

As tabelas desta seção contém as efemérides do Sol, Lua e grandes planetas.

Essas efemérides fundamentais foram preparadas com base nos dados da integração numérica DE405, cujos coeficientes são fornecidos pelo Jet Propulsion Laboratory, NASA, EUA.

Dos coeficientes são extraídas as coordenadas cartesianas geocêntricas e suas derivadas primeiras e segundas, das quais são deduzidos: distância à Terra verdadeira da data, ascensão reta e declinações aparentes da data, com base nas recomendações e constantes IAU 2006A.

O semi-diâmetro (s) é calculado da distância geocêntrica verdadeira (d) pela relação:

$$S = S / d$$

Onde S é o semi-diâmetro a uma unidade astronômica (u.a.). São dados abaixo os valores de S adotados:

ASTRO	S (segundos de arco)
Mercúrio	3,36
Vênus	8,34
Marte	4,68
Júpiter	98,44 (equatorial)
Saturno	82,73 (equatorial)
Urano	35,02
Netuno	33,50

O semi-diâmetro do Sol é calculado:

$$s = \text{arc sen} (\text{raio solar} / d) = \text{arc sen} (696000 \text{ km} / d (\text{km}))$$

Para a Lua, o semi-diâmetro é obtido da paralaxe horizontal (w):

$$s = \text{arc sen} (0,272399 \times \text{sen } w)$$

A paralaxe horizontal equatorial para o Sol e planetas é calculada pela relação:

$$w = w' / d , \quad w' = 8,794 \text{ segundos de arco}$$

w' é a paralaxe horizontal equatorial do Sol a 1 u.a.

A passagem pelo meridiano de Greenwich refere-se ao instante (em tempo terrestre) do trânsito do centro do astro pelo meridiano das efemérides. A posição desse meridiano corresponde àquela que o meridiano verdadeiro de Greenwich assumiria se a rotação da TERRA fosse uniforme, ou em outras palavras, se a diferença entre o Tempo Terrestre e o Tempo Universal fosse igual a zero.

Para os planetas e o Sol são fornecidos somente os instantes das passagens pelo meridiano superior de Greenwich, enquanto que para a Lua são fornecidos os instantes da passagem superior "S" e inferior "I".

Para as datas em que não há trânsito, o espaço é preenchido com traços e para aqueles em que existe um segundo trânsito é posposto um asterisco ao instante do primeiro trânsito.

As variações horárias da ascensão reta e da declinação não são tabeladas, mas podem ser facilmente calculadas por:

$$\text{Variação horária da ascensão reta} = (AR'' - AR') / 24$$

$$\text{Variação horária da declinação} = (D'' - D') / 24$$

Onde AR' e AR'' são as ascensões retas tabuladas para o dia e para o dia seguinte, respectivamente, e D' e D'' são as declinações tabuladas para o dia e para o dia seguinte, respectivamente.

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
JAN. 0	18	42	21.85	-23	4	38.6	0.983	3553	16	15.89	12	3	12.2
1	18	46	46.97	22	59	56.6	.983	3379	16	15.91	12	3	40.6
2	18	51	11.77	22	54	47.2	.983	3245	16	15.92	12	4	8.7
3	18	55	36.20	22	49	10.3	.983	3153	16	15.93	12	4	36.3
4	19	0	.23	22	43	6.3	.983	3103	16	15.93	12	5	3.6
5	19	4	23.84	-22	36	35.2	0.983	3098	16	15.93	12	5	30.5
6	19	8	46.99	22	29	37.2	.983	3142	16	15.93	12	5	56.8
7	19	13	9.65	22	22	12.6	.983	3238	16	15.92	12	6	22.7
8	19	17	31.81	22	14	21.6	.983	3388	16	15.90	12	6	48.0
9	19	21	53.43	22	6	4.4	.983	3596	16	15.88	12	7	12.8
10	19	26	14.50	-21	57	21.3	0.983	3866	16	15.86	12	7	37.0
11	19	30	34.99	21	48	12.5	.983	4199	16	15.82	12	8	.7
12	19	34	54.89	21	38	38.2	.983	4598	16	15.78	12	8	23.7
13	19	39	14.17	21	28	38.9	.983	5062	16	15.74	12	8	46.1
14	19	43	32.83	21	18	14.6	.983	5592	16	15.69	12	9	7.9
15	19	47	50.83	-21	7	25.8	0.983	6185	16	15.63	12	9	29.0
16	19	52	8.18	20	56	12.6	.983	6841	16	15.56	12	9	49.5
17	19	56	24.85	20	44	35.5	.983	7556	16	15.49	12	10	9.3
18	20	0	40.84	20	32	34.7	.983	8327	16	15.41	12	10	28.3
19	20	4	56.12	20	20	10.5	.983	9153	16	15.33	12	10	46.7
20	20	9	10.69	-20	7	23.2	0.984	0030	16	15.25	12	11	4.4
21	20	13	24.54	19	54	13.3	.984	0956	16	15.15	12	11	21.3
22	20	17	37.64	19	40	41.1	.984	1927	16	15.06	12	11	37.5
23	20	21	50.00	19	26	46.9	.984	2942	16	14.96	12	11	52.9
24	20	26	1.60	19	12	31.1	.984	3998	16	14.85	12	12	7.5
25	20	30	12.42	-18	57	54.1	0.984	5093	16	14.74	12	12	21.4
26	20	34	22.46	18	42	56.2	.984	6225	16	14.63	12	12	34.5
27	20	38	31.70	18	27	37.9	.984	7392	16	14.52	12	12	46.8
28	20	42	40.14	18	11	59.6	.984	8592	16	14.40	12	12	58.2
29	20	46	47.77	17	56	1.6	.984	9825	16	14.28	12	13	8.9
30	20	50	54.58	-17	39	44.4	0.985	1091	16	14.15	12	13	18.7
31	20	55	.56	17	23	8.3	.985	2388	16	14.02	12	13	27.7
FEV. 1	20	59	5.70	17	6	13.7	.985	3720	16	13.89	12	13	35.9
2	21	3	10.02	16	49	1.2	.985	5086	16	13.76	12	13	43.3
3	21	7	13.50	16	31	31.0	.985	6489	16	13.62	12	13	49.8
4	21	11	16.15	-16	13	43.5	0.985	7931	16	13.47	12	13	55.4
5	21	15	17.97	15	55	39.3	.985	9416	16	13.33	12	14	.3
6	21	19	18.97	15	37	18.8	.986	0946	16	13.18	12	14	4.3
7	21	23	19.14	15	18	42.2	.986	2524	16	13.02	12	14	7.5
8	21	27	18.50	14	59	50.2	.986	4153	16	12.86	12	14	9.9
9	21	31	17.06	-14	40	43.0	0.986	5835	16	12.70	12	14	11.5
10	21	35	14.83	-14	21	21.0	0.986	7570	16	12.52	12	14	12.3

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DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA	SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"		'	"	H	M	S
FEV. 10	21	35	14.83	-14	21	21.0	0.986 7570	16	12.52	12	14	12.3
11	21	39	11.81	14	1	44.8	.986 9359	16	12.35	12	14	12.3
12	21	43	8.02	13	41	54.7	.987 1202	16	12.17	12	14	11.6
13	21	47	3.48	13	21	51.0	.987 3098	16	11.98	12	14	10.1
14	21	50	58.20	13	1	34.2	.987 5044	16	11.79	12	14	7.9
15	21	54	52.19	-12	41	4.7	0.987 7038	16	11.59	12	14	5.0
16	21	58	45.48	12	20	22.8	.987 9078	16	11.39	12	14	1.4
17	22	2	38.07	11	59	29.1	.988 1160	16	11.19	12	13	57.1
18	22	6	29.98	11	38	23.8	.988 3282	16	10.98	12	13	52.1
19	22	10	21.23	11	17	7.4	.988 5441	16	10.77	12	13	46.5
20	22	14	11.82	-10	55	40.3	0.988 7634	16	10.55	12	13	40.2
21	22	18	1.78	10	34	3.0	.988 9857	16	10.33	12	13	33.2
22	22	21	51.11	10	12	15.8	.989 2108	16	10.11	12	13	25.7
23	22	25	39.83	9	50	19.1	.989 4384	16	9.89	12	13	17.6
24	22	29	27.95	9	28	13.5	.989 6683	16	9.66	12	13	8.8
25	22	33	15.48	-9	5	59.2	0.989 9000	16	9.44	12	12	59.5
26	22	37	2.44	8	43	36.7	.990 1335	16	9.21	12	12	49.6
27	22	40	48.83	8	21	6.5	.990 3685	16	8.98	12	12	39.2
28	22	44	34.68	7	58	28.9	.990 6049	16	8.75	12	12	28.2
MAR. 1	22	48	20.00	7	35	44.4	.990 8426	16	8.51	12	12	16.7
2	22	52	4.80	-7	12	53.3	0.991 0818	16	8.28	12	12	4.7
3	22	55	49.10	6	49	56.1	.991 3226	16	8.05	12	11	52.2
4	22	59	32.91	6	26	53.1	.991 5650	16	7.81	12	11	39.3
5	23	3	16.25	6	3	44.9	.991 8094	16	7.57	12	11	25.8
6	23	6	59.14	5	40	31.7	.992 0561	16	7.33	12	11	11.9
7	23	10	41.60	-5	17	14.0	0.992 3053	16	7.09	12	10	57.6
8	23	14	23.64	4	53	52.2	.992 5572	16	6.84	12	10	42.9
9	23	18	5.29	4	30	26.6	.992 8120	16	6.59	12	10	27.8
10	23	21	46.57	4	6	57.7	.993 0700	16	6.34	12	10	12.4
11	23	25	27.51	3	43	25.8	.993 3312	16	6.09	12	9	56.6
12	23	29	8.12	-3	19	51.2	0.993 5956	16	5.83	12	9	40.5
13	23	32	48.43	2	56	14.4	.993 8633	16	5.57	12	9	24.1
14	23	36	28.47	2	32	35.6	.994 1340	16	5.31	12	9	7.5
15	23	40	8.26	2	8	55.2	.994 4076	16	5.04	12	8	50.6
16	23	43	47.82	1	45	13.6	.994 6840	16	4.77	12	8	33.5
17	23	47	27.19	-1	21	31.2	0.994 9629	16	4.50	12	8	16.2
18	23	51	6.37	0	57	48.2	.995 2440	16	4.23	12	7	58.8
19	23	54	45.40	0	34	5.0	.995 5270	16	3.96	12	7	41.2
20	23	58	24.30	-0	10	22.0	.995 8117	16	3.68	12	7	23.5
21	0	2	3.08	+0	13	20.4	.996 0977	16	3.40	12	7	5.7
22	0	5	41.77	+0	37	1.9	0.996 3847	16	3.13	12	6	47.8
23	0	9	20.38	+1	0	42.1	0.996 6723	16	2.85	12	6	29.8

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DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA	SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	+	G	'		"	'	"	H	M	S	
MAR.23	0	9	20.38	+	1	0	42.1	0.996	6723	16	2.85	12	6	29.8
24	0	12	58.94		1	24	20.7	.996	9603	16	2.57	12	6	11.8
25	0	16	37.45		1	47	57.2	.997	2483	16	2.29	12	5	53.7
26	0	20	15.95		2	11	31.4	.997	5360	16	2.02	12	5	35.7
27	0	23	54.44		2	35	2.8	.997	8231	16	1.74	12	5	17.7
28	0	27	32.95	+	2	58	31.2	0.998	1093	16	1.46	12	4	59.6
29	0	31	11.49		3	21	56.0	.998	3944	16	1.19	12	4	41.6
30	0	34	50.08		3	45	16.9	.998	6785	16	.91	12	4	23.7
31	0	38	28.72		4	8	33.7	.998	9614	16	.64	12	4	5.9
ABR. 1	0	42	7.45		4	31	45.9	.999	2434	16	.37	12	3	48.1
2	0	45	46.27	+	4	54	53.1	0.999	5245	16	.10	12	3	30.4
3	0	49	25.20		5	17	54.9	0.999	8052	15	59.83	12	3	12.8
4	0	53	4.25		5	40	51.1	1.000	0855	15	59.56	12	2	55.4
5	0	56	43.45		6	3	41.2	.000	3658	15	59.29	12	2	38.1
6	1	0	22.81		6	26	24.9	.000	6463	15	59.02	12	2	21.0
7	1	4	2.35	+	6	49	1.9	1.000	9272	15	58.76	12	2	4.1
8	1	7	42.09		7	11	31.8	.001	2087	15	58.49	12	1	47.4
9	1	11	22.06		7	33	54.3	.001	4908	15	58.22	12	1	31.0
10	1	15	2.28		7	56	9.1	.001	7736	15	57.95	12	1	14.8
11	1	18	42.76		8	18	15.8	.002	0570	15	57.67	12	0	58.8
12	1	22	23.53	+	8	40	14.2	1.002	3410	15	57.40	12	0	43.2
13	1	26	4.61		9	2	3.9	.002	6255	15	57.13	12	0	27.9
14	1	29	46.01		9	23	44.6	.002	9104	15	56.86	12	0	12.9
15	1	33	27.77		9	45	16.0	.003	1953	15	56.59	11	59	58.3
16	1	37	9.89		10	6	37.7	.003	4802	15	56.32	11	59	44.1
17	1	40	52.39	+10	27	49.5		1.003	7647	15	56.05	11	59	30.2
18	1	44	35.29		10	48	50.9	.004	0486	15	55.78	11	59	16.8
19	1	48	18.60		11	9	41.8	.004	3315	15	55.51	11	59	3.7
20	1	52	2.34		11	30	21.7	.004	6133	15	55.24	11	58	51.1
21	1	55	46.51		11	50	50.3	.004	8934	15	54.97	11	58	39.0
22	1	59	31.14	+12	11	7.3		1.005	1717	15	54.71	11	58	27.3
23	2	3	16.23		12	31	12.3	.005	4476	15	54.45	11	58	16.1
24	2	7	1.80		12	51	5.0	.005	7210	15	54.19	11	58	5.3
25	2	10	47.84		13	10	45.1	.005	9913	15	53.93	11	57	55.1
26	2	14	34.38		13	30	12.2	.006	2584	15	53.68	11	57	45.3
27	2	18	21.42	+13	49	26.0		1.006	5220	15	53.43	11	57	36.0
28	2	22	8.96		14	8	26.2	.006	7821	15	53.18	11	57	27.3
29	2	25	57.01		14	27	12.4	.007	0387	15	52.94	11	57	19.0
30	2	29	45.57		14	45	44.3	.007	2918	15	52.70	11	57	11.3
MAIO 1	2	33	34.64		15	4	1.5	.007	5417	15	52.46	11	57	4.1
2	2	37	24.23	+15	22	3.7		1.007	7887	15	52.23	11	56	57.3
3	2	41	14.34	+15	39	50.5		1.008	0330	15	52.00	11	56	51.2

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
MAIO	1	2 33	34.64	+15	4	1.5	1.007	5417	15	52.46	11	57	4.1
	2	2 37	24.23	15	22	3.7	.007	7887	15	52.23	11	56	57.3
	3	2 41	14.34	15	39	50.5	.008	0330	15	52.00	11	56	51.2
	4	2 45	4.97	15	57	21.7	.008	2748	15	51.77	11	56	45.5
	5	2 48	56.13	16	14	36.9	.008	5145	15	51.54	11	56	40.4
	6	2 52	47.84	+16	31	35.8	1.008	7522	15	51.32	11	56	35.8
	7	2 56	40.09	16	48	18.2	.008	9880	15	51.10	11	56	31.8
	8	3 0	32.90	17	4	43.6	.009	2222	15	50.88	11	56	28.3
	9	3 4	26.27	17	20	51.9	.009	4546	15	50.66	11	56	25.4
	10	3 8	20.20	17	36	42.8	.009	6855	15	50.44	11	56	23.1
	11	3 12	14.71	+17	52	15.9	1.009	9147	15	50.22	11	56	21.3
	12	3 16	9.79	18	7	31.0	.010	1423	15	50.01	11	56	20.1
	13	3 20	5.45	18	22	27.9	.010	3680	15	49.80	11	56	19.5
	14	3 24	1.68	18	37	6.2	.010	5918	15	49.59	11	56	19.5
	15	3 27	58.50	18	51	25.7	.010	8136	15	49.38	11	56	20.0
16	3 31	55.89	+19	5	26.1	1.011	0330	15	49.17	11	56	21.2	
17	3 35	53.87	19	19	7.2	.011	2500	15	48.97	11	56	22.9	
18	3 39	52.41	19	32	28.6	.011	4641	15	48.77	11	56	25.1	
19	3 43	51.53	19	45	30.2	.011	6752	15	48.57	11	56	28.0	
20	3 47	51.20	19	58	11.6	.011	8828	15	48.38	11	56	31.4	
21	3 51	51.44	+20	10	32.6	1.012	0868	15	48.18	11	56	35.3	
22	3 55	52.23	20	22	32.9	.012	2866	15	48.00	11	56	39.8	
23	3 59	53.56	20	34	12.4	.012	4820	15	47.81	11	56	44.9	
24	4 3	55.43	20	45	30.7	.012	6725	15	47.64	11	56	50.5	
25	4 7	57.81	20	56	27.6	.012	8579	15	47.46	11	56	56.5	
26	4 12	.70	+21	7	2.9	1.013	0380	15	47.29	11	57	3.1	
27	4 16	4.07	21	17	16.4	.013	2127	15	47.13	11	57	10.2	
28	4 20	7.90	21	27	7.8	.013	3820	15	46.97	11	57	17.7	
29	4 24	12.18	21	36	36.9	.013	5461	15	46.82	11	57	25.6	
30	4 28	16.89	21	45	43.5	.013	7051	15	46.67	11	57	33.9	
31	4 32	22.00	+21	54	27.4	1.013	8594	15	46.53	11	57	42.7	
JUN.	1	4 36	27.50	22	2	48.3	.014	0092	15	46.39	11	57	51.8
	2	4 40	33.37	22	10	46.2	.014	1548	15	46.25	11	58	1.3
	3	4 44	39.60	22	18	20.7	.014	2964	15	46.12	11	58	11.2
	4	4 48	46.18	22	25	31.8	.014	4344	15	45.99	11	58	21.4
	5	4 52	53.09	+22	32	19.2	1.014	5688	15	45.86	11	58	31.9
	6	4 57	.31	22	38	43.0	.014	6997	15	45.74	11	58	42.7
	7	5 1	7.82	22	44	42.9	.014	8275	15	45.62	11	58	53.8
	8	5 5	15.62	22	50	18.8	.014	9520	15	45.51	11	59	5.2
	9	5 9	23.68	22	55	30.6	.015	0734	15	45.39	11	59	16.8
	10	5 13	31.99	+23	0	18.3	1.015	1917	15	45.28	11	59	28.7
	11	5 17	40.53	+23	4	41.6	1.015	3069	15	45.18	11	59	40.8

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DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
JUN. 11	5	17	40.53	+23	4	41.6	1.015	3069	15	45.18	11	59	40.8
12	5	21	49.27	23	8	40.6	.015	4188	15	45.07	11	59	53.0
13	5	25	58.20	23	12	15.1	.015	5274	15	44.97	12	0	5.5
14	5	30	7.30	23	15	25.1	.015	6325	15	44.87	12	0	18.1
15	5	34	16.55	23	18	10.4	.015	7340	15	44.78	12	0	30.9
16	5	38	25.93	+23	20	31.2	1.015	8317	15	44.69	12	0	43.8
17	5	42	35.41	23	22	27.2	.015	9252	15	44.60	12	0	56.7
18	5	46	44.98	23	23	58.5	.016	0143	15	44.52	12	1	9.8
19	5	50	54.62	23	25	5.0	.016	0986	15	44.44	12	1	22.9
20	5	55	4.30	23	25	46.7	.016	1779	15	44.37	12	1	36.1
21	5	59	14.00	+23	26	3.6	1.016	2517	15	44.30	12	1	49.2
22	6	3	23.69	23	25	55.7	.016	3197	15	44.24	12	2	2.3
23	6	7	33.34	23	25	23.1	.016	3816	15	44.18	12	2	15.4
24	6	11	42.93	23	24	25.7	.016	4373	15	44.13	12	2	28.4
25	6	15	52.42	23	23	3.6	.016	4867	15	44.08	12	2	41.2
26	6	20	1.78	+23	21	16.9	1.016	5297	15	44.04	12	2	54.0
27	6	24	10.98	23	19	5.5	.016	5667	15	44.01	12	3	6.5
28	6	28	20.00	23	16	29.5	.016	5977	15	43.98	12	3	18.9
29	6	32	28.80	23	13	29.1	.016	6231	15	43.95	12	3	31.0
30	6	36	37.37	23	10	4.2	.016	6432	15	43.93	12	3	42.9
JUL. 1	6	40	45.68	+23	6	14.9	1.016	6582	15	43.92	12	3	54.5
2	6	44	53.71	23	2	1.4	.016	6684	15	43.91	12	4	5.8
3	6	49	1.45	22	57	23.7	.016	6741	15	43.91	12	4	16.9
4	6	53	8.87	22	52	22.0	.016	6755	15	43.90	12	4	27.6
5	6	57	15.96	22	46	56.4	.016	6729	15	43.91	12	4	37.9
6	7	1	22.70	+22	41	7.1	1.016	6663	15	43.91	12	4	47.9
7	7	5	29.07	22	34	54.2	.016	6560	15	43.92	12	4	57.6
8	7	9	35.06	22	28	17.8	.016	6420	15	43.94	12	5	6.8
9	7	13	40.65	22	21	18.1	.016	6245	15	43.95	12	5	15.6
10	7	17	45.82	22	13	55.3	.016	6034	15	43.97	12	5	24.0
11	7	21	50.57	+22	6	9.6	1.016	5788	15	43.99	12	5	32.0
12	7	25	54.87	21	58	1.1	.016	5508	15	44.02	12	5	39.5
13	7	29	58.72	21	49	30.0	.016	5190	15	44.05	12	5	46.6
14	7	34	2.11	21	40	36.5	.016	4836	15	44.08	12	5	53.2
15	7	38	5.02	21	31	20.7	.016	4441	15	44.12	12	5	59.3
16	7	42	7.45	+21	21	43.0	1.016	4006	15	44.16	12	6	4.9
17	7	46	9.38	21	11	43.4	.016	3526	15	44.20	12	6	10.0
18	7	50	10.81	21	1	22.3	.016	2998	15	44.25	12	6	14.7
19	7	54	11.72	20	50	39.7	.016	2420	15	44.31	12	6	18.7
20	7	58	12.12	20	39	36.1	.016	1787	15	44.37	12	6	22.3
21	8	2	11.97	+20	28	11.6	1.016	1098	15	44.43	12	6	25.3
22	8	6	11.27	+20	16	26.5	1.016	0349	15	44.50	12	6	27.8

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
JUL. 22	8	6	11.27	+20	16	26.5	1.016	0349	15	44.50	12	6	27.8
23	8	10	10.00	20	4	21.0	.015	9539	15	44.58	12	6	29.7
24	8	14	8.16	19	51	55.5	.015	8668	15	44.66	12	6	31.0
25	8	18	5.72	19	39	10.1	.015	7736	15	44.74	12	6	31.7
26	8	22	2.67	19	26	5.2	.015	6744	15	44.84	12	6	31.7
27	8	25	59.01	+19	12	41.0	1.015	5695	15	44.93	12	6	31.2
28	8	29	54.73	18	58	57.8	.015	4591	15	45.04	12	6	30.1
29	8	33	49.83	18	44	55.8	.015	3436	15	45.14	12	6	28.3
30	8	37	44.31	18	30	35.4	.015	2233	15	45.25	12	6	25.9
31	8	41	38.17	18	15	56.7	.015	0985	15	45.37	12	6	22.9
AGO. 1	8	45	31.40	+18	1	.2	1.014	9693	15	45.49	12	6	19.3
2	8	49	24.00	17	45	46.2	.014	8362	15	45.62	12	6	15.0
3	8	53	15.99	17	30	14.8	.014	6994	15	45.74	12	6	10.1
4	8	57	7.35	17	14	26.4	.014	5590	15	45.87	12	6	4.6
5	9	0	58.11	16	58	21.2	.014	4154	15	46.01	12	5	58.5
6	9	4	48.25	+16	41	59.7	1.014	2687	15	46.14	12	5	51.8
7	9	8	37.79	16	25	22.1	.014	1190	15	46.28	12	5	44.5
8	9	12	26.74	16	8	28.6	.013	9666	15	46.43	12	5	36.6
9	9	16	15.10	15	51	19.6	.013	8114	15	46.57	12	5	28.1
10	9	20	2.88	15	33	55.3	.013	6535	15	46.72	12	5	19.0
11	9	23	50.09	+15	16	16.1	1.013	4929	15	46.87	12	5	9.4
12	9	27	36.75	14	58	22.2	.013	3294	15	47.02	12	4	59.3
13	9	31	22.86	14	40	13.9	.013	1630	15	47.18	12	4	48.6
14	9	35	8.45	14	21	51.6	.012	9934	15	47.34	12	4	37.3
15	9	38	53.52	14	3	15.4	.012	8204	15	47.50	12	4	25.6
16	9	42	38.08	+13	44	25.8	1.012	6437	15	47.66	12	4	13.3
17	9	46	22.14	13	25	23.0	.012	4630	15	47.83	12	4	.6
18	9	50	5.71	13	6	7.4	.012	2779	15	48.01	12	3	47.4
19	9	53	48.79	12	46	39.3	.012	0883	15	48.18	12	3	33.6
20	9	57	31.40	12	26	59.1	.011	8940	15	48.36	12	3	19.5
21	10	1	13.54	+12	7	7.0	1.011	6947	15	48.55	12	3	4.8
22	10	4	55.21	11	47	3.3	.011	4906	15	48.74	12	2	49.7
23	10	8	36.43	11	26	48.5	.011	2816	15	48.94	12	2	34.2
24	10	12	17.20	11	6	22.9	.011	0679	15	49.14	12	2	18.2
25	10	15	57.54	10	45	46.7	.010	8497	15	49.34	12	2	1.7
26	10	19	37.45	+10	25	.4	1.010	6272	15	49.55	12	1	44.9
27	10	23	16.96	10	4	4.2	.010	4009	15	49.77	12	1	27.7
28	10	26	56.08	9	42	58.4	.010	1709	15	49.98	12	1	10.0
29	10	30	34.81	9	21	43.4	.009	9377	15	50.20	12	0	52.0
30	10	34	13.19	9	0	19.6	.009	7014	15	50.42	12	0	33.7
31	10	37	51.21	+ 8	38	47.2	1.009	4623	15	50.65	12	0	15.0
SET. 1	10	41	28.91	+ 8	17	6.6	1.009	2209	15	50.88	11	59	56.0

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA		SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	+	G	'	"			'	"	H	M	S	
SET.	1	10	41	28.91	+	8	17	6.6	1.009	2209	15	50.88	11	59	56.0
	2	10	45	6.29		7	55	18.1	.008	9774	15	51.11	11	59	36.7
	3	10	48	43.37		7	33	21.9	.008	7320	15	51.34	11	59	17.1
	4	10	52	20.18		7	11	18.6	.008	4849	15	51.57	11	58	57.2
	5	10	55	56.74		6	49	8.3	.008	2366	15	51.81	11	58	37.1
	6	10	59	33.05	+	6	26	51.3	1.007	9871	15	52.04	11	58	16.7
	7	11	3	9.16		6	4	28.1	.007	7365	15	52.28	11	57	56.2
	8	11	6	45.07		5	41	58.7	.007	4851	15	52.52	11	57	35.5
	9	11	10	20.82		5	19	23.7	.007	2327	15	52.75	11	57	14.6
	10	11	13	56.42		4	56	43.2	.006	9794	15	52.99	11	56	53.6
	11	11	17	31.91	+	4	33	57.6	1.006	7249	15	53.23	11	56	32.5
	12	11	21	7.30		4	11	7.2	.006	4692	15	53.48	11	56	11.3
	13	11	24	42.62		3	48	12.3	.006	2120	15	53.72	11	55	50.0
	14	11	28	17.88		3	25	13.2	.005	9530	15	53.97	11	55	28.7
	15	11	31	53.10		3	2	10.2	.005	6919	15	54.21	11	55	7.4
16	11	35	28.30	+	2	39	3.8	1.005	4285	15	54.46	11	54	46.0	
17	11	39	3.50		2	15	54.2	.005	1625	15	54.72	11	54	24.7	
18	11	42	38.71		1	52	41.8	.004	8939	15	54.97	11	54	3.4	
19	11	46	13.94		1	29	26.9	.004	6224	15	55.23	11	53	42.1	
20	11	49	49.22		1	6	10.0	.004	3481	15	55.49	11	53	20.8	
21	11	53	24.56	+	0	42	51.3	1.004	0711	15	55.75	11	52	59.7	
22	11	56	59.99	+	0	19	31.1	.003	7915	15	56.02	11	52	38.6	
23	12	0	35.50	-	0	3	50.1	.003	5094	15	56.29	11	52	17.6	
24	12	4	11.14		0	27	11.9	.003	2251	15	56.56	11	51	56.8	
25	12	7	46.91		0	50	34.2	.002	9389	15	56.83	11	51	36.1	
26	12	11	22.83	-	1	13	56.4	1.002	6511	15	57.11	11	51	15.5	
27	12	14	58.92		1	37	18.2	.002	3619	15	57.38	11	50	55.2	
28	12	18	35.20		2	0	39.4	.002	0717	15	57.66	11	50	35.0	
29	12	22	11.69		2	23	59.4	.001	7807	15	57.94	11	50	15.0	
30	12	25	48.41		2	47	18.0	.001	4894	15	58.22	11	49	55.3	
OUT.	1	12	29	25.38	-	3	10	34.8	1.001	1980	15	58.50	11	49	35.9
	2	12	33	2.61		3	33	49.5	.000	9068	15	58.78	11	49	16.7
	3	12	36	40.15		3	57	1.7	.000	6162	15	59.05	11	48	57.9
	4	12	40	17.99		4	20	11.0	.000	3264	15	59.33	11	48	39.3
	5	12	43	56.18		4	43	17.2	1.000	0378	15	59.61	11	48	21.1
	6	12	47	34.73	-	5	6	19.9	0.999	7505	15	59.88	11	48	3.3
	7	12	51	13.67		5	29	18.7	.999	4647	16	0.16	11	47	45.9
	8	12	54	53.03		5	52	13.3	.999	1804	16	0.43	11	47	29.0
	9	12	58	32.83		6	15	3.4	.998	8976	16	0.70	11	47	12.4
	10	13	2	13.09		6	37	48.6	.998	6161	16	0.97	11	46	56.4
	11	13	5	53.84	-	7	0	28.7	0.998	3358	16	1.24	11	46	40.8
	12	13	9	35.09	-	7	23	3.1	0.998	0565	16	1.51	11	46	25.8

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA		SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	G	'	"			'	"	H	M	S		
OUT.	12	13	9	35.09	-	7	23	3.1	0.998	0565	16	1.51	11	46	25.8
	13	13	13	16.86		7	45	31.7	.997	7778	16	1.78	11	46	11.2
	14	13	16	59.17		8	7	53.8	.997	4995	16	2.05	11	45	57.3
	15	13	20	42.04		8	30	9.3	.997	2214	16	2.32	11	45	43.9
	16	13	24	25.47		8	52	17.7	.996	9433	16	2.59	11	45	31.0
	17	13	28	9.50	-	9	14	18.6	0.996	6651	16	2.86	11	45	18.8
	18	13	31	54.12		9	36	11.5	.996	3866	16	3.13	11	45	7.2
	19	13	35	39.37		9	57	56.2	.996	1078	16	3.39	11	44	56.2
	20	13	39	25.24		10	19	32.2	.995	8288	16	3.66	11	44	45.8
	21	13	43	11.76		10	40	59.1	.995	5497	16	3.93	11	44	36.1
	22	13	46	58.93	-11	2	16.5		0.995	2706	16	4.21	11	44	27.1
	23	13	50	46.77		11	23	24.0	.994	9916	16	4.48	11	44	18.7
	24	13	54	35.29		11	44	21.2	.994	7132	16	4.75	11	44	11.0
	25	13	58	24.50		12	5	7.7	.994	4354	16	5.01	11	44	4.0
	26	14	2	14.41		12	25	43.0	.994	1585	16	5.28	11	43	57.7
	27	14	6	5.04	-12	46	6.8		0.993	8829	16	5.55	11	43	52.1
	28	14	9	56.39		13	6	18.6	.993	6088	16	5.82	11	43	47.3
	29	14	13	48.48		13	26	18.0	.993	3366	16	6.08	11	43	43.2
	30	14	17	41.32		13	46	4.6	.993	0665	16	6.35	11	43	39.8
	31	14	21	34.91		14	5	38.1	.992	7990	16	6.61	11	43	37.2
	NOV.	1	14	25	29.27	-14	24	57.9		0.992	5344	16	6.86	11	43
2		14	29	24.42		14	44	3.8	.992	2730	16	7.12	11	43	34.4
3		14	33	20.36		15	2	55.3	.992	0151	16	7.37	11	43	34.2
4		14	37	17.12		15	21	32.0	.991	7610	16	7.62	11	43	34.8
5		14	41	14.70		15	39	53.6	.991	5108	16	7.86	11	43	36.2
6		14	45	13.11	-15	57	59.7		0.991	2647	16	8.10	11	43	38.5
7		14	49	12.37		16	15	49.9	.991	0226	16	8.34	11	43	41.6
8		14	53	12.49		16	33	23.8	.990	7843	16	8.57	11	43	45.6
9		14	57	13.46		16	50	41.1	.990	5497	16	8.80	11	43	50.4
10		15	1	15.30		17	7	41.3	.990	3185	16	9.03	11	43	56.1
11		15	5	18.00	-17	24	24.1		0.990	0905	16	9.25	11	44	2.7
12		15	9	21.57		17	40	48.9	.989	8654	16	9.47	11	44	10.1
13		15	13	26.01		17	56	55.5	.989	6429	16	9.69	11	44	18.4
14		15	17	31.31		18	12	43.5	.989	4228	16	9.90	11	44	27.6
15		15	21	37.47		18	28	12.3	.989	2051	16	10.12	11	44	37.6
16		15	25	44.49	-18	43	21.7		0.988	9895	16	10.33	11	44	48.5
17		15	29	52.36		18	58	11.3	.988	7761	16	10.54	11	45	.3
18		15	34	1.08		19	12	40.6	.988	5649	16	10.75	11	45	12.8
19		15	38	10.62		19	26	49.3	.988	3558	16	10.95	11	45	26.2
20		15	42	20.99		19	40	36.9	.988	1489	16	11.15	11	45	40.4
21		15	46	32.17	-19	54	3.2		0.987	9445	16	11.36	11	45	55.5
22		15	50	44.14	-20	7	7.7		0.987	7426	16	11.55	11	46	11.3

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			DISTÂNCIA À TERRA	SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"		'	"	H	M	S
NOV. 22	15	50	44.14	-20	7	7.7	0.987 7426	16	11.55	11	46	11.3
23	15	54	56.90	20	19	50.1	.987 5434	16	11.75	11	46	27.8
24	15	59	10.42	20	32	10.0	.987 3472	16	11.94	11	46	45.2
25	16	3	24.70	20	44	7.0	.987 1541	16	12.13	11	47	3.3
26	16	7	39.70	20	55	40.8	.986 9645	16	12.32	11	47	22.1
27	16	11	55.43	-21	6	51.0	0.986 7786	16	12.50	11	47	41.6
28	16	16	11.86	21	17	37.4	.986 5968	16	12.68	11	48	1.8
29	16	20	28.97	21	27	59.6	.986 4193	16	12.86	11	48	22.7
30	16	24	46.75	21	37	57.3	.986 2466	16	13.03	11	48	44.3
DEZ. 1	16	29	5.19	21	47	30.2	.986 0790	16	13.19	11	49	6.5
2	16	33	24.26	-21	56	38.1	0.985 9168	16	13.35	11	49	29.3
3	16	37	43.95	22	5	20.6	.985 7602	16	13.51	11	49	52.7
4	16	42	4.24	22	13	37.6	.985 6096	16	13.66	11	50	16.8
5	16	46	25.12	22	21	28.8	.985 4649	16	13.80	11	50	41.4
6	16	50	46.56	22	28	54.0	.985 3261	16	13.94	11	51	6.5
7	16	55	8.53	-22	35	52.9	0.985 1932	16	14.07	11	51	32.2
8	16	59	31.03	22	42	25.3	.985 0657	16	14.19	11	51	58.4
9	17	3	54.01	22	48	31.0	.984 9435	16	14.31	11	52	25.0
10	17	8	17.45	22	54	9.9	.984 8264	16	14.43	11	52	52.2
11	17	12	41.33	22	59	21.7	.984 7139	16	14.54	11	53	19.7
12	17	17	5.62	-23	4	6.2	0.984 6058	16	14.65	11	53	47.6
13	17	21	30.29	23	8	23.3	.984 5020	16	14.75	11	54	15.9
14	17	25	55.30	23	12	12.8	.984 4022	16	14.85	11	54	44.6
15	17	30	20.61	23	15	34.6	.984 3063	16	14.95	11	55	13.5
16	17	34	46.21	23	18	28.7	.984 2142	16	15.04	11	55	42.6
17	17	39	12.04	-23	20	54.8	0.984 1258	16	15.12	11	56	12.0
18	17	43	38.07	23	22	52.9	.984 0410	16	15.21	11	56	41.6
19	17	48	4.26	23	24	22.9	.983 9598	16	15.29	11	57	11.3
20	17	52	30.58	23	25	24.8	.983 8824	16	15.37	11	57	41.1
21	17	56	56.98	23	25	58.5	.983 8087	16	15.44	11	58	11.0
22	18	1	23.44	-23	26	3.9	0.983 7389	16	15.51	11	58	40.9
23	18	5	49.90	23	25	41.1	.983 6732	16	15.57	11	59	10.8
24	18	10	16.33	23	24	50.0	.983 6116	16	15.63	11	59	40.7
25	18	14	42.70	23	23	30.7	.983 5544	16	15.69	12	0	10.5
26	18	19	8.98	23	21	43.2	.983 5019	16	15.74	12	0	40.1
27	18	23	35.12	-23	19	27.5	0.983 4543	16	15.79	12	1	9.6
28	18	28	1.09	23	16	43.6	.983 4119	16	15.83	12	1	39.0
29	18	32	26.86	23	13	31.8	.983 3750	16	15.87	12	2	8.1
30	18	36	52.41	23	9	52.0	.983 3441	16	15.90	12	2	37.0
31	18	41	17.69	23	5	44.3	.983 3193	16	15.92	12	3	5.6

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL		SEMI- DIÂMETRO		PASS.MERID. GREENWICH			
	H	M	S	G	'	"			'	"	H	M	S	
JAN. .0	20	2	53.84	-17	25	3.6	55	34.507	15	8.28	1	26	23.3 I	
.5	20	28	56.36	16	28	54.3	55	48.097	15	11.98	13	51	16.8 S	
1.0	20	54	53.86	15	20	18.4	56	2.233	15	15.83	2	16	4.5 I	
1.5	21	20	44.86	13	59	59.6	56	16.897	15	19.83	14	40	44.9 S	
2.0	21	46	28.84	12	28	50.5	56	32.081	15	23.96	3	5	17.5 I	
2.5	22	12	6.29	-10	47	51.5	56	47.778	15	28.24	15	29	43.2 S	
3.0	22	37	38.70	8	58	9.6	57	3.974	15	32.65	3	54	4.0 I	
3.5	23	3	8.48	7	0	57.4	57	20.644	15	37.19	16	18	23.0 S	
4.0	23	28	38.85	4	57	33.1	57	37.736	15	41.84	4	42	44.1 I	
4.5	23	54	13.77	2	49	19.7	57	55.169	15	46.59	17	7	12.1 S	
5.0	0	19	57.72	-	0	37	46.1	58	12.823	15	51.40	5	31	52.4 I
5.5	0	45	55.55	+	1	35	33.1	58	30.531	15	56.22	17	56	50.6 S
6.0	1	12	12.33	3	48	56.8	58	48.077	16	1.00	6	22	12.6 I	
6.5	1	38	53.02	6	0	36.5	59	5.189	16	5.66	18	48	3.9 S	
7.0	2	6	2.27	8	8	36.3	59	21.544	16	10.12	7	14	29.7 I	
7.5	2	33	44.04	+10	10	53.1	59	36.774	16	14.26	19	41	33.8 S	
8.0	3	2	1.21	12	5	18.2	59	50.473	16	18.00	8	9	18.7 I	
8.5	3	30	55.21	13	49	39.4	60	2.215	16	21.19	20	37	44.9 S	
9.0	4	0	25.58	15	21	45.4	60	11.572	16	23.74	9	6	50.0 I	
9.5	4	30	29.65	16	39	31.1	60	18.140	16	25.53	21	36	29.0 S	
10.0	5	1	2.36	+17	41	4.5	60	21.565	16	26.46	10	6	33.9 I	
10.5	5	31	56.31	18	24	54.0	60	21.568	16	26.46	22	36	54.0 S	
11.0	6	3	2.13	18	49	55.4	60	17.966	16	25.48	11	7	16.8 I	
11.5	6	34	9.09	18	55	37.0	60	10.694	16	23.50	23	37	29.1 S	
12.0	7	5	5.99	18	42	2.9	59	59.814	16	20.54	--	--	---- -	
12.5	7	35	42.04	+18	9	52.1	59	45.513	16	16.64	12	7	18.3 I	
13.0	8	5	47.80	17	20	15.2	59	28.095	16	11.90	0	36	33.2 S	
13.5	8	35	15.72	16	14	48.0	59	7.968	16	6.42	13	5	5.2 I	
14.0	9	4	.60	14	55	24.2	58	45.620	16	.33	1	32	48.5 S	
14.5	9	31	59.57	13	24	7.8	58	21.590	15	53.79	13	59	40.3 I	
15.0	9	59	11.98	+11	43	5.3	57	56.445	15	46.94	2	25	40.3 S	
15.5	10	25	39.08	9	54	20.9	57	30.757	15	39.94	14	50	50.5 I	
16.0	10	51	23.61	7	59	51.5	57	5.073	15	32.95	3	15	14.5 S	
16.5	11	16	29.46	6	1	25.2	56	39.910	15	26.09	15	38	57.2 I	
17.0	11	41	1.29	4	0	39.4	56	15.731	15	19.51	4	2	4.1 S	
17.5	12	5	4.24	+	1	59	1.2	55	52.946	15	13.30	16	24	41.2 I
18.0	12	28	43.76	-	0	2	11.8	55	31.904	15	7.57	4	46	54.9 S
18.5	12	52	5.34	2	1	50.8	55	12.893	15	2.39	17	8	51.3 I	
19.0	13	15	14.45	3	58	53.4	54	56.140	14	57.83	5	30	36.7 S	
19.5	13	38	16.42	5	52	23.0	54	41.817	14	53.93	17	52	16.8 I	
20.0	14	1	16.33	-	7	41	26.7	54	30.043	14	50.72	6	13	57.2 S
20.5	14	24	18.97	-	9	25	14.0	54	20.888	14	48.23	18	35	43.2 I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH					
	H	M	S	G	'	"		'	"	H	M	S			
JAN.20.5	14	24	18.97	-	9	25	14.0	54	20.888	14	48.23	18	35	43.2	I
21.0	14	47	28.73	11	2	55.9	54	14.376	14	46.45	6	57	39.4	S	
21.5	15	10	49.55	12	33	43.5	54	10.491	14	45.40	19	19	50.0	I	
22.0	15	34	24.85	13	56	48.0	54	9.180	14	45.04	7	42	18.3	S	
22.5	15	58	17.40	15	11	19.8	54	10.354	14	45.36	20	5	7.1	I	
23.0	16	22	29.26	-16	16	29.3	54	13.893	14	46.32	8	28	18.2	S	
23.5	16	47	1.68	17	11	26.9	54	19.648	14	47.89	20	51	52.3	I	
24.0	17	11	55.06	17	55	24.5	54	27.446	14	50.01	9	15	49.2	S	
24.5	17	37	8.90	18	27	36.5	54	37.087	14	52.64	21	40	7.6	I	
25.0	18	2	41.79	18	47	21.7	54	48.354	14	55.71	10	4	45.1	S	
25.5	18	28	31.53	-18	54	5.4	55	1.016	14	59.16	22	29	38.7	I	
26.0	18	54	35.22	18	47	21.0	55	14.826	15	2.92	10	54	44.3	S	
26.5	19	20	49.44	18	26	52.4	55	29.537	15	6.93	23	19	58.0	I	
27.0	19	47	10.57	17	52	35.2	55	44.898	15	11.11	11	45	15.6	S	
27.5	20	13	34.95	17	4	37.9	56	.666	15	15.40	--	--	----	-	
28.0	20	39	59.25	-16	3	22.8	56	16.611	15	19.75	0	10	33.1	I	
28.5	21	6	20.67	14	49	25.3	56	32.522	15	24.08	12	35	47.4	S	
29.0	21	32	37.13	13	23	33.9	56	48.211	15	28.35	1	0	56.1	I	
29.5	21	58	47.45	11	46	48.8	57	3.519	15	32.52	13	25	57.9	S	
30.0	22	24	51.40	10	0	20.4	57	18.319	15	36.55	1	50	52.7	I	
30.5	22	50	49.69	-	8	5	28.1	57	32.512	15	40.42	14	15	41.5	S
31.0	23	16	43.98	6	3	38.8	57	46.033	15	44.10	2	40	26.4	I	
31.5	23	42	36.73	3	56	25.0	57	58.839	15	47.59	15	5	10.2	S	
FEV. 1.0	0	8	31.08	-	1	45	24.3	58	10.912	15	50.88	3	29	56.8	I
1.5	0	34	30.74	+	0	27	41.6	58	22.242	15	53.96	15	54	50.6	S
2.0	1	0	39.79	+	2	41	7.9	58	32.829	15	56.85	4	19	56.3	I
2.5	1	27	2.47	4	53	6.6	58	42.666	15	59.53	16	45	18.8	S	
3.0	1	53	42.96	7	1	47.3	58	51.735	16	2.00	5	11	2.8	I	
3.5	2	20	45.15	9	5	17.3	58	59.999	16	4.25	17	37	12.7	S	
4.0	2	48	12.33	11	1	42.7	59	7.395	16	6.26	6	3	51.8	I	
4.5	3	16	6.92	+12	49	9.1	59	13.831	16	8.02	18	31	2.4	S	
5.0	3	44	30.12	14	25	44.2	59	19.187	16	9.47	6	58	45.0	I	
5.5	4	13	21.64	15	49	40.2	59	23.316	16	10.60	19	26	58.2	S	
6.0	4	42	39.49	16	59	17.2	59	26.048	16	11.34	7	55	38.7	I	
6.5	5	12	19.87	17	53	7.9	59	27.203	16	11.66	20	24	40.5	S	
7.0	5	42	17.17	+18	30	2.4	59	26.597	16	11.49	8	53	55.9	I	
7.5	6	12	24.30	18	49	12.0	59	24.062	16	10.80	21	23	15.6	S	
8.0	6	42	33.10	18	50	13.5	59	19.454	16	9.55	9	52	29.6	I	
8.5	7	12	34.89	18	33	11.2	59	12.672	16	7.70	22	21	27.8	S	
9.0	7	42	21.21	17	58	36.8	59	3.666	16	5.25	10	50	1.1	I	
9.5	8	11	44.39	+17	7	27.9	58	52.451	16	2.19	23	18	2.0	S	
10.0	8	40	38.07	+16	1	4.6	58	39.112	15	58.56	11	45	24.7	I	

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	G	'	"		'	"	H	M	S		
FEV.10.0	8	40	38.07	+16	1	4.6	58	39.112	15	58.56	11	45	24.7	I
10.5	9	8	57.55	14	41	4.1	58	23.803	15	54.39	--	--	----	-
11.0	9	36	39.88	13	9	15.7	58	6.746	15	49.74	0	12	6.1	S
11.5	10	3	43.89	11	27	35.0	57	48.223	15	44.70	12	38	4.8	I
12.0	10	30	9.92	9	37	59.2	57	28.565	15	39.35	1	3	21.3	S
12.5	10	55	59.66	+ 7	42	23.2	57	8.143	15	33.78	13	27	58.0	I
13.0	11	21	15.86	5	42	36.3	56	47.345	15	28.12	1	51	57.9	S
13.5	11	46	2.03	3	40	20.8	56	26.572	15	22.46	14	15	25.5	I
14.0	12	10	22.23	+ 1	37	10.3	56	6.220	15	16.92	2	38	25.4	S
14.5	12	34	20.87	- 0	25	30.0	55	46.667	15	11.59	15	1	2.7	I
15.0	12	58	2.53	- 2	26	23.2	55	28.270	15	6.58	3	23	22.7	S
15.5	13	21	31.85	4	24	19.8	55	11.353	15	1.97	15	45	30.5	I
16.0	13	44	53.40	6	18	16.9	54	56.205	14	57.85	4	7	31.4	S
16.5	14	8	11.60	8	7	17.1	54	43.074	14	54.27	16	29	30.3	I
17.0	14	31	30.67	9	50	27.1	54	32.170	14	51.30	4	51	31.7	S
17.5	14	54	54.54	-11	26	56.9	54	23.662	14	48.98	17	13	40.0	I
18.0	15	18	26.76	12	55	58.5	54	17.675	14	47.35	5	35	59.1	S
18.5	15	42	10.48	14	16	45.5	54	14.297	14	46.43	17	58	32.1	I
19.0	16	6	8.34	15	28	32.8	54	13.575	14	46.24	6	21	21.9	S
19.5	16	30	22.41	16	30	35.7	54	15.516	14	46.77	18	44	30.5	I
20.0	16	54	54.12	-17	22	10.6	54	20.088	14	48.01	7	7	59.0	S
20.5	17	19	44.24	18	2	35.5	54	27.219	14	49.95	19	31	47.9	I
21.0	17	44	52.80	18	31	10.5	54	36.797	14	52.56	7	55	56.7	S
21.5	18	10	19.13	18	47	19.1	54	48.672	14	55.80	20	20	24.3	I
22.0	18	36	1.90	18	50	30.0	55	2.650	14	59.60	8	45	8.7	S
22.5	19	1	59.16	-18	40	18.0	55	18.501	15	3.92	21	10	7.2	I
23.0	19	28	8.57	18	16	26.5	55	35.955	15	8.67	9	35	16.9	S
23.5	19	54	27.46	17	38	48.5	55	54.706	15	13.78	22	0	34.8	I
24.0	20	20	53.12	16	47	28.8	56	14.415	15	19.15	10	25	57.7	S
24.5	20	47	22.97	15	42	44.3	56	34.721	15	24.68	22	51	23.2	I
25.0	21	13	54.76	-14	25	5.9	56	55.240	15	30.27	11	16	49.0	S
25.5	21	40	26.77	12	55	17.9	57	15.586	15	35.81	23	42	13.9	I
26.0	22	6	57.92	11	14	18.5	57	35.371	15	41.20	--	--	----	-
26.5	22	33	27.86	9	23	19.2	57	54.230	15	46.34	12	7	37.5	S
27.0	22	59	57.00	7	23	43.6	58	11.826	15	51.13	0	33	.2	I
27.5	23	26	26.47	- 5	17	6.6	58	27.864	15	55.50	12	58	23.3	S
28.0	23	52	58.08	3	5	12.3	58	42.107	15	59.38	1	23	49.0	I
28.5	0	19	34.16	- 0	49	53.0	58	54.378	16	2.72	13	49	20.1	S
MAR. 1.0	0	46	17.46	+ 1	26	53.2	59	4.566	16	5.49	2	14	59.6	I
1.5	1	13	10.97	3	43	4.0	59	12.629	16	7.69	14	40	51.1	S
2.0	1	40	17.66	+ 5	56	34.9	59	18.584	16	9.31	3	6	58.0	I
2.5	2	7	40.34	+ 8	5	20.8	59	22.505	16	10.38	15	33	23.4	S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
MAR. 1.0	0	46	17.46	+	1	26 53.2	59	4.566	16	5.49	2	14	59.6 I
1.5	1	13	10.97		3	43 4.0	59	12.629	16	7.69	14	40	51.1 S
2.0	1	40	17.66		5	56 34.9	59	18.584	16	9.31	3	6	58.0 I
2.5	2	7	40.34		8	5 20.8	59	22.505	16	10.38	15	33	23.4 S
3.0	2	35	21.36		10	7 18.6	59	24.506	16	10.92	4	0	9.9 I
3.5	3	3	22.38	+12	0	28.9	59	24.733	16	10.99	16	27	19.1 S
4.0	3	31	44.13		13	42 58.2	59	23.347	16	10.61	4	54	51.5 I
4.5	4	0	26.20		15	13 2.0	59	20.513	16	9.84	17	22	46.1 S
5.0	4	29	26.88		16	29 6.7	59	16.385	16	8.71	5	51	.1 I
5.5	4	58	43.12		17	29 53.0	59	11.101	16	7.27	18	19	29.4 S
6.0	5	28	10.56	+18	14	18.8	59	4.777	16	5.55	6	48	8.2 I
6.5	5	57	43.74		18	41 41.0	58	57.498	16	3.57	19	16	49.5 S
7.0	6	27	16.40		18	51 38.2	58	49.327	16	1.34	7	45	25.8 I
7.5	6	56	41.92		18	44 10.9	58	40.300	15	58.88	20	13	49.2 S
8.0	7	25	53.76		18	19 41.9	58	30.434	15	56.20	8	41	52.6 I
8.5	7	54	45.95	+17	38	54.4	58	19.736	15	53.28	21	9	29.8 S
9.0	8	23	13.40		16	42 50.4	58	8.209	15	50.14	9	36	35.8 I
9.5	8	51	12.24		15	32 47.1	57	55.858	15	46.78	22	3	7.5 S
10.0	9	18	39.90		14	10 13.6	57	42.705	15	43.20	10	29	3.2 I
10.5	9	45	35.12		12	36 47.1	57	28.789	15	39.41	22	54	22.9 S
11.0	10	11	57.92	+10	54	9.9	57	14.176	15	35.43	11	19	7.7 I
11.5	10	37	49.37		9	4 5.7	56	58.962	15	31.28	23	43	19.9 S
12.0	11	3	11.48		7	8 17.9	56	43.272	15	27.01	--	--	---- -
12.5	11	28	6.94		5	8 26.8	56	27.266	15	22.65	12	7	2.6 I
13.0	11	52	38.93		3	6 8.7	56	11.129	15	18.25	0	30	19.5 S
13.5	12	16	51.02	+ 1	2	54.7	55	55.073	15	13.88	12	53	14.7 I
14.0	12	40	46.96	- 0	59	49.7	55	39.328	15	9.59	1	15	52.5 S
14.5	13	4	30.56		3	0 45.1	55	24.138	15	5.46	13	38	17.2 I
15.0	13	28	5.65		4	58 37.9	55	9.755	15	1.54	2	0	33.1 S
15.5	13	51	35.92		6	52 20.0	54	56.431	14	57.91	14	22	44.4 I
16.0	14	15	4.90	- 8	40	48.6	54	44.412	14	54.64	2	44	55.1 S
16.5	14	38	35.90		10	23 5.3	54	33.934	14	51.78	15	7	8.7 I
17.0	15	2	11.92		11	58 16.0	54	25.220	14	49.41	3	29	28.7 S
17.5	15	25	55.64		13	25 30.2	54	18.470	14	47.57	15	51	57.8 I
18.0	15	49	49.32		14	44 .5	54	13.865	14	46.32	4	14	38.6 S
18.5	16	13	54.83	-15	53	2.5	54	11.560	14	45.69	16	37	32.9 I
19.0	16	38	13.53		16	51 54.4	54	11.678	14	45.72	5	0	42.2 S
19.5	17	2	46.31		17	39 57.2	54	14.318	14	46.44	17	24	7.2 I
20.0	17	27	33.56		18	16 34.6	54	19.539	14	47.86	5	47	48.2 S
20.5	17	52	35.16		18	41 14.1	54	27.368	14	49.99	18	11	44.7 I
21.0	18	17	50.55	-18	53	26.6	54	37.791	14	52.83	6	35	56.0 S
21.5	18	43	18.75	-18	52	47.9	54	50.753	14	56.36	19	0	20.6 I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL		SEMI- DIÂMETRO		PASS.MERID. GREENWICH			
	H	M	S	G	'	"			'	"	H	M	S	
MAR. 21.5	18	43	18.75	-18	52	47.9	54	50.753	14	56.36	19	0	20.6 I	
22.0	19	8	58.50	18	38	59.5	55	6.151	15	0.56	7	24	57.1 S	
22.5	19	34	48.31	18	11	49.3	55	23.832	15	5.37	19	49	43.7 I	
23.0	20	0	46.65	17	31	13.0	55	43.591	15	10.75	8	14	38.6 S	
23.5	20	26	52.04	16	37	15.0	56	5.166	15	16.63	20	39	40.4 I	
24.0	20	53	3.23	-15	30	9.6	56	28.237	15	22.91	9	4	47.8 S	
24.5	21	19	19.29	14	10	22.1	56	52.426	15	29.50	21	30	.2 I	
25.0	21	45	39.76	12	38	29.7	57	17.300	15	36.28	9	55	17.4 S	
25.5	22	12	4.66	10	55	22.4	57	42.381	15	43.11	22	20	40.1 I	
26.0	22	38	34.59	9	2	3.4	58	7.148	15	49.85	10	46	9.3 S	
26.5	23	5	10.67	-	6	59	49.8	58	31.061	15	56.37	23	11	47.1 I
27.0	23	31	54.56	4	50	12.6	58	53.575	16	2.50	11	37	35.6 S	
27.5	23	58	48.33	2	34	56.1	59	14.162	16	8.11	--	--	---- -	
28.0	0	25	54.36	-	0	15	57.2	59	32.338	16	13.06	0	3	37.7 I
28.5	0	53	15.17	+	2	4	36.3	59	47.686	16	17.24	12	29	56.3 S
29.0	1	20	53.23	+	4	24	27.7	59	59.878	16	20.56	0	56	34.2 I
29.5	1	48	50.72	6	41	14.4	60	8.691	16	22.96	13	23	34.0 S	
30.0	2	17	9.30	8	52	31.4	60	14.020	16	24.41	1	50	57.4 I	
30.5	2	45	49.81	10	55	55.0	60	15.877	16	24.91	14	18	45.5 S	
31.0	3	14	52.05	12	49	7.6	60	14.388	16	24.51	2	46	57.7 I	
ABR. 31.5	3	44	14.56	+14	30	1.8	60	9.775	16	23.25	15	15	32.1 S	
1.0	4	13	54.51	15	56	45.2	60	2.341	16	21.23	3	44	24.9 I	
1.5	4	43	47.66	17	7	44.6	59	52.440	16	18.53	16	13	30.8 S	
2.0	5	13	48.55	18	1	48.8	59	40.461	16	15.27	4	42	43.0 I	
2.5	5	43	50.72	18	38	11.6	59	26.799	16	11.55	17	11	53.5 S	
3.0	6	13	47.16	+18	56	32.4	59	11.837	16	7.47	5	40	54.1 I	
3.5	6	43	30.79	18	56	56.1	58	55.932	16	3.14	18	9	36.7 S	
4.0	7	12	54.98	18	39	50.9	58	39.400	15	58.64	6	37	53.9 I	
4.5	7	41	53.93	18	6	5.8	58	22.512	15	54.04	19	5	39.9 S	
5.0	8	10	23.09	17	16	46.5	58	5.492	15	49.40	7	32	50.2 I	
5.5	8	38	19.28	+16	13	12.0	57	48.514	15	44.78	19	59	22.4 S	
6.0	9	5	40.76	14	56	50.0	57	31.713	15	40.20	8	25	15.5 I	
6.5	9	32	27.16	13	29	13.9	57	15.185	15	35.70	20	50	30.1 S	
7.0	9	58	39.34	11	51	59.5	56	58.995	15	31.29	9	15	8.3 I	
7.5	10	24	19.15	10	6	43.3	56	43.187	15	26.99	21	39	13.0 S	
8.0	10	49	29.26	+	8	15	.3	56	27.791	15	22.79	10	2	47.7 I
8.5	11	14	12.91	6	18	23.0	56	12.831	15	18.72	22	25	56.6 S	
9.0	11	38	33.75	4	18	21.0	55	58.328	15	14.77	10	48	44.2 I	
9.5	12	2	35.62	2	16	20.6	55	44.315	15	10.95	23	11	14.9 S	
10.0	12	26	22.50	+	0	13	44.1	55	30.831	15	7.28	11	33	33.1 I
10.5	12	49	58.32	-	1	48	9.4	55	17.933	15	3.77	23	55	43.3 S
11.0	13	13	26.89	-	3	48	4.7	55	5.693	15	0.43	--	--	---- -

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH					
	H	M	S	G	'	"		'	"	H	M	S			
ABR. 11.0	13	13	26.89	-	3	48	4.7	55	5.693	15	0.43	--	--	----	-
11.5	13	36	51.84		5	44	50.1	54	54.201	14	57.30	12	17	49.4	I
12.0	14	0	16.54		7	37	17.2	54	43.565	14	54.40	0	39	55.4	S
12.5	14	23	44.05		9	24	21.3	54	33.909	14	51.77	13	2	4.6	I
13.0	14	47	17.06		11	5	1.2	54	25.367	14	49.45	1	24	20.1	S
13.5	15	10	57.84	-12	38	19.1		54	18.089	14	47.47	13	46	44.4	I
14.0	15	34	48.22		14	3	21.0	54	12.228	14	45.87	2	9	19.4	S
14.5	15	58	49.54		15	19	16.4	54	7.941	14	44.70	14	32	6.6	I
15.0	16	23	2.68		16	25	19.3	54	5.387	14	44.01	2	55	7.0	S
15.5	16	47	27.97		17	20	47.6	54	4.716	14	43.82	15	18	20.7	I
16.0	17	12	5.31	-18	5	3.8		54	6.072	14	44.19	3	41	47.6	S
16.5	17	36	54.13		18	37	35.4	54	9.585	14	45.15	16	5	26.8	I
17.0	18	1	53.52		18	57	55.0	54	15.368	14	46.72	4	29	17.3	S
17.5	18	27	2.28		19	5	40.8	54	23.512	14	48.94	16	53	17.5	I
18.0	18	52	19.05		19	0	36.8	54	34.079	14	51.82	5	17	25.9	S
18.5	19	17	42.44	-18	42	33.1		54	47.101	14	55.37	17	41	41.0	I
19.0	19	43	11.12		18	11	26.4	55	2.571	14	59.58	6	6	1.4	S
19.5	20	8	44.03		17	27	19.8	55	20.436	15	4.45	18	30	25.9	I
20.0	20	34	20.42		16	30	23.7	55	40.596	15	9.94	6	54	54.1	S
20.5	21	0	.00		15	20	55.9	56	2.890	15	16.01	19	19	25.9	I
21.0	21	25	43.00	-13	59	21.9		56	27.094	15	22.60	7	44	1.8	S
21.5	21	51	30.20		12	26	16.3	56	52.913	15	29.63	20	8	43.4	I
22.0	22	17	23.00		10	42	23.0	57	19.980	15	37.01	8	33	32.6	S
22.5	22	43	23.36		8	48	36.6	57	47.852	15	44.60	20	58	32.0	I
23.0	23	9	33.76		6	46	3.7	58	16.012	15	52.27	9	23	45.0	S
23.5	23	35	57.15	-	4	36	3.4	58	43.878	15	59.86	21	49	15.3	I
24.0	0	2	36.82		2	20	9.2	59	10.818	16	7.19	10	15	6.8	S
24.5	0	29	36.26	-	0	0	9.0	59	36.164	16	14.10	22	41	23.6	I
25.0	0	56	58.94	+	2	21	54.5	59	59.248	16	20.39	11	8	9.5	S
25.5	1	24	48.10		4	43	44.9	60	19.426	16	25.88	23	35	27.8	I
26.0	1	53	6.42	+	7	2	53.8	60	36.120	16	30.43	--	--	----	-
26.5	2	21	55.72		9	16	44.0	60	48.847	16	33.89	12	3	20.7	S
27.0	2	51	16.58		11	22	34.7	60	57.258	16	36.19	0	31	49.1	I
27.5	3	21	8.02		13	17	47.0	61	1.155	16	37.25	13	0	51.7	S
28.0	3	51	27.20		14	59	51.0	61	.507	16	37.07	1	30	25.2	I
28.5	4	22	9.30	+16	26	33.4		60	55.446	16	35.69	14	0	23.7	S
29.0	4	53	7.59		17	36	4.7	60	46.256	16	33.19	2	30	39.0	I
29.5	5	24	13.72		18	27	4.6	60	33.348	16	29.67	15	1	1.1	S
30.0	5	55	18.25		18	58	46.6	60	17.227	16	25.28	3	31	18.5	I
30.5	6	26	11.38		19	10	58.7	59	58.459	16	20.17	16	1	19.9	S
MAIO 1.0	6	56	43.69	+19	4	2.2		59	37.632	16	14.50	4	30	54.4	I
1.5	7	26	46.89	+18	38	47.5		59	15.330	16	8.42	16	59	53.1	S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	G	'	"		'	"	H	M	S		
MAIO 1.0	6	56	43.69	+19	4	2.2	59	37.632	16	14.50	4	30	54.4	I
1.5	7	26	46.89	18	38	47.5	59	15.330	16	8.42	16	59	53.1	S
2.0	7	56	14.35	17	56	28.4	58	52.104	16	2.10	5	28	9.2	I
2.5	8	25	1.39	16	58	36.1	58	28.453	15	55.66	17	55	38.3	S
3.0	8	53	5.42	15	46	51.9	58	4.815	15	49.22	6	22	18.9	I
3.5	9	20	25.76	+14	23	2.6	57	41.559	15	42.88	18	48	11.1	S
4.0	9	47	3.43	12	48	55.2	57	18.983	15	36.74	7	13	17.4	I
4.5	10	13	.81	11	6	14.1	56	57.319	15	30.83	19	37	41.2	S
5.0	10	38	21.31	9	16	39.3	56	36.737	15	25.23	8	1	27.1	I
5.5	11	3	9.09	7	21	45.1	56	17.355	15	19.95	20	24	40.4	S
6.0	11	27	28.73	+ 5	23	.3	55	59.245	15	15.02	8	47	26.5	I
6.5	11	51	25.06	3	21	48.0	55	42.443	15	10.44	21	9	50.9	S
7.0	12	15	2.99	+ 1	19	26.7	55	26.958	15	6.22	9	31	59.2	I
7.5	12	38	27.34	- 0	42	49.3	55	12.777	15	2.36	21	53	56.7	S
8.0	13	1	42.75	2	43	49.1	54	59.878	14	58.85	10	15	48.4	I
8.5	13	24	53.59	- 4	42	24.3	54	48.234	14	55.68	22	37	38.8	S
9.0	13	48	3.92	6	37	29.2	54	37.818	14	52.84	10	59	32.3	I
9.5	14	11	17.36	8	27	59.5	54	28.609	14	50.33	23	21	32.4	S
10.0	14	34	37.10	10	12	53.1	54	20.598	14	48.15	11	43	42.2	I
10.5	14	58	5.80	11	51	9.6	54	13.786	14	46.29	--	--	----	-
11.0	15	21	45.54	-13	21	50.9	54	8.193	14	44.77	0	6	4.0	S
11.5	15	45	37.80	14	44	1.2	54	3.851	14	43.59	12	28	39.5	I
12.0	16	9	43.43	15	56	48.4	54	.810	14	42.76	0	51	29.7	S
12.5	16	34	2.59	16	59	24.1	53	59.136	14	42.30	13	14	34.8	I
13.0	16	58	34.84	17	51	4.8	53	58.906	14	42.24	1	37	54.2	S
13.5	17	23	19.15	-18	31	12.5	54	.211	14	42.60	14	1	26.7	I
14.0	17	48	13.98	18	59	15.9	54	3.147	14	43.40	2	25	10.4	S
14.5	18	13	17.42	19	14	50.2	54	7.817	14	44.67	14	49	3.1	I
15.0	18	38	27.33	19	17	38.5	54	14.322	14	46.44	3	13	2.4	S
15.5	19	3	41.50	19	7	31.2	54	22.758	14	48.74	15	37	5.8	I
16.0	19	28	57.87	-18	44	26.6	54	33.214	14	51.59	4	1	11.0	S
16.5	19	54	14.67	18	8	30.4	54	45.759	14	55.00	16	25	16.1	I
17.0	20	19	30.56	17	19	55.5	55	.442	14	59.00	4	49	19.8	S
17.5	20	44	44.82	16	19	1.4	55	17.284	15	3.59	17	13	21.6	I
18.0	21	9	57.39	15	6	14.4	55	36.267	15	8.76	5	37	21.8	S
18.5	21	35	8.94	-13	42	6.6	55	57.327	15	14.50	18	1	21.5	I
19.0	22	0	20.90	12	7	16.7	56	20.351	15	20.77	6	25	22.7	S
19.5	22	25	35.44	10	22	30.1	56	45.159	15	27.52	18	49	28.4	I
20.0	22	50	55.45	8	28	39.2	57	11.503	15	34.70	7	13	42.3	S
20.5	23	16	24.43	6	26	44.9	57	39.059	15	42.20	19	38	8.7	I
21.0	23	42	6.45	- 4	17	57.7	58	7.419	15	49.93	8	2	52.7	S
21.5	0	8	5.98	- 2	3	39.1	58	36.094	15	57.74	20	27	59.5	I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"		'	"	H	M	S
MAIO21.5	0	8	5.98	-	2	3 39.1	58 36.094	15	57.74	20	27	59.5 I
22.0	0	34	27.77	+	0	14 36.5	59 4.513	16	5.48	8	53	34.9 S
22.5	1	1	16.63		2	35 1.1	59 32.039	16	12.97	21	19	44.1 I
23.0	1	28	37.20		4	55 31.6	59 57.982	16	20.04	9	46	32.4 S
23.5	1	56	33.57		7	13 50.3	60 21.626	16	26.48	22	14	3.6 I
24.0	2	25	8.95	+	9	27 26.6	60 42.265	16	32.10	10	42	20.4 S
24.5	2	54	25.17		11	33 39.3	60 59.237	16	36.72	23	11	23.3 I
25.0	3	24	22.23		13	29 42.7	61 11.974	16	40.19	11	41	9.8 S
25.5	3	54	57.87		15	12 53.2	61 20.033	16	42.39	--	--	--
26.0	4	26	7.24		16	40 38.4	61 23.136	16	43.23	0	11	34.7 I
26.5	4	57	42.85	+17	50	46.7	61 21.187	16	42.70	12	42	29.2 S
27.0	5	29	34.84		18	41 36.6	61 14.285	16	40.82	1	13	41.4 I
27.5	6	1	31.56		19	12 3.8	61 2.707	16	37.67	13	44	57.6 S
28.0	6	33	20.52		19	21 45.9	60 46.893	16	33.36	2	16	3.0 I
28.5	7	4	49.49		19	11 1.9	60 27.406	16	28.05	14	46	43.1 S
29.0	7	35	47.47	+18	40	48.5	60 4.898	16	21.92	3	16	45.7 I
29.5	8	6	5.58		17	52 33.2	59 40.059	16	15.16	15	46	1.0 S
30.0	8	35	37.51		16	48 5.3	59 13.589	16	7.95	4	14	22.8 I
30.5	9	4	19.65		15	29 27.1	58 46.155	16	0.48	16	41	48.1 S
31.0	9	32	10.94		13	58 45.6	58 18.376	15	52.91	5	8	16.8 I
JUN. 31.5	9	59	12.48	+12	18	6.5	57 50.799	15	45.40	17	33	51.4 S
1.0	10	25	27.11		10	29 29.5	57 23.891	15	38.07	5	58	35.9 I
1.5	10	50	58.95		8	34 45.9	56 58.039	15	31.03	18	22	35.8 S
2.0	11	15	52.96		6	35 37.4	56 33.549	15	24.36	6	45	57.2 I
2.5	11	40	14.60		4	33 36.5	56 10.653	15	18.12	19	8	46.5 S
3.0	12	4	9.58	+	2	30 6.8	55 49.515	15	12.37	7	31	10.3 I
3.5	12	27	43.65	+	0	26 24.8	55 30.239	15	7.12	19	53	15.0 S
4.0	12	51	2.42	-	1	36 19.3	55 12.880	15	2.39	8	15	7.0 I
4.5	13	14	11.26		3	36 59.8	54 57.453	14	58.19	20	36	51.9 S
5.0	13	37	15.22		5	34 34.4	54 43.938	14	54.51	8	58	35.1 I
5.5	14	0	18.96	-	7	28 3.3	54 32.292	14	51.33	21	20	21.6 S
6.0	14	23	26.64		9	16 28.0	54 22.454	14	48.65	9	42	15.5 I
6.5	14	46	41.89		10	58 51.2	54 14.352	14	46.45	22	4	20.5 S
7.0	15	10	7.73		12	34 16.6	54 7.910	14	44.69	10	26	39.3 I
7.5	15	33	46.53		14	1 48.7	54 3.050	14	43.37	22	49	13.8 S
8.0	15	57	39.90	-15	20	33.5	53 59.703	14	42.46	11	12	5.2 I
8.5	16	21	48.68		16	29 39.3	53 57.805	14	41.94	23	35	13.6 S
9.0	16	46	12.92		17	28 17.5	53 57.305	14	41.81	11	58	38.3 I
9.5	17	10	51.87		18	15 44.1	53 58.165	14	42.04	--	--	--
10.0	17	35	44.05		18	51 20.5	54 .364	14	42.64	0	22	17.5 S
10.5	18	0	47.36	-19	14	35.0	54 3.896	14	43.60	12	46	8.9 I
11.0	18	25	59.18	-19	25	4.1	54 8.771	14	44.93	1	10	9.5 S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	G	'	"		'	"	H	M	S		
JUN. 11.0	18	25	59.18	-19	25	4.1	54	8.771	14	44.93	1	10	9.5 S	
11.5	18	51	16.63	19	22	32.9	54	15.014	14	46.63	13	34	16.0 I	
12.0	19	16	36.72	19	6	55.8	54	22.660	14	48.71	1	58	24.9 S	
12.5	19	41	56.63	18	38	16.4	54	31.757	14	51.19	14	22	33.2 I	
13.0	20	7	13.92	17	56	47.8	54	42.356	14	54.08	2	46	38.2 S	
13.5	20	32	26.69	-17	2	51.2	54	54.511	14	57.39	15	10	37.7 I	
14.0	20	57	33.76	15	56	55.7	55	8.268	15	1.13	3	34	30.9 S	
14.5	21	22	34.80	14	39	37.2	55	23.667	15	5.33	15	58	17.4 I	
15.0	21	47	30.32	13	11	37.8	55	40.725	15	9.97	4	21	58.2 S	
15.5	22	12	21.74	11	33	44.7	55	59.437	15	15.07	16	45	35.4 I	
16.0	22	37	11.33	-	9	46	50.6	56	19.762	15	20.61	5	9	11.8 S
16.5	23	2	2.19	7	51	53.2	56	41.614	15	26.56	17	32	51.3 I	
17.0	23	26	58.14	5	49	55.7	57	4.859	15	32.89	5	56	38.6 S	
17.5	23	52	3.61	3	42	7.9	57	29.299	15	39.54	18	20	39.1 I	
18.0	0	17	23.58	-	1	29	47.0	57	54.668	15	46.45	6	44	58.6 S
18.5	0	43	3.38	+	0	45	40.7	58	20.629	15	53.53	19	9	43.5 I
19.0	1	9	8.54	3	2	38.5	58	46.763	16	0.64	7	35	.2 S	
19.5	1	35	44.55	5	19	18.0	59	12.580	16	7.68	20	0	54.8 I	
20.0	2	2	56.55	7	33	37.9	59	37.519	16	14.47	8	27	32.9 S	
20.5	2	30	49.00	9	43	24.4	60	.964	16	20.85	20	54	58.9 I	
21.0	2	59	25.20	+11	46	12.1	60	22.267	16	26.66	9	23	15.5 S	
21.5	3	28	46.79	13	39	27.6	60	40.775	16	31.70	10	52	22.9 I	
22.0	3	58	53.21	15	20	34.0	60	55.862	16	35.81	10	22	18.1 S	
22.5	4	29	41.28	16	46	58.8	61	6.977	16	38.83	22	52	54.6 I	
23.0	5	1	4.93	17	56	22.8	61	13.670	16	40.66	11	24	2.4 S	
23.5	5	32	55.19	+18	46	50.3	61	15.639	16	41.19	23	55	28.2 I	
24.0	6	5	.65	19	16	58.7	61	12.745	16	40.40	--	--	---- -	
24.5	6	37	8.29	19	26	5.6	61	5.033	16	38.30	12	26	56.5 S	
25.0	7	9	4.57	19	14	12.3	60	52.725	16	34.95	0	58	11.3 I	
25.5	7	40	36.65	18	42	3.2	60	36.208	16	30.45	13	28	57.7 S	
26.0	8	11	33.50	+17	51	.1	60	16.002	16	24.95	1	59	2.7 I	
26.5	8	41	46.61	16	42	54.0	59	52.728	16	18.61	14	28	17.2 S	
27.0	9	11	10.42	15	19	55.2	59	27.067	16	11.62	2	56	35.4 I	
27.5	9	39	42.24	13	44	23.1	58	59.720	16	4.17	15	23	55.0 S	
28.0	10	7	21.97	11	58	38.4	58	31.376	15	56.45	3	50	17.0 I	
28.5	10	34	11.66	+10	4	56.4	58	2.686	15	48.64	16	15	44.4 S	
29.0	11	0	14.95	8	5	23.1	57	34.236	15	40.89	4	40	22.2 I	
29.5	11	25	36.61	6	1	52.7	57	6.542	15	33.35	17	4	16.3 S	
30.0	11	50	22.16	3	56	7.8	56	40.041	15	26.13	5	27	33.4 I	
30.5	12	14	37.44	+	1	49	39.1	56	15.089	15	19.33	17	50	20.2 S
JUL. 1.0	12	38	28.48	-	0	16	12.6	55	51.966	15	13.03	6	12	43.5 I
1.5	13	2	1.21	-	2	20	15.2	55	30.879	15	7.29	18	34	50.1 S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL		SEMI- DIÂMETRO		PASS.MERID. GREENWICH			
	H	M	S	G	'	"			'	"	H	M	S	
JUL. 1.0	12	38	28.48	-	0	16	12.6	55	51.966	15	13.03	6	12	43.5 I
1.5	13	2	1.21		2	20	15.2	55	30.879	15	7.29	18	34	50.1 S
2.0	13	25	21.38		4	21	23.4	55	11.972	15	2.14	6	56	46.3 I
2.5	13	48	34.41		6	18	37.3	54	55.333	14	57.61	19	18	37.9 S
3.0	14	11	45.36		8	11	.5	54	40.997	14	53.71	7	40	30.3 I
3.5	14	34	58.80	-	9	57	38.9	54	28.963	14	50.43	20	2	28.4 S
4.0	14	58	18.79		11	37	40.1	54	19.192	14	47.77	8	24	36.2 I
4.5	15	21	48.74		13	10	12.6	54	11.619	14	45.70	20	46	57.1 S
5.0	15	45	31.41		14	34	25.7	54	6.157	14	44.22	9	9	33.6 I
5.5	16	9	28.77		15	49	29.3	54	2.702	14	43.28	21	32	27.4 S
6.0	16	33	42.00	-16	54	35.1		54	1.141	14	42.85	9	55	38.9 I
6.5	16	58	11.41		17	48	57.0	54	1.352	14	42.91	22	19	7.8 S
7.0	17	22	56.44		18	31	52.4	54	3.214	14	43.41	10	42	52.6 I
7.5	17	47	55.72		19	2	43.7	54	6.607	14	44.34	23	6	51.1 S
8.0	18	13	7.14		19	20	59.7	54	11.416	14	45.65	11	31	.2 I
8.5	18	38	27.97	-19	26	17.2		54	17.535	14	47.32	23	55	16.4 S
9.0	19	3	55.10		19	18	21.9	54	24.872	14	49.31	--	--	---
9.5	19	29	25.23		18	57	9.8	54	33.345	14	51.62	12	19	36.0 I
10.0	19	54	55.14		18	22	46.8	54	42.890	14	54.22	0	43	55.2 S
10.5	20	20	21.94		17	35	29.8	54	53.458	14	57.10	13	8	10.8 I
11.0	20	45	43.26	-16	35	45.5		55	5.012	15	0.25	1	32	20.2 S
11.5	21	10	57.46		15	24	9.7	55	17.533	15	3.66	13	56	21.5 I
12.0	21	36	3.73		14	1	26.5	55	31.008	15	7.33	2	20	14.0 S
12.5	22	1	2.20		12	28	27.2	55	45.433	15	11.26	14	43	58.1 I
13.0	22	25	53.88		10	46	9.1	56	.807	15	15.44	3	7	35.2 S
13.5	22	50	40.73	-	8	55	34.8	56	17.122	15	19.89	15	31	7.6 I
14.0	23	15	25.52		6	57	51.6	56	34.361	15	24.58	3	54	38.8 S
14.5	23	40	11.82		4	54	11.1	56	52.488	15	29.52	16	18	13.1 I
15.0	0	5	3.83		2	45	49.8	57	11.439	15	34.68	4	41	55.6 S
15.5	0	30	6.31	-	0	34	9.1	57	31.117	15	40.04	17	5	51.7 I
16.0	0	55	24.40	+	1	39	23.6	57	51.381	15	45.56	5	30	7.6 S
16.5	1	21	3.51		3	53	14.1	58	12.041	15	51.19	17	54	49.5 I
17.0	1	47	9.05		6	5	40.4	58	32.849	15	56.85	6	20	3.6 S
17.5	2	13	46.24		8	14	52.1	58	53.502	16	2.48	18	45	55.6 I
18.0	2	40	59.76		10	18	49.8	59	13.636	16	7.96	7	12	30.6 S
18.5	3	8	53.35	+12	15	26.0		59	32.833	16	13.19	19	39	52.2 I
19.0	3	37	29.42		14	2	26.7	59	50.632	16	18.04	8	8	2.0 S
19.5	4	6	48.56		15	37	34.9	60	6.542	16	22.37	20	36	59.2 I
20.0	4	36	49.10		16	58	35.7	60	20.061	16	26.05	9	6	40.0 S
20.5	5	7	26.79		18	3	23.1	60	30.708	16	28.95	21	36	57.0 I
21.0	5	38	34.73	+18	50	8.4		60	38.043	16	30.95	10	7	40.0 S
21.5	6	10	3.54	+19	17	28.2		60	41.707	16	31.95	22	38	36.0 I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
JUL.21.5	6	10	3.54	+19	17	28.2	60	41.707	16	31.95	22	38	36.0 I
22.0	6	41	41.98	19	24	32.1	60	41.439	16	31.88	11	9	30.5 S
22.5	7	13	17.78	19	11	7.9	60	37.108	16	30.70	23	40	9.2 I
23.0	7	44	38.71	18	37	43.1	60	28.718	16	28.41	--	--	---- -
23.5	8	15	33.62	17	45	22.8	60	16.420	16	25.06	12	10	18.8 S
24.0	8	45	53.30	+16	35	43.9	60	.501	16	20.73	0	39	48.4 I
24.5	9	15	30.98	15	10	47.5	59	41.365	16	15.51	13	8	30.5 S
25.0	9	44	22.56	13	32	49.5	59	19.516	16	9.56	1	36	20.5 I
25.5	10	12	26.43	11	44	12.4	58	55.519	16	3.03	14	3	17.1 S
26.0	10	39	43.23	9	47	17.6	58	29.980	15	56.07	2	29	21.6 I
26.5	11	6	15.34	+ 7	44	20.3	58	3.510	15	48.86	14	54	37.3 S
27.0	11	32	6.50	5	37	25.9	57	36.701	15	41.56	3	19	8.8 I
27.5	11	57	21.33	3	28	27.8	57	10.109	15	34.32	15	43	1.6 S
28.0	12	22	5.05	+ 1	19	7.3	56	44.236	15	27.27	4	6	22.1 I
28.5	12	46	23.14	- 0	49	6.1	56	19.525	15	20.54	16	29	16.5 S
29.0	13	10	21.18	- 2	54	53.1	55	56.350	15	14.23	4	51	51.1 I
29.5	13	34	4.63	4	57	3.9	55	35.021	15	8.42	17	14	12.2 S
30.0	13	57	38.77	6	54	35.4	55	15.780	15	3.18	5	36	25.4 I
30.5	14	21	8.53	8	46	30.7	54	58.812	14	58.56	17	58	36.2 S
31.0	14	44	38.46	10	31	56.8	54	44.243	14	54.59	6	20	49.5 I
31.5	15	8	12.63	-12	10	3.8	54	32.149	14	51.30	18	43	9.5 S
AGO. 1.0	15	31	54.59	13	40	4.0	54	22.562	14	48.68	7	5	40.0 I
1.5	15	55	47.21	15	1	10.9	54	15.470	14	46.75	19	28	23.7 S
2.0	16	19	52.73	16	12	39.8	54	10.830	14	45.49	7	51	22.6 I
2.5	16	44	12.59	17	13	47.1	54	8.565	14	44.87	20	14	37.9 S
3.0	17	8	47.47	-18	3	51.4	54	8.572	14	44.87	8	38	9.7 I
3.5	17	33	37.21	18	42	14.4	54	10.724	14	45.46	21	1	57.2 S
4.0	17	58	40.87	19	8	21.8	54	14.877	14	46.59	9	25	58.7 I
4.5	18	23	56.79	19	21	44.8	54	20.869	14	48.22	21	50	11.9 S
5.0	18	49	22.68	19	22	1.6	54	28.527	14	50.31	10	14	33.6 I
5.5	19	14	55.82	-19	8	58.7	54	37.668	14	52.80	22	39	.5 S
6.0	19	40	33.25	18	42	32.0	54	48.108	14	55.64	11	3	29.2 I
6.5	20	6	11.96	18	2	47.8	54	59.661	14	58.79	23	27	56.5 S
7.0	20	31	49.18	17	10	3.2	55	12.146	15	2.19	11	52	19.7 I
7.5	20	57	22.56	16	4	45.9	55	25.390	15	5.80	--	--	---- -
8.0	21	22	50.33	-14	47	34.4	55	39.232	15	9.57	0	16	36.7 S
8.5	21	48	11.50	13	19	16.8	55	53.526	15	13.46	12	40	46.4 I
9.0	22	13	25.86	11	40	50.2	56	8.144	15	17.44	1	4	48.6 S
9.5	22	38	34.08	9	53	19.4	56	22.977	15	21.48	13	28	44.1 I
10.0	23	3	37.67	7	57	56.3	56	37.935	15	25.56	1	52	34.8 S
10.5	23	28	38.93	- 5	55	58.7	56	52.945	15	29.64	14	16	23.4 I
11.0	23	53	40.87	- 3	48	49.5	57	7.949	15	33.73	2	40	13.5 S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH					
	H	M	S	G	'	"		'	"	H	M	S			
AGO.11.0	23	53	40.87	-	3	48	49.5	57	7.949	15	33.73	2	40	13.5	S
11.5	0	18	47.10	-	1	37	56.5	57	22.898	15	37.80	15	4	9.3	I
12.0	0	44	1.76	+	0	35	8.2	57	37.751	15	41.85	3	28	15.6	S
12.5	1	9	29.30					57	52.462	15	45.85	15	52	37.6	I
13.0	1	35	14.37					58	6.978	15	49.81	4	17	20.6	S
13.5	2	1	21.61	+	7	11	4.8	58	21.228	15	53.69	16	42	30.0	I
14.0	2	27	55.40					58	35.121	15	57.47	5	8	10.7	S
14.5	2	54	59.62					58	48.533	16	1.13	17	34	26.7	I
15.0	3	22	37.31					59	1.310	16	4.61	6	1	21.2	S
15.5	3	50	50.33					59	13.260	16	7.86	18	28	55.6	I
16.0	4	19	39.00	+	16	10	49.8	59	24.159	16	10.83	6	57	9.3	S
16.5	4	49	1.82					59	33.752	16	13.44	19	25	59.4	I
17.0	5	18	55.24					59	41.762	16	15.62	7	55	20.2	S
17.5	5	49	13.63					59	47.903	16	17.30	20	25	3.8	I
18.0	6	19	49.49					59	51.892	16	18.38	8	55	.2	S
18.5	6	50	33.86	+	19	21	4.1	59	53.468	16	18.81	21	24	58.0	I
19.0	7	21	16.94					59	52.413	16	18.52	9	54	45.6	S
19.5	7	51	48.93					59	48.563	16	17.48	22	24	12.1	I
20.0	8	22	.73					59	41.831	16	15.64	10	53	8.3	S
20.5	8	51	44.63					59	32.214	16	13.02	23	21	27.0	I
21.0	9	20	54.73	+	14	53	32.7	59	19.801	16	9.64	11	49	3.7	S
21.5	9	49	27.18					59	4.775	16	5.55	--	--	----	-
22.0	10	17	20.14					58	47.403	16	0.82	0	15	56.2	I
22.5	10	44	33.58					58	28.027	15	55.54	12	42	4.8	S
23.0	11	11	9.01					58	7.049	15	49.83	1	7	31.3	I
23.5	11	37	9.14	+	5	13	2.7	57	44.912	15	43.80	13	32	18.9	S
24.0	12	2	37.54					57	22.081	15	37.58	1	56	32.1	I
24.5	12	27	38.41	+	0	51	2.4	56	59.025	15	31.30	14	20	15.7	S
25.0	12	52	16.26	-	1	18	53.3	56	36.203	15	25.08	2	43	34.9	I
25.5	13	16	35.73					56	14.046	15	19.05	15	6	35.1	S
26.0	13	40	41.48	-	5	29	19.2	55	52.953	15	13.30	3	29	21.5	I
26.5	14	4	38.01					55	33.279	15	7.95	15	51	59.2	S
27.0	14	28	29.58					55	15.332	15	3.06	4	14	32.8	I
27.5	14	52	20.14					54	59.373	14	58.71	16	37	6.8	S
28.0	15	16	13.21					54	45.616	14	54.96	4	59	44.9	I
28.5	15	40	11.88	-	14	8	39.2	54	34.223	14	51.86	17	22	30.4	S
29.0	16	4	18.71					54	25.315	14	49.43	5	45	25.9	I
29.5	16	28	35.65					54	18.967	14	47.71	18	8	33.3	S
30.0	16	53	4.06					54	15.215	14	46.68	6	31	53.8	I
30.5	17	17	44.64					54	14.052	14	46.37	18	55	27.8	S
31.0	17	42	37.44	-	18	52	57.3	54	15.438	14	46.74	7	19	14.9	I
31.5	18	7	41.86	-	19	14	34.7	54	19.295	14	47.79	19	43	14.2	S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH			
	H	M	S	G	'	"		'	"	H	M	S	
AGO.31.5	18	7	41.86	-19	14	34.7	54	19.295	14	47.79	19	43	14.2 S
SET. 1.0	18	32	56.76	19	23	22.0	54	25.512	14	49.49	8	7	24.0 I
1.5	18	58	20.51	19	19	1.2	54	33.944	14	51.78	20	31	42.0 S
2.0	19	23	51.13	19	1	21.4	54	44.417	14	54.64	8	56	6.0 I
2.5	19	49	26.47	18	30	19.8	54	56.725	14	57.99	21	20	33.4 S
3.0	20	15	4.35	-17	46	2.3	55	10.638	15	1.78	9	45	1.8 I
3.5	20	40	42.76	16	48	44.5	55	25.900	15	5.94	22	9	29.3 S
4.0	21	6	20.04	15	38	52.2	55	42.238	15	10.39	10	33	54.4 I
4.5	21	31	54.98	14	17	1.7	55	59.363	15	15.05	22	58	16.3 S
5.0	21	57	26.97	12	43	59.5	56	16.981	15	19.85	11	22	35.0 I
5.5	22	22	56.08	-11	0	42.7	56	34.793	15	24.70	23	46	51.2 S
6.0	22	48	23.03	9	8	18.0	56	52.512	15	29.53	--	--	----
6.5	23	13	49.26	7	8	1.3	57	9.864	15	34.25	12	11	6.6 I
7.0	23	39	16.82	5	1	17.5	57	26.600	15	38.81	0	35	23.5 S
7.5	0	4	48.35	2	49	39.1	57	42.500	15	43.14	12	59	44.9 I
8.0	0	30	26.95	-	0	34	57	57.383	15	47.19	1	24	14.5 S
8.5	0	56	16.06	+	1	41	58	11.106	15	50.93	13	48	56.2 I
9.0	1	22	19.31	3	57	38.3	58	23.568	15	54.33	2	13	54.1 S
9.5	1	48	40.37	6	11	22.6	58	34.708	15	57.36	14	39	12.5 I
10.0	2	15	22.69	8	20	52.1	58	44.499	16	0.03	3	4	55.3 S
10.5	2	42	29.30	+10	24	7.1	58	52.944	16	2.33	15	31	5.9 I
11.0	3	10	2.57	12	19	7.9	59	.068	16	4.27	3	57	46.7 S
11.5	3	38	3.90	14	3	57.1	59	5.908	16	5.86	16	24	59.1 I
12.0	4	6	33.48	15	36	41.9	59	10.502	16	7.11	4	52	42.8 S
12.5	4	35	30.07	16	55	37.5	59	13.886	16	8.03	17	20	55.7 I
13.0	5	4	50.87	+17	59	10.3	59	16.081	16	8.63	5	49	33.8 S
13.5	5	34	31.49	18	46	2.0	59	17.090	16	8.90	18	18	31.2 I
14.0	6	4	26.09	19	15	13.1	59	16.899	16	8.85	6	47	40.3 S
14.5	6	34	27.69	19	26	6.2	59	15.471	16	8.46	19	16	52.4 I
15.0	7	4	28.64	19	18	28.8	59	12.752	16	7.72	7	45	58.5 S
15.5	7	34	21.15	+18	52	33.5	59	8.676	16	6.61	20	14	49.7 I
16.0	8	3	57.90	18	8	58.4	59	3.176	16	5.11	8	43	18.0 S
16.5	8	33	12.45	17	8	44.4	58	56.186	16	3.21	21	11	17.1 I
17.0	9	1	59.74	15	53	12.6	58	47.657	16	0.89	9	38	42.5 S
17.5	9	30	16.18	14	23	59.9	58	37.565	15	58.14	22	5	31.5 I
18.0	9	57	59.78	+12	42	54.9	58	25.920	15	54.97	10	31	43.4 S
18.5	10	25	10.04	10	51	53.6	58	12.774	15	51.39	22	57	18.9 I
19.0	10	51	47.76	8	52	55.0	57	58.222	15	47.42	11	22	20.2 S
19.5	11	17	54.82	6	47	58.5	57	42.409	15	43.12	23	46	50.3 I
20.0	11	43	33.92	4	39	.4	57	25.526	15	38.52	--	--	----
20.5	12	8	48.36	+	2	27	57	7.805	15	33.69	12	10	53.2 S
21.0	12	33	41.80	+	0	16	56	49.514	15	28.71	0	34	32.9 I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH					
	H	M	S	G	'	"		'	"	H	M	S			
SET. 21.0	12	33	41.80	+	0	16	19.9	56	49.514	15	28.71	0	34	32.9	I
21.5	12	58	18.10	-	1	53	59.0	56	30.947	15	23.65	12	57	54.0	S
22.0	13	22	41.14		4	1	33.8	56	12.418	15	18.61	1	21	.8	I
22.5	13	46	54.73		6	5	1.5	55	54.248	15	13.66	13	43	57.7	S
23.0	14	11	2.50		8	3	6.8	55	36.758	15	8.89	2	6	48.8	I
23.5	14	35	7.77	-	9	54	41.4	55	20.259	15	4.40	14	29	37.7	S
24.0	14	59	13.55		11	38	43.6	55	5.048	15	0.26	2	52	27.8	I
24.5	15	23	22.45		13	14	17.7	54	51.397	14	56.54	15	15	22.0	S
25.0	15	47	36.62		14	40	33.8	54	39.556	14	53.31	3	38	22.5	I
25.5	16	11	57.72		15	56	46.7	54	29.741	14	50.64	16	1	31.0	S
26.0	16	36	26.93	-17	2	16.3		54	22.140	14	48.57	4	24	48.8	I
26.5	17	1	4.89		17	56	26.8	54	16.906	14	47.14	16	48	16.3	S
27.0	17	25	51.74		18	38	47.0	54	14.157	14	46.39	5	11	53.6	I
27.5	17	50	47.17		19	8	50.5	54	13.975	14	46.35	17	35	39.9	S
28.0	18	15	50.44		19	26	15.3	54	16.407	14	47.01	5	59	34.5	I
28.5	18	41	.49	-19	30	44.8		54	21.463	14	48.38	18	23	35.8	S
29.0	19	6	16.03		19	22	8.0	54	29.110	14	50.47	6	47	42.3	I
29.5	19	31	35.66		19	0	19.6	54	39.279	14	53.24	19	11	52.5	S
30.0	19	56	58.02		18	25	21.2	54	51.855	14	56.66	7	36	4.9	I
30.5	20	22	21.89		17	37	20.9	55	6.682	15	0.70	20	0	18.2	S
OUT. 1.0	20	47	46.34	-16	36	34.7		55	23.556	15	5.30	8	24	31.8	I
1.5	21	13	10.81		15	23	26.5	55	42.229	15	10.38	20	48	45.2	S
2.0	21	38	35.22		13	58	28.7	56	2.405	15	15.88	9	12	58.9	I
2.5	22	4	.03		12	22	23.0	56	23.745	15	21.69	21	37	13.8	S
3.0	22	29	26.22		10	36	.5	56	45.869	15	27.72	10	1	31.6	I
3.5	22	54	55.38	-	8	40	22.7	57	8.363	15	33.84	22	25	54.6	S
4.0	23	20	29.59		6	36	41.8	57	30.790	15	39.95	10	50	25.6	I
4.5	23	46	11.41		4	26	20.7	57	52.697	15	45.92	23	15	7.9	S
5.0	0	12	3.80	-	2	10	53.6	58	13.637	15	51.62	11	40	5.3	I
5.5	0	38	9.99	+	0	7	54.7	58	33.179	15	56.94	--	--	----	-
6.0	1	4	33.33	+	2	28	9.2	58	50.929	16	1.78	0	5	21.6	S
6.5	1	31	17.14		4	47	45.8	59	6.547	16	6.03	12	31	.7	I
7.0	1	58	24.45		7	4	33.1	59	19.759	16	9.63	0	57	6.0	S
7.5	2	25	57.79		9	16	14.8	59	30.374	16	12.52	13	23	40.5	I
8.0	2	53	58.92		11	20	32.6	59	38.284	16	14.68	1	50	46.1	S
8.5	3	22	28.51	+13	15	9.9		59	43.470	16	16.09	14	18	23.6	I
9.0	3	51	25.94		14	57	55.8	59	45.993	16	16.78	2	46	31.9	S
9.5	4	20	49.05		16	26	50.0	59	45.986	16	16.77	15	15	8.2	I
10.0	4	50	34.06		17	40	7.4	59	43.641	16	16.13	3	44	7.7	S
10.5	5	20	35.66		18	36	22.2	59	39.190	16	14.92	16	13	23.6	I
11.0	5	50	47.16	+19	14	32.2		59	32.886	16	13.21	4	42	47.8	S
11.5	6	21	.98	+19	34	.8		59	24.994	16	11.06	17	12	11.1	I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	G	'	"		'	"	H	M	S		
OUT. 11.5	6	21	.98	+19	34	.8	59	24.994	16	11.06	17	12	11.1	I
12.0	6	51	9.09	19	34	38.6	59	15.766	16	8.54	5	41	24.1	S
12.5	7	21	3.68	19	16	42.9	59	5.437	16	5.73	18	10	17.9	I
13.0	7	50	37.65	18	40	55.2	58	54.213	16	2.67	6	38	44.9	S
13.5	8	19	45.13	17	48	18.5	58	42.267	15	59.42	19	6	39.4	I
14.0	8	48	21.74	+16	40	12.5	58	29.739	15	56.01	7	33	57.2	S
14.5	9	16	24.75	15	18	10.0	58	16.735	15	52.46	20	0	36.5	I
15.0	9	43	53.02	13	43	52.3	58	3.331	15	48.81	8	26	37.2	S
15.5	10	10	46.87	11	59	5.5	57	49.585	15	45.07	20	52	.8	I
16.0	10	37	7.84	10	5	38.1	57	35.535	15	41.24	9	16	49.9	S
16.5	11	2	58.46	+ 8	5	18.0	57	21.214	15	37.34	21	41	8.1	I
17.0	11	28	21.97	5	59	51.4	57	6.655	15	33.38	10	4	59.7	S
17.5	11	53	22.07	3	51	1.4	56	51.896	15	29.36	22	28	29.2	I
18.0	12	18	2.75	+ 1	40	27.4	56	36.990	15	25.30	10	51	41.2	S
18.5	12	42	28.08	- 0	30	15.2	56	22.010	15	21.22	23	14	40.4	I
19.0	13	6	42.09	- 2	39	35.7	56	7.047	15	17.14	11	37	31.1	S
19.5	13	30	48.64	4	46	8.0	55	52.216	15	13.10	--	--	----	-
20.0	13	54	51.31	6	48	31.0	55	37.655	15	9.14	0	0	17.4	I
20.5	14	18	53.32	8	45	28.3	55	23.523	15	5.29	12	23	3.0	S
21.0	14	42	57.48	10	35	49.0	55	9.995	15	1.60	0	45	51.1	I
21.5	15	7	6.12	-12	18	27.2	54	57.263	14	58.14	13	8	44.2	S
22.0	15	31	21.01	13	52	22.9	54	45.527	14	54.94	1	31	44.3	I
22.5	15	55	43.40	15	16	41.4	54	34.992	14	52.07	13	54	52.8	S
23.0	16	20	13.96	16	30	34.2	54	25.865	14	49.58	2	18	10.3	I
23.5	16	44	52.77	17	33	19.0	54	18.347	14	47.54	14	41	36.9	S
24.0	17	9	39.42	-18	24	19.8	54	12.631	14	45.98	3	5	11.9	I
24.5	17	34	33.02	19	3	7.1	54	8.895	14	44.96	15	28	54.3	S
25.0	17	59	32.33	19	29	18.0	54	7.304	14	44.53	3	52	42.5	I
25.5	18	24	35.84	19	42	36.4	54	7.999	14	44.72	16	16	34.7	S
26.0	18	49	41.91	19	42	52.7	54	11.101	14	45.56	4	40	29.1	I
26.5	19	14	48.95	-19	30	3.6	54	16.699	14	47.09	17	4	24.0	S
27.0	19	39	55.52	19	4	12.2	54	24.854	14	49.31	5	28	17.7	I
27.5	20	5	.48	18	25	27.6	54	35.590	14	52.23	17	52	9.3	S
28.0	20	30	3.12	17	34	4.7	54	48.892	14	55.86	6	15	58.1	I
28.5	20	55	3.22	16	30	23.9	55	4.701	15	0.16	18	39	44.3	S
29.0	21	20	1.15	-15	14	51.5	55	22.906	15	5.12	7	3	28.6	I
29.5	21	44	57.90	13	47	59.5	55	43.344	15	10.69	19	27	12.5	S
30.0	22	9	55.05	12	10	26.5	56	5.790	15	16.80	7	50	58.3	I
30.5	22	34	54.83	10	22	57.9	56	29.955	15	23.38	20	14	49.0	S
31.0	23	0	.02	8	26	27.3	56	55.484	15	30.34	8	38	48.0	I
31.5	23	25	13.91	- 6	21	57.5	57	21.955	15	37.54	21	2	59.6	S
NOV. 1.0	23	50	40.24	- 4	10	41.7	57	48.882	15	44.88	9	27	28.4	I

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"		'	"	H	M	S
NOV. 1.0	23	50	40.24	-	4	10 41.7	57 48.882	15	44.88	9	27	28.4 I
1.5	0	16	23.09	-	1	54 4.8	58 15.721	15	52.19	21	52	19.1 S
2.0	0	42	26.73	+	0	26 15.4	58 41.886	15	59.31	10	17	36.7 I
2.5	1	8	55.43		2	48 27.3	59 6.762	16	6.09	22	43	26.2 S
3.0	1	35	53.29		5	10 25.9	59 29.736	16	12.35	11	9	51.6 I
3.5	2	3	23.91	+	7	29 53.4	59 50.217	16	17.93	23	36	56.6 S
4.0	2	31	30.10		9	44 21.4	60 7.671	16	22.68	--	--	---- -
4.5	3	0	13.46		11	51 14.0	60 21.649	16	26.49	12	4	43.1 I
5.0	3	29	34.04		13	47 53.5	60 31.816	16	29.26	0	33	11.3 S
5.5	3	59	29.95		15	31 46.2	60 37.970	16	30.93	13	2	19.1 I
6.0	4	29	57.13	+17	0	30.1	60 40.052	16	31.50	1	32	1.7 S
6.5	5	0	49.30		18	12 2.9	60 38.144	16	30.98	14	2	11.4 I
7.0	5	31	58.16		19	4 48.9	60 32.466	16	29.43	2	32	38.1 S
7.5	6	3	13.84		19	37 44.7	60 23.344	16	26.95	15	3	10.1 I
8.0	6	34	25.66		19	50 23.0	60 11.197	16	23.64	3	33	34.5 S
8.5	7	5	22.97	+19	42	52.4	59 56.496	16	19.64	16	3	39.2 I
9.0	7	35	56.03		19	15 55.0	59 39.739	16	15.07	4	33	13.1 S
9.5	8	5	56.73		18	30 41.0	59 21.426	16	10.08	17	2	7.7 I
10.0	8	35	19.03		17	28 42.2	59 2.029	16	4.80	5	30	17.2 S
10.5	9	3	59.19		16	11 45.2	58 41.981	15	59.34	17	57	38.3 I
11.0	9	31	55.70	+14	41	44.5	58 21.662	15	53.81	6	24	10.7 S
11.5	9	59	8.99		13	0 37.1	58 1.392	15	48.29	18	49	56.1 I
12.0	10	25	41.16		11	10 18.9	57 41.430	15	42.85	7	14	57.8 S
12.5	10	51	35.54		9	12 41.3	57 21.978	15	37.55	19	39	20.4 I
13.0	11	16	56.32		7	9 30.7	57 3.181	15	32.43	8	3	9.3 S
13.5	11	41	48.28	+	5	2 27.2	56 45.142	15	27.52	20	26	30.1 I
14.0	12	6	16.47		2	53 5.0	56 27.922	15	22.83	8	49	28.7 S
14.5	12	30	26.02	+	0	42 53.2	56 11.552	15	18.37	21	12	11.0 I
15.0	12	54	21.96	-	1	26 44.2	55 56.045	15	14.15	9	34	42.4 S
15.5	13	18	9.11		3	34 26.9	55 41.398	15	10.16	21	57	8.0 I
16.0	13	41	51.93	-	5	38 58.3	55 27.604	15	6.40	10	19	32.7 S
16.5	14	5	34.48		7	39 4.5	55 14.658	15	2.87	22	42	.4 I
17.0	14	29	20.27		9	33 34.8	55 2.561	14	59.58	11	4	34.6 I
17.5	14	53	12.26		11	21 21.4	54 51.329	14	56.52	23	27	18.0 S
18.0	15	17	12.73		13	1 19.5	54 40.990	14	53.70	11	50	12.3 S
18.5	15	41	23.28	-14	32	28.3	54 31.590	14	51.14	--	--	---- -
19.0	16	5	44.75		15	53 51.3	54 23.195	14	48.86	0	13	18.6 I
19.5	16	30	17.24		17	4 37.3	54 15.889	14	46.87	12	36	37.1 S
20.0	16	55	.13		18	4 1.3	54 9.769	14	45.20	1	0	6.9 I
20.5	17	19	52.11		18	51 25.2	54 4.951	14	43.89	13	23	46.6 S
21.0	17	44	51.32	-19	26	18.7	54 1.561	14	42.96	1	47	33.9 I
21.5	18	9	55.48	-19	48	19.9	53 59.732	14	42.47	14	11	26.4 S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL	SEMI- DIÂMETRO		PASS.MERID. GREENWICH				
	H	M	S	G	'	"		'	"	H	M	S		
NOV. 21.5	18	9	55.48	-19	48	19.9	53	59.732	14	42.47	14	11	26.4	S
22.0	18	35	2.05	19	57	15.2	53	59.604	14	42.43	2	35	20.9	I
22.5	19	0	8.46	19	52	59.7	54	1.315	14	42.90	14	59	14.7	S
23.0	19	25	12.29	19	35	36.7	54	5.000	14	43.90	3	23	5.0	I
23.5	19	50	11.45	19	5	17.0	54	10.785	14	45.48	15	46	49.7	S
24.0	20	15	4.38	-18	22	18.5	54	18.781	14	47.65	4	10	27.0	I
24.5	20	39	50.16	17	27	4.9	54	29.081	14	50.46	16	33	56.4	S
25.0	21	4	28.61	16	20	5.1	54	41.752	14	53.91	4	57	17.8	I
25.5	21	29	.33	15	1	52.6	54	56.828	14	58.02	17	20	32.4	S
26.0	21	53	26.72	13	33	4.8	55	14.305	15	2.78	5	43	42.0	I
26.5	22	17	49.98	-11	54	23.3	55	34.135	15	8.18	18	6	49.7	S
27.0	22	42	13.01	10	6	33.8	55	56.213	15	14.19	6	29	59.0	I
27.5	23	6	39.45	8	10	26.9	56	20.373	15	20.77	18	53	14.6	S
28.0	23	31	13.50	6	6	59.1	56	46.378	15	27.86	7	16	41.4	I
28.5	23	55	59.94	3	57	14.4	57	13.916	15	35.36	19	40	25.4	S
29.0	0	21	3.93	-	1	42	57	42.590	15	43.17	8	4	32.5	I
29.5	0	46	30.95	+	0	36	58	11.920	15	51.15	20	29	9.2	S
30.0	1	12	26.59	2	56	33.1	58	41.342	15	59.17	8	54	22.0	I
30.5	1	38	56.36	5	17	15.2	59	10.221	16	7.03	21	20	16.9	S
DEZ. 1.0	2	6	5.34	7	36	2.0	59	37.860	16	14.56	9	46	59.3	I
1.5	2	33	57.85	+	9	50	60	3.532	16	21.55	22	14	33.3	S
2.0	3	2	36.98	11	58	8.3	60	26.504	16	27.81	10	43	.9	I
2.5	3	32	4.03	13	56	7.9	60	46.081	16	33.14	23	12	21.6	S
3.0	4	2	18.01	15	41	42.2	61	1.644	16	37.38	11	42	31.4	I
3.5	4	33	15.17	17	12	8.2	61	12.693	16	40.39	--	--	----	-
4.0	5	4	48.75	+18	24	58.2	61	18.884	16	42.08	0	13	22.6	S
4.5	5	36	49.06	19	18	10.9	61	20.054	16	42.39	12	44	44.0	I
5.0	6	9	4.00	19	50	20.6	61	16.230	16	41.35	1	16	21.0	S
5.5	6	41	19.94	20	0	45.2	61	7.626	16	39.01	13	47	57.5	I
6.0	7	13	22.98	19	49	28.1	60	54.627	16	35.47	2	19	17.0	S
6.5	7	45	.15	+19	17	16.7	60	37.752	16	30.87	14	50	4.5	I
7.0	8	16	.53	18	25	36.1	60	17.616	16	25.39	3	20	8.0	S
7.5	8	46	15.97	17	16	20.0	59	54.891	16	19.20	15	49	18.8	I
8.0	9	15	41.35	15	51	40.2	59	30.263	16	12.49	4	17	32.2	S
8.5	9	44	14.56	14	13	56.9	59	4.397	16	5.45	16	44	47.1	I
9.0	10	11	56.06	+12	25	30.9	58	37.913	15	58.23	5	11	5.2	S
9.5	10	38	48.38	10	28	37.5	58	11.363	15	51.00	17	36	30.4	I
10.0	11	4	55.63	8	25	23.1	57	45.221	15	43.88	6	1	8.3	S
10.5	11	30	22.94	6	17	43.5	57	19.882	15	36.98	18	25	5.1	I
11.0	11	55	16.08	4	7	23.5	56	55.657	15	30.38	6	48	27.8	S
11.5	12	19	41.08	+	1	55	56	32.781	15	24.15	19	11	23.4	I
12.0	12	43	44.04	-	0	15	56	11.422	15	18.33	7	33	58.8	S

COORDENADAS APARENTES A 0 E 12 HORAS TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			PARALAXE HORIZONTAL		SEMI- DIÂMETRO		PASS.MERID. GREENWICH		
	H	M	S	G	'	"			'	"	H	M	S
DEZ.12.0	12	43	44.04	-	0	15 7.8	56	11.422	15	18.33	7	33	58.8 S
12.5	13	7	30.90		2	24 34.9	55	51.685	15	12.96	19	56	20.4 I
13.0	13	31	7.30		4	31 10.9	55	33.625	15	8.04	8	18	34.4 S
13.5	13	54	38.48		6	33 47.6	55	17.256	15	3.58	20	40	46.4 I
14.0	14	18	9.18		8	31 20.1	55	2.558	14	59.58	9	3	1.2 S
14.5	14	41	43.55	-10	22	46.0	54	49.490	14	56.02	21	25	22.9 I
15.0	15	5	25.09		12	7 4.9	54	37.994	14	52.89	9	47	55.0 S
15.5	15	29	16.56		13	43 18.0	54	28.004	14	50.17	22	10	39.8 I
16.0	15	53	19.91		15	10 29.2	54	19.454	14	47.84	10	33	38.7 S
16.5	16	17	36.23		16	27 44.8	54	12.281	14	45.88	22	56	52.1 I
17.0	16	42	5.72	-17	34	15.2	54	6.431	14	44.29	11	20	19.3 S
17.5	17	6	47.70		18	29 15.7	54	1.863	14	43.05	23	43	58.8 I
18.0	17	31	40.66		19	12 7.7	53	58.552	14	42.14	--	--	---- -
18.5	17	56	42.36		19	42 20.3	53	56.493	14	41.58	12	7	47.9 S
19.0	18	21	50.00		19	59 31.0	53	55.697	14	41.37	0	31	43.5 I
19.5	18	47	.41	-20	3	26.8	53	56.194	14	41.50	12	55	42.1 S
20.0	19	12	10.29		19	54 4.6	53	58.035	14	42.00	1	19	39.7 I
20.5	19	37	16.45		19	31 30.7	54	1.283	14	42.89	13	43	33.0 S
21.0	20	2	16.10		18	56 1.0	54	6.018	14	44.18	2	7	18.6 I
21.5	20	27	6.99		18	7 59.6	54	12.326	14	45.90	14	30	54.2 S
22.0	20	51	47.60	-17	7	58.1	54	20.302	14	48.07	2	54	18.3 I
22.5	21	16	17.27		15	56 34.0	54	30.039	14	50.72	15	17	30.3 S
23.0	21	40	36.26		14	34 29.7	54	41.626	14	53.88	3	40	30.9 I
23.5	22	4	45.73		13	2 31.6	54	55.139	14	57.56	16	3	21.6 S
24.0	22	28	47.74		11	21 29.1	55	10.635	15	1.78	4	26	5.0 I
24.5	22	52	45.19	-	9	32 14.6	55	28.146	15	6.55	16	48	44.9 S
25.0	23	16	41.76		7	35 43.3	55	47.668	15	11.86	5	11	25.7 I
25.5	23	40	41.84		5	32 53.8	56	9.153	15	17.72	17	34	12.6 S
26.0	0	4	50.40		3	24 49.0	56	32.499	15	24.07	5	57	11.5 I
26.5	0	29	12.95	-	1	12 37.4	56	57.542	15	30.90	18	20	29.0 S
27.0	0	53	55.41	+	1	2 25.1	57	24.043	15	38.11	6	44	12.1 I
27.5	1	19	3.95		3	18 53.5	57	51.687	15	45.64	19	8	27.7 S
28.0	1	44	44.82		5	35 11.6	58	20.070	15	53.37	7	33	23.2 I
28.5	2	11	4.10		7	49 30.5	58	48.701	16	1.17	19	59	5.3 S
29.0	2	38	7.39		9	59 47.5	59	17.003	16	8.88	8	25	39.9 I
29.5	3	5	59.33	+12	3	45.6	59	44.326	16	16.32	20	53	11.6 S
30.0	3	34	43.12		13	58 55.6	60	9.959	16	23.30	9	21	42.6 I
30.5	4	4	19.91		15	42 39.3	60	33.166	16	29.62	21	51	12.2 S
31.0	4	34	48.20		17	12 15.8	60	53.213	16	35.08	10	21	36.0 I
31.5	5	6	3.35		18	25 10.6	61	9.414	16	39.50	22	52	45.3 S

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH			
	H	M	S	G	'	"			"	"	H	M	S	
JAN.	0	18	19	12.61	-20	27	42.6	12.96	4.95	0.678	5801	11	35	19
	1	18	13	57.83	20	21	13.9	12.84	4.91	.685	0126	11	26	25
	2	18	9	14.15	20	16	28.1	12.67	4.84	.694	0338	11	18	4
	3	18	5	7.59	20	13	30.0	12.47	4.76	.705	3671	11	10	22
	4	18	1	42.07	20	12	20.5	12.24	4.68	.718	7147	11	3	22
	5	17	58	59.58	-20	12	57.0	11.98	4.58	0.733	7743	10	57	5
	6	17	57	.56	20	15	13.8	11.72	4.48	.750	2518	10	51	30
	7	17	55	44.19	20	19	2.3	11.45	4.38	.767	8710	10	46	37
	8	17	55	8.75	20	24	11.9	11.18	4.27	.786	3792	10	42	23
	9	17	55	11.96	20	30	31.1	10.92	4.17	.805	5510	10	38	47
	10	17	55	51.18	-20	37	47.5	10.66	4.07	0.825	1881	10	35	45
	11	17	57	3.65	20	45	48.8	10.41	3.98	.845	1193	10	33	15
	12	17	58	46.57	20	54	22.9	10.16	3.88	.865	1984	10	31	14
	13	18	0	57.25	21	3	18.4	9.93	3.80	.885	3020	10	29	39
14	18	3	33.13	21	12	24.6	9.71	3.71	.905	3270	10	28	29	
15	18	6	31.84	-21	21	31.6	9.51	3.63	0.925	1879	10	27	40	
16	18	9	51.19	21	30	30.4	9.31	3.56	.944	8148	10	27	12	
17	18	13	29.19	21	39	13.0	9.12	3.48	.964	1509	10	27	1	
18	18	17	24.02	21	47	32.0	8.94	3.42	0.983	1505	10	27	6	
19	18	21	34.07	21	55	20.9	8.78	3.35	1.001	7775	10	27	25	
20	18	25	57.86	-22	2	34.0	8.62	3.29	1.020	0036	10	27	58	
21	18	30	34.08	22	9	5.9	8.47	3.24	.037	8072	10	28	43	
22	18	35	21.55	22	14	52.2	8.33	3.18	.055	1720	10	29	38	
23	18	40	19.22	22	19	48.8	8.20	3.13	.072	0863	10	30	44	
24	18	45	26.13	22	23	52.1	8.08	3.09	.088	5422	10	31	58	
25	18	50	41.44	-22	26	58.8	7.96	3.04	1.104	5346	10	33	20	
26	18	56	4.37	22	29	6.2	7.85	3.00	.120	0609	10	34	50	
27	19	1	34.23	22	30	11.6	7.75	2.96	.135	1203	10	36	26	
28	19	7	10.41	22	30	13.0	7.65	2.92	.149	7139	10	38	8	
29	19	12	52.34	22	29	8.1	7.56	2.89	.163	8436	10	39	56	
30	19	18	39.52	-22	26	55.4	7.47	2.85	1.177	5124	10	41	49	
31	19	24	31.49	22	23	33.2	7.39	2.82	.190	7239	10	43	47	
FEV.	1	19	30	27.83	22	19	.1	7.31	2.79	.203	4821	10	45	49
	2	19	36	28.17	22	13	14.8	7.23	2.76	.215	7914	10	47	54
	3	19	42	32.18	22	6	16.3	7.16	2.74	.227	6561	10	50	3
	4	19	48	39.54	-21	58	3.5	7.10	2.71	1.239	0806	10	52	16
	5	19	54	49.97	21	48	35.5	7.03	2.69	.250	0690	10	54	31
	6	20	1	3.23	21	37	51.5	6.98	2.67	.260	6251	10	56	49
	7	20	7	19.08	21	25	50.9	6.92	2.64	.270	7523	10	59	10
	8	20	13	37.33	21	12	32.9	6.87	2.62	.280	4534	11	1	33
	9	20	19	57.78	-20	57	57.1	6.82	2.61	1.289	7307	11	3	58
	10	20	26	20.26	-20	42	2.9	6.77	2.59	1.298	5857	11	6	25

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA	P. MERID. GREENWICH		
	H	M	S	G	'	"				"	"	H
FEV. 10	20	26	20.26	-20	42	2.9	6.77	2.59	1.298 5857	11	6	25
11	20	32	44.63	20	24	49.9	6.73	2.57	.307 0190	11	8	54
12	20	39	10.76	20	6	17.6	6.69	2.56	.315 0305	11	11	25
13	20	45	38.52	19	46	25.6	6.65	2.54	.322 6191	11	13	57
14	20	52	7.83	19	25	13.7	6.61	2.53	.329 7828	11	16	31
15	20	58	38.59	-19	2	41.6	6.58	2.51	1.336 5184	11	19	6
16	21	5	10.72	18	38	48.9	6.55	2.50	.342 8216	11	21	42
17	21	11	44.18	18	13	35.6	6.52	2.49	.348 6871	11	24	20
18	21	18	18.90	17	47	1.5	6.49	2.48	.354 1081	11	26	59
19	21	24	54.84	17	19	6.3	6.47	2.47	.359 0764	11	29	39
20	21	31	31.99	-16	49	50.1	6.45	2.46	1.363 5825	11	32	21
21	21	38	10.31	16	19	12.8	6.43	2.46	.367 6152	11	35	3
22	21	44	49.81	15	47	14.4	6.41	2.45	.371 1614	11	37	47
23	21	51	30.47	15	13	54.9	6.40	2.45	.374 2065	11	40	32
24	21	58	12.31	14	39	14.4	6.39	2.44	.376 7337	11	43	18
25	22	4	55.34	-14	3	13.2	6.38	2.44	1.378 7241	11	46	6
26	22	11	39.58	13	25	51.5	6.37	2.43	.380 1566	11	48	54
27	22	18	25.06	12	47	9.6	6.37	2.43	.381 0078	11	51	44
28	22	25	11.80	12	7	8.0	6.37	2.43	.381 2518	11	54	36
MAR. 1	22	31	59.82	11	25	47.4	6.37	2.43	.380 8601	11	57	28
2	22	38	49.16	-10	43	8.4	6.37	2.44	1.379 8016	12	0	22
3	22	45	39.84	9	59	12.0	6.38	2.44	.378 0424	12	3	17
4	22	52	31.87	9	13	59.5	6.39	2.44	.375 5458	12	6	13
5	22	59	25.26	8	27	32.2	6.41	2.45	.372 2724	12	9	11
6	23	6	19.98	7	39	52.2	6.43	2.46	.368 1800	12	12	11
7	23	13	16.00	-6	51	1.5	6.45	2.46	1.363 2239	12	15	11
8	23	20	13.25	6	1	2.8	6.48	2.48	.357 3573	12	18	13
9	23	27	11.63	5	9	59.3	6.51	2.49	.350 5315	12	21	15
10	23	34	10.97	4	17	54.9	6.55	2.50	.342 6970	12	24	19
11	23	41	11.09	3	24	54.2	6.59	2.52	.333 8038	12	27	23
12	23	48	11.71	-2	31	2.3	6.64	2.54	1.323 8030	12	30	28
13	23	55	12.48	1	36	25.6	6.70	2.56	.312 6483	12	33	32
14	0	2	12.98	-0	41	11.2	6.76	2.58	.300 2972	12	36	36
15	0	9	12.67	+0	14	32.6	6.83	2.61	.286 7134	12	39	39
16	0	16	10.92	1	10	36.4	6.91	2.64	.271 8692	12	42	40
17	0	23	6.96	+2	6	49.6	7.00	2.68	1.255 7475	12	45	39
18	0	29	59.92	3	3	.8	7.10	2.71	.238 3444	12	48	33
19	0	36	48.79	3	58	57.2	7.21	2.75	.219 6716	12	51	23
20	0	43	32.45	4	54	25.1	7.33	2.80	.199 7584	12	54	7
21	0	50	9.65	5	49	10.1	7.46	2.85	.178 6532	12	56	44
22	0	56	39.07	+6	42	57.4	7.60	2.91	1.156 4241	12	59	13
23	1	2	59.29	+7	35	31.7	7.76	2.97	1.133 1590	13	1	31

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH			
	H	M	S	G	'	"			"	"	H	M	S	
MAR. 23	1	2	59.29	+	7	35	31.7	7.76	2.97	1.133	1590	13	1	31
24	1	9	8.82		8	26	37.7	7.93	3.03	.108	9645	13	3	38
25	1	15	6.16		9	16	.4	8.11	3.10	.083	9638	13	5	31
26	1	20	49.79	10	3	25.6		8.31	3.17	.058	2941	13	7	10
27	1	26	18.22	10	48	39.6		8.52	3.26	.032	1030	13	8	33
28	1	31	30.00	+11	31	29.8		8.75	3.34	1.005	5450	13	9	39
29	1	36	23.74	12	11	44.6		8.98	3.43	0.978	7777	13	10	26
30	1	40	58.16	12	49	13.6		9.24	3.53	.951	9582	13	10	53
31	1	45	12.04	13	23	47.7		9.50	3.63	.925	2404	13	10	58
ABR. 1	1	49	4.31	13	55	18.6		9.78	3.74	.898	7722	13	10	42
2	1	52	33.98	+14	23	39.1		10.08	3.85	0.872	6938	13	10	2
3	1	55	40.24	14	48	43.0		10.38	3.97	.847	1365	13	8	59
4	1	58	22.40	15	10	24.8		10.70	4.09	.822	2222	13	7	31
5	2	0	39.91	15	28	39.9		11.02	4.21	.798	0628	13	5	38
6	2	2	32.44	15	43	24.4		11.35	4.34	.774	7607	13	3	21
7	2	3	59.82	+15	54	35.1		11.69	4.47	0.752	4088	13	0	38
8	2	5	2.09	16	2	10.0		12.03	4.60	.731	0913	12	57	31
9	2	5	39.56	16	6	7.7		12.37	4.73	.710	8839	12	53	59
10	2	5	52.75	16	6	28.3		12.71	4.86	.691	8542	12	50	4
11	2	5	42.47	16	3	13.6		13.05	4.98	.674	0624	12	45	46
12	2	5	9.84	+15	56	26.7		13.37	5.11	0.657	5609	12	41	6
13	2	4	16.26	15	46	13.2		13.69	5.23	.642	3947	12	36	7
14	2	3	3.42	15	32	41.0		13.99	5.35	.628	6012	12	30	49
15	2	1	33.32	15	16	.5		14.27	5.45	.616	2102	12	25	16
16	1	59	48.22	14	56	25.0		14.53	5.55	.605	2432	12	19	29
17	1	57	50.61	+14	34	10.8		14.76	5.64	0.595	7132	12	13	31
18	1	55	43.17	14	9	36.9		14.97	5.72	.587	6249	12	7	24
19	1	53	28.70	13	43	4.7		15.14	5.78	.580	9741	12	1	12
20	1	51	10.08	13	14	57.9		15.27	5.84	.575	7476	11	54	58
21	1	48	50.15	12	45	41.8		15.38	5.87	.571	9239	11	48	43
22	1	46	31.71	+12	15	42.7		15.44	5.90	0.569	4731	11	42	32
23	1	44	17.42	11	45	26.9		15.47	5.91	.568	3581	11	36	25
24	1	42	9.71	11	15	20.6		15.47	5.91	.568	5348	11	30	26
25	1	40	10.81	10	45	48.6		15.43	5.90	.569	9536	11	24	37
26	1	38	22.67	10	17	14.1		15.36	5.87	.572	5606	11	19	0
27	1	36	46.95	+	9	49	57.9	15.26	5.83	0.576	2984	11	13	35
28	1	35	25.02	9	24	18.5		15.13	5.78	.581	1076	11	8	24
29	1	34	17.97	9	0	31.5		14.98	5.72	.586	9279	11	3	29
30	1	33	26.62	8	38	50.0		14.81	5.66	.593	6991	10	58	49
MAIO 1	1	32	51.53	8	19	24.1		14.62	5.59	.601	3616	10	54	26
2	1	32	33.08	+	8	2	21.4	14.42	5.51	0.609	8576	10	50	19
3	1	32	31.41	+	7	47	47.3	14.20	5.43	0.619	1316	10	46	29

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
MAIO	1	1 32	51.53	+	8 19	24.1	14.62	5.59	0.601	3616	10 54	26	
	2	1 32	33.08		8 2	21.4	14.42	5.51	.609	8576	10 50	19	
	3	1 32	31.41		7 47	47.3	14.20	5.43	.619	1316	10 46	29	
	4	1 32	46.55		7 35	45.0	13.98	5.34	.629	1304	10 42	56	
	5	1 33	18.37		7 26	15.9	13.75	5.25	.639	8039	10 39	39	
	6	1 34	6.63	+	7 19	19.9	13.51	5.16	0.651	1050	10 36	38	
	7	1 35	11.02		7 14	55.4	13.26	5.07	.662	9898	10 33	53	
	8	1 36	31.17		7 12	59.9	13.02	4.97	.675	4177	10 31	24	
	9	1 38	6.66		7 13	30.1	12.78	4.88	.688	3510	10 29	10	
	10	1 39	57.06		7 16	21.9	12.53	4.79	.701	7553	10 27	10	
	11	1 42	1.91	+	7 21	30.9	12.29	4.70	0.715	5989	10 25	25	
	12	1 44	20.77		7 28	52.0	12.05	4.60	.729	8526	10 23	53	
	13	1 46	53.20		7 38	20.3	11.81	4.51	.744	4900	10 22	35	
	14	1 49	38.77		7 49	50.4	11.58	4.42	.759	4865	10 21	29	
	15	1 52	37.10		8 3	16.9	11.35	4.34	.774	8197	10 20	37	
16	1 55	47.82	+	8 18	34.6	11.13	4.25	0.790	4687	10 19	56		
17	1 59	10.58		8 35	38.0	10.91	4.17	.806	4142	10 19	27		
18	2 2	45.09		8 54	21.8	10.69	4.08	.822	6379	10 19	10		
19	2 6	31.09		9 14	40.7	10.48	4.00	.839	1224	10 19	5		
20	2 10	28.35		9 36	29.5	10.28	3.93	.855	8509	10 19	10		
21	2 14	36.68	+	9 59	43.1	10.08	3.85	0.872	8067	10 19	27		
22	2 18	55.94		10 24	16.4	9.88	3.78	.889	9733	10 19	54		
23	2 23	26.02		10 50	4.4	9.69	3.70	.907	3338	10 20	32		
24	2 28	6.85		11 17	2.0	9.51	3.63	.924	8708	10 21	21		
25	2 32	58.40		11 45	4.3	9.33	3.56	.942	5658	10 22	21		
26	2 38	.66	+	12 14	6.2	9.16	3.50	0.960	3991	10 23	31		
27	2 43	13.69		12 44	2.6	8.99	3.43	.978	3493	10 24	52		
28	2 48	37.54		13 14	48.5	8.83	3.37	0.996	3930	10 26	24		
29	2 54	12.33		13 46	18.4	8.67	3.31	1.014	5042	10 28	8		
30	2 59	58.20		14 18	27.0	8.52	3.25	.032	6537	10 30	2		
31	3 5	55.30	+	14 51	8.6	8.37	3.20	1.050	8092	10 32	8		
JUN.	1	3 12	3.82		15 24	17.3	8.23	3.14	.068	9338	10 34	25	
	2	3 18	23.97		15 57	46.9	8.09	3.09	.086	9863	10 36	54	
	3	3 24	55.97		16 31	30.9	7.96	3.04	.104	9205	10 39	35	
	4	3 31	40.03		17 5	22.1	7.83	2.99	.122	6844	10 42	28	
	5	3 38	36.36	+	17 39	13.2	7.71	2.95	1.140	2202	10 45	34	
	6	3 45	45.15		18 12	56.1	7.60	2.90	.157	4637	10 48	52	
	7	3 53	6.56		18 46	22.4	7.49	2.86	.174	3442	10 52	24	
	8	4 0	40.71		19 19	22.8	7.39	2.82	.190	7846	10 56	8	
	9	4 8	27.64		19 51	47.5	7.29	2.78	.206	7014	11 0	4	
10	4 16	27.32	+	20 23	26.3	7.20	2.75	1.222	0054	11 4	14		
11	4 24	39.61	+	20 54	8.0	7.11	2.72	1.236	6025	11 8	36		

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
JUN.	11	4 24	39.61	+20 54	8.0		7.11	2.72	1.236	6025	11 8	36	
	12	4 33	4.23	21 23	41.3		7.03	2.69	.250	3951	11 13	11	
	13	4 41	40.80	21 51	54.3		6.96	2.66	.263	2838	11 17	57	
	14	4 50	28.75	22 18	35.0		6.90	2.63	.275	1697	11 22	55	
	15	4 59	27.33	22 43	31.3		6.84	2.61	.285	9572	11 28	3	
	16	5 8	35.64	+23 6	31.2		6.79	2.59	1.295	5565	11 33	20	
	17	5 17	52.58	23 27	23.6		6.74	2.58	.303	8871	11 38	45	
	18	5 27	16.89	23 45	58.0		6.71	2.56	.310	8809	11 44	17	
	19	5 36	47.17	24 2	4.8		6.68	2.55	.316	4844	11 49	55	
	20	5 46	21.90	24 15	36.3		6.66	2.54	.320	6613	11 55	36	
	21	5 55	59.46	+24 26	26.0		6.65	2.54	1.323	3938	12 1	19	
	22	6 5	38.20	24 34	29.4		6.64	2.54	.324	6830	12 7	3	
	23	6 15	16.46	24 39	43.8		6.64	2.54	.324	5483	12 12	45	
	24	6 24	52.64	24 42	8.5		6.65	2.54	.323	0265	12 18	24	
	25	6 34	25.17	24 41	44.4		6.66	2.55	.320	1696	12 23	59	
	26	6 43	52.65	+24 38	34.3		6.68	2.55	1.316	0419	12 29	28	
	27	6 53	13.77	24 32	42.2		6.71	2.56	.310	7179	12 34	50	
	28	7 2	27.38	24 24	13.5		6.74	2.58	.304	2784	12 40	4	
	29	7 11	32.49	24 13	14.6		6.78	2.59	.296	8086	12 45	8	
	30	7 20	28.26	23 59	52.6		6.83	2.61	.288	3951	12 50	3	
	JUL.	1	7 29	14.02	+23 44	15.3		6.88	2.63	1.279	1239	12 54	48
		2	7 37	49.20	23 26	30.8		6.93	2.65	.269	0789	12 59	22
		3	7 46	13.40	23 6	47.2		6.99	2.67	.258	3402	13 3	44
		4	7 54	26.30	22 45	12.9		7.05	2.69	.246	9835	13 7	55
		5	8 2	27.70	22 21	56.1		7.12	2.72	.235	0794	13 11	54
		6	8 10	17.46	+21 57	4.9		7.19	2.75	1.222	6929	13 15	41
		7	8 17	55.54	21 30	47.3		7.27	2.78	.209	8838	13 19	17
		8	8 25	21.92	21 3	10.9		7.35	2.81	.196	7062	13 22	41
		9	8 32	36.65	20 34	23.0		7.43	2.84	.183	2091	13 25	53
		10	8 39	39.81	20 4	30.6		7.52	2.87	.169	4363	13 28	53
11		8 46	31.49	+19 33	40.6		7.61	2.91	1.155	4270	13 31	42	
12		8 53	11.83	19 1	59.4		7.71	2.94	.141	2162	13 34	20	
13		8 59	40.93	18 29	33.2		7.80	2.98	.126	8349	13 36	46	
14		9 5	58.95	17 56	27.9		7.91	3.02	.112	3104	13 39	2	
15		9 12	5.99	17 22	49.3		8.01	3.06	.097	6669	13 41	6	
16		9 18	2.20	+16 48	42.8		8.12	3.10	1.082	9257	13 43	0	
17		9 23	47.67	16 14	13.7		8.23	3.15	.068	1056	13 44	43	
18		9 29	22.51	15 39	27.1		8.35	3.19	.053	2232	13 46	15	
19		9 34	46.79	15 4	28.1		8.47	3.24	.038	2932	13 47	37	
20		9 40	.57	14 29	21.4		8.59	3.28	.023	3288	13 48	48	
21		9 45	3.88	+13 54	11.9		8.72	3.33	1.008	3417	13 49	49	
22		9 49	56.73	+13 19	4.3		8.85	3.38	0.993	3427	13 50	39	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
JUL. 22	9	49	56.73	+13	19	4.3	8.85	3.38	0.993	3427	13	50	39
23	9	54	39.09	12	44	3.3	8.99	3.43	.978	3421	13	51	19
24	9	59	10.91	12	9	13.7	9.13	3.49	.963	3493	13	51	48
25	10	3	32.09	11	34	40.1	9.27	3.54	.948	3739	13	52	7
26	10	7	42.52	11	0	27.3	9.42	3.60	.933	4253	13	52	14
27	10	11	42.05	+10	26	40.3	9.57	3.66	0.918	5133	13	52	11
28	10	15	30.49	9	53	23.9	9.73	3.72	.903	6481	13	51	56
29	10	19	7.61	9	20	43.3	9.89	3.78	.888	8406	13	51	30
30	10	22	33.14	8	48	43.8	10.06	3.84	.874	1026	13	50	52
31	10	25	46.80	8	17	30.9	10.23	3.91	.859	4472	13	50	2
AGO. 1	10	28	48.22	+ 7	47	10.4	10.41	3.98	0.844	8887	13	49	0
2	10	31	37.02	7	17	48.3	10.59	4.05	.830	4433	13	47	45
3	10	34	12.77	6	49	31.0	10.78	4.12	.816	1289	13	46	17
4	10	36	35.01	6	22	25.1	10.97	4.19	.801	9661	13	44	34
5	10	38	43.23	5	56	37.7	11.16	4.26	.787	9778	13	42	38
6	10	40	36.90	+ 5	32	16.3	11.36	4.34	0.774	1901	13	40	27
7	10	42	15.44	5	9	28.6	11.56	4.42	.760	6323	13	38	0
8	10	43	38.26	4	48	22.9	11.77	4.50	.747	3375	13	35	18
9	10	44	44.77	4	29	7.7	11.98	4.58	.734	3431	13	32	18
10	10	45	34.37	4	11	52.1	12.19	4.66	.721	6908	13	29	2
11	10	46	6.47	+ 3	56	45.3	12.40	4.74	0.709	4274	13	25	28
12	10	46	20.53	3	43	56.7	12.61	4.82	.697	6049	13	21	36
13	10	46	16.08	3	33	35.7	12.81	4.90	.686	2810	13	17	25
14	10	45	52.72	3	25	51.8	13.02	4.97	.675	5194	13	12	56
15	10	45	10.20	3	20	54.0	13.22	5.05	.665	3900	13	8	7
16	10	44	8.43	+ 3	18	50.6	13.41	5.12	0.655	9687	13	2	59
17	10	42	47.53	3	19	48.8	13.59	5.19	.647	3376	12	57	33
18	10	41	7.88	3	23	54.7	13.75	5.25	.639	5848	12	51	48
19	10	39	10.17	3	31	12.0	13.90	5.31	.632	8033	12	45	46
20	10	36	55.45	3	41	42.2	14.02	5.36	.627	0906	12	39	28
21	10	34	25.18	+ 3	55	23.6	14.13	5.40	0.622	5473	12	32	56
22	10	31	41.23	4	12	11.1	14.20	5.43	.619	2755	12	26	11
23	10	28	45.94	4	31	55.7	14.24	5.44	.617	3765	12	19	16
24	10	25	42.08	4	54	24.1	14.25	5.45	.616	9490	12	12	15
25	10	22	32.84	5	19	18.6	14.23	5.44	.618	0861	12	5	10
26	10	19	21.79	+ 5	46	17.6	14.16	5.41	0.620	8728	11	58	5
27	10	16	12.76	6	14	55.5	14.06	5.37	.625	3831	11	51	4
28	10	13	9.80	6	44	43.9	13.92	5.32	.631	6777	11	44	11
29	10	10	16.98	7	15	11.8	13.75	5.25	.639	8012	11	37	29
30	10	7	38.37	7	45	47.0	13.53	5.17	.649	7810	11	31	4
31	10	5	17.83	+ 8	15	57.3	13.29	5.08	0.661	6251	11	24	59
SET. 1	10	3	18.94	+ 8	45	10.6	13.02	4.98	0.675	3218	11	19	16

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH				
	H	M	S	G	'	"			"	"	H	M	S		
SET.	1	10	3	18.94	+	8	45	10.6	13.02	4.98	0.675	3218	11	19	16
	2	10	1	44.89		9	12	57.0	12.73	4.86	.690	8389	11	13	59
	3	10	0	38.41		9	38	48.1	12.42	4.74	.708	1239	11	9	11
	4	10	0	1.71	10	2	18.8		12.09	4.62	.727	1041	11	4	53
	5	9	59	56.47	10	23	6.7		11.76	4.49	.747	6872	11	1	6
	6	10	0	23.82	+10	40	52.4		11.42	4.36	0.769	7616	10	57	53
	7	10	1	24.33	10	55	20.1		11.09	4.24	.793	1983	10	55	12
	8	10	2	58.09	11	6	16.8		10.75	4.11	.817	8507	10	53	5
	9	10	5	4.68	11	13	32.6		10.43	3.98	.843	5574	10	51	29
	10	10	7	43.23	11	17	.6		10.11	3.86	.870	1428	10	50	25
	11	10	10	52.51	+11	16	36.7		9.80	3.74	0.897	4205	10	49	52
	12	10	14	30.90	11	12	19.5		9.51	3.63	.925	1954	10	49	46
	13	10	18	36.52	11	4	10.5		9.23	3.52	.953	2676	10	50	7
	14	10	23	7.25	10	52	13.4		8.96	3.42	0.981	4363	10	50	51
	15	10	28	.78	10	36	34.6		8.71	3.33	1.009	5040	10	51	58
16	10	33	14.72	+10	17	22.5		8.48	3.24	1.037	2812	10	53	24	
17	10	38	46.62	9	54	47.7		8.26	3.16	.064	5901	10	55	7	
18	10	44	34.04	9	29	2.1		8.06	3.08	.091	2690	10	57	4	
19	10	50	34.62	9	0	19.4		7.87	3.01	.117	1747	10	59	13	
20	10	56	46.11	8	28	53.7		7.70	2.94	.142	1849	11	1	33	
21	11	3	6.42	+	7	55	.2	7.54	2.88	1.166	1992	11	4	0	
22	11	9	33.65	7	18	54.0		7.40	2.83	.189	1391	11	6	34	
23	11	16	6.07	6	40	50.1		7.26	2.77	.210	9469	11	9	12	
24	11	22	42.18	6	1	3.4		7.14	2.73	.231	5846	11	11	53	
25	11	29	20.69	5	19	47.8		7.03	2.69	.251	0315	11	14	36	
26	11	36	.49	+	4	37	16.7	6.93	2.65	1.269	2817	11	17	20	
27	11	42	40.65	3	53	42.4		6.84	2.61	.286	3422	11	20	4	
28	11	49	20.43	3	9	16.6		6.75	2.58	.302	2300	11	22	47	
29	11	55	59.22	2	24	9.5		6.68	2.55	.316	9699	11	25	29	
30	12	2	36.56	1	38	30.9		6.61	2.53	.330	5928	11	28	9	
OUT.	1	12	9	12.10	+	0	52	29.3	6.55	2.50	1.343	1336	11	30	47
	2	12	15	45.58	+	0	6	12.4	6.49	2.48	.354	6296	11	33	23
	3	12	22	16.84	-	0	40	12.8	6.44	2.46	.365	1200	11	35	57
	4	12	28	45.78	1	26	40.2		6.40	2.44	.374	6439	11	38	29
	5	12	35	12.35	2	13	4.3		6.36	2.43	.383	2403	11	40	58
	6	12	41	36.57	-	2	59	20.2	6.32	2.42	1.390	9472	11	43	25
	7	12	47	58.49	3	45	23.5		6.29	2.40	.397	8009	11	45	49
	8	12	54	18.17	4	31	10.3		6.26	2.39	.403	8362	11	48	12
	9	13	0	35.71	5	16	37.3		6.24	2.38	.409	0858	11	50	32
	10	13	6	51.24	6	1	41.3		6.22	2.38	.413	5803	11	52	50
	11	13	13	4.88	-	6	46	19.6	6.20	2.37	1.417	3481	11	55	6
	12	13	19	16.77	-	7	30	29.5	6.19	2.37	1.420	4155	11	57	21

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH			
	H	M	S	G	'	"			"	"	H	M	S	
OUT. 12	13	19	16.77	-	7	30	29.5	6.19	2.37	1.420	4155	11	57	21
13	13	25	27.04		8	14	9.0	6.18	2.36	.422	8068	11	59	34
14	13	31	35.84		8	57	15.8	6.17	2.36	.424	5439	12	1	46
15	13	37	43.33		9	39	48.1	6.17	2.36	.425	6471	12	3	57
16	13	43	49.64		10	21	44.2	6.17	2.36	.426	1345	12	6	6
17	13	49	54.92	-11	3	2.3		6.17	2.36	1.426	0225	12	8	15
18	13	55	59.32		11	43	41.0	6.17	2.36	.425	3259	12	10	22
19	14	2	2.96		12	23	38.9	6.18	2.36	.424	0576	12	12	29
20	14	8	5.99		13	2	54.5	6.18	2.36	.422	2293	12	14	35
21	14	14	8.53		13	41	26.6	6.19	2.37	.419	8510	12	16	41
22	14	20	10.69	-14	19	13.9		6.21	2.37	1.416	9312	12	18	47
23	14	26	12.58		14	56	15.1	6.22	2.38	.413	4775	12	20	53
24	14	32	14.31		15	32	29.0	6.24	2.38	.409	4957	12	22	58
25	14	38	15.95		16	7	54.4	6.26	2.39	.404	9908	12	25	3
26	14	44	17.60		16	42	30.1	6.28	2.40	.399	9665	12	27	8
27	14	50	19.33	-17	16	14.9		6.31	2.41	1.394	4255	12	29	14
28	14	56	21.18		17	49	7.5	6.33	2.42	.388	3692	12	31	19
29	15	2	23.20		18	21	6.8	6.36	2.43	.381	7984	12	33	25
30	15	8	25.42		18	52	11.4	6.40	2.44	.374	7126	12	35	31
31	15	14	27.85		19	22	20.2	6.43	2.46	.367	1108	12	37	37
NOV. 1	15	20	30.49	-19	51	31.7		6.47	2.47	1.358	9907	12	39	44
2	15	26	33.32		20	19	44.8	6.51	2.49	.350	3497	12	41	50
3	15	32	36.30		20	46	58.1	6.56	2.51	.341	1841	12	43	57
4	15	38	39.37		21	13	10.2	6.60	2.52	.331	4896	12	46	4
5	15	44	42.43		21	38	19.7	6.66	2.54	.321	2610	12	48	10
6	15	50	45.37	-22	2	25.3		6.71	2.56	1.310	4927	12	50	17
7	15	56	48.05		22	25	25.5	6.77	2.59	.299	1784	12	52	23
8	16	2	50.28		22	47	18.9	6.83	2.61	.287	3110	12	54	28
9	16	8	51.83		23	8	3.9	6.90	2.64	.274	8835	12	56	33
10	16	14	52.45		23	27	39.1	6.97	2.66	.261	8880	12	58	37
11	16	20	51.83	-23	46	2.9		7.04	2.69	1.248	3169	13	0	39
12	16	26	49.59		24	3	13.7	7.13	2.72	.234	1624	13	2	39
13	16	32	45.31		24	19	10.1	7.21	2.76	.219	4171	13	4	37
14	16	38	38.51		24	33	50.5	7.30	2.79	.204	0740	13	6	32
15	16	44	28.62		24	47	13.4	7.40	2.83	.188	1269	13	8	24
16	16	50	14.98	-24	59	17.4		7.51	2.87	1.171	5708	13	10	12
17	16	55	56.85		25	10	.8	7.62	2.91	.154	4022	13	11	54
18	17	1	33.38		25	19	22.5	7.74	2.96	.136	6198	13	13	31
19	17	7	3.58		25	27	21.0	7.86	3.00	.118	2247	13	15	1
20	17	12	26.36		25	33	55.2	8.00	3.06	.099	2217	13	16	22
21	17	17	40.45	-25	39	3.9		8.15	3.11	1.079	6198	13	17	35
22	17	22	44.42		-25	42	46.1	8.30	3.17	1.059	4334	13	18	36

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
NOV. 22	17	22	44.42	-25	42	46.1	8.30	3.17	1.059	4334	13	18	36
23	17	27	36.65	25	45	1.0	8.47	3.23	.038	6835	13	19	24
24	17	32	15.31	25	45	47.8	8.64	3.30	1.017	3992	13	19	58
25	17	36	38.37	25	45	6.0	8.83	3.37	0.995	6194	13	20	15
26	17	40	43.51	25	42	55.3	9.03	3.45	.973	3951	13	20	12
27	17	44	28.19	-25	39	15.5	9.25	3.53	0.950	7912	13	19	48
28	17	47	49.60	25	34	6.4	9.48	3.62	.927	8897	13	18	58
29	17	50	44.67	25	27	28.1	9.72	3.71	.904	7922	13	17	41
30	17	53	10.11	25	19	20.7	9.97	3.81	.881	6227	13	15	52
DEZ. 1	17	55	2.43	25	9	44.3	10.24	3.91	.858	5312	13	13	28
2	17	56	18.08	-24	58	38.9	10.52	4.02	0.835	6961	13	10	26
3	17	56	53.53	24	46	4.5	10.81	4.13	.813	3263	13	6	42
4	17	56	45.52	24	32	1.0	11.11	4.24	.791	6626	13	2	14
5	17	55	51.27	24	16	28.2	11.41	4.36	.770	9766	12	56	58
6	17	54	8.86	23	59	26.3	11.70	4.47	.751	5683	12	50	54
7	17	51	37.61	-23	40	56.9	11.99	4.58	0.733	7590	12	44	3
8	17	48	18.47	23	21	2.9	12.25	4.68	.717	8818	12	36	25
9	17	44	14.41	22	59	51.1	12.49	4.77	.704	2669	12	28	6
10	17	39	30.67	22	37	32.4	12.69	4.85	.693	2241	12	19	11
11	17	34	14.79	22	14	24.1	12.84	4.90	.685	0218	12	9	50
12	17	28	36.38	-21	50	50.0	12.94	4.94	0.679	8675	12	0	12
13	17	22	46.55	21	27	20.2	12.97	4.96	.677	8896	11	50	28
14	17	16	57.15	21	4	30.1	12.95	4.95	.679	1263	11	40	50
15	17	11	19.81	20	42	57.0	12.87	4.92	.683	5222	11	31	30
16	17	6	5.11	20	23	17.0	12.73	4.86	.690	9335	11	22	36
17	17	1	21.88	-20	6	1.9	12.54	4.79	0.701	1413	11	14	16
18	16	57	16.78	19	51	36.0	12.32	4.71	.713	8702	11	6	36
19	16	53	54.25	19	40	15.3	12.07	4.61	.728	8085	10	59	40
20	16	51	16.62	19	32	6.6	11.79	4.51	.745	6285	10	53	28
21	16	49	24.42	19	27	8.7	11.51	4.40	.764	0033	10	48	1
22	16	48	16.78	-19	25	13.8	11.22	4.29	0.783	6201	10	43	17
23	16	47	51.84	19	26	8.8	10.94	4.18	.804	1895	10	39	14
24	16	48	7.05	19	29	37.6	10.65	4.07	.825	4505	10	35	50
25	16	48	59.51	19	35	21.8	10.38	3.97	.847	1731	10	33	2
26	16	50	26.15	19	43	2.6	10.12	3.87	.869	1581	10	30	46
27	16	52	23.91	-19	52	21.1	9.87	3.77	0.891	2363	10	29	0
28	16	54	49.87	20	2	59.4	9.63	3.68	.913	2653	10	27	41
29	16	57	41.25	20	14	40.6	9.40	3.59	.935	1275	10	26	46
30	17	0	55.51	20	27	8.9	9.19	3.51	.956	7263	10	26	13
31	17	4	30.34	20	40	10.3	8.99	3.44	0.977	9839	10	26	0

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH				
	H	M	S	G	'	"			"	"	H	M	S		
JAN.	0	21	56	39.71	-14	7	55.3	11.32	10.74	0.776	7183	15	17	22	
	1	22	0	46.58	13	41	52.5	11.43	10.84	.769	3743	15	17	31	
	2	22	4	51.34	13	15	33.9	11.54	10.94	.762	0208	15	17	38	
	3	22	8	53.97	12	49	.2	11.65	11.05	.754	6582	15	17	43	
	4	22	12	54.47	12	22	12.4	11.77	11.16	.747	2868	15	17	45	
	5	22	16	52.81	-11	55	11.3	11.89	11.27	0.739	9072	15	17	46	
	6	22	20	48.99	11	27	57.8	12.01	11.39	.732	5201	15	17	44	
	7	22	24	42.99	11	0	32.7	12.13	11.50	.725	1261	15	17	40	
	8	22	28	34.79	10	32	56.9	12.25	11.62	.717	7262	15	17	34	
	9	22	32	24.38	10	5	11.3	12.38	11.74	.710	3211	15	17	25	
	10	22	36	11.73	-	9	37	16.6	12.51	11.86	0.702	9119	15	17	15
	11	22	39	56.84	9	9	13.9	12.64	11.99	.695	4996	15	17	2	
	12	22	43	39.68	8	41	3.8	12.78	12.12	.688	0853	15	16	47	
	13	22	47	20.23	8	12	47.3	12.92	12.25	.680	6699	15	16	29	
14	22	50	58.48	7	44	25.2	13.06	12.39	.673	2544	15	16	9		
15	22	54	34.40	-	7	15	58.4	13.21	12.53	0.665	8398	15	15	47	
16	22	58	7.99	6	47	27.6	13.36	12.67	.658	4269	15	15	23		
17	23	1	39.21	6	18	53.7	13.51	12.81	.651	0165	15	14	56		
18	23	5	8.04	5	50	17.5	13.66	12.96	.643	6095	15	14	27		
19	23	8	34.46	5	21	39.9	13.82	13.11	.636	2067	15	13	55		
20	23	11	58.43	-	4	53	1.7	13.99	13.26	0.628	8088	15	13	21	
21	23	15	19.92	4	24	23.8	14.15	13.42	.621	4168	15	12	44		
22	23	18	38.89	3	55	47.0	14.32	13.58	.614	0313	15	12	5		
23	23	21	55.29	3	27	12.2	14.50	13.75	.606	6533	15	11	23		
24	23	25	9.07	2	58	40.2	14.67	13.92	.599	2837	15	10	39		
25	23	28	20.18	-	2	30	12.1	14.86	14.09	0.591	9235	15	9	52	
26	23	31	28.57	2	1	48.6	15.04	14.27	.584	5736	15	9	2		
27	23	34	34.15	1	33	30.8	15.23	14.45	.577	2351	15	8	9		
28	23	37	36.88	1	5	19.5	15.43	14.63	.569	9091	15	7	13		
29	23	40	36.66	0	37	15.8	15.63	14.82	.562	5967	15	6	15		
30	23	43	33.41	-	0	9	20.5	15.84	15.02	0.555	2993	15	5	13	
31	23	46	27.05	+	0	18	25.2	16.05	15.22	.548	0183	15	4	8	
FEV.	1	23	49	17.47	0	46	.3	16.26	15.42	.540	7551	15	3	0	
	2	23	52	4.58	1	13	23.9	16.48	15.63	.533	5115	15	1	49	
	3	23	54	48.27	1	40	34.8	16.71	15.85	.526	2894	15	0	34	
	4	23	57	28.41	+	2	7	31.9	16.94	16.07	0.519	0907	14	59	15
	5	0	0	4.90	2	34	14.0	17.18	16.29	.511	9178	14	57	53	
	6	0	2	37.58	3	0	40.1	17.42	16.52	.504	7730	14	56	26	
	7	0	5	6.35	3	26	48.8	17.67	16.76	.497	6589	14	54	56	
	8	0	7	31.04	3	52	38.9	17.93	17.00	.490	5781	14	53	22	
	9	0	9	51.52	+	4	18	9.2	18.19	17.25	0.483	5337	14	51	43
	10	0	12	7.63	+	4	43	18.3	18.45	17.50	0.476	5284	14	50	0

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH			
	H	M	S	G	'	"			"	"	H	M	S	
FEV. 10	0	12	7.63	+	4	43	18.3	18.45	17.50	0.476	5284	14	50	0
11	0	14	19.23		5	8	4.9	18.73	17.76	.469	5655	14	48	12
12	0	16	26.14		5	32	27.7	19.01	18.03	.462	6481	14	46	20
13	0	18	28.22		5	56	25.1	19.29	18.30	.455	7793	14	44	23
14	0	20	25.28		6	19	55.8	19.59	18.58	.448	9626	14	42	20
15	0	22	17.15	+	6	42	58.3	19.89	18.86	0.442	2014	14	40	12
16	0	24	3.64		7	5	30.9	20.19	19.15	.435	4992	14	37	59
17	0	25	44.57		7	27	32.0	20.51	19.45	.428	8596	14	35	40
18	0	27	19.74		7	48	59.9	20.83	19.75	.422	2866	14	33	15
19	0	28	48.94		8	9	52.7	21.15	20.06	.415	7842	14	30	45
20	0	30	11.96	+	8	30	8.6	21.48	20.37	0.409	3565	14	28	8
21	0	31	28.59		8	49	45.6	21.82	20.69	.403	0081	14	25	24
22	0	32	38.61		9	8	41.6	22.17	21.02	.396	7433	14	22	34
23	0	33	41.79		9	26	54.5	22.52	21.35	.390	5672	14	19	37
24	0	34	37.93		9	44	21.9	22.87	21.69	.384	4848	14	16	32
25	0	35	26.78	+10	1	1.6		23.23	22.03	0.378	5015	14	13	20
26	0	36	8.14		10	16	51.0	23.60	22.38	.372	6226	14	10	1
27	0	36	41.79		10	31	47.6	23.97	22.73	.366	8543	14	6	34
28	0	37	7.51		10	45	48.7	24.35	23.09	.361	2027	14	2	59
MAR. 1	0	37	25.11		10	58	51.6	24.73	23.45	.355	6743	13	59	16
2	0	37	34.40	+11	10	53.4		25.11	23.81	0.350	2760	13	55	24
3	0	37	35.22		11	21	51.2	25.49	24.17	.345	0153	13	51	24
4	0	37	27.41		11	31	42.0	25.87	24.54	.339	8997	13	47	16
5	0	37	10.86		11	40	22.9	26.26	24.90	.334	9373	13	42	58
6	0	36	45.50		11	47	50.8	26.64	25.26	.330	1365	13	38	32
7	0	36	11.28	+11	54	2.7		27.02	25.62	0.325	5059	13	33	57
8	0	35	28.21		11	58	56.0	27.39	25.98	.321	0545	13	29	14
9	0	34	36.35		12	2	27.8	27.76	26.33	.316	7912	13	24	21
10	0	33	35.82		12	4	35.8	28.12	26.67	.312	7252	13	19	20
11	0	32	26.81		12	5	17.6	28.47	27.00	.308	8657	13	14	11
12	0	31	9.55	+12	4	31.4		28.81	27.32	0.305	2217	13	8	54
13	0	29	44.37		12	2	15.8	29.14	27.63	.301	8023	13	3	30
14	0	28	11.65		11	58	29.7	29.45	27.93	.298	6162	12	57	58
15	0	26	31.86		11	53	12.5	29.74	28.21	.295	6718	12	52	19
16	0	24	45.51		11	46	24.3	30.02	28.47	.292	9775	12	46	34
17	0	22	53.20	+11	38	5.9		30.27	28.71	0.290	5409	12	40	44
18	0	20	55.58		11	28	18.5	30.50	28.92	.288	3692	12	34	49
19	0	18	53.38		11	17	4.3	30.70	29.11	.286	4691	12	28	50
20	0	16	47.37		11	4	25.9	30.87	29.28	.284	8466	12	22	47
21	0	14	38.35		10	50	27.1	31.02	29.42	.283	5070	12	16	42
22	0	12	27.19	+10	35	12.1		31.13	29.53	0.282	4549	12	10	35
23	0	10	14.77	+10	18	45.8		31.22	29.61	0.281	6938	12	4	27

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
MAR. 23	0	10	14.77	+10	18	45.8	31.22	29.61	0.281	6938	12	4	27
24	0	8	1.97	10	1	13.9	31.27	29.66	.281	2265	11	58	19
25	0	5	49.70	9	42	42.8	31.29	29.67	.281	0548	11	52	13
26	0	3	38.86	9	23	19.1	31.28	29.66	.281	1796	11	46	8
27	0	1	30.30	9	3	10.1	31.23	29.62	.281	6009	11	40	6
28	23	59	24.88	+ 8	42	23.4	31.15	29.54	0.282	3177	11	34	7
29	23	57	23.41	8	21	6.6	31.04	29.44	.283	3283	11	28	13
30	23	55	26.63	7	59	27.7	30.90	29.30	.284	6300	11	22	23
31	23	53	35.26	7	37	34.4	30.73	29.14	.286	2196	11	16	40
ABR. 1	23	51	49.96	7	15	34.6	30.53	28.95	.288	0930	11	11	2
2	23	50	11.30	+ 6	53	35.8	30.30	28.73	0.290	2456	11	5	31
3	23	48	39.83	6	31	45.4	30.05	28.50	.292	6718	11	0	8
4	23	47	16.01	6	10	10.3	29.77	28.24	.295	3657	10	54	52
5	23	46	.24	5	48	57.1	29.48	27.96	.298	3208	10	49	45
6	23	44	52.85	5	28	12.1	29.17	27.66	.301	5299	10	44	46
7	23	43	54.12	+ 5	8	.8	28.83	27.35	0.304	9856	10	39	56
8	23	43	4.26	4	48	28.4	28.49	27.02	.308	6799	10	35	14
9	23	42	23.41	4	29	39.4	28.13	26.68	.312	6047	10	30	41
10	23	41	51.67	4	11	38.0	27.76	26.33	.316	7514	10	26	18
11	23	41	29.07	3	54	27.5	27.39	25.97	.321	1116	10	22	4
12	23	41	15.61	+ 3	38	11.1	27.00	25.61	0.325	6765	10	17	58
13	23	41	11.23	3	22	51.0	26.61	25.24	.330	4375	10	14	2
14	23	41	15.82	3	8	29.3	26.22	24.87	.335	3860	10	10	14
15	23	41	29.28	2	55	7.6	25.83	24.49	.340	5134	10	6	35
16	23	41	51.43	2	42	46.8	25.43	24.12	.345	8114	10	3	5
17	23	42	22.09	+ 2	31	27.8	25.04	23.74	0.351	2718	9	59	43
18	23	43	1.05	2	21	10.9	24.64	23.37	.356	8866	9	56	29
19	23	43	48.10	2	11	56.3	24.25	23.00	.362	6481	9	53	24
20	23	44	43.01	2	3	43.7	23.86	22.63	.368	5488	9	50	25
21	23	45	45.51	1	56	32.7	23.48	22.26	.374	5815	9	47	35
22	23	46	55.38	+ 1	50	22.8	23.10	21.90	0.380	7392	9	44	51
23	23	48	12.34	1	45	13.0	22.72	21.55	.387	0154	9	42	15
24	23	49	36.14	1	41	2.5	22.35	21.20	.393	4037	9	39	45
25	23	51	6.52	1	37	50.3	21.99	20.86	.399	8982	9	37	22
26	23	52	43.24	1	35	35.0	21.63	20.52	.406	4932	9	35	4
27	23	54	26.03	+ 1	34	15.5	21.28	20.18	0.413	1835	9	32	53
28	23	56	14.65	1	33	50.5	20.94	19.86	.419	9643	9	30	48
29	23	58	8.87	1	34	18.6	20.60	19.54	.426	8309	9	28	48
30	0	0	8.46	1	35	38.3	20.27	19.23	.433	7791	9	26	53
MAIO 1	0	2	13.19	1	37	48.4	19.95	18.92	.440	8049	9	25	3
2	0	4	22.87	+ 1	40	47.4	19.63	18.62	0.447	9043	9	23	18
3	0	6	37.30	+ 1	44	33.9	19.32	18.33	0.455	0738	9	21	38

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA	P. MERID. GREENWICH				
	H	M	S	G	'	"					"	"	H	M
MAIO	1	0	2	13.19	+	1	37	48.4	19.95	18.92	0.440 8049	9	25	3
	2	0	4	22.87		1	40	47.4	19.63	18.62	.447 9043	9	23	18
	3	0	6	37.30		1	44	33.9	19.32	18.33	.455 0738	9	21	38
	4	0	8	56.28		1	49	6.5	19.02	18.04	.462 3096	9	20	2
	5	0	11	19.64		1	54	23.8	18.73	17.76	.469 6084	9	18	31
	6	0	13	47.20	+	2	0	24.6	18.44	17.49	0.476 9666	9	17	4
	7	0	16	18.81		2	7	7.3	18.16	17.22	.484 3811	9	15	40
	8	0	18	54.30		2	14	30.6	17.88	16.96	.491 8486	9	14	21
	9	0	21	33.53		2	22	33.3	17.61	16.70	.499 3660	9	13	5
	10	0	24	16.36		2	31	13.9	17.35	16.45	.506 9303	9	11	53
	11	0	27	2.63	+	2	40	31.1	17.09	16.21	0.514 5386	9	10	44
	12	0	29	52.24		2	50	23.6	16.84	15.97	.522 1880	9	9	38
	13	0	32	45.04		3	0	50.0	16.60	15.74	.529 8758	9	8	35
	14	0	35	40.92		3	11	49.1	16.36	15.51	.537 5994	9	7	36
	15	0	38	39.76		3	23	19.6	16.13	15.29	.545 3561	9	6	39
16	0	41	41.45	+	3	35	20.1	15.90	15.08	0.553 1436	9	5	46	
17	0	44	45.89		3	47	49.4	15.68	14.87	.560 9594	9	4	55	
18	0	47	52.98		4	0	46.4	15.46	14.66	.568 8013	9	4	6	
19	0	51	2.62		4	14	9.6	15.25	14.46	.576 6669	9	3	20	
20	0	54	14.73		4	27	57.9	15.04	14.27	.584 5543	9	2	37	
21	0	57	29.22	+	4	42	10.1	14.84	14.08	0.592 4614	9	1	55	
22	1	0	46.00		4	56	45.0	14.65	13.89	.600 3863	9	1	17	
23	1	4	5.01		5	11	41.4	14.46	13.71	.608 3271	9	0	40	
24	1	7	26.17		5	26	58.1	14.27	13.53	.616 2823	9	0	5	
25	1	10	49.42		5	42	34.0	14.09	13.36	.624 2503	8	59	33	
26	1	14	14.68	+	5	58	28.0	13.91	13.19	0.632 2299	8	59	2	
27	1	17	41.91		6	14	38.9	13.74	13.03	.640 2198	8	58	34	
28	1	21	11.04		6	31	5.7	13.57	12.87	.648 2190	8	58	7	
29	1	24	42.03		6	47	47.3	13.40	12.71	.656 2266	8	57	42	
30	1	28	14.84		7	4	42.5	13.24	12.56	.664 2417	8	57	19	
31	1	31	49.42	+	7	21	50.5	13.08	12.41	0.672 2634	8	56	58	
JUN.	1	1	35	25.75		7	39	10.2	12.93	12.26	.680 2909	8	56	38
	2	1	39	3.81		7	56	40.7	12.78	12.12	.688 3231	8	56	20
	3	1	42	43.56		8	14	20.9	12.63	11.98	.696 3591	8	56	4
	4	1	46	24.98		8	32	10.0	12.48	11.84	.704 3979	8	55	49
5	1	50	8.07	+	8	50	7.0	12.34	11.71	0.712 4386	8	55	37	
6	1	53	52.79		9	8	10.9	12.21	11.58	.720 4801	8	55	25	
7	1	57	39.13		9	26	20.9	12.07	11.45	.728 5214	8	55	16	
8	2	1	27.08		9	44	36.1	11.94	11.32	.736 5615	8	55	8	
9	2	5	16.63		10	2	55.5	11.81	11.20	.744 5992	8	55	1	
10	2	9	7.76	+10	21	18.2		11.68	11.08	0.752 6335	8	54	56	
11	2	13	.46	+10	39	43.4		11.56	10.96	0.760 6634	8	54	53	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
JUN. 11	2	13	.46	+10	39	43.4	11.56	10.96	0.760	6634	8	54	53
12	2	16	54.72	10	58	10.1	11.44	10.85	.768	6879	8	54	51
13	2	20	50.53	11	16	37.4	11.32	10.74	.776	7057	8	54	51
14	2	24	47.88	11	35	4.5	11.21	10.63	.784	7160	8	54	53
15	2	28	46.76	11	53	30.5	11.09	10.52	.792	7175	8	54	56
16	2	32	47.16	+12	11	54.5	10.98	10.42	0.800	7093	8	55	0
17	2	36	49.07	12	30	15.5	10.87	10.31	.808	6903	8	55	6
18	2	40	52.49	12	48	32.8	10.77	10.21	.816	6596	8	55	13
19	2	44	57.40	13	6	45.5	10.66	10.11	.824	6161	8	55	22
20	2	49	3.81	13	24	52.6	10.56	10.02	.832	5589	8	55	33
21	2	53	11.69	+13	42	53.5	10.46	9.92	0.840	4871	8	55	44
22	2	57	21.05	14	0	47.1	10.37	9.83	.848	4001	8	55	58
23	3	1	31.87	14	18	32.6	10.27	9.74	.856	2970	8	56	13
24	3	5	44.14	14	36	9.3	10.18	9.65	.864	1775	8	56	29
25	3	9	57.85	14	53	36.2	10.08	9.56	.872	0411	8	56	47
26	3	14	12.99	+15	10	52.5	9.99	9.48	0.879	8874	8	57	6
27	3	18	29.56	15	27	57.4	9.91	9.39	.887	7163	8	57	26
28	3	22	47.54	15	44	50.1	9.82	9.31	.895	5274	8	57	48
29	3	27	6.94	16	1	29.8	9.74	9.23	.903	3206	8	58	12
30	3	31	27.75	16	17	55.7	9.65	9.15	.911	0954	8	58	36
JUL. 1	3	35	49.97	+16	34	7.0	9.57	9.08	0.918	8517	8	59	3
2	3	40	13.60	16	50	3.0	9.49	9.00	.926	5889	8	59	30
3	3	44	38.65	17	5	42.9	9.41	8.93	.934	3067	8	59	59
4	3	49	5.09	17	21	5.9	9.34	8.85	.942	0046	9	0	30
5	3	53	32.94	17	36	11.4	9.26	8.78	.949	6821	9	1	1
6	3	58	2.17	+17	50	58.6	9.19	8.71	0.957	3387	9	1	35
7	4	2	32.79	18	5	26.8	9.11	8.64	.964	9740	9	2	9
8	4	7	4.79	18	19	35.2	9.04	8.58	.972	5872	9	2	45
9	4	11	38.15	18	33	23.1	8.97	8.51	.980	1778	9	3	23
10	4	16	12.87	18	46	49.8	8.90	8.44	.987	7452	9	4	1
11	4	20	48.92	+18	59	54.7	8.84	8.38	0.995	2887	9	4	41
12	4	25	26.30	19	12	36.9	8.77	8.32	1.002	8077	9	5	23
13	4	30	4.99	19	24	55.9	8.70	8.25	.010	3014	9	6	5
14	4	34	44.97	19	36	50.9	8.64	8.19	.017	7692	9	6	49
15	4	39	26.22	19	48	21.3	8.58	8.13	.025	2102	9	7	34
16	4	44	8.71	+19	59	26.4	8.52	8.08	1.032	6239	9	8	21
17	4	48	52.44	20	10	5.5	8.46	8.02	.040	0093	9	9	8
18	4	53	37.36	20	20	18.2	8.40	7.96	.047	3659	9	9	57
19	4	58	23.46	20	30	3.6	8.34	7.91	.054	6930	9	10	47
20	5	3	10.70	20	39	21.3	8.28	7.85	.061	9899	9	11	38
21	5	7	59.04	+20	48	10.7	8.22	7.80	1.069	2561	9	12	31
22	5	12	48.45	+20	56	31.2	8.17	7.75	1.076	4912	9	13	24

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
JUL. 22	5	12	48.45	+20	56	31.2	8.17	7.75	1.076	4912	9	13	24
23	5	17	38.89	21	4	22.2	8.11	7.70	.083	6949	9	14	18
24	5	22	30.32	21	11	43.2	8.06	7.65	.090	8670	9	15	14
25	5	27	22.71	21	18	33.8	8.01	7.60	.098	0073	9	16	10
26	5	32	16.00	21	24	53.3	7.96	7.55	.105	1158	9	17	7
27	5	37	10.17	+21	30	41.3	7.91	7.50	1.112	1924	9	18	5
28	5	42	5.19	21	35	57.4	7.86	7.45	.119	2370	9	19	4
29	5	47	1.00	21	40	41.1	7.81	7.41	.126	2496	9	20	3
30	5	51	57.58	21	44	52.0	7.76	7.36	.133	2300	9	21	4
31	5	56	54.88	21	48	29.9	7.71	7.31	.140	1781	9	22	5
AGO. 1	6	1	52.87	+21	51	34.2	7.67	7.27	1.147	0937	9	23	6
2	6	6	51.50	21	54	4.8	7.62	7.23	.153	9765	9	24	9
3	6	11	50.73	21	56	1.2	7.58	7.18	.160	8265	9	25	12
4	6	16	50.52	21	57	23.2	7.53	7.14	.167	6432	9	26	15
5	6	21	50.82	21	58	10.5	7.49	7.10	.174	4263	9	27	19
6	6	26	51.59	+21	58	23.0	7.45	7.06	1.181	1757	9	28	24
7	6	31	52.79	21	58	.3	7.40	7.02	.187	8908	9	29	29
8	6	36	54.36	21	57	2.3	7.36	6.98	.194	5713	9	30	34
9	6	41	56.27	21	55	28.8	7.32	6.94	.201	2168	9	31	39
10	6	46	58.46	21	53	19.7	7.28	6.90	.207	8267	9	32	45
11	6	52	.89	+21	50	34.9	7.24	6.87	1.214	4006	9	33	51
12	6	57	3.52	21	47	14.2	7.20	6.83	.220	9379	9	34	57
13	7	2	6.31	21	43	17.6	7.16	6.79	.227	4381	9	36	4
14	7	7	9.19	21	38	45.1	7.13	6.76	.233	9004	9	37	10
15	7	12	12.14	21	33	36.6	7.09	6.72	.240	3244	9	38	16
16	7	17	15.10	+21	27	52.3	7.05	6.69	1.246	7095	9	39	23
17	7	22	18.01	21	21	32.0	7.02	6.66	.253	0550	9	40	29
18	7	27	20.85	21	14	36.0	6.98	6.62	.259	3607	9	41	36
19	7	32	23.54	21	7	4.3	6.95	6.59	.265	6259	9	42	42
20	7	37	26.05	20	58	57.1	6.91	6.56	.271	8505	9	43	48
21	7	42	28.33	+20	50	14.5	6.88	6.53	1.278	0341	9	44	53
22	7	47	30.33	20	40	56.7	6.85	6.49	.284	1768	9	45	59
23	7	52	32.01	20	31	3.8	6.82	6.46	.290	2784	9	47	4
24	7	57	33.34	20	20	36.2	6.78	6.43	.296	3389	9	48	8
25	8	2	34.27	20	9	33.9	6.75	6.40	.302	3584	9	49	13
26	8	7	34.77	+19	57	57.4	6.72	6.37	1.308	3369	9	50	16
27	8	12	34.81	19	45	46.9	6.69	6.35	.314	2745	9	51	20
28	8	17	34.36	19	33	2.8	6.66	6.32	.320	1712	9	52	23
29	8	22	33.38	19	19	45.2	6.63	6.29	.326	0269	9	53	25
30	8	27	31.87	19	5	54.7	6.60	6.26	.331	8417	9	54	27
31	8	32	29.78	+18	51	31.6	6.57	6.23	1.337	6156	9	55	28
SET. 1	8	37	27.09	+18	36	36.3	6.55	6.21	1.343	3485	9	56	28

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
SET.	1	8 37	27.09	+18 36	36.3		6.55	6.21	1.343	3485	9 56	28	
	2	8 42	23.78	18 21	9.2		6.52	6.18	.349	0403	9 57	28	
	3	8 47	19.84	18 5	10.7		6.49	6.16	.354	6910	9 58	27	
	4	8 52	15.25	17 48	41.3		6.46	6.13	.360	3004	9 59	26	
	5	8 57	9.98	17 31	41.4		6.44	6.11	.365	8684	10 0	24	
	6	9 2	4.04	+17 14	11.6		6.41	6.08	1.371	3948	10 1	21	
	7	9 6	57.40	16 56	12.1		6.39	6.06	.376	8793	10 2	18	
	8	9 11	50.06	16 37	43.7		6.36	6.03	.382	3216	10 3	14	
	9	9 16	42.02	16 18	46.6		6.34	6.01	.387	7215	10 4	9	
	10	9 21	33.27	15 59	21.6		6.31	5.99	.393	0784	10 5	3	
	11	9 26	23.81	+15 39	29.1		6.29	5.96	1.398	3919	10 5	57	
	12	9 31	13.63	15 19	9.7		6.27	5.94	.403	6616	10 6	50	
	13	9 36	2.74	14 58	24.0		6.24	5.92	.408	8870	10 7	42	
	14	9 40	51.13	14 37	12.5		6.22	5.90	.414	0676	10 8	34	
	15	9 45	38.80	14 15	35.9		6.20	5.88	.419	2030	10 9	25	
16	9 50	25.75	+13 53	34.7		6.17	5.86	1.424	2928	10 10	15		
17	9 55	11.98	13 31	9.6		6.15	5.83	.429	3368	10 11	4		
18	9 59	57.49	13 8	21.2		6.13	5.81	.434	3348	10 11	53		
19	10 4	42.30	12 45	10.2		6.11	5.79	.439	2865	10 12	41		
20	10 9	26.40	12 21	37.1		6.09	5.77	.444	1920	10 13	28		
21	10 14	9.82	+11 57	42.6		6.07	5.76	1.449	0513	10 14	15		
22	10 18	52.56	11 33	27.4		6.05	5.74	.453	8645	10 15	1		
23	10 23	34.64	11 8	52.2		6.03	5.72	.458	6316	10 15	46		
24	10 28	16.08	10 43	57.4		6.01	5.70	.463	3529	10 16	31		
25	10 32	56.89	10 18	44.0		5.99	5.68	.468	0284	10 17	15		
26	10 37	37.09	+ 9 53	12.4		5.97	5.66	1.472	6583	10 17	58		
27	10 42	16.70	9 27	23.5		5.95	5.65	.477	2427	10 18	41		
28	10 46	55.75	9 1	17.8		5.93	5.63	.481	7819	10 19	23		
29	10 51	34.26	8 34	56.0		5.92	5.61	.486	2759	10 20	5		
30	10 56	12.25	8 8	18.9		5.90	5.59	.490	7248	10 20	46		
OUT.	1	11 0	49.76	+ 7 41	27.1		5.88	5.58	1.495	1289	10 21	27	
	2	11 5	26.80	7 14	21.3		5.86	5.56	.499	4882	10 22	7	
	3	11 10	3.40	6 47	2.2		5.85	5.55	.503	8028	10 22	47	
	4	11 14	39.60	6 19	30.5		5.83	5.53	.508	0727	10 23	27	
	5	11 19	15.44	5 51	46.8		5.82	5.51	.512	2981	10 24	6	
	6	11 23	50.94	+ 5 23	51.8		5.80	5.50	1.516	4789	10 24	45	
	7	11 28	26.14	4 55	46.3		5.78	5.48	.520	6149	10 25	23	
	8	11 33	1.07	4 27	30.8		5.77	5.47	.524	7060	10 26	1	
	9	11 37	35.78	3 59	6.2		5.75	5.46	.528	7519	10 26	40	
	10	11 42	10.29	3 30	33.0		5.74	5.44	.532	7524	10 27	17	
	11	11 46	44.64	+ 3 1	52.1		5.72	5.43	1.536	7070	10 27	55	
	12	11 51	18.87	+ 2 33	4.0		5.71	5.41	1.540	6155	10 28	33	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH				
	H	M	S	G	'	"			"	"	H	M	S		
OUT.	12	11	51	18.87	+	2	33	4.0	5.71	5.41	1.540	6155	10	28	33
	13	11	55	53.00		2	4	9.7	5.69	5.40	.544	4774	10	29	10
	14	12	0	27.07		1	35	9.7	5.68	5.39	.548	2926	10	29	48
	15	12	5	1.11		1	6	4.9	5.67	5.37	.552	0608	10	30	25
	16	12	9	35.16		0	36	56.0	5.65	5.36	.555	7817	10	31	3
	17	12	14	9.25	+	0	7	43.6	5.64	5.35	1.559	4553	10	31	41
	18	12	18	43.43	-	0	21	31.4	5.63	5.34	.563	0816	10	32	18
	19	12	23	17.71		0	50	48.4	5.61	5.32	.566	6605	10	32	56
	20	12	27	52.15		1	20	6.5	5.60	5.31	.570	1922	10	33	34
	21	12	32	26.78		1	49	25.1	5.59	5.30	.573	6767	10	34	12
	22	12	37	1.63	-	2	18	43.4	5.58	5.29	1.577	1143	10	34	51
	23	12	41	36.74		2	48	.6	5.56	5.28	.580	5051	10	35	29
	24	12	46	12.15		3	17	16.0	5.55	5.27	.583	8493	10	36	8
	25	12	50	47.90		3	46	28.8	5.54	5.25	.587	1473	10	36	48
	26	12	55	24.01		4	15	38.3	5.53	5.24	.590	3993	10	37	28
	27	13	0	.54	-	4	44	43.6	5.52	5.23	1.593	6056	10	38	8
	28	13	4	37.51		5	13	44.2	5.51	5.22	.596	7663	10	38	48
	29	13	9	14.97		5	42	39.1	5.50	5.21	.599	8819	10	39	29
	30	13	13	52.94		6	11	27.6	5.49	5.20	.602	9525	10	40	11
	31	13	18	31.48		6	40	9.0	5.48	5.19	.605	9785	10	40	53
	NOV.	1	13	23	10.61	-	7	8	42.4	5.47	5.18	1.608	9602	10	41
2		13	27	50.38		7	37	7.2	5.46	5.17	.611	8979	10	42	20
3		13	32	30.82		8	5	22.5	5.45	5.16	.614	7916	10	43	4
4		13	37	11.98		8	33	27.6	5.44	5.16	.617	6417	10	43	49
5		13	41	53.89		9	1	21.8	5.43	5.15	.620	4482	10	44	35
6		13	46	36.60	-	9	29	4.2	5.42	5.14	1.623	2110	10	45	21
7		13	51	20.12		9	56	34.2	5.41	5.13	.625	9301	10	46	9
8		13	56	4.51		10	23	50.8	5.40	5.12	.628	6053	10	46	57
9		14	0	49.78		10	50	53.4	5.39	5.11	.631	2363	10	47	46
10		14	5	35.98		11	17	41.1	5.38	5.10	.633	8229	10	48	36
11		14	10	23.12	-11	44	13.2		5.37	5.10	1.636	3649	10	49	27
12		14	15	11.23		12	10	28.7	5.37	5.09	.638	8621	10	50	19
13		14	20	.34		12	36	26.9	5.36	5.08	.641	3142	10	51	12
14		14	24	50.48		13	2	7.1	5.35	5.07	.643	7213	10	52	6
15		14	29	41.67		13	27	28.3	5.34	5.07	.646	0832	10	53	2
16		14	34	33.94	-13	52	29.8		5.33	5.06	1.648	3999	10	53	58
17		14	39	27.30		14	17	10.7	5.33	5.05	.650	6715	10	54	55
18		14	44	21.76		14	41	30.4	5.32	5.05	.652	8981	10	55	54
19		14	49	17.36		15	5	27.9	5.31	5.04	.655	0799	10	56	53
20		14	54	14.10		15	29	2.4	5.31	5.03	.657	2169	10	57	54
21		14	59	12.00	-15	52	13.1		5.30	5.03	1.659	3094	10	58	56
22	15	4	11.06	-16	14	59.4		5.29	5.02	1.661	3577	10	59	59	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
NOV. 22	15	4	11.06	-16	14	59.4	5.29	5.02	1.661	3577	10	59	59
23	15	9	11.30	16	37	20.2	5.29	5.01	.663	3620	11	1	3
24	15	14	12.72	16	59	14.8	5.28	5.01	.665	3226	11	2	9
25	15	19	15.33	17	20	42.6	5.27	5.00	.667	2398	11	3	15
26	15	24	19.13	17	41	42.5	5.27	5.00	.669	1140	11	4	23
27	15	29	24.12	-18	2	13.9	5.26	4.99	1.670	9454	11	5	32
28	15	34	30.31	18	22	16.0	5.26	4.99	.672	7345	11	6	42
29	15	39	37.69	18	41	48.1	5.25	4.98	.674	4816	11	7	54
30	15	44	46.26	19	0	49.3	5.25	4.98	.676	1871	11	9	7
DEZ. 1	15	49	56.02	19	19	19.0	5.24	4.97	.677	8514	11	10	20
2	15	55	6.96	-19	37	16.4	5.24	4.97	1.679	4747	11	11	35
3	16	0	19.07	19	54	40.9	5.23	4.96	.681	0575	11	12	52
4	16	5	32.34	20	11	31.7	5.23	4.96	.682	5999	11	14	9
5	16	10	46.75	20	27	48.1	5.22	4.95	.684	1020	11	15	27
6	16	16	2.28	20	43	29.6	5.22	4.95	.685	5637	11	16	47
7	16	21	18.92	-20	58	35.3	5.21	4.94	1.686	9849	11	18	8
8	16	26	36.63	21	13	4.8	5.21	4.94	.688	3656	11	19	29
9	16	31	55.39	21	26	57.3	5.20	4.94	.689	7053	11	20	52
10	16	37	15.17	21	40	12.2	5.20	4.93	.691	0040	11	22	16
11	16	42	35.93	21	52	48.9	5.20	4.93	.692	2614	11	23	41
12	16	47	57.64	-22	4	46.9	5.19	4.92	1.693	4774	11	25	6
13	16	53	20.27	22	16	5.6	5.19	4.92	.694	6519	11	26	33
14	16	58	43.77	22	26	44.5	5.19	4.92	.695	7847	11	28	0
15	17	4	8.09	22	36	43.2	5.18	4.91	.696	8758	11	29	28
16	17	9	33.18	22	46	1.0	5.18	4.91	.697	9253	11	30	57
17	17	14	59.01	-22	54	37.6	5.18	4.91	1.698	9330	11	32	27
18	17	20	25.51	23	2	32.7	5.17	4.91	.699	8992	11	33	57
19	17	25	52.63	23	9	45.7	5.17	4.90	.700	8238	11	35	28
20	17	31	20.32	23	16	16.3	5.17	4.90	.701	7070	11	37	0
21	17	36	48.50	23	22	4.2	5.17	4.90	.702	5489	11	38	32
22	17	42	17.14	-23	27	9.1	5.16	4.90	1.703	3498	11	40	4
23	17	47	46.15	23	31	30.8	5.16	4.89	.704	1098	11	41	37
24	17	53	15.49	23	35	8.9	5.16	4.89	.704	8291	11	43	10
25	17	58	45.09	23	38	3.4	5.16	4.89	.705	5081	11	44	43
26	18	4	14.89	23	40	13.9	5.15	4.89	.706	1470	11	46	17
27	18	9	44.82	-23	41	40.5	5.15	4.89	1.706	7462	11	47	50
28	18	15	14.82	23	42	23.0	5.15	4.88	.707	3059	11	49	24
29	18	20	44.84	23	42	21.3	5.15	4.88	.707	8266	11	50	57
30	18	26	14.80	23	41	35.5	5.15	4.88	.708	3085	11	52	31
31	18	31	44.66	23	40	5.5	5.15	4.88	.708	7521	11	54	4

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH				
	H	M	S	G	'	"			"	"	H	M	S		
JAN. 0	22	42	52.82	-	9	6	36.6	5.38	2.86	1.633	7760	16	2	43	
	4	22	54	5.00		7	54	13.3	5.30	2.82	.660	4895	15	58	8
	8	23	5	12.92		6	40	57.0	5.21	2.77	.687	2778	15	53	30
	12	23	16	16.88		5	26	59.8	5.13	2.73	.714	1363	15	48	47
	16	23	27	17.27		4	12	33.6	5.05	2.69	.741	0702	15	44	1
20	23	38	14.62	-	2	57	49.2	4.97	2.65	1.768	0726	15	39	12	
	24	23	49	9.57		1	42	56.9	4.90	2.61	.795	1192	15	34	20
	28	0	0	2.60	-	0	28	7.4	4.83	2.57	.822	1763	15	29	27
	FEV. 1	0	10	54.12	+	0	46	28.3	4.76	2.53	.849	2065	15	24	32
		5	0	21	44.49		2	0	39.4	4.69	2.49	.876	1783	15	19
9	0	32	34.09	+	3	14	15.1	4.62	2.46	1.903	0772	15	14	40	
	13	0	43	23.29		4	27	4.8	4.56	2.42	.929	9003	15	9	43
	17	0	54	12.65		5	38	59.4	4.49	2.39	.956	6380	15	4	47
	21	1	5	2.74		6	49	49.9	4.43	2.36	1.983	2643	14	59	51
	25	1	15	54.04		7	59	27.5	4.38	2.33	2.009	7431	14	54	57
MAR. 1	1	1	26	46.90	+	9	7	43.0	4.32	2.30	2.036	0317	14	50	4
	5	1	37	41.62		10	14	27.1	4.26	2.27	.062	0914	14	45	13
	9	1	48	38.42		11	19	30.8	4.21	2.24	.087	9015	14	40	24
	13	1	59	37.50		12	22	45.1	4.16	2.21	.113	4552	14	35	38
	17	2	10	39.23		13	24	2.0	4.11	2.19	.138	7422	14	30	54
21	2	21	43.99	+	14	23	14.4	4.06	2.16	2.163	7388	14	26	13	
	25	2	32	52.01		15	20	14.9	4.02	2.14	.188	4106	14	21	36
	29	2	44	3.43		16	14	56.2	3.97	2.12	.212	7146	14	17	2
	ABR. 2	2	55	18.33		17	7	11.0	3.93	2.09	.236	6082	14	12	31
		6	3	6	36.59		17	56	52.3	3.89	2.07	.260	0676	14	8
10	3	17	58.11	+	18	43	53.0	3.85	2.05	2.283	0850	14	3	40	
	14	3	29	22.91		19	28	7.1	3.81	2.03	.305	6519	13	59	19
	18	3	40	51.01		20	9	29.5	3.78	2.01	.327	7490	13	55	2
	22	3	52	22.30		20	47	55.4	3.74	1.99	.349	3460	13	50	47
	26	4	3	56.57		21	23	19.8	3.71	1.97	.370	4029	13	46	36
30	4	15	33.56	+	21	55	38.4	3.68	1.96	2.390	8764	13	42	27	
MAIO 4	4	27	12.79	+	22	24	47.5	3.65	1.94	2.410	7407	13	38	21	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
MAIO	4	4 27	12.79	+	22 24	47.5	3.65	1.94	2.410	7407	13 38	21	
	8	4 38	53.76		22 50	43.2	3.62	1.93	.429	9889	13 34	16	
	12	4 50	36.14		23 13	22.7	3.59	1.91	.448	6152	13 30	12	
	16	5 2	19.60		23 32	44.4	3.57	1.90	.466	6056	13 26	10	
	20	5 14	3.69		23 48	47.0	3.54	1.88	.483	9352	13 22	8	
	24	5 25	47.99	+	24 1	29.4	3.52	1.87	2.500	5686	13 18	6	
	28	5 37	31.98		24 10	51.5	3.49	1.86	.516	4640	13 14	4	
	JUN.	1	5 49	14.97		24 16	54.0	3.47	1.85	.531	5942	13 10	1
		5	6 0	56.29		24 19	37.1	3.45	1.84	.545	9535	13 5	56
		9	6 12	35.48		24 19	2.6	3.44	1.83	.559	5396	13 1	49
	13	6 24	12.09	+	24 15	12.7	3.42	1.82	2.572	3439	12 57	39	
	17	6 35	45.68		24 8	10.3	3.40	1.81	.584	3474	12 53	26	
	21	6 47	15.85		23 57	58.3	3.39	1.80	.595	5199	12 49	10	
	25	6 58	42.21		23 44	40.7	3.37	1.80	.605	8228	12 44	49	
	29	7 10	4.15		23 28	22.0	3.36	1.79	.615	2283	12 40	25	
JUL.	3	7 21	21.21	+	23 9	6.5	3.35	1.78	2.623	7316	12 35	55	
	7	7 32	33.09		22 46	59.2	3.34	1.78	.631	3344	12 31	20	
	11	7 43	39.58		22 22	5.5	3.33	1.77	.638	0334	12 26	40	
	15	7 54	40.49		21 54	30.9	3.33	1.77	.643	8164	12 21	54	
	19	8 5	35.74		21 24	21.0	3.32	1.77	.648	6585	12 17	3	
	23	8 16	25.25	+	20 51	41.8	3.32	1.76	2.652	5255	12 12	5	
	27	8 27	8.76		20 16	40.0	3.31	1.76	.655	3910	12 7	2	
	31	8 37	46.12		19 39	22.0	3.31	1.76	.657	2510	12 1	53	
	AGO.	4	8 48	17.38		18 59	54.0	3.31	1.76	.658	1113	11 56	37
		8	8 58	42.58		18 18	22.7	3.31	1.76	.657	9749	11 51	16
12		9 9	1.87	+	17 34	54.5	3.31	1.76	2.656	8370	11 45	49	
	16	9 19	15.50		16 49	35.3	3.31	1.76	.654	6796	11 40	16	
	20	9 29	23.66		16 2	31.7	3.32	1.77	.651	4739	11 34	37	
	24	9 39	26.39		15 13	50.8	3.32	1.77	.647	1971	11 28	54	
	28	9 49	23.82		14 23	39.1	3.33	1.77	.641	8473	11 23	5	
	SET.	1	9 59	16.18	+	13 32	3.1	3.34	1.78	2.635	4351	11 17	10
5		10 9	3.74	+	12 39	9.3	3.35	1.78	2.627	9709	11 11	12	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH				
	H	M	S	G	'	"			"	"	H	M	S		
SET. 5	10	9	3.74	+	12	39	9.3	3.35	1.78	2.627	9709	11	11	12	
	9	10	18	46.82		11	45	3.7	3.36	1.79	.619	4592	11	5	8
	13	10	28	25.87		10	49	52.0	3.37	1.79	.609	8910	10	59	1
	17	10	38	1.24		9	53	40.3	3.38	1.80	.599	2444	10	52	50
	21	10	47	33.10		8	56	35.2	3.40	1.81	.587	5030	10	46	36
	25	10	57	1.74	+	7	58	43.0	3.42	1.82	2.574	6692	10	40	19
	29	11	6	27.47		7	0	10.0	3.43	1.83	.560	7599	10	33	58
OUT. 3	11	15	50.60		6	1	2.3	3.45	1.84	.545	7944	10	27	35	
	7	11	25	11.55		5	1	25.6	3.48	1.85	.529	7887	10	21	10
11	11	34	30.81		4	1	24.9	3.50	1.86	.512	7454	10	14	44	
	15	11	43	48.78	+	3	1	6.1	3.53	1.88	2.494	6521	10	8	16
	19	11	53	5.71		2	0	35.5	3.55	1.89	.475	5008	10	1	47
	23	12	2	21.87	+	0	59	59.0	3.58	1.91	.455	3013	9	55	17
	27	12	11	37.58	-	0	0	37.0	3.61	1.92	.434	0783	9	48	47
31	12	20	53.13		1	1	6.6	3.65	1.94	.411	8617	9	42	17	
NOV. 4	12	30	8.91	-	2	1	24.0	3.68	1.96	2.388	6804	9	35	47	
	8	12	39	25.42		3	1	24.4	3.72	1.98	.364	5514	9	29	18
	12	12	48	42.99		4	1	2.1	3.76	2.00	.339	4740	9	22	49
	16	12	58	1.86		5	0	10.9	3.80	2.02	.313	4498	9	16	23
	20	13	7	22.28		5	58	44.8	3.85	2.05	.286	4980	9	9	58
	24	13	16	44.43	-	6	56	37.3	3.89	2.07	2.258	6521	9	3	34
	28	13	26	8.52		7	53	42.4	3.94	2.10	.229	9530	8	57	13
DEZ. 2	13	35	34.86		8	49	54.1	4.00	2.13	.200	4428	8	50	53	
	6	13	45	3.84		9	45	7.6	4.05	2.16	.170	1532	8	44	37
10	13	54	35.69		10	39	17.4	4.11	2.19	.139	0964	8	38	23	
	14	14	4	10.56	-	11	32	17.4	4.17	2.22	2.107	2832	8	32	12
	18	14	13	48.52		12	24	1.6	4.24	2.26	.074	7413	8	26	5
	22	14	23	29.60		13	14	23.8	4.31	2.29	.041	5123	8	20	0
	26	14	33	13.80		14	3	18.0	4.38	2.33	2.007	6466	8	13	59
30	14	43	1.23	-	14	50	38.6	4.46	2.37	1.973	1966	8	8	1	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
JAN. 0	13	19	41.15	- 7	1	24.3	1.58	17.70	5.562	7217	6	39	18
4	13	21	14.95	7	9	49.2	1.60	17.90	.498	9085	6	25	7
8	13	22	39.58	7	17	15.9	1.62	18.11	.434	5678	6	10	47
12	13	23	54.73	7	23	43.0	1.64	18.33	.369	9623	5	56	17
16	13	24	59.97	7	29	8.8	1.66	18.55	.305	3423	5	41	38
20	13	25	54.93	- 7	33	31.6	1.68	18.78	5.240	9661	5	26	48
24	13	26	39.26	7	36	50.1	1.70	19.01	.177	1179	5	11	48
28	13	27	12.64	7	39	3.1	1.72	19.25	.114	1035	4	56	37
FEV. 1	13	27	34.78	7	40	9.4	1.74	19.48	5.052	2442	4	41	15
5	13	27	45.58	7	40	8.6	1.76	19.72	4.991	8641	4	25	42
9	13	27	45.03	- 7	39	1.5	1.78	19.95	4.933	2706	4	9	57
13	13	27	33.09	7	36	48.1	1.80	20.19	.876	7520	3	54	1
17	13	27	9.81	7	33	29.1	1.82	20.41	.822	5970	3	37	54
21	13	26	35.37	7	29	5.9	1.84	20.63	.771	1077	3	21	36
25	13	25	49.97	7	23	40.2	1.86	20.84	.722	5937	3	5	6
MAR. 1	13	24	53.97	- 7	17	14.2	1.88	21.05	4.677	3630	2	48	27
5	13	23	47.99	7	9	51.6	1.90	21.24	.635	7057	2	31	37
9	13	22	32.73	7	1	36.8	1.91	21.41	.597	8727	2	14	39
13	13	21	8.91	6	52	34.2	1.93	21.57	.564	0790	1	57	31
17	13	19	37.38	6	42	48.9	1.94	21.71	.534	5230	1	40	17
21	13	17	59.08	- 6	32	27.0	1.95	21.83	4.509	3950	1	22	55
25	13	16	15.03	6	21	34.5	1.96	21.93	.488	8700	1	5	28
29	13	14	26.36	6	10	18.3	1.97	22.01	.473	0977	0	47	56
ABR. 2	13	12	34.40	5	58	46.4	1.97	22.06	.462	1860	0	30	21
6	13	10	40.48	5	47	6.9	1.97	22.09	.456	1821	0	12	44
9	13	9	14.49	- 5	38	22.0	1.97	22.10	4.454	9012	23	55	7
13	13	7	20.13	5	26	47.8	1.97	22.08	.457	4719	23	37	30
17	13	5	27.25	5	15	27.5	1.97	22.05	.464	8973	23	19	55
21	13	3	37.06	5	4	28.4	1.96	21.99	.477	1189	23	2	22
25	13	1	50.71	4	53	57.6	1.96	21.90	.494	0506	22	44	54
29	13	0	9.43	- 4	44	2.5	1.95	21.80	4.515	5682	22	27	31
MAIO 3	12	58	34.32	- 4	34	50.0	1.94	21.68	4.541	4931	22	10	14

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH				
	H	M	S	G	'	"			"	"	H	M	S		
ABR.25	13	1	50.71	-	4	53	57.6	1.96	21.90	4.494	0506	22	44	54	
	29	13	0	9.43		4	44	2.5	1.95	21.80	.515	5682	22	27	31
MAIO 3	12	58	34.32		4	34	50.0	1.94	21.68	.541	4931	22	10	14	
	7	12	57	6.27		4	26	25.4	1.92	21.53	.571	6086	21	53	5
	11	12	55	46.09		4	18	53.6	1.91	21.37	.605	6879	21	36	3
	15	12	54	34.47	-	4	12	18.9	1.89	21.20	4.643	5028	21	19	10
	19	12	53	31.95		4	6	44.4	1.88	21.01	.684	8204	21	2	27
	23	12	52	39.04		4	2	12.9	1.86	20.81	.729	3979	20	45	53
	27	12	51	56.24		3	58	47.1	1.84	20.61	.776	9727	20	29	29
	31	12	51	23.86		3	56	28.8	1.82	20.39	.827	2502	20	13	15
JUN. 4	12	51	2.03	-	3	55	18.3	1.80	20.17	4.879	9233	19	57	12	
	8	12	50	50.85		3	55	16.0	1.78	19.95	.934	7001	19	41	19
	12	12	50	50.29		3	56	21.4	1.76	19.72	4.991	3061	19	25	37
	16	12	51	.28		3	58	33.5	1.74	19.50	5.049	4781	19	10	6
	20	12	51	20.70		4	1	51.3	1.72	19.27	.108	9573	18	54	44
	24	12	51	51.52	-	4	6	14.0	1.70	19.04	5.169	4772	18	39	33
	28	12	52	32.54		4	11	39.8	1.68	18.82	.230	7538	18	24	32
JUL. 2	12	53	23.45		4	18	6.6	1.66	18.60	.292	5050	18	9	41	
	6	12	54	23.99		4	25	32.2	1.64	18.38	.354	4753	17	54	60
	10	12	55	33.81		4	33	54.2	1.62	18.17	.416	4326	17	40	27
	14	12	56	52.58	-	4	43	9.8	1.61	17.97	5.478	1613	17	26	3
	18	12	58	19.99		4	53	16.6	1.59	17.77	.539	4524	17	11	48
	22	12	59	55.82		5	4	12.7	1.57	17.58	.600	0912	16	57	41
	26	13	1	39.71		5	15	55.4	1.55	17.39	.659	8497	16	43	42
	30	13	3	31.27		5	28	21.8	1.54	17.21	.718	5064	16	29	51
AGO. 3	13	5	30.16	-	5	41	29.4	1.52	17.04	5.775	8678	16	16	7	
	7	13	7	36.02		5	55	15.2	1.51	16.88	.831	7635	16	2	30
	11	13	9	48.45		6	9	36.3	1.49	16.72	.886	0382	15	48	59
	15	13	12	7.17		6	24	30.4	1.48	16.58	.938	5423	15	35	34
	19	13	14	31.96		6	39	55.3	1.47	16.44	5.989	1171	15	22	16
	23	13	17	2.45	-	6	55	48.4	1.46	16.30	6.037	5926	15	9	3
	27	13	19	38.30	-	7	12	6.9	1.45	16.18	6.083	8069	14	55	55

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH			
	H	M	S	G	'	"			"	"	H	M	S	
AGO. 27	13	19	38.30	-	7	12	6.9	1.45	16.18	6.083	8069	14	55	55
31	13	22	19.20		7	28	48.4	1.44	16.06	.127	6245	14	42	52
SET. 4	13	25	4.80		7	45	50.2	1.43	15.96	.168	9316	14	29	54
8	13	27	54.77		8	3	9.6	1.42	15.86	.207	6283	14	17	0
12	13	30	48.86		8	20	44.5	1.41	15.77	.243	6187	14	4	10
16	13	33	46.87	-	8	38	32.9	1.40	15.68	6.276	7957	13	51	24
20	13	36	48.46		8	56	32.4	1.39	15.61	.307	0422	13	38	42
24	13	39	53.34		9	14	40.4	1.39	15.54	.334	2513	13	26	3
28	13	43	1.20		9	32	54.9	1.38	15.48	.358	3415	13	13	26
OUT. 2	13	46	11.73		9	51	13.4	1.38	15.43	.379	2523	13	0	53
6	13	49	24.60	-10	9	33	5	1.37	15.39	6.396	9371	12	48	21
10	13	52	39.61		10	27	53.2	1.37	15.35	.411	3533	12	35	52
14	13	55	56.52		10	46	10.9	1.37	15.33	.422	4459	12	23	24
18	13	59	15.00		11	4	24.3	1.37	15.31	.430	1518	12	10	58
22	14	2	34.76		11	22	31.3	1.37	15.30	.434	4215	11	58	34
26	14	5	55.50	-11	40	29	9	1.37	15.30	6.435	2306	11	46	10
30	14	9	16.83		11	58	18.0	1.37	15.30	.432	5764	11	33	47
NOV. 3	14	12	38.45		12	15	53.4	1.37	15.32	.426	4708	11	21	24
7	14	16	.12		12	33	14.5	1.37	15.34	.416	9307	11	9	1
11	14	19	21.55		12	50	19.9	1.37	15.37	.403	9609	10	56	38
15	14	22	42.36	-13	7	7	5	1.38	15.41	6.387	5595	10	44	14
19	14	26	2.23		13	23	35.6	1.38	15.46	.367	7426	10	31	49
23	14	29	20.79		13	39	42.6	1.39	15.52	.344	5521	10	19	23
27	14	32	37.60		13	55	26.5	1.39	15.58	.318	0521	10	6	55
DEZ. 1	14	35	52.29		14	10	45.6	1.40	15.65	.288	3226	9	54	24
5	14	39	4.56	-14	25	38	7	1.41	15.74	6.255	4496	9	41	52
9	14	42	14.04		14	40	4.6	1.41	15.83	.219	5075	9	29	16
13	14	45	20.28		14	54	1.7	1.42	15.93	.180	5656	9	16	38
17	14	48	22.89		15	7	28.7	1.43	16.04	.138	7144	9	3	56
21	14	51	21.40		15	20	24.2	1.44	16.15	.094	0715	8	51	9
25	14	54	15.29	-15	32	46	9	1.45	16.28	6.046	7771	8	38	18
29	14	57	4.13	-15	44	35	2	1.47	16.41	5.996	9876	8	25	22

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
JAN. 0	17	22	17.91	-21	51	57.9	0.80	7.54	10.975	5234	10	41	21
4	17	24	14.96	21	53	46.1	.80	7.55	.952	2381	10	27	34
8	17	26	10.07	21	55	25.4	.80	7.57	.925	0458	10	13	44
12	17	28	2.99	21	56	56.1	.81	7.59	.894	0682	9	59	53
16	17	29	53.36	21	58	18.5	.81	7.62	.859	4239	9	45	59
20	17	31	40.88	-21	59	32.4	0.81	7.65	0.821	2251	9	32	2
24	17	33	25.27	22	0	38.2	.82	7.67	.779	5993	9	18	2
28	17	35	6.20	22	1	36.2	.82	7.71	.734	6986	9	3	58
FEV. 1	17	36	43.29	22	2	26.8	.82	7.74	.686	7040	8	49	51
5	17	38	16.24	22	3	9.9	.83	7.78	.635	8250	8	35	39
9	17	39	44.83	-22	3	46.2	0.83	7.82	10.582	2838	8	21	23
13	17	41	8.73	22	4	16.2	.84	7.86	.526	2954	8	7	3
17	17	42	27.69	22	4	40.0	.84	7.90	.468	0685	7	52	37
21	17	43	41.49	22	4	58.3	.84	7.95	.407	8241	7	38	7
25	17	44	49.82	22	5	11.7	.85	8.00	.345	8052	7	23	30
MAR. 1	17	45	52.39	-22	5	20.4	0.86	8.05	10.282	2803	7	8	49
5	17	46	49.01	22	5	24.7	.86	8.10	.217	5416	6	54	1
9	17	47	39.51	22	5	25.5	.87	8.15	.151	8857	6	39	7
13	17	48	23.68	22	5	23.0	.87	8.20	.085	5942	6	24	7
17	17	49	1.39	22	5	17.5	.88	8.26	10.018	9398	6	9	0
21	17	49	32.54	-22	5	9.6	0.88	8.31	9.952	2029	5	53	47
25	17	49	56.96	22	4	59.7	.89	8.37	.885	6798	5	38	28
29	17	50	14.52	22	4	48.1	.90	8.42	.819	6852	5	23	1
ABR. 2	17	50	25.20	22	4	34.7	.90	8.48	.754	5493	5	7	28
6	17	50	29.03	22	4	20.3	.91	8.54	.690	5945	4	51	47
10	17	50	25.99	-22	4	4.8	0.91	8.59	9.628	1174	4	36	1
14	17	50	16.20	22	3	48.4	.92	8.65	.567	3997	4	20	7
18	17	49	59.77	22	3	31.2	.92	8.70	.508	7229	4	4	7
22	17	49	36.78	22	3	13.6	.93	8.75	.452	3747	3	48	0
26	17	49	7.36	22	2	55.2	.94	8.80	.398	6502	3	31	47
30	17	48	31.80	-22	2	36.0	0.94	8.85	9.347	8467	3	15	27
MAIO 4	17	47	50.40	-22	2	16.4	0.95	8.90	9.300	2380	2	59	2

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
MAIO 4	17	47	50.40	-22	2	16.4	0.95	8.90	9.300	2380	2	59	2
8	17	47	3.45	22	1	56.1	.95	8.94	.256	0584	2	42	32
12	17	46	11.36	22	1	35.0	.95	8.98	.215	5187	2	25	56
16	17	45	14.55	22	1	13.3	.96	9.01	.178	8196	2	9	16
20	17	44	13.38	22	0	51.1	.96	9.05	.146	1561	1	52	32
24	17	43	8.31	-22	0	27.8	0.96	9.07	9.117	7176	1	35	43
28	17	41	59.93	22	0	3.8	.97	9.10	.093	6809	1	18	52
JUN. 1	17	40	48.77	21	59	39.3	.97	9.12	.074	1837	1	1	57
5	17	39	35.40	21	59	14.1	.97	9.13	.059	3136	0	45	1
9	17	38	20.49	21	58	48.5	.97	9.14	.049	1288	0	28	2
13	17	37	4.60	-21	58	22.9	0.97	9.15	9.043	6715	0	11	3
16	17	36	7.37	21	58	3.8	.97	9.15	.042	6990	23	54	4
20	17	34	51.12	21	57	38.4	.97	9.15	.045	5781	23	37	4
24	17	33	35.57	21	57	13.6	.97	9.14	.053	2310	23	20	6
28	17	32	21.34	21	56	50.0	.97	9.13	.065	6214	23	3	9
JUL. 2	17	31	9.00	-21	56	27.9	0.97	9.11	9.082	6603	22	46	14
6	17	29	59.19	21	56	7.8	.97	9.09	.104	2280	22	29	21
10	17	28	52.43	21	55	50.2	.96	9.06	.130	1912	22	12	32
14	17	27	49.17	21	55	35.8	.96	9.03	.160	4082	21	55	47
18	17	26	49.89	21	55	24.7	.96	9.00	.194	7295	21	39	5
22	17	25	55.09	-21	55	17.5	0.95	8.96	9.232	9905	21	22	28
26	17	25	5.19	21	55	15.0	.95	8.92	.274	9918	21	5	56
30	17	24	20.56	21	55	17.3	.94	8.88	.320	4927	20	49	29
AGO. 3	17	23	41.56	21	55	24.8	.94	8.83	.369	2355	20	33	8
7	17	23	8.44	21	55	38.2	.93	8.78	.420	9620	20	16	52
11	17	22	41.38	-21	55	57.5	0.93	8.73	9.475	4176	20	0	43
15	17	22	20.59	21	56	22.6	.92	8.68	.532	3509	19	44	40
19	17	22	6.28	21	56	54.0	.92	8.63	.591	5032	19	28	44
23	17	21	58.55	21	57	31.9	.91	8.57	.652	5903	19	12	54
27	17	21	57.49	21	58	15.8	.91	8.52	.715	3020	18	57	10
31	17	22	3.17	-21	59	5.9	0.90	8.46	9.779	3261	18	41	34
SET. 4	17	22	15.58	-22	0	2.1	0.89	8.40	9.844	3626	18	26	4

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA		P. MERID. GREENWICH		
	H	M	S	G	'	"			"	"	H	M	S
SET. 4	17	22	15.58	-22	0	2.1	0.89	8.40	9.844	3626	18	26	4
8	17	22	34.60	22	1	4.1	.89	8.35	.910	1260	18	10	40
12	17	23	.22	22	2	11.1	.88	8.29	9.976	3438	17	55	23
16	17	23	32.42	22	3	23.2	.88	8.24	10.042	7424	17	40	13
20	17	24	11.03	22	4	39.9	.87	8.18	.109	0296	17	25	9
24	17	24	55.97	-22	6	.5	0.86	8.13	0.174	9001	17	10	11
28	17	25	47.12	22	7	24.6	.86	8.08	.240	0574	16	55	19
OUT. 2	17	26	44.23	22	8	51.8	.85	8.03	.304	2255	16	40	33
6	17	27	47.07	22	10	21.1	.85	7.98	.367	1492	16	25	53
10	17	28	55.48	22	11	51.7	.84	7.93	.428	5928	16	11	19
14	17	30	9.27	-22	13	23.5	0.84	7.89	10.488	3222	15	56	49
18	17	31	28.17	22	14	55.5	.83	7.84	.546	0889	15	42	25
22	17	32	51.99	22	16	26.9	.83	7.80	.601	6406	15	28	6
26	17	34	20.49	22	17	57.2	.83	7.76	.654	7410	15	13	51
30	17	35	53.32	22	19	25.9	.82	7.73	.705	1787	14	59	40
NOV. 3	17	37	30.19	-22	20	52.0	0.82	7.69	10.752	7673	14	45	33
7	17	39	10.88	22	22	14.7	.81	7.66	.797	3429	14	31	30
11	17	40	55.09	22	23	34.0	.81	7.63	.838	7453	14	17	31
15	17	42	42.53	22	24	49.0	.81	7.61	.876	8017	14	3	35
19	17	44	32.93	22	25	59.0	.81	7.58	.911	3429	13	49	41
23	17	46	26.00	-22	27	3.8	0.80	7.56	10.942	2209	13	35	50
27	17	48	21.37	22	28	3.0	.80	7.54	.969	3154	13	22	2
DEZ. 1	17	50	18.69	22	28	55.9	.80	7.53	10.992	5336	13	8	15
5	17	52	17.71	22	29	42.1	.80	7.51	11.011	8067	12	54	30
9	17	54	18.12	22	30	21.9	.80	7.50	.027	0704	12	40	47
13	17	56	19.58	-22	30	54.6	0.80	7.49	11.038	2496	12	27	4
17	17	58	21.81	22	31	20.0	.80	7.49	.045	2775	12	13	22
21	18	0	24.50	22	31	38.4	.80	7.49	.048	1126	11	59	40
25	18	2	27.23	22	31	49.6	.80	7.49	.046	7423	11	45	59
29	18	4	29.68	22	31	53.5	.80	7.49	.041	1828	11	32	17
33	18	6	31.58	-22	31	50.1	0.80	7.50	11.031	4736	11	18	34

0 HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA	P. MERID. GREENWICH		
	H	M	S	G	'	"				"	"	H
JAN. 0	1 16	52.34		+ 7 28	5.2		0.45	1.77	19.732 566	18 34	25	
10	1 17	4.65		7 29	43.3		.44	1.76	19.903 535	17 55	20	
20	1 17	36.25		7 33	17.2		.44	1.74	20.074 809	17 16	33	
30	1 18	26.47		7 38	41.8		.43	1.73	.241 380	16 38	5	
FEV. 9	1 19	34.08		7 45	48.7		.43	1.72	.398 200	15 59	55	
19	1 20	57.31		+ 7 54	26.2		0.43	1.70	20.540 909	15 21	59	
MAR. 1	1 22	34.31		8 4	22.1		.43	1.69	.665 701	14 44	18	
11	1 24	22.80		8 15	21.7		.42	1.69	.769 135	14 6	47	
21	1 26	20.26		8 27	9.0		.42	1.68	.848 789	13 29	25	
31	1 28	24.30		8 39	29.1		.42	1.68	.902 757	12 52	10	
ABR. 10	1 30	32.29		+ 8 52	6.1		0.42	1.67	20.929 749	12 14	58	
20	1 32	41.57		9 4	43.8		.42	1.67	.929 487	11 37	48	
30	1 34	49.67		9 17	7.9		.42	1.68	.902 057	11 0	36	
MAIO 10	1 36	53.93		9 29	3.4		.42	1.68	.848 301	10 23	20	
20	1 38	52.00		9 40	17.0		.42	1.69	.769 847	9 45	58	
30	1 40	41.53		+ 9 50	36.1		0.43	1.69	20.668 570	9 8	28	
JUN. 9	1 42	20.18		9 59	48.2		.43	1.70	.547 148	8 30	46	
19	1 43	46.08		10 7	43.9		.43	1.72	.408 725	7 52	52	
29	1 44	57.37		10 14	13.8		.43	1.73	.256 650	7 14	44	
JUL. 9	1 45	52.39		10 19	9.7		.44	1.74	20.095 004	6 36	19	
19	1 46	30.04		+10 22	26.5		0.44	1.76	19.927 977	5 57	37	
29	1 46	49.44		10 24	.5		.45	1.77	.759 940	5 18	36	
AGO. 8	1 46	50.19		10 23	49.9		.45	1.79	.595 725	4 39	18	
18	1 46	32.51		10 21	56.6		.45	1.80	.439 881	3 59	41	
28	1 45	57.02		10 18	24.7		.46	1.81	.297 016	3 19	46	
SET. 7	1 45	5.22		+10 13	22.2		0.46	1.83	19.171 662	2 39	35	
17	1 43	59.09		10 7	.5		.46	1.84	19.067 645	1 59	10	
27	1 42	41.10		9 59	33.4		.46	1.84	18.988 549	1 18	34	
OUT. 7	1 41	14.60		9 51	19.5		.46	1.85	.937 182	0 37	49	
16	1 39	52.41		9 43	31.8		.46	1.85	.916 123	23 56	58	
26	1 38	19.70		+ 9 34	45.5		0.46	1.85	18.921 794	23 16	7	
NOV. 5	1 36	49.54		+ 9 26	15.6		.46	1.85	18.958 017	22 35	19	
15	1 35	25.79		9 18	24.4		.46	1.84	19.023 643	21 54	37	
25	1 34	12.05		9 11	32.7		.46	1.83	.116 786	21 14	6	
DEZ. 5	1 33	11.62		9 5	59.8		0.46	1.82	.234 274	20 33	48	
15	1 32	27.01		9 2	.6		.45	1.81	.372 240	19 53	46	
25	1 32	.29		+ 8 59	46.7		.45	1.79	19.526 302	19 14	2	

O HORA TEMPO TERRESTRE

DATA	ASCENSÃO RETA			DECLINAÇÃO			P.H.	S.D.	DISTÂNCIA À TERRA	P. MERID. GREENWICH		
	H	M	S	G	'	"				"	"	H
JAN. 0	22	46	21.35	- 8	43	3.2	0.29	1.10	30.431 600	16	4	22
10	22	47	16.61	8	37	19.8	.29	1.10	.573 664	15	25	58
20	22	48	21.21	8	30	41.3	.29	1.09	.696 778	14	47	44
30	22	49	33.63	8	23	16.8	.29	1.09	.797 510	14	9	37
FEV. 9	22	50	52.06	8	15	17.4	.28	1.09	.872 912	13	31	37
19	22	52	14.58	- 8	6	54.8	0.28	1.08	30.921 167	12	53	40
MAR. 1	22	53	39.37	7	58	20.1	.28	1.08	.941 048	12	15	45
11	22	55	4.40	7	49	45.6	.28	1.08	.932 100	11	37	51
21	22	56	27.72	7	41	23.4	.28	1.08	.894 965	10	59	54
31	22	57	47.56	7	33	24.4	.29	1.09	.830 725	10	21	54
ABR. 10	22	59	2.12	- 7	25	59.8	0.29	1.09	30.741 326	9	43	49
20	23	0	9.78	7	19	19.4	.29	1.09	.629 497	9	5	37
30	23	1	9.12	7	13	32.3	.29	1.10	.498 227	8	27	17
MAIO 10	23	1	58.82	7	8	46.4	.29	1.10	.351 292	7	48	47
20	23	2	37.95	7	5	7.4	.29	1.11	.192 800	7	10	6
30	23	3	5.65	- 7	2	40.3	0.29	1.12	30.026 964	6	31	14
JUN. 9	23	3	21.37	7	1	28.4	.29	1.12	29.858 558	5	52	11
19	23	3	25.01	7	1	31.6	.30	1.13	.692 200	5	12	55
29	23	3	16.64	7	2	49.1	.30	1.13	.532 486	4	33	27
JUL. 9	23	2	56.66	7	5	17.7	.30	1.14	.384 161	3	53	48
19	23	2	25.96	- 7	8	51.2	0.30	1.15	29.251 380	3	13	58
29	23	1	45.65	7	13	22.1	.30	1.15	.138 107	2	33	59
AGO. 8	23	0	57.23	7	18	40.2	.30	1.15	29.047 911	1	53	52
18	23	0	2.48	7	24	34.0	.30	1.16	28.983 441	1	13	38
28	22	59	3.38	7	30	50.7	.30	1.16	.946 947	0	33	20
SET. 6	22	58	8.42	- 7	36	37.0	0.30	1.16	28.939 134	23	53	0
16	22	57	7.45	7	42	57.0	.30	1.16	28.958 552	23	12	41
26	22	56	8.82	7	48	58.2	.30	1.15	29.007 327	22	32	24
OUT. 6	22	55	14.97	7	54	26.0	.30	1.15	.084 074	21	52	12
16	22	54	27.98	7	59	7.9	.30	1.15	.186 492	21	12	7
26	22	53	49.74	- 8	2	52.9	0.30	1.14	29.311 715	20	32	10
NOV. 5	22	53	21.94	- 8	5	31.7	.30	1.14	29.455 794	19	52	25
15	22	53	5.76	8	6	57.4	.30	1.13	.614 349	19	12	50
25	22	53	2.06	8	7	5.8	.30	1.12	.782 634	18	33	29
DEZ. 5	22	53	11.24	8	5	55.0	0.29	1.12	29.955 304	17	54	20
15	22	53	33.22	8	3	26.1	.29	1.11	30.127 219	17	15	23
25	22	54	7.68	- 7	59	41.5	.29	1.11	30.293 186	16	36	39