# EFEMÉRIDES CIENTÍFICA E SIMPLIFICADA - ROSACRUZ CALCULADA PARA O MEIO-DIA DE GREENWICH

#### **JANEIRO DE 1989**

#### **Longitude dos Astros**

Tropical	l Ephemeris -		1 jan 1989 = 2447528		Greenwich	SVP =	05 x 24,67	True Aya	namsa = 23	d 42m 19s			
Long.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupite	er Satur	n Uranu	s <b>N</b> ept	une Plut	o N.	Node
01 jan 02 jan 03 jan 04 jan 05 jan 06 jan	h m s 18 44 27.6 18 48 24.2 18 52 20.7 18 56 17.3 19 0 13.9 19 4 10.4	11 vs 03 , 8 12 vs 04 , 9 13 vs 06 , 1 14 vs 07 , 3 15 vs 08 , 4 16 vs 09 , 6	07 m,20.3 19 m,47.3 02 ≠ 34.9 15 ≠ 44.8 29 ≠ 17.1	28 vs 05 .8 29 vs 32 .9 00 \$\infty 58 .0 02 \$\infty 20 .7 03 \$\infty 40 .5 04 \$\infty 56 .9	18 \( \pm 25.7 \) 19 \( \pm 40.7 \) 20 \( \pm 55.8 \) 22 \( \pm 10.8 \) 23 \( \pm 25.9 \) 24 \( \pm 41.0 \)	20°727,5 20°758,2 21°729,1 22°700,2 22°731,5 23°702,9	26 & 343 26 & 309 26 & 278 26 & 249	05 v 39 .5 05 v 46 .6 05 v 53 .6 06 v 00 .7 06 v 07 .7 06 v 14 .8	01 %47.3 01 %50.9 01 %54.5 01 %58.1 02 %01.6 02 %05.2	09 v 56 . 7 09 v 59 . 0 10 v 01 . 3 10 v 03 . 6 10 v 05 . 8 10 v 08 . 1	14 m, 34, 2 14 m, 35, 7 14 m, 37, 2 14 m, 38, 7 14 m, 40, 2 14 m, 41, 6	06 x 373 06 x 335 06 x 275 06 x 197 06 x 108 06 x 017	7 7
07 jan 08 jan 09 jan 10 jan 11 jan 12 jan 13 jan 14 jan	19 8 7.0 19 12 3.5 19 16 0.1 19 19 56.6 19 23 53.2 19 27 49.7 19 31 46.3 19 35 42.9	17 vs 10.8 18 vs 12.0 19 vs 13.1 20 vs 14.3 21 vs 15.4 22 vs 16.6 23 vs 17.7 24 vs 18.8	27 vs 18.5 11 ≈ 38.5 26 ≈ 04.2 10 × 30.2 24 × 52.2 09 ~ 07.4	06=09.3 07=16.9 08=19.2 09=15.3 10=04.2 10=45.3 11=17.4 11=39.9	25 \( \delta \) 56.0 27 \( \delta \) 11.1 28 \( \delta \) 26.2 29 \( \delta \) 11.3 00 \( \walpha \) 56.4 02 \( \walpha \) 11.5 03 \( \walpha \) 26.6 04 \( \walpha \) 41.7	23 m 34,5 24 m 06,3 24 m 38,2 25 m 10,3 25 m 42,9 26 m 47,4 27 m 20,1	26 & 173 26 & 152 26 & 133 26 & 115 26 & 100	06 v 21.8 06 v 28.8 06 v 35.8 06 v 42.8 06 v 49.7 06 v 56.7 07 v 03.6 07 v 10.5	02 vs 12.2 02 vs 15.8 02 vs 19.2 02 vs 22.7 02 vs 26.2 02 vs 29.7 02 vs 33.1	10 vs 12.6 10 vs 14.9 10 vs 17.1 10 vs 19.4 10 vs 23.8 10 vs 26.1	14m,43.0 14m,44.4 14m,45.7 14m,47.0 14m,48.3 14m,49.5 14m,51.9	05 x 534 05 x 468 05 x 422 05 x 398 05 x 394 05 x 40. 05 x 41.	1 .1 .3
15 jan 16 jan 17 jan 18 jan 19 jan 20 jan 21 jan	19 39 39.4 19 43 36.0 19 47 32.5 19 51 29.1 19 55 25.6 19 59 22.2 20 3 18.7	25 v 20.0 26 v 21.1 27 v 22.1 28 v 23.2 29 v 24.3 00 \$\infty\$25.3 01 \$\infty\$26.3	07 & 10.4 20 & 56.6 04 \t 31.8 17 \t 55.3 01 \sqrt{606.5} 14 \sqrt{604.6}	11251.8 11252.6 1122417 1122192 1022452 102202	05 v 56 .9 07 v 12 .0 08 v 27 .1 09 v 42 .2 10 v 57 .3 12 v 12 .4	27 7 5 2 . 9 28 7 2 5 . 9 28 7 5 8 . 9 29 7 3 2 . 1 00 8 0 5 . 4 00 8 3 8 . 8	26 & 077 26 & 068 26 & 061 26 & 056 26 & 054 26 & 053	07 vs 17.4 07 vs 24.2 07 vs 31.1 07 vs 37.9 07 vs 44.7 07 vs 51.4	02 vs 36 .5 02 vs 39 .9 02 vs 43 .3 02 vs 46 .6 02 vs 50 .0	10 w 28.3 10 w 30.5 10 w 32.7 10 w 34.9 10 w 37.0 10 w 39.2	14 m, 53.0 14 m, 54.1 14 m, 55.2 14 m, 56.3 14 m, 57.3 14 m, 58.2	05 x 416 05 x 395 05 x 357 05 x 305 05 x 244 05 x 181	5
22 jan 23 jan 24 jan 25 jan 26 jan 27 jan 28 jan	20 7 15.3 20 11 11.9 20 15 8.4 20 19 5.0 20 23 1.5 20 26 58.1 20 30 54.6	02 = 27.4 03 = 28.4 04 = 29.4 05 = 30.4 06 = 31.3 07 = 32.3 08 = 33.3	21 \$\alpha 37.9 03 ms 44.1 15 ms 40.8 27 ms 31.2 09 \( = 19.0 \)	06≈524 05≈383 04≈221 03≈061 01≈524	14 vs 42.6 15 vs 57.7 17 vs 12.9 18 vs 28.0 19 vs 43.1 20 vs 58.2 22 vs 13.3	01 & 45.9 02 & 19.7 02 & 53.5 03 & 27.4 04 & 01.4 04 & 35.5 05 & 09.8	26 8 05 .9 26 8 06 .4 26 8 07 .2 26 8 08 .2 26 8 09 .4 26 8 10 .7 26 8 12 .3	08 % 04.8 08 % 11.5 08 % 18.1 08 % 24.7 08 % 31.3 08 % 37.8 08 % 44.3	02 %59.9 03 %03.1 03 %06.4 03 %09.6 03 %12.8 03 %15.9 03 %19.0	10 %43.5 10 %45.7 10 %47.8 10 %49.9 10 %52.0 10 %54.1 10 %56.2	15 m, 00, 1 15 m, 00, 9 15 m, 01, 8 15 m, 02, 6 15 m, 03, 3 15 m, 04, 1 15 m, 04, 8	05 x 078 05 x 049 05 x 036 05 x 03. 05 x 04. 05 x 06. 05 x 07.	) .7 .9 .4
29 jan 30 jan 31 jan	20 34 51,2 20 38 47,7 20 42 44,3	09≈34.2 10≈35.1 11≈36.1	15 m, 13.0		24 vs 43.6	05 & 44.1 06 & 18.4 06 & 52.9	26 8 16,1	08 vs 50 , 7 08 vs 57 , 2 09 vs 03 , 5	03 vs 22 . 1 03 vs 25 . 2 03 vs 28 . 3	10 v 58,2 11 v 00,3 11 v 02,3	15 m, 05, 4 15 m, 06, 0 15 m, 06, 6	$05 \times 074$	1

Tropica	l Ephemeris -	domingo, O Julian Day			Greenwich	SVP = 0	5 x 24,67	True Ayana	msa = 23d	<b>42m</b> 19s			
Decl.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	e Pluto	N.	Node
01 jan 02 jan 03 jan 04 jan 05 jan 06 jan 07 jan	h m s 18 44 27.6 18 48 24.2 18 52 20.7 18 56 17.3 19 0 13.9 19 4 10.4 19 8 7.0	22 s 58 .8 22 s 53 .5 22 s 47 .7 22 s 41 .5 22 s 34 .9 22 s 27 .8 22 s 20 .2	13 s 18.9 18 s 10.8 22 s 23.8 25 s 40.5 27 s 41.3 28 s 08.3 26 s 50.9	22 s 22 . 7 21 s 59 . 2 21 s 34 . 6 21 s 09 . 0 20 s 42 . 6 20 s 15 . 5 19 s 47 . 9	22 s 08 . 4 22 s 17 . 0 22 s 25 . 0 22 s 32 . 2 22 s 38 . 8 22 s 44 . 7 22 s 49 . 9	08 n 30 . 4 08 n 43 . 2 08 n 55 . 9 09 n 08 . 7 09 n 21 . 4 09 n 34 . 2 09 n 47 . 0		22 s 36.2 22 s 36.0 22 s 35.7 22 s 35.5 22 s 35.2 22 s 34.9 22 s 34.7	23 s 38 .9 23 s 38 .8 23 s 38 .8 23 s 38 .8 23 s 38 .7 23 s 38 .7 23 s 38 .7 23 s 38 .6	22 s 09.9 22 s 09.7 22 s 09.6 22 s 09.4 22 s 09.2	01 s 16.2 01 s 16.2 01 s 16.2 01 s 16.3 01 s 16.2 01 s 16.2 01 s 16.2	09 s 0 09 s 0 09 s 0 09 s 1 09 s 1 09 s 2	06.3 08.5 1.4 4.7 8.1
08 jan 09 jan 10 jan 11 jan 12 jan 13 jan 14 jan	19 12 3.5 19 16 0.1 19 19 56.6 19 23 53.2 19 27 49.7 19 31 46.3 19 35 42.9	22 s 12.2 22 s 03.8 21 s 54.9 21 s 45.6 21 s 35.9 21 s 25.8 21 s 15.3	23 s 50.0 19 s 18.7 13 s 38.2 07 s 13.4 00 s 28.3 06 n 14.6 12 n 34.6	19 s 20.1 18 s 52.4 18 s 25.0 17 s 58.2 17 s 32.5 17 s 08.2 16 s 45.8	22 s 54.4 22 s 58.2 23 s 01.3 23 s 03.8 23 s 05.5 23 s 06.5 23 s 06.8	11 n 03.5	18 n 29,1		23 s 38.6 23 s 38.5 23 s 38.5 23 s 38.4 23 s 38.4 23 s 38.3 23 s 38.3	22 s 08.7 22 s 08.6 22 s 08.4 22 s 08.2 22 s 08.1	01 s 16.2 01 s 16.1 01 s 16.0 01 s 16.0 01 s 15.9 01 s 15.8 01 s 15.6	09 s 2 09 s 2 09 s 2 09 s 2 09 s 2 09 s 2	5,2 6,1 6,3 6,0 5,6
15 jan 16 jan 17 jan 18 jan 19 jan 20 jan 21 jan	19 39 39.4 19 43 36.0 19 47 32.5 19 51 29.1 19 55 25.6 19 59 22.2 20 3 18.7	21 s 04.3 20 s 53.0 20 s 41.2 20 s 29.1 20 s 16.6 20 s 03.7 19 s 50.4	18 n 12 .3 22 n 49 .1 26 n 07 .8 27 n 55 .5 28 n 06 .2 26 n 43 .1 23 n 57 .6	16 s 25.5 16 s 07.8 15 s 53.0 15 s 41.4 15 s 33.1 15 s 28.3 15 s 26.9	23 s 06 .4 23 s 05 .3 23 s 03 .4 23 s 00 .9 22 s 57 .7 22 s 53 .7 22 s 49 .1	11 n 41,5 11 n 54,2 12 n 06,8 12 n 19,4	18 n 28.4 18 n 28.4 18 n 28.5 18 n 28.7 18 n 28.9 18 n 29.1 18 n 29.4		23 s 38.2 23 s 38.2 23 s 38.1 23 s 38.0 23 s 38.0 23 s 37.9 23 s 37.9	22 s 07.5 22 s 07.4 22 s 07.2 22 s 07.0 22 s 06.9	01 s 15.5 01 s 15.4 01 s 15.2 01 s 15.0 01 s 14.9 01 s 14.7 01 s 14.5	09 s 2 09 s 2 09 s 2 09 s 2 09 s 3 09 s 3	6.2 7.6 9.5 1.8 4.1
22 jan 23 jan 24 jan 25 jan 26 jan 27 jan 28 jan	20 7 15.3 20 11 11.9 20 15 8.4 20 19 5.0 20 23 1.5 20 26 58.1 20 30 54.6	19 s 36.8 19 s 22.8 19 s 08.4 18 s 53.7 18 s 38.6 18 s 23.2 18 s 07.5	20 n 06 .2 15 n 26 .6 10 n 15 .0 04 n 45 .2 00 s 51 .3 06 s 24 .6 11 s 45 .3	15 s 28.8 15 s 33.7 15 s 41.2 15 s 51.0 16 s 02.6 16 s 15.6 16 s 29.5	22 s 43.7 22 s 37.7 22 s 31.0 22 s 23.5 22 s 15.4 22 s 06.6 21 s 57.2	12 n 56 .9 13 n 09 .3 13 n 21 .7 13 n 34 .0 13 n 46 .3 13 n 58 .5 14 n 10 .7	18 n 30.6 18 n 31.1 18 n 31.6	22 s 29.8 22 s 29.4 22 s 29.1 22 s 28.7 22 s 28.3 22 s 27.9 22 s 27.6	23 s 37.8 23 s 37.8 23 s 37.7 23 s 37.6 23 s 37.6 23 s 37.5 23 s 37.5	22 s 06.3 22 s 06.2 22 s 06.0 22 s 05.8 22 s 05.6	01 s 14.2 01 s 14.0 01 s 13.8 01 s 13.5 01 s 13.3 01 s 13.0 01 s 12.7	09 s 3 09 s 3 09 s 3 09 s 3 09 s 3 09 s 3	8.9 19.4 19.3 18.9
29 jan 30 jan 31 jan	20 34 51.2 20 38 47.7 20 42 44.3	17 s 51.4 17 s 35.0 17 s 18.3	16 s 43.4 21 s 07.1 24 s 41.9	16 s 58,7	21 s 36.3	14 n 22 .8 14 n 34 .9 14 n 46 .9	18 n 33,5 18 n 34,2 18 n 35,0	22 s 27,2 22 s 26,8 22 s 26,4	23 s 37,4 23 s 37,3 23 s 37,3	22 s 05,1	01 s 12.4 01 s 12.1 01 s 11.8	09 s 3 09 s 3 09 s 3	8.0

#### **FEVEREIRO DE 1989**

### **Longitude dos Astros**

Tropica	1 Ephemeris -	quarta-fei Julian Day			noon, Gree	enwich SI	/P = 05 x 24	1,60 True	Ayanamsa	= 23d 42m	23s	
Long.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupite	r Saturn	Uranus	Neptur	ne Pluto	N. Node
	h m s	0 ,	0 ,	ο ,	0 ,	0 ,	0 ,			0 ,	o ,	0 ,
01 fev	20 46 40.9	12 <b>≈</b> 37.0	$10 \neq 22.8$	27 <b>v</b> 144	27 vs 13.8	07 & 27.5	26820.7	09 vs 09 . 9	03 vs 31,3	11 vs 04.3	15 m, 07.2	05 x 028
02 fev	20 50 37,4	13≈37,9	23 4 32.2	26 vs 429		08802.1			03 vs 34,3		15 m, 07.7	$04 \times 595$
03 fev	20 54 34,0	14≈38,7	07 <b>v</b> s 07,3						03 <b>vs</b> 37,2		15 m, 08, 2	$04 \times 560$
04 fev	20 58 30,5	15≈39.6	21 vs 07.8	26 vs 056	00≈59,2	09 & 11.6	26 8 29.0	09 vs 28,6	03 vs 40,2	11 <b>v</b> s 10,2	15 m, 08, 6	04 x 529
05 fev	21 2 27.1	16≈40.4	05≈30.7	25 vs 592	02 = 14.3	09 & 46 . 5	26 8 32 .2	09 vs 34.8	03 vs 43.1	11 <b>v</b> 12 . 2	15 m, 09.0	04 × 505
06 fev	21 6 23,6	17 <b>≈4</b> 1.3	2 <b>0≈</b> 11.1	26 vs 00,4	03≈29.4	10821,5	26 8 35,5	09 vs 40.9	03 vs 45,9	11 <b>v</b> 14, 1	15 m, 09 . 4	$04 \times 492$
07 fev	21 10 20,2	18≈42.1	$05 \times 01.8$	26 vs 08,7		10 & 56,5	26839,1	09 vs 46,9	03 <b>v</b> 48 , 8	11 <b>v</b> s 16 , 0	15 m, 09.7	$04 \times 488$
08 fev	21 14 16,7	19≈42.9	$19 \times 55, 2$	26 <b>vs</b> 23,8		11831,6	26 & 42 , 8	09 vs 52,9	03 <b>v</b> s 51,5	11 <b>v</b> s 17 , 9	15 m, 10, 0	$04 \times 49.3$
09 fev	21 18 13,3	20≈43.6	04 <b>°</b> 43,6	26 vs 45,0		12 & 06 . 8		$09 \times 58.9$	03  vs 54.3	11 <b>v</b> s 19 , 8	15 m, 10.3	$04 \times 50.3$
10 fev	21 22 9.9	21≈44,4	19°20.7				26 8 50.9	10 vs 04.8			15 m, 10.5	$04 \times 51.5$
11 fev	21 26 6.4	22 <b>≈4</b> 5,1	03 & 42 , 0	27 <b>vs</b> 44,0	09≈44,9	13 8 17 , 4	26 & 55,2	10 <b>v</b> 10,7	03 <b>v</b> 59 . 7	11 <b>vs</b> 23 , 4	15 m, 10, 7	04 x 52,6
12 fev	21 30 3.0	23≈45.7	17 8 45.0	28 vs 21,0	10≈60.0	13 8 52,7	26859.7	10 vs 16,5	04 vs 02 , 4	11 vs 25, 2	15 m, 10, 8	$04 \times 53.2$
13 fev	21 33 59,5	24≈46,4	01X28,6				27 & 04,4				15 m, 11, 0	$04 \times 53,2$
14 fev	21 37 56,1	25≈47.0	14X53,4				27 & 09 , 2			11 <b>vs</b> 28 , 8		$04 \times 528$
15 fev	21 41 52,6	26≈47,6	28X00.6	00≈36.9			27 8 14.2					04 x 519
16 fev	21 45 49,2	27≈48,2	10951.8	01≈29.5			27 8 19,4			11 <b>v</b> 32 . 2		04 × 508
17 fev	21 49 45,7	28≈48.7	239528.8				27 8 24,8			11 vs 33.9	15 m, 111	04 x 497
18 fev	21 53 42,3	29≈49,2	05 มี 53 . 4	03≈23,8	18≈30,2	1/826,1	27 & 30,4	10 vs 50, 1	04 <b>v</b> 17,5	11 <b>vs</b> 35,6	15 m, 110	04 × 488
19 fev	21 57 38,8	$00 \times 49.7$	18 ស 07 . 4	04≈25.2			27836,1		04 vs 19,9	11 vs 37.2	15 m, 109	04 x 483
20 fev	22 1 35,4	$01 \times 50.2$	00 ms 12,3	05≈29,0			27 & 42,0			11 <b>vs</b> 38, 9	$15 m_{\rm e} 108$	$04 \times 481$
21 fev	22 5 32,0	$02 \times 50,6$	12 ms 10,0	06≈35,1			27 & 48,0			11 <b>vs</b> 40 , 5	15 դ. 106	$04 \times 48, 2$
22 fev	22 9 28,5	$03 \times 51,0$	24 ms 02.3	07≈43.5			27 8 54,2			11 <b>vs</b> 42 , 0		04 × 48,4
23 fev	22 13 25,1	$04 \times 51.4$		08≈53.9		20825.3		11 vs 16,5		11 vs 43.6		04 × 48,7
24 fev	22 17 21.6	05 x 51.7	17-40.1				28 8 07.2					04 x 48,8
25 fev	22 21 18,2	06 x 52,0	29 = 31,3	11#20,2	2/22/15,1	21837,2	28 & 13.9	11 <b>vs</b> 26,6	04 <b>vs</b> 33,4	11 <b>vs</b> 46 , 6	15 m, 096	04 × 488
26 fev	22 25 14.7	07 x 52,3	11 m, 28, 5	12≈36.0			28820.7			11 <b>vs 4</b> 8,1	15 m, 092	04 x 486
27 fev	22 29 11,3	$08 \times 52,6$	23 m, 35, 7	13≈53,4				11 vs 36,4		11 <b>vs</b> 49 , 5	15 m, 088	$04 \times 484$
28 fev	22 33 7,8	$09 \times 52.9$	05 ≠ 57,2	15≈12.4	$00 \times 59.9$	23 & 25 , 4	28 & 34.9	11 <b>vs 4</b> 1,2	04 vs 39,5	11 <b>v</b> 50,9	15 ալ 084	$04 \times 483$

Tropica	l Ephemeris -		ra, 01 fev /= 2447559		noon, Gree	nwich SV	P = 05 x 24	.60 True	Ayanamsa =	= 23d 42m 2	2 <b>3</b> s		
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N.	Node
	h m s	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0	,
01 fev	20 46 40.9	17 s 01.3	27 s 10.7	17 s 27.8	21 s 12.8	14 n 58.8	18 n 35,8	22 s 26.0	23 s 37,2	22 s 04.8	01 s 11.4	09 s 3	9.7
02 fev	20 50 37.4	16 s 44.0	28 s 15.6	17 s 41,7	21 s 00.1	15 n 10.7	18 n 36,6	22 s 25,6	23 s 37,1	22 s 04,6	01 s 11,1	09 s 4	0.9
03 fev	20 54 34,0	16 s 26,4		17 s 55,0		15 n 22,5		22 s 25,2	23 s 37,1		01 s 10.8	09 s 4	2,2
04 fev	20 58 30.5	16 s 08,6	25 s 22,9	18 s 07,5	20 s 32,8	15 n 34,3	18 n 38,5	22 s 24,8	23 s 37,0	22 s <b>04</b> ,3	01 s 10,4	09 s 4	3,3
05 fev	21 2 27.1	15 s 50,4	21 s 24,1	18 s 19,2	20 s 18.2	15 n 46.0	18 n 39,4	22 s 24,4	23 s 36,9	22 s <b>04</b> ,1	01 s 10.0	09 s 4	4.2
06 fev	21 6 23.6	15 s 32,0	16 s 01.7	18 s 30,0	20 s 03.1	15 n 57.6	18 n 40,5	22 s 24,0	23 s 36,9	22 s 03,9	01 s 09.6	09 s 4	4.7
07 fev	21 10 20,2	15 s 13,3	09 s 39,2	18 s 39,7	19 s 47,3	16 n 09,1	18 n 41,5	22 s 23,5	23 s 36,8	22 s 03,8	01 s 09,2	09 s 4	
08 fev	21 14 16,7	14 s 54,3	02 s 43,8	18 s 48,5	19 s 31,0	16 n 20,6	18 n 42,6	22 s 23,1	23 s 36,7	22 s 03,6	01 s 08,8	09 s 4	
09 fev	21 18 13,3	14 s 35,1	04 n 17.7	18 s 56,1	19 s 14,1	16 n 32.0	18 n 43,8	22 s 22,7	23 s 36,7	22 s 03,4	01 s 08.4	09 s 4	
10 fev	21 22 9,9	14 s 15,6		19 s 02,6		16 n 43,3		22 s 22,3	23 s 36,6	22 s 03,3	01 s 08.0	09 s 4	
11 fev	21 26 6.4	13 s 55,9	17 n 00.0	19 s 07,9	18 s 38,6	16 n 54,5	18 n 46,2	22 s 21,9	23 s 36,5	22 s <b>0</b> 3,1	01 s 07,6	09 s 4	3.4
12 fev	21 30 3.0	13 s 36,0		19 s 12,1			18 n 47,5	22 s 21,5	23 s 36,5	22 s 02,9	01 s 07.1	09 s 4	
13 fev	21 33 59,5	13 s 15,9		19 s 15,0	18 s 01,0	17 n 16.7	18 n 48,8	22 s 21,1	23 s 36,4	22 s 02,8	01 s 06.7	09 s 4	
14 fev	21 37 56.1	12 s 55.5		19 s 16.7	17 s 41.4	17 n 27 . 6	18 n 50.1	22 s 20.6	23 s 36 . 4	22 s 02.6	01 s 06.2	09 s 4	
15 fev	21 41 52.6	12 s 35.0			17 s 21,3	17 n 38 . 5	18 n 51.5	22 s 20.2	23 s 36 . 3	22 s 02 . 4	01 s 05 .8	09 s 4	
16 fev 17 fev	21 45 49.2 21 49 45.7	12 s 14.2 11 s 53.3		19 s 16.4			18 n 52 , 9 18 n 54 . 4	22 s 19 .8	23 s 36,2 23 s 36,2	22 s 02.3 22 s 02.1	01 s 05.3 01 s 04.8	09 s 4 09 s 4	
17 TeV 18 fev	21 53 42.3	11 s 33,3			16 s 18.1		18 n 55 . 9		23 s 36,2 23 s 36,1	22 s 02,1	01 s 04.8	09 S 4	
TO LEA	21 33 42,3	11532,1	211117,4	19 5 11,0	10 5 10,1	10 11 10,5	10 11 55 , 9	22 5 19,0	23 5 30,1	22 5 02,0	01504,3	09 5 4	4.0
19 fev	21 57 38,8	11 s 10,8	16 n 51.2	19 s 06,3	15 s 56,1	18 n 21.0	18 n 57,4		23 s 36,1	22 s 01,8	01 s 03.8	09 s 4	5.0
20 fev	22 1 35,4	10 s 49,3	11 n 48,3		15 s 33,7	18 n 31,3		22 s 18,1	23 s 36,0	22 s <b>0</b> 1,7	01  s  03.3	09 s 4	
21 fev	22 5 32,0	10 s 27,7		18 s 53,2	15 s 10,9	18 n 41,6	19 n 00,5	22 s 17,7	23 s 35,9	22 s <b>0</b> 1,5	01 s 02.8	09 s 4	
22 fev	22 9 28,5	10 s 05,8		18 s 44,7	14 s 47,6		19 n 02,1	22 s 17.3	23 s 35,9	22 s 01.4	01 s 02.3	09 s 4	
23 fev	22 13 25,1	09 s 43,9		18 s 34,8	14 s 23,9		19 n 03,8	22 s 16.9	23 s 35,8	22 s 01,2	01 s 01.8	09 s 4	
24 fev	22 17 21,6	09 s 21.7		18 s 23.7				22 s 16.5	23 s 35,8	22 s 01,1	01 s 01,2	09 s 4	
25 fev	22 21 18,2	08 s 59,5	15 s 20,6	18 s 11,3	13 s 35,4	19 n 21,5	19 n 07,2	22 s 16,1	23 s 35,7	22 s 00,9	01 s 00,7	09 s 4	4,8
26 fev	22 25 14.7		19 s 53,6	17 s 57,5		19 n 31,3		22 s 15,7	23 s 35,7	22 s 00,8	01 s 00,1	09 s 4	4,9
27 fev	22 29 11,3	08 s 14,5	23 s 41.8		12 s 45,3	19 n 40,8	19 n 10,7	22 s 15,3	23 s 35,6	22 s 00,6	00 s 59,6	09 s 4	
28 fev	22 33 7,8	07 s 51,9	26 s 30,6	17 s 26,2	12 s 19,8	19 n 50,3	19 n 12,5	22 s 14,9	23 s 35,6	22 s 00,5	00 s 59,0	09 s 4	5,0

### MARÇO DE 1989

## Longitude dos Astros

Tropica	1 Ephemeris -		ra. 01 mar = 2447587		noon, Gree	nwich SV	P = 05 x 24	,54 True	Ayanamsa =	23d 42m 2	?7s		
Long.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	e Pluto	N.	Node
01 mar 02 mar 03 mar 04 mar	h m s 22 37 4.4 22 41 1.0 22 44 57.5 22 48 54.1	10 x 53,1 11 x 53,3 12 x 53,5 13 x 53,6	18 ≠ 37.3 01 v39.7 15 v07.6 29 v02.4	16 ≈ 32.9 17 ≈ 54.7 19 ≈ 18.0 20 ≈ 42.6	02 x 14.9 03 x 29.8 04 x 44.7 05 x 59.6	24 & 01.6 24 & 37.7 25 & 14.0 25 & 50.2	28 & 49 . 7 28 & 57 . 3	11 vs 46 . 0 11 vs 50 . 6 11 vs 55 . 2 11 vs 59 . 7	04 vs 41.5 04 vs 43.4 04 vs 45.3 04 vs 47.1	11 vs 52 , 3 11 vs 53 , 7 11 vs 55 , 0 11 vs 56 , 3	. 15 m, 080 15 m, 075 15 m, 070 15 m, 064	04 x 48, 04 x 48, 04 x 49, 04 x 50,	.7 .3
05 mar 06 mar 07 mar 08 mar 09 mar 10 mar 11 mar	22 52 50.6 22 56 47.2 23 0 43.7 23 4 40.3 23 8 36.8 23 12 33.4 23 16 30.0	14 x 53 .7 15 x 53 .8 16 x 53 .9 17 x 53 .9 18 x 53 .9 19 x 53 .9 20 x 53 .8	13 23.6 28 208.1 13 x 09.8 28 x 20.3 13 x 30.1 28 x 29.6 13 x 11.2	22 = 08.5 23 = 35.7 25 = 04.2 26 = 33.8 28 = 04.7 29 = 36.8 01 × 10.0	07 x 14.5 08 x 29.4 09 x 44.3 10 x 59.1 12 x 14.0 13 x 28.8 14 x 43.6	26 & 26.5 27 & 02.8 27 & 39.2 28 & 15.6 28 & 52.0 29 & 28.5 00 x 05.0	29 & 21.0 29 & 29.2 29 & 37.5 29 & 45.9 29 & 54.5	12 v 04, 2 12 v 08, 6 12 v 12, 9 12 v 17, 1 12 v 21, 2 12 v 25, 3 12 v 29, 2	04 vs 48, 9 04 vs 50, 6 04 vs 52, 3 04 vs 54, 0 04 vs 55, 5 04 vs 57, 1 04 vs 58, 6	11 vs 57.6 11 vs 58.8 12 vs 00.1 12 vs 01.2 12 vs 02.4 12 vs 03.5 12 vs 04.6	15 m, 058 15 m, 052 15 m, 046 15 m, 039 15 m, 032 15 m, 024 15 m, 017	04 x 50, 04 x 51, 04 x 511 04 x 504 04 x 492 04 x 475	.1 1 4
12 mar 13 mar 14 mar 15 mar 16 mar 17 mar 18 mar	23 20 26.5 23 24 23.1 23 28 19.6 23 32 16.2 23 36 12.7 23 40 9.3 23 44 5.8	21 x 53 .7 22 x 53 .6 23 x 53 .4 24 x 53 .2 25 x 52 .9 26 x 52 .6 27 x 52 .3	11 X 21.8 24 X 48.3	02 x 44,5 04 x 20,2 05 x 57,0 07 x 35,0 09 x 14,2 10 x 54,7 12 x 36,3	15 x 58,4 17 x 13,2 18 x 28,0 19 x 42,8 20 x 57,5 22 x 12,2 23 x 26,9	00   41.5 01   18.0 01   154.6 02   131.2 03   107.8 03   144.4 04   121.0	00 X 21.1 00 X 30.2 00 X 39.5 00 X 48.8 00 X 58.3	12 v 33, 1 12 v 37, 0 12 v 40, 7 12 v 44, 3 12 v 47, 9 12 v 51, 4 12 v 54, 8	05 % 00 , 0 05 % 01 , 4 05 % 02 , 8 05 % 04 , 1 05 % 05 , 3 05 % 06 , 5 05 % 07 , 7	12 vs 05 . 7 12 vs 06 . 7 12 vs 07 . 7 12 vs 08 . 7 12 vs 09 . 7 12 vs 10 . 6 12 vs 11 . 5	15 m,009 15 m,000 14 m,592 14 m,583 14 m,574 14 m,564 14 m,554	04 x 437 04 x 422 04 x 414 04 x 41 04 x 42 04 x 43 04 x 45	2 1 . 4 . 2 . 5
19 mar 20 mar 21 mar 22 mar 23 mar 24 mar 25 mar	23 48 2.4 23 51 59.0 23 55 55.5 23 59 52.1 0 3 48.6 0 7 45.2 0 11 41.7	28 x 52,0 29 x 51,6 00 m 51,1 01 m 50,7 02 m 50,1 03 m 49,6 04 m 49,0	09 m, 05, 2 20 m, 55, 9 02 <del></del> 44, 9	14 x 19 .2 16 x 03 .4 17 x 48 .7 19 x 35 .4 21 x 23 .3 23 x 12 .6 25 x 03 .1	24 x 41.6 25 x 56.3 27 x 11.0 28 x 25.6 29 x 40.3 00 \$\times 54.9 02 \$\times 09.5	04X57.7 05X34.4 06X11.0 06X47.8 07X24.5 08X01.2 08X38.0	01X27.4	13 v 04.5 13 v 07.5 13 v 10.5 13 v 13.4	05 v 08 .8 05 v 09 .8 05 v 10 .8 05 v 11 .7 05 v 12 .6 05 v 13 .5 05 v 14 .3	12 v 12, 3 12 v 13, 1 12 v 13, 9 12 v 14, 7 12 v 15, 4 12 v 16, 1 12 v 16, 8	14 m, 544 14 m, 534 14 m, 523 14 m, 512 14 m, 501 14 m, 490 14 m, 478	04 x 46 . 04 x 46 . 04 x 459 04 x 439 04 x 406 04 x 365 04 x 320	. 6 ) ) 5
26 mar 27 mar 28 mar 29 mar 30 mar	0 15 38.3 0 19 34.8 0 23 31.4 0 27 28.0 0 31 24.5 0 35 21.1	05 948.4 06 947.8 07 947.2 08 946.5 09 945.7	20 m, 24.4 02 ≠ 35.8 14 ≠ 59.1 27 ≠ 37.7 10 vs 34.8 23 vs 53.8	26 x 54.9 28 x 48.1 00 x 42.5 02 x 38.3 04 x 35.3 06 x 33.5	03°24.1 04°38.6 05°53.2 07°07.7 08°22.3 09°36.8	09 \ 14.7 09 \ 51.5 10 \ 28.3 11 \ 05.1 11 \ 42.0 12 \ 18.8	02 M 39.2 02 M 49.8 03 M 00.6	13 vs 18.8 13 vs 21.4 13 vs 23.9 13 vs 26.4 13 vs 28.7 13 vs 30.9	05 vs 15 . 0 05 vs 15 . 7 05 vs 16 . 3 05 vs 16 . 9 05 vs 17 . 5 05 vs 17 . 9	12 vs 17 . 4 12 vs 18 . 0 12 vs 18 . 5 12 vs 19 . 1 12 vs 19 . 5 12 vs 20 . 0	14 m, 466 14 m, 454 14 m, 442 14 m, 429 14 m, 416 14 m, 403	04 x 276 04 x 241 04 x 217 04 x 208 04 x 21, 04 x 22,	L 7 3 , 2

Tropica	1 Ephemeris -		ira, 01 mar /= 2447587		noon, Gree	nwich SV	P = 05 x 24	,54 True	Ayanamsa =	= 23d 42m 2	?7s		
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	e Pluto	N.	Node
01 mar 02 mar 03 mar 04 mar	h m s 22 37 4.4 22 41 1.0 22 44 57.5 22 48 54.1	07 s 29.1 07 s 06.2 06 s 43.2 06 s 20.2	28 s 04.6 28 s 09.4 26 s 36.1 23 s 23.3	17 s 08.5 16 s 49.6 16 s 29.4 16 s 07.9	11 s 53.9 11 s 27.7 11 s 01.2 10 s 34.4	20 n 08.9 20 n 18.0	19 n 16.1 19 n 18.0	22 s 14.5 22 s 14.1 22 s 13.7 22 s 13.3	23 s 35 .5 23 s 35 .5 23 s 35 .4 23 s 35 .4	22 s 00.3 22 s 00.2 22 s 00.1 21 s 59.9	00 s 58.5 00 s 57.9 00 s 57.3 00 s 56.7	09 s 44 09 s 44 09 s 44 09 s 44	.8 .6
05 mar 06 mar 07 mar 08 mar 09 mar 10 mar	22 52 50.6 22 56 47.2 23 0 43.7 23 4 40.3 23 8 36.8 23 12 33.4 23 16 30.0	05 s 57.0 05 s 33.7 05 s 10.4 04 s 47.0 04 s 23.6 04 s 00.0 03 s 36.5	18 s 39.8 12 s 42.5 05 s 54.8 01 n 16.3 08 n 22.1 14 n 54.5 20 n 28.0	15 s 45 .1 15 s 21 .0 14 s 55 .7 14 s 29 .1 14 s 01 .2 13 s 32 .1 13 s 01 .7	10 s 07.4 09 s 40.0 09 s 12.4 08 s 44.5 08 s 16.5 07 s 48.2 07 s 19.6	20 n 44.6 20 n 53.2 21 n 01.7 21 n 10.0 21 n 18.3	19 n 23.7 19 n 25.7 19 n 27.7 19 n 29.7 19 n 31.7	22 s 12,9 22 s 12,5 22 s 12,2 22 s 11,8 22 s 11,4 22 s 11,1 22 s 10,7	23 s 35,3 23 s 35,3 23 s 35,2 23 s 35,2 23 s 35,2 23 s 35,1 23 s 35,1	21 s 59.8 21 s 59.7 21 s 59.6 21 s 59.4 21 s 59.3 21 s 59.2 21 s 59.1	00 s 56.1 00 s 55.6 00 s 55.0 00 s 54.4 00 s 53.8 00 s 53.1 00 s 52.5	09 s 44 09 s 44 09 s 44 09 s 44 09 s 44 09 s 45 09 s 46	.0 .0 .2 .6
12 mar 13 mar 14 mar 15 mar 16 mar 17 mar 18 mar	23 20 26.5 23 24 23.1 23 28 19.6 23 32 16.2 23 36 12.7 23 40 9.3 23 44 5.8	03 s 12.9 02 s 49.2 02 s 25.6 02 s 01.9 01 s 38.2 01 s 14.5 00 s 50.8	24 n 41.3 27 n 19.7 28 n 17.2 27 n 37.1 25 n 30.4 22 n 12.3 17 n 59.4	12 s 30.1 11 s 57.3 11 s 23.2 10 s 47.9 10 s 11.3 09 s 33.6 08 s 54.7	06 s 50.9 06 s 22.1 05 s 53.0 05 s 23.8 04 s 54.4 04 s 25.0 03 s 55.3	21 n 42 .1 21 n 49 .7 21 n 57 .2	19 n 37.9 19 n 40.0 19 n 42.1 19 n 44.2 19 n 46.3	22 s 10.4 22 s 10.0 22 s 09.7 22 s 09.3 22 s 09.0 22 s 08.7 22 s 08.4	23 s 35.1 23 s 35.0 23 s 35.0 23 s 35.0 23 s 34.9 23 s 34.9 23 s 34.9	21 s 59.0 21 s 58.8 21 s 58.7 21 s 58.6 21 s 58.5 21 s 58.4 21 s 58.3	00 s 51.9 00 s 51.3 00 s 50.7 00 s 50.1 00 s 49.5 00 s 48.8 00 s 48.2	09 s 46 09 s 47 09 s 47 09 s 47 09 s 47 09 s 46 09 s 46	.2 .5 .5 .2
19 mar 20 mar 21 mar 22 mar 23 mar 24 mar 25 mar	23 48 2.4 23 51 59.0 23 55 55.5 23 59 52.1 0 3 48.6 0 7 45.2 0 11 41.7	00 s 27.1 00 s 03.4 00 n 20.3 00 n 44.0 01 n 07.7 01 n 31.3 01 n 54.9	13 n 06.8 07 n 48.2 02 n 15.4 03 s 20.8 08 s 49.8 14 s 01.0 18 s 42.9	08 s 14,6 07 s 33,3 06 s 50,8 06 s 07,2 05 s 22,4 04 s 36,6 03 s 49,6	03 s 25.6 02 s 55.8 02 s 25.9 01 s 55.9 01 s 25.9 00 s 55.8 00 s 25.7	22 n 32 . 6 22 n 39 . 2 22 n 45 . 7	19 n 55.0 19 n 57.2 19 n 59.4 20 n 01.6	22 s 08.1 22 s 07.8 22 s 07.5 22 s 07.2 22 s 06.9 22 s 06.6 22 s 06.4	23 s 34,9 23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8	21 s 58,2 21 s 58,1 21 s 58,0 21 s 57,9 21 s 57,9 21 s 57,8 21 s 57,7	00 s 47.6 00 s 47.0 00 s 46.3 00 s 45.7 00 s 45.1 00 s 44.4	09 s 45 09 s 45 09 s 45 09 s 46 09 s 47 09 s 49 09 s 50	.6 .9 .6 .8
26 mar 27 mar 28 mar 29 mar 30 mar 31 mar	0 15 38.3 0 19 34.8 0 23 31.4 0 27 28.0 0 31 24.5 0 35 21.1	02 n 18.4 02 n 41.9 03 n 05.3 03 n 28.7 03 n 52.1 04 n 15.3	22 s 42.6 25 s 46.6 27 s 40.5 28 s 11.9 27 s 12.2 24 s 39.2	03 s 01.6 02 s 12.5 01 s 22.4 00 s 31.4 00 n 20.5 01 n 13.3	00 n 04.5 00 n 34.6 01 n 04.8 01 n 34.9 02 n 05.1 02 n 35.2	23 n 10.0 23 n 15.7 23 n 21.2 23 n 26.6 23 n 31.8 23 n 36.8	20 n 08.3 20 n 10.5 20 n 12.8	22 s 06 .1 22 s 05 .8 22 s 05 .6 22 s 05 .4 22 s 05 .2 22 s 04 .9	23 s 34.8 23 s 34.8 23 s 34.8 23 s 34.8 23 s 34.8 23 s 34.8	21 s 57.6 21 s 57.5 21 s 57.5 21 s 57.4 21 s 57.3 21 s 57.3	00 s 43.2 00 s 42.5 00 s 41.9 00 s 41.3 00 s 40.7 00 s 40.0	09 s 52 09 s 53 09 s 54 09 s 55 09 s 54 09 s 54	.8 .7 .0

#### **ABRIL DE 1989**

### **Longitude dos Astros**

Tropical	l Ephemeris -	s⊈bado, O Julian Day			Greenwich	SVP = 0	5 x 24,47	True Ayana	amsa = 23d	<b>1 42m 31</b> s			
Long.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranu	s <b>N</b> epti	une Plut	o N.	Node
	h m s	ο ,	0 ,	ο ,	ο ,	ο ,	ο ,	ο ,	0 ,	0	. 0	, ,	;
01 abr	0 39 17.6	11 <b>°44</b> ,2	07≈37,1	08 <b>m</b> 33,0	10°51,3	12X55.7	03Д33,5	13 <b>vs</b> 33, 1	05 <b>v</b> s 18,4	12 <b>vs</b> 20 , 4	4 14 m <sub>1</sub> 390	$04 \times 24$	.0
02 abr	0 43 14.2	12°43.4	21≈46,2		12305,8				05 vs 18,8				
03 abr	0 47 10,7	13 <b>°4</b> 2.6	$06 \times 20.3$	$12 \Upsilon 35.3$	$13^{20.3}$	14X09.4	03X55.8	13 <b>vs</b> 37 , 0	05 vs 19, 1	12 <b>vs</b> 21 , 2	2 14m,363	$04 \times 250$	0
04 abr	0 51 7.3	14 <b>°41.</b> 7	$21 \times 15.5$	14 <b>~</b> 38,0	14 <b>°</b> 34,8	14X46,3	04X07,1	13 vs 38,9	05 vs 19,3	12 <b>vs</b> 21 .	5 14m,349	$04 \times 23$	3
05 abr	0 55 3.8	15	06 ℃25,4	16	$15 \Upsilon 49.2$	15 X 23,2	04X18.5	13 vs 40.7	05 vs 19,6	12 <b>vs</b> 21 . 8	3 14 m, 335	$04 \times 190$	6
06 abr	0 59 0.4	16 T39.9	21440.5	18 <b>°</b> 45.8	$17 \Upsilon 03.6$	16 X 00.2	04X30.0	13 vs 42 , 3	05 vs 19,7	12 <b>vs</b> 22 , 1	14m,321	$04 \times 142$	2
07 abr	1 2 57.0	17 % 38.9	06 8 50.4	20°50.6	$18 \Upsilon 18.1$	16 X 37.1	04X41.6	13 vs 43.9	05 vs 19,9	12 <b>vs</b> 22 . 3	3 14 m, 306	$04 \times 074$	4
08 abr	1 6 53,5	18 <b>°</b> 37,9	21 & 45,2	22°55,8	19 m 32,5	17X14,1	04X53,3	13 <b>vs</b> 45,3	05 vs 19,9	12 <b>vs</b> 22 .	5 14 <b>π,</b> 291	$04 \times 000$	0
09 abr	1 10 50.1	19 ~36.9	06 X 16.8	25°01,1	20°46.8	17 X 51.0	05X05.0	13 vs 46 . 7	05 vs 19 . 9	12 <b>vs</b> 22 . 7	7 1 <b>4 m,</b> 277	03 × 529	9
10 abr	1 14 46.6	20 T 35.8	20X20.6	27 TO6.2	22 TO1.2	18X28.0	05 X 16.8	13 vs 48, 0	05 vs 199	12 vs 22 . 8	14 m, 262	$03 \times 469$	
11 abr	1 18 43.2	21 m 34.7	03955.1	29 T11, 0	23°15,5	19 X 05.0	05 X 28.7	13 vs 49 . 1	05 vs 198	12 vs 22 . 9	14m,247	$03 \times 425$	
12 abr	1 22 39,7	22 <b>~</b> 33 . 5	17901.5	01815.1	24°29.9	19 X 42.0	05X40.7	$13 \times 50.2$	05 vs 197	12 vs 22 . 9	14m,231	$03 \times 400$	
13 abr	1 26 36.3	23 T 32, 3	299643.2	03 & 18 . 1	25 T44.2	20 X 19.0	05X52.7	13 vs 51,2	05 vs 195	12 vs 23, 0	14 m, 216	$03 \times 394$	
14 abr	1 30 32.8	24°31.1	12 ស 04.7	05 ຮ 19 . 7	26 T58.4	201156.0	06 X 04.8	13 vs 52.1	05 vs 192	12 vs 230	14 m. 200	$03 \times 40.0$	
15 abr	1 34 29.4	25 ~29,9	24 & 10.9	07 8 19,6	28°12,7	21X33.0	06 X 17,0	13 <b>vs</b> 52,8	05 <b>v</b> s 189	12 <b>vs</b> 229	14 m, 185	$03 \times 41.1$	
16 abr	1 38 26.0	26°28.6	06 ms 06 . 6	09 წ 17 . 5	29°26.9	22 X 10.0	06 X 29.2	13 <b>v</b> 53 . 5	05 <b>v</b> s 186	12 <b>vs</b> 228	14 m, 169	03 × 41.7	
17 abr	1 42 22.5	27 T 27.2	17 m 56.4	11 8 12.9	00 & 41.2	22 X 47.1	06 X 41.5	13 vs 54.1	05 vs 182	12 <b>vs</b> 227	14 m, 153	$03 \times 410$	
18 abr	1 46 19.1	28 25.8	29 ms 44.0	13 & 05 . 7	01855.4	23X24.1	06X53.9	13 vs 54.6	05 vs 177	12 vs 226	14 m, 137	$03 \times 382$	
19 abr	1 50 15.6	29 T 24.4	11-32.7	14855.4	03 8 09 . 6	24X01.1	07 X 06.3	13 vs 55.0	05 vs 172	12 vs 224	14 m. 121	$03 \times 330$	
20 abr	1 54 12.2	00823.0	23-24.9	16 8 41.9	04823.7	24X38.1	07 X 18.8	13 vs 55.3	05 vs 167	12 vs 222	14 m. 105	03 x 255	
21 abr	1 58 8.7	01 8 21 .5	05 m, 22 . 6	18 8 24 .8	05 ຽ 37 . 9	25 X 15.2	07 X 31.4	13 vs 55 . 5	05 vs 161	12 vs 220	14 m. 089	03 x 164	
22 abr	2 2 5.3	02 8 20,0	17 m, 27, 2	20 8 03,9	06 8 52,0	25 X 52,2	07X44,0	13 <b>v</b> 55,5	05 <b>v</b> 155	12 <b>vs</b> 217	14m,072	$03 \times 065$	
23 abr	2 6 1.8	03 & 18 <sub>.</sub> 5	29 m, 39 . 9	21 & 39 . 1	08 8 06 .1	26 X 29.3	07X56.6	13 vs 555	05 vs 148	12 <b>vs</b> 214	14 <b>ન 0</b> 56 0	2 × 568	
24 abr	2 9 58.4	04 & 16.9	$12 \neq 01.8$	23 8 10.2	09 8 20.2	27 X 06.3	08 X 09 . 4	13 vs 554	05 vs 140	12 w 211	14 <b>տ.</b> 039 0	2 × 483	
25 abr	2 13 54.9	05 & 15.3	24 \( \alpha \) 34.3	24836.9	10834.3	27 X 43.4		13 vs 552				2 × 418	
26 abr	2 17 51.5	06 & 13.7		25 8 59 . 3	11848.4			13 vs 549				2 × 377	
27 abr	2 21 48.1	07 & 12 . 1	20 vs 18.8	27 8 17 . 1	13 8 02 . 4		08 X 47.9	13 vs 545				2 × 358	
28 abr	2 25 44.6	08 8 10 . 4	03≈35.3	28 8 30.3	14816.5	29 X 34.6	09 X 00.8	13 vs 540				2 × 356	
29 abr	2 29 41.2	09 8 08.7	17≈11,1	29 8 38 , 7	15 & 30,5	00911.7	09 X 13,8					2 x 36,1	
30 abr	2 33 37,7	10 & 07.0	01 x 08,0	00 X 42,4	16 & 44.5	00948.8	09 Д26,8	13 <b>v</b> 527	05 <b>vs</b> 086	12 <b>v</b> s 185	L3 <b>π,</b> 539 0	2 × 36,2	

Tropica	1 Ephemeris -		1 abr 1989 7 = 2447618		Greenwich	SVP = 0	5 x 24,47	True Ayana	msa = 23d	42m 31s			
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	e Pluto	N.	Node
01 abr	h m s 0 39 17,6	04 n 38,5	20 s 37,8	02 n 06,9	03 n 05,2	23 n 41,7	20 n 19,6	22 s 04,7	23 s 34,8	21 s 57,2	00 s 39,4	09 s 5	3,8
02 abr 03 abr 04 abr 05 abr 06 abr 07 abr 08 abr	0 43 14.2 0 47 10.7 0 51 7.3 0 55 3.8 0 59 0.4 1 2 57.0 1 6 53.5	05 n 01.6 05 n 24.6 05 n 47.5 06 n 10.3 06 n 33.0 06 n 55.6 07 n 18.1	15 s 19.4 09 s 01.1 02 s 04.6 05 n 04.8 11 n 58.6 18 n 07.3 23 n 03.5	03 n 01.1 03 n 56.0 04 n 51.4 05 n 47.2 06 n 43.2 07 n 39.3 08 n 35.4	03 n 35 .2 04 n 05 .1 04 n 35 .0 05 n 04 .7 05 n 34 .4 06 n 03 .9 06 n 33 .3	23 n 46 . 4 23 n 50 . 9 23 n 55 . 3 23 n 59 . 5 24 n 03 . 6 24 n 07 . 5 24 n 11 . 2	20 n 21.8 20 n 24.1 20 n 26.4 20 n 28.6 20 n 30.9 20 n 33.2 20 n 35.4	22 s 04.5 22 s 04.3 22 s 04.2 22 s 04.0 22 s 03.8 22 s 03.7 22 s 03.5	23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8 23 s 34,8	21 s 57.1 21 s 57.1 21 s 57.0 21 s 57.0 21 s 56.9 21 s 56.9 21 s 56.9	00 s 38.8 00 s 38.2 00 s 37.6 00 s 37.0 00 s 36.3 00 s 35.7 00 s 35.1	09 s 5 09 s 5 09 s 5 09 s 5 09 s 5 09 s 5	3,5 4,1 5,4 7,4
09 abr 10 abr 11 abr 12 abr 13 abr 14 abr 15 abr	1 10 50.1 1 14 46.6 1 18 43.2 1 22 39.7 1 26 36.3 1 30 32.8 1 34 29.4	07 n 40.5 08 n 02.7 08 n 24.8 08 n 46.7 09 n 08.5 09 n 30.1 09 n 51.6	26 n 25 .2 28 n 00 .6 27 n 50 .1 26 n 04 .7 23 n 01 .8 18 n 60 .0 14 n 16 .1	09 n 31.3 10 n 26.7 11 n 21.5 12 n 15.4 13 n 08.3 13 n 59.8 14 n 50.0	07 n 02 .5 07 n 31 .6 08 n 00 .5 08 n 29 .2 08 n 57 .8 09 n 26 .1 09 n 54 .2	24 n 14.7 24 n 18.1 24 n 21.3 24 n 24.3 24 n 27.1 24 n 29.8 24 n 32.3	20 n 37.7 20 n 40.0 20 n 42.2 20 n 44.5 20 n 46.7 20 n 49.0 20 n 51.2	22 s 03.4 22 s 03.3 22 s 03.2 22 s 03.1 22 s 03.0 22 s 02.9 22 s 02.8	23 s 34.9 23 s 34.9 23 s 34.9 23 s 35.0 23 s 35.0 23 s 35.0 23 s 35.0	21 s 56.8 21 s 56.8 21 s 56.8 21 s 56.7 21 s 56.7 21 s 56.7 21 s 56.7	00 s 34.5 00 s 33.9 00 s 33.4 00 s 32.8 00 s 32.2 00 s 31.6 00 s 31.0	10 s 0 10 s 0 10 s 0 10 s 0 10 s 1 10 s 0	7,3 8,9 9,8 0,1
16 abr 17 abr 18 abr 19 abr 20 abr 21 abr 22 abr	1 38 26.0 1 42 22.5 1 46 19.1 1 50 15.6 1 54 12.2 1 58 8.7 2 2 5.3	10 n 12.9 10 n 34.1 10 n 55.0 11 n 15.8 11 n 36.4 11 n 56.8 12 n 17.1	09 n 04.3 03 n 36.4 01 s 57.5 07 s 27.3 12 s 42.7 17 s 32.3 21 s 43.1	15 n 38.4 16 n 24.9 17 n 09.4 17 n 51.8 18 n 31.8 19 n 09.5 19 n 44.7	10 n 22 .1 10 n 49 .7 11 n 17 .1 11 n 44 .2 12 n 11 .1 12 n 37 .6 13 n 03 .9	24 n 34.6 24 n 36.7 24 n 38.7 24 n 40.5 24 n 42.1 24 n 43.5 24 n 44.8	20 n 53 .4 20 n 55 .7 20 n 57 .9 21 n 00 .1 21 n 02 .3 21 n 04 .5 21 n 06 .7	22 s 02.7 22 s 02.7 22 s 02.7 22 s 02.6 22 s 02.6	23 s 35 .1 23 s 35 .1 23 s 35 .2 23 s 35 .2 23 s 35 .2 23 s 35 .3 23 s 35 .3	21 s 56.7 21 s 56.6 21 s 56.6 21 s 56.6 21 s 56.6 21 s 56.6 21 s 56.6 21 s 56.6	00 s 30.5 00 s 29.9 00 s 29.4 00 s 28.8 00 s 28.3 00 s 27.8 00 s 27.2	10 s 0 10 s 0 10 s 1 10 s 1 10 s 1 10 s 2	9,5 0,5 2,4 5,1 8,3
23 abr 24 abr 25 abr 26 abr 27 abr 28 abr 29 abr	2 6 1.8 2 9 58.4 2 13 54.9 2 17 51.5 2 21 48.1 2 25 44.6 2 29 41.2	12 n 37 . 1 12 n 56 . 9 13 n 16 . 5 13 n 35 . 9 13 n 55 . 0 14 n 13 . 9 14 n 32 . 6	25 s 00.8 27 s 11.1 28 s 01.4 27 s 23.8 25 s 16.4 21 s 44.1 16 s 57.5		13 n 29 .8 13 n 55 .4 14 n 20 .7 14 n 45 .6 15 n 10 .1 15 n 34 .3 15 n 58 .1		21 n 08 .8 21 n 11 .0 21 n 13 .2 21 n 15 .3 21 n 17 .4 21 n 19 .6 21 n 21 .7		23 s 35 . 4 23 s 35 . 4 23 s 35 . 5 23 s 35 . 5 23 s 35 . 6 23 s 35 . 7 23 s 35 . 7	21 s 56.6 21 s 56.6 21 s 56.7 21 s 56.7 21 s 56.7 21 s 56.7 21 s 56.7 21 s 56.7	00 s 26.7 00 s 26.2 00 s 25.7 00 s 25.2 00 s 24.7 00 s 24.2 00 s 23.7	10 s 2 10 s 3 10 s 3 10 s 3 10 s 3	8,5 0,8 2,3 3,0 3,0
30 abr	2 33 37,7	14 n 51,1	11 s 10.7	22 n 55,1	16 n 21.5	24 n 48,4	21 n 23,8	22 s 03.0	23 s 35.8	21 s 56.8	00 s 23,3	10 s 3	2.8

#### **MAIO DE 1989**

#### **Longitude dos Astros**

Tropica	1 Ephemeris - s		eira, 01 ma /= 2447648		noon, Gre	eenwich :	$SVP = 05 \times 2$	24,40 Tri	ue Ayanam	sa = 23d	<b>42m 35</b> s		
Long.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupite	r Satur	n Uran	us Nep	otune F	Pluto N.	Node
01 mai 02 mai 03 mai 04 mai 05 mai 06 mai	h m s 2 37 34.3 2 41 30.8 2 45 27.4 2 49 23.9 2 53 20.5 2 57 17.1 3 1 13.6	11 8 05 . 2 12 8 03 . 5 13 8 01 . 7 13 8 59 . 9 14 8 58 . 0 15 8 56 . 1 16 8 5 4 . 2	15 x 26 .5 00 x 05 .0 14 x 59 .4 00 x 02 .5 15 x 05 .1 29 x 57 .4 14 x 30 .7	01 X 41.1 02 X 35.0 03 X 23.8 04 X 07.5 04 X 46.1 05 X 19.6	17 8 58 .5 19 8 12 .5 20 8 26 .4 21 8 40 .4 22 8 54 .3 24 8 08 .2	03917,2 03954,3 04931,5		13 v 501 13 v 490 13 v 479 13 v 466	05 vs 076 05 vs 064 05 vs 063 05 vs 041 05 vs 028 05 vs 016	12 vs 179 12 vs 173 12 vs 167 12 vs 161 12 vs 154 12 vs 147	13 m, 522 13 m, 505 13 m, 485 13 m, 471 13 m, 454 13 m, 437	02 x 313 02 x 251 02 x 163 02 x 055 01 x 537	;
08 mai 09 mai 10 mai 11 mai 12 mai 13 mai	3 5 10.2 3 9 6.7 3 13 3.3 3 16 59.8 3 20 56.4 3 24 52.9	17 8 52 .3 18 8 50 .3 19 8 48 .3 20 8 46 .3 21 8 44 .3 22 8 42 .2	28 1 38.7 12 5 18.3 25 5 29.5 08 1 14.6 20 1 38.0 02 1 44.7	06 X 10,8 06 X 28,6 06 X 41,3 06 X 48,8 06 X 51,2 06 X 487	26 & 36.0 27 & 49.9 29 & 03.7 00 X 17.6 01 X 31.4 02 X 45.2	05945,7 06922,9 07900,0 07937,2 08914,3 08951,5	11 x 12 .7 11 x 26 .1 11 x 39 .5 11 x 53 .0 12 x 06 .5 12 x 20 .1	13 v 438 13 v 422 13 v 406 13 v 389 13 v 371 13 v 352	04 n 589 04 n 574 04 n 560 04 n 545 04 n 530 04 n 514	12 vs 133 12 vs 125 12 vs 117 12 vs 108 12 vs 100 12 vs 091	13 m, 404 13 m, 387 13 m, 370 13 m, 353 13 m, 337 13 m, 320	01 x 318 01 x 237 01 x 182 01 x 153 01 x 143 01 x 14.3	
14 mai 15 mai 16 mai 17 mai 18 mai 19 mai 20 mai	3 28 49.5 3 32 46.1 3 36 42.6 3 40 39.2 3 44 35.7 3 48 32.3 3 52 28.8	23 & 40.0 24 & 37.9 25 & 35.7 26 & 33.5 27 & 31.3 28 & 29.1 29 & 26.8	14 m 40.1 26 m 29.5 08 = 17.6 20 = 08.6 02 m 05.7 14 m 11.4 26 m 27.1	06 X 297 06 X 137 05 X 538 05 X 303 05 X 037		09\$28.6 10\$05.8 10\$43.0 11\$20.1 11\$57.3 12\$34.5 13\$11.6	12 M 47.2 13 M 00.8 13 M 14.5 13 M 28.1 13 M 41.8	13 v 311 13 v 289 13 v 267 13 v 244 13 v 220	04 vs 482 04 vs 465 04 vs 448 04 vs 430 04 vs 412	12 v 082 12 v 072 12 v 063 12 v 053 12 v 042 12 v 032 12 v 021	13 m, 303 13 m, 287 13 m, 270 13 m, 254 13 m, 238 13 m, 221 13 m, 205	01 x 142 01 x 126 01 x 088 01 x 022 00 x 530 00 x 416 00 x 290	
21 mai 22 mai 23 mai 24 mai 25 mai 26 mai 27 mai	3 56 25.4 4 0 21.9 4 4 18.5 4 8 15.1 4 12 11.6 4 16 8.2 4 20 4.7	00 x 24.5 01 x 22.2 02 x 19.8 03 x 17.5 04 x 15.1 05 x 12.7 06 x 10.3	08 \( \psi 53.7 \) 21 \( \psi 31.3 \) 04 \( \mathbf{n} 20.1 \) 17 \( \mathbf{n} 20.2 \) 00 \( \mathbf{m} 32.0 \) 13 \( \mathbf{m} 56.3 \) 27 \( \mathbf{m} 34.1 \)	03 X 301 02 X 562 02 X 219 01 X 478 01 X 145	12 X 34,8 13 X 48,4 15 X 02,1 16 X 15,7 17 X 29,2 18 X 42,8 19 X 56,4	13948.8 14926.0 15903.2 15940.3 16917.5 16954.7 17931.9	14X23.0 14X36.8 14X50.6 15X04.4 15X18.2	13 v 142 13 v 115 13 v 087 13 v 058 13 v 029	04 vs 357 04 vs 338 04 vs 318 04 vs 298 04 vs 278	12 w 010 11 w 599 11 w 588 11 w 576 11 w 565 11 w 553 11 w 540	13 m, 189 13 m, 174 13 m, 158 13 m, 142 13 m, 127 13 m, 111 13 m, 096	00 x 166 00 x 054 29 x 565 29 x 503 29 x 468 29 x 455 29 x 454	
28 mai 29 mai 30 mai 31 mai	4 24 1.3 4 27 57.8 4 31 54.4 4 35 50.9	07页07.9 08页05.4 09页03.0 10页00.5	11 x 26,6 25 x 34,2 09 \cdot 56,1 24 \cdot 29,9	29 & 450 29 & 203	21 X 09 .9 22 X 23 .4 23 X 37 .0 24 X 50 .5	18909.1 18946.3 19923.5 20900.7	15 X 59.8 16 X 13.6	12 vs 536 12 vs 503	04 vs 217 04 vs 196	11 v 528 11 v 515 11 v 502 11 v 489	13 m, 081 13 m, 066 13 m, 051 13 m, 037	29 <b>24</b> 53 29 <b>44</b> 0 29 <b>40</b> 6 29 <b>34</b> 6	

Tropical	l Ephemeris -	segunda-fe Julian Day	eira. 01 ma v = 2447648	ai 1989 at 3.0	noon, Gre	enwich S	VP = 05 x 2	4,40 True	Ayanamsa	= 23d 42m	35s		
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N.	Node
	h m s	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	0 ,	· · ·	0	,
01 mai	2 37 34.3	15 n 09 . 3	04 s 41,0	23 n 07.7	16 n 44,4	24 n 48,0	21 n 25,8	22 s 03,1	23 s 35,8	21 s 56.8	00 s 22,8	10 s 3	
02 mai	2 41 30.8	15 n 27 . 3	02 n 11.7	23 n 18.0	17 n 07.0	24 n 47 . 5	21 n 27.9	22 s 03.2	23 s 35.9	21 s 56.8	00 s 22.4	10 s 3	
03 mai 04 mai	2 45 27.4 2 49 23.9	15 n 45 . 0 16 n 02 . 5	09 n 03,9 15 n 28.8	23 n 26 . 0 23 n 31 . 6	17 n 29 . 1	24 n 46 , 8	21 n 30.0 21 n 32.0	22 s 03.4	23 s 36.0	21 s 56.9	00 s 21.9 00 s 21.5	10 s 3	
05 mai	2 53 20.5	16 n 19 . 6	20 n 57 . 5	23 n 31, b	17 n 50 . 7 18 n 11 . 9	24 n 45 . 9 24 n 44 . 8	21 n 32,0 21 n 34.0		23 s 36.0 23 s 36.1	21 s 56.9 21 s 57.0	00 s 21.5	10 s 4 10 s 4	
06 mai	2 57 17.1	16 n 36 . 6	25 n 02 .9	23 n 36 . 3	18 n 32 . 6	24 n 43.6	21 n 34.0		23 s 36 . 2	21 s 57.0	00 s 21,1	10 s 4	
OU III II	2 37 17,1	10 11 30 , 0	23 11 02 , 3	20 11 00 , 0	10 11 32 , 0	241143,0	211130,0	22 3 00,0	20 3 00,2	21337,0	00320,7	10 3 4	0,1
07 mai	3 1 13.6	16 n 53.2	27 n 24.6	23 n 35.3	18 n 52.8	24 n 42.1	21 n 38.0	22 s 03.9	23 s 36.2	21 s 57.1	00 s 20.3	10 s 5	2.2
08 mai	3 5 10,2	17 n 09,6	27 n 54.8	23 n 32,3	19 n 12.5	24 n 40.5	21 n 40.0	22 s <b>04</b> .1	23 s 36.3	21 s 57.1	00 s 19,9	10 s 5	5.9
09 mai	3 9 6,7	17 n 25,6	26 n 40,0	23 n 27,1	19 n 31,7	24 n 38,8	21 n 42,0	22 s 04,3	23 s 36,4	21 s 57,2	00 s 19,5	10 s 5	
10 mai	3 13 3,3	17 n 41,4	23 n 57,0	23 n 20.0	19 n 50.4	24 n 36,8	21 n 43,9	22 s <b>04</b> .5	23 s 36,5	21 s 57,2	<b>00</b> s <b>19</b> ,1	11 s <b>0</b>	
11 mai	3 16 59.8	17 n 56 . 9	20 n 07,0	23 n 10.8	20 n 08,5			22 s 04,7	23 s 36,5	21 s 57.3		11 s 0	
12 mai	3 20 56,4	18 n 12.0	15 n 30,0	22 n 59 . 7	20 n 26 . 1		21 n 47 , 7	22 s 04.9	23 s 36,6	21 s 57,3	00 s 18.4		
13 mai	3 24 52,9	18 n 26.9	10 n 22,4	22 n 46,8	20 n 43,2	24 n 29,9	21 n 49,6	22 s <b>05</b> ,1	23 s 36,7	21 s 57,4	00 s 18,1	11 s 0	2,1
14 mai	3 28 49.5	18 n 41.5	04 n 57.2	22 n 32 . 2	20 n 59.6	24 n 27 2	21 n 51.5	22 s 05 3	23 s 36.8	21 s 57.5	00 s 17.8	11 s 0	2 1
15 mai	3 32 46.1	18 n 55 . 7	00 s 35.1	22 n 15 . 8	21 n 15.5	24 n 24.3	21 n 53.3	22 s 05.6	23 s 36 .8	21 s 57.5	00 s 17.5	11 s 0	
16 mai	3 36 42.6	19 n 09.6	06 s 05.0	21 n 58.0	21 n 30.9	24 n 21.3	21 n 55.2	22 s 05.8	23 s 36.9	21 s 57.6	00 s 17.2	11 s 0	
17 mai	3 40 39.2	19 n 23,2	11 s 23.3	21 n 38,7	21 n 45,6	24 n 18,1	21 n 57,0	22 s 06.1	23 s 37.0	21 s 57.7	00 s 16.9	11 s 0	6.4
18 mai	3 44 35.7	19 n 36,5	16 s 19,2	21 n 18,2			21 n 58,7			21 s 57,8	00 s 16,6	11 s 0	9.7
19 mai	3 48 32,3	19 n 49,4	20 s 40,3	20 n 56,6			22 n 00,5			21 s 57,9	00 s 16,3		
20 mai	3 52 28.8	20 n 02,0	24 s 12,3	20 n 34,2	22 n 26,0	24 n 07,5	22 n 02,3	22 s 06,9	23 s 37,2	21 s 57.9	00 s 16.1	11 s 1	8,1
21 mai	3 56 25.4	20 n 14.2	26 s 39.8	20 n 11.2	22 n 20 2	24 n 02 6	22 n 04 0	22 5 07 2	22 6 27 2	21 s 58.0	00 s 15.8	11 s 2	2.5
22 mai	4 0 21.9	20 n 26 . 1	27 s 48 .8	19 n 47.7	22 n 49 . 8	23 n 59 . 6		22 s 07.5		21 s 58.1	00 s 15.6	11 s 2	
23 mai	4 4 18.5	20 n 37 . 7	27 s 29 . 9	19 n 24.2	23 n 00.8		22 n 07.4		23 s 37.5	21 s 58.2	00 s 15.3	11 s 2	
24 mai	4 8 15.1	20 n 48.9		19 n 00.8	23 n 11.0				23 s 37.6	21 s 58.3		11 s 3	
25 mai	4 12 11.6		22 s 25.7				22 n 10.7			21 s 58.4		11 s 3	
26 mai	4 16 8.2	21 n 10,2	17 s 56.9	18 n 15.4	23 n 29,6		22 n 12,3		23 s 37,7	21 s 58.5		11 s 3	
27 mai	4 20 4.7	21 n 20.4	12 s 29,0	17 n 54.0	23 n 37,9	23 n 36 .8	22 n 13.9	22 s 09.1	23 s 37,8	21 s 58.6	00 s 14,6	11 s 3	3,5
20	4 24 1 2	21 - 20 1	06 - 10 6	17 - 22 0	22 - 4E 4	22 - 21 7	22 - 15 5	22 - 00 4	22 - 27 0	21 . 50 7	00 - 14 4	11 . 2	2 5
28 mai	4 24 1.3 4 27 57.8	21 n 30,1 21 n 39,5	06 s 18,6 00 n 16.3	17 n 33,8 17 n 14.9	23 n 45 . 4 23 n 52 . 3	23 n 31.7 23 n 26.5	22 n 15,5 22 n 17,1	22 s 09 . 4 22 s 09 . 7	23 s 37.9 23 s 38.0	21 s 58,7 21 s 58.8	00 s 14,4 00 s 14,3	11 s 3	
29 mai 30 mai	4 31 54.4	21 n 48.5	06 n 56 . 4	17 n 14.9 16 n 57.7	23 n 52 , 3	23 n 20,5	22 n 17 . 1 22 n 18 . 6	22 s 10.1	23 S 38.0 23 S 38.1	21 s 58.8		11 s 3	
31 mai	4 35 50.9	21 n 57.1		16 n 42 . 2		23 n 21,1	22 n 20.1		23 s 38.2			11 s 3	

#### **JUNHO DE 1989**

#### **Longitude dos Astros**

Tropica	1 Ephemeris -		ra, <b>0</b> 1 jur = 2447679		noon, Gree	enwich S	VP = 05 x 24	,33 True	Ayanamsa	= 23d 4	12m 39s		
Long.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturi	n Uranu	ıs Nep	otune P	luto N.	Node
01 jun 02 jun 03 jun 04 jun 05 jun 06 jun 07 jun	h m s 4 39 47.5 4 43 44.1 4 47 40.6 4 51 37.2 4 55 33.7 4 59 30.3 5 3 26.8	10 X 58.0 11 X 55.5 12 X 53.0 13 X 50.5 14 X 48.0 15 X 45.4 16 X 42.9	09 & 10.8 23 & 52.3 08 M 26.7 22 M 46.8 06 \$246.4 20 \$21.8 03 N 31.9	28 & 267 28 & 166 28 & 108 28 & 093 28 & 12.3 28 & 19.7	29 X 44.3 00\$57.8 02\$11.2 03\$24.6	21\square 22\square 22\square 23\square 23\square 44.2 24\square 21.4	16 X 55,3 17 X 09,2 17 X 23,1 17 X 37,0 17 X 51,0 18 X 04,9	12 vs 402 12 vs 367 12 vs 332 12 vs 296 12 vs 259 12 vs 222	04 vs 131 1 04 vs 109 1 04 vs 086 1 04 vs 064 1 04 vs 041 04 vs 018	11 vs 449 11 vs 435 11 vs 422 11 vs 408 11 vs 393	13 m, 022 13 m, 008 12 m, 594 12 m, 580 12 m, 566 12 m, 553 12 m, 540	28≈251	
08 jun 09 jun 10 jun	5 7 23,4 5 11 19,9 5 15 16,5	17 X 40.3 18 X 37.7 19 X 35.0	16 \$18.0 28 \$43.2 10 \$51.8	28 & 31,6 28 & 48,1 29 & 09,0	04938.0 05951.3 07904.7	24958.7 25936.0 26913.3	18 X 18.8 18 X 32.7 18 X 46.6	12 vs 184 12 vs 145 12 vs 107	03 vs 572	11 vs 379 11 vs 364 11 vs 350	12 m,526 12 m,514 12 m,501	28 <b>≈</b> 205	
11 jun 12 jun 13 jun 14 jun 15 jun 16 jun 17 jun	5 19 13.1 5 23 9.6 5 27 6.2 5 31 2.7 5 34 59.3 5 38 55.8 5 42 52.4	20 M 32.4 21 M 29.7 22 M 27.1 23 M 24.4 24 M 21.7 25 M 18.9 26 M 16.2	22 m 49.0 04 = 40.0 16 = 30.2 28 = 24.2 10 m, 26.1 22 m, 39.3 05 \( \neq 05.7 \)	29 & 34.3 00 M 04.0 00 M 38.0 01 M 16.2 01 M 58.5 02 M 44.9 03 M 35.2	08918.0 09931.3 10944.6 11957.8 13911.1 14924.3 15937.5	26950.5 27927.8 28905.1 28942.4 29919.7 29957.0	19 X 56.1 20 X 10.0	11 vs 465	03 vs 502 03 vs 478 03 vs 454 03 vs 430 03 vs 406	11 w 335 11 w 320 11 w 305 11 w 290 11 w 275 11 w 259 11 w 244	12 m,488 12 m,476 12 m,464 12 m,453 12 m,441 12 m,430 12 m,419	28 <b>2</b> 05 28 <b>2</b> 181 28 <b>2</b> 133 28 <b>2</b> 060 27 <b>2</b> 568	
18 jun 19 jun 20 jun 21 jun 22 jun 23 jun 24 jun	5 46 48.9 5 50 45.5 5 54 42.0 5 58 38.6 6 2 35.2 6 6 31.7 6 10 28.3	27 X 13.5 28 X 10.7 29 X 08.0 00 \$\infty\$05.2 01 \$\infty\$02.4 01 \$\infty\$59.7 02 \$\infty\$56.9	17 ≠ 46.6 00 v 42.0 13 v 51.2 27 v 12.8 10 ≈ 45.4 24 ≈ 27.8 08 × 18.9	04   29.5 05   127.7 06   129.6 07   135.2 08   144.6 09   157.5 11   114.0	16950.7 18903.9 19917.0 20930.2 21943.3 22956.4 24909.4	01 \( \alpha \) 11 \( \cdot 6 \) 01 \( \alpha \) 48 \( \cdot 9 \) 02 \( \alpha \) 26 \( \cdot 2 \) 03 \( \alpha \) 03 \( \alpha \) 40 \( \cdot 9 \) 04 \( \alpha \) 18 \( \cdot 2 \) 04 \( \alpha \) 55 \( \cdot 6 \)	20 X 51, 5 21 X 05, 3 21 X 19, 1 21 X 32, 9 21 X 46, 7	11 vs 381 11 vs 339 11 vs 296 11 vs 254 11 vs 210 11 vs 167 11 vs 124	03 vs 334 03 vs 310 03 vs 285 03 vs 261 03 vs 237	11 w 228 11 w 213 11 w 197 11 w 181 11 w 165 11 w 149 11 w 133	12 m, 408 12 m, 398 12 m, 387 12 m, 368 12 m, 358 12 m, 349	27 <b>≈</b> 264 27 <b>≈</b> 187 27 <b>≈</b> 135 27 <b>≈</b> 107	
25 jun 26 jun 27 jun 28 jun 29 jun 30 jun	6 14 24.8 6 18 21.4 6 22 17.9 6 26 14.5 6 30 11.0 6 34 7.6	03954.1 04951.3 05948.5 06945.8 07943.0 08940.2	22 x 18.1 06 \( 24.6 20 \( 737.3 04 \( 854.1 19 \( 812.3 03 \( \pm 27.8 \)	12 X 34.1 13 X 57.7 15 X 24.7 16 X 55.1 18 X 28.9 20 X 06.0	25%22.5 26%35.6 27%48.6 29%01.6 00 & 14.6 01 & 27.6	05 \$32.9 06 \$10.3 06 \$47.6 07 \$25.0 08 \$02.4 08 \$39.8	23 X 09.0	11 v 080 11 v 036 10 v 592 10 v 548 10 v 504 10 v 460	03 vs 163 03 vs 139 03 vs 115 03 vs 090	11 v 117 11 v 101 11 v 085 11 v 069 11 v 053 11 v 037	12 m, 340 12 m, 332 12 m, 323 12 m, 315 12 m, 308 12 m, 300	27 = 12,1 27 = 110 27 = 079 27 = 027	

Tropical	Ephemeris -		ra, 01 jur = 2447679		noon, Gree	nwich SV	P = 05 x 24	,33 True	Ayanamsa =	= 23d 42m (	39s		
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N.	Node
01 jun 02 jun 03 jun	h m s 4 39 47.5 4 43 44.1 4 47 40.6	22 n 05 . 4 22 n 13 . 2 22 n 20 . 7	19 n 01.1 23 n 34.6 26 n 36.0	16 n 28,5 16 n 16,9 16 n 07,3	24 n 08 .8 24 n 12 .9 24 n 16 .2	23 n 09 .8 23 n 03 .9 22 n 57 .8	22 n 21.6 22 n 23.0 22 n 24.5	22 s 10.8 22 s 11.2 22 s 11.6	23 s 38,3 23 s 38,3 23 s 38,4	21 s 59.1 21 s 59.2 21 s 59.3	00 s 13.9 00 s 13.8 00 s 13.7	11 s 40 11 s 44 11 s 48	4,1
04 jun 05 jun 06 jun 07 jun 08 jun 09 jun 10 jun	4 51 37.2 4 55 33.7 4 59 30.3 5 3 26.8 5 7 23.4 5 11 19.9 5 15 16.5	22 n 27.8 22 n 34.5 22 n 40.8 22 n 46.7 22 n 52.1 22 n 57.2 23 n 01.9	27 n 49.6 27 n 13.3 24 n 58.8 21 n 26.2 16 n 57.9 11 n 53.4 06 n 28.4	15 n 59.8 15 n 54.4 15 n 51.2 15 n 50.1 15 n 51.0 15 n 54.0 15 n 58.9	24 n 18.9 24 n 20.8 24 n 22.0 24 n 22.5 24 n 22.3 24 n 21.3 24 n 19.7	22 n 51.6 22 n 45.3 22 n 38.7 22 n 32.0 22 n 25.2 22 n 18.2 22 n 11.1	22 n 25 .9 22 n 27 .3 22 n 28 .7 22 n 30 .0 22 n 31 .3 22 n 32 .6 22 n 33 .9	22 s 11.9 22 s 12.3 22 s 12.7 22 s 13.1 22 s 13.5 22 s 13.9 22 s 14.3	23 s 38.5 23 s 38.6 23 s 38.7 23 s 38.8 23 s 38.8 23 s 38.9 23 s 39.0	21 s 59 .4 21 s 59 .6 21 s 59 .7 21 s 59 .8 21 s 59 .9 22 s 00 .0 22 s 00 .2	00 s 13.6 00 s 13.6 00 s 13.5 00 s 13.5 00 s 13.5 00 s 13.5 00 s 13.5	11 s 52 11 s 56 11 s 59 12 s 01 12 s 02 12 s 03	5.3 9.3 1.5 2.6 3.1
11 jun 12 jun 13 jun 14 jun 15 jun 16 jun 17 jun	5 19 13.1 5 23 9.6 5 27 6.2 5 31 2.7 5 34 59.3 5 38 55.8 5 42 52.4	23 n 06 .2 23 n 10 .1 23 n 13 .5 23 n 16 .6 23 n 19 .2 23 n 21 .5 23 n 23 .3	00 n 55.0 04 s 37.1 09 s 58.8 15 s 00.6 19 s 31.5 23 s 18.1 26 s 04.9	16 n 05 .6 16 n 14 .2 16 n 24 .4 16 n 36 .2 16 n 49 .5 17 n 04 .1 17 n 20 .0	24 n 17.3 24 n 14.2 24 n 10.4 24 n 05.9 24 n 00.7 23 n 54.7 23 n 48.1	22 n 03.7 21 n 56.3 21 n 48.7 21 n 40.9 21 n 33.0 21 n 25.0 21 n 16.8	22 n 35.1 22 n 36.3 22 n 37.5 22 n 38.7 22 n 39.9 22 n 41.0 22 n 42.1	22 s 14.7 22 s 15.2 22 s 15.6 22 s 16.0 22 s 16.4 22 s 16.9 22 s 17.3	23 s 39 .1 23 s 39 .2 23 s 39 .3 23 s 39 .3 23 s 39 .4 23 s 39 .5 23 s 39 .6	22 s 00.3 22 s 00.4 22 s 00.5 22 s 00.7 22 s 00.8 22 s 00.9 22 s 01.1	00 s 13.5 00 s 13.5 00 s 13.6 00 s 13.6 00 s 13.7 00 s 13.8 00 s 13.9	12 s 02 12 s 03 12 s 03 12 s 05 12 s 08 12 s 11 12 s 14	3.1 3.9 5.6 3.1 1.3
18 jun 19 jun 20 jun 21 jun 22 jun 23 jun 24 jun	5 46 48.9 5 50 45.5 5 54 42.0 5 58 38.6 6 2 35.2 6 6 31.7 6 10 28.3	23 n 24.7 23 n 25.7 23 n 26.3 23 n 26.4 23 n 26.2 23 n 25.5 23 n 24.5	27 s 36.6 27 s 40.8 26 s 11.8 23 s 13.0 18 s 55.5 13 s 35.5 07 s 31.7	17 n 37.0 17 n 55.0 18 n 13.9 18 n 33.5 18 n 53.7 19 n 14.4 19 n 35.5	23 n 40.8 23 n 32.8 23 n 24.1 23 n 14.7 23 n 04.6 22 n 53.9 22 n 42.6	21 n 08.4 20 n 60.0 20 n 51.3 20 n 42.6 20 n 33.7 20 n 24.6 20 n 15.4	22 n 44.2 22 n 45.2 22 n 46.2 22 n 47.2 22 n 48.1	22 s 18.1 22 s 18.6 22 s 19.0 22 s 19.5	23 s 39.6 23 s 39.7 23 s 39.8 23 s 39.9 23 s 39.9 23 s 40.0 23 s 40.1	22 s 01.2 22 s 01.3 22 s 01.5 22 s 01.6 22 s 01.7 22 s 01.9 22 s 02.0	00 s 14.0 00 s 14.1 00 s 14.3 00 s 14.4 00 s 14.6 00 s 14.8 00 s 15.0	12 s 18 12 s 24 12 s 26 12 s 26 12 s 27 12 s 27	1.7 4.4 5.2 7.1 7.3
25 jun 26 jun 27 jun 28 jun 29 jun 30 jun	6 14 24.8 6 18 21.4 6 22 17.9 6 26 14.5 6 30 11.0 6 34 7.6	23 n 23.0 23 n 21.1 23 n 18.8 23 n 16.1 23 n 13.0 23 n 09.4	01 s 02.9 05 n 31.7 11 n 52.2 17 n 37.3 22 n 24.1 25 n 50.3	19 n 56.8 20 n 18.0 20 n 39.2 21 n 00.1 21 n 20.6 21 n 40.4	22 n 30.5 22 n 17.9 22 n 04.6 21 n 50.7 21 n 36.1 21 n 21.0	20 n 06 .1 19 n 56 .7 19 n 47 .1 19 n 37 .4 19 n 27 .5 19 n 17 .5	22 n 49.9 22 n 50.8 22 n 51.6 22 n 52.5 22 n 53.3 22 n 54.0	22 s 20.8 22 s 21.2 22 s 21.6 22 s 22.1 22 s 22.5 22 s 23.0	23 s 40.2 23 s 40.2 23 s 40.3 23 s 40.4 23 s 40.4 23 s 40.5	22 s 02.1 22 s 02.3 22 s 02.4 22 s 02.6 22 s 02.7 22 s 02.9	00 s 15.2 00 s 15.4 00 s 15.6 00 s 15.9 00 s 16.1 00 s 16.4	12 s 26 12 s 26 12 s 27 12 s 28 12 s 29 12 s 32	5.6 7.0 8.1 9.8

#### **JULHO DE 1989**

#### **Longitude dos Astros**

Tropica	1 Ephemeris -	sğbado, O Julian Day			Greenwich	SVP = 0	5 x 24,26	True Ayan	amsa = 23	d 42m 44s	S		
Long.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturr	n Uranu	ıs Nep	tune P	luto N.	Node
01 jul	h m s 6 38 4,2	。 09 <b>%</b> 37,5	 17 X 36,1	。 21 <b>1</b> (46,4	02 A 40.5	。 09 ស 17.2	23 X 36,2	0 vs 415	03 <b>v</b> 042	020 x 11		26 <b>≈</b> 478	•
02 jul 03 jul 04 jul 05 jul 06 jul 07 jul 08 jul	6 42 0.7 6 45 57.3 6 49 53.8 6 53 50.4 6 57 46.9 7 1 43.5 7 5 40.0	10934.7 11931.9 12929.1 13926.4 14923.6 15920.8 16918.0	01932.2 15932.2 28933.1 11933.8 24914.6 06m37.6 18m46.0	23 X 30.0 25 X 16.7 27 X 06.3 28 X 58.9 00 \$\infty\$51.9 04 \$\infty\$52.0	03 \$53.5 05 \$06.4 06 \$19.3 07 \$32.2 08 \$45.0 09 \$57.9 11 \$10.7	09 \$54.7 10 \$32.1 11 \$09.5 11 \$47.0 12 \$24.5 13 \$01.9 13 \$39.4	24X16.9	10 w 371 10 w 326 10 w 282 10 w 238 10 w 194 10 w 149 10 w 105		11 v 004 10 v 588 10 v 572 10 v 555 10 v 539 10 v 523 10 v 507	12 m, 286 12 m, 280 12 m, 273 12 m, 268 12 m, 262 12 m, 257 12 m, 252	26 2398 26 2324 26 266 26 228 26 210 26 21.0 26 22.2	
09 jul 10 jul 11 jul 12 jul 13 jul 14 jul 15 jul	7 9 36.6 7 13 33.2 7 17 29.7 7 21 26.3 7 25 22.8 7 29 19.4 7 33 15.9	17915,3 18912,5 19909,7 20906,9 21904,1 22901,3 22958,6	00=44.0 12=36.2 24=27.7 06 m, 23.4 18 m, 27.9 00 \( \neq 45.2 13 \( \neq 18.6 \)	06%54,2 08%58,3 11%03,9 13%10,8 15%18,6 17%27,1 19%35,9	12 \Q 23 .5 13 \Q 36 .2 14 \Q 49 .0 16 \Q 01 .7 17 \Q 14 .4 18 \Q 27 .0 19 \Q 39 .6		25 X 24.0 25 X 37.3 25 X 50.6 26 X 03.9 26 X 17.1 26 X 30.2 26 X 43.3	10 % 061 10 % 018 09 % 574 09 % 531 09 % 488 09 % 445 09 % 402	02 v 451 02 v 428 02 v 405 02 v 382 02 v 359 02 v 336 02 v 314	10 v 491 10 v 475 10 v 459 10 v 443 10 v 427 10 v 411 10 v 395	12 m, 247 12 m, 243 12 m, 239 12 m, 235 12 m, 232 12 m, 229 12 m, 226	26 æ 23,8 26 æ 25,0 26 æ 25,1 26 æ 237 26 æ 207 26 æ 164 26 æ 113	
16 jul 17 jul 18 jul 19 jul 20 jul 21 jul 22 jul	7 37 12.5 7 41 9.0 7 45 5.6 7 49 2.2 7 52 58.7 7 56 55.3 8 0 51.8	23955,8 24953,0 25950,2 26947,5 27944,7 28942,0 29939,2	26 ≠ 10.1 09 v 20.3 22 v 48.7 06 ≈ 33.3 20 ≈ 31.1 04 × 38.8 18 × 52.7	21944.9 23953.6 26901.8 28909.4 00916.1 02921.8 04926.2	20 \( \bar{9} \) 52 \( \cdot 2 \) 22 \( \bar{9} \) 04 \( \bar{8} \) 23 \( \bar{9} \) 17 \( \cdot 3 \) 24 \( \bar{9} \) 9 \( 25 \) 042 \( \cdot 3 \) 26 \( \bar{9} \) 54 \( \bar{8} \) 28 \( \bar{9} \) 7 \( \cdot 2 \)	18 \qquad 39 .6 19 \qquad 17 .2 19 \qquad 54 .7 20 \qquad 32 .3 21 \qquad 09 .9 21 \qquad 47 .5 22 \qquad 25 .2	26 \ 56 . 4 27 \ \ 09 . 4 27 \ \ 22 . 4 27 \ \ \ 35 . 3 27 \ \ \ 48 . 2 28 \ \ \ 01 . 1 28 \ \ \ 13 . 9	09 v 360 09 v 318 09 v 276 09 v 235 09 v 194 09 v 153 09 v 113		10 w 380 10 w 364 10 w 348 10 w 333 10 w 318 10 w 302 10 w 287	12 m, 224 12 m, 222 12 m, 220 12 m, 219 12 m, 218 12 m, 217 12 m, 217	26 = 060 26 = 013 25 = 576 25 = 554 25 = 547 25 = 55,3 25 = 56,7	
23 jul 24 jul 25 jul 26 jul 27 jul 28 jul 29 jul	8 4 48.4 8 8 44.9 8 12 41.5 8 16 38.0 8 20 34.6 8 24 31.2 8 28 27.7	00 \( 36.5 \) 01 \( 33.8 \) 02 \( 331.1 \) 03 \( 828.4 \) 04 \( 825.8 \) 05 \( 823.1 \) 06 \( 820.5 \)	03 T 09 .4 17 T 26 .0 01 & 39 .9 15 & 48 .8 29 & 50 .7 13 X 43 .6 27 X 25 .6	06 \$29.4 08 \$31.1 10 \$31.4 12 \$30.1 14 \$27.2 16 \$22.7 18 \$16.6	29 \$19.6 00 \$32.0 01 \$56.6 04 \$58.9 05 \$521.1 06 \$53.4	23 \Q 02.8 23 \Q 40.5 24 \Q 18.1 24 \Q 55.8 25 \Q 33.5 26 \Q 11.2 26 \Q 49.0	28   26.6 28   39.3 28   151.9 29   104.5 29   17.0 29   129.4 29   141.8	09 % 074 09 % 034 08 % 595 08 % 557 08 % 519 08 % 482 08 % 445	02 v 143 02 v 122 02 v 102 02 v 083 02 v 063 02 v 044 02 v 025	10 w 272 10 w 257 10 w 243 10 w 228 10 w 213 10 w 199 10 w 185	12 m, 21 . 7 12 m, 21 . 7 12 m, 21 . 8 12 m, 21 . 9 12 m, 22 . 2 12 m, 22 . 2	7 25≈60,0 8 26≈00,8 9 26≈006 9 25≈595 2 25≈575	)
30 jul 31 jul	8 32 24.3 8 36 20.8	07 ស 17.9 08 ស 15.3	10955,0 24910,2	20 N 08.8 21 N 59.4	07 ms 45,6 08 ms 57,7	27 \$26.7 28 \$04.5	29Д54,2 00©06,5	08 vs 409 08 vs 373	02 vs 007 01 vs 589	10 ໝ171 10 ໝ157	12 <b>π.</b> 22.7 12 <b>π.</b> 22.9		

Tropica	l Ephemeris -		1 jul 1989 = 2447709		Greenwich	SVP = 0	5 × 24,26	True Ayana	msa = 23d	42m 44s			
Dec1.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N.	Node
01 jul	h m s 6 38 4.2	23 n 05 , 5	27 n 37,8	21 n 59,4	21 n 05,2	19 n 07,4	22 n 54,8	22 s 23,4	23 s 40,6	22 s 03,0	00 s 16,7	12 s 3	4.9
02 jul 03 jul 04 jul 05 jul 06 jul 07 jul 08 jul	6 42 0.7 6 45 57.3 6 49 53.8 6 53 50.4 6 57 46.9 7 1 43.5 7 5 40.0	23 n 01.2 22 n 56.4 22 n 51.3 22 n 45.7 22 n 39.8 22 n 33.5 22 n 26.7	27 n 38 .5 25 n 56 .9 22 n 48 .9 18 n 35 .3 13 n 37 .5 08 n 13 .4 02 n 37 .5	22 n 17.3 22 n 34.1 22 n 49.5 23 n 03.2 23 n 15.1 23 n 25.1 23 n 32.9	20 n 48 .9 20 n 32 .0 20 n 14 .5 19 n 56 .5 19 n 37 .9 19 n 18 .8 18 n 59 .2	18 n 57.2 18 n 46.8 18 n 36.3 18 n 25.7 18 n 15.0 18 n 04.1 17 n 53.2	22 n 55 . 5 22 n 56 . 2 22 n 56 . 9 22 n 57 . 5 22 n 58 . 1 22 n 58 . 7 22 n 59 . 3	22 s 24.7 22 s 25.1	23 s 40.6 23 s 40.7 23 s 40.8 23 s 40.8 23 s 40.9 23 s 40.9 23 s 41.0	22 s 03 .1 22 s 03 .3 22 s 03 .4 22 s 03 .6 22 s 03 .7 22 s 03 .9 22 s 04 .0	00 s 17.0 00 s 17.3 00 s 17.6 00 s 18.0 00 s 18.3 00 s 18.7 00 s 19.0	12 s 3 12 s 4 12 s 4 12 s 4 12 s 4 12 s 4 12 s 4	0,2 2,1 3,4 4,0 4,0
09 jul 10 jul 11 jul 12 jul 13 jul 14 jul 15 jul	7 9 36.6 7 13 33.2 7 17 29.7 7 21 26.3 7 25 22.8 7 29 19.4 7 33 15.9	22 n 19.6 22 n 12.1 22 n 04.3 21 n 56.0 21 n 47.4 21 n 38.4 21 n 29.0	02 s 58.8 08 s 25.8 13 s 34.5 18 s 15.0 22 s 15.5 25 s 22.0 27 s 19.3	23 n 38,3 23 n 41,3 23 n 41,6 23 n 39,3 23 n 34,3 23 n 26,5 23 n 16,0	18 n 39 . 0 18 n 18 . 4 17 n 57 . 2 17 n 35 . 6 17 n 13 . 6 16 n 51 . 0 16 n 28 . 1	17 n 42 . 1 17 n 30 . 9 17 n 19 . 6 17 n 08 . 1 16 n 56 . 6 16 n 44 . 9 16 n 33 . 2	22 n 59 .8 23 n 00 .4 23 n 00 .9 23 n 01 .3 23 n 01 .8 23 n 02 .2 23 n 02 .6	22 s 26.9 22 s 27.3 22 s 27.7 22 s 28.1 22 s 28.5 22 s 28.9 22 s 29.4	23 s 41,0 23 s 41,1 23 s 41,1 23 s 41,2 23 s 41,2 23 s 41,3 23 s 41,3	22 s 04.1 22 s 04.3 22 s 04.4 22 s 04.6 22 s 04.7 22 s 04.8 22 s 05.0	00 s 19.4 00 s 19.8 00 s 20.2 00 s 20.7 00 s 21.1 00 s 21.5 00 s 22.0	12 s 4 12 s 4 12 s 4 12 s 4 12 s 4 12 s 4 12 s 4	2,7 2,7 3,1 4,1 5,6
16 jul 17 jul 18 jul 19 jul 20 jul 21 jul 22 jul	7 37 12.5 7 41 9.0 7 45 5.6 7 49 2.2 7 52 58.7 7 56 55.3 8 0 51.8	21 n 19.3 21 n 09.2 20 n 58.8 20 n 48.0 20 n 36.8 20 n 25.3 20 n 13.5	27 s 53.0 26 s 53.6 24 s 19.6 20 s 19.0 15 s 07.2 09 s 04.1 02 s 31.2	23 n 02 .8 22 n 46 .9 22 n 28 .5 22 n 07 .7 21 n 44 .6 21 n 19 .3 20 n 52 .0	16 n 04.7 15 n 40.9 15 n 16.7 14 n 52.1 14 n 27.1 14 n 01.7 13 n 36.0	16 n 21.3 16 n 09.4 15 n 57.3 15 n 45.1 15 n 32.8 15 n 20.5 15 n 08.0	23 n 03.0 23 n 03.4 23 n 03.7 23 n 04.0 23 n 04.3 23 n 04.6 23 n 04.8	22 s 29 .8 22 s 30 .2 22 s 30 .6 22 s 31 .0 22 s 31 .3 22 s 31 .7 22 s 32 .1	23 s 41.4 23 s 41.4 23 s 41.5 23 s 41.5 23 s 41.6 23 s 41.6 23 s 41.6	22 s 05 .1 22 s 05 .3 22 s 05 .4 22 s 05 .6 22 s 05 .7 22 s 05 .8 22 s 06 .0	00 s 22 .5 00 s 22 .9 00 s 23 .4 00 s 23 .9 00 s 24 .5 00 s 25 .0 00 s 25 .5	12 s 4 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5	0.7 2.0 2.7 3.0 2.8
23 jul 24 jul 25 jul 26 jul 27 jul 28 jul 29 jul	8 4 48.4 8 8 44.9 8 12 41.5 8 16 38.0 8 20 34.6 8 24 31.2 8 28 27.7	20 n 01.3 19 n 48.8 19 n 35.9 19 n 22.8 19 n 09.3 18 n 55.4 18 n 41.3	04 n 09 .9 10 n 38 .0 16 n 31 .8 21 n 30 .4 25 n 13 .5 27 n 24 .3 27 n 53 .3	20 n 22.8 19 n 51.9 19 n 19.5 18 n 45.6 18 n 10.5 17 n 34.1 16 n 56.8	13 n 09 .9 12 n 43 .5 12 n 16 .8 11 n 49 .8 11 n 22 .5 10 n 54 .8 10 n 26 .9	14 n 55 . 4 14 n 42 . 7 14 n 30 . 0 14 n 17 . 1 14 n 04 . 2 13 n 51 . 1 13 n 38 . 0	23 n 05 .1 23 n 05 .3 23 n 05 .4 23 n 05 .6 23 n 05 .8 23 n 05 .9 23 n 06 .0	22 s 32,9 22 s 33,2 22 s 33,6	23 s 41.7 23 s 41.7 23 s 41.7 23 s 41.8 23 s 41.8 23 s 41.8 23 s 41.8	22 s 06 .1 22 s 06 .2 22 s 06 .4 22 s 06 .5 22 s 06 .7 22 s 06 .8 22 s 06 .9	00 s 26.1 00 s 26.6 00 s 27.2 00 s 27.8 00 s 28.4 00 s 29.0 00 s 29.6	12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5	1,2 0,9 0,9 1,3 2,0
30 jul 31 jul	8 32 24,3 8 36 20,8	18 n 26 . 9 18 n 12 . 1	26 n 41,4 23 n 59,8	16 n 18,6 15 n 39,5			23 n 06 . 1 23 n 06 . 1			22 s 07.1 22 s 07.2		12 s 5 12 s 5	

#### **AGOSTO DE 1989**

### **Longitude dos Astros**

Tropica	l Ephemeris - t J		ra, 01 ago = 2447740		oon, Greer	nwich SV	P = 05 x 24	.17 True	Ayanamsa	= 23d 42	2m 49s		
Long.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranu	ıs Nep	tune P1	uto N.	Node
01 ago 02 ago 03 ago 04 ago 05 ago	8 44 13.9 8 48 10.5 8 52 7.0	09 \$12.7 10 \$10.2 11 \$07.6 12 \$05.1 13 \$02.6	07 Ω 10.3 19 Ω 54.9 02 m 24.6 14 m 40.8 26 m 45.6	23 \$48.3 25 \$35.6 27 \$21.2 29 \$05.2 00 m 47.6	10 m 09 .9 11 m 22 .0 12 m 34 .0 13 m 46 .1 14 m 58 .1	28 \$42.3 29 \$20.0 29 \$57.9 00 \$5.7 01 \$5.5	00918.7 00930.8 00942.9 00954.9 01906.8	08 vs 304 08 vs 270 08 vs 237	01 vs553 01 vs536 01 vs520	10 vs 143 10 vs 130 10 vs 116 10 vs 103 10 vs 090	12 m,23.3 12 m,23.6 12 m,24.0 12 m,24.4 12 m,24.8	25 <b>2</b> 479 25 <b>2</b> 48.0 25 <b>2</b> 48.7	
06 ago 07 ago 08 ago 09 ago 10 ago 11 ago 12 ago	9 3 56.7 9 7 53.3 9 11 49.8 9 15 46.4 9 19 42.9	14 \(\pi\) 00 \(.1\) 14 \(\pi\) 57 \(.6\) 15 \(\pi\) 55 \(.1\) 16 \(\pi\) 52 \(.6\) 17 \(\pi\) 50 \(.2\) 18 \(\pi\) 47 \(.7\) 19 \(\pi\) 45 \(.3\)	$08 = 42.2$ $20 = 34.0$ $02 = 25.4$ $14 = 20.7$ $26 = 24.7$ $08 \neq 41.9$ $21 \neq 16.3$	02 ms 28 . 4 04 ms 07 . 6 05 ms 45 . 1 07 ms 21 . 1 08 ms 55 . 5 10 ms 28 . 3 11 ms 59 . 5	16 m 10.0 17 m 21.9 18 m 33.8 19 m 45.6 20 m 57.4 22 m 09.2 23 m 20.9	01 m 51 . 4 02 m 29 . 3 03 m 07 . 2 03 m 45 . 1 04 m 23 . 0 05 m 00 . 9 05 m 38 . 9	01918.7 01930.5 01942.2 01953.8 02905.4 02916.8 02928.2	08 vs 141 08 vs 111 08 vs 081 08 vs 052 08 vs 024	01 vs 471 01 vs 456 01 vs 441 01 vs 427 01 vs 413	10 % 077 10 % 065 10 % 052 10 % 040 10 % 028 10 % 016 10 % 005	12 m, 25 , 3 12 m, 25 , 8 12 m, 26 , 4 12 m, 27 , 0 12 m, 27 , 6 12 m, 28 , 2 12 m, 28 , 9	25 <b>2</b> 52.1 25 <b>2</b> 52.9 25 <b>2</b> 53.2 25 <b>2</b> 531 25 <b>2</b> 527	
13 ago 14 ago 15 ago 16 ago 17 ago 18 ago 19 ago	9 31 32.6 9 35 29.1 9 39 25.7 9 43 22.3 9 47 18.8	24833.4	04 v 11, 2 17 v 28, 7 01 ≈ 09, 2 15 ≈ 11, 3 29 ≈ 31, 8 14 × 05, 6 28 × 46, 5	13 m 29 , 1 14 m 57 , 0 16 m 23 , 4 17 m 48 , 1 19 m 11 , 1 20 m 32 , 4 21 m 52 , 0	24 m 32 .6 25 m 44 .2 26 m 55 .7 28 m 07 .3 29 m 18 .7 00 = 30 .2 01 = 41 .5	06 m 16.8 06 m 54.8 07 m 32.8 08 m 10.8 08 m 48.9 09 m 26.9 10 m 05.0	02939.5 02950.8 03901.9 03913.0 03923.9 03934.8 03945.6	07 vs 544 07 vs 519 07 vs 495 07 vs 472 07 vs 449	01 vs 361 01 vs 349 01 vs 337	09 %593 09 %582 09 %571 09 %561 09 %550 09 %540 09 %530	12 m, 29 .6 12 m, 30 .4 12 m, 31 .2 12 m, 32 .0 12 m, 32 .8 12 m, 33 .7 12 m, 34 .6	25 = 518 25 = 51.8 25 = 52.0 25 = 52.3 25 = 52.6	
20 ago 21 ago 22 ago 23 ago 24 ago 25 ago 26 ago	9 59 8.5 10 3 5.0 10 7 1.6 10 10 58.1 10 14 54.7	27 \Q 26 ,6 28 \Q 24 ,3 29 \Q 22 ,1 00 \mp 20 ,0 01 \mp 17 ,8 02 \mp 15 ,7 03 \mp 13 ,6	13 T 28.0 28 T 04.1 12 8 29.7 26 8 41.3 10 M 36.9 24 M 15.8 07 \$38.1	23 m 09 .8 24 m 25 .7 25 m 39 .8 26 m 51 .9 28 m 02 .0 29 m 10 .0 00 = 15 .7	02 \(\delta 52\), 9 04 \(\delta 04\), 2 05 \(\delta 15\), 4 06 \(\delta 26\), 6 07 \(\delta 37\), 7 08 \(\delta 48\), 8 09 \(\delta 59\), 9	10 m 43 .1 11 m 21 .2 11 m 59 .3 12 m 37 .5 13 m 15 .7 13 m 53 .9 14 m 32 .1	03956,3 04906,9 04917,4 04927,9 04938,2 04948,4 04958,5	07 vs 386 07 vs 367 07 vs 349 07 vs 332 07 vs 315		09 %521 09 %511 09 %502 09 %493 09 %485 09 %476 09 %468	12 m, 35 , 6 12 m, 36 , 6 12 m, 37 , 6 12 m, 38 , 6 12 m, 39 , 7 12 m, 40 , 8 12 m, 41 , 9	25 <b>2</b> 5 <b>2</b> 5 <b>2</b> 5 <b>2</b> 5 <b>2</b> 5 <b>2</b> 5 <b>1</b> 6 <b>2</b> 5 <b>2</b> 5 <b>1</b> 6	
27 ago 28 ago 29 ago 30 ago 31 ago	10 26 44.4 10 30 40.9 10 34 37.5	04mo11.5 05mo09.5 06mo07.5 07mo05.5 08mo03.6	20544.8 03 \$37.0 16 \$15.8 28 \$42.6 10 \$58.6	01=19.2 02=20.2 03=18.6 04=14.3 05=07.1	11=10.9 12=21.8 13=32.7 14=43.6 15=54.4	15 m 10.3 15 m 48.6 16 m 26.9 17 m 05.2 17 m 43.5	05908.5 05918.4 05928.2 05937.9 05947.5	07 vs 271 07 vs 258 07 vs 246	01 vs 229	09 % 460 09 % 453 09 % 446 09 % 439 09 % 432	12 m, 43 , 1 12 m, 44 , 3 12 m, 45 , 5 12 m, 46 , 8 12 m, 48 , 1	25 <b>≈</b> 54,8 25 <b>≈</b> 55,8 25 <b>≈</b> 56,4	

Dec1.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	e Pluto	N.	Node
01 ago 02 ago 03 ago 04 ago	h m s 8 40 17.4 8 44 13.9 8 48 10.5 8 52 7.0	17 n 57 .1 17 n 41 .8 17 n 26 .2 17 n 10 .3	20 n 06 .4 15 n 21 .2 10 n 02 .8 04 n 27 .2	14 n 59 .8 14 n 19 .5 13 n 38 .7 12 n 57 .4	09 n 01.7 08 n 32.9 08 n 03.8 07 n 34.5	12 n 58.1 12 n 44.6 12 n 31.0 12 n 17.4	23 n 06 .2 23 n 06 .2 23 n 06 .2 23 n 06 .2	22 s 35.7 22 s 36.1 22 s 36.4 22 s 36.7	23 s 42.0 23 s 42.0 23 s 42.0 23 s 42.0	22 s 07.3 22 s 07.4 22 s 07.6 22 s 07.7	00 s 31.5 00 s 32.1 00 s 32.8 00 s 33.5	12 s 5 12 s 5 12 s 5 12 s 5	5,2 5,2 5,0
05 ago 06 ago 07 ago 08 ago 09 ago 10 ago 11 ago 12 ago	8 56 3.6 9 0 0.2 9 3 56.7 9 7 53.3 9 11 49.8 9 15 46.4 9 19 42.9 9 23 39.5	16 n 54.1 16 n 37.6 16 n 20.9 16 n 03.9 15 n 46.7 15 n 29.2 15 n 11.5 14 n 53.5	01 s 12.5 06 s 45.3 12 s 01.6 16 s 51.6 21 s 04.8 24 s 28.9 26 s 50.2 27 s 54.8	12 n 15 .8 11 n 34 .0 10 n 52 .0 10 n 09 .8 09 n 27 .6 08 n 45 .4 08 n 03 .3 07 n 21 .2	06 n 05 .5 05 n 35 .5	12 n 03.7 11 n 49.9 11 n 36.0 11 n 22.1 11 n 08.1 10 n 54.0 10 n 39.8 10 n 25.6	23 n 06 .1 23 n 06 .0	22 s 37.4 22 s 37.7 22 s 38.0 22 s 38.3 22 s 38.6 22 s 38.9 22 s 39.2	23 s 42 .1 23 s 42 .2 23 s 42 .2	22 s 07.8 22 s 07.9 22 s 08.1 22 s 08.2 22 s 08.3 22 s 08.4 22 s 08.5 22 s 08.7	00 s 34.8 00 s 35.5 00 s 35.5 00 s 37.0 00 s 37.7 00 s 38.4 00 s 39.1	12 s 5 12 s 5	4.2 3.8 3.6 3.5 3.5 3.5
13 ago 14 ago 15 ago 16 ago 17 ago 18 ago 19 ago	9 27 36.0 9 31 32.6 9 35 29.1 9 39 25.7 9 43 22.3 9 47 18.8 9 51 15.4	14 n 35 . 3 14 n 16 . 9 13 n 58 . 2 13 n 39 . 3 13 n 20 . 2 13 n 00 . 9 12 n 41 . 4	27 s 31.0 25 s 33.1 22 s 03.5 17 s 12.9 11 s 18.9 04 s 43.5 02 n 09.4	06 n 39 , 4 05 n 57 . 7 05 n 16 . 4 04 n 35 . 3 03 n 54 . 7 03 n 14 . 4 02 n 34 . 6	03 n 03.7 02 n 33.0 02 n 02.2 01 n 31.4 01 n 00.5 00 n 29.6 00 s 01.3	10 n 11.3 09 n 56.9 09 n 42.5 09 n 28.0 09 n 13.5 08 n 58.9 08 n 44.2	23 n 05,3 23 n 05,2 23 n 05,0	22 s 39 .4 22 s 39 .7 22 s 40 .0 22 s 40 .3 22 s 40 .5 22 s 40 .8 22 s 41 .0		22 s 08 .8 22 s 08 .9 22 s 09 .0 22 s 09 .1 22 s 09 .2 22 s 09 .3 22 s 09 .4	00 s 39 .9 00 s 40 .6 00 s 41 .4 00 s 42 .2 00 s 43 .0 00 s 43 .7 00 s 44 .5	12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5	3.9 4.0 3.9 3.9 3.8 3.7
20 ago 21 ago 22 ago 23 ago 24 ago 25 ago 26 ago	9 55 11.9 9 59 8.5 10 3 5.0 10 7 1.6 10 10 58.1 10 14 54.7 10 18 51.3	12 n 21.7 12 n 01.7 11 n 41.6 11 n 21.3 11 n 00.9 10 n 40.2 10 n 19.4	08 n 55 . 0 15 n 09 . 2 20 n 28 . 8 24 n 33 . 1 27 n 05 . 7 27 n 57 . 6 27 n 09 . 3	01 n 55 .3 01 n 16 .6 00 n 38 .6 00 n 01 .2 00 s 35 .5 01 s 11 .4 01 s 46 .4	00 s 32.3 01 s 03.3 01 s 34.2 02 s 05.2 02 s 36.1 03 s 07.1 03 s 37.9	08 n 29 .5 08 n 14 .7 07 n 59 .9 07 n 45 .0 07 n 30 .1 07 n 15 .1 07 n 00 .0	23 n 02,7	22 s 41.3 22 s 41.5 22 s 41.7 22 s 42.0 22 s 42.2 22 s 42.4 22 s 42.6	23 s 42 .3 23 s 42 .3	22 s 09 .5 22 s 09 .6 22 s 09 .7 22 s 09 .8 22 s 09 .9 22 s 10 .0 22 s 10 .1	00 s 45.3 00 s 46.1 00 s 46.9 00 s 47.7 00 s 48.6 00 s 49.4 00 s 50.2	12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5 12 s 5	3.8 3.9 4.0 4.0 3.9
27 ago 28 ago 29 ago 30 ago 31 ago	10 22 47.8 10 26 44.4 10 30 40.9 10 34 37.5 10 38 34.0	09 n 58.4 09 n 37.2 09 n 15.9 08 n 54.5 08 n 32.9	24 n 50.6 21 n 17.5 16 n 48.2 11 n 40.6 06 n 10.4	02 s 20.4 02 s 53.5 03 s 25.4 03 s 56.2 04 s 25.7	04 s 08.7 04 s 39.5 05 s 10.2 05 s 40.7 06 s 11.2	06 n 44.9 06 n 29.8 06 n 14.6 05 n 59.4 05 n 44.1		22 s 42 .8 22 s 43 .0 22 s 43 .2 22 s 43 .4 22 s 43 .6	23 s 42 .3 23 s 42 .3 23 s 42 .3 23 s 42 .3 23 s 42 .3	22 s 10.2 22 s 10.3 22 s 10.4 22 s 10.5 22 s 10.6	00 s 51.1 00 s 51.9 00 s 52.7 00 s 53.6 00 s 54.5	12 s 5 12 s 5 12 s 5 12 s 5 12 s 5	2,9 2,6 2,4

#### **SETEMBRO DE 1989**

### **Longitude dos Astros**

Long.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupite	r Saturr	n Uranu	s Nep	tune Plu	uto N.	Node
	h m s	0 ,	0 ,	ο ,	0 ,	0 ,	0 ,	0 ,	0 ,	0	, ,	, ,	,
01 set 02 set	10 42 30.6 10 46 27.1	09 ms 01.7 09 ms 59.8	23 ms 05 . 4 05 <del></del> 04 . 5	05 <b>≏</b> 56.8 06 <b>≏</b> 43.3	17 <b>≏</b> 05.1 18 <b>≏</b> 15.8		05956.9 06906.3	07 <b>vs</b> 226 07 <b>vs</b> 217		09 vs 426 09 vs 420	12 m, 49 . 4 12 m, 50 . 8		
03 set	10 50 23,7	10 m 57,9	16 <b>≏</b> 58,1		19 - 26,4						12 <b>m,</b> 52,1	25≈516	
04 set	10 54 20.3	11 ms 56,1	28 = 48.8	08 = 05.6	20 = 37,0			07 vs 201		09 vs 408	12 m, 53, 6	25 <b>≈</b> 491	
05 set 06 set	10 58 16.8 11 2 13.4	12 ms 54,2 13 ms 52,4	10 <b>m,</b> 39 . 6 22 <b>m,</b> 34 . 0	08 = 40.9 09 = 11.9	21 <del>4</del> 7.5 22 <del>5</del> 7.9		06933.6 06942.5	07 vs 195 07 vs 190		09 vs 403 09 vs 398	12 m, 55.0 12 m, 56.5	25 <b>≈</b> 468 25 <b>≈</b> 449	
07 set	11 6 9.9	14 m 50.7		09 = 38.5	24-08.3		06951.2				12 m, 58.0	25 <b>≈</b> 439	
08 set	11 10 6.5	15 m 48,9	$16 \neq 50.1$	10 = 00.1	25 = 18.6	22 m 51.0	06959,8	07 vs 183	01 vs 201	09 vs 390	12 m, 59.5	25≈438	
09 set	11 14 3.0	16 ms 47,2	29 ≠ 20,7	10 <b>≏</b> 16,7	26-28.9	23 ms 29,5	07908.3	07 <b>v</b> s 181	01 <b>vs</b> 201	09 <b>v</b> 386	13 m, 01, 0	25 <b>≈44</b> ,7	
10 set	11 17 59,6	17 ms 45,5		10-27,7				07 vs 179		09 vs 382			
11 set	11 21 56.1	18 ms 43.9		10-33.0		24 ms 46 . 7			01 vs 20 . 1	09 vs 379			
12 set 13 set	11 25 52.7 11 29 49.3	19 ms 42.2 20 ms 40.6	09≈09.2 23≈17.5		29 <del>-</del> 59.1 01 m.09.1	25 ms 25,3 26 ms 03.9	07933.0 079341.0	07 vs 18,0 07 vs 18,2		09 vs 376 09 vs 373			
14 set	11 33 45.8	21 ms 39.0	07 × 50.2		02 m, 18.9	26 m 42.5		07 vs 18.4		09 vs 371			
15 set	11 37 42,4	22 ms 37,5	$22 \times 42.0$	09 = 505	03 m, 28, 7	27 ms 21.2	07956.5	07 vs 18,8	$01 \times 20.9$	09 vs 369	13 m, 10, 9	25 <b>≈4</b> 61	
16 set	11 41 38,9	23 ms 35,9	07 ℃45,6	09 = 231	04m <sub>1</sub> 38.4	27 m/59,9	08904.1	07 vs 19,3	01 <b>vs</b> 21,2	09 <b>vs</b> 367	13 m, 12, 6	25 <b>≈</b> 423	
17 set	11 45 35,5	24m 34,4	22°51,7	08-487	05 m,48.1	28 ms 38,6		07 vs 19,8	01 w 21,5	09 vs 366			
18 set	11 49 32.0	25 ms 33,0	07851.0	08 - 077	06 m, 57, 6	29 ms 17,4		07 vs 20.5	01 vs 21.9	09 vs 365			
19 set 20 set	11 53 28.6 11 57 25.1	26 ms 31.6 27 ms 30.2	22 & 35,2 06 X 58,8		08 m, 07, 1 09 m, 16, 4	29 ms 56.2 00 <del>≏</del> 35.0		07 vs 21.2 07 vs 22.1	01 vs 22 , 4	09 vs 364 09 vs 364			
20 set	12 1 21.7	28 ms 28.8	20X58.5		10 m, 25.7	00=33.0 01=13.8		07 vs 22 . 1			13 m, 21.6		
22 set	12 5 18.3	29 m 27.5	04934.1		11 m, 34.9	01=52.7		07 vs 24.1	01 vs 24.1		4 13 m, 23.		
23 set	12 9 14,8	00 = 26.3	17946.9	03=231	12 m, 44, 1	02 = 31.5	08952,9	07 vs 25,3	01 w 24,8	09 vs 36.	5 13 m, 25,	4 25 <b>≈</b> 19	.2
24 set	12 13 11.4	01=25.0	00 ผ 39 . 6	02 - 173	13 m,53.1	03=10.5	08959.3	07 vs 26 . 5	01 vs 25 . 5	09 vs 36.	5 13 m, 27.	3 25≈20	.4
25 set	12 17 7.9	02 = 23.8	13 ស 15 . 6	01 - 119	15 m, 02, 0	03 = 49.4	09905.5	07 vs 27,8	01 vs 26.2	09 vs 36.			.8
26 set	12 21 4.5	03 = 22.7	25 ผ 38 . 0	00 = 085	16 m, 10.9	04-28.4		07 vs 29 . 3	01 vs 27, 1	09 vs 36.			
27 set	12 25 1.0	04-21.5	07 ms 49 . 8		17 m, 19 . 7	05 = 07.4		07 vs 30 , 8	01 vs 27, 9	09 vs 37.			
28 set 29 set	12 28 57.6 12 32 54.1	05 = 20.5 06 = 19.4	19 ms 53,5 01 <del>~</del> 51.4		18 m, 28, 3 19 m, 36, 9	05 = 46.4 06 = 25.5		07 vs 32 . 5 07 vs 34 . 2	01 vs 28,9 01 vs 29,8	09 vs 37. 09 vs 37.			
30 set	12 36 50.7		13≃45.1		20 m, 45, 4	00 = 25.5 07 = 04.6		07 vs 34,2			o 13 <b>m,</b> 37, 8 13 <b>m,</b> 39.		

Tropica	l Ephemeris -		a, 01 set v = 2447771		on, Green	wich SVP	= 05 x 24,	09 True A	yanamsa =	23d 42m 54	ŀs		
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	e Pluto	N.	Node
01 set 02 set	h m s 10 42 30,6 10 46 27,1	08 n 11.1 07 n 49.3	00 n 31,4 05 s 04,7	04 s 53.8 05 s 20.5	06 s 41,6 07 s 11,8	05 n 28,8 05 n 13,5	23 n 00,1 22 n 59,7	22 s 43,8 22 s 44,0	23 s 42,3 23 s 42,3	22 s 10,7 22 s 10,7	00 s 55,3 00 s 56,2	12 s 52	
03 set 04 set 05 set 06 set 07 set 08 set 09 set	10 50 23.7 10 54 20.3 10 58 16.8 11 2 13.4 11 6 9.9 11 10 6.5 11 14 3.0	07 n 27.3 07 n 05.2 06 n 42.9 06 n 20.6 05 n 58.2 05 n 35.6 05 n 13.0	10 s 27.2 15 s 25.8 19 s 50.2 23 s 28.8 26 s 09.5 27 s 39.8 27 s 48.7	05 s 45.5 06 s 08.8 06 s 30.3 06 s 49.6 07 s 06.8 07 s 21.5 07 s 33.7	08 s 41.7 09 s 11.3 09 s 40.8 10 s 10.1	04 n 42.7 04 n 27.2 04 n 11.7 03 n 56.2 03 n 40.7	22 n 59.0 22 n 58.6 22 n 58.2	22 s 44.5 22 s 44.6 22 s 44.8 22 s 44.9	23 s 42 .3 23 s 42 .3	22 s 10.9 22 s 11.0 22 s 11.0 22 s 11.1 22 s 11.2		12 s 54 12 s 54 12 s 55 12 s 56 12 s 56 12 s 56 12 s 56	4,8 5,6 5,3 5,6
10 set 11 set 12 set 13 set 14 set 15 set 16 set	11 17 59.6 11 21 56.1 11 25 52.7 11 29 49.3 11 33 45.8 11 37 42.4 11 41 38.9	04 n 50,3 04 n 27,5 04 n 04,6 03 n 41,7 03 n 18,7 02 n 55,6 02 n 32,5	19 s 24.6	07 s 49 .4 07 s 52 .6 07 s 52 .2 07 s 48 .2 07 s 40 .3	11 s 36.6 12 s 05.0 12 s 33.1 13 s 01.0	02 n 53.9 02 n 38.2 02 n 22.6 02 n 06.9 01 n 51.2	22 n 55,9 22 n 55,5 22 n 55,1 22 n 54,7	22 s 45.3 22 s 45.5 22 s 45.6 22 s 45.7	23 s 42 .3 23 s 42 .3	22 s 11.4 22 s 11.4 22 s 11.5 22 s 11.5 22 s 11.6		12 s 55 12 s 55 12 s 55 12 s 55 12 s 55 12 s 55 12 s 55	5.3 4.9 4.7 5.1 5.9
17 set 18 set 19 set 20 set 21 set 22 set 23 set	11 45 35.5 11 49 32.0 11 53 28.6 11 57 25.1 12 1 21.7 12 5 18.3 12 9 14.8	02 n 09 .3 01 n 46 .1 01 n 22 .9 00 n 59 .6 00 n 36 .3 00 n 12 .9 00 s 10 .4	18 n 49 . 1 23 n 26 . 5 26 n 30 . 2	06 s 27.4 05 s 58.9	14 s 49,6 15 s 16,0 15 s 42,1	01 n 04.0 00 n 48.2 00 n 32.4 00 n 16.6 00 n 00.8	22 n 53.5 22 n 53.1 22 n 52.7 22 n 52.3 22 n 52.0			22 s 11.7 22 s 11.8 22 s 11.8 22 s 11.9 22 s 11.9	01 s 09 .5 01 s 10 .4 01 s 11 .3 01 s 12 .2 01 s 13 .1 01 s 14 .0 01 s 14 .9	12 s 50 13 s 00 13 s 00 13 s 00 13 s 00 13 s 00 13 s 00	0.5 2.2 3.6 4.6 5.0
24 set 25 set 26 set 27 set 28 set 29 set 30 set	12 13 11.4 12 17 7.9 12 21 4.5 12 25 1.0 12 28 57.6 12 32 54.1 12 36 50.7	00 s 33.8 00 s 57.2 01 s 20.6 01 s 44.0 02 s 07.3 02 s 30.7 02 s 54.0		02 s 50.5 02 s 08.4 01 s 26.9 00 s 46.9 00 s 09.3	17 s 47.2 18 s 11.0 18 s 34.5 18 s 57.6 19 s 20.2	00 s 46.6 01 s 02.4 01 s 18.2 01 s 34.1 01 s 49.9	22 n 50.9 22 n 50.5 22 n 50.2			22 s 12,1 22 s 12,1 22 s 12,1	01 s 16.7 01 s 17.6 01 s 18.5 01 s 19.5 01 s 20.4		4.0 3.7 3.8 4.5 5.9

#### **OUTUBRO DE 1989**

### **Longitude dos Astros**

Tropical	l Ephemeris -	domingo, O Julian Day			Greenwich	SVP = (	05 x 24,00	True Ayan	amsa = 23d	42m 59s		
Long.	Sidereal Time	Sun .	Moon	Mercury	Venus	Mars	Jupite	r Saturn	Uranus	Neptu	ne Pluto	N. Node
	h nn s	۰,	۰,	ο ,	۰,	۰,	۰,	۰,	۰,	ο,	۰,	ο ,
01 out	12 40 47.3	08 = 17.4	25 = 36.5	26 ms 166	21 m, 53.7	07 = 43.7	099639.5	07 vs 38.0	01 vs 31.9	09 vs 38.1	13 m, 41.3	25≈027
02 out	12 44 43.8	09 = 16.4	07 m, 27, 1	25 m 559	23 m, 02.0	08-22.8	099644.5	07 vs 40.0	01 vs 33,0	09 vs 38.5	13 m, 43, 4	2 <b>4≈</b> 546
03 out	12 48 40.4	10 - 15.5	19 m, 19.0				099649.4				13 m, 45, 5	2 <b>4≈4</b> 67
04 out	12 52 36,9	11 - 14.6	$01 \neq 14.6$	25 ms 45,7				07 <b>v</b> s 44,3		09 vs 39,3		24≈400
05 out	12 56 33,5	12 = 13.8	$13 \neq 16.7$	25 m/56,3	26 m, 26, 0	10 = 20.4				8, 9E & 90	13 <b>m,</b> 49,8	2 <b>4≈</b> 350
06 out	13 0 30,0	13 = 12.9	25 ≠ 29.0	26 ms 17,2	27 <b>m,</b> 33,8	10 - 59.7				09  vs  40.3	13 <b>m,</b> 51,9	2 <b>4≈</b> 321
07 out	13 4 26,6	14 <del>-12</del> ,1	07 <b>v</b> s 55,5	26 ms 47,8	28 <b>m,</b> 41,4	11 = 39,0	10907,3	07 <b>v</b> 51,5	01 vs 39,4	09 <b>v</b> s 40 , 8	13 <b>m</b> ,54,1	2 <b>4≈</b> 311
08 out	13 8 23,1	15 = 11.4	20 vs 40,5	27 ms 27,8		12=18.3		07 vs 54, 1			13 m, 56, 3	24 <b>≈</b> 31.5
09 out	13 12 19,7	16 = 10.6	03≈48,1	28 ms 16,3	$00 \neq 56.3$	12 - 57,6	109615,2					24≈32,3
10 out	13 16 16,3	17 - 09.9	17 <b>≈</b> 21.9	29 ms 12,7	$02 \neq 03.5$	13 <b>≏</b> 37,0				09 vs 42,6	14 տ. 00, 7	2 <b>4≈</b> 32,7
11 out	13 20 12.8	18 = 09.2	$01 \times 23.9$	00 = 16.2	$03 \neq 10.6$	14 = 16.4				09 vs 43,2		2 <b>4≈</b> 317
12 out	13 24 9,4	19 - 08.6	$15 \times 53.9$	01 = 26.0		14-55.8	10925.6					2 <b>4≈</b> 285
13 out	13 28 5.9	20 - 07.9	00°48,5	02 = 41.4	05 ≠ 24,3		10928.8			09 vs 44.7		24≈228
14 out	13 32 2,5	21 = 07,4	16 ℃00,8	04 <del>-</del> 01,7	06 ≠ 30,9	16 = 14.7	109631.7	08 <b>v</b> 11,5	01 <b>v</b> 50,3	09 vs 45, 4	14 m, 09 . 7	2 <b>4≈</b> 148
15 out	13 35 59.0	22 = 06.8	01820.7	05 = 26.1	07 ≠ 37.3	16-54.2	10934.4	08 <b>v</b> 14.7	01 vs 52 . 1	09 vs 46 . 2	14 m, 12.0	24≈050
16 out	13 39 55.6	23 = 06.3	16 8 37.1	06 = 54.1	$08 \neq 43.6$	17 = 33.8	10937.0	08 vs 18, 0	01 vs 53.8	09 vs 47.0	14 m, 14.3	23 <b>≈</b> 544
17 out	13 43 52.1	24 = 05.8	01 X 39.0	08 = 25.0	$09 \neq 49.7$	18 = 13.3	10939.3	08 vs 21.3	01 vs 55.7	09 vs 47.9	14 m, 16, 6	23 <b>≈440</b>
18 out	13 47 48,7	25 = 05.3	16 X 17.9	09 = 58.4	$10 \neq 55.6$	18 - 52.9	10941.5	08 vs 24.8	01  vs 57.6	09 vs 48.7	14m, 18, 9	23 <b>≈</b> 349
19 out	13 51 45,2	26 - 04.9	009628.9	11 <del>-</del> 33,8	$12 \neq 01.3$		10943,5			09 vs 49 . 7	14m,21,2	23 <b>≈</b> 279
20 out	13 55 41,8	27 - 04.6			$13 \neq 06.9$		10945.3			09 vs 50,6	14 ա, 23, 5	23 <b>≈</b> 232
21 out	13 59 38,4	28 = 04.2	279624.0	14-49.0	14 ≠ 12,2	20-52.0	109646,9	08 <b>vs</b> 35 , 7	02 <b>vs</b> 03,5	09 vs 51,6	14 <b>m,</b> 25,9	23 <b>≈</b> 210
22 out	14 3 34.9	29 - 03.9	10 ស 13.1	16 - 28.2	15 ≠ 17.4	21=31.7	10948.3	08 vs 39 . 5	02 vs 05 . 5	09 vs 52 . 6	14 m, 28.2	23≈204
23 out	14 7 31.5	00 m, 03.7	22 8 42 . 2	18 = 08.1	$16 \neq 22.3$	22 = 11.5	10949.5	08 vs 43.4	02 vs 07,6	09 vs 53.6	14m,30.6	23≈20.6
24 out	14 11 28,0	01 m, 03, 4	04ms55.9	19 = 48.5	$17 \neq 27.1$	22 = 51.3	10950.5	08 vs 47.3	02 vs 09,8	09 vs 54.7	14m,33,0	23≈205
25 out	14 15 24,6	02 m, 03, 3	16 m 58.7	21=29.1	$18 \neq 31.6$	23 = 31.1	10951.3	08 vs 51.4	02 vs 12, 0	09 vs 55.8	14m,35,4	23≈188
26 out	14 19 21,1	03m, $03$ , $1$	28 m 54,5	23 = 10.0	$19 \neq 35.9$	24 <del>-11</del> ,0	10951.9	08 vs 55,5	02 <b>v</b> 14,2	09 vs 56,9	14m,37,7	23 <b>≈</b> 149
27 out	14 23 17,7	04 դ.03.0	10 = 46.4		$20 \neq 40.0$		10952,3			09 vs 58, 1		23≈083
28 out	14 27 14.2	05 m, 02, 9	22 - 37,1	26 <del>-3</del> 1,6	21 ≠ 43,8	25 = 30.8	10952,5	09 vs 04,0	02 <b>v</b> s 18,8	09 vs 59,3	14 <b>m,</b> 42,5	22 <b>≈</b> 590
29 out	14 31 10.8	06 m. 02.9	04 m. 28 . 4	28=12.3	22 ≠ 47 . 4	26=10.8	109525	09 vs 08 . 3	02 <b>vs</b> 21.1	10 vs 00 . 5	14 m. 44.9	22 <b>≈</b> 478
30 out	14 35 7.4	07 m, 02.9	16 m, 21.7	29 - 52.7	$23 \neq 50.7$	26-50.8	109523	09 vs 12.7	02 vs 23.5	10 vs 01.7	14 m, 47.3	22≈355
31 out	14 39 3.9	08 m, 02.9	28 m, 18.3	01 m, 32.8	24 4 53.8	27 = 30.9	109519	09 vs 17.2	$02 \times 26.0$	10 vs 03.0	14m,49.8	22 234

Tropica	1 Ephemeris -	domingo, O Julian Day			Greenwich	SVP = 0	05 x 24,00	True Ayana	msa = 23d	42m 59s			
Decl.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N.	Node
	h m s	0 ,	0 ,	ο ,	ο ,	ο ,	0 ,	ο ,	ο ,	ο,	ο,	0	,
01 out	12 40 47,3	03 s 17,3	14 s 03,7	00 n 55,4	20 s 04,1	02 s 21,5	22 n 48,9	22 s 46.7	23 s 42,1	22 s 12,1	<b>0</b> 1 s 22.1	13 s 1	
02 out	12 44 43.8	03 s 40,6	18 s 37,1	01 n 21,3	20 s 25.4	02 s 37,3	22 n 48,6	22 s <b>46</b> ,7	23 s 42,0	22 s 12,1	01 s 23.0	13 s 1	
03 out	12 48 40,4	04 s 03,8	22 s 27,6	01 n 42 , 4	20 s 46,2	02 s 53,1		22 s 46.7	23 s 42,0	22 s 12,2	01 s 23,9	13 s 1	
04 out	12 52 36.9	04 s 26.9		01 n 58.2	21 s 06.6	03 s 08.9		22 s 46.7	23 s 42.0	22 s 12.2	01 s 24.8	13 s 1	
05 out	12 56 33.5	04 s 50.0	27 s 12.7	02 n 08.7	21 s 26 . 4	03 s 24.7		22 s 46.7	23 s 42.0	22 s 12.2	01 s 25.7	13 s 1	
06 out	13 0 30.0	05 s 13.1	27 s 45.6	02 n 14.0			22 n 47 . 4		23 s 42.0	22 s 12.2 22 s 12.2	01 s 26.6	13 s 2	
07 out	13 4 26,6	05 s 36,1	26 s 55,4	UZ N 14, U	22 s <b>04</b> .6	03850,1	22 n 47,2	22 s 46,7	23 s 41,9	22 \$ 12,2	01 s 27,5	13 s 2	1,0
08 out	13 8 23.1	05 s 59.0	24 s 40.4	02 n 09.0	22 s 22.9	04 s 11.9	22 n 47.0	22 s 46.6	23 s 41.9	22 s 12.2	01 s 28.4	13 s 2	0.9
09 out	13 12 19.7	06 s 21.8	21 s 03.9	01 n 59 . 2	22 s 40.6	04 s 27.6	22 n 46.7	22 s 46.6	23 s 41.9	22 s 12.2	01 s 29.2	13 s 2	0.6
10 out	13 16 16.3	06 s 44,5	16 s 14,2	01 n 44.9	22 s 57.9	04 s 43.2	22 n 46,5	22 s 46,5	23 s 41,9	22 s 12,2	01 s 30.1	13 s 2	0.5
11 out	13 20 12.8	07 s 07,2	10 s 24,0	01 n 26.6	23 s 14.6	04 s 58.9	22 n 46,3	22 s 46,5	23 s 41,8	22 s 12,2	01 s 31.0	13 s 2	0.8
12 out	13 24 9,4	07 s 29.7	03 s 50,2	01 n 04,5	23 s 30,7	05 s 14,5	22 n 46,1	22 s 46,4	23 s 41,8	22 s 12,1	01 s 31.9	13 s 2	1,9
13 out	13 28 5,9	07 s 52,2	03 n 06,1	00 n 39,0	23 s 46,3	05 s 30,1		22 s <b>46</b> ,3	23 s 41,8	22 s 12,1	<b>0</b> 1 s <b>3</b> 2.7	13 s 2	
14 out	13 32 2,5	08 s 14,5	09 n 59,1	00 n 10,5	24 s 01,2	05 s 45,7	22 n 45,8	22 s 46,3	23 s 41.8	22 s 12,1	01 s 33.6	13 s 2	6,4
15 out	13 35 59.0	08 s 36 . 7	16 n 19 . 6	00 s 20.5	24 s 15.7	06 s 01.2	22 n 45 . 7	22 s 46.2	23 s 41.7	22 s 12.1	01 s 34.4	13 s 2	9 7
16 out	13 39 55.6	08 s 58.8	21 n 37.1	00 s 53.9	24 s 29 . 5	06 s 16.7	22 n 45 . 5	22 s 46 . 1	23 s 41.7	22 s 12.1	01 s 35.3	13 s 3	
17 out	13 43 52.1	09 s 20.8	25 n 24.6	01 s 29 . 2	24 s 42 . 7	06 s 32.2	22 n 45 . 4	22 s 46.0	23 s 41.7	22 s 12.1	01 s 36.1	13 s 3	
18 out	13 47 48.7	09 s 42.7	27 n 23.8	02 s 06.1	24 s 55.3	06 s 47.7	22 n 45.3	22 s 45.9	23 s 41.6	22 s 12.0	01 s 37.0	13 s 3	
19 out	13 51 45.2	10 s 04.4	27 n 30.4	02 s 44.3	25 s 07.4	07 s 03.1		22 s 45.8	23 s 41.6	22 s 12.0	01 s 37.8	13 s 4	1.9
20 out	13 55 41.8	10 s 25.9	25 n 53.9	03 s 23.7	25 s 18.8	07 s 18.5	22 n 45,2	22 s 45.7	23 s 41.6	22 s 12,0	01 s 38.6	13 s 4	3.4
21 out	13 59 38,4	10 s 47,3	22 n 53,0	04 s 03,9	25 s 29,6	07 s 33,8	22 n 45,1	22 s 45,5	23 s 41,5	22 s 11.9	01 s 39,4	13 s 4	4.2
22 out	14 3 34.9	11 s 08.6	18 n 48.9	04 s 44.7	25 s 39.8	07 s 49.1	22 n 45 . 1	22 s 45 . 4	23 s 41.5	22 s 11.9	01 s 40.3	13 s 4	4 4
23 out	14 7 31.5	11 s 29.6	14 n 01.3	05 s 26.1	25 s 49 . 3	08 s 04.3	22 n 45 . 0	22 s 45.3	23 s 41.5	22 s 11.9	01 s 41.1	13 s 4	
24 out	14 11 28.0	11 s 50.6	08 n 46 . 3	06 s 07.7	25 s 58.3	08 s 19.5	22 n 45 . 0	22 s 45.1	23 s 41.4	22 s 11.8	01 s 41.9	13 s 4	
25 out	14 15 24.6	12 s 11.3	03 n 17.0	06 s 49.5	26 s 06.6	08 s 34.7		22 s 45.0	23 s 41.4	22 s 11.8	01 s 42.7	13 s 4	
26 out	14 19 21.1	12 s 31.8	02 s 15.3	07 s 31.4	26 s 14.2	08 s 49 .8	22 n 45 . 1	22 s 44.8	23 s 41.3	22 s 11.7	01 s 43.5	13 s 4	
27 out	14 23 17.7	12 s 52,2	07 s 40.6	08 s 13.1	26 s 21.2	09 s 04.8	22 n 45.1	22 s 44.6	23 s 41.3	22 s 11.7	01 s 44.3	13 s 4	
28 out	14 27 14,2	13 s 12.3	12 s 48.7	08 s 54.7	26 s 27,6	09 s 19,8	22 n 45,2	22 s 44.4	23 s 41.3	22 s 11.6	01 s 45.0	13 s 5	1.4
29 out	14 31 10.8	13 s 32 . 3	17 s 28.9	09 s 36.0	26 s 33.4	09 s 34.8	22 n 45 . 3	22 s 44.3	23 s 41.2	22 s 11.6	01 s 45.8	13 s 5	5 1
30 out	14 35 7.4	13 s 52.3		10 s 16.9	26 s 38.5	09 s 49.7	22 n 45 . 4	22 s 44,3	23 s 41,2	22 s 11.5	01 s 46.6	13 s 5	
31 out	14 39 3.9	14 s 11.5		10 s 57.4		10 s 04.5			23 s 41.1	22 s 11.4	01 s 47.3	14 s 0	

#### **NOVEMBRO DE 1989**

### **Longitude dos Astros**

Tropica	1 Ephemeris -	quarta-fei Julian Day			oon, Gree	nwich SV	P = 05 x 23	3.91 True	Ayanamsa	= 23d 43m (	04s		
Long.	Sidereal Time	e Sun	Moon	Mercury	Venus	Mars	Jupite	r Saturn	Uranus	Neptun	e Pluto	N.	Node
01 nov 02 nov 03 nov 04 nov	h m s 14 43 0.5 14 46 57.0 14 50 53.6 14 54 50.1	09 m, 02, 9 10 m, 03, 0 11 m, 03, 1 12 m, 03, 2	10 ≠ 19.5 22 ≠ 27.2 04 vs 43.6 17 vs 11.5	03 m, 12, 7 04 m, 52, 2 06 m, 31, 3 08 m, 10, 1	25 \( \neq 56.5 \) 26 \( \neq 59.0 \) 28 \( \neq 01.2 \) 29 \( \neq 03.1 \)	28=10.9 28=51.0 29=31.2 00m,11.3	109512 109504 109494 109482	09 vs 26 . 5 09 vs 31 . 2	02 vs 28 , 4 02 vs 30 , 9 02 vs 33 , 5 02 vs 36 , 1	10 vs 05 . 6 10 vs 07 . 0	14m,52,2 14m,54,6 14m,57,0 14m,59,4	° 22≈126 22≈040 21≈581 21≈549	
05 nov 06 nov 07 nov 08 nov 09 nov 10 nov 11 nov	14 58 46.7 15 2 43.2 15 6 39.8 15 10 36.4 15 14 32.9 15 18 29.5 15 22 26.0	13 m, 03, 4 14 m, 03, 6 15 m, 03, 8 16 m, 04, 0 17 m, 04, 2 18 m, 04, 5 19 m, 04, 8	29 v54.4 12 = 56.1 26 = 20.3 10 × 10.0 24 × 26.4 09 ° 08.4 24 ° 11.1	09 m, 48, 4 11 m, 26, 4 13 m, 04, 0 14 m, 41, 2 16 m, 18, 1 17 m, 54, 6 19 m, 30, 7	00 % 04 .6 01 % 05 .8 02 % 06 .7 03 % 07 .1 04 % 07 .2 05 % 06 .9 06 % 06 .2	00 m, 51 . 5 01 m, 31 . 7 02 m, 12 . 0 02 m, 52 . 3 03 m, 32 . 6 04 m, 13 . 0 04 m, 53 . 4	109468 109452 109434 109413 109391 109367 109341	09 vs 45 . 8 09 vs 50 . 8 09 vs 55 . 8 10 vs 01 . 0 10 vs 06 . 2	02 vs 38.7 02 vs 41.3 02 vs 44.0 02 vs 46.8 02 vs 49.5 02 vs 52.3 02 vs 55.1	10 vs 11.2 10 vs 12.7 10 vs 14.2 10 vs 15.7 10 vs 17.3	15 m, 04, 3 15 m, 06, 7 15 m, 09, 2 15 m, 11, 6 15 m, 14, 0	21=536 21=533 21=529 21=511 21=471 21=403 21=308	
12 nov 13 nov 14 nov 15 nov 16 nov 17 nov 18 nov	15 26 22.6 15 30 19.1 15 34 15.7 15 38 12.2 15 42 8.8 15 46 5.4 15 50 1.9	20 m, 05, 2 21 m, 05, 5 22 m, 05, 9 23 m, 06, 3 24 m, 06, 8 25 m, 07, 2 26 m, 07, 7	09 8 26,3 24 8 43,3 09 X 50,7 24 X 38,4 08 \$59,3 22 \$50,1 06 \$10,8	21 m, 06,5 22 m, 42,0 24 m, 17,2 25 m, 52,1 27 m, 26,7 29 m, 01,1 00 \neq 35,2	07 v 05 .1 08 v 03 .5 09 v 01 .4 09 v 58 .9 10 v 55 .9 11 v 52 .3 12 v 48 .3	05 m, 33 , 8 06 m, 14 , 2 06 m, 54 , 7 07 m, 35 , 3 08 m, 15 , 8 08 m, 56 , 4 09 m, 37 , 1		10 w 22 . 1 10 w 27 . 6 10 w 33 . 1 10 w 38 . 7 10 w 44 . 3		10 w 22 . 1 10 w 23 . 7 10 w 25 . 4 10 w 27 . 1 10 w 28 . 8		21 = 192 21 = 064 20 = 537 20 = 423 20 = 331 20 = 266 20 = 229	
19 nov 20 nov 21 nov 22 nov 23 nov 24 nov 25 nov	15 53 58.5 15 57 55.0 16 1 51.6 16 5 48.1 16 9 44.7 16 13 41.2 16 17 37.8	27 m, 08, 3 28 m, 08, 8 29 m, 09, 4 00 ≠ 10, 1 01 ≠ 10, 7 02 ≠ 11, 4 03 ≠ 12, 1	19 \$04.3 01 m35.0 13 m48.1 25 m48.6 07 \$\text{\$\text{\$\delta}\$} 41.7 19 \$\text{\$\delta\$} 31.6 01 m,21.8	$02 \neq 09.1$ $03 \neq 42.8$ $05 \neq 16.3$ $06 \neq 49.6$ $08 \neq 22.8$ $09 \neq 55.8$ $11 \neq 28.6$	13 v 43 .6 14 v 38 .5 15 v 32 .7 16 v 26 .3 17 v 19 .3 18 v 11 .6 19 v 03 .2	10 m, 17 . 7 10 m, 58 . 4 11 m, 39 . 2 12 m, 20 . 0 13 m, 00 . 8 13 m, 41 . 6 14 m, 22 . 5	10%021 09%577 09%530 09%482 09%432	11 w 01.5 11 w 07.3 11 w 13.2 11 w 19.2 11 w 25.2	03 v 21.9 03 v 25.1 03 v 28.2 03 v 31.4	10 vs 34.1 10 vs 35.9 10 vs 37.7 10 vs 39.5 10 vs 41.4	15 m, 35 . 7 15 m, 38 . 1 15 m, 40 . 5 15 m, 42 . 9 15 m, 45 . 2 15 m, 47 . 6 15 m, 49 . 9	20 = 213 20 = 210 20 = 207 20 = 2193 20 = 2158 20 = 2097 20 = 2010	
26 nov 27 nov 28 nov 29 nov 30 nov	16 21 34.4 16 25 30.9 16 29 27.5 16 33 24.0 16 37 20.6	04 ≠ 12.8 05 ≠ 13.6 06 ≠ 14.3 07 ≠ 15.1 08 ≠ 16.0	$19 \neq 30.0$	13 ≠ 01.3 14 ≠ 33.9 16 ≠ 06.4 17 ≠ 38.7 19 ≠ 10.9	19 vs 54.0 20 vs 44.2 21 vs 33.5 22 vs 22.1 23 vs 09.8	15 m, 03.5 15 m, 44.4 16 m, 25.4 17 m, 06.4 17 m, 47.5	09\$272 09\$215 09\$157	11 vs 43 , 5 11 vs 49 , 7 11 vs 55 , 9	03 vs 41.0 03 vs 44.3 03 vs 47.6 03 vs 50.9 03 vs 54.2	10 vs 47, 1 10 vs 49, 0 10 vs 51, 0	15 m, 52, 3 15 m, 54, 6 15 m, 56, 9 15 m, 59, 2 16 m, 01, 5	19 <b>2</b> 501 19 <b>2</b> 381 19 <b>2</b> 61 19 <b>2</b> 152 19 <b>2</b> 064	

Tropica	1 Ephemeris - c		ira, 01 nov /= 2447832		noon, Gree	nwich SV	P = 05 x 23	,91 True	Ayanamsa =	= 23d 43m (	<b>04</b> s	
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N. Node
01 nov	h m s 14 43 0.5	14 s 30 .8	26 s 42 . 4	11 s 37.5	26 s 46 .8	10 s 19.3	22 n 45 . 6	22 s 43.6	23 s 41.1	22 s 11.4	01 s 48 . 1	14 s 06 .5
02 nov 03 nov 04 nov	14 46 57.0 14 50 53.6 14 54 50.1	14 s 49 .9 15 s 08 .7	27 s 32.7 27 s 02.5	12 s 17.0 12 s 55.9 13 s 34.2	26 s 49.9 26 s 52.5	10 s 34.0 10 s 48.6		22 s 43 . 4 22 s 43 . 2	23 s 41.0 23 s 41.0	22 s 11,3 22 s 11,3 22 s 11,2	01 s 48.8 01 s 49.6 01 s 50.3	14 s 09,3 14 s 11,2 14 s 12,3
05 nov	14 58 46.7	15 s 45,5	22 s 00.6	14 s 11.8	26 s 55.7	11 s 17.7	22 n 46 , 3	22 s 42,7	23 s 40.9	22 s 11.1	01 s 51.0	14 s 12.7
06 nov 07 nov 08 nov	15 2 43,2 15 6 39,8 15 10 36,4	16 s 03.6 16 s 21.3 16 s 38.8	17 s 40.7 12 s 21.7 06 s 17.0	14 s 48.7 15 s 24.9 16 s 00.3	26 s 56,3 26 s 56,4 26 s 55,8	11 s 32.1 11 s 46.4 12 s 00.7		22 s 42.4 22 s 42.2 22 s 41.9	23 s 40.8 23 s 40.7 23 s 40.7	22 s 11.0 22 s 11.0 22 s 10.9	01 s 51.7 01 s 52.4 01 s 53.1	14 s 12.7 14 s 12.9 14 s 13.4
09 nov 10 nov 11 nov	15 14 32,9 15 18 29,5 15 22 26,0	16 s 56.0 17 s 12.9 17 s 29.6	00 n 17,3 07 n 01,4 13 n 30,7	16 s 34,9 17 s 08,7 17 s 41,6	26 s 54.6 26 s 52.8 26 s 50.4	12 s 14.9 12 s 29.0 12 s 43.1		22 s 41.6 22 s 41.3 22 s 41.0	23 s 40.6 23 s 40.6 23 s 40.5	22 s 10,8 22 s 10,7 22 s 10,6	01 s 53,8 01 s 54,5 01 s 55,2	14 s 14,8 14 s 16,9 14 s 20,0
12 nov 13 nov 14 nov 15 nov 16 nov 17 nov	15 30 19.1 15 34 15.7 15 38 12.2 15 42 8.8 15 46 5.4	17 s 45.9 18 s 01.9 18 s 17.6 18 s 33.0 18 s 48.1 19 s 02.8	23 n 47.0 26 n 36.4 27 n 29.5 26 n 28.1 23 n 49.2	18 s 13.7 18 s 44.8 19 s 15.0 19 s 44.2 20 s 12.5 20 s 39.8	26 s 43.8 26 s 39.6 26 s 34.9 26 s 29.6 26 s 23.8	13 s 10.9 13 s 24.6 13 s 38.3 13 s 51.9 14 s 05.4	22 n 49 . 7 22 n 50 . 0	22 s 40.4 22 s 40.1 22 s 39.7 22 s 39.4 22 s 39.0	23 s 40.4 23 s 40.4 23 s 40.3 23 s 40.2 23 s 40.2 23 s 40.1	22 s 10.4 22 s 10.3 22 s 10.2 22 s 10.1 22 s 10.0	01 s 55.8 01 s 56.5 01 s 57.1 01 s 57.8 01 s 58.4 01 s 59.0	14 s 23.7 14 s 27.8 14 s 31.9 14 s 35.5 14 s 38.4 14 s 40.5
19 nov 19 nov 20 nov 21 nov 22 nov 23 nov 24 nov 25 nov	15 50 1.9 15 53 58.5 15 57 55.0 16 1 51.6 16 5 48.1 16 9 44.7 16 13 41.2 16 17 37.8	19 s 17.2 19 s 31.2 19 s 44.9 19 s 58.3 20 s 11.2 20 s 23.8 20 s 36.0 20 s 47.9	19 n 56.5 15 n 13.7 10 n 00.4 04 n 31.7 01 s 00.6 06 s 26.9 11 s 37.8 16 s 23.5	21 s 06.1 21 s 31.3 21 s 55.4 22 s 18.5 22 s 40.5 23 s 01.3 23 s 21.0 23 s 39.5	26 s 10.6 26 s 03.2 25 s 55.3 25 s 46.9 25 s 38.0	14 s 18.8 14 s 32.1 14 s 45.3 14 s 58.5 15 s 11.4 15 s 24.3 15 s 37.1 15 s 49.8	22 n 51.3 22 n 51.7 22 n 52.2 22 n 52.7 22 n 53.1	22 s 38.7 22 s 38.3 22 s 37.9 22 s 37.5 22 s 37.1 22 s 36.7 22 s 36.3 22 s 35.9	23 s 40.0 23 s 39.9 23 s 39.9 23 s 39.8 23 s 39.7 23 s 39.6 23 s 39.5 23 s 39.4	22 s 09 .9 22 s 09 .8 22 s 09 .7 22 s 09 .6 22 s 09 .5 22 s 09 .3 22 s 09 .2 22 s 09 .1	01 s 59.6 02 s 00.2 02 s 00.8 02 s 01.3 02 s 01.9 02 s 02.4 02 s 03.0 02 s 03.5	14 s 41.7 14 s 42.2 14 s 42.3 14 s 42.4 14 s 42.8 14 s 43.9 14 s 45.8 14 s 45.8
26 nov 27 nov 28 nov 29 nov 30 nov	16 21 34.4 16 25 30.9 16 29 27.5 16 33 24.0 16 37 20.6	20 s 59.3 21 s 10.4 21 s 21.1 21 s 31.3	20 s 33.0 23 s 54.0 26 s 13.6 27 s 20.6 27 s 07.1	23 s 56.7 24 s 12.8 24 s 27.6 24 s 41.2	25 s 08.7 24 s 58.1 24 s 47.0 24 s 35.6	16 s 02.3 16 s 14.8 16 s 27.1 16 s 39.3	22 n 54,1 22 n 54,6 22 n 55,1	22 s 35.5 22 s 35.0 22 s 34.6 22 s 34.1	23 s 39 .4 23 s 39 .3 23 s 39 .2 23 s 39 .1	22 s 09.0 22 s 08.9 22 s 08.7 22 s 08.6	02 s 04.0 02 s 04.5 02 s 05.0 02 s 05.5	14 s 52 . 0 14 s 55 . 8 14 s 59 . 5 15 s 02 . 9 15 s 05 . 7

#### **DEZEMBRO DE 1989**

### **Longitude dos Astros**

Tropica	1 Ephemeris - s	sexta-feir Julian Day	a. 01 dez = 2447862	1989 at n 2.0	oon, Gree	nwich SV	P = 05 x 2	3,83 True	Ayanamsa =	= 23d 43m	09s		
Long.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupit	ter Satur	n Uranu	s <b>N</b> eptu	une Pluto	N. 1	Node
01 dez 02 dez	h m s 16 41 17.1 16 45 13.7	09 ≠ 16.8 10 ≠ 17.6	14 vs 18,5 26 vs 57,4	0 , 20 ≠ 42,9 22 ≠ 14,8	23 vs 56 . 6 24 vs 42 . 4					10 v 55 , 0 10 v 57 , 0	. 16 m, 03.8 16 m, 06.1		
03 dez 04 dez 05 dez 06 dez 07 dez 08 dez 09 dez	16 49 10.2 16 53 6.8 16 57 3.4 17 0 59.9 17 4 56.5 17 8 53.0 17 12 49.6	11 \( \nu 18.5 \) 12 \( \nu 19.4 \) 13 \( \nu 20.3 \) 14 \( \nu 21.2 \) 15 \( \nu 22.1 \) 16 \( \nu 23.0 \) 17 \( \nu 24.0 \)	09 <b>24</b> 8.4 22 <b>25</b> 3.9 06 × 16.3 19 × 58.0 04 <b>9</b> 00.5 18 <b>9</b> 23.7 03 <b>8</b> 04.9	23 \( \pm 46.5 \) 25 \( \pm 18.0 \) 26 \( \pm 49.3 \) 28 \( \pm 20.3 \) 29 \( \pm 51.1 \) 01 \( \pm 21.4 \) 02 \( \pm 51.3 \)	25 n 27 . 3 26 n 11 . 2 26 n 54 . 0 27 n 35 . 8 28 n 16 . 3 28 n 55 . 7 29 n 33 . 8	20 m, 32, 1 21 m, 13, 4 21 m, 54, 6 22 m, 35, 9 23 m, 17, 3	089444 089378 089310 089241 089171	12 w 27.7 12 w 34.2 12 w 40.7 12 w 47.3 12 w 53.9	04 vs 07.8 04 vs 11.2 04 vs 14.6 04 vs 18.1 04 vs 21.6	10 w 59.0 11 w 01.0 11 w 03.1 11 w 05.2 11 w 07.3 11 w 09.4 11 w 11.5	16 m, 10.5 16 m, 12.8 16 m, 15.0 16 m, 17.2	18 = 553 18 = 553 18 = 555.5 18 = 548 18 = 524 18 = 476 18 = 406	;
10 dez 11 dez 12 dez 13 dez 14 dez 15 dez 16 dez	17 16 46.1 17 20 42.7 17 24 39.2 17 28 35.8 17 32 32.3 17 36 28.9 17 40 25.5	18 \( \) 24,9 19 \( \) 25,9 20 \( \) 26,9 21 \( \) 27,8 22 \( \) 28,8 23 \( \) 29,9 24 \( \) 30,9	17 8 58.6 02 \( \pi 57.1 17 \( \pi 51.0 02 \( \pi 31.3 16 \( \pi 50.6 00 \( \pi 44.1 14 \( \pi 10.1 \)	04 % 20.7 05 % 49.5 07 % 17.6 08 % 44.8 10 % 11.0 11 % 35.9 12 % 59.5	00 == 10.6 00 == 46.1 01 == 20.1 01 == 52.7 02 == 23.7 02 == 53.2 03 == 21.0	25 m, 21, 5 26 m, 03, 0 26 m, 44, 5 27 m, 26, 0 28 m, 07, 6	079554 0796480 0796405 0796329 0796252	13 vs 13.9 13 vs 20.6 13 vs 27.3 13 vs 34.1 13 vs 40.9	04 vs 32 . 1 04 vs 35 . 6 04 vs 39 . 1 04 vs 42 . 6 04 vs 46 . 2	11 vs 13.6 11 vs 15.7 11 vs 17.9 11 vs 20.0 11 vs 22.2 11 vs 24.4 11 vs 26.6	16 m, 32.0	18 <b>2</b> 316 18 <b>2</b> 14 18 <b>2</b> 14 18 <b>2</b> 112 18 <b>2</b> 019 17 <b>2</b> 543 17 <b>2</b> 491 17 <b>2</b> 463	
17 dez 18 dez 19 dez 20 dez 21 dez 22 dez 23 dez	17 44 22.0 17 48 18.6 17 52 15.1 17 56 11.7 18 0 8.2 18 4 4.8 18 8 1.3	25 ≠ 31,9 26 ≠ 33,0 27 ≠ 34,1 28 ≠ 35,2 29 ≠ 36,3 00 v 37,4 01 v 38,5	27 \$\text{\$09.7}\$ 09 \$\text{\$m\$}46.0\$ 22 \$\text{\$m\$}03.3\$ 04 \$\text{\$\delta\$}06.6\$ 16 \$\text{\$\delta\$}01.2\$ 27 \$\text{\$\delta\$}51.9\$ 09 \$\text{\$m\$},43.4	14 v 21.3 15 v 41.1 16 v 58.5 18 v 13.2 19 v 24.7 20 v 32.4 21 v 35.7	03 = 47 .2 04 = 11 .5 04 = 34 .1 04 = 54 .7 05 = 13 .4 05 = 30 .1 05 = 44 .7	00 \( \delta \) 12.6 00 \( \delta \) 54.4 01 \( \delta \) 36.1 02 \( \delta \) 18.0 02 \( \delta \) 59.8	079018 069539 069459 069379 069298	14 % 01.5 14 % 08.4 14 % 15.3 14 % 22.3 14 % 29.2	04 vs 56.9 05 vs 00.5 05 vs 04.1 05 vs 07.7 05 vs 11.3	11 vs 31.0 11 vs 33.2 11 vs 35.4 11 vs 37.7	16 m, 42 . 1 16 m, 44 . 1 16 m, 46 . 0 16 m, 47 . 9	17 <b>≈</b> 46.0 17 <b>≈</b> 46.9	9
24 dez 25 dez 26 dez 27 dez 28 dez 29 dez 30 dez	18 11 57.9 18 15 54.5 18 19 51.0 18 23 47.6 18 27 44.1 18 31 40.7 18 35 37.2	02 vs 39 , 7 03 vs 40 , 8 04 vs 42 , 0 05 vs 43 , 1 06 vs 44 , 3 07 vs 45 , 4 08 vs 46 , 6	$21\text{m}, 39\text{,}4$ $03 \neq 42\text{,}9$ $15 \neq 56\text{,}0$ $28 \neq 20\text{,}2$ $10\text{v}_{5}55\text{,}9$ $23\text{v}_{5}43\text{,}3$ $06\text{cm}42\text{,}4$	22 w 34.0 23 w 26.5 24 w 12.4 24 w 50.8 25 w 20.9 25 w 41.6 25 w 52.2	05 = 57.1 06 = 07.4 06 = 15.4 06 = 21.1 06 = 24.4 06 = 25.3 06 = 237	05 ≠ 05.6 05 ≠ 47.6 06 ≠ 29.6 07 ≠ 11.7	06%055 05%573 05%492 05%410 05%329	14 v 50.2 14 v 57.3 15 v 04.3 15 v 11.4 15 v 18.4	05 vs 22 , 1 05 vs 25 , 7 05 vs 29 , 3 05 vs 32 , 9		16 m, 53, 4 16 m, 55, 2 16 m, 57, 0 16 m, 58, 8 17 m, 00, 5	17 2315 17 2240 17 2163 17 2093 17 2037 16 2600 16 2582	
31 dez	18 39 33.8	09 vs 47 . 8	19≈53.0	25 <b>v</b> <sub>3</sub> 519	06≈197	09 ≠ 18,1	059166	15 <b>vs</b> 32 . 6	05 <b>v</b> 43 , 8 1	2 <b>vs</b> 00,2	17 <b>m,</b> 03.9 1	.6 <b>≈</b> 581	

Tropica	l Ephemeris -	sexta-feir Julian Day	a. 01 dez = 2447862	1989 at no 2,0	oon, Green	wich SVP	= 05 x 23,	83 True A	yanamsa =	23d 43m 0	9s		
Decl.	Sidereal Time	Sun	Moon	Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptun	e Pluto	N.	Node
01 dez 02 dez	h m s 16 41 17,1 16 45 13,7	21 s 50.6 21 s 59.6	25 s 31,1 22 s 36,9	25 s 04,4 25 s 14,0	24 s 11,7 23 s 59,2	17 s 03,3 17 s 15,1	22 n 56 , 7 22 n 57 , 3	22 s 33,1 22 s 32,7	23 s 38,9 23 s 38,8	22 s 08,3 22 s 08,2	02 s 06,5 02 s 06,9	15 s 0 15 s 0	
03 dez 04 dez 05 dez 06 dez 07 dez 08 dez 09 dez	16 49 10.2 16 53 6.8 16 57 3.4 17 0 59.9 17 4 56.5 17 8 53.0 17 12 49.6	22 s 08.2 22 s 16.4 22 s 24.1 22 s 31.4 22 s 38.2 22 s 44.6 22 s 50.6	18 s 33.2 13 s 32.2 07 s 47.2 01 s 33.0 04 n 54.4 11 n 15.6 17 n 07.4		23 s 06.3 22 s 52.5 22 s 38.4	17 s 38,4 17 s 49,8 18 s 01,1 18 s 12,2	22 n 58 . 4 22 n 58 . 9 22 n 59 . 5	22 s 31.1 22 s 30.6 22 s 30.1 22 s 29.5	23 s 38.7 23 s 38.6 23 s 38.5 23 s 38.4 23 s 38.3 23 s 38.2 23 s 38.0	22 s 08.0 22 s 07.9 22 s 07.7 22 s 07.6 22 s 07.4 22 s 07.3 22 s 07.1	02 s 07.4 02 s 07.8 02 s 08.2 02 s 08.6 02 s 09.0 02 s 09.4 02 s 09.7	15 s 0 15 s 0 15 s 0 15 s 0 15 s 1 15 s 1 15 s 1	9.2 9.1 9.3 0.1 1.5
10 dez 11 dez 12 dez 13 dez 14 dez 15 dez 16 dez	17 16 46.1 17 20 42.7 17 24 39.2 17 28 35.8 17 32 32.3 17 36 28.9 17 40 25.5	22 s 56 . 1 23 s 01 . 2 23 s 05 . 8 23 s 09 . 9 23 s 13 . 6 23 s 16 . 9 23 s 19 . 6	22 n 02 .7 25 n 33 .3 27 n 16 .4 27 n 02 .5 24 n 59 .2 21 n 27 .6 16 n 53 .3	25 s 40.4 25 s 37.1 25 s 32.5 25 s 26.3 25 s 18.7 25 s 09.7 24 s 59.3	20 s 55.5	18 s 44.8 18 s 55.4 19 s 05.8 19 s 16.0 19 s 26.1 19 s 36.1 19 s 45.9	23 n 04.0	22 s 27.8 22 s 27.2 22 s 26.6 22 s 26.0 22 s 25.4	23 s 37 .9 23 s 37 .8 23 s 37 .7 23 s 37 .6 23 s 37 .5 23 s 37 .3 23 s 37 .2	22 s 07.0 22 s 06.8 22 s 06.7 22 s 06.5 22 s 06.3 22 s 06.2 22 s 06.0	02 s 10.1 02 s 10.4 02 s 10.8 02 s 11.1 02 s 11.4 02 s 11.7 02 s 12.0	15 s 1 15 s 1 15 s 2 15 s 2 15 s 2 15 s 2 15 s 3	9.6 2.8 5.7 8.0 9.5
17 dez 18 dez 19 dez 20 dez 21 dez 22 dez 23 dez	17 44 22.0 17 48 18.6 17 52 15.1 17 56 11.7 18 0 8.2 18 4 4.8 18 8 1.3	23 s 21.9 23 s 23.7 23 s 25.1 23 s 26.0 23 s 26.4 23 s 26.4 23 s 25.8	11 n 40.2 06 n 07.5 00 n 29.5 05 s 02.7 10 s 19.8 15 s 13.0 19 s 32.4	24 s 47.5 24 s 34.3 24 s 20.0 24 s 04.4 23 s 47.8 23 s 30.2 23 s 11.8	20 s 25 . 4 20 s 10 . 4 19 s 55 . 3 19 s 40 . 3 19 s 25 . 4 19 s 10 . 5 18 s 55 . 8	20 s 05.0 20 s 14.3 20 s 23.4 20 s 32.4	23 n 07 .4 23 n 07 .9 23 n 08 .4	22 s 23.6 22 s 22.9 22 s 22.3 22 s 21.6	23 s 37.1 23 s 37.0 23 s 36.8 23 s 36.7 23 s 36.6 23 s 36.4 23 s 36.3	22 s 05 .8 22 s 05 .7 22 s 05 .5 22 s 05 .3 22 s 05 .1 22 s 04 .9 22 s 04 .8	02 s 12.2 02 s 12.5 02 s 12.7 02 s 13.0 02 s 13.2 02 s 13.4 02 s 13.6	15 s 3 15 s 3 15 s 3 15 s 3 15 s 3 15 s 3	0.5 0.2 0.2 0.5 1.4
24 dez 25 dez 26 dez 27 dez 28 dez 29 dez 30 dez	18 11 57.9 18 15 54.5 18 19 51.0 18 23 47.6 18 27 44.1 18 31 40.7 18 35 37.2	23 s 24.8 23 s 23.4 23 s 21.4 23 s 19.0 23 s 16.2 23 s 12.8 23 s 09.0	23 s 06.7 25 s 43.6 27 s 10.7 27 s 18.1 26 s 01.1 23 s 21.9 19 s 29.0	22 s 33.2 22 s 13.4 21 s 53.6 21 s 34.0 21 s 14.9	18 s 41.2 18 s 26.8 18 s 12.6 17 s 58.6 17 s 44.8 17 s 31.3 17 s 18.1	21 s 30.1 21 s 37.6	23 n 10.0 23 n 10.5 23 n 11.0 23 n 11.5 23 n 12.0	22 s 19.6 22 s 18.9 22 s 18.2 22 s 17.5 22 s 16.8 22 s 16.0 22 s 15.3	23 s 36.2 23 s 36.0 23 s 35.9 23 s 35.8 23 s 35.6 23 s 35.5 23 s 35.3	22 s 04.6 22 s 04.4 22 s 04.2 22 s 04.0 22 s 03.8 22 s 03.6 22 s 03.5	02 s 13.8 02 s 13.9 02 s 14.1 02 s 14.2 02 s 14.4 02 s 14.5 02 s 14.6	15 s 3 15 s 3 15 s 3 15 s 4 15 s 4 15 s 4	7.2 9.6 1.7 3.4 4.5
31 dez	18 39 33,8	23 s <b>04</b> .7	14 s 35,4	20 s 39,3	17 s 05,2	21 s 52,1	23 n 13.0	22 s 14.6	23 s 35,2	22 s <b>0</b> 3,3	02 s 14.7	15 s 4	5,1