

## EXTRACT FROM SECTION G

The following pages replace those in the printed almanac for 2009. This is necessary due to an unpredictable error in the transit times. Mostly the times are in error by  $0^m1$  or  $0^m2$ ; occasionally, the error reached  $0^m4$ . The astrometric right ascension, declination and magnitude are also tabulated but are unchanged.

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Geocentric ephemeris, magnitude, time of ephemeris transit for:	
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Davida .....	G14
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This symbol indicates that these data or auxiliary material may also be found on *The Astronomical Almanac Online* at <http://asa.usno.navy.mil> and <http://asa.hmnao.com>

**Note**

A daily geocentric astrometric ephemeris is tabulated for those of the 15 larger minor planets (Ceres, Pallas, Juno, Vesta, Hebe, Iris, Flora, Metis, Hygiea, Eunomia, Psyche, Europa, Cybele, Davida and Interamnia) that have an opposition date occurring between 2009 January 1 and January 31 of the following year. The daily ephemeris of each object is centred about the opposition date, which is repeated at the bottom of the first column and at the top of the second column. The highlighted dates indicate when the object is stationary in right ascension. It is very occasionally possible for a stationary date to be outside the period tabulated.

Linear interpolation is sufficient for the magnitude and ephemeris transit, but for the right ascension and declination second differences are significant. The tabulations are similar to those for Pluto, and the use of the data is similar to that for major planets.

GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem-eris Transit	Date	Astrometric					Vis. Mag.	Ephem-eris Transit
	R.A.		Dec.						R.A.		Dec.				
	h	m s	°	'	"				h	m s	°	'	"		
<b>2008 Dec.</b> 28	11 15	20.2	+17 46	28	7.9	4 47.8	<b>2009 Feb.</b> 25	11 02	06.1	+24 20	22	6.9	0 42.5		
29	11 15	52.2	+17 49	41	7.9	4 44.4	26	11 01	14.1	+24 26	51	6.9	0 37.7		
30	11 16	22.8	+17 53	04	7.9	4 41.0	27	11 00	21.7	+24 33	09	6.9	0 32.9		
31	11 16	52.0	+17 56	37	7.9	4 37.5	28	10 59	29.0	+24 39	15	6.9	0 28.1		
<b>2009 Jan.</b> 1	11 17	19.7	+18 00	22	7.9	4 34.0	<b>Mar.</b> 1	10 58	36.1	+24 45	09	6.9	0 23.3		
2	11 17	45.9	+18 04	16	7.8	4 30.5	2	10 57	43.1	+24 50	51	6.9	0 18.5		
3	11 18	10.6	+18 08	21	7.8	4 27.0	3	10 56	49.9	+24 56	20	6.9	0 13.7		
4	11 18	33.7	+18 12	37	7.8	4 23.5	4	10 55	56.8	+25 01	36	6.9	0 08.9		
5	11 18	55.4	+18 17	03	7.8	4 19.9	5	10 55	03.8	+25 06	38	6.9	0 04.1		
6	11 19	15.4	+18 21	39	7.8	4 16.3	6	10 54	10.9	+25 11	26	6.9	23 54.5		
7	11 19	34.0	+18 26	26	7.8	4 12.7	7	10 53	18.2	+25 16	00	7.0	23 49.7		
8	11 19	50.9	+18 31	23	7.7	4 09.0	8	10 52	25.9	+25 20	19	7.0	23 44.9		
9	11 20	06.2	+18 36	30	7.7	4 05.3	9	10 51	33.9	+25 24	24	7.0	23 40.1		
10	11 20	20.0	+18 41	47	7.7	4 01.6	10	10 50	42.4	+25 28	15	7.0	23 35.3		
11	11 20	32.1	+18 47	13	7.7	3 57.9	11	10 49	51.3	+25 31	50	7.0	23 30.6		
12	11 20	42.6	+18 52	50	7.7	3 54.1	12	10 49	00.9	+25 35	10	7.0	23 25.8		
13	11 20	51.4	+18 58	36	7.6	3 50.3	13	10 48	11.0	+25 38	15	7.1	23 21.1		
14	11 20	58.6	+19 04	32	7.6	3 46.5	14	10 47	21.9	+25 41	04	7.1	23 16.3		
15	11 21	04.1	+19 10	37	7.6	3 42.7	15	10 46	33.5	+25 43	38	7.1	23 11.6		
16	11 21	07.9	+19 16	51	7.6	3 38.8	16	10 45	46.0	+25 45	57	7.1	23 06.9		
<b>Jan.</b> 17	11 21	10.0	+19 23	15	7.6	3 34.9	17	10 44	59.3	+25 48	00	7.1	23 02.2		
18	11 21	10.3	+19 29	47	7.5	3 31.0	18	10 44	13.6	+25 49	47	7.2	22 57.5		
19	11 21	09.0	+19 36	28	7.5	3 27.0	19	10 43	28.8	+25 51	18	7.2	22 52.9		
20	11 21	06.0	+19 43	17	7.5	3 23.0	20	10 42	45.1	+25 52	34	7.2	22 48.2		
21	11 21	01.2	+19 50	14	7.5	3 19.0	21	10 42	02.5	+25 53	35	7.2	22 43.6		
22	11 20	54.7	+19 57	19	7.4	3 15.0	22	10 41	21.1	+25 54	20	7.2	22 39.0		
23	11 20	46.4	+20 04	32	7.4	3 10.9	23	10 40	40.9	+25 54	49	7.3	22 34.4		
24	11 20	36.4	+20 11	51	7.4	3 06.8	24	10 40	01.9	+25 55	03	7.3	22 29.9		
25	11 20	24.7	+20 19	17	7.4	3 02.7	25	10 39	24.2	+25 55	01	7.3	22 25.3		
26	11 20	11.3	+20 26	50	7.4	2 58.5	26	10 38	47.8	+25 54	44	7.3	22 20.8		
27	11 19	56.1	+20 34	28	7.3	2 54.3	27	10 38	12.9	+25 54	12	7.3	22 16.3		
28	11 19	39.3	+20 42	12	7.3	2 50.1	28	10 37	39.3	+25 53	25	7.4	22 11.9		
29	11 19	20.7	+20 50	01	7.3	2 45.9	29	10 37	07.2	+25 52	24	7.4	22 07.4		
30	11 19	00.5	+20 57	54	7.3	2 41.6	30	10 36	36.6	+25 51	07	7.4	22 03.0		
31	11 18	38.6	+21 05	52	7.3	2 37.3	31	10 36	07.5	+25 49	37	7.4	21 58.6		
<b>Feb.</b> 1	11 18	15.1	+21 13	53	7.2	2 33.0	<b>Apr.</b> 1	10 35	39.9	+25 47	52	7.4	21 54.3		
2	11 17	49.9	+21 21	57	7.2	2 28.6	2	10 35	13.8	+25 45	53	7.5	21 49.9		
3	11 17	23.2	+21 30	04	7.2	2 24.2	3	10 34	49.4	+25 43	40	7.5	21 45.6		
4	11 16	54.9	+21 38	12	7.2	2 19.8	4	10 34	26.5	+25 41	14	7.5	21 41.3		
5	11 16	25.1	+21 46	22	7.2	2 15.4	5	10 34	05.3	+25 38	34	7.5	21 37.1		
6	11 15	53.7	+21 54	33	7.1	2 11.0	6	10 33	45.6	+25 35	42	7.5	21 32.8		
7	11 15	20.9	+22 02	45	7.1	2 06.5	7	10 33	27.6	+25 32	37	7.6	21 28.6		
8	11 14	46.6	+22 10	56	7.1	2 02.0	8	10 33	11.2	+25 29	19	7.6	21 24.4		
9	11 14	11.0	+22 19	06	7.1	1 57.5	9	10 32	56.4	+25 25	49	7.6	21 20.3		
10	11 13	33.9	+22 27	15	7.1	1 52.9	10	10 32	43.3	+25 22	07	7.6	21 16.2		
11	11 12	55.6	+22 35	23	7.0	1 48.3	11	10 32	31.7	+25 18	14	7.6	21 12.1		
12	11 12	15.9	+22 43	28	7.0	1 43.7	12	10 32	21.8	+25 14	09	7.7	21 08.0		
13	11 11	35.0	+22 51	30	7.0	1 39.1	13	10 32	13.6	+25 09	53	7.7	21 03.9		
14	11 10	52.9	+22 59	28	7.0	1 34.5	14	10 32	07.0	+25 05	25	7.7	20 59.9		
15	11 10	09.6	+23 07	22	7.0	1 29.9	15	10 32	02.0	+25 00	47	7.7	20 55.9		
16	11 09	25.3	+23 15	12	7.0	1 25.2	16	10 31	58.6	+24 55	58	7.7	20 52.0		
17	11 08	39.9	+23 22	56	6.9	1 20.5	<b>Apr.</b> 17	10 31	56.8	+24 50	59	7.8	20 48.0		
18	11 07	53.4	+23 30	34	6.9	1 15.8	18	10 31	56.6	+24 45	50	7.8	20 44.1		
19	11 07	06.1	+23 38	05	6.9	1 11.1	19	10 31	58.1	+24 40	31	7.8	20 40.2		
20	11 06	17.9	+23 45	29	6.9	1 06.4	20	10 32	01.1	+24 35	02	7.8	20 36.4		
21	11 05	28.9	+23 52	46	6.9	1 01.6	21	10 32	05.8	+24 29	23	7.8	20 32.5		
22	11 04	39.1	+23 59	54	6.9	0 56.9	22	10 32	11.9	+24 23	35	7.9	20 28.7		
23	11 03	48.7	+24 06	53	6.9	0 52.1	23	10 32	19.7	+24 17	38	7.9	20 25.0		
24	11 02	57.7	+24 13	43	6.9	0 47.3	24	10 32	29.0	+24 11	33	7.9	20 21.2		
<b>Feb.</b> 25	11 02	06.1	+24 20	22	6.9	0 42.5	<b>Apr.</b> 25	10 32	39.9	+24 05	18	7.9	20 17.5		

Second transit for Ceres 2009 March 5<sup>d</sup> 23<sup>h</sup> 59<sup>m</sup>3

JUNO, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit
	R.A.		Dec.						R.A.		Dec.				
	h	m	s	°	'				"	h	m	s	°		
<b>2009 July 24</b>	0 08	14.0	+	3 56	42	9.2	4 00.8	<b>2009 Sept. 21</b>	23 59	44.3	-	3 50	34	7.6	0 00.3
<b>25</b>	0 08	45.1	+	3 55	38	9.2	3 57.3	<b>22</b>	23 59	03.0	-	4 03	40	7.6	23 51.0
<b>26</b>	0 09	14.9	+	3 54	22	9.2	3 53.9	<b>23</b>	23 58	21.6	-	4 16	46	7.6	23 46.4
<b>27</b>	0 09	43.5	+	3 52	51	9.2	3 50.4	<b>24</b>	23 57	40.0	-	4 29	50	7.7	23 41.8
<b>28</b>	0 10	10.8	+	3 51	08	9.1	3 47.0	<b>25</b>	23 56	58.4	-	4 42	52	7.7	23 37.2
<b>29</b>	0 10	36.8	+	3 49	11	9.1	3 43.5	<b>26</b>	23 56	16.9	-	4 55	50	7.7	23 32.5
<b>30</b>	0 11	01.5	+	3 47	00	9.1	3 39.9	<b>27</b>	23 55	35.5	-	5 08	44	7.7	23 27.9
<b>31</b>	0 11	24.9	+	3 44	36	9.1	3 36.4	<b>28</b>	23 54	54.3	-	5 21	34	7.7	23 23.3
<b>Aug. 1</b>	0 11	47.0	+	3 41	57	9.0	3 32.8	<b>29</b>	23 54	13.4	-	5 34	17	7.8	23 18.7
<b>2</b>	0 12	07.7	+	3 39	04	9.0	3 29.2	<b>30</b>	23 53	32.8	-	5 46	55	7.8	23 14.1
<b>3</b>	0 12	27.0	+	3 35	57	9.0	3 25.6	<b>Oct. 1</b>	23 52	52.6	-	5 59	25	7.8	23 09.5
<b>4</b>	0 12	45.0	+	3 32	35	9.0	3 22.0	<b>2</b>	23 52	12.9	-	6 11	47	7.8	23 04.9
<b>5</b>	0 13	01.6	+	3 28	58	8.9	3 18.3	<b>3</b>	23 51	33.8	-	6 24	00	7.8	23 00.4
<b>6</b>	0 13	16.8	+	3 25	06	8.9	3 14.6	<b>4</b>	23 50	55.3	-	6 36	04	7.8	22 55.8
<b>7</b>	0 13	30.5	+	3 21	00	8.9	3 10.9	<b>5</b>	23 50	17.5	-	6 47	58	7.9	22 51.3
<b>8</b>	0 13	42.8	+	3 16	38	8.9	3 07.2	<b>6</b>	23 49	40.5	-	6 59	41	7.9	22 46.7
<b>9</b>	0 13	53.7	+	3 12	01	8.8	3 03.4	<b>7</b>	23 49	04.2	-	7 11	13	7.9	22 42.2
<b>10</b>	0 14	03.1	+	3 07	09	8.8	2 59.7	<b>8</b>	23 48	28.9	-	7 22	33	7.9	22 37.7
<b>11</b>	0 14	11.0	+	3 02	01	8.8	2 55.9	<b>9</b>	23 47	54.4	-	7 33	40	7.9	22 33.2
<b>12</b>	0 14	17.4	+	2 56	37	8.8	2 52.0	<b>10</b>	23 47	21.0	-	7 44	34	8.0	22 28.8
<b>13</b>	0 14	22.3	+	2 50	57	8.7	2 48.2	<b>11</b>	23 46	48.7	-	7 55	14	8.0	22 24.3
<b>14</b>	0 14	25.7	+	2 45	02	8.7	2 44.3	<b>12</b>	23 46	17.4	-	8 05	40	8.0	22 19.9
<b>Aug. 15</b>	0 14	27.6	+	2 38	51	8.7	2 40.4	<b>13</b>	23 45	47.4	-	8 15	51	8.0	22 15.5
<b>16</b>	0 14	28.0	+	2 32	23	8.6	2 36.5	<b>14</b>	23 45	18.6	-	8 25	47	8.0	22 11.1
<b>17</b>	0 14	26.8	+	2 25	40	8.6	2 32.5	<b>15</b>	23 44	51.1	-	8 35	27	8.1	22 06.7
<b>18</b>	0 14	24.1	+	2 18	41	8.6	2 28.5	<b>16</b>	23 44	24.9	-	8 44	51	8.1	22 02.4
<b>19</b>	0 14	19.9	+	2 11	25	8.6	2 24.5	<b>17</b>	23 44	00.1	-	8 53	58	8.1	21 58.0
<b>20</b>	0 14	14.1	+	2 03	54	8.5	2 20.5	<b>18</b>	23 43	36.8	-	9 02	49	8.1	21 53.8
<b>21</b>	0 14	06.8	+	1 56	07	8.5	2 16.5	<b>19</b>	23 43	14.9	-	9 11	22	8.1	21 49.5
<b>22</b>	0 13	58.0	+	1 48	04	8.5	2 12.4	<b>20</b>	23 42	54.6	-	9 19	37	8.1	21 45.2
<b>23</b>	0 13	47.6	+	1 39	45	8.5	2 08.3	<b>21</b>	23 42	35.9	-	9 27	34	8.2	21 41.0
<b>24</b>	0 13	35.8	+	1 31	11	8.4	2 04.1	<b>22</b>	23 42	18.7	-	9 35	14	8.2	21 36.8
<b>25</b>	0 13	22.5	+	1 22	22	8.4	2 00.0	<b>23</b>	23 42	03.2	-	9 42	35	8.2	21 32.7
<b>26</b>	0 13	07.7	+	1 13	17	8.4	1 55.8	<b>24</b>	23 41	49.4	-	9 49	38	8.2	21 28.5
<b>27</b>	0 12	51.5	+	1 03	58	8.3	1 51.6	<b>25</b>	23 41	37.2	-	9 56	22	8.2	21 24.4
<b>28</b>	0 12	33.8	+	0 54	24	8.3	1 47.4	<b>26</b>	23 41	26.8	-	10 02	48	8.3	21 20.3
<b>29</b>	0 12	14.7	+	0 44	36	8.3	1 43.1	<b>27</b>	23 41	18.1	-	10 08	55	8.3	21 16.3
<b>30</b>	0 11	54.2	+	0 34	33	8.3	1 38.9	<b>28</b>	23 41	11.2	-	10 14	43	8.3	21 12.3
<b>31</b>	0 11	32.4	+	0 24	17	8.2	1 34.6	<b>29</b>	23 41	06.0	-	10 20	13	8.3	21 08.3
<b>Sept. 1</b>	0 11	09.3	+	0 13	48	8.2	1 30.2	<b>30</b>	23 41	02.6	-	10 25	24	8.3	21 04.3
<b>2</b>	0 10	44.8	+	0 03	05	8.2	1 25.9	<b>Oct. 31</b>	23 41	01.0	-	10 30	16	8.4	21 00.4
<b>3</b>	0 10	19.0	-	0 07	50	8.1	1 21.5	<b>Nov. 1</b>	23 41	01.2	-	10 34	50	8.4	20 56.5
<b>4</b>	0 09	52.0	-	0 18	58	8.1	1 17.2	<b>2</b>	23 41	03.1	-	10 39	05	8.4	20 52.6
<b>5</b>	0 09	23.8	-	0 30	18	8.1	1 12.8	<b>3</b>	23 41	06.9	-	10 43	02	8.4	20 48.8
<b>6</b>	0 08	54.5	-	0 41	49	8.1	1 08.3	<b>4</b>	23 41	12.5	-	10 46	40	8.4	20 44.9
<b>7</b>	0 08	23.9	-	0 53	30	8.0	1 03.9	<b>5</b>	23 41	19.9	-	10 50	00	8.4	20 41.2
<b>8</b>	0 07	52.3	-	1 05	23	8.0	0 59.5	<b>6</b>	23 41	29.0	-	10 53	02	8.5	20 37.4
<b>9</b>	0 07	19.6	-	1 17	25	8.0	0 55.0	<b>7</b>	23 41	40.0	-	10 55	46	8.5	20 33.7
<b>10</b>	0 06	45.9	-	1 29	36	7.9	0 50.5	<b>8</b>	23 41	52.7	-	10 58	12	8.5	20 30.0
<b>11</b>	0 06	11.3	-	1 41	56	7.9	0 46.0	<b>9</b>	23 42	07.3	-	11 00	20	8.5	20 26.3
<b>12</b>	0 05	35.7	-	1 54	24	7.9	0 41.5	<b>10</b>	23 42	23.6	-	11 02	11	8.5	20 22.7
<b>13</b>	0 04	59.3	-	2 06	59	7.8	0 36.9	<b>11</b>	23 42	41.7	-	11 03	44	8.6	20 19.1
<b>14</b>	0 04	22.0	-	2 19	41	7.8	0 32.4	<b>12</b>	23 43	01.6	-	11 04	59	8.6	20 15.5
<b>15</b>	0 03	44.1	-	2 32	29	7.8	0 27.8	<b>13</b>	23 43	23.3	-	11 05	57	8.6	20 12.0
<b>16</b>	0 03	05.4	-	2 45	21	7.8	0 23.2	<b>14</b>	23 43	46.7	-	11 06	39	8.6	20 08.4
<b>17</b>	0 02	26.1	-	2 58	19	7.7	0 18.7	<b>15</b>	23 44	11.9	-	11 07	03	8.6	20 04.9
<b>18</b>	0 01	46.3	-	3 11	19	7.7	0 14.1	<b>16</b>	23 44	38.9	-	11 07	10	8.6	20 01.5
<b>19</b>	0 01	06.0	-	3 24	23	7.7	0 09.5	<b>17</b>	23 45	07.5	-	11 07	01	8.7	19 58.1
<b>20</b>	0 00	25.3	-	3 37	28	7.6	0 04.9	<b>18</b>	23 45	37.9	-	11 06	36	8.7	19 54.6
<b>Sept. 21</b>	23 59	44.3	-	3 50	34	7.6	0 00.3	<b>Nov. 19</b>	23 46	10.0	-	11 05	54	8.7	19 51.3

Second transit for Juno 2009 September 21<sup>d</sup> 23<sup>h</sup> 55<sup>m</sup>6

HEBE, 2009

G7

GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit
	R.A.			Dec.					R.A.			Dec.			
	h	m	s	°	'				''	h	m	s	°		
<b>2009 Mar.</b>	<b>4</b>	15 28 01.3	-	0 59 56	10.7	4 40.2	<b>2009 May</b>	<b>2</b>	15 06 11.7	+	5 51 34	9.9	0 26.4		
	<b>5</b>	15 28 19.0	-	0 54 11	10.7	4 36.6		<b>3</b>	15 05 17.9	+	5 56 39	9.9	0 21.6		
	<b>6</b>	15 28 35.4	-	0 48 19	10.7	4 32.9		<b>4</b>	15 04 23.9	+	6 01 33	9.9	0 16.8		
	<b>7</b>	15 28 50.4	-	0 42 20	10.7	4 29.3		<b>5</b>	15 03 29.6	+	6 06 16	9.9	0 12.0		
	<b>8</b>	15 29 04.1	-	0 36 15	10.7	4 25.5		<b>6</b>	15 02 35.1	+	6 10 47	9.9	0 07.1		
	<b>9</b>	15 29 16.4	-	0 30 04	10.7	4 21.8		<b>7</b>	15 01 40.6	+	6 15 05	9.9	0 02.3		
	<b>10</b>	15 29 27.3	-	0 23 47	10.6	4 18.1		<b>8</b>	15 00 46.0	+	6 19 12	9.9	23 52.6		
	<b>11</b>	15 29 36.8	-	0 17 23	10.6	4 14.3		<b>9</b>	14 59 51.4	+	6 23 06	9.9	23 47.8		
	<b>12</b>	15 29 44.9	-	0 10 54	10.6	4 10.5		<b>10</b>	14 58 56.8	+	6 26 48	9.9	23 42.9		
	<b>13</b>	15 29 51.5	-	0 04 19	10.6	4 06.7		<b>11</b>	14 58 02.4	+	6 30 17	9.9	23 38.1		
	<b>14</b>	15 29 56.7	+	0 02 22	10.6	4 02.8		<b>12</b>	14 57 08.1	+	6 33 33	9.9	23 33.3		
	<b>15</b>	15 30 00.5	+	0 09 08	10.6	3 58.9		<b>13</b>	14 56 14.0	+	6 36 36	9.9	23 28.5		
	<b>16</b>	15 30 02.8	+	0 15 59	10.5	3 55.0		<b>14</b>	14 55 20.2	+	6 39 26	9.9	23 23.6		
	<b>Mar. 17</b>	15 30 03.7	+	0 22 56	10.5	3 51.1		<b>15</b>	14 54 26.7	+	6 42 02	9.9	23 18.8		
	<b>18</b>	15 30 03.0	+	0 29 58	10.5	3 47.2		<b>16</b>	14 53 33.6	+	6 44 25	9.9	23 14.0		
	<b>19</b>	15 30 00.9	+	0 37 04	10.5	3 43.2		<b>17</b>	14 52 40.9	+	6 46 34	9.9	23 09.2		
	<b>20</b>	15 29 57.3	+	0 44 15	10.5	3 39.2		<b>18</b>	14 51 48.7	+	6 48 30	9.9	23 04.4		
	<b>21</b>	15 29 52.2	+	0 51 30	10.5	3 35.2		<b>19</b>	14 50 57.0	+	6 50 11	10.0	22 59.7		
	<b>22</b>	15 29 45.6	+	0 58 50	10.4	3 31.1		<b>20</b>	14 50 05.9	+	6 51 39	10.0	22 54.9		
	<b>23</b>	15 29 37.5	+	1 06 13	10.4	3 27.1		<b>21</b>	14 49 15.4	+	6 52 53	10.0	22 50.1		
	<b>24</b>	15 29 27.9	+	1 13 40	10.4	3 23.0		<b>22</b>	14 48 25.6	+	6 53 53	10.0	22 45.4		
	<b>25</b>	15 29 16.7	+	1 21 10	10.4	3 18.8		<b>23</b>	14 47 36.6	+	6 54 39	10.0	22 40.7		
	<b>26</b>	15 29 04.1	+	1 28 43	10.4	3 14.7		<b>24</b>	14 46 48.2	+	6 55 10	10.0	22 35.9		
	<b>27</b>	15 28 50.0	+	1 36 19	10.3	3 10.5		<b>25</b>	14 46 00.7	+	6 55 28	10.0	22 31.2		
	<b>28</b>	15 28 34.4	+	1 43 58	10.3	3 06.3		<b>26</b>	14 45 14.1	+	6 55 32	10.0	22 26.5		
	<b>29</b>	15 28 17.3	+	1 51 38	10.3	3 02.1		<b>27</b>	14 44 28.4	+	6 55 22	10.1	22 21.9		
	<b>30</b>	15 27 58.7	+	1 59 21	10.3	2 57.9		<b>28</b>	14 43 43.6	+	6 54 58	10.1	22 17.2		
	<b>31</b>	15 27 38.6	+	2 07 04	10.3	2 53.6		<b>29</b>	14 42 59.8	+	6 54 21	10.1	22 12.6		
<b>Apr.</b>	<b>1</b>	15 27 17.1	+	2 14 49	10.3	2 49.3		<b>30</b>	14 42 17.1	+	6 53 30	10.1	22 07.9		
	<b>2</b>	15 26 54.1	+	2 22 35	10.2	2 45.0		<b>31</b>	14 41 35.3	+	6 52 25	10.1	22 03.3		
	<b>3</b>	15 26 29.7	+	2 30 22	10.2	2 40.7	<b>June</b>	<b>1</b>	14 40 54.7	+	6 51 07	10.1	21 58.7		
	<b>4</b>	15 26 03.9	+	2 38 08	10.2	2 36.3		<b>2</b>	14 40 15.2	+	6 49 36	10.1	21 54.2		
	<b>5</b>	15 25 36.7	+	2 45 55	10.2	2 31.9		<b>3</b>	14 39 36.8	+	6 47 53	10.2	21 49.6		
	<b>6</b>	15 25 08.1	+	2 53 41	10.2	2 27.5		<b>4</b>	14 38 59.6	+	6 45 56	10.2	21 45.1		
	<b>7</b>	15 24 38.2	+	3 01 26	10.2	2 23.1		<b>5</b>	14 38 23.6	+	6 43 46	10.2	21 40.6		
	<b>8</b>	15 24 06.9	+	3 09 09	10.1	2 18.6		<b>6</b>	14 37 48.8	+	6 41 24	10.2	21 36.1		
	<b>9</b>	15 23 34.3	+	3 16 52	10.1	2 14.2		<b>7</b>	14 37 15.2	+	6 38 50	10.2	21 31.6		
	<b>10</b>	15 23 00.4	+	3 24 32	10.1	2 09.7		<b>8</b>	14 36 42.9	+	6 36 04	10.2	21 27.2		
	<b>11</b>	15 22 25.3	+	3 32 10	10.1	2 05.1		<b>9</b>	14 36 11.9	+	6 33 05	10.2	21 22.8		
	<b>12</b>	15 21 48.8	+	3 39 45	10.1	2 00.6		<b>10</b>	14 35 42.1	+	6 29 55	10.3	21 18.3		
	<b>13</b>	15 21 11.2	+	3 47 17	10.1	1 56.1		<b>11</b>	14 35 13.7	+	6 26 33	10.3	21 14.0		
	<b>14</b>	15 20 32.3	+	3 54 46	10.0	1 51.5		<b>12</b>	14 34 46.5	+	6 23 00	10.3	21 09.6		
	<b>15</b>	15 19 52.3	+	4 02 10	10.0	1 46.9		<b>13</b>	14 34 20.7	+	6 19 16	10.3	21 05.3		
	<b>16</b>	15 19 11.2	+	4 09 31	10.0	1 42.3		<b>14</b>	14 33 56.3	+	6 15 21	10.3	21 00.9		
	<b>17</b>	15 18 28.9	+	4 16 46	10.0	1 37.6		<b>15</b>	14 33 33.1	+	6 11 15	10.3	20 56.6		
	<b>18</b>	15 17 45.6	+	4 23 57	10.0	1 33.0		<b>16</b>	14 33 11.4	+	6 06 58	10.3	20 52.4		
	<b>19</b>	15 17 01.3	+	4 31 02	10.0	1 28.3		<b>17</b>	14 32 51.0	+	6 02 31	10.4	20 48.1		
	<b>20</b>	15 16 15.9	+	4 38 01	10.0	1 23.6		<b>18</b>	14 32 32.0	+	5 57 54	10.4	20 43.9		
	<b>21</b>	15 15 29.7	+	4 44 54	9.9	1 18.9		<b>19</b>	14 32 14.4	+	5 53 06	10.4	20 39.7		
	<b>22</b>	15 14 42.5	+	4 51 40	9.9	1 14.2		<b>20</b>	14 31 58.2	+	5 48 09	10.4	20 35.5		
	<b>23</b>	15 13 54.4	+	4 58 18	9.9	1 09.5		<b>21</b>	14 31 43.4	+	5 43 02	10.4	20 31.4		
	<b>24</b>	15 13 05.6	+	5 04 49	9.9	1 04.7		<b>22</b>	14 31 30.0	+	5 37 46	10.4	20 27.2		
	<b>25</b>	15 12 15.9	+	5 11 12	9.9	1 00.0		<b>23</b>	14 31 18.0	+	5 32 21	10.4	20 23.1		
	<b>26</b>	15 11 25.6	+	5 17 27	9.9	0 55.2		<b>24</b>	14 31 07.4	+	5 26 47	10.5	20 19.0		
	<b>27</b>	15 10 34.6	+	5 23 32	9.9	0 50.4		<b>25</b>	14 30 58.2	+	5 21 04	10.5	20 15.0		
	<b>28</b>	15 09 43.0	+	5 29 28	9.9	0 45.7		<b>26</b>	14 30 50.5	+	5 15 13	10.5	20 10.9		
	<b>29</b>	15 08 50.9	+	5 35 15	9.9	0 40.9		<b>27</b>	14 30 44.1	+	5 09 13	10.5	20 06.9		
	<b>30</b>	15 07 58.2	+	5 40 52	9.9	0 36.1		<b>28</b>	14 30 39.2	+	5 03 06	10.5	20 02.9		
<b>May</b>	<b>1</b>	15 07 05.2	+	5 46 18	9.9	0 31.2		<b>29</b>	14 30 35.7	+	4 56 50	10.5	19 58.9		
<b>May</b>	<b>2</b>	15 06 11.7	+	5 51 34	9.9	0 26.4	<b>June</b>	<b>30</b>	14 30 33.5	+	4 50 27	10.5	19 55.0		

Second transit for Hebe 2009 May 7<sup>d</sup> 23<sup>h</sup> 57<sup>m</sup>4

IRIS, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit
	R.A.			Dec.					R.A.			Dec.			
	h	m	s	°	'				"	h	m	s	°		
2009 May	6	19 23	19.9	-20 47	51	10.3	4 27.3	2009 July	4	18 52	47.0	-19 21	40	8.7	0 04.8
	7	19 23	34.2	-20 45	24	10.2	4 23.6		5	18 51	41.8	-19 20	59	8.7	23 54.8
	8	19 23	46.9	-20 43	00	10.2	4 19.9		6	18 50	36.6	-19 20	18	8.7	23 49.8
	9	19 23	58.1	-20 40	37	10.2	4 16.1		7	18 49	31.3	-19 19	37	8.8	23 44.8
	10	19 24	07.8	-20 38	16	10.2	4 12.3		8	18 48	26.1	-19 18	57	8.8	23 39.8
	11	19 24	15.8	-20 35	56	10.2	4 08.5		9	18 47	20.9	-19 18	17	8.8	23 34.7
	12	19 24	22.3	-20 33	39	10.1	4 04.7		10	18 46	16.0	-19 17	38	8.8	23 29.7
	13	19 24	27.2	-20 31	24	10.1	4 00.8		11	18 45	11.3	-19 17	00	8.8	23 24.7
	14	19 24	30.4	-20 29	10	10.1	3 57.0		12	18 44	06.9	-19 16	22	8.9	23 19.8
	May 15	19 24	32.1	-20 26	59	10.1	3 53.1		13	18 43	03.0	-19 15	44	8.9	23 14.8
	16	19 24	32.0	-20 24	49	10.1	3 49.1		14	18 41	59.5	-19 15	07	8.9	23 09.8
	17	19 24	30.4	-20 22	42	10.0	3 45.2		15	18 40	56.5	-19 14	31	8.9	23 04.8
	18	19 24	27.0	-20 20	37	10.0	3 41.2		16	18 39	54.2	-19 13	54	9.0	22 59.9
	19	19 24	22.0	-20 18	35	10.0	3 37.1		17	18 38	52.5	-19 13	19	9.0	22 54.9
20	19 24	15.2	-20 16	34	10.0	3 33.1	18	18 37	51.6	-19 12	44	9.0	22 50.0		
21	19 24	06.8	-20 14	36	9.9	3 29.0	19	18 36	51.5	-19 12	09	9.0	22 45.1		
22	19 23	56.7	-20 12	40	9.9	3 24.9	20	18 35	52.4	-19 11	35	9.0	22 40.2		
23	19 23	44.8	-20 10	47	9.9	3 20.8	21	18 34	54.2	-19 11	02	9.1	22 35.3		
24	19 23	31.2	-20 08	56	9.9	3 16.6	22	18 33	57.0	-19 10	29	9.1	22 30.5		
25	19 23	15.9	-20 07	07	9.8	3 12.4	23	18 33	00.9	-19 09	57	9.1	22 25.6		
26	19 22	58.9	-20 05	20	9.8	3 08.2	24	18 32	06.0	-19 09	25	9.1	22 20.8		
27	19 22	40.2	-20 03	36	9.8	3 04.0	25	18 31	12.3	-19 08	54	9.1	22 16.0		
28	19 22	19.7	-20 01	55	9.8	2 59.7	26	18 30	19.8	-19 08	24	9.2	22 11.2		
29	19 21	57.6	-20 00	15	9.7	2 55.4	27	18 29	28.7	-19 07	54	9.2	22 06.4		
30	19 21	33.7	-19 58	38	9.7	2 51.1	28	18 28	39.0	-19 07	25	9.2	22 01.7		
June	31	19 21	08.2	-19 57	04	9.7	2 46.7	29	18 27	50.7	-19 06	57	9.2	21 57.0	
	1	19 20	41.0	-19 55	31	9.7	2 42.3	30	18 27	03.9	-19 06	29	9.2	21 52.3	
	2	19 20	12.1	-19 54	01	9.6	2 37.9	31	18 26	18.6	-19 06	02	9.3	21 47.7	
	3	19 19	41.5	-19 52	33	9.6	2 33.5	Aug. 1	18 25	34.9	-19 05	36	9.3	21 43.0	
	4	19 19	09.3	-19 51	08	9.6	2 29.0	2	18 24	52.7	-19 05	11	9.3	21 38.4	
	5	19 18	35.5	-19 49	44	9.6	2 24.5	3	18 24	12.1	-19 04	46	9.3	21 33.8	
	6	19 18	00.1	-19 48	23	9.5	2 20.0	4	18 23	33.2	-19 04	22	9.3	21 29.3	
	7	19 17	23.0	-19 47	03	9.5	2 15.4	5	18 22	56.0	-19 04	00	9.4	21 24.8	
	8	19 16	44.4	-19 45	46	9.5	2 10.9	6	18 22	20.5	-19 03	38	9.4	21 20.3	
	9	19 16	04.3	-19 44	31	9.5	2 06.3	7	18 21	46.7	-19 03	17	9.4	21 15.8	
	10	19 15	22.6	-19 43	18	9.4	2 01.6	8	18 21	14.6	-19 02	57	9.4	21 11.4	
	11	19 14	39.4	-19 42	07	9.4	1 57.0	9	18 20	44.3	-19 02	38	9.4	21 07.0	
	12	19 13	54.7	-19 40	57	9.4	1 52.3	10	18 20	15.9	-19 02	20	9.5	21 02.6	
	13	19 13	08.6	-19 39	50	9.3	1 47.6	11	18 19	49.2	-19 02	02	9.5	20 58.2	
14	19 12	21.1	-19 38	44	9.3	1 42.9	12	18 19	24.3	-19 01	46	9.5	20 53.9		
15	19 11	32.1	-19 37	40	9.3	1 38.2	13	18 19	01.3	-19 01	31	9.5	20 49.6		
16	19 10	41.9	-19 36	38	9.3	1 33.4	14	18 18	40.1	-19 01	17	9.5	20 45.4		
17	19 09	50.3	-19 35	37	9.2	1 28.6	15	18 18	20.8	-19 01	03	9.5	20 41.2		
18	19 08	57.5	-19 34	39	9.2	1 23.8	16	18 18	03.4	-19 00	51	9.6	20 37.0		
19	19 08	03.4	-19 33	41	9.2	1 19.0	17	18 17	47.8	-19 00	39	9.6	20 32.8		
20	19 07	08.2	-19 32	45	9.1	1 14.1	18	18 17	34.2	-19 00	29	9.6	20 28.7		
21	19 06	11.9	-19 31	51	9.1	1 09.3	19	18 17	22.4	-19 00	19	9.6	20 24.6		
22	19 05	14.5	-19 30	58	9.1	1 04.4	20	18 17	12.5	-19 00	10	9.6	20 20.5		
23	19 04	16.2	-19 30	06	9.1	0 59.5	21	18 17	04.6	-19 00	02	9.6	20 16.5		
24	19 03	16.8	-19 29	15	9.0	0 54.6	22	18 16	58.5	-18 59	54	9.7	20 12.5		
25	19 02	16.7	-19 28	26	9.0	0 49.6	23	18 16	54.4	-18 59	48	9.7	20 08.5		
26	19 01	15.7	-19 27	37	9.0	0 44.7	Aug. 24	18 16	52.2	-18 59	41	9.7	20 04.5		
27	19 00	13.9	-19 26	50	8.9	0 39.7	25	18 16	51.8	-18 59	36	9.7	20 00.6		
28	18 59	11.5	-19 26	03	8.9	0 34.8	26	18 16	53.4	-18 59	31	9.7	19 56.7		
29	18 58	08.5	-19 25	18	8.9	0 29.8	27	18 16	56.8	-18 59	26	9.7	19 52.9		
30	18 57	05.0	-19 24	33	8.8	0 24.8	28	18 17	02.1	-18 59	22	9.8	19 49.1		
July 1	18 56	01.0	-19 23	49	8.8	0 19.8	29	18 17	09.2	-18 59	18	9.8	19 45.3		
2	18 54	56.6	-19 23	05	8.8	0 14.8	30	18 17	18.2	-18 59	14	9.8	19 41.5		
3	18 53	51.9	-19 22	22	8.7	0 09.8	31	18 17	29.0	-18 59	11	9.8	19 37.8		
July 4	18 52	47.0	-19 21	40	8.7	0 04.8	Sept. 1	18 17	41.6	-18 59	08	9.8	19 34.1		

Second transit for Iris 2009 July 4<sup>d</sup> 23<sup>h</sup> 59<sup>m</sup>8

GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit							
	R.A.			Dec.					R.A.			Dec.										
	h	m	s	°	'				"	h	m	s	°			'	"	h	m			
2009 Feb. 19	14	29	01.8	-	6	45	17	10.8	4	32.5		2009 Apr. 19	14	02	51.9	-	2	15	15	9.8	0	14.4
20	14	29	21.2	-	6	43	44	10.8	4	28.9		20	14	01	51.4	-	2	09	57	9.8	0	09.5
21	14	29	39.1	-	6	42	03	10.8	4	25.3		21	14	00	50.7	-	2	04	44	9.8	0	04.5
22	14	29	55.4	-	6	40	13	10.8	4	21.6		22	13	59	50.0	-	1	59	37	9.8	23	54.7
23	14	30	10.1	-	6	38	15	10.8	4	17.9		23	13	58	49.3	-	1	54	36	9.8	23	49.7
24	14	30	23.2	-	6	36	08	10.7	4	14.2		24	13	57	48.8	-	1	49	43	9.8	23	44.8
25	14	30	34.6	-	6	33	53	10.7	4	10.5		25	13	56	48.4	-	1	44	57	9.8	23	39.9
26	14	30	44.4	-	6	31	30	10.7	4	06.7		26	13	55	48.3	-	1	40	19	9.8	23	35.0
27	14	30	52.5	-	6	28	58	10.7	4	02.9		27	13	54	48.5	-	1	35	48	9.8	23	30.0
28	14	30	59.0	-	6	26	18	10.7	3	59.1		28	13	53	49.1	-	1	31	26	9.9	23	25.1
Mar. 1	14	31	03.7	-	6	23	30	10.7	3	55.2		29	13	52	50.2	-	1	27	13	9.9	23	20.2
2	14	31	06.8	-	6	20	34	10.6	3	51.3		30	13	51	51.9	-	1	23	09	9.9	23	15.3
Mar. 3	14	31	08.1	-	6	17	30	10.6	3	47.4		May 1	13	50	54.1	-	1	19	14	9.9	23	10.5
4	14	31	07.7	-	6	14	17	10.6	3	43.5		2	13	49	57.0	-	1	15	28	9.9	23	05.6
5	14	31	05.6	-	6	10	57	10.6	3	39.5		3	13	49	00.7	-	1	11	52	10.0	23	00.7
6	14	31	01.8	-	6	07	29	10.6	3	35.5		4	13	48	05.1	-	1	08	26	10.0	22	55.9
7	14	30	56.3	-	6	03	54	10.5	3	31.5		5	13	47	10.4	-	1	05	10	10.0	22	51.1
8	14	30	49.0	-	6	00	10	10.5	3	27.4		6	13	46	16.6	-	1	02	04	10.0	22	46.3
9	14	30	40.0	-	5	56	20	10.5	3	23.3		7	13	45	23.7	-	0	59	09	10.0	22	41.5
10	14	30	29.3	-	5	52	22	10.5	3	19.2		8	13	44	31.8	-	0	56	24	10.1	22	36.7
11	14	30	16.8	-	5	48	16	10.5	3	15.1		9	13	43	40.9	-	0	53	50	10.1	22	31.9
12	14	30	02.6	-	5	44	04	10.4	3	10.9		10	13	42	51.2	-	0	51	26	10.1	22	27.2
13	14	29	46.6	-	5	39	44	10.4	3	06.7		11	13	42	02.5	-	0	49	14	10.1	22	22.5
14	14	29	28.9	-	5	35	18	10.4	3	02.5		12	13	41	15.0	-	0	47	13	10.1	22	17.8
15	14	29	09.5	-	5	30	44	10.4	2	58.2		13	13	40	28.8	-	0	45	22	10.2	22	13.1
16	14	28	48.3	-	5	26	05	10.4	2	53.9		14	13	39	43.8	-	0	43	43	10.2	22	08.4
17	14	28	25.5	-	5	21	18	10.4	2	49.6		15	13	39	00.0	-	0	42	15	10.2	22	03.8
18	14	28	00.9	-	5	16	26	10.3	2	45.3		16	13	38	17.6	-	0	40	58	10.2	21	59.2
19	14	27	34.6	-	5	11	27	10.3	2	40.9		17	13	37	36.6	-	0	39	53	10.2	21	54.6
20	14	27	06.6	-	5	06	23	10.3	2	36.5		18	13	36	56.9	-	0	38	59	10.3	21	50.0
21	14	26	36.9	-	5	01	13	10.3	2	32.1		19	13	36	18.6	-	0	38	16	10.3	21	45.5
22	14	26	05.6	-	4	55	58	10.2	2	27.6		20	13	35	41.7	-	0	37	45	10.3	21	41.0
23	14	25	32.7	-	4	50	38	10.2	2	23.1		21	13	35	06.3	-	0	37	25	10.3	21	36.5
24	14	24	58.1	-	4	45	13	10.2	2	18.6		22	13	34	32.4	-	0	37	16	10.3	21	32.0
25	14	24	22.0	-	4	39	43	10.2	2	14.1		23	13	34	00.0	-	0	37	19	10.4	21	27.6
26	14	23	44.3	-	4	34	09	10.2	2	09.5		24	13	33	29.1	-	0	37	33	10.4	21	23.1
27	14	23	05.0	-	4	28	32	10.1	2	05.0		25	13	32	59.8	-	0	37	58	10.4	21	18.7
28	14	22	24.3	-	4	22	50	10.1	2	00.4		26	13	32	32.0	-	0	38	34	10.4	21	14.4
29	14	21	42.2	-	4	17	06	10.1	1	55.7		27	13	32	05.8	-	0	39	22	10.4	21	10.0
30	14	20	58.7	-	4	11	19	10.1	1	51.1		28	13	31	41.2	-	0	40	20	10.5	21	05.7
31	14	20	13.7	-	4	05	29	10.1	1	46.4		29	13	31	18.2	-	0	41	30	10.5	21	01.4
Apr. 1	14	19	27.5	-	3	59	37	10.0	1	41.7		30	13	30	56.7	-	0	42	50	10.5	20	57.2
2	14	18	40.0	-	3	53	44	10.0	1	37.0		31	13	30	36.9	-	0	44	20	10.5	20	52.9
3	14	17	51.3	-	3	47	49	10.0	1	32.2		June 1	13	30	18.7	-	0	46	02	10.5	20	48.7
4	14	17	01.4	-	3	41	53	10.0	1	27.5		2	13	30	02.1	-	0	47	53	10.6	20	44.5
5	14	16	10.5	-	3	35	56	10.0	1	22.7		3	13	29	47.0	-	0	49	55	10.6	20	40.4
6	14	15	18.4	-	3	29	59	9.9	1	17.9		4	13	29	33.6	-	0	52	07	10.6	20	36.2
7	14	14	25.4	-	3	24	03	9.9	1	13.1		5	13	29	21.7	-	0	54	28	10.6	20	32.1
8	14	13	31.4	-	3	18	06	9.9	1	08.3		6	13	29	11.5	-	0	57	00	10.6	20	28.1
9	14	12	36.5	-	3	12	11	9.9	1	03.4		7	13	29	02.8	-	0	59	41	10.7	20	24.0
10	14	11	40.7	-	3	06	17	9.9	0	58.6		8	13	28	55.6	-	1	02	32	10.7	20	20.0
11	14	10	44.2	-	3	00	25	9.9	0	53.7		9	13	28	50.1	-	1	05	32	10.7	20	16.0
12	14	09	47.0	-	2	54	34	9.8	0	48.8		10	13	28	46.0	-	1	08	41	10.7	20	12.0
13	14	08	49.2	-	2	48	47	9.8	0	43.9		11	13	28	43.6	-	1	11	59	10.7	20	08.0
14	14	07	50.7	-	2	43	02	9.8	0	39.0		June 12	13	28	42.6	-	1	15	26	10.7	20	04.1
15	14	06	51.7	-	2	37	20	9.8	0	34.1		13	13	28	43.2	-	1	19	02	10.8	20	00.2
16	14	05	52.3	-	2	31	42	9.8	0	29.2		14	13	28	45.3	-	1	22	46	10.8	19	56.3
17	14	04	52.5	-	2	26	09	9.8	0	24.3		15	13	28	48.9	-	1	26	39	10.8	19	52.5
18	14	03	52.3	-	2	20	40	9.8	0	19.3		16	13	28	54.0	-	1	30	40	10.8	19	48.7
Apr. 19	14	02	51.9	-	2	15	15	9.8	0	14.4		June 17	13	29	00.6	-	1	34	49	10.8	19	44.9

Second transit for Flora 2009 April 21<sup>d</sup> 23<sup>h</sup> 59<sup>m</sup>6

EUNOMIA, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit				
	R.A.		Dec.						R.A.		Dec.								
	h	m	s	°	'				''	h	m	s	°			'	''	h	m
<b>2009 Feb.</b> 8	13	15	32.2	-22	46	41	10.6	4	02.5	<b>2009 Apr.</b> 8	12	40	55.4	-23	03	10	9.8	23	31.2
9	13	15	32.0	-22	51	54	10.6	3	58.5	9	12	40	01.8	-22	57	57	9.8	23	26.3
10	13	15	30.3	-22	56	59	10.6	3	54.6	10	12	39	08.6	-22	52	36	9.8	23	21.5
11	13	15	27.3	-23	01	57	10.6	3	50.6	11	12	38	15.8	-22	47	07	9.8	23	16.7
12	13	15	22.9	-23	06	46	10.5	3	46.6	12	12	37	23.5	-22	41	30	9.8	23	11.9
13	13	15	17.0	-23	11	28	10.5	3	42.5	13	12	36	31.6	-22	35	46	9.8	23	07.2
14	13	15	09.8	-23	16	01	10.5	3	38.5	14	12	35	40.3	-22	29	56	9.8	23	02.4
15	13	15	01.1	-23	20	27	10.5	3	34.4	15	12	34	49.6	-22	23	59	9.8	22	57.6
16	13	14	51.1	-23	24	43	10.5	3	30.3	16	12	33	59.5	-22	17	56	9.9	22	52.9
17	13	14	39.6	-23	28	51	10.5	3	26.2	17	12	33	10.2	-22	11	47	9.9	22	48.1
18	13	14	26.6	-23	32	50	10.5	3	22.0	18	12	32	21.5	-22	05	34	9.9	22	43.4
19	13	14	12.3	-23	36	40	10.4	3	17.8	19	12	31	33.6	-21	59	15	9.9	22	38.7
20	13	13	56.5	-23	40	21	10.4	3	13.6	20	12	30	46.6	-21	52	52	9.9	22	34.0
21	13	13	39.2	-23	43	52	10.4	3	09.4	21	12	30	00.4	-21	46	25	9.9	22	29.3
22	13	13	20.6	-23	47	13	10.4	3	05.2	22	12	29	15.1	-21	39	55	9.9	22	24.7
23	13	13	00.5	-23	50	25	10.4	3	00.9	23	12	28	30.8	-21	33	21	9.9	22	20.0
24	13	12	39.1	-23	53	27	10.4	2	56.6	24	12	27	47.4	-21	26	45	10.0	22	15.4
25	13	12	16.2	-23	56	18	10.4	2	52.3	25	12	27	05.1	-21	20	07	10.0	22	10.7
26	13	11	51.9	-23	58	59	10.3	2	48.0	26	12	26	23.8	-21	13	27	10.0	22	06.1
27	13	11	26.3	-24	01	30	10.3	2	43.6	27	12	25	43.6	-21	06	45	10.0	22	01.6
28	13	10	59.2	-24	03	50	10.3	2	39.2	28	12	25	04.5	-21	00	03	10.0	21	57.0
<b>Mar.</b> 1	13	10	30.9	-24	06	00	10.3	2	34.8	29	12	24	26.5	-20	53	20	10.0	21	52.5
2	13	10	01.2	-24	07	58	10.3	2	30.4	30	12	23	49.8	-20	46	37	10.0	21	47.9
3	13	09	30.1	-24	09	45	10.3	2	26.0	<b>May</b> 1	12	23	14.2	-20	39	54	10.1	21	43.4
4	13	08	57.8	-24	11	21	10.2	2	21.5	2	12	22	39.9	-20	33	12	10.1	21	39.0
5	13	08	24.3	-24	12	46	10.2	2	17.0	3	12	22	06.8	-20	26	31	10.1	21	34.5
6	13	07	49.4	-24	13	59	10.2	2	12.5	4	12	21	34.9	-20	19	52	10.1	21	30.0
7	13	07	13.4	-24	15	01	10.2	2	08.0	5	12	21	04.3	-20	13	14	10.1	21	25.6
8	13	06	36.1	-24	15	51	10.2	2	03.4	6	12	20	35.0	-20	06	39	10.1	21	21.2
9	13	05	57.7	-24	16	30	10.2	1	58.8	7	12	20	07.1	-20	00	06	10.2	21	16.9
10	13	05	18.2	-24	16	56	10.1	1	54.3	8	12	19	40.4	-19	53	35	10.2	21	12.5
11	13	04	37.5	-24	17	11	10.1	1	49.6	9	12	19	15.0	-19	47	08	10.2	21	08.2
12	13	03	55.8	-24	17	13	10.1	1	45.0	10	12	18	51.0	-19	40	45	10.2	21	03.9
13	13	03	13.0	-24	17	04	10.1	1	40.4	11	12	18	28.3	-19	34	25	10.2	20	59.6
14	13	02	29.2	-24	16	42	10.1	1	35.7	12	12	18	07.0	-19	28	09	10.2	20	55.3
15	13	01	44.4	-24	16	08	10.1	1	31.0	13	12	17	47.0	-19	21	57	10.3	20	51.1
16	13	00	58.7	-24	15	21	10.1	1	26.4	14	12	17	28.3	-19	15	50	10.3	20	46.8
17	13	00	12.1	-24	14	23	10.0	1	21.6	15	12	17	11.0	-19	09	47	10.3	20	42.6
18	12	59	24.6	-24	13	12	10.0	1	16.9	16	12	16	55.1	-19	03	50	10.3	20	38.5
19	12	58	36.3	-24	11	48	10.0	1	12.2	17	12	16	40.5	-18	57	58	10.3	20	34.3
20	12	57	47.2	-24	10	12	10.0	1	07.5	18	12	16	27.4	-18	52	11	10.3	20	30.2
21	12	56	57.3	-24	08	24	10.0	1	02.7	19	12	16	15.5	-18	46	30	10.4	20	26.1
22	12	56	06.8	-24	06	24	10.0	0	57.9	20	12	16	05.1	-18	40	55	10.4	20	22.0
23	12	55	15.7	-24	04	11	10.0	0	53.1	21	12	15	56.0	-18	35	26	10.4	20	17.9
24	12	54	23.9	-24	01	47	9.9	0	48.4	22	12	15	48.2	-18	30	04	10.4	20	13.9
25	12	53	31.7	-23	59	10	9.9	0	43.6	23	12	15	41.9	-18	24	48	10.4	20	09.9
26	12	52	38.9	-23	56	21	9.9	0	38.8	24	12	15	36.8	-18	19	39	10.4	20	05.9
27	12	51	45.8	-23	53	20	9.9	0	33.9	25	12	15	33.2	-18	14	37	10.5	20	01.9
28	12	50	52.2	-23	50	08	9.9	0	29.1	26	12	15	30.9	-18	09	41	10.5	19	57.9
29	12	49	58.4	-23	46	45	9.9	0	24.3	<b>May</b> 27	12	15	29.9	-18	04	53	10.5	19	54.0
30	12	49	04.3	-23	43	10	9.9	0	19.5	28	12	15	30.3	-18	00	13	10.5	19	50.1
31	12	48	10.0	-23	39	24	9.9	0	14.6	29	12	15	32.0	-17	55	39	10.5	19	46.2
<b>Apr.</b> 1	12	47	15.6	-23	35	27	9.8	0	09.8	30	12	15	35.0	-17	51	14	10.5	19	42.3
2	12	46	21.0	-23	31	20	9.8	0	05.0	31	12	15	39.3	-17	46	55	10.5	19	38.5
3	12	45	26.5	-23	27	02	9.8	0	00.1	<b>June</b> 1	12	15	44.9	-17	42	45	10.6	19	34.7
4	12	44	32.0	-23	22	35	9.8	23	50.5	2	12	15	51.8	-17	38	42	10.6	19	30.9
5	12	43	37.6	-23	17	58	9.8	23	45.6	3	12	15	59.9	-17	34	47	10.6	19	27.1
6	12	42	43.3	-23	13	11	9.8	23	40.8	4	12	16	09.3	-17	31	00	10.6	19	23.3
7	12	41	49.2	-23	08	15	9.8	23	36.0	5	12	16	20.0	-17	27	21	10.6	19	19.6
<b>Apr.</b> 8	12	40	55.4	-23	03	10	9.8	23	31.2	<b>June</b> 6	12	16	31.8	-17	23	50	10.6	19	15.9

Second transit for Eunomia 2009 April 3<sup>d</sup> 23<sup>h</sup> 55<sup>m</sup>3

PSYCHE, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

G11

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit	
	R.A.			Dec.					R.A.			Dec.				
	h	m	s	°	'				''	h	m	s	°			'
<b>2009 June 8</b>	21	24	21.6	-13	08	38	10.7	<b>2009 Aug. 6</b>	21	02	34.3	-15	22	26	9.3	0 04.5
<b>9</b>	21	24	36.9	-13	07	33	10.7	<b>7</b>	21	01	45.5	-15	27	05	9.3	23 55.0
<b>10</b>	21	24	50.8	-13	06	36	10.7	<b>8</b>	21	00	56.6	-15	31	45	9.3	23 50.2
<b>11</b>	21	25	03.4	-13	05	45	10.6	<b>9</b>	21	00	07.8	-15	36	25	9.4	23 45.5
<b>12</b>	21	25	14.7	-13	05	01	10.6	<b>10</b>	20	59	19.1	-15	41	04	9.4	23 40.8
<b>13</b>	21	25	24.6	-13	04	24	10.6	<b>11</b>	20	58	30.5	-15	45	43	9.4	23 36.0
<b>14</b>	21	25	33.2	-13	03	55	10.6	<b>12</b>	20	57	42.2	-15	50	21	9.5	23 31.3
<b>15</b>	21	25	40.3	-13	03	32	10.6	<b>13</b>	20	56	54.1	-15	54	58	9.5	23 26.6
<b>16</b>	21	25	46.2	-13	03	17	10.5	<b>14</b>	20	56	06.3	-15	59	33	9.5	23 21.9
<b>17</b>	21	25	50.6	-13	03	09	10.5	<b>15</b>	20	55	18.8	-16	04	06	9.5	23 17.2
<b>18</b>	21	25	53.6	-13	03	09	10.5	<b>16</b>	20	54	31.9	-16	08	38	9.5	23 12.5
<b>June 19</b>	21	25	55.3	-13	03	16	10.5	<b>17</b>	20	53	45.4	-16	13	07	9.6	23 07.8
<b>20</b>	21	25	55.5	-13	03	30	10.5	<b>18</b>	20	52	59.5	-16	17	34	9.6	23 03.1
<b>21</b>	21	25	54.3	-13	03	53	10.4	<b>19</b>	20	52	14.2	-16	21	58	9.6	22 58.4
<b>22</b>	21	25	51.7	-13	04	23	10.4	<b>20</b>	20	51	29.6	-16	26	20	9.6	22 53.8
<b>23</b>	21	25	47.6	-13	05	00	10.4	<b>21</b>	20	50	45.7	-16	30	37	9.7	22 49.1
<b>24</b>	21	25	42.2	-13	05	45	10.4	<b>22</b>	20	50	02.6	-16	34	52	9.7	22 44.5
<b>25</b>	21	25	35.3	-13	06	38	10.4	<b>23</b>	20	49	20.4	-16	39	02	9.7	22 39.9
<b>26</b>	21	25	27.0	-13	07	39	10.3	<b>24</b>	20	48	39.1	-16	43	09	9.7	22 35.3
<b>27</b>	21	25	17.2	-13	08	48	10.3	<b>25</b>	20	47	58.7	-16	47	11	9.7	22 30.7
<b>28</b>	21	25	06.1	-13	10	04	10.3	<b>26</b>	20	47	19.3	-16	51	09	9.8	22 26.1
<b>29</b>	21	24	53.5	-13	11	27	10.3	<b>27</b>	20	46	41.0	-16	55	03	9.8	22 21.6
<b>30</b>	21	24	39.6	-13	12	59	10.2	<b>28</b>	20	46	03.7	-16	58	51	9.8	22 17.0
<b>July 1</b>	21	24	24.3	-13	14	38	10.2	<b>29</b>	20	45	27.6	-17	02	35	9.8	22 12.5
<b>2</b>	21	24	07.5	-13	16	24	10.2	<b>30</b>	20	44	52.7	-17	06	14	9.8	22 08.0
<b>3</b>	21	23	49.4	-13	18	18	10.2	<b>31</b>	20	44	19.0	-17	09	48	9.9	22 03.6
<b>4</b>	21	23	30.0	-13	20	20	10.2	<b>Sept. 1</b>	20	43	46.5	-17	13	16	9.9	21 59.1
<b>5</b>	21	23	09.1	-13	22	29	10.1	<b>2</b>	20	43	15.3	-17	16	39	9.9	21 54.7
<b>6</b>	21	22	47.0	-13	24	45	10.1	<b>3</b>	20	42	45.4	-17	19	56	9.9	21 50.3
<b>7</b>	21	22	23.5	-13	27	08	10.1	<b>4</b>	20	42	16.8	-17	23	08	9.9	21 45.9
<b>8</b>	21	21	58.7	-13	29	39	10.1	<b>5</b>	20	41	49.6	-17	26	14	10.0	21 41.5
<b>9</b>	21	21	32.6	-13	32	17	10.0	<b>6</b>	20	41	23.8	-17	29	15	10.0	21 37.2
<b>10</b>	21	21	05.2	-13	35	01	10.0	<b>7</b>	20	40	59.4	-17	32	09	10.0	21 32.9
<b>11</b>	21	20	36.5	-13	37	53	10.0	<b>8</b>	20	40	36.5	-17	34	58	10.0	21 28.6
<b>12</b>	21	20	06.6	-13	40	51	10.0	<b>9</b>	20	40	15.0	-17	37	41	10.0	21 24.3
<b>13</b>	21	19	35.5	-13	43	56	9.9	<b>10</b>	20	39	55.0	-17	40	17	10.1	21 20.1
<b>14</b>	21	19	03.1	-13	47	08	9.9	<b>11</b>	20	39	36.5	-17	42	47	10.1	21 15.9
<b>15</b>	21	18	29.6	-13	50	26	9.9	<b>12</b>	20	39	19.5	-17	45	11	10.1	21 11.7
<b>16</b>	21	17	54.9	-13	53	50	9.9	<b>13</b>	20	39	04.0	-17	47	29	10.1	21 07.5
<b>17</b>	21	17	19.2	-13	57	20	9.9	<b>14</b>	20	38	50.1	-17	49	41	10.1	21 03.4
<b>18</b>	21	16	42.3	-14	00	56	9.8	<b>15</b>	20	38	37.7	-17	51	46	10.1	20 59.2
<b>19</b>	21	16	04.4	-14	04	37	9.8	<b>16</b>	20	38	26.9	-17	53	45	10.2	20 55.2
<b>20</b>	21	15	25.5	-14	08	25	9.8	<b>17</b>	20	38	17.8	-17	55	37	10.2	20 51.1
<b>21</b>	21	14	45.6	-14	12	17	9.8	<b>18</b>	20	38	10.2	-17	57	23	10.2	20 47.1
<b>22</b>	21	14	04.7	-14	16	14	9.7	<b>19</b>	20	38	04.2	-17	59	02	10.2	20 43.1
<b>23</b>	21	13	23.0	-14	20	16	9.7	<b>20</b>	20	37	59.8	-18	00	34	10.2	20 39.1
<b>24</b>	21	12	40.5	-14	24	23	9.7	<b>21</b>	20	37	57.1	-18	02	00	10.2	20 35.1
<b>25</b>	21	11	57.1	-14	28	33	9.7	<b>Sept. 22</b>	20	37	56.0	-18	03	19	10.3	20 31.2
<b>26</b>	21	11	13.0	-14	32	48	9.6	<b>23</b>	20	37	56.4	-18	04	32	10.3	20 27.3
<b>27</b>	21	10	28.2	-14	37	06	9.6	<b>24</b>	20	37	58.6	-18	05	38	10.3	20 23.4
<b>28</b>	21	09	42.8	-14	41	28	9.6	<b>25</b>	20	38	02.3	-18	06	37	10.3	20 19.6
<b>29</b>	21	08	56.8	-14	45	52	9.5	<b>26</b>	20	38	07.6	-18	07	30	10.3	20 15.7
<b>30</b>	21	08	10.3	-14	50	20	9.5	<b>27</b>	20	38	14.6	-18	08	16	10.4	20 11.9
<b>31</b>	21	07	23.3	-14	54	50	9.5	<b>28</b>	20	38	23.1	-18	08	55	10.4	20 08.2
<b>Aug. 1</b>	21	06	35.9	-14	59	22	9.5	<b>29</b>	20	38	33.2	-18	09	28	10.4	20 04.4
<b>2</b>	21	05	48.1	-15	03	56	9.4	<b>30</b>	20	38	44.9	-18	09	55	10.4	20 00.7
<b>3</b>	21	04	59.9	-15	08	32	9.4	<b>Oct. 1</b>	20	38	58.2	-18	10	14	10.4	19 57.0
<b>4</b>	21	04	11.6	-15	13	09	9.3	<b>2</b>	20	39	13.0	-18	10	27	10.4	19 53.4
<b>5</b>	21	03	23.0	-15	17	47	9.3	<b>3</b>	20	39	29.4	-18	10	34	10.4	19 49.7
<b>Aug. 6</b>	21	02	34.3	-15	22	26	9.3	<b>Oct. 4</b>	20	39	47.3	-18	10	34	10.5	19 46.1

Second transit for Psyche 2009 August 6<sup>d</sup> 23<sup>h</sup> 59<sup>m</sup>7



EUROPA, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric		Vis. Mag.	Ephem- eris Transit	Date	Astrometric		Vis. Mag.	Ephem- eris Transit
	R.A.	Dec.				R.A.	Dec.		
	h m s ° ' "	° ' "				h m s ° ' "	° ' "		
<b>2009 Oct. 20</b>	6 09 31.8	+15 44 44	11.3	4 15.1	<b>2009 Dec. 18</b>	5 45 48.4	+15 36 10	10.1	23 54.6
<b>21</b>	6 09 49.0	+15 43 23	11.3	4 11.5	<b>19</b>	5 44 55.1	+15 37 47	10.1	23 49.8
<b>22</b>	6 10 04.7	+15 42 02	11.2	4 07.8	<b>20</b>	5 44 01.7	+15 39 28	10.1	23 45.0
<b>23</b>	6 10 19.0	+15 40 43	11.2	4 04.1	<b>21</b>	5 43 08.4	+15 41 12	10.1	23 40.2
<b>24</b>	6 10 31.8	+15 39 24	11.2	4 00.4	<b>22</b>	5 42 15.2	+15 43 00	10.1	23 35.4
<b>25</b>	6 10 43.1	+15 38 07	11.2	3 56.6	<b>23</b>	5 41 22.2	+15 44 52	10.2	23 30.6
<b>26</b>	6 10 52.9	+15 36 51	11.2	3 52.8	<b>24</b>	5 40 29.5	+15 46 48	10.2	23 25.8
<b>27</b>	6 11 01.2	+15 35 37	11.2	3 49.1	<b>25</b>	5 39 37.1	+15 48 47	10.2	23 21.0
<b>28</b>	6 11 08.0	+15 34 24	11.1	3 45.2	<b>26</b>	5 38 45.1	+15 50 49	10.2	23 16.2
<b>29</b>	6 11 13.2	+15 33 13	11.1	3 41.4	<b>27</b>	5 37 53.6	+15 52 55	10.2	23 11.4
<b>30</b>	6 11 17.0	+15 32 03	11.1	3 37.5	<b>28</b>	5 37 02.5	+15 55 04	10.2	23 06.7
<b>Oct. 31</b>	6 11 19.2	+15 30 56	11.1	3 33.6	<b>29</b>	5 36 12.1	+15 57 17	10.3	23 01.9
<b>Nov. 1</b>	6 11 19.8	+15 29 50	11.1	3 29.7	<b>30</b>	5 35 22.3	+15 59 32	10.3	22 57.2
<b>2</b>	6 11 18.9	+15 28 46	11.0	3 25.7	<b>31</b>	5 34 33.1	+16 01 51	10.3	22 52.4
<b>3</b>	6 11 16.5	+15 27 44	11.0	3 21.8	<b>2010 Jan. 1</b>	5 33 44.8	+16 04 14	10.3	22 47.7
<b>4</b>	6 11 12.4	+15 26 45	11.0	3 17.8	<b>2</b>	5 32 57.2	+16 06 39	10.3	22 43.0
<b>5</b>	6 11 06.9	+15 25 47	11.0	3 13.7	<b>3</b>	5 32 10.4	+16 09 08	10.4	22 38.3
<b>6</b>	6 10 59.7	+15 24 52	11.0	3 09.7	<b>4</b>	5 31 24.6	+16 11 39	10.4	22 33.6
<b>7</b>	6 10 51.0	+15 23 59	10.9	3 05.6	<b>5</b>	5 30 39.7	+16 14 14	10.4	22 29.0
<b>8</b>	6 10 40.7	+15 23 09	10.9	3 01.5	<b>6</b>	5 29 55.8	+16 16 51	10.4	22 24.3
<b>9</b>	6 10 28.8	+15 22 22	10.9	2 57.4	<b>7</b>	5 29 13.0	+16 19 32	10.5	22 19.7
<b>10</b>	6 10 15.4	+15 21 37	10.9	2 53.2	<b>8</b>	5 28 31.2	+16 22 15	10.5	22 15.1
<b>11</b>	6 10 00.3	+15 20 55	10.9	2 49.0	<b>9</b>	5 27 50.6	+16 25 01	10.5	22 10.5
<b>12</b>	6 09 43.7	+15 20 16	10.8	2 44.8	<b>10</b>	5 27 11.1	+16 27 50	10.5	22 05.9
<b>13</b>	6 09 25.6	+15 19 40	10.8	2 40.6	<b>11</b>	5 26 32.9	+16 30 42	10.5	22 01.4
<b>14</b>	6 09 05.9	+15 19 07	10.8	2 36.3	<b>12</b>	5 25 56.0	+16 33 36	10.6	21 56.9
<b>15</b>	6 08 44.6	+15 18 37	10.8	2 32.0	<b>13</b>	5 25 20.3	+16 36 33	10.6	21 52.4
<b>16</b>	6 08 21.8	+15 18 10	10.8	2 27.7	<b>14</b>	5 24 46.0	+16 39 33	10.6	21 47.9
<b>17</b>	6 07 57.5	+15 17 46	10.7	2 23.4	<b>15</b>	5 24 13.1	+16 42 34	10.6	21 43.4
<b>18</b>	6 07 31.7	+15 17 26	10.7	2 19.0	<b>16</b>	5 23 41.6	+16 45 39	10.6	21 39.0
<b>19</b>	6 07 04.5	+15 17 09	10.7	2 14.6	<b>17</b>	5 23 11.5	+16 48 45	10.7	21 34.6
<b>20</b>	6 06 35.8	+15 16 56	10.7	2 10.2	<b>18</b>	5 22 42.9	+16 51 54	10.7	21 30.2
<b>21</b>	6 06 05.6	+15 16 46	10.7	2 05.8	<b>19</b>	5 22 15.8	+16 55 06	10.7	21 25.8
<b>22</b>	6 05 34.1	+15 16 40	10.6	2 01.3	<b>20</b>	5 21 50.3	+16 58 19	10.7	21 21.5
<b>23</b>	6 05 01.2	+15 16 37	10.6	1 56.9	<b>21</b>	5 21 26.2	+17 01 34	10.7	21 17.2
<b>24</b>	6 04 27.0	+15 16 38	10.6	1 52.4	<b>22</b>	5 21 03.7	+17 04 51	10.8	21 12.9
<b>25</b>	6 03 51.4	+15 16 43	10.6	1 47.8	<b>23</b>	5 20 42.8	+17 08 11	10.8	21 08.7
<b>26</b>	6 03 14.6	+15 16 51	10.5	1 43.3	<b>24</b>	5 20 23.5	+17 11 32	10.8	21 04.4
<b>27</b>	6 02 36.5	+15 17 03	10.5	1 38.7	<b>25</b>	5 20 05.7	+17 14 55	10.8	21 00.2
<b>28</b>	6 01 57.2	+15 17 19	10.5	1 34.1	<b>26</b>	5 19 49.6	+17 18 19	10.8	20 56.1
<b>29</b>	6 01 16.8	+15 17 39	10.5	1 29.5	<b>27</b>	5 19 35.1	+17 21 45	10.8	20 51.9
<b>30</b>	6 00 35.2	+15 18 02	10.5	1 24.9	<b>28</b>	5 19 22.2	+17 25 13	10.9	20 47.8
<b>Dec. 1</b>	5 59 52.6	+15 18 30	10.4	1 20.3	<b>29</b>	5 19 11.0	+17 28 42	10.9	20 43.7
<b>2</b>	5 59 08.9	+15 19 01	10.4	1 15.6	<b>30</b>	5 19 01.3	+17 32 13	10.9	20 39.6
<b>3</b>	5 58 24.2	+15 19 36	10.4	1 11.0	<b>31</b>	5 18 53.3	+17 35 45	10.9	20 35.6
<b>4</b>	5 57 38.6	+15 20 15	10.4	1 06.3	<b>Feb. 1</b>	5 18 46.9	+17 39 18	10.9	20 31.6
<b>5</b>	5 56 52.0	+15 20 58	10.4	1 01.6	<b>2</b>	5 18 42.2	+17 42 52	11.0	20 27.6
<b>6</b>	5 56 04.6	+15 21 44	10.3	0 56.8	<b>3</b>	5 18 39.1	+17 46 28	11.0	20 23.6
<b>7</b>	5 55 16.3	+15 22 35	10.3	0 52.1	<b>Feb. 4</b>	5 18 37.6	+17 50 05	11.0	20 19.7
<b>8</b>	5 54 27.3	+15 23 29	10.3	0 47.4	<b>5</b>	5 18 37.7	+17 53 42	11.0	20 15.8
<b>9</b>	5 53 37.6	+15 24 28	10.3	0 42.6	<b>6</b>	5 18 39.4	+17 57 21	11.0	20 11.9
<b>10</b>	5 52 47.3	+15 25 30	10.2	0 37.8	<b>7</b>	5 18 42.8	+18 01 00	11.0	20 08.1
<b>11</b>	5 51 56.3	+15 26 37	10.2	0 33.1	<b>8</b>	5 18 47.8	+18 04 40	11.1	20 04.2
<b>12</b>	5 51 04.9	+15 27 47	10.2	0 28.3	<b>9</b>	5 18 54.4	+18 08 21	11.1	20 00.4
<b>13</b>	5 50 12.9	+15 29 01	10.2	0 23.5	<b>10</b>	5 19 02.6	+18 12 02	11.1	19 56.7
<b>14</b>	5 49 20.6	+15 30 19	10.2	0 18.7	<b>11</b>	5 19 12.4	+18 15 44	11.1	19 52.9
<b>15</b>	5 48 27.9	+15 31 41	10.1	0 13.9	<b>12</b>	5 19 23.8	+18 19 26	11.1	19 49.2
<b>16</b>	5 47 34.9	+15 33 07	10.1	0 09.1	<b>13</b>	5 19 36.8	+18 23 09	11.2	19 45.5
<b>17</b>	5 46 41.8	+15 34 36	10.1	0 04.3	<b>14</b>	5 19 51.4	+18 26 52	11.2	19 41.8
<b>Dec. 18</b>	5 45 48.4	+15 36 10	10.1	23 54.6	<b>Feb. 15</b>	5 20 07.5	+18 30 35	11.2	19 38.2

Second transit for Europa 2009 December 17<sup>d</sup> 23<sup>h</sup> 59<sup>m</sup>5

GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric				Vis. Mag.	Ephem- eris Transit	Date	Astrometric				Vis. Mag.	Ephem- eris Transit
	R.A.			Dec.				R.A.			Dec.		
	h	m	s	° / ' / ''				h	m	s	° / ' / ''		
<b>2009 July 10</b>	23	28	03.8	- 3 25 18	12.4	4 15.7	<b>2009 Sept. 7</b>	23	06	46.5	- 6 35 27	11.2	0 02.5
<b>11</b>	23	28	10.8	- 3 25 21	12.4	4 11.9	<b>8</b>	23	06	06.4	- 6 40 33	11.2	23 53.3
<b>12</b>	23	28	16.8	- 3 25 32	12.4	4 08.0	<b>9</b>	23	05	26.2	- 6 45 37	11.2	23 48.7
<b>13</b>	23	28	21.7	- 3 25 50	12.4	4 04.2	<b>10</b>	23	04	46.1	- 6 50 40	11.3	23 44.1
<b>14</b>	23	28	25.4	- 3 26 16	12.4	4 00.3	<b>11</b>	23	04	06.1	- 6 55 42	11.3	23 39.5
<b>15</b>	23	28	28.1	- 3 26 50	12.4	3 56.4	<b>12</b>	23	03	26.3	- 7 00 42	11.4	23 34.9
<b>July 16</b>	23	28	29.6	- 3 27 31	12.3	3 52.5	<b>13</b>	23	02	46.6	- 7 05 41	11.4	23 30.3
<b>17</b>	23	28	30.0	- 3 28 19	12.3	3 48.6	<b>14</b>	23	02	07.1	- 7 10 37	11.4	23 25.8
<b>18</b>	23	28	29.3	- 3 29 16	12.3	3 44.6	<b>15</b>	23	01	28.0	- 7 15 30	11.5	23 21.2
<b>19</b>	23	28	27.5	- 3 30 19	12.3	3 40.7	<b>16</b>	23	00	49.1	- 7 20 21	11.5	23 16.6
<b>20</b>	23	28	24.5	- 3 31 31	12.3	3 36.7	<b>17</b>	23	00	10.6	- 7 25 09	11.5	23 12.0
<b>21</b>	23	28	20.4	- 3 32 50	12.3	3 32.7	<b>18</b>	22	59	32.4	- 7 29 53	11.6	23 07.5
<b>22</b>	23	28	15.2	- 3 34 17	12.2	3 28.7	<b>19</b>	22	58	54.7	- 7 34 34	11.6	23 02.9
<b>23</b>	23	28	08.9	- 3 35 51	12.2	3 24.6	<b>20</b>	22	58	17.5	- 7 39 11	11.6	22 58.4
<b>24</b>	23	28	01.4	- 3 37 33	12.2	3 20.6	<b>21</b>	22	57	40.7	- 7 43 44	11.6	22 53.9
<b>25</b>	23	27	52.8	- 3 39 23	12.2	3 16.5	<b>22</b>	22	57	04.5	- 7 48 13	11.7	22 49.3
<b>26</b>	23	27	43.2	- 3 41 19	12.2	3 12.4	<b>23</b>	22	56	28.9	- 7 52 37	11.7	22 44.8
<b>27</b>	23	27	32.4	- 3 43 24	12.2	3 08.3	<b>24</b>	22	55	53.8	- 7 56 57	11.7	22 40.3
<b>28</b>	23	27	20.5	- 3 45 35	12.1	3 04.2	<b>25</b>	22	55	19.4	- 8 01 12	11.7	22 35.8
<b>29</b>	23	27	07.5	- 3 47 54	12.1	3 00.0	<b>26</b>	22	54	45.7	- 8 05 21	11.8	22 31.4
<b>30</b>	23	26	53.4	- 3 50 21	12.1	2 55.8	<b>27</b>	22	54	12.7	- 8 09 26	11.8	22 26.9
<b>31</b>	23	26	38.3	- 3 52 54	12.1	2 51.7	<b>28</b>	22	53	40.5	- 8 13 25	11.8	22 22.4
<b>Aug. 1</b>	23	26	22.1	- 3 55 34	12.1	2 47.5	<b>29</b>	22	53	09.0	- 8 17 18	11.8	22 18.0
<b>2</b>	23	26	04.8	- 3 58 22	12.1	2 43.2	<b>30</b>	22	52	38.2	- 8 21 06	11.9	22 13.6
<b>3</b>	23	25	46.5	- 4 01 16	12.0	2 39.0	<b>Oct. 1</b>	22	52	08.4	- 8 24 48	11.9	22 09.1
<b>4</b>	23	25	27.2	- 4 04 17	12.0	2 34.7	<b>2</b>	22	51	39.3	- 8 28 24	11.9	22 04.7
<b>5</b>	23	25	06.9	- 4 07 25	12.0	2 30.5	<b>3</b>	22	51	11.1	- 8 31 53	11.9	22 00.4
<b>6</b>	23	24	45.5	- 4 10 39	12.0	2 26.2	<b>4</b>	22	50	43.8	- 8 35 17	11.9	21 56.0
<b>7</b>	23	24	23.2	- 4 14 00	12.0	2 21.9	<b>5</b>	22	50	17.4	- 8 38 34	12.0	21 51.6
<b>8</b>	23	23	59.9	- 4 17 27	11.9	2 17.6	<b>6</b>	22	49	51.9	- 8 41 44	12.0	21 47.3
<b>9</b>	23	23	35.6	- 4 21 01	11.9	2 13.2	<b>7</b>	22	49	27.4	- 8 44 49	12.0	21 43.0
<b>10</b>	23	23	10.4	- 4 24 41	11.9	2 08.9	<b>8</b>	22	49	03.8	- 8 47 46	12.0	21 38.7
<b>11</b>	23	22	44.3	- 4 28 26	11.9	2 04.5	<b>9</b>	22	48	41.2	- 8 50 37	12.1	21 34.4
<b>12</b>	23	22	17.2	- 4 32 18	11.9	2 00.1	<b>10</b>	22	48	19.6	- 8 53 20	12.1	21 30.1
<b>13</b>	23	21	49.3	- 4 36 15	11.9	1 55.7	<b>11</b>	22	47	59.0	- 8 55 57	12.1	21 25.8
<b>14</b>	23	21	20.5	- 4 40 18	11.8	1 51.3	<b>12</b>	22	47	39.4	- 8 58 27	12.1	21 21.6
<b>15</b>	23	20	50.8	- 4 44 26	11.8	1 46.9	<b>13</b>	22	47	20.9	- 9 00 50	12.1	21 17.4
<b>16</b>	23	20	20.3	- 4 48 40	11.8	1 42.5	<b>14</b>	22	47	03.5	- 9 03 06	12.2	21 13.2
<b>17</b>	23	19	49.1	- 4 52 58	11.8	1 38.0	<b>15</b>	22	46	47.1	- 9 05 14	12.2	21 09.0
<b>18</b>	23	19	17.0	- 4 57 21	11.8	1 33.6	<b>16</b>	22	46	31.8	- 9 07 16	12.2	21 04.8
<b>19</b>	23	18	44.3	- 5 01 49	11.7	1 29.1	<b>17</b>	22	46	17.6	- 9 09 10	12.2	21 00.7
<b>20</b>	23	18	10.8	- 5 06 21	11.7	1 24.6	<b>18</b>	22	46	04.4	- 9 10 56	12.2	20 56.5
<b>21</b>	23	17	36.6	- 5 10 57	11.7	1 20.1	<b>19</b>	22	45	52.5	- 9 12 35	12.3	20 52.4
<b>22</b>	23	17	01.8	- 5 15 37	11.7	1 15.6	<b>20</b>	22	45	41.6	- 9 14 07	12.3	20 48.3
<b>23</b>	23	16	26.4	- 5 20 21	11.6	1 11.1	<b>21</b>	22	45	31.8	- 9 15 31	12.3	20 44.2
<b>24</b>	23	15	50.4	- 5 25 07	11.6	1 06.5	<b>22</b>	22	45	23.2	- 9 16 48	12.3	20 40.2
<b>25</b>	23	15	13.8	- 5 29 57	11.6	1 02.0	<b>23</b>	22	45	15.8	- 9 17 58	12.3	20 36.1
<b>26</b>	23	14	36.8	- 5 34 50	11.6	0 57.5	<b>24</b>	22	45	09.4	- 9 19 00	12.4	20 32.1
<b>27</b>	23	13	59.3	- 5 39 46	11.5	0 52.9	<b>25</b>	22	45	04.2	- 9 19 54	12.4	20 28.1
<b>28</b>	23	13	21.4	- 5 44 43	11.5	0 48.3	<b>26</b>	22	45	00.2	- 9 20 42	12.4	20 24.1
<b>29</b>	23	12	43.0	- 5 49 43	11.5	0 43.8	<b>27</b>	22	44	57.3	- 9 21 21	12.4	20 20.2
<b>30</b>	23	12	04.3	- 5 54 44	11.5	0 39.2	<b>28</b>	22	44	55.5	- 9 21 54	12.4	20 16.2
<b>31</b>	23	11	25.3	- 5 59 47	11.4	0 34.6	<b>Oct. 29</b>	22	44	54.8	- 9 22 19	12.5	20 12.3
<b>Sept. 1</b>	23	10	46.0	- 6 04 51	11.4	0 30.0	<b>30</b>	22	44	55.3	- 9 22 36	12.5	20 08.4
<b>2</b>	23	10	06.5	- 6 09 57	11.4	0 25.5	<b>31</b>	22	44	56.9	- 9 22 47	12.5	20 04.5
<b>3</b>	23	09	26.8	- 6 15 02	11.4	0 20.9	<b>Nov. 1</b>	22	44	59.7	- 9 22 50	12.5	20 00.6
<b>4</b>	23	08	46.9	- 6 20 09	11.3	0 16.3	<b>2</b>	22	45	03.5	- 9 22 46	12.5	19 56.8
<b>5</b>	23	08	06.8	- 6 25 15	11.3	0 11.7	<b>3</b>	22	45	08.5	- 9 22 35	12.5	19 52.9
<b>6</b>	23	07	26.7	- 6 30 21	11.3	0 07.1	<b>4</b>	22	45	14.5	- 9 22 17	12.6	19 49.1
<b>Sept. 7</b>	23	06	46.5	- 6 35 27	11.2	0 02.5	<b>Nov. 5</b>	22	45	21.7	- 9 21 52	12.6	19 45.3

Second transit for Cybele 2009 September 7<sup>d</sup> 23<sup>h</sup> 57<sup>m</sup>9

DAVIDA, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit
	R.A.			Dec.					R.A.			Dec.			
	h	m	s	°	'				"	h	m	s	°		
<b>2008 Dec.</b>	<b>13</b>	10 12 25.5	+18 51 56	11-0	4 44.0		<b>2009 Feb.</b>	<b>10</b>	9 58 28.9	+27 22 00	10-1	0 38-1			
	<b>14</b>	10 12 53.9	+18 56 55	11-0	4 40.6		<b>11</b>	9 57 41.1	+27 30 51	10-1	0 33-4				
	<b>15</b>	10 13 20.9	+19 02 04	11-0	4 37-1		<b>12</b>	9 56 53.0	+27 39 31	10-1	0 28-6				
	<b>16</b>	10 13 46.4	+19 07 24	11-0	4 33-6		<b>13</b>	9 56 04.7	+27 48 02	10-2	0 23-9				
	<b>17</b>	10 14 10.6	+19 12 54	11-0	4 30-0		<b>14</b>	9 55 16.3	+27 56 23	10-2	0 19-2				
	<b>18</b>	10 14 33.3	+19 18 36	10-9	4 26.5		<b>15</b>	9 54 27.8	+28 04 32	10-2	0 14-4				
	<b>19</b>	10 14 54.5	+19 24 28	10-9	4 22-9		<b>16</b>	9 53 39.4	+28 12 31	10-2	0 09-7				
	<b>20</b>	10 15 14.2	+19 30 30	10-9	4 19-3		<b>17</b>	9 52 51.1	+28 20 18	10-2	0 05-0				
	<b>21</b>	10 15 32.5	+19 36 44	10-9	4 15-7		<b>18</b>	9 52 02.8	+28 27 53	10-2	0 00-3				
	<b>22</b>	10 15 49.2	+19 43 08	10-9	4 12-0		<b>19</b>	9 51 14.8	+28 35 16	10-2	23 50-8				
	<b>23</b>	10 16 04.4	+19 49 43	10-9	4 08-3		<b>20</b>	9 50 27.1	+28 42 26	10-3	23 46-1				
	<b>24</b>	10 16 18.1	+19 56 29	10-8	4 04-6		<b>21</b>	9 49 39.7	+28 49 24	10-3	23 41-4				
	<b>25</b>	10 16 30.2	+20 03 25	10-8	4 00-9		<b>22</b>	9 48 52.7	+28 56 09	10-3	23 36-7				
	<b>26</b>	10 16 40.7	+20 10 31	10-8	3 57-1		<b>23</b>	9 48 06.2	+29 02 40	10-3	23 32-0				
	<b>27</b>	10 16 49.7	+20 17 48	10-8	3 53-3		<b>24</b>	9 47 20.3	+29 08 59	10-3	23 27-3				
	<b>28</b>	10 16 57.1	+20 25 15	10-8	3 49-5		<b>25</b>	9 46 34.9	+29 15 03	10-4	23 22-6				
	<b>29</b>	10 17 03.0	+20 32 52	10-8	3 45-7		<b>26</b>	9 45 50.2	+29 20 54	10-4	23 18-0				
	<b>30</b>	10 17 07.2	+20 40 39	10-7	3 41-8		<b>27</b>	9 45 06.2	+29 26 30	10-4	23 13-3				
	<b>31</b>	10 17 09.8	+20 48 36	10-7	3 37-9		<b>28</b>	9 44 23.0	+29 31 53	10-4	23 08-7				
<b>2009 Jan.</b>	<b>1</b>	10 17 10.9	+20 56 42	10-7	3 34-0		<b>Mar. 1</b>	9 43 40.7	+29 37 02	10-4	23 04-1				
	<b>2</b>	10 17 10.3	+21 04 57	10-7	3 30-1		<b>2</b>	9 42 59.2	+29 41 56	10-5	22 59-5				
	<b>3</b>	10 17 08.2	+21 13 22	10-7	3 26-1		<b>3</b>	9 42 18.7	+29 46 36	10-5	22 54-9				
	<b>4</b>	10 17 04.4	+21 21 55	10-7	3 22-1		<b>4</b>	9 41 39.2	+29 51 02	10-5	22 50-3				
	<b>5</b>	10 16 59.1	+21 30 37	10-6	3 18-1		<b>5</b>	9 41 00.7	+29 55 14	10-5	22 45-8				
	<b>6</b>	10 16 52.2	+21 39 27	10-6	3 14-0		<b>6</b>	9 40 23.3	+29 59 11	10-5	22 41-2				
	<b>7</b>	10 16 43.6	+21 48 25	10-6	3 09-9		<b>7</b>	9 39 47.0	+30 02 54	10-6	22 36-7				
	<b>8</b>	10 16 33.6	+21 57 31	10-6	3 05-8		<b>8</b>	9 39 11.9	+30 06 24	10-6	22 32-2				
	<b>9</b>	10 16 21.9	+22 06 44	10-6	3 01-7		<b>9</b>	9 38 38.0	+30 09 39	10-6	22 27-7				
	<b>10</b>	10 16 08.7	+22 16 04	10-6	2 57-6		<b>10</b>	9 38 05.3	+30 12 41	10-6	22 23-3				
	<b>11</b>	10 15 53.9	+22 25 31	10-5	2 53-4		<b>11</b>	9 37 33.9	+30 15 28	10-7	22 18-9				
	<b>12</b>	10 15 37.6	+22 35 04	10-5	2 49-2		<b>12</b>	9 37 03.7	+30 18 02	10-7	22 14-4				
	<b>13</b>	10 15 19.7	+22 44 43	10-5	2 44-9		<b>13</b>	9 36 34.9	+30 20 23	10-7	22 10-1				
	<b>14</b>	10 15 00.3	+22 54 28	10-5	2 40-7		<b>14</b>	9 36 07.4	+30 22 30	10-7	22 05-7				
	<b>15</b>	10 14 39.4	+23 04 17	10-5	2 36-4		<b>15</b>	9 35 41.3	+30 24 24	10-7	22 01-3				
	<b>16</b>	10 14 17.1	+23 14 12	10-4	2 32-1		<b>16</b>	9 35 16.6	+30 26 05	10-8	21 57-0				
	<b>17</b>	10 13 53.2	+23 24 11	10-4	2 27-8		<b>17</b>	9 34 53.3	+30 27 33	10-8	21 52-7				
	<b>18</b>	10 13 27.9	+23 34 13	10-4	2 23-4		<b>18</b>	9 34 31.5	+30 28 48	10-8	21 48-5				
	<b>19</b>	10 13 01.1	+23 44 19	10-4	2 19-0		<b>19</b>	9 34 11.1	+30 29 51	10-8	21 44-2				
	<b>20</b>	10 12 33.0	+23 54 28	10-4	2 14-6		<b>20</b>	9 33 52.1	+30 30 41	10-8	21 40-0				
	<b>21</b>	10 12 03.5	+24 04 39	10-4	2 10-2		<b>21</b>	9 33 34.7	+30 31 19	10-9	21 35-8				
	<b>22</b>	10 11 32.6	+24 14 52	10-3	2 05-8		<b>22</b>	9 33 18.7	+30 31 44	10-9	21 31-6				
	<b>23</b>	10 11 00.4	+24 25 07	10-3	2 01-3		<b>23</b>	9 33 04.2	+30 31 58	10-9	21 27-5				
	<b>24</b>	10 10 26.9	+24 35 21	10-3	1 56-8		<b>24</b>	9 32 51.3	+30 32 00	10-9	21 23-3				
	<b>25</b>	10 09 52.2	+24 45 36	10-3	1 52-3		<b>25</b>	9 32 39.9	+30 31 50	11-0	21 19-2				
	<b>26</b>	10 09 16.3	+24 55 51	10-3	1 47-8		<b>26</b>	9 32 30.0	+30 31 29	11-0	21 15-2				
	<b>27</b>	10 08 39.3	+25 06 04	10-3	1 43-2		<b>27</b>	9 32 21.7	+30 30 56	11-0	21 11-1				
	<b>28</b>	10 08 01.1	+25 16 16	10-2	1 38-7		<b>28</b>	9 32 14.8	+30 30 13	11-0	21 07-1				
	<b>29</b>	10 07 21.9	+25 26 26	10-2	1 34-1		<b>29</b>	9 32 09.6	+30 29 19	11-0	21 03-1				
	<b>30</b>	10 06 41.7	+25 36 33	10-2	1 29-5		<b>30</b>	9 32 05.9	+30 28 14	11-1	20 59-1				
	<b>31</b>	10 06 00.6	+25 46 36	10-2	1 24-9		<b>Mar. 31</b>	9 32 03.7	+30 26 59	11-1	20 55-2				
<b>Feb.</b>	<b>1</b>	10 05 18.5	+25 56 35	10-2	1 20-3		<b>Apr. 1</b>	9 32 03.0	+30 25 34	11-1	20 51-3				
	<b>2</b>	10 04 35.6	+26 06 30	10-2	1 15-6		<b>2</b>	9 32 03.9	+30 23 59	11-1	20 47-4				
	<b>3</b>	10 03 51.9	+26 16 20	10-2	1 11-0		<b>3</b>	9 32 06.3	+30 22 14	11-1	20 43-5				
	<b>4</b>	10 03 07.4	+26 26 04	10-2	1 06-3		<b>4</b>	9 32 10.1	+30 20 19	11-2	20 39-7				
	<b>5</b>	10 02 22.3	+26 35 42	10-2	1 01-6		<b>5</b>	9 32 15.5	+30 18 16	11-2	20 35-8				
	<b>6</b>	10 01 36.6	+26 45 13	10-1	0 56-9		<b>6</b>	9 32 22.4	+30 16 03	11-2	20 32-0				
	<b>7</b>	10 00 50.4	+26 54 37	10-1	0 52-2		<b>7</b>	9 32 30.7	+30 13 41	11-2	20 28-3				
	<b>8</b>	10 00 03.6	+27 03 53	10-1	0 47-5		<b>8</b>	9 32 40.5	+30 11 11	11-2	20 24-5				
	<b>9</b>	9 59 16.5	+27 13 01	10-1	0 42-8		<b>9</b>	9 32 51.7	+30 08 32	11-2	20 20-8				
<b>Feb. 10</b>		9 58 28.9	+27 22 00	10-1	0 38-1		<b>Apr. 10</b>	9 33 04.4	+30 05 44	11-3	20 17-1				

Second transit for Davida 2009 February 18<sup>d</sup> 23<sup>h</sup> 55<sup>m</sup>5

INTERAMNIA, 2009  
GEOCENTRIC POSITIONS FOR 0<sup>h</sup> TERRESTRIAL TIME

G15

Date	Astrometric					Vis. Mag.	Ephem- eris Transit	Date	Astrometric					Vis. Mag.	Ephem- eris Transit
	R.A.			Dec.					R.A.			Dec.			
	h	m	s	°	'				"	h	m	s	°		
<b>2009 Jan.</b>	<b>2</b>	10 55 37.8	-10 52 20	12.0			4 08.4	<b>2009 Mar.</b>	<b>2</b>	10 22 49.3	-12 56 29	11.2	23 38.9		
	<b>3</b>	10 55 33.8	-10 58 57	11.9		4 04.4		<b>3</b>	10 22 00.7	-12 53 23	11.2	23 34.2			
	<b>4</b>	10 55 28.6	-11 05 27	11.9		4 00.3		<b>4</b>	10 21 12.4	-12 50 08	11.2	23 29.5			
	<b>5</b>	10 55 22.2	-11 11 50	11.9		3 56.3		<b>5</b>	10 20 24.5	-12 46 45	11.2	23 24.8			
	<b>6</b>	10 55 14.5	-11 18 06	11.9		3 52.2		<b>6</b>	10 19 36.9	-12 43 14	11.2	23 20.1			
	<b>7</b>	10 55 05.7	-11 24 15	11.9		3 48.1		<b>7</b>	10 18 49.8	-12 39 35	11.2	23 15.4			
	<b>8</b>	10 54 55.7	-11 30 16	11.9		3 44.0		<b>8</b>	10 18 03.1	-12 35 49	11.2	23 10.7			
	<b>9</b>	10 54 44.4	-11 36 10	11.9		3 39.9		<b>9</b>	10 17 16.9	-12 31 55	11.2	23 06.0			
	<b>10</b>	10 54 32.0	-11 41 57	11.8		3 35.8		<b>10</b>	10 16 31.3	-12 27 55	11.2	23 01.3			
	<b>11</b>	10 54 18.3	-11 47 35	11.8		3 31.6		<b>11</b>	10 15 46.3	-12 23 47	11.2	22 56.6			
	<b>12</b>	10 54 03.5	-11 53 06	11.8		3 27.4		<b>12</b>	10 15 01.8	-12 19 34	11.2	22 52.0			
	<b>13</b>	10 53 47.4	-11 58 28	11.8		3 23.2		<b>13</b>	10 14 18.1	-12 15 14	11.2	22 47.3			
	<b>14</b>	10 53 30.1	-12 03 42	11.8		3 19.0		<b>14</b>	10 13 35.0	-12 10 49	11.3	22 42.7			
	<b>15</b>	10 53 11.7	-12 08 48	11.8		3 14.8		<b>15</b>	10 12 52.6	-12 06 19	11.3	22 38.1			
	<b>16</b>	10 52 52.0	-12 13 45	11.8		3 10.5		<b>16</b>	10 12 11.0	-12 01 43	11.3	22 33.5			
	<b>17</b>	10 52 31.2	-12 18 33	11.7		3 06.2		<b>17</b>	10 11 30.2	-11 57 02	11.3	22 28.9			
	<b>18</b>	10 52 09.2	-12 23 12	11.7		3 01.9		<b>18</b>	10 10 50.2	-11 52 17	11.3	22 24.3			
	<b>19</b>	10 51 45.9	-12 27 42	11.7		2 57.6		<b>19</b>	10 10 11.0	-11 47 28	11.3	22 19.7			
	<b>20</b>	10 51 21.6	-12 32 02	11.7		2 53.3		<b>20</b>	10 09 32.7	-11 42 35	11.3	22 15.2			
	<b>21</b>	10 50 56.0	-12 36 13	11.7		2 48.9		<b>21</b>	10 08 55.4	-11 37 38	11.4	22 10.6			
	<b>22</b>	10 50 29.4	-12 40 15	11.7		2 44.6		<b>22</b>	10 08 19.0	-11 32 39	11.4	22 06.1			
	<b>23</b>	10 50 01.6	-12 44 06	11.6		2 40.2		<b>23</b>	10 07 43.5	-11 27 36	11.4	22 01.6			
	<b>24</b>	10 49 32.6	-12 47 47	11.6		2 35.7		<b>24</b>	10 07 09.0	-11 22 31	11.4	21 57.1			
	<b>25</b>	10 49 02.6	-12 51 18	11.6		2 31.3		<b>25</b>	10 06 35.6	-11 17 24	11.4	21 52.6			
	<b>26</b>	10 48 31.5	-12 54 39	11.6		2 26.9		<b>26</b>	10 06 03.2	-11 12 15	11.4	21 48.2			
	<b>27</b>	10 47 59.3	-12 57 50	11.6		2 22.4		<b>27</b>	10 05 31.8	-11 07 04	11.5	21 43.7			
	<b>28</b>	10 47 26.1	-13 00 50	11.6		2 17.9		<b>28</b>	10 05 01.6	-11 01 53	11.5	21 39.3			
	<b>29</b>	10 46 51.9	-13 03 39	11.5		2 13.4		<b>29</b>	10 04 32.4	-10 56 40	11.5	21 34.9			
	<b>30</b>	10 46 16.7	-13 06 18	11.5		2 08.9		<b>30</b>	10 04 04.4	-10 51 27	11.5	21 30.6			
	<b>31</b>	10 45 40.5	-13 08 45	11.5		2 04.4		<b>31</b>	10 03 37.5	-10 46 14	11.5	21 26.2			
<b>Feb.</b>	<b>1</b>	10 45 03.4	-13 11 02	11.5		1 59.8		<b>Apr.</b>	<b>1</b>	10 03 11.7	-10 41 01	11.6	21 21.9		
	<b>2</b>	10 44 25.3	-13 13 08	11.5		1 55.3		<b>2</b>	10 02 47.1	-10 35 48	11.6	21 17.5			
	<b>3</b>	10 43 46.4	-13 15 02	11.5		1 50.7		<b>3</b>	10 02 23.7	-10 30 36	11.6	21 13.2			
	<b>4</b>	10 43 06.6	-13 16 46	11.5		1 46.1		<b>4</b>	10 02 01.5	-10 25 25	11.6	21 08.9			
	<b>5</b>	10 42 26.0	-13 18 18	11.4		1 41.5		<b>5</b>	10 01 40.4	-10 20 16	11.6	21 04.7			
	<b>6</b>	10 41 44.6	-13 19 39	11.4		1 36.9		<b>6</b>	10 01 20.6	-10 15 07	11.6	21 00.4			
	<b>7</b>	10 41 02.4	-13 20 49	11.4		1 32.2		<b>7</b>	10 01 01.9	-10 10 01	11.7	20 56.2			
	<b>8</b>	10 40 19.5	-13 21 47	11.4		1 27.6		<b>8</b>	10 00 44.5	-10 04 57	11.7	20 52.0			
	<b>9</b>	10 39 35.9	-13 22 34	11.4		1 22.9		<b>9</b>	10 00 28.2	-9 59 54	11.7	20 47.8			
	<b>10</b>	10 38 51.7	-13 23 10	11.4		1 18.3		<b>10</b>	10 00 13.2	-9 54 54	11.7	20 43.7			
	<b>11</b>	10 38 06.8	-13 23 34	11.3		1 13.6		<b>11</b>	9 59 59.4	-9 49 57	11.7	20 39.5			
	<b>12</b>	10 37 21.3	-13 23 47	11.3		1 08.9		<b>12</b>	9 59 46.8	-9 45 03	11.7	20 35.4			
	<b>13</b>	10 36 35.3	-13 23 49	11.3		1 04.2		<b>13</b>	9 59 35.4	-9 40 12	11.8	20 31.3			
	<b>14</b>	10 35 48.8	-13 23 39	11.3		0 59.5		<b>14</b>	9 59 25.2	-9 35 24	11.8	20 27.2			
	<b>15</b>	10 35 01.8	-13 23 18	11.3		0 54.8		<b>15</b>	9 59 16.2	-9 30 39	11.8	20 23.1			
	<b>16</b>	10 34 14.3	-13 22 46	11.3		0 50.1		<b>16</b>	9 59 08.4	-9 25 58	11.8	20 19.1			
	<b>17</b>	10 33 26.5	-13 22 03	11.3		0 45.4		<b>17</b>	9 59 01.9	-9 21 21	11.8	20 15.1			
	<b>18</b>	10 32 38.3	-13 21 08	11.2		0 40.6		<b>18</b>	9 58 56.6	-9 16 48	11.8	20 11.1			
	<b>19</b>	10 31 49.8	-13 20 02	11.2		0 35.9		<b>19</b>	9 58 52.4	-9 12 20	11.9	20 07.1			
	<b>20</b>	10 31 01.1	-13 18 46	11.2		0 31.2		<b>20</b>	9 58 49.5	-9 07 55	11.9	20 03.1			
	<b>21</b>	10 30 12.1	-13 17 18	11.2		0 26.4		<b>Apr. 21</b>	9 58 47.8	-9 03 35	11.9	19 59.2			
	<b>22</b>	10 29 23.0	-13 15 40	11.2		0 21.7		<b>22</b>	9 58 47.2	-8 59 20	11.9	19 55.3			
	<b>23</b>	10 28 33.7	-13 13 51	11.2		0 16.9		<b>23</b>	9 58 47.9	-8 55 10	11.9	19 51.4			
	<b>24</b>	10 27 44.3	-13 11 52	11.2		0 12.2		<b>24</b>	9 58 49.7	-8 51 04	11.9	19 47.5			
	<b>25</b>	10 26 55.0	-13 09 43	11.2		0 07.4		<b>25</b>	9 58 52.7	-8 47 04	12.0	19 43.6			
	<b>26</b>	10 26 05.6	-13 07 23	11.2		0 02.7		<b>26</b>	9 58 56.9	-8 43 09	12.0	19 39.8			
	<b>27</b>	10 25 16.3	-13 04 54	11.2		23 53.2		<b>27</b>	9 59 02.3	-8 39 19	12.0	19 35.9			
	<b>28</b>	10 24 27.1	-13 02 15	11.2		23 48.4		<b>28</b>	9 59 08.8	-8 35 35	12.0	19 32.1			
<b>Mar.</b>	<b>1</b>	10 23 38.1	-12 59 27	11.2		23 43.7		<b>29</b>	9 59 16.4	-8 31 57	12.0	19 28.3			
<b>Mar.</b>	<b>2</b>	10 22 49.3	-12 56 29	11.2		23 38.9		<b>Apr. 30</b>	9 59 25.2	-8 28 24	12.0	19 24.6			

Second transit for Interamnia 2009 February 26<sup>d</sup> 23<sup>h</sup> 57<sup>m</sup>9