

DATA	DECLINAÇÃO			VARIÇÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/01/09	-23	0	30,80	12,271	0,9833051	-23,00855556
02/01/09	-22	55	22,50	13,417	0,9832902	-22,92291667
03/01/09	-22	49	46,80	14,554	0,9832798	-22,82966667
04/01/09	-22	43	43,90	15,685	0,9832741	-22,72886111
05/01/09	-22	37	13,90	16,806	0,9832734	-22,62052778
06/01/09	-22	30	17,20	17,917	0,9832779	-22,50477778
07/01/09	-22	22	53,90	19,023	0,9832880	-22,38163889
08/01/09	-22	15	4,10	20,117	0,9833040	-22,25113889
09/01/09	-22	6	48,30	21,198	0,9833263	-22,11341667
10/01/09	-21	58	6,60	22,273	0,9833550	-21,96850000
11/01/09	-21	48	59,20	23,338	0,9833904	-21,81644444
12/01/09	-21	39	26,40	24,390	0,9834324	-21,65733333
13/01/09	-21	29	28,50	25,433	0,9834811	-21,49125000
14/01/09	-21	19	5,60	26,467	0,9835363	-21,31822222
15/01/09	-21	8	18,10	27,487	0,9835976	-21,13836111
16/01/09	-20	57	6,20	28,496	0,9836649	-20,95172222
17/01/09	-20	45	30,30	29,494	0,9837377	-20,75841667
18/01/09	-20	33	30,50	30,479	0,9838158	-20,55847222
19/01/09	-20	21	7,30	31,446	0,9838988	-20,35202778
20/01/09	-20	8	21,10	32,402	0,9839866	-20,13919444
21/01/09	-19	55	12,00	33,344	0,9840787	-19,92000000
22/01/09	-19	41	40,60	34,269	0,9841751	-19,69461111
23/01/09	-19	27	47,10	35,179	0,9842755	-19,46308333
24/01/09	-19	13	32,00	36,071	0,9843797	-19,22555556
25/01/09	-18	58	55,70	36,950	0,9844876	-18,98213889
26/01/09	-18	43	58,40	37,813	0,9845990	-18,73288889
27/01/09	-18	28	40,70	38,654	0,9847138	-18,47797222
28/01/09	-18	13	3,00	39,483	0,9848321	-18,21750000
29/01/09	-17	57	5,50	40,294	0,9849538	-17,95152778
30/01/09	-17	40	48,90	41,088	0,9850789	-17,68025000
31/01/09	-17	24	13,30	41,865	0,9852076	-17,40369444

DATA	DECLINAÇÃO			VARIÇÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/02/09	-17	7	19,40	42,623	0,9853400	-17,12205556
02/02/09	-16	50	7,40	43,367	0,9854762	-16,83538889
03/02/09	-16	32	37,80	44,090	0,9856165	-16,54383333
04/02/09	-16	14	51,10	44,796	0,9857612	-16,24752778
05/02/09	-15	56	47,60	45,488	0,9859106	-15,94655556
06/02/09	-15	38	27,70	46,158	0,9860648	-15,64102778
07/02/09	-15	19	52,00	46,810	0,9862244	-15,33111111
08/02/09	-15	1	0,80	47,450	0,9863893	-15,01688889
09/02/09	-14	41	54,40	48,073	0,9865598	-14,69844444
10/02/09	-14	22	33,30	48,679	0,9867359	-14,37591667
11/02/09	-14	2	57,80	49,271	0,9869176	-14,04938889
12/02/09	-13	43	8,30	49,846	0,9871046	-13,71897222
13/02/09	-13	23	5,20	50,404	0,9872968	-13,38477778
14/02/09	-13	2	48,90	50,948	0,9874937	-13,04691667
15/02/09	-12	42	19,70	51,475	0,9876952	-12,70547222
16/02/09	-12	21	38,10	52,817	0,9879008	-12,36058333
17/02/09	-12	0	4,50	52,475	0,9881103	-12,00125000
18/02/09	-11	39	39,30	52,117	0,9883233	-11,66091667
19/02/09	-11	18	22,90	53,404	0,9885395	-11,30636111
20/02/09	-10	56	55,90	53,842	0,9887587	-10,94886111
21/02/09	-10	35	18,50	54,265	0,9889806	-10,58847222
22/02/09	-10	13	31,20	54,669	0,9892049	-10,22533333
23/02/09	-9	51	34,40	55,052	0,9894314	-9,85955556
24/02/09	-9	29	28,70	55,419	0,9896598	-9,49130556
25/02/09	-9	7	14,30	55,769	0,9898901	-9,12063889
26/02/09	-8	44	51,80	56,100	0,9901221	-8,74772222
27/02/09	-8	22	21,50	56,417	0,9903557	-8,37263889
28/02/09	-7	59	43,80	56,713	0,9905909	-7,99550000

DATA	DECLINAÇÃO			VARIÇÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/03/09	-7	36	59,30	56,990	0,9908277	-7,61647222
02/03/09	-7	14	8,30	57,252	0,9910663	-7,23563889
03/03/09	-6	51	11,20	57,498	0,9913068	-6,85311111
04/03/09	-6	28	8,40	57,727	0,9915494	-6,46900000
05/03/09	-6	5	0,30	57,938	0,9917944	-6,08341667
06/03/09	-5	41	47,40	58,131	0,9920420	-5,69650000
07/03/09	-5	18	30,00	58,310	0,9922925	-5,30833333
08/03/09	-4	55	8,50	58,475	0,9925461	-4,91902778
09/03/09	-4	31	43,20	58,623	0,9928030	-4,52866667
10/03/09	-4	8	14,60	58,756	0,9930634	-4,13738889
11/03/09	-3	44	42,90	58,877	0,9933273	-3,74525000
12/03/09	-3	21	8,50	58,983	0,9935945	-3,35236111
13/03/09	-2	57	31,70	59,075	0,9938650	-2,95880556
14/03/09	-2	33	52,90	59,154	0,9941385	-2,56469444
15/03/09	-2	10	12,30	59,219	0,9944147	-2,17008333
16/03/09	-1	46	30,40	59,265	0,9946934	-1,77511111
17/03/09	-1	22	47,60	59,298	0,9949743	-1,37988889
18/03/09	0	59	4,10	59,317	0,9952570	-0,98447222
19/03/09	0	35	20,40	59,317	0,9955412	-0,58900000
20/03/09	0	11	36,90	59,302	0,9958266	-0,19358333
21/03/09	0	12	6,10	59,275	0,9961128	0,20169444
22/03/09	0	35	48,30	59,229	0,9963996	0,59675000
23/03/09	0	59	29,10	59,167	0,9966866	0,99141667
24/03/09	1	23	8,30	59,092	0,9969737	1,38563889
25/03/09	1	46	45,50	59,000	0,9972604	1,77930556
26/03/09	2	10	20,30	58,890	0,9975466	2,17230556
27/03/09	2	33	52,20	58,767	0,9978320	2,56450000
28/03/09	2	57	21,10	58,627	0,9981166	2,95586111
29/03/09	3	20	46,30	58,471	0,9984004	3,34619444
30/03/09	3	44	7,70	58,302	0,9986832	3,73547222
31/03/09	4	7	24,80	58,115	0,9989652	4,12355556

DATA	DECLINAÇÃO			VARIÇÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/04/09	4	30	37,20	57,913	0,9992466	4,51033333
02/04/09	4	53	44,60	57,698	0,9995276	4,89572222
03/04/09	5	16	46,70	57,467	0,9998084	5,27963889
04/04/09	5	39	43,00	57,219	1,0000893	5,66194444
05/04/09	6	2	33,20	56,960	1,0003706	6,04255556
06/04/09	6	25	17,10	56,688	1,0006524	6,42141667
07/04/09	6	47	54,20	56,400	1,0009350	6,79838889
08/04/09	7	10	24,30	56,102	1,0012184	7,17341667
09/04/09	7	32	47,10	55,792	1,0015028	7,54641667
10/04/09	7	55	2,30	55,467	1,0017879	7,91730556
11/04/09	8	17	9,50	55,129	1,0020738	8,28597222
12/04/09	8	39	8,50	54,779	1,0023603	8,65236111
13/04/09	9	0	58,90	54,415	1,0026471	9,01636111
14/04/09	9	22	40,40	54,038	1,0029341	9,37788889
15/04/09	9	44	12,70	53,646	1,0032209	9,73686111
16/04/09	10	5	35,40	53,240	1,0035072	10,09316667
17/04/09	10	26	48,20	52,819	1,0037928	10,44672222
18/04/09	10	47	50,70	52,385	1,0040773	10,79741667
19/04/09	11	8	42,70	51,937	1,0043604	11,14519444
20/04/09	11	29	23,70	51,473	1,0046418	11,48991667
21/04/09	11	49	53,40	50,994	1,0049212	11,83150000
22/04/09	12	10	11,40	50,502	1,0051982	12,16983333
23/04/09	12	30	17,50	49,998	1,0054726	12,50486111
24/04/09	12	50	11,30	49,475	1,0057441	12,83647222
25/04/09	13	9	52,30	48,940	1,0060124	13,16452778
26/04/09	13	29	20,40	48,392	1,0062774	13,48900000
27/04/09	13	48	35,10	47,827	1,0065390	13,80975000
28/04/09	14	7	36,10	47,248	1,0067972	14,12669444
29/04/09	14	26	23,00	46,656	1,0070522	14,43972222
30/04/09	14	44	55,60	46,050	1,0073041	14,74877778

DATA	DECLINAÇÃO			VARIÇÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/05/09	15	3	13,40	45,429	1,0075531	15,05372222
02/05/09	15	21	16,20	44,798	1,0077996	15,35450000
03/05/09	15	39	3,70	44,152	1,0080438	15,65102778
04/05/09	15	56	35,50	43,492	1,0082859	15,94319444
05/05/09	16	13	51,30	42,823	1,0085262	16,23091667
06/05/09	16	30	51,00	42,142	1,0087649	16,51416667
07/05/09	16	47	34,10	41,446	1,0090021	16,79280556
08/05/09	17	4	0,40	40,742	1,0092378	17,06677778
09/05/09	17	20	9,70	40,025	1,0094721	17,33602778
10/05/09	17	36	1,60	39,296	1,0097048	17,60044444
11/05/09	17	51	35,90	38,556	1,0099360	17,85997222
12/05/09	18	6	52,30	37,804	1,0101654	18,11452778
13/05/09	18	21	50,50	37,042	1,0103928	18,36402778
14/05/09	18	36	30,30	36,265	1,0106181	18,60841667
15/05/09	18	50	51,20	35,477	1,0108410	18,84755556
16/05/09	19	4	53,20	34,677	1,0110612	19,08144444
17/05/09	19	18	35,70	33,865	1,0112785	19,30991667
18/05/09	19	31	58,70	33,044	1,0114926	19,53297222
19/05/09	19	45	1,80	32,208	1,0117031	19,75050000
20/05/09	19	57	44,70	31,363	1,0119097	19,96241667
21/05/09	20	10	7,20	30,504	1,0121122	20,16866667
22/05/09	20	22	8,90	29,638	1,0123102	20,36913889
23/05/09	20	33	49,80	28,760	1,0125033	20,56383333
24/05/09	20	45	9,40	27,871	1,0126914	20,75261111
25/05/09	20	56	7,60	26,973	1,0128743	20,93544444
26/05/09	21	6	44,10	26,067	1,0130518	21,11225000
27/05/09	21	16	58,80	25,150	1,0132241	21,28300000
28/05/09	21	26	51,30	24,223	1,0133912	21,44758333
29/05/09	21	36	21,50	23,290	1,0135533	21,60597222
30/05/09	21	45	29,20	22,346	1,0137108	21,75811111
31/05/09	21	54	14,10	21,394	1,0138640	21,90391667

DATA	DECLINAÇÃO			VARIÇÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/06/09	22	2	36,10	20,435	1,0140131	22,04336111
02/06/09	22	10	35,00	19,469	1,0141584	22,17638889
03/06/09	22	18	10,60	18,498	1,0143002	22,30294444
04/06/09	22	25	22,90	17,523	1,0144386	22,42302778
05/06/09	22	32	11,70	16,540	1,0145738	22,53658333
06/06/09	22	38	36,80	15,550	1,0147059	22,64355556
07/06/09	22	44	38,10	14,558	1,0148350	22,74391667
08/06/09	22	50	15,60	13,560	1,0149611	22,83766667
09/06/09	22	55	29,00	12,554	1,0150841	22,92472222
10/06/09	23	0	18,20	11,546	1,0152039	23,00505556
11/06/09	23	4	43,20	10,535	1,0153205	23,07866667
12/06/09	23	8	43,90	9,519	1,0154337	23,14552778
13/06/09	23	12	20,10	8,498	1,0155433	23,20558333
14/06/09	23	15	31,80	7,473	1,0156492	23,25883333
15/06/09	23	18	18,80	6,446	1,0157510	23,30522222
16/06/09	23	20	41,20	5,417	1,0158485	23,34477778
17/06/09	23	22	38,80	4,383	1,0159415	23,37744444
18/06/09	23	24	11,60	3,348	1,0160296	23,40322222
19/06/09	23	25	19,50	2,313	1,0161125	23,42208333
20/06/09	23	26	2,60	1,279	1,0161899	23,43405556
21/06/09	23	26	20,90	0,244	1,0162615	23,43913889
22/06/09	23	26	14,30	-0,790	1,0163270	23,43730556
23/06/09	23	25	43,00	-1,823	1,0163863	23,42861111
24/06/09	23	24	46,80	-2,856	1,0164392	23,41300000
25/06/09	23	23	25,90	-3,885	1,0164859	23,39052778
26/06/09	23	21	40,30	-4,915	1,0165265	23,36119444
27/06/09	23	19	30,00	-5,940	1,0165612	23,32500000
28/06/09	23	16	55,20	-6,963	1,0165904	23,28200000
29/06/09	23	13	55,80	-7,981	1,0166144	23,23216667
30/06/09	23	10	32,10	-8,996	1,0166335	23,17558333

DATA	DECLINAÇÃO			VARIACÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/07/09	23	6	44,00	-10,008	1,0166480	23,11222222
02/07/09	23	2	31,70	-11,015	1,0166582	23,04213889
03/07/09	22	57	55,30	-12,017	1,0166642	22,96536111
04/07/09	22	52	54,90	-13,012	1,0166664	22,88191667
05/07/09	22	47	30,70	-14,002	1,0166648	22,79186111
06/07/09	22	41	42,80	-14,988	1,0166596	22,69522222
07/07/09	22	35	31,30	-15,967	1,0166508	22,59202778
08/07/09	22	28	56,40	-16,940	1,0166385	22,48233333
09/07/09	22	21	58,20	-17,906	1,0166226	22,36616667
10/07/09	22	14	36,90	-18,867	1,0166032	22,24358333
11/07/09	22	6	52,60	-19,823	1,0165801	22,11461111
12/07/09	21	58	45,40	-20,771	1,0165532	21,97927778
13/07/09	21	50	15,60	-21,710	1,0165225	21,83766667
14/07/09	21	41	23,30	-22,642	1,0164876	21,68980556
15/07/09	21	32	8,80	-23,567	1,0164484	21,53577778
16/07/09	21	22	32,10	-24,485	1,0164047	21,37558333
17/07/09	21	12	33,50	-25,392	1,0163561	21,20930556
18/07/09	21	2	13,30	-26,290	1,0163023	21,03702778
19/07/09	20	51	31,60	-27,177	1,0162430	20,85877778
20/07/09	20	40	28,80	-28,052	1,0161780	20,67466667
21/07/09	20	29	5,10	-28,919	1,0161070	20,48475000
22/07/09	20	17	20,70	-29,773	1,0160297	20,28908333
23/07/09	20	5	16,00	-30,615	1,0159463	20,08777778
24/07/09	19	52	51,20	-31,448	1,0158567	19,88088889
25/07/09	19	40	6,50	-32,269	1,0157611	19,66847222
26/07/09	19	27	2,30	-33,077	1,0156599	19,45063889
27/07/09	19	13	38,80	-33,875	1,0155533	19,22744444
28/07/09	18	59	56,30	-34,660	1,0154417	18,99897222
29/07/09	18	45	55,10	-35,433	1,0153253	18,76530556
30/07/09	18	31	35,50	-36,194	1,0152047	18,52652778
31/07/09	18	16	57,80	-36,944	1,0150799	18,28272222

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	GRAU	MINUTOS	SEGUNDOS			
01/08/09	18	2	2,20	-37,681	1,0149513	18,03394444
02/08/09	17	46	49,10	-38,408	1,0148192	17,78030556
03/08/09	17	31	18,60	-39,123	1,0146837	17,52183333
04/08/09	17	15	31,20	-39,823	1,0145450	17,25866667
05/08/09	16	59	27,10	-40,515	1,0144033	16,99086111
06/08/09	16	43	6,50	-41,194	1,0142587	16,71847222
07/08/09	16	26	29,80	-41,860	1,0141111	16,44161111
08/08/09	16	9	37,20	-42,519	1,0139608	16,16033333
09/08/09	15	52	28,90	-43,162	1,0138076	15,87469444
10/08/09	15	35	5,40	-43,796	1,0136514	15,58483333
11/08/09	15	17	26,70	-44,417	1,0134923	15,29075000
12/08/09	14	59	33,40	-45,025	1,0133300	14,99261111
13/08/09	14	41	25,50	-45,623	1,0131644	14,69041667
14/08/09	14	23	3,50	-46,206	1,0129953	14,38430556
15/08/09	14	4	27,60	-46,777	1,0128223	14,07433333
16/08/09	13	45	38,20	-47,335	1,0126452	13,76061111
17/08/09	13	26	35,50	-47,879	1,0124637	13,44319444
18/08/09	13	7	20,00	-48,406	1,0122775	13,12222222
19/08/09	12	47	52,00	-48,921	1,0120864	12,79777778
20/08/09	12	28	11,80	-49,421	1,0118903	12,46994444
21/08/09	12	8	19,80	-49,906	1,0116892	12,13883333
22/08/09	11	48	16,30	-50,377	1,0114830	11,80452778
23/08/09	11	28	1,70	-50,835	1,0112721	11,46713889
24/08/09	11	7	36,20	-51,279	1,0110567	11,12672222
25/08/09	10	47	0,30	-51,708	1,0108371	10,78341667
26/08/09	10	26	14,20	-52,125	1,0106137	10,43727778
27/08/09	10	5	18,30	-52,527	1,0103867	10,08841667
28/08/09	9	44	12,90	-52,915	1,0101566	9,73691667
29/08/09	9	22	58,40	-53,290	1,0099236	9,38288889

30/08/09	9	1	35,00	-53,652	1,0096881	9,02638889
31/08/09	8	40	3,10	-54,000	1,0094504	8,66752778

DATA	DECLINAÇÃO			VARIACÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/09/09	8	18	23,00	-54,335	1,0092106	8,30638889
02/09/09	7	56	35,00	-54,660	1,0089690	7,94305556
03/09/09	7	34	39,30	-54,973	1,0087259	7,57758333
04/09/09	7	12	36,30	-55,269	1,0084813	7,21008333
05/09/09	6	50	26,40	-55,554	1,0082355	6,84066667
06/09/09	6	28	9,70	-55,829	1,0079885	6,46936111
07/09/09	6	5	46,60	-56,092	1,0077405	6,09627778
08/09/09	5	43	17,30	-56,342	1,0074913	5,72147222
09/09/09	5	20	42,20	-56,577	1,0072409	5,34505556
10/09/09	4	58	1,60	-56,802	1,0069892	4,96711111
11/09/09	4	35	15,70	-57,013	1,0067361	4,58769444
12/09/09	4	12	25,00	-57,208	1,0064813	4,20694444
13/09/09	3	49	29,70	-57,394	1,0062245	3,82491667
14/09/09	3	26	30,10	-57,563	1,0059656	3,44169444
15/09/09	3	3	26,70	-57,715	1,0057043	3,05741667
16/09/09	2	40	19,80	-57,852	1,0054402	2,67216667
17/09/09	2	17	9,80	-57,975	1,0051733	2,28605556
18/09/09	1	53	57,00	-58,085	1,0049033	1,89916667
19/09/09	1	30	41,70	-58,179	1,0046304	1,51158333
20/09/09	1	7	24,40	-58,256	1,0043544	1,12344444
21/09/09	0	44	5,40	-58,321	1,0040758	0,73483333
22/09/09	0	20	45,00	-58,371	1,0037946	0,34583333
23/09/09	0	2	36,40	-58,404	1,0035112	-0,04344444
24/09/09	0	25	58,40	-58,423	1,0032259	-0,43288889
25/09/09	0	49	20,70	-58,427	1,0029390	-0,82241667
26/09/09	-1	12	42,90	-58,417	1,0026509	-1,21191667
27/09/09	-1	36	4,70	-58,394	1,0023620	-1,60130556
28/09/09	-1	59	25,80	-58,356	1,0020724	-1,99050000
29/09/09	-2	22	45,80	-58,302	1,0017826	-2,37938889
30/09/09	-2	46	4,30	-58,235	1,0014927	-2,76786111

DATA	DECLINAÇÃO			VARIACÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/10/09	-3	9	21,10	-58,156	1,0012032	-3,15586111
02/10/09	-3	32	35,80	-58,063	1,0009143	-3,54327778
03/10/09	-3	55	48,10	-57,954	1,0006261	-3,93002778
04/10/09	-4	18	57,60	-57,833	1,0003390	-4,31600000
05/10/09	-4	42	4,10	-57,698	1,0000530	-4,70113889
06/10/09	-5	5	7,10	-57,548	0,9997682	-5,08530556
07/10/09	-5	28	6,40	-57,388	0,9994848	-5,46844444
08/10/09	-5	51	1,70	-57,210	0,9992025	-5,85047222
09/10/09	-6	13	52,50	-57,019	0,9989215	-6,23125000
10/10/09	-6	36	38,60	-56,813	0,9986414	-6,61072222
11/10/09	-6	59	19,50	-56,590	0,9983621	-6,98875000
12/10/09	-7	21	54,90	-56,350	0,9980833	-7,36525000
13/10/09	-7	44	24,30	-56,096	0,9978049	-7,74008333
14/10/09	-8	6	47,50	-55,825	0,9975264	-8,11319444
15/10/09	-8	29	3,90	-55,533	0,9972477	-8,48441667
16/10/09	-8	51	13,10	-55,229	0,9969686	-8,85363889
17/10/09	-9	13	14,90	-54,908	0,9966891	-9,22080556
18/10/09	-9	35	8,70	-54,567	0,9964091	-9,58575000
19/10/09	-9	56	54,10	-54,213	0,9961286	-9,94836111
20/10/09	-10	18	30,90	-53,842	0,9958478	-10,30858333
21/10/09	-10	39	58,50	-53,450	0,9955669	-10,66625000
22/10/09	-11	1	16,50	-53,042	0,9952861	-11,02125000
23/10/09	-11	22	24,50	-52,621	0,9950058	-11,37347222
24/10/09	-11	43	22,30	-52,181	0,9947262	-11,72286111
25/10/09	-12	4	9,20	-51,723	0,9944476	-12,06922222
26/10/09	-12	24	45,00	-51,250	0,9941704	-12,41250000
27/10/09	-12	45	9,20	-50,758	0,9938948	-12,75255556
28/10/09	-13	5	21,40	-50,252	0,9936212	-13,08927778

29/10/09	-13	25	21,30	-49,731	0,9933499	-13,42258333
30/10/09	-13	45	8,50	-49,192	0,9930812	-13,75236111
31/10/09	-14	4	42,50	-48,638	0,9928153	-14,07847222

DATA	DECLINAÇÃO			VARIACÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/11/09	-14	24	3,10	-48,067	0,9925527	-14,40086111
02/11/09	-14	43	9,70	-47,479	0,9922935	-14,71936111
03/11/09	-15	2	2,10	-46,879	0,9920379	-15,03391667
04/11/09	-15	20	39,90	-46,260	0,9917860	-15,34441667
05/11/09	-15	39	2,60	-45,627	0,9915380	-15,65072222
06/11/09	-15	57	10,00	-44,977	0,9912937	-15,95277778
07/11/09	-16	15	1,50	-44,308	0,9910531	-16,25041667
08/11/09	-16	32	36,80	-43,625	0,9908161	-16,54355556
09/11/09	-16	49	55,50	-42,925	0,9905822	-16,83208333
10/11/09	-17	6	57,20	-42,206	0,9903514	-17,11588889
11/11/09	-17	23	41,40	-41,467	0,9901233	-17,39483333
12/11/09	-17	40	7,60	-40,713	0,9898977	-17,66877778
13/11/09	-17	56	15,60	-39,944	0,9896744	-17,93766667
14/11/09	-18	12	4,90	-39,156	0,9894531	-18,20136111
15/11/09	-18	27	35,10	-38,352	0,9892338	-18,45975000
16/11/09	-18	42	45,80	-37,531	0,9890164	-18,71272222
17/11/09	-18	57	36,60	-36,694	0,9888009	-18,96016667
18/11/09	-19	12	7,10	-35,842	0,9885874	-19,20197222
19/11/09	-19	26	17,00	-34,971	0,9883761	-19,43805556
20/11/09	-19	40	5,70	-34,085	0,9881671	-19,66825000
21/11/09	-19	53	33,10	-33,188	0,9879606	-19,89252778
22/11/09	-20	6	38,70	-32,271	0,9877569	-20,11075000
23/11/09	-20	19	22,10	-31,340	0,9875562	-20,32280556
24/11/09	-20	31	43,00	-30,394	0,9873588	-20,52861111
25/11/09	-20	43	41,00	-29,435	0,9871650	-20,72805556
26/11/09	-20	55	15,90	-28,463	0,9869751	-20,92108333
27/11/09	-21	6	27,20	-27,477	0,9867893	-21,10755556
28/11/09	-21	17	14,80	-26,479	0,9866080	-21,28744444
29/11/09	-21	27	38,20	-25,467	0,9864315	-21,46061111
30/11/09	-21	37	37,20	-24,444	0,9862601	-21,62700000

DATA	DECLINAÇÃO			VARIACÃO HORÁRIA (segundos)	DISTÂNCIA À TERRA	DECIMAL
	GRAU	MINUTOS	SEGUNDOS			
01/12/09	-21	47	11,50	-23,410	0,9860941	-21,78652778
02/12/09	-21	56	20,90	-22,367	0,9859337	-21,93913889
03/12/09	-22	5	5,10	-21,310	0,9857790	-22,08475000
04/12/09	-22	13	23,80	-20,244	0,9856301	-22,22327778
05/12/09	-22	21	16,80	-19,167	0,9854870	-22,35466667
06/12/09	-22	28	43,80	-18,077	0,9853496	-22,47883333
07/12/09	-22	35	44,50	-16,979	0,9852176	-22,59569444
08/12/09	-22	42	18,80	-15,871	0,9850907	-22,70522222
09/12/09	-22	48	26,30	-14,752	0,9849687	-22,80730556
10/12/09	-22	54	6,90	-13,625	0,9848513	-22,90191667
11/12/09	-22	59	20,30	-12,492	0,9847381	-22,98897222
12/12/09	-23	4	6,50	-11,352	0,9846290	-23,06847222
13/12/09	-23	8	25,20	-10,204	0,9845237	-23,14033333
14/12/09	-23	12	16,30	-9,050	0,9844220	-23,20452778
15/12/09	-23	15	39,60	-7,892	0,9843240	-23,26100000
16/12/09	-23	18	35,10	-6,729	0,9842295	-23,30975000
17/12/09	-23	21	2,60	-5,563	0,9841385	-23,35072222
18/12/09	-23	23	2,10	-4,394	0,9840512	-23,38391667
19/12/09	-23	24	33,50	-3,221	0,9839675	-23,40930556
20/12/09	-23	25	36,70	-2,046	0,9838875	-23,42686111
21/12/09	-23	26	11,70	-0,869	0,9838116	-23,43658333
22/12/09	-23	26	18,40	0,308	0,9837398	-23,43844444
23/12/09	-23	25	56,90	1,483	0,9836723	-23,43247222
24/12/09	-23	25	7,20	2,660	0,9836094	-23,41866667
25/12/09	-23	23	49,20	3,835	0,9835513	-23,39700000
26/12/09	-23	22	3,10	5,008	0,9834983	-23,36752778
27/12/09	-23	19	48,80	6,179	0,9834507	-23,33022222

28/12/09	-23	17	6,50	7,348	0,9834087	-23,28513889
29/12/09	-23	13	56,10	8,510	0,9833727	-23,23225000
30/12/09	-23	10	18,00	9,669	0,9833429	-23,17166667
31/12/09	-23	6	12,00	10,823	0,9833196	-23,10333333
01/01/10	-23	1	38,50		0,9833029	-23,02736111