

Exame de Seleção para Capitão Amador Abril / 2017

Anexos

A2 CORREÇÃO DE ALTURA DE 10° - 90° - SOL, ESTRELAS E PLANETAS

Out — Mar		SOL	Abr — Set		ESTRELAS E PLANETAS				DEPRESSÃO				
a	Limbo		a	Limbo	a	Corr.	a	Corr.	Elev do	Corr.	Elev do	Elev do	Corr.
ap	Inf Sup		ap	Inf Sup	ap		ap	adicional	Olho		Olho	Olho	
9 33	+ 10·8 - 21·5		9 39	+ 10·6 - 21·2	9 55	- 5·3		2015	m		Pés	m	
9 45	+ 10·9 - 21·4		9 50	+ 10·7 - 21·1	10 07	- 5·2		VÊNUS	2·4	- 2·8	8·0	1·0	- 1·8
9 56	+ 11·0 - 21·3		10 02	+ 10·8 - 21·0	10 20	- 5·1		1 jan - 3 mai	2·6	- 2·9	8·6	1·5	- 2·2
10 08	+ 11·1 - 21·2		10 14	+ 10·9 - 20·9	10 32	- 5·0		4 dez - 31dez	2·8	- 3·0	9·2	2·0	- 2·5
10 20	+ 11·2 - 21·1		10 27	+ 11·0 - 20·8	10 46	- 4·9		0	3·0	- 3·1	9·8	2·5	- 2·8
10 33	+ 11·3 - 21·0		10 40	+ 11·1 - 20·7	10 59	- 4·8		0	3·2	- 3·2	10·5	3·0	- 3·0
10 46	+ 11·4 - 20·9		10 53	+ 11·2 - 20·6	11 14	- 4·7		60	3·4	- 3·3	11·2		
11 00	+ 11·5 - 20·8		11 07	+ 11·3 - 20·5	11 29	- 4·6		0	3·6	- 3·4	11·9	Ver tábua	
11 15	+ 11·6 - 20·7		11 22	+ 11·4 - 20·4	11 44	- 4·5		0	3·8	- 3·5	12·6	—	
11 30	+ 11·7 - 20·6		11 37	+ 11·5 - 20·3	12 00	- 4·4		4 mai - 22 jun	4·0	- 3·6	13·3	m	
11 45	+ 11·8 - 20·5		11 53	+ 11·6 - 20·2	12 17	- 4·3		13 out - 3 dez	4·3	- 3·7	14·1	20	- 7·9
12 01	+ 11·9 - 20·4		12 10	+ 11·7 - 20·1	12 35	- 4·2		0	4·5	- 3·8	14·9	22	- 8·3
12 18	+ 12·0 - 20·3		12 27	+ 11·8 - 20·0	12 53	- 4·1		41	4·7	- 3·9	15·7	24	- 8·6
12 36	+ 12·1 - 20·2		12 45	+ 11·9 - 19·9	13 12	- 4·0		76	5·0	- 4·0	16·5	26	- 9·0
12 54	+ 12·2 - 20·1		13 04	+ 12·0 - 19·8	13 32	- 3·9		0	5·2	- 4·1	17·4	28	- 9·3
13 14	+ 12·3 - 20·0		13 24	+ 12·1 - 19·7	13 53	- 3·8		0	5·5	- 4·2	18·3	30 - 9·6	
13 34	+ 12·4 - 19·9		13 44	+ 12·2 - 19·6	14 16	- 3·7		34	5·8	- 4·3	19·1	32 - 10·0	
13 55	+ 12·5 - 19·8		14 06	+ 12·3 - 19·5	14 39	- 3·6		60	6·1	- 4·4	20·1	34 - 10·3	
14 17	+ 12·6 - 19·7		14 29	+ 12·4 - 19·4	15 03	- 3·5		80	6·3	- 4·5	21·0	36 - 10·6	
14 41	+ 12·7 - 19·6		14 53	+ 12·5 - 19·3	15 29	- 3·4		0	6·6	- 4·6	22·0	38 - 10·8	
15 05	+ 12·8 - 19·5		15 18	+ 12·6 - 19·2	15 56	- 3·3		15 jul - 30 jul	6·9	- 4·7	22·9	40 - 11·1	
15 31	+ 12·9 - 19·4		15 45	+ 12·7 - 19·1	16 25	- 3·2		2 set - 18 set	7·2	- 4·8	23·9	42 - 11·4	
15 59	+ 13·0 - 19·3		16 13	+ 12·8 - 19·0	16 55	- 3·1		0	7·5	- 4·9	24·9	44 - 11·7	
16 27	+ 13·1 - 19·2		16 43	+ 12·9 - 18·9	17 27	- 3·0		29	7·9	- 5·0	26·0	46 - 11·9	
16 58	+ 13·2 - 19·1		17 14	+ 13·0 - 18·8	18 01	- 2·9		51	8·2	- 5·1	27·1	48 - 12·2	
17 30	+ 13·3 - 19·0		17 47	+ 13·1 - 18·7	18 37	- 2·8		68	8·5	- 5·2	28·1	Pés	
18 05	+ 13·4 - 18·9		18 23	+ 13·2 - 18·6	19 16	- 2·7		83	8·8	- 5·3	29·2	2 - 1·4	
18 41	+ 13·5 - 18·8		19 00	+ 13·3 - 18·5	19 56	- 2·6		0	9·2	- 5·4	30·4	4 - 1·9	
19 20	+ 13·6 - 18·7		19 41	+ 13·4 - 18·4	20 40	- 2·5		26	9·5	- 5·5	31·5	6 - 2·4	
20 02	+ 13·7 - 18·6		20 24	+ 13·5 - 18·3	21 27	- 2·4		46	9·9	- 5·6	32·7	8 - 2·7	
20 46	+ 13·8 - 18·5		21 10	+ 13·6 - 18·2	22 17	- 2·3		60	10·3	- 5·7	33·9	10 - 3·1	
21 34	+ 13·9 - 18·4		21 59	+ 13·7 - 18·1	23 11	- 2·2		73	10·6	- 5·8	35·1	Ver tábua	
22 25	+ 14·0 - 18·3		22 52	+ 13·8 - 18·0	24 09	- 2·1		84	11·0	- 5·9	36·3	—	
23 20	+ 14·1 - 18·2		23 49	+ 13·9 - 17·9	25 12	- 2·0		0	11·4	- 6·0	37·6	Pés	
24 20	+ 14·2 - 18·1		24 51	+ 14·0 - 17·8	26 20	- 1·9		26	11·8	- 6·1	38·9	70 - 8·1	
25 24	+ 14·3 - 18·0		25 58	+ 14·1 - 17·7	27 34	- 1·8		46	12·2	- 6·2	40·1	75 - 8·4	
26 34	+ 14·4 - 17·9		27 11	+ 14·2 - 17·6	28 54	- 1·7		60	12·6	- 6·3	41·5	80 - 8·7	
27 50	+ 14·5 - 17·8		28 31	+ 14·3 - 17·5	30 22	- 1·6		0	13·0	- 6·4	42·8	85 - 8·9	
29 13	+ 14·6 - 17·7		29 58	+ 14·4 - 17·4	31 58	- 1·5		60	13·4	- 6·5	44·2	90 - 9·2	
30 44	+ 14·7 - 17·6		31 33	+ 14·5 - 17·3	33 43	- 1·4		73	13·8	- 6·6	45·5	95 - 9·5	
32 24	+ 14·8 - 17·5		33 18	+ 14·6 - 17·2	35 38	- 1·3		84	14·2	- 6·7	46·9	100 - 9·7	
34 15	+ 14·9 - 17·4		35 15	+ 14·7 - 17·1	37 45	- 1·2		0	14·7	- 6·8	48·4	105 - 9·9	
36 17	+ 15·0 - 17·3		37 24	+ 14·8 - 17·0	40 06	- 1·1		60	15·1	- 6·9	49·8	110 - 10·2	
38 34	+ 15·1 - 17·2		39 48	+ 14·9 - 16·9	42 42	- 1·0		0	15·5	- 7·0	51·3	115 - 10·4	
41 06	+ 15·2 - 17·1		42 28	+ 15·0 - 16·8	45 34	- 0·9		0	16·0	- 7·1	52·8	120 - 10·6	
43 56	+ 15·3 - 17·0		45 29	+ 15·1 - 16·7	48 45	- 0·8		0	16·5	- 7·2	54·3	125 - 10·8	
47 07	+ 15·4 - 16·9		48 52	+ 15·2 - 16·6	52 16	- 0·7		60	16·9	- 7·3	55·8	130 - 11·1	
50 43	+ 15·5 - 16·8		52 41	+ 15·3 - 16·5	56 09	- 0·6		0	17·4	- 7·4	57·4	135 - 11·3	
54 46	+ 15·6 - 16·7		56 59	+ 15·4 - 16·4	60 26	- 0·5		60	17·9	- 7·5	58·9	140 - 11·5	
59 21	+ 15·7 - 16·6		61 50	+ 15·5 - 16·3	65 06	- 0·4		0	18·4	- 7·6	60·5	145 - 11·7	
64 28	+ 15·8 - 16·5		67 15	+ 15·6 - 16·2	70 09	- 0·3		60	18·8	- 7·7	62·1	150 - 11·9	
70 10	+ 15·9 - 16·4		73 14	+ 15·7 - 16·1	75 32	- 0·2		0	19·3	- 7·8	63·8	155 - 12·1	
76 24	+ 16·0 - 16·3		79 42	+ 15·8 - 16·0	81 12	- 0·1		0	19·8	- 7·9	65·4	—	
83 05	+ 16·1 - 16·2		86 31	+ 15·9 - 15·9	87 03	0·0		60	20·4	- 8·0	67·1	Pés	
90 00			90 00		90 00			0	20·9	- 8·1	68·8	2 - 1·4	
								0	21·4	- 8·1	70·5	4 - 1·9	

a ap = Altura dada pelo sextante corrigida do erro instrumental e da depressão

TU	SOL		LUA				Lat.	CREP		SOL Nascer	LUA - Nascer				
	AHG	Dec	AHG	v	Dec	d Ph		Naut.	Civil		29 30 31 1				
											h m	h m	h m	h m	h m
29	178 47.4 N 3	22.0	166 21.3	8.7 N	4 24.7	11.5	60.0	01 59	03 53	05 06	06 00	05 52	05 43	05 30	
01	193 47.6	22.9	180 49.0	8.6	4 36.2	11.6	60.0	02 35	04 07	05 12	06 07	06 07	06 09	06 14	
02	208 47.8	23.9	195 16.6	8.7	4 47.8	11.5	60.0	03 00	04 19	05 17	06 14	06 20	06 28	06 43	
03	223 48.0	24.9	209 44.3	8.6	4 59.3	11.4	60.0	03 19	04 28	05 21	06 19	06 30	06 44	07 05	
04	238 48.1	25.8	224 11.9	8.6	5 10.7	11.5	60.1	03 34	04 36	05 25	06 23	06 38	06 57	07 23	
05	253 48.3	26.8	238 39.5	8.5	5 22.2	11.4	60.1	03 46	04 43	05 28	06 27	06 45	07 08	07 38	
06	268 48.5 N 3	27.8	253 07.0	8.5 N	5 33.6	11.4	60.1	03 56	04 48	05 31	06 30	06 52	07 17	07 50	
07	283 48.7	28.8	267 34.5	8.5	5 45.0	11.4	60.1	04 04	04 53	05 33	06 33	06 57	07 26	08 01	
08	298 48.9	29.7	282 02.0	8.4	5 56.4	11.3	60.1	04 12	04 58	05 36	06 36	07 02	07 33	08 10	
09	313 49.1	30.7	296 29.4	8.4	6 07.7	11.3	60.1	04 18	05 02	05 38	06 39	07 07	07 40	08 18	
10	328 49.3	31.7	310 56.8	8.3	6 19.0	11.2	60.1	04 24	05 05	05 39	06 41	07 11	07 45	08 26	
11	343 49.5	32.7	325 24.1	8.3	6 30.2	11.3	60.1	04 29	05 08	05 41	06 43	07 15	07 51	08 32	
12	358 49.6 N 3	33.6	339 51.4	8.3 N	6 41.5	11.1	60.1	04 40	05 15	05 44	06 47	07 23	08 02	08 47	
13	13 49.8	34.6	354 18.7	8.3	6 52.6	11.2	60.2	04 48	05 20	05 47	06 51	07 30	08 12	08 59	
14	28 50.0	35.6	8 46.0	8.2	7 03.8	11.1	60.2	05 04	05 24	05 50	06 54	07 36	08 20	09 09	
15	43 50.2	36.6	23 13.2	8.2	7 14.9	11.0	60.2	05 00	05 28	05 52	06 57	07 41	08 28	09 18	
16	58 50.4	37.5	37 40.4	8.1	7 25.9	11.1	60.2	05 07	05 33	05 55	07 02	07 50	08 40	09 33	
17	73 50.6	38.5	52 07.5	8.1	7 37.0	10.9	60.2	05 13	05 37	05 58	07 07	07 58	08 51	09 47	
18	88 50.8 N 3	39.5	66 34.6	8.0 N	7 47.9	11.0	60.2	05 16	05 40	06 01	07 11	08 06	09 02	10 00	
19	103 51.0	40.4	81 01.6	8.1	7 58.9	10.8	60.2	05 18	05 43	06 04	07 15	08 13	09 13	10 13	
20	118 51.1	41.4	95 28.7	7.9	8 09.7	10.9	60.2	05 19	05 45	06 07	07 20	08 21	09 24	10 26	
21	133 51.3	42.4	109 55.6	8.0	8 20.6	10.7	60.2	05 18	05 46	06 10	07 25	08 31	09 37	10 42	
22	148 51.5	43.4	124 22.6	7.9	8 31.3	10.8	60.2	05 17	05 46	06 11	07 28	08 36	09 45	10 51	
23	163 51.7	44.3	138 49.5	7.9	8 42.1	10.6	60.2	05 15	05 46	06 13	07 31	08 43	09 53	11 02	
30	178 51.9 N 3	45.3	153 16.4	7.8 N	8 52.7	10.6	60.2	05 12	05 46	06 15	07 35	08 50	10 03	11 14	
01	193 52.1	46.3	167 43.2	7.8	9 03.3	10.6	60.2	05 08	05 45	06 18	07 40	08 59	10 16	11 30	
02	208 52.3	47.2	182 10.0	7.7	9 13.9	10.5	60.2	05 06	05 45	06 19	07 43	09 03	10 22	11 37	
03	223 52.5	48.2	196 36.7	7.8	9 24.4	10.4	60.2	05 04	05 45	06 20	07 45	09 07	10 28	11 45	
04	238 52.6	49.2	211 03.5	7.6	9 34.8	10.4	60.3	05 01	05 44	06 21	07 48	09 12	10 35	11 53	
05	253 52.8	50.2	225 30.1	7.7	9 45.2	10.3	60.3	04 58	05 44	06 23	07 51	09 18	10 43	12 04	
06	268 53.0 N 3	51.1	239 56.8	7.6 N	9 55.5	10.3	60.3	04 54	05 43	06 25	07 54	09 24	10 52	12 15	
07	283 53.2	52.1	254 23.4	7.5	10 05.8	10.2	60.3	Lat.	SOL	CREP	LUA - Pôr				
08	298 53.4	53.1	268 49.9	7.6	10 16.0	10.1	60.3	Pôr	Pôr	Civil	Naut.	29	30	31	1
09	313 53.6	54.0	283 16.5	7.4	10 26.1	10.1	60.3	h m	h m	h m	h m	h m	h m	h m	h m
10	328 53.8	55.0	297 42.9	7.5	10 36.2	10.0	60.3	N 72	19 06	20 20	22 19	21 27	23 33	25 47	01 47
11	343 53.9	56.0	312 09.4	7.4	10 46.2	9.9	60.3	N 70	18 59	20 05	21 39	21 14	23 09	25 04	01 04
12	358 54.1 N 3	56.9	326 35.8	7.4 N	10 56.1	9.9	60.3	68	18 54	19 53	21 13	21 04	22 51	24 36	00 36
13	13 54.3	57.9	341 02.2	7.3	11 06.0	9.7	60.3	66	18 49	19 43	20 54	20 55	22 36	24 14	00 14
14	28 54.5	58.9	355 28.5	7.3	11 15.7	9.7	60.3	64	18 45	19 35	20 38	20 48	22 24	23 57	25 21
15	43 54.7	59.9	9 54.8	7.3	11 25.4	9.7	60.3	62	18 42	19 28	20 26	20 42	22 14	23 43	25 04
16	58 54.9	60.8	24 21.1	7.2	11 35.1	9.5	60.3	60	18 39	19 22	20 15	20 36	22 05	23 31	24 50
17	73 55.1	61.8	38 47.3	7.2	11 44.6	9.5	60.3	N 58	18 37	19 17	20 06	20 32	21 58	23 21	24 38
18	88 55.2 N 4	62.8	53 13.5	7.1 N	11 54.1	9.4	60.3	56	18 34	19 12	19 59	20 27	21 51	23 12	24 27
19	103 55.4	63.7	67 39.6	7.1	12 03.5	9.3	60.3	54	18 32	19 08	19 52	20 24	21 45	23 04	24 18
20	118 55.6	64.7	82 05.7	7.1	12 12.8	9.3	60.3	52	18 31	19 05	19 46	20 20	21 40	22 57	24 09
21	133 55.8	65.7	96 31.8	7.0	12 22.1	9.1	60.3	50	18 29	19 02	19 41	20 17	21 35	22 51	24 02
22	148 56.0	66.6	110 57.8	7.0	12 31.2	9.1	60.2	45	18 25	18 55	19 30	20 11	21 25	22 37	23 46
23	163 56.2	67.6	125 23.8	7.0	12 40.3	9.0	60.2	N 40	18 22	18 50	19 22	20 05	21 16	22 26	23 33
31	178 56.4 N 4	68.6	139 49.8	6.9 N	12 49.3	8.9	60.2	35	18 20	18 45	19 15	20 00	21 09	22 17	23 22
01	193 56.6	69.5	154 15.7	6.9	12 58.2	8.8	60.2	30	18 18	18 42	19 10	19 56	21 02	22 08	23 12
02	208 56.7	70.5	168 41.6	6.9	13 07.0	8.7	60.2	20	18 14	18 36	19 02	19 49	20 51	21 54	22 56
03	223 56.9	71.5	183 07.5	6.8	13 15.7	8.7	60.2	N 10	18 11	18 32	18 56	19 43	20 41	21 41	22 41
04	238 57.1	72.5	197 33.3	6.8	13 24.4	8.5	60.2	0	18 08	18 28	18 52	19 37	20 32	21 29	22 27
05	253 57.3	73.4	211 59.1	6.8	13 32.9	8.5	60.2	S 10	18 05	18 26	18 50	19 31	20 23	21 18	22 14
06	268 57.5 N 4	74.4	226 24.9	6.7 N	13 41.4	8.4	60.2	20	18 02	18 24	18 50	19 24	20 13	21 05	21 59
07	283 57.7	75.4	240 50.6	6.7	13 49.8	8.2	60.2	30	17 59	18 23	18 50	19 17	20 02	20 51	21 43
08	298 57.9	76.3	255 16.3	6.6	13 58.0	8.2	60.2	35	17 57	18 22	18 52	19 13	19 56	20 42	21 33
09	313 58.0	77.3	269 41.9	6.7	14 06.2	8.1	60.2	40	17 55	18 22	18 53	19 08	19 49	20 33	21 22
10	328 58.2	78.3	284 07.6	6.6	14 14.3	8.0	60.2	45	17 53	18 22	18 56	19 03	19 40	20 22	21 09
11	343 58.4	79.2	298 33.2	6.5	14 22.3	7.9	60.2	S 50	17 50	18 22	19 00	18 56	19 30	20 08	20 53
12	358 58.6 N 4	80.2	312 58.7	6.6 N	14 30.2	7.8	60.2	52	17 49	18 23	19 02	18 53	19 25	20 02	20 46
13	13 58.8	81.2	327 24.3	6.5	14 38.0	7.7	60.2	54	17 48	18 23	19 04	18 50	19 20	19 55	20 38
14	28 59.0	82.1	341 49.8	6.4	14 45.7	7.5	60.1	56	17 46	18 23	19 06	18 46	19 15	19 48	20 28
15	43 59.2	83.1	356 15.2	6.5	14 53.2	7.5	60.1	58	17 45	18 24	19 09	18 42	19 08	19 39	20 18
16	58 59.3	84.1	10 40.7	6.4	15 00.7	7.4	60.1	S 60	17 43	18 24	19 13	18 38	19 01	19 30	20 06
17	73 59.5	85.0	25 06.1	6.4	15 08.1	7.3	60.1	Dia	SOL		LUA				
18	88 59.7 N 4	86.0	39 31.5	6.4 N	15 15.4	7.2	60.1	ET	Pass	Pass Merid		Idade	Fase		
19	103 59.9	87.0	53 56.9	6.3	15 22.6	7.1	60.1	00h	Merid	Sup	Inf	d	%		
20	119 00.1	88.0	68 22.2	6.3	15 29.7	6.9	60.1	12h	h m	h m	h m				
21	134 00.3	89.0	82 47.5	6.3	15 36.6	6.9	60.1	m s	m s						

CONVERSÃO DE ARCO EM TEMPO

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

A tábua acima destina-se à conversão de arco em tempo; sua principal aplicação nesse Almanaque é a conversão da longitude, cujo valor em horas, minutos e segundos é utilizado na fórmula que relaciona a HML com a TU: $TU = HML + \lambda$, sendo λ positivo para longitude W e negativo para longitude E.

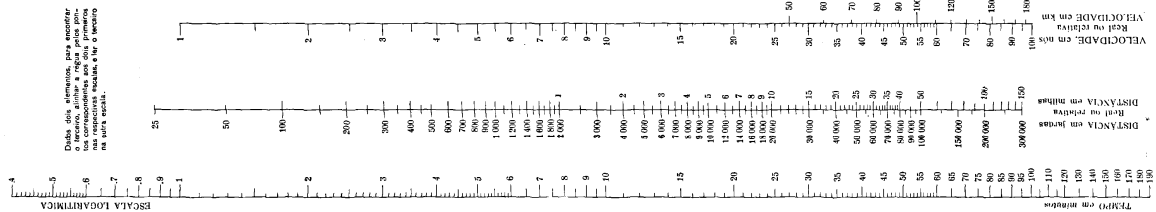
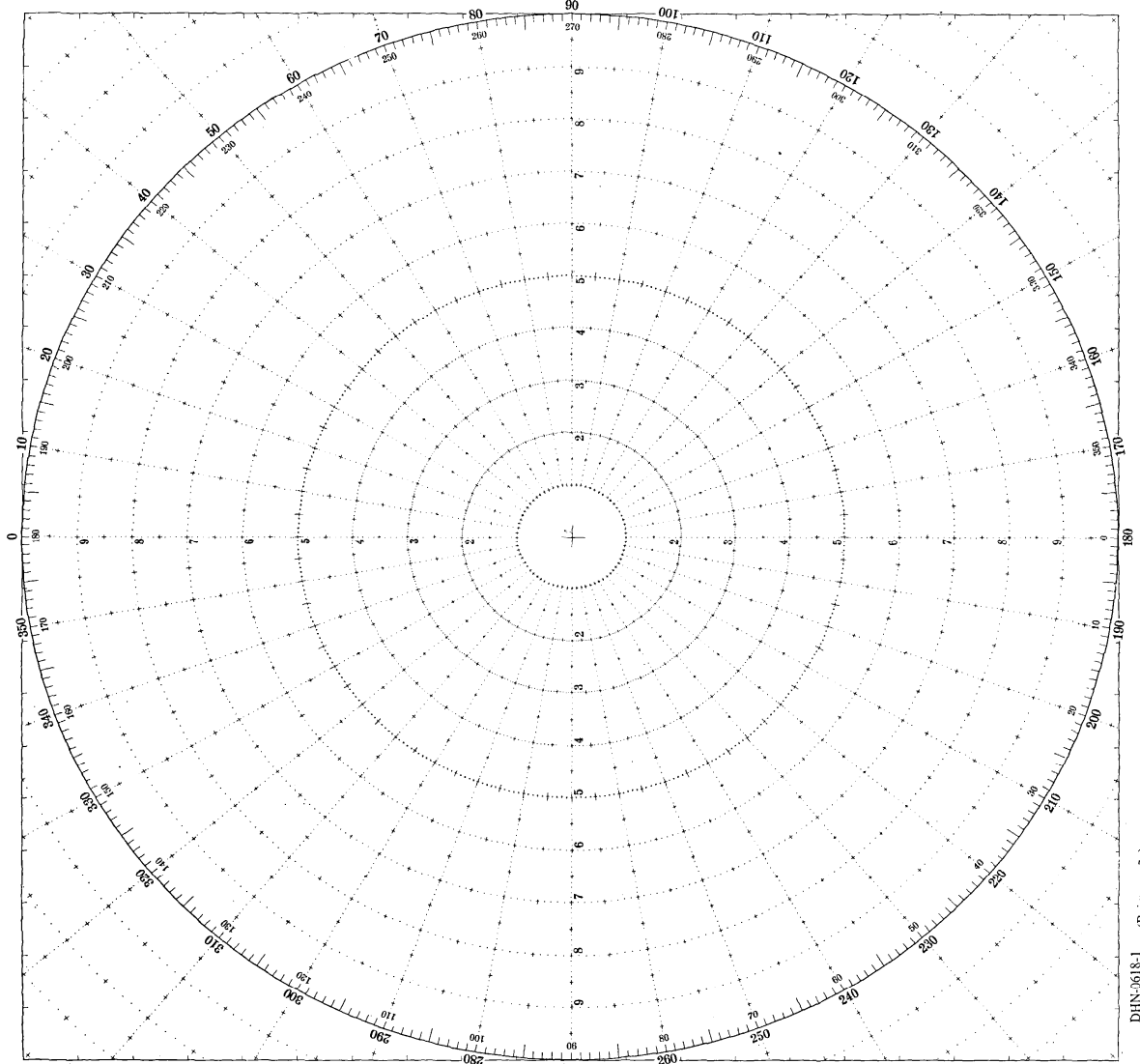
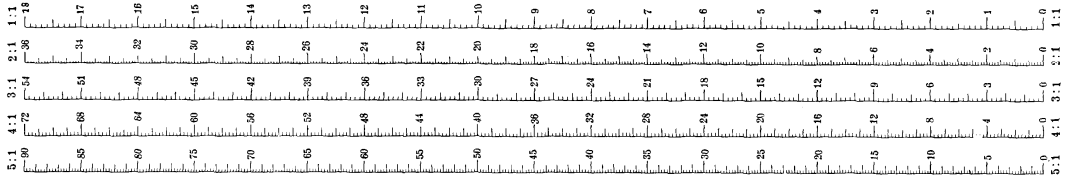
^m 52	SOL PLANETAS	Υ	LUA	v ou d	Corr.	v ou d	Corr.	v ou d	Corr.
00	13 00-0	13 02-1	12 24-5	0-0	0-0	6-0	5-3	12-0	10-5
01	13 00-3	13 02-4	12 24-7	0-1	0-1	6-1	5-3	12-1	10-6
02	13 00-5	13 02-6	12 24-9	0-2	0-2	6-2	5-4	12-2	10-7
03	13 00-8	13 02-9	12 25-2	0-3	0-3	6-3	5-5	12-3	10-8
04	13 01-0	13 03-1	12 25-4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

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

ROSA DE MANOBRAS



ESCALAS



DHN-0618-1 (Reimpressão)
15.000-VI-2005