	11 22-4	4-0 3-2	10-0 7-9	16-0 12-7				
41	11 55-3	11 57-2	11 22-7	4-1 3-2	10-1 8-0	16-1 12-7				
42	11 55-5	11 57-5	11 22-9	4-2 3-3	10-2 8-1	16-2 12-8				
43	11 55-8	11 57-7	11 23-1	4-3 3-4	10-3 8-2	16-3 12-9				
44	11 56-0	11 58-0	11 23-4	4-4 3-5	10-4 8-2	16-4 13-0				
45	11 56-3	11 58-2	11 23-6	4-5 3-6	10-5 8-3	16-5 13-1				
46	11 56-5	11 58-5	11 23-9	4-6 3-6	10-6 8-4	16-6 13-1				
47	11 56-8	11 58-7	11 24-1	4-7 3-7	10-7 8-5	16-7 13-2				
48	11 57-0	11 59-0	11 24-3	4-8 3-8	10-8 8-6	16-8 13-3				
49	11 57-3	11 59-2	11 24-6	4-9 3-9	10-9 8-6	16-9 13-4				
50	11 57-5	11 59-5	11 24-8	5-0 4-0	11-0 8-7	17-0 13-5				
51	11 57-8	11 59-7	11 25-1	5-1 4-0	11-1 8-8	17-1 13-5				
52	11 58-0	12 00-0	11 25-3	5-2 4-1	11-2 8-9	17-2 13-6				
53	11 58-3	12 00-2	11 25-5	5-3 4-2	11-3 8-9	17-3 13-7		</		

48 ^m	SOL PLANETAS			ARIES	LUNA	v		v		v	
	s	o	'			o	'	o	'	o	'	o	'
00	12 00-0	12 02-0	11 27-2	0-0	0-0	6-0	4-9	12-0	9-7		
01	12 00-3	12 02-2	11 27-4	0-1	0-1	6-1	4-9	12-1	9-8		
02	12 00-5	12 02-5	11 27-7	0-2	0-2	6-2	5-0	12-2	9-9		
03	12 00-8	12 02-7	11 27-9	0-3	0-2	6-3	5-1	12-3	9-9		
04	12 01-0	12 03-0	11 28-2	0-4	0-3	6-4	5-2	12-4	10-0		
05	12 01-3	12 03-2	11 28-4	0-5	0-4	6-5	5-3	12-5	10-1		
06	12 01-5	12 03-5	11 28-6	0-6	0-5	6-6	5-3	12-6	10-2		
07	12 01-8	12 03-7	11 28-9	0-7	0-6	6-7	5-4	12-7	10-3		
08	12 02-0	12 04-0	11 29-1	0-8	0-6	6-8	5-5	12-8	10-3		
09	12 02-3	12 04-2	11 29-3	0-9	0-7	6-9	5-6	12-9	10-4		
10	12 02-5	12 04-5	11 29-6	1-0	0-8	7-0	5-7	13-0	10-5		
11	12 02-8	12 04-7	11 29-8	1-1	0-9	7-1	5-7	13-1	10-6		
12	12 03-0	12 05-0	11 30-1	1-2	1-0	7-2	5-8	13-2	10-7		
13	12 03-3	12 05-2	11 30-3	1-3	1-1	7-3	5-9	13-3	10-8		
14	12 03-5	12 05-5	11 30-5	1-4	1-1	7-4	6-0	13-4	10-8		
15	12 03-8	12 05-7	11 30-8	1-5	1-2	7-5	6-1	13-5	10-9		
16	12 04-0	12 06-0	11 31-0	1-6	1-3	7-6	6-1	13-6	11-0		
17	12 04-3	12 06-2	11 31-3	1-7	1-4	7-7	6-2	13-7	11-1		
18	12 04-5	12 06-5	11 31-5	1-8	1-5	7-8	6-3	13-8	11-2		
19	12 04-8	12 06-7	11 31-7	1-9	1-5	7-9	6-4	13-9	11-2		
20	12 05-0	12 07-0	11 32-0	2-0	1-6	8-0	6-5	14-0	11-3		
21	12 05-3	12 07-2	11 32-2	2-1	1-7	8-1	6-5	14-1	11-4		
22	12 05-5	12 07-5	11 32-4	2-2	1-8	8-2	6-6	14-2	11-5		
23	12 05-8	12 07-7	11 32-7	2-3	1-9	8-3	6-7	14-3	11-6		
24	12 06-0	12 08-0	11 32-9	2-4	1-9	8-4	6-8	14-4	11-6		
25	12 06-3	12 08-2	11 33-2	2-5	2-0	8-5	6-9	14-5	11-7		
26	12 06-5	12 08-5	11 33-4	2-6	2-1	8-6	7-0	14-6	11-8		
27	12 06-8	12 08-7	11 33-6	2-7	2-2	8-7	7-0	14-7	11-9		
28	12 07-0	12 09-0	11 33-9	2-8	2-3	8-8	7-1	14-8	12-0		
29	12 07-3	12 09-2	11 34-1	2-9	2-3	8-9	7-2	14-9	12-0		
30	12 07-5	12 09-5	11 34-4	3-0	2-4	9-0	7-3	15-0	12-1		
31	12 07-8	12 09-7	11 34-6	3-1	2-5	9-1	7-4	15-1	12-2		
32	12 08-0	12 10-0	11 34-8	3-2	2-6	9-2	7-4	15-2	12-3		
33	12 08-3	12 10-2	11 35-1	3-3	2-7	9-3	7-5	15-3	12-4		
34	12 08-5	12 10-5	11 35-3	3-4	2-7	9-4	7-6	15-4	12-4		
35	12 08-8	12 10-7	11 35-6	3-5	2-8	9-5	7-7	15-5	12-5		
36	12 09-0	12 11-0	11 35-8	3-6	2-9	9-6	7-8	15-6	12-6		
37	12 09-3	12 11-2	11 36-0	3-7	3-0	9-7	7-8	15-7	12-7		
38	12 09-5	12 11-5	11 36-3	3-8	3-1	9-8	7-9	15-8	12-8		
39	12 09-8	12 11-7	11 36-5	3-9	3-2	9-9	8-0	15-9	12-9		
40	12 10-0	12 12-0	11 36-7	4-0	3-2	10-0	8-1	16-0	12-9		
41	12 10-3	12 12-2	11 37-0	4-1	3-3	10-1	8-2	16-1	13-0		
42	12 10-5	12 12-5	11 37-2	4-2	3-4	10-2	8-2	16-2	13-1		
43	12 10-8	12 12-8	11 37-5	4-3	3-5	10-3	8-3	16-3	13-2		
44	12 11-0	12 13-0	11 37-7	4-4	3-6	10-4	8-4	16-4	13-3		
45	12 11-3	12 13-3	11 37-9	4-5	3-6	10-5	8-5	16-5	13-3		
46	12 11-5	12 13-5	11 38-2	4-6	3-7	10-6	8-6	16-6	13-4		
47	12 11-8	12 13-8	11 38-4	4-7	3-8	10-7	8-6	16-7	13-5		
48	12 12-0	12 14-0	11 38-7	4-8	3-9	10-8	8-7	16-8	13-6		
49	12 12-3	12 14-3	11 38-9	4-9	4-0	10-9	8-8	16-9	13-7		
50	12 12-5	12 14-5	11 39-1	5-0	4-0	11-0	8-9	17-0	13-7		
51	12 12-8	12 14-8	11 39-4	5-1	4-1	11-1	9-0	17-1	13-8		
52	12 13-0	12 15-0	11 39-6	5-2	4-2	11-2	9-1	17-2	13-9		
53	12 13-3	12 15-3	11 39-8	5-3	4-3	11-3	9-1	17-3	14-0		
54	12 13-5	12 15-5	11 40-1	5-4	4-4	11-4	9-2	17-4	14-1		
55	12 13-8	12 15-8	11 40-3	5-5	4-4	11-5	9-3	17-5	14-1		
56	12 14-0	12 16-0	11 40-6	5-6	4-5	11-6	9-4	17-6	14-2		
57	12 14-3	12 16-3	11 40-8	5-7	4-6	11-7	9-5	17-7	14-3		
58	12 14-5	12 16-5	11 41-0	5-8	4-7	11-8	9-5	17-8	14-4		
59	12 14-8	12 16-8	11 41-3	5-9	4-8	11-9	9-6	17-9	14-5		
60	12 15-0	12 17-0	11 41-5	6-0	4-9	12-0	9-7	18-0	14-6		

49 ^m	SOL PLANETAS			ARIES	LUNA	v		v		v	
	s	o	'			o	'	o	'	o	'
00	12 15-0	12 17-0	11 41-5	0-0	0-0	6-0	5-0	12-0	9-9		
01	12 15-3	12 17-3	11 41-8	0-1	0-1	6-1	5-0	12-1	10-0		
02	12 15-5	12 17-5	11 42-0	0-2	0-2	6-2	5-1	12-2	10-1		
03	12 15-8	12 17-8	11 42-2	0-3	0-2	6-3	5-2	12-3	10-1		
04	12 16-0	12 18-0	11 42-5	0-4	0-3	6-4	5-3	12-4	10-2		
05	12 16-3	12 18-3	11 42-7	0-5	0-4	6-5	5-4	12-5	10-3		
06	12 16-5	12 18-5	11 42-9	0-6	0-5	6-6	5-4	12-6	10-4		
07	12 16-8	12 18-8	11 43-2	0-7	0-6	6-7	5-5	12-7	10-5		
08	12 17-0	12 19-0	11 43-4	0-8	0-7	6-8	5-6	12-8	10-6		
09	12 17-3	12 19-3	11 43-7	0-9	0-7	6-9	5-7	12-9	10-6		
10	12 17-5	12 19-5	11 43-9	1-0	0-8	7-0	5-8	13-0	10-7		
11	12 17-8	12 19-8	11 44-1	1-1	0-9	7-1	5-9	13-1	10-8		
12	12 18-0	12 20-0	11 44-4	1-2	1-0	7-2	5-9	13-2	10-9		
13	12 18-3	12 20-3	11 44-6	1-3	1-1	7-3	6-0	13-3	11-0		
14	12 18-5	12 20-5	11 44-9	1-4	1-2	7-4	6-1	13-4	11-1		
15	12 18-8	12 20-8	11 45-1	1-5	1-2	7-5	6-2	13-5	11-1		
16	12 19-0	12 21-0	11 45-3	1-6	1-3	7-6	6-3	13-6	11-2		
17	12 19-3	12 21-3	11 45-6	1-7	1-4	7-7	6-4	13-7	11-3		
18	12 19-5	12 21-5	11 45-8	1-8	1-5	7-8	6-4	13-8	11-4		
19	12 19-8	12 21-8	11 46-1	1-9	1-6	7-9	6-5	13-9	11-5		
20	12 20-0	12 22-0	11 46-3	2-0	1-7	8-0	6-6	14-0	11-6		
21	12 20-3	12 22-3	11 46-5	2-1	1-7	8-1	6-7	14-1	11-6		
22	12 20-5	12 22-5	11 46-8	2-2	1-8	8-2	6-8	14-2	11-7		
23	12 20-8	12 22-8	11 47-0	2-3	1-9	8-3	6-8	14-3	11-8		
24	12 21-0	12 23-0	11 47-2	2-4	2-0	8-4	6-9	14-4	11-9		
25	12 21-3	12 23-3	11 47-5	2-5	2-1	8-5	7-0	14-5	12-0		
26	12 21-5	12 23-5	11 47-7	2-6	2-1	8-6	7-1	14-6	12-0		
27	12 21-8	12 23-8	11 48-0	2-7	2-2	8-7	7-2	14-7	12-1		
28	12 22-0	12 24-0	11 48-2	2-8	2-3	8-8	7-3	14-8	12-2		
29	12 22-3	12 24-3	11 48-4	2-9	2-4	8-9	7-3	14-9	12-3		
30	12 22-5	12 24-5	11 48-7	3-0	2-5	9-0	7-4	15-0	12-4		
31	12 22-8	12 24-8	11 48-9	3-1	2-6	9-1	7-5	15-1	12-5		
32	12 23-0	12 25-0	11 49-2	3-2	2-6	9-2	7-6	15-2	12-5		
33	12 23-3	12 25-3	11 49-4	3-3	2-7	9-3	7-7	15-3	12-6		
34	12 23-5	12 25-5	11 49-6	3-4	2-8	9-4	7-8	15-4	12-7		
35	12 23-8	12 25-8	11 49-9	3-5	2-9	9-5	7-8	15-5	12-8		
36	12 24-0	12 26-0	11 50-1	3-6	3-0	9-6	7-9	15-6	12-9		
37	12 24-3	12 26-3	11 50-3	3-7	3-1	9-7	8-0	15-7	13-0		
38	12 24-5	12 26-5	11 50-6	3-8	3-1	9-8	8-1	15-8	13-0		
39	12 24-8	12 26-8	11 50-8	3-9	3-2	9-9	8-2	15-9	13-1		
40	12 25-0	12 27-0	11 51-1	4-0	3-3	10-0	8-3	16-0	13-2		
41	12 25-3	12 27-3	11 51-3	4-1	3-4	10-1	8-3	16-1	13-3		
42	12 25-5	12 27-5	11 51-5	4-2	3-5	10-2	8-4	16-2	13-4		
43	12 25-8	12 27-8	11 51-8	4-3	3-5	10-3	8-5	16-3	13-4		
44	12 25-0	12 28-0	11 52-0	4-4	3-6	10-4	8-6	16-4	13-5		
45	12 26-3	12 28-3	11 52-3	4-5	3-7	10-5	8-7	16-5	13-6		
46	12 26-5	12 28-5	11 52-5	4-6	3-8	10-6	8-7	16-6	13-7		
47	12 26-8	12 28-8	11 52-7	4-7	3-9	10-7	8-8	16-7	13-8		
48	12 27-0	12 29-0	11 53-0	4-8	4-0	10-8	8-9	16-8	13-9		
49	12 27-3	12 29-3	11 53-2	4-9	4-0	10-9	9-0	16-9	13-9		
50	12 27-5	12 29-5	11 53-4</								

50 ^m	SOL PLANETAS		ARIES		LUNA		v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /	o /	o /	o /	o /	o /	o /	o /	o /	o /	o /
00	12 30-0	12 32-1	11 55-8	0-0	0-0	6-0	5-1	12-0	10-1			
01	12 30-3	12 32-3	11 56-1	0-1	0-1	6-1	5-1	12-1	10-2			
02	12 30-5	12 32-6	11 56-3	0-2	0-2	6-2	5-2	12-2	10-3			
03	12 30-8	12 32-8	11 56-5	0-3	0-3	6-3	5-3	12-3	10-4			
04	12 31-0	12 33-1	11 56-8	0-4	0-3	6-4	5-4	12-4	10-4			
05	12 31-3	12 33-3	11 57-0	0-5	0-4	6-5	5-5	12-5	10-5			
06	12 31-5	12 33-6	11 57-3	0-6	0-5	6-6	5-6	12-6	10-6			
07	12 31-8	12 33-8	11 57-5	0-7	0-6	6-7	5-6	12-7	10-7			
08	12 32-0	12 34-1	11 57-7	0-8	0-7	6-8	5-7	12-8	10-8			
09	12 32-3	12 34-3	11 58-0	0-9	0-8	6-9	5-8	12-9	10-9			
10	12 32-5	12 34-6	11 58-2	1-0	0-8	7-0	5-9	13-0	10-9			
11	12 32-8	12 34-8	11 58-5	1-1	0-9	7-1	6-0	13-1	11-0			
12	12 33-0	12 35-1	11 58-7	1-2	1-0	7-2	6-1	13-2	11-1			
13	12 33-3	12 35-3	11 58-9	1-3	1-1	7-3	6-1	13-3	11-2			
14	12 33-5	12 35-6	11 59-2	1-4	1-2	7-4	6-2	13-4	11-3			
15	12 33-8	12 35-8	11 59-4	1-5	1-3	7-5	6-3	13-5	11-4			
16	12 34-0	12 36-1	11 59-7	1-6	1-3	7-6	6-4	13-6	11-4			
17	12 34-3	12 36-3	11 59-9	1-7	1-4	7-7	6-5	13-7	11-5			
18	12 34-5	12 36-6	12 00-1	1-8	1-5	7-8	6-6	13-8	11-6			
19	12 34-8	12 36-8	12 00-4	1-9	1-6	7-9	6-6	13-9	11-7			
20	12 35-0	12 37-1	12 00-6	2-0	1-7	8-0	6-7	14-0	11-8			
21	12 35-3	12 37-3	12 00-8	2-1	1-8	8-1	6-8	14-1	11-9			
22	12 35-5	12 37-6	12 01-1	2-2	1-9	8-2	6-9	14-2	12-0			
23	12 35-8	12 37-8	12 01-3	2-3	1-9	8-3	7-0	14-3	12-0			
24	12 36-0	12 38-1	12 01-6	2-4	2-0	8-4	7-1	14-4	12-1			
25	12 36-3	12 38-3	12 01-8	2-5	2-1	8-5	7-2	14-5	12-2			
26	12 36-5	12 38-6	12 02-0	2-6	2-2	8-6	7-2	14-6	12-3			
27	12 36-8	12 38-8	12 02-3	2-7	2-3	8-7	7-3	14-7	12-4			
28	12 37-0	12 39-1	12 02-5	2-8	2-4	8-8	7-4	14-8	12-5			
29	12 37-3	12 39-3	12 02-8	2-9	2-4	8-9	7-5	14-9	12-5			
30	12 37-5	12 39-6	12 03-0	3-0	2-5	9-0	7-6	15-0	12-6			
31	12 37-8	12 39-8	12 03-2	3-1	2-6	9-1	7-7	15-1	12-7			
32	12 38-0	12 40-1	12 03-5	3-2	2-7	9-2	7-7	15-2	12-8			
33	12 38-3	12 40-3	12 03-7	3-3	2-8	9-3	7-8	15-3	12-9			
34	12 38-5	12 40-6	12 03-9	3-4	2-9	9-4	7-9	15-4	13-0			
35	12 38-8	12 40-8	12 04-2	3-5	2-9	9-5	8-0	15-5	13-0			
36	12 39-0	12 41-1	12 04-4	3-6	3-0	9-6	8-1	15-6	13-1			
37	12 39-3	12 41-3	12 04-7	3-7	3-1	9-7	8-2	15-7	13-2			
38	12 39-5	12 41-6	12 04-9	3-8	3-2	9-8	8-2	15-8	13-3			
39	12 39-8	12 41-8	12 05-1	3-9	3-3	9-9	8-3	15-9	13-4			
40	12 40-0	12 42-1	12 05-4	4-0	3-4	10-0	8-4	16-0	13-5			
41	12 40-3	12 42-3	12 05-6	4-1	3-5	10-1	8-5	16-1	13-6			
42	12 40-5	12 42-6	12 05-9	4-2	3-5	10-2	8-6	16-2	13-6			
43	12 40-8	12 42-8	12 06-1	4-3	3-6	10-3	8-7	16-3	13-7			
44	12 41-0	12 43-1	12 06-3	4-4	3-7	10-4	8-8	16-4	13-8			
45	12 41-3	12 43-3	12 06-6	4-5	3-8	10-5	8-8	16-5	13-9			
46	12 41-5	12 43-6	12 06-8	4-6	3-9	10-6	8-9	16-6	14-0			
47	12 41-8	12 43-8	12 07-0	4-7	4-0	10-7	9-0	16-7	14-1			
48	12 42-0	12 44-1	12 07-3	4-8	4-0	10-8	9-1	16-8	14-1			
49	12 42-3	12 44-3	12 07-5	4-9	4-1	10-9	9-2	16-9	14-2			
50	12 42-5	12 44-6	12 07-8	5-0	4-2	11-0	9-3	17-0	14-3			
51	12 42-8	12 44-8	12 08-0	5-1	4-3	11-1	9-3	17-1	14-4			
52	12 43-0	12 45-1	12 08-2	5-2	4-4	11-2	9-4	17-2	14-5			
53	12 43-3	12 45-3	12 08-5	5-3	4-5	11-3	9-5	17-3	14-6			
54	12 43-5	12 45-6	12 08-7	5-4	4-5	11-4	9-6	17-4	14-6			
55	12 43-8	12 45-8	12 09-0	5-5	4-6	11-5	9-7	17-5	14-7			
56	12 44-0	12 46-1	12 09-2	5-6	4-7	11-6	9-8	17-6	14-8			
57	12 44-3	12 46-3	12 09-4	5-7	4-8	11-7	9-8	17-7	14-9			
58	12 44-5	12 46-5	12 09-7	5-8	4-9	11-8	9-9	17-8	15-0			
59	12 44-8	12 46-8	12 09-9	5-9	5-0	11-9	10-0	17-9	15-1			
60	12 45-0	12 47-1	12 10-2	6-0	5-1	12-0	10-1	18-0	15-2			

51 ^m	SOL PLANETAS		ARIES		LUNA		v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o /	o /	o /	o /	o /	o /	o /	o /	o /	o /	o /
00	12 45-0	12 47-1	12 10-2	0-0	0-0	6-0	5-2	12-0	10-3			
01	12 45-3	12 47-3	12 10-4	0-1	0-1	6-1	5-2	12-1	10-4			
02	12 45-5	12 47-6	12 10-6	0-2	0-2	6-2	5-3	12-2	10-5			
03	12 45-8	12 47-8	12 10-9	0-3	0-3	6-3	5-4	12-3	10-6			
04	12 46-0	12 48-1	12 11-1	0-4	0-3	6-4	5-5	12-4	10-6			
05	12 46-3	12 48-3	12 11-3	0-5	0-4	6-5	5-6	12-5	10-7			
06	12 46-5	12 48-6	12 11-6	0-6	0-5	6-6	5-7	12-6	10-8			
07	12 46-8	12 48-8	12 11-8	0-7	0-6	6-7	5-8	12-7	10-9			
08	12 47-0	12 49-1	12 12-1	0-8	0-7	6-8	5-8	12-8	11-0			
09	12 47-3	12 49-4	12 12-3	0-9	0-8	6-9	5-9	12-9	11-1			
10	12 47-5	12 49-6	12 12-5	1-0	0-9	7-0	6-0	13-0	11-2			
11	12 47-8	12 49-9	12 12-8	1-1	0-9	7-1	6-1	13-1	11-2			
12	12 48-0	12 50-1	12 13-0	1-2	1-0	7-2	6-2	13-2	11-3			
13	12 48-3	12 50-4	12 13-3	1-3	1-1	7-3	6-3	13-3	11-4			
14	12 48-5	12 50-6	12 13-5	1-4	1-2	7-4	6-4	13-4	11-5			
15	12 48-8	12 50-9	12 13-7	1-5	1-3	7-5	6-4	13-5	11-6			
16	12 49-0	12 51-1	12 14-0	1-6	1-4	7-6	6-5	13-6	11-7			
17	12 49-3	12 51-4	12 14-2	1-7	1-5	7-7	6-6	13-7	11-8			
18	12 49-5	12 51-6	12 14-4	1-8	1-5	7-8	6-7	13-8	11-8			
19	12 49-8	12 51-9	12 14-7	1-9	1-6	7-9	6-8	13-9	11-9			
20	12 50-0	12 52-1	12 14-9	2-0	1-7	8-0	6-9	14-0	12-0			
21	12 50-3	12 52-4	12 15-2	2-1	1-8	8-1	7-0	14-1	12-1			
22	12 50-5	12 52-6	12 15-4	2-2	1-9	8-2	7-0	14-2	12-2			
23	12 50-8	12 52-9	12 15-6	2-3	2-0	8-3	7-1	14-3	12-3			
24	12 51-0	12 53-1	12 15-9	2-4	2-1	8-4	7-2	14-4	12-4			
25	12 51-3	12 53-4	12 16-1	2-5	2-1	8-5	7-3	14-5	12-4			
26	12 51-5	12 53-6	12 16-4	2-6	2-2	8-6	7-4	14-6	12-5			
27	12 51-8	12 53-9	12 16-6	2-7	2-3	8-7	7-5	14-7	12-6			
28	12 52-0	12 54-1	12 16-8	2-8	2-4	8-8	7-6	14-8	12-7			
29	12 52-3	12 54-4	12 17-1	2-9	2-5	8-9	7-6	14-9	12-8			
30	12 52-5	12 54-6	12 17-3	3-0	2-6	9-0	7-7	15-0	12-9			
31	12 52-8	12 54-9	12 17-5	3-1	2-7	9-1	7-8	15-1	13-0			
32	12 53-0	12 55-1	12 17-8	3-2	2-7	9-2	7-9	15-2	13-0			
33	12 53-3	12 55-4	12 18-0	3-3	2-8	9-3	8-0	15-3	13-1			
34	12 53-5	12 55-6	12 18-3	3-4	2-9	9-4	8-1	15-4	13-2			
35	12 53-8	12 55-9	12 18-5	3-5	3-0	9-5	8-2	15-5	13-3			
36	12 54-0	12 56-1	12 18-7	3-6	3-1	9-6	8-2	15-6	13-4			
37	12 54-3	12 56-4	12 19-0	3-7	3-2	9-7	8-3	15-7	13-5			
38	12 54-5	12 56-6	12 19-2	3-8	3-3	9-8	8-4	15-8	13-6			
39	12 54-8	12 56-9	12 19-5	3-9	3-3	9-9	8-5	15-9	13-6			
40	12 55-0	12 57-1	12 19-7	4-0	3-4	10-0	8-6	16-0	13-7			
41	12 55-3	12 57-4	12 19-9	4-1	3-5	10-1	8-7	16-1	13-8			
42	12 55-5	12 57-6	12 20-2	4-2	3-6	10-2	8-8	16-2	13-9			
43	12 55-8	12 57-9	12 20-4	4-3	3-7	10-3	8-8	16-3	14-0			
44	12 56-0	12 58-1	12 20-6	4-4	3-8	10-4	8-9	16-4	14-1			

52 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	Corr ⁿ	o	Corr ⁿ	o	Corr ⁿ
s	o	'	o	'	d	'	d	'	d
00	13 00-0	13 02-1	12 24-5	0-0	0-0	6-0	5-3	12-0	10-5
01	13 00-3	13 02-4	12 24-7	0-1	0-1	6-1	5-3	12-1	10-6
02	13 00-5	13 02-6	12 24-9	0-2	0-2	6-2	5-4	12-2	10-7
03	13 00-8	13 02-9	12 25-2	0-3	0-3	6-3	5-5	12-3	10-8
04	13 01-0	13 03-1	12 25-4	0-4	0-4	6-4	5-6	12-4	10-9
05	13 01-3	13 03-4	12 25-7	0-5	0-4	6-5	5-7	12-5	10-9
06	13 01-5	13 03-6	12 25-9	0-6	0-5	6-6	5-8	12-6	11-0
07	13 01-8	13 03-9	12 26-1	0-7	0-6	6-7	5-9	12-7	11-1
08	13 02-0	13 04-1	12 26-4	0-8	0-7	6-8	6-0	12-8	11-2
09	13 02-3	13 04-4	12 26-6	0-9	0-8	6-9	6-0	12-9	11-3
10	13 02-5	13 04-6	12 26-9	1-0	0-9	7-0	6-1	13-0	11-4
11	13 02-8	13 04-9	12 27-1	1-1	1-0	7-1	6-2	13-1	11-5
12	13 03-0	13 05-1	12 27-3	1-2	1-1	7-2	6-3	13-2	11-6
13	13 03-3	13 05-4	12 27-6	1-3	1-1	7-3	6-4	13-3	11-6
14	13 03-5	13 05-6	12 27-8	1-4	1-2	7-4	6-5	13-4	11-7
15	13 03-8	13 05-9	12 28-0	1-5	1-3	7-5	6-6	13-5	11-8
16	13 04-0	13 06-1	12 28-3	1-6	1-4	7-6	6-7	13-6	11-9
17	13 04-3	13 06-4	12 28-5	1-7	1-5	7-7	6-7	13-7	12-0
18	13 04-5	13 06-6	12 28-8	1-8	1-6	7-8	6-8	13-8	12-1
19	13 04-8	13 06-9	12 29-0	1-9	1-7	7-9	6-9	13-9	12-2
20	13 05-0	13 07-1	12 29-2	2-0	1-8	8-0	7-0	14-0	12-3
21	13 05-3	13 07-4	12 29-5	2-1	1-8	8-1	7-1	14-1	12-3
22	13 05-5	13 07-7	12 29-7	2-2	1-9	8-2	7-2	14-2	12-4
23	13 05-8	13 07-9	12 30-0	2-3	2-0	8-3	7-3	14-3	12-5
24	13 06-0	13 08-2	12 30-2	2-4	2-1	8-4	7-4	14-4	12-6
25	13 06-3	13 08-4	12 30-4	2-5	2-2	8-5	7-4	14-5	12-7
26	13 06-5	13 08-7	12 30-7	2-6	2-3	8-6	7-5	14-6	12-8
27	13 06-8	13 08-9	12 30-9	2-7	2-4	8-7	7-6	14-7	12-9
28	13 07-0	13 09-2	12 31-1	2-8	2-5	8-8	7-7	14-8	13-0
29	13 07-3	13 09-4	12 31-4	2-9	2-5	8-9	7-8	14-9	13-0
30	13 07-5	13 09-7	12 31-6	3-0	2-6	9-0	7-9	15-0	13-1
31	13 07-8	13 09-9	12 31-9	3-1	2-7	9-1	8-0	15-1	13-2
32	13 08-0	13 10-2	12 32-1	3-2	2-8	9-2	8-1	15-2	13-3
33	13 08-3	13 10-4	12 32-3	3-3	2-9	9-3	8-1	15-3	13-4
34	13 08-5	13 10-7	12 32-6	3-4	3-0	9-4	8-2	15-4	13-5
35	13 08-8	13 10-9	12 32-8	3-5	3-1	9-5	8-3	15-5	13-6
36	13 09-0	13 11-2	12 33-1	3-6	3-2	9-6	8-4	15-6	13-7
37	13 09-3	13 11-4	12 33-3	3-7	3-2	9-7	8-5	15-7	13-7
38	13 09-5	13 11-7	12 33-5	3-8	3-3	9-8	8-6	15-8	13-8
39	13 09-8	13 11-9	12 33-8	3-9	3-4	9-9	8-7	15-9	13-9
40	13 10-0	13 12-2	12 34-0	4-0	3-5	10-0	8-8	16-0	14-0
41	13 10-3	13 12-4	12 34-2	4-1	3-6	10-1	8-8	16-1	14-1
42	13 10-5	13 12-7	12 34-5	4-2	3-7	10-2	8-9	16-2	14-2
43	13 10-8	13 12-9	12 34-7	4-3	3-8	10-3	9-0	16-3	14-3
44	13 11-0	13 13-2	12 35-0	4-4	3-9	10-4	9-1	16-4	14-4
45	13 11-3	13 13-4	12 35-2	4-5	3-9	10-5	9-2	16-5	14-4
46	13 11-5	13 13-7	12 35-4	4-6	4-0	10-6	9-3	16-6	14-5
47	13 11-8	13 13-9	12 35-7	4-7	4-1	10-7	9-4	16-7	14-6
48	13 12-0	13 14-2	12 35-9	4-8	4-2	10-8	9-5	16-8	14-7
49	13 12-3	13 14-4	12 36-2	4-9	4-3	10-9	9-5	16-9	14-8
50	13 12-5	13 14-7	12 36-4	5-0	4-4	11-0	9-6	17-0	14-9
51	13 12-8	13 14-9	12 36-6	5-1	4-5	11-1	9-7	17-1	15-0
52	13 13-0	13 15-2	12 36-9	5-2	4-6	11-2	9-8	17-2	15-1
53	13 13-3	13 15-4	12 37-1	5-3	4-6	11-3	9-9	17-3	15-1
54	13 13-5	13 15-7	12 37-4	5-4	4-7	11-4	10-0	17-4	15-2
55	13 13-8	13 15-9	12 37-6	5-5	4-8	11-5	10-1	17-5	15-3
56	13 14-0	13 16-2	12 37-8	5-6	4-9	11-6	10-2	17-6	15-4
57	13 14-3	13 16-4	12 38-1	5-7	5-0	11-7	10-2	17-7	15-5
58	13 14-5	13 16-7	12 38-3	5-8	5-1	11-8	10-3	17-8	15-6
59	13 14-8	13 16-9	12 38-5	5-9	5-2	11-9	10-4	17-9	15-7
60	13 15-0	13 17-2	12 38-8	6-0	5-3	12-0	10-5	18-0	15-8

53 ^m	SOL PLANETAS	ARIES	LUNA	v		v		v	
				o	Corr ⁿ	o	Corr ⁿ	o	Corr ⁿ
s	o	'	o	'	d	'	d	'	d
00	13 15-0	13 17-2	12 38-8	0-0	0-0	6-0	5-4	12-0	10-7
01	13 15-3	13 17-4	12 39-0	0-1	0-1	6-1	5-4	12-1	10-8
02	13 15-5	13 17-7	12 39-3	0-2	0-2	6-2	5-5	12-2	10-9
03	13 15-8	13 17-9	12 39-5	0-3	0-3	6-3	5-6	12-3	11-0
04	13 16-0	13 18-2	12 39-7	0-4	0-4	6-4	5-7	12-4	11-1
05	13 16-3	13 18-4	12 40-0	0-5	0-4	6-5	5-8	12-5	11-1
06	13 16-5	13 18-7	12 40-2	0-6	0-5	6-6	5-9	12-6	11-2
07	13 16-8	13 18-9	12 40-5	0-7	0-6	6-7	6-0	12-7	11-3
08	13 17-0	13 19-2	12 40-7	0-8	0-7	6-8	6-1	12-8	11-4
09	13 17-3	13 19-4	12 40-9	0-9	0-8	6-9	6-2	12-9	11-5
10	13 17-5	13 19-7	12 41-2	1-0	0-9	7-0	6-2	13-0	11-6
11	13 17-8	13 19-9	12 41-4	1-1	1-0	7-1	6-3	13-1	11-7
12	13 18-0	13 20-2	12 41-6	1-2	1-1	7-2	6-4	13-2	11-8
13	13 18-3	13 20-4	12 41-9	1-3	1-2	7-3	6-5	13-3	11-9
14	13 18-5	13 20-7	12 42-1	1-4	1-2	7-4	6-6	13-4	11-9
15	13 18-8	13 20-9	12 42-4	1-5	1-3	7-5	6-7	13-5	12-0
16	13 19-0	13 21-2	12 42-6	1-6	1-4	7-6	6-8	13-6	12-1
17	13 19-3	13 21-4	12 42-8	1-7	1-5	7-7	6-9	13-7	12-2
18	13 19-5	13 21-7	12 43-1	1-8	1-6	7-8	7-0	13-8	12-3
19	13 19-8	13 21-9	12 43-3	1-9	1-7	7-9	7-0	13-9	12-4
20	13 20-0	13 22-2	12 43-6	2-0	1-8	8-0	7-1	14-0	12-5
21	13 20-3	13 22-4	12 43-8	2-1	1-9	8-1	7-2	14-1	12-6
22	13 20-5	13 22-7	12 44-0	2-2	2-0	8-2	7-3	14-2	12-7
23	13 20-8	13 22-9	12 44-3	2-3	2-1	8-3	7-4	14-3	12-8
24	13 21-0	13 23-2	12 44-5	2-4	2-1	8-4	7-5	14-4	12-8
25	13 21-3	13 23-4	12 44-7	2-5	2-2	8-5	7-6	14-5	12-9
26	13 21-5	13 23-7	12 45-0	2-6	2-3	8-6	7-7	14-6	13-0
27	13 21-8	13 23-9	12 45-2	2-7	2-4	8-7	7-8	14-7	13-1
28	13 22-0	13 24-2	12 45-5	2-8	2-5	8-8	7-8	14-8	13-2
29	13 22-3	13 24-4	12 45-7	2-9	2-6	8-9	7-9	14-9	13-3
30	13 22-5	13 24-7	12 45-9	3-0	2-7	9-0	8-0	15-0	13-4
31	13 22-8	13 24-9	12 46-2	3-1	2-8	9-1	8-1	15-1	13-5
32	13 23-0	13 25-2	12 46-4	3-2	2-9	9-2	8-2	15-2	13-6
33	13 23-3	13 25-4	12 46-7	3-3	2-9	9-3	8-3	15-3	13-6
34	13 23-5	13 25-7	12 46-9	3-4	3-0	9-4	8-4	15-4	13-7
35	13 23-8	13 26-0	12 47-1	3-5	3-1	9-5	8-5	15-5	13-8
36	13 24-0	13 26-2	12 47-4	3-6	3-2	9-6	8-6	15-6	13-9
37	13 24-3	13 26-5	12 47-6	3-7	3-3	9-7	8-6	15-7	14-0
38	13 24-5	13 26-7	12 47-9	3-8	3-4	9-8	8-7	15-8	14-1
39	13 24-8	13 27-0	12 48-1	3-9	3-5	9-9	8-8	15-9	14-2
40	13 25-0	13 27-2	12 48-3	4-0	3-6	10-0	8-9	16-0	14-3
41	13 25-3	13 27-5	12 48-6	4-1	3-7	10-1	9-0	16-1	14-4
42	13 25-5	13 27-7	12 48-8	4-2	3-7	10-2	9-1	16-2	14-4
43	13 25-8	13 28-0	12 49-0	4-3	3-8	10-3	9-2	16-3	14-5
44	13 26-0	13 28-2	12 49-3	4-4	3-9	10-4	9-3	16-4	14-6
45	13 26-3	13 28-5	12 49-5	4-5	4-0	10-5	9-4	16-5	14-7
46	13 26-5	13 28-7	12 49-8	4-6	4-1	10-6	9-5	16-6	14-8
47	13 26-8	13 29-0	12 50-0	4-7	4-2	10-7	9-5	16-7	14-9
48	13 27-0	13 29-2	12 50-2	4-8	4-3	10-8	9-6	16-8	15-0
49	13 27-3	13 29-5	12 50-5	4-9	4-4	10-9	9-7	16-9	15-1
50	13 27-5	13 29-7	12 50-7	5-0	4-5	11-0	9-8	17-0	15-2
51	13 27-8	13 30-0	12 51-0	5-1	4-5	11-1	9-9	17-1	15-2
52	13 28-0	13 30-2	12 51-2	5-2	4-6	11-2	10-0	17-2	15-3
53	13 28-3	13 30-5	12 51-4	5-3	4-7	11-3	10-1	17-3	15-4
54	13 28-5	13 30-7	12 51-7	5-4	4-8	11-4	10-2	17-4	15-5
55	13 28-8	13 31-0	12 51-9	5-5	4-9	11-5	10-3	17-5	15-6
56	13 29-0	13 31-2	12 52-1	5-6	5-0	11-6	10-3	17-6	15-7
57	13 29-3	13 31-5	12 52-4	5-7	5-1	11-7	10-4	17-7	15-8

54 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o			d	d	d	d	d	d
00	13 30-0	13 32-2	12 53-1	0-0	0-0	6-0	5-5	12-0	10-9	
01	13 30-3	13 32-5	12 53-3	0-1	0-1	6-1	5-5	12-1	11-0	
02	13 30-5	13 32-7	12 53-6	0-2	0-2	6-2	5-6	12-2	11-1	
03	13 30-8	13 33-0	12 53-8	0-3	0-3	6-3	5-7	12-3	11-2	
04	13 31-0	13 33-2	12 54-1	0-4	0-4	6-4	5-8	12-4	11-3	
05	13 31-3	13 33-5	12 54-3	0-5	0-5	6-5	5-9	12-5	11-4	
06	13 31-5	13 33-7	12 54-5	0-6	0-5	6-6	6-0	12-6	11-4	
07	13 31-8	13 34-0	12 54-8	0-7	0-6	6-7	6-1	12-7	11-5	
08	13 32-0	13 34-2	12 55-0	0-8	0-7	6-8	6-2	12-8	11-6	
09	13 32-3	13 34-5	12 55-2	0-9	0-8	6-9	6-3	12-9	11-7	
10	13 32-5	13 34-7	12 55-5	1-0	0-9	7-0	6-4	13-0	11-8	
11	13 32-8	13 35-0	12 55-7	1-1	1-0	7-1	6-4	13-1	11-9	
12	13 33-0	13 35-2	12 56-0	1-2	1-1	7-2	6-5	13-2	12-0	
13	13 33-3	13 35-5	12 56-2	1-3	1-2	7-3	6-6	13-3	12-1	
14	13 33-5	13 35-7	12 56-4	1-4	1-3	7-4	6-7	13-4	12-2	
15	13 33-8	13 36-0	12 56-7	1-5	1-4	7-5	6-8	13-5	12-3	
16	13 34-0	13 36-2	12 56-9	1-6	1-5	7-6	6-9	13-6	12-4	
17	13 34-3	13 36-5	12 57-2	1-7	1-5	7-7	7-0	13-7	12-4	
18	13 34-5	13 36-7	12 57-4	1-8	1-6	7-8	7-1	13-8	12-5	
19	13 34-8	13 37-0	12 57-6	1-9	1-7	7-9	7-2	13-9	12-6	
20	13 35-0	13 37-2	12 57-9	2-0	1-8	8-0	7-3	14-0	12-7	
21	13 35-3	13 37-5	12 58-1	2-1	1-9	8-1	7-4	14-1	12-8	
22	13 35-5	13 37-7	12 58-3	2-2	2-0	8-2	7-4	14-2	12-9	
23	13 35-8	13 38-0	12 58-6	2-3	2-1	8-3	7-5	14-3	13-0	
24	13 35-0	13 38-2	12 58-8	2-4	2-2	8-4	7-6	14-4	13-1	
25	13 36-3	13 38-5	12 59-1	2-5	2-3	8-5	7-7	14-5	13-2	
26	13 36-5	13 38-7	12 59-3	2-6	2-4	8-6	7-8	14-6	13-3	
27	13 36-8	13 39-0	12 59-5	2-7	2-5	8-7	7-9	14-7	13-4	
28	13 37-0	13 39-2	12 59-8	2-8	2-5	8-8	8-0	14-8	13-4	
29	13 37-3	13 39-5	13 00-0	2-9	2-6	8-9	8-1	14-9	13-5	
30	13 37-5	13 39-7	13 00-3	3-0	2-7	9-0	8-2	15-0	13-6	
31	13 37-8	13 40-0	13 00-5	3-1	2-8	9-1	8-3	15-1	13-7	
32	13 38-0	13 40-2	13 00-7	3-2	2-9	9-2	8-4	15-2	13-8	
33	13 38-3	13 40-5	13 01-0	3-3	3-0	9-3	8-4	15-3	13-9	
34	13 38-5	13 40-7	13 01-2	3-4	3-1	9-4	8-5	15-4	14-0	
35	13 38-8	13 41-0	13 01-5	3-5	3-2	9-5	8-6	15-5	14-1	
36	13 39-0	13 41-2	13 01-7	3-6	3-3	9-6	8-7	15-6	14-2	
37	13 39-3	13 41-5	13 01-9	3-7	3-4	9-7	8-8	15-7	14-3	
38	13 39-5	13 41-7	13 02-2	3-8	3-5	9-8	8-9	15-8	14-4	
39	13 39-8	13 42-0	13 02-4	3-9	3-5	9-9	9-0	15-9	14-4	
40	13 40-0	13 42-2	13 02-6	4-0	3-6	10-0	9-1	16-0	14-5	
41	13 40-3	13 42-5	13 02-9	4-1	3-7	10-1	9-2	16-1	14-6	
42	13 40-5	13 42-7	13 03-1	4-2	3-8	10-2	9-3	16-2	14-7	
43	13 40-8	13 43-0	13 03-4	4-3	3-9	10-3	9-4	16-3	14-8	
44	13 41-0	13 43-2	13 03-6	4-4	4-0	10-4	9-4	16-4	14-9	
45	13 41-3	13 43-5	13 03-8	4-5	4-1	10-5	9-5	16-5	15-0	
46	13 41-5	13 43-7	13 04-1	4-6	4-2	10-6	9-6	16-6	15-1	
47	13 41-8	13 44-0	13 04-3	4-7	4-3	10-7	9-7	16-7	15-2	
48	13 42-0	13 44-3	13 04-6	4-8	4-4	10-8	9-8	16-8	15-3	
49	13 42-3	13 44-5	13 04-8	4-9	4-5	10-9	9-9	16-9	15-4	
50	13 42-5	13 44-8	13 05-0	5-0	4-5	11-0	10-0	17-0	15-4	
51	13 42-8	13 45-0	13 05-3	5-1	4-6	11-1	10-1	17-1	15-5	
52	13 43-0	13 45-3	13 05-5	5-2	4-7	11-2	10-2	17-2	15-6	
53	13 43-3	13 45-5	13 05-7	5-3	4-8	11-3	10-3	17-3	15-7	
54	13 43-5	13 45-8	13 06-0	5-4	4-9	11-4	10-4	17-4	15-8	
55	13 43-8	13 46-0	13 06-2	5-5	5-0	11-5	10-4	17-5	15-9	
56	13 44-0	13 46-3	13 06-5	5-6	5-1	11-6	10-5	17-6	16-0	
57	13 44-3	13 46-5	13 06-7	5-7	5-2	11-7	10-6	17-7	16-1	
58	13 44-5	13 46-8	13 06-9	5-8	5-3	11-8	10-7	17-8	16-2	
59	13 44-8	13 47-0	13 07-2	5-9	5-4	11-9	10-8	17-9	16-3	
60	13 45-0	13 47-3	13 07-4	6-0	5-5	12-0	10-9	18-0	16-4	

55 ^m	SOL PLANETAS		ARIES	LUNA	v _o Corr ⁿ		v _o Corr ⁿ		v _o Corr ⁿ	
	s	o			d	d	d	d	d	d
00	13 45-0	13 47-3	13 07-4	0-0	0-0	6-0	5-6	12-0	11-1	
01	13 45-3	13 47-5	13 07-7	0-1	0-1	6-1	5-6	12-1	11-2	
02	13 45-5	13 47-8	13 07-9	0-2	0-2	6-2	5-7	12-2	11-3	
03	13 45-8	13 48-0	13 08-1	0-3	0-3	6-3	5-8	12-3	11-4	
04	13 46-0	13 48-3	13 08-4	0-4	0-4	6-4	5-9	12-4	11-5	
05	13 46-3	13 48-5	13 08-6	0-5	0-5	6-5	6-0	12-5	11-6	
06	13 46-5	13 48-8	13 08-8	0-6	0-6	6-6	6-1	12-6	11-7	
07	13 46-8	13 49-0	13 09-1	0-7	0-6	6-7	6-2	12-7	11-7	
08	13 47-0	13 49-3	13 09-3	0-8	0-7	6-8	6-3	12-8	11-8	
09	13 47-3	13 49-5	13 09-6	0-9	0-8	6-9	6-4	12-9	11-9	
10	13 47-5	13 49-8	13 09-8	1-0	0-9	7-0	6-5	13-0	12-0	
11	13 47-8	13 50-0	13 10-0	1-1	1-0	7-1	6-6	13-1	12-1	
12	13 48-0	13 50-3	13 10-3	1-2	1-1	7-2	6-7	13-2	12-2	
13	13 48-3	13 50-5	13 10-5	1-3	1-2	7-3	6-8	13-3	12-3	
14	13 48-5	13 50-8	13 10-8	1-4	1-3	7-4	6-8	13-4	12-4	
15	13 48-8	13 51-0	13 11-0	1-5	1-4	7-5	6-9	13-5	12-5	
16	13 49-0	13 51-3	13 11-2	1-6	1-5	7-6	7-0	13-6	12-6	
17	13 49-3	13 51-5	13 11-5	1-7	1-6	7-7	7-1	13-7	12-7	
18	13 49-5	13 51-8	13 11-7	1-8	1-7	7-8	7-2	13-8	12-8	
19	13 49-8	13 52-0	13 12-0	1-9	1-8	7-9	7-3	13-9	12-9	
20	13 50-0	13 52-3	13 12-2	2-0	1-9	8-0	7-4	14-0	13-0	
21	13 50-3	13 52-5	13 12-4	2-1	1-9	8-1	7-5	14-1	13-0	
22	13 50-5	13 52-8	13 12-7	2-2	2-0	8-2	7-6	14-2	13-1	
23	13 50-8	13 53-0	13 12-9	2-3	2-1	8-3	7-7	14-3	13-2	
24	13 51-0	13 53-3	13 13-1	2-4	2-2	8-4	7-8	14-4	13-3	
25	13 51-3	13 53-5	13 13-4	2-5	2-3	8-5	7-9	14-5	13-4	
26	13 51-5	13 53-8	13 13-6	2-6	2-4	8-6	8-0	14-6	13-5	
27	13 51-8	13 54-0	13 13-9	2-7	2-5	8-7	8-0	14-7	13-6	
28	13 52-0	13 54-3	13 14-1	2-8	2-6	8-8	8-1	14-8	13-7	
29	13 52-3	13 54-5	13 14-3	2-9	2-7	8-9	8-2	14-9	13-8	
30	13 52-5	13 54-8	13 14-6	3-0	2-8	9-0	8-3	15-0	13-9	
31	13 52-8	13 55-0	13 14-8	3-1	2-9	9-1	8-4	15-1	14-0	
32	13 53-0	13 55-3	13 15-1	3-2	3-0	9-2	8-5	15-2	14-1	
33	13 53-3	13 55-5	13 15-3	3-3	3-1	9-3	8-6	15-3	14-2	
34	13 53-5	13 55-8	13 15-5	3-4	3-1	9-4	8-7	15-4	14-2	
35	13 53-8	13 56-0	13 15-8	3-5	3-2	9-5	8-8	15-5	14-3	
36	13 54-0	13 56-3	13 16-0	3-6	3-3	9-6	8-9	15-6	14-4	
37	13 54-3	13 56-5	13 16-2	3-7	3-4	9-7	9-0	15-7	14-5	
38	13 54-5	13 56-8	13 16-5	3-8	3-5	9-8	9-1	15-8	14-6	
39	13 54-8	13 57-0	13 16-7	3-9	3-6	9-9	9-2	15-9	14-7	
40	13 55-0	13 57-3	13 17-0	4-0	3-7	10-0	9-3	16-0	14-8	
41	13 55-3	13 57-5	13 17-2	4-1	3-8	10-1	9-4	16-1	14-9	
42	13 55-5	13 57-8	13 17-4	4-2	3-9	10-2	9-5	16-2	15-0	
43	13 55-8	13 58-0	13 17-7	4-3	4-0	10-3	9-5	16-3	15-1	
44	13 56-0	13 58-3	13 17-9	4-4	4-1	10-4	9-6	16-4	15-2	
45	13 56-3	13 58-5	13 18-2	4-5	4-2	10-5	9-7	16-5	15-3	
46	13 56-5	13 58-8	13 18-4	4-6	4-3	10-6	9-8	16-6	15-4	
47	13 56-8	13 59-0	13 18-6	4-7	4-3	10-7	9-9	16-7	15-4	
48	13 57-0	13 59-3	13 18-9	4-8	4-4	10-8	10-0	16-8	15-5	
49	13 57-3	13 59-5	13 19-1	4-9	4-5	10-9	10-1	16-9	15-6	
50	13 57-5	13 59-8	13 19-3	5-0	4-6	11-0	10-2	17-0	15-7	
51	13 57-8	14 00-0	13 19-6	5-1	4-7	11-1	10-3	17-1	15-8	
52	13 58-0	14 00-3	13 19-8	5-2	4-8	11-2	10-4	17-2	15-9	
53	13 58-3	14 00-5	13 20-1	5-3	4-9	11-3	10-5	17-3	16-0	

TABLAS PARA INTERPOLAR ORTOS DEL SOL, ORTOS DE LUNA, ETC.

TABLA I - POR LATITUD

Intervalo Tabular			Diferencia entre los tiempos para latitudes consecutivas.															
10°	5°	2°	5 ^m	10 ^m	15 ^m	20 ^m	25 ^m	30 ^m	35 ^m	40 ^m	45 ^m	50 ^m	55 ^m	60 ^m	1 ^h 05 ^m	1 ^h 10 ^m	1 ^h 15 ^m	1 ^h 20 ^m
0 30	0 15	0 06	0	0	1	1	1	1	1	2	2	2	2	2	0 02	0 02	0 02	0 02
1 00	0 30	0 12	0	1	1	2	2	3	3	3	4	4	4	5	05	05	05	05
1 30	0 45	0 18	1	1	2	3	3	4	4	5	5	6	7	7	07	07	07	07
2 00	1 00	0 24	1	2	3	4	5	5	6	7	7	8	9	10	10	10	10	10
2 30	1 15	0 30	1	2	4	5	6	7	8	9	9	10	11	12	12	13	13	13
3 00	1 30	0 36	1	3	4	6	7	8	9	10	11	12	13	14	0 15	0 15	0 16	0 16
3 30	1 45	0 42	2	3	5	7	8	10	11	12	13	14	16	17	18	18	19	19
4 00	2 00	0 48	2	4	6	8	9	11	13	14	15	16	18	19	20	21	22	22
4 30	2 15	0 54	2	4	7	9	11	13	15	16	18	19	21	22	23	24	25	26
5 00	2 30	1 00	2	5	7	10	12	14	16	18	20	22	23	25	26	27	28	29
5 30	2 45	1 06	3	5	8	11	13	16	18	20	22	24	26	28	0 29	0 30	0 31	0 32
6 00	3 00	1 12	3	6	9	12	14	17	20	22	24	26	29	31	32	33	34	36
6 30	3 15	1 18	3	6	10	13	16	19	22	24	26	29	31	34	36	37	38	40
7 00	3 30	1 24	3	7	10	14	17	20	23	26	29	31	34	37	39	41	42	44
7 30	3 45	1 30	4	7	11	15	18	22	25	28	31	34	37	40	43	44	46	48
8 00	4 00	1 36	4	8	12	16	20	23	27	30	34	37	41	44	0 47	0 48	0 51	0 53
8 30	4 15	1 42	4	8	13	17	21	25	29	33	36	40	44	48	0 51	0 53	0 56	0 58
9 00	4 30	1 48	4	9	13	18	22	27	31	35	39	43	47	52	0 55	0 58	1 01	1 04
9 30	4 45	1 54	5	9	14	19	24	28	33	38	42	47	51	56	1 00	1 04	1 08	1 12
10 00	5 00	2 00	5	10	15	20	25	30	35	40	45	50	55	60	1 05	1 10	1 15	1 20

La tabla I se usa para interpolar el T.M.L. del orto del Sol, crepúsculo, orto de la Luna, etc. por latitud. Debe entrarse en la columna apropiada de la izquierda con la diferencia entre la latitud verdadera y la latitud tabulada más próxima que sea menor que la verdadera; y con el argumento en la parte superior que es el valor más próximo de la diferencia entre las horas para la latitud tabular y la siguiente superior; la corrección así obtenida se aplica a la hora para la latitud tabular; el signo de la corrección puede determinarse por inspección. Debe notarse que la interpolación no es lineal, de tal manera que cuando se usa la tabla es esencial tomar el fenómeno tabular para la latitud menor que la latitud verdadera.

TABLA II - POR LONGITUD

Long. Este u Oeste	Diferencia entre las horas para la fecha dada y la fecha inmediata anterior (para longitudes este) o para la fecha dada y la inmediata posterior (para longitudes oeste)																	
	10 ^m	20 ^m	30 ^m	40 ^m	50 ^m	60 ^m	1 ^h + 10 ^m	20 ^m	30 ^m	1 ^h + 40 ^m	50 ^m	60 ^m	2 ^h 10 ^m	2 ^h 20 ^m	2 ^h 30 ^m	2 ^h 40 ^m	2 ^h 50 ^m	3 ^h 00 ^m
0	0	0	0	0	0	0	0	0	0	0	0	0	0 00	0 00	0 00	0 00	0 00	0 00
10	0	1	1	1	1	2	2	2	3	3	3	3	04	04	04	04	05	05
20	1	1	2	2	3	3	4	4	5	6	6	7	07	08	08	09	09	10
30	1	2	2	3	4	5	6	7	7	8	9	10	11	12	12	13	14	15
40	1	2	3	4	6	7	8	9	10	11	12	13	14	16	17	18	19	20
50	1	3	4	6	7	8	10	11	12	14	15	17	0 18	0 19	0 21	0 22	0 24	0 25
60	2	3	5	7	8	10	12	13	15	17	18	20	22	23	25	27	28	30
70	2	4	6	8	10	12	14	16	17	19	21	23	25	27	29	31	33	35
80	2	4	7	9	11	13	16	18	20	22	24	27	29	31	33	36	38	40
90	2	5	7	10	12	15	17	20	22	25	27	30	32	35	37	40	42	45
100	3	6	8	11	14	17	19	22	25	28	31	33	0 36	0 39	0 42	0 44	0 47	0 50
110	3	6	9	12	15	18	21	24	27	31	34	37	40	43	46	49	0 52	0 55
120	3	7	10	13	17	20	23	27	30	33	37	40	43	47	50	53	0 57	1 00
130	4	7	11	14	18	22	25	29	32	36	40	43	47	51	54	0 58	1 01	1 05
140	4	8	12	16	19	23	27	31	35	39	43	47	51	54	0 58	1 02	1 06	1 10
150	4	8	13	17	21	25	29	33	38	42	46	50	0 54	0 58	1 03	1 07	1 11	1 15
160	4	9	13	18	22	27	31	36	40	44	49	53	0 58	1 02	1 07	1 11	1 16	1 20
170	5	9	14	19	24	28	33	38	42	47	52	57	1 01	1 06	1 11	1 16	1 20	1 25
180	5	10	15	20	25	30	35	40	45	50	55	60	1 05	1 10	1 15	1 20	1 25	1 30

La tabla II se usa para interpolar por longitud el T.M.L. del orto y ocaso de la Luna y el paso de la Luna por el meridiano. Se entra a la tabla con la longitud y con la diferencia entre las horas para la fecha dada y la fecha inmediata anterior (en longitudes este) o la fecha inmediata posterior (en longitudes oeste). Normalmente la corrección se suma en las longitudes oeste y se resta en las este, pero si como ocurre ocasionalmente, las horas se hacen más temprano cada día en lugar de más tarde, los signos de la corrección deben invertirse.

INDICE DE ESTRELLAS SELECCIONADAS, 1977

Nombres	No.	Mag.	A. H. S.	Dec.
<i>Acamar</i>	7	3·1	316	S. 40
<i>Acherrar</i>	5	0·6	336	S. 57
<i>Acrux</i>	30	1·1	174	S. 63
<i>Adhara</i>	19	1·6	256	S. 29
<i>Aldebaran</i>	10	1·1	291	N. 16
<i>Alioth</i>	32	1·7	167	N. 56
<i>Alkaid</i>	34	1·9	153	N. 49
<i>Al Na'ir</i>	55	2·2	28	S. 47
<i>Alnilam</i>	15	1·8	276	S. 1
<i>Alphard</i>	25	2·2	218	S. 9
<i>Alphecca</i>	41	2·3	127	N. 27
<i>Alpheratz</i>	1	2·2	358	N. 29
<i>Altair</i>	51	0·9	63	N. 9
<i>Ankaa</i>	2	2·4	354	S. 42
<i>Antares</i>	42	1·2	113	S. 26
<i>Arcturus</i>	37	0·2	146	N. 19
<i>Atria</i>	43	1·9	108	S. 69
<i>Avior</i>	22	1·7	234	S. 59
<i>Bellatrix</i>	13	1·7	279	N. 6
<i>Betelgeuse</i>	16	Var.*	272	N. 7
<i>Canopus</i>	17	-0·9	264	S. 53
<i>Capella</i>	12	0·2	281	N. 46
<i>Deneb</i>	53	1·3	50	N. 45
<i>Denebola</i>	28	2·2	183	N. 15
<i>Diphda</i>	4	2·2	349	S. 18
<i>Dubhe</i>	27	2·0	194	N. 62
<i>Elnath</i>	14	1·8	279	N. 29
<i>Eltanin</i>	47	2·4	91	N. 51
<i>Enif</i>	54	2·5	34	N. 10
<i>Fomalhaut</i>	56	1·3	16	S. 30
<i>Gacrux</i>	31	1·6	173	S. 57
<i>Gienah</i>	29	2·8	176	S. 17
<i>Hadar</i>	35	0·9	149	S. 60
<i>Hamal</i>	6	2·2	329	N. 23
<i>Kaus Australis</i>	48	2·0	84	S. 34
<i>Kochab</i>	40	2·2	137	N. 74
<i>Markab</i>	57	2·6	14	N. 15
<i>Menkar</i>	8	2·8	315	N. 4
<i>Menkent</i>	36	2·3	149	S. 36
<i>Micplacidus</i>	24	1·8	222	S. 70
<i>Karfek</i>	9	1·9	309	N. 50
<i>Purki</i>	50	2·1	77	S. 26
<i>Peacock</i>	52	2·1	54	S. 57
<i>Pollux</i>	21	1·2	244	N. 28
<i>Procyon</i>	20	0·5	245	N. 5
<i>Rasalhague</i>	46	2·1	97	N. 13
<i>Regulus</i>	26	1·3	208	N. 12
<i>Rigel</i>	11	0·3	282	S. 8
<i>Rigel Kentaurus</i>	38	0·1	140	S. 61
<i>Sabik</i>	44	2·6	103	S. 16
<i>Schedar</i>	3	2·5	350	N. 56
<i>Shaula</i>	45	1·7	97	S. 37
<i>Sirius</i>	18	-1·6	259	S. 17
<i>Spica</i>	33	1·2	159	S. 11
<i>Suhail</i>	23	2·2	223	S. 43
<i>Vega</i>	49	0·1	81	N. 39
<i>Zubenelgenubi</i>	39	2·9	138	S. 16

No.	Nombres	Mag.	A. H. S.	Dec.
1	<i>Alpheratz</i>	2·2	358	N. 29
2	<i>Ankaa</i>	2·4	354	S. 42
3	<i>Schedar</i>	2·5	350	N. 56
4	<i>Diphda</i>	2·2	349	S. 18
5	<i>Achernar</i>	0·6	335	S. 57
6	<i>Hamal</i>	2·2	329	N. 23
7	<i>Acamar</i>	3·1	316	S. 40
8	<i>Menkar</i>	2·8	315	N. 4
9	<i>Mirfak</i>	1·9	309	N. 50
10	<i>Aldebaran</i>	1·1	291	N. 16
11	<i>Rigel</i>	0·3	282	S. 8
12	<i>Capella</i>	0·2	281	N. 46
13	<i>Bellatrix</i>	1·7	279	N. 6
14	<i>Elnath</i>	1·8	279	N. 29
15	<i>Alnilam</i>	1·8	276	S. 1
16	<i>Betelgeuse</i>	Var.*	272	N. 7
17	<i>Canopus</i>	-0·9	264	S. 53
18	<i>Sirius</i>	-1·6	259	S. 17
19	<i>Adhara</i>	1·6	256	S. 29
20	<i>Procyon</i>	0·5	245	N. 5
21	<i>Pollux</i>	1·2	244	N. 28
22	<i>Avior</i>	1·7	234	S. 59
23	<i>Suhail</i>	2·2	223	S. 43
24	<i>Micplacidus</i>	1·8	222	S. 70
25	<i>Alphard</i>	2·2	218	S. 9
26	<i>Regulus</i>	1·3	208	N. 12
27	<i>Dubhe</i>	2·0	194	N. 62
28	<i>Denebola</i>	2·2	183	N. 15
29	<i>Gienah</i>	2·8	176	S. 17
30	<i>Acrux</i>	1·1	174	S. 63
31	<i>Gacrux</i>	1·6	173	S. 57
32	<i>Alioth</i>	1·7	167	N. 56
33	<i>Spica</i>	1·2	159	S. 11
34	<i>Alkaid</i>	1·9	153	N. 49
35	<i>Hadar</i>	0·9	149	S. 60
36	<i>Menkent</i>	2·3	149	S. 36
37	<i>Arcturus</i>	0·2	146	N. 19
38	<i>Rigel Kentaurus</i>	0·1	140	S. 61
39	<i>Zubenelgenubi</i>	2·9	138	S. 16
40	<i>Kochab</i>	2·2	137	N. 74
41	<i>Alphecca</i>	2·3	127	N. 27
42	<i>Antares</i>	1·2	113	S. 26
43	<i>Atria</i>	1·9	108	S. 69
44	<i>Sabik</i>	2·6	103	S. 16
45	<i>Shaula</i>	1·7	97	S. 37
46	<i>Rasalhague</i>	2·1	97	N. 13
47	<i>Eltanin</i>	2·4	91	N. 51
48	<i>Kaus Australis</i>	2·0	84	S. 34
49	<i>Vega</i>	0·1	81	N. 39
50	<i>Nunki</i>	2·1	77	S. 26
51	<i>Altair</i>	0·9	63	N. 9
52	<i>Peacock</i>	2·1	54	S. 57
53	<i>Deneb</i>	1·3	50	N. 45
54	<i>Enif</i>	2·5	34	N. 10
55	<i>Al Na'ir</i>	2·2	28	S. 47
56	<i>Fomalhaut</i>	1·3	16	S. 30
57	<i>Markab</i>	2·6	14	N. 15

* 0·1—1·2

TABLAS DE CORRECCION DE ALTURAS 0° — 35° — LUNA

Alt. Ap.	0°-4°		5°-9°		10°-14°		15°-19°		20°-24°		25°-29°		30°-34°		Alt. Ap.
	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ	Corr ⁿ		
00	0	33.8	5	58.2	10	62.1	15	62.8	20	62.2	25	60.8	30	58.9	00
10		35.9		58.5		62.2		62.8		62.1		60.8		58.8	10
20		37.8		58.7		62.2		62.8		62.1		60.7		58.8	20
30		39.6		58.9		62.3		62.8		62.1		60.7		58.7	30
40		41.2		59.1		62.3		62.8		62.0		60.6		58.6	40
50		42.6		59.3		62.4		62.7		62.0		60.6		58.5	50
00	1	44.0	6	59.5	11	62.4	16	62.7	21	62.0	26	60.5	31	58.5	00
10		45.2		59.7		62.4		62.7		61.9		60.4		58.4	10
20		46.3		59.9		62.5		62.7		61.9		60.4		58.3	20
30		47.3		60.0		62.5		62.7		61.9		60.3		58.2	30
40		48.3		60.2		62.5		62.7		61.8		60.3		58.2	40
50		49.2		60.3		62.6		62.7		61.8		60.2		58.1	50
00	2	50.0	7	60.5	12	62.6	17	62.7	22	61.7	27	60.1	32	58.0	00
10		50.8		60.6		62.6		62.6		61.7		60.1		57.9	10
20		51.4		60.7		62.6		62.6		61.6		60.0		57.8	20
30		52.1		60.9		62.7		62.6		61.6		59.9		57.8	30
40		52.7		61.0		62.7		62.6		61.5		59.9		57.7	40
50		53.3		61.1		62.7		62.6		61.5		59.8		57.6	50
00	3	53.8	8	61.2	13	62.7	18	62.5	23	61.5	28	59.7	33	57.5	00
10		54.3		61.3		62.7		62.5		61.4		59.7		57.4	10
20		54.8		61.4		62.7		62.5		61.4		59.6		57.4	20
30		55.2		61.5		62.8		62.5		61.3		59.6		57.3	30
40		55.6		61.6		62.8		62.4		61.3		59.5		57.2	40
50		56.0		61.6		62.8		62.4		61.2		59.4		57.1	50
00	4	56.4	9	61.7	14	62.8	19	62.4	24	61.2	29	59.3	34	57.0	00
10		56.7		61.8		62.8		62.3		61.1		59.3		56.9	10
20		57.1		61.9		62.8		62.3		61.1		59.2		56.9	20
30		57.4		61.9		62.8		62.3		61.0		59.1		56.8	30
40		57.7		62.0		62.8		62.2		60.9		59.1		56.7	40
50		57.9		62.1		62.8		62.2		60.9		59.0		56.6	50
P.H.	I	S	I	S	I	S	I	S	I	S	I	S	I	S	P.H.
54.0	0.3	0.9	0.3	0.9	0.4	1.0	0.5	1.1	0.6	1.2	0.7	1.3	0.9	1.5	54.0
54.3	0.7	1.1	0.7	1.2	0.7	1.2	0.8	1.3	0.9	1.4	1.1	1.5	1.2	1.7	54.3
54.6	1.1	1.4	1.1	1.4	1.1	1.4	1.2	1.5	1.3	1.6	1.4	1.7	1.5	1.8	54.6
54.9	1.4	1.6	1.5	1.6	1.5	1.6	1.6	1.7	1.6	1.8	1.8	1.9	1.9	2.0	54.9
55.2	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	55.2
55.5	2.2	2.0	2.2	2.0	2.3	2.1	2.3	2.1	2.4	2.2	2.4	2.3	2.5	2.4	55.5
55.8	2.6	2.2	2.6	2.2	2.6	2.3	2.7	2.3	2.7	2.4	2.8	2.4	2.9	2.5	55.8
56.1	3.0	2.4	3.0	2.5	3.0	2.5	3.0	2.5	3.1	2.6	3.1	2.6	3.2	2.7	56.1
56.4	3.4	2.7	3.4	2.7	3.4	2.7	3.4	2.7	3.4	2.8	3.5	2.8	3.5	2.9	56.4
56.7	3.7	2.9	3.7	2.9	3.8	2.9	3.8	2.9	3.8	3.0	3.8	3.0	3.9	3.0	56.7
57.0	4.1	3.1	4.1	3.1	4.1	3.1	4.1	3.1	4.2	3.1	4.2	3.2	4.2	3.2	57.0
57.3	4.5	3.3	4.5	3.3	4.5	3.3	4.5	3.3	4.5	3.3	4.5	3.4	4.6	3.4	57.3
57.6	4.9	3.5	4.9	3.5	4.9	3.5	4.9	3.5	4.9	3.5	4.9	3.5	4.9	3.6	57.6
57.9	5.3	3.8	5.3	3.8	5.2	3.8	5.2	3.7	5.2	3.7	5.2	3.7	5.2	3.7	57.9
58.2	5.6	4.0	5.6	4.0	5.6	4.0	5.6	4.0	5.6	3.9	5.6	3.9	5.6	3.9	58.2
58.5	6.0	4.2	6.0	4.2	6.0	4.2	6.0	4.2	6.0	4.1	5.9	4.1	5.9	4.1	58.5
58.8	6.4	4.4	6.4	4.4	6.4	4.4	6.3	4.4	6.3	4.3	6.3	4.3	6.2	4.2	58.8
59.1	6.8	4.6	6.8	4.6	6.7	4.6	6.7	4.6	6.7	4.5	6.6	4.5	6.6	4.4	59.1
59.4	7.2	4.8	7.1	4.8	7.1	4.8	7.1	4.8	7.0	4.7	7.0	4.7	6.9	4.6	59.4
59.7	7.5	5.1	7.5	5.0	7.5	5.0	7.5	5.0	7.4	4.9	7.3	4.8	7.2	4.7	59.7
60.0	7.9	5.3	7.9	5.3	7.9	5.2	7.8	5.2	7.8	5.1	7.7	5.0	7.6	4.9	60.0
60.3	8.3	5.5	8.3	5.5	8.2	5.4	8.2	5.4	8.1	5.3	8.0	5.2	7.9	5.1	60.3
60.6	8.7	5.7	8.7	5.7	8.6	5.7	8.6	5.6	8.5	5.5	8.4	5.4	8.3	5.3	60.6
60.9	9.1	5.9	9.0	5.9	9.0	5.9	8.9	5.8	8.8	5.7	8.7	5.6	8.6	5.4	60.9
61.2	9.5	6.2	9.4	6.1	9.4	6.1	9.3	6.0	9.2	5.9	9.1	5.8	8.9	5.6	61.2
61.5	9.8	6.4	9.8	6.3	9.7	6.3	9.7	6.2	9.5	6.1	9.4	5.9	9.2	5.8	61.5

DEPRESION			
Alt. del ojo	Alt. del ojo corr.	Alt. del ojo	Alt. del ojo corr.
m	Pies	m	Pies
2.4	-2.8	8.0	9.5
2.6	-2.9	8.6	9.9
2.8	-3.0	9.2	10.3
3.0	-3.1	9.8	10.6
3.2	-3.2	10.5	11.0
3.4	-3.3	11.2	11.4
3.6	-3.4	11.9	11.8
3.8	-3.5	12.6	12.2
4.0	-3.6	13.3	12.6
4.3	-3.7	14.1	13.0
4.5	-3.8	14.9	13.4
4.7	-3.9	15.7	13.8
5.0	-4.0	16.5	14.2
5.2	-4.1	17.4	14.7
5.5	-4.2	18.3	15.1
5.8	-4.3	19.1	15.5
6.1	-4.4	20.1	16.0
6.3	-4.5	21.0	16.5
6.6	-4.6	22.0	16.9
6.9	-4.7	22.9	17.4
7.2	-4.8	23.9	17.9
7.5	-4.9	24.9	18.4
7.9	-5.0	26.0	18.8
8.2	-5.1	27.1	19.3
8.5	-5.2	28.1	19.8
8.8	-5.3	29.2	20.4
9.2	-5.4	30.4	20.9
9.5		31.5	21.4

TABLA DE CORRECCION DE LUNA

La corrección está dividida en dos partes; la primera corrección se toma de la parte superior de la tabla usando la altura aparente como argumento, y la segunda de la parte inferior, usando P.H. como argumento, en la misma columna que se usó para tomar la primera corrección. En la parte inferior se dan correcciones separadas para los limbos inferior (I) y superior (S). Todas las correcciones deben sumarse a la altura aparente, pero deben restarse 30' de la altura correspondiente al limbo superior.

Para correcciones por presión y temperatura ver página A4

Para observaciones con sextante de burbuja, despreciar la depresión, tomar la media de las correcciones para limbo superior y limbo inferior y restar 15' de la altura.

Alt. Ap. = Altura aparente = Altura de sextante corregida por error de índice y depresión.