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5 Aug

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Eunomia

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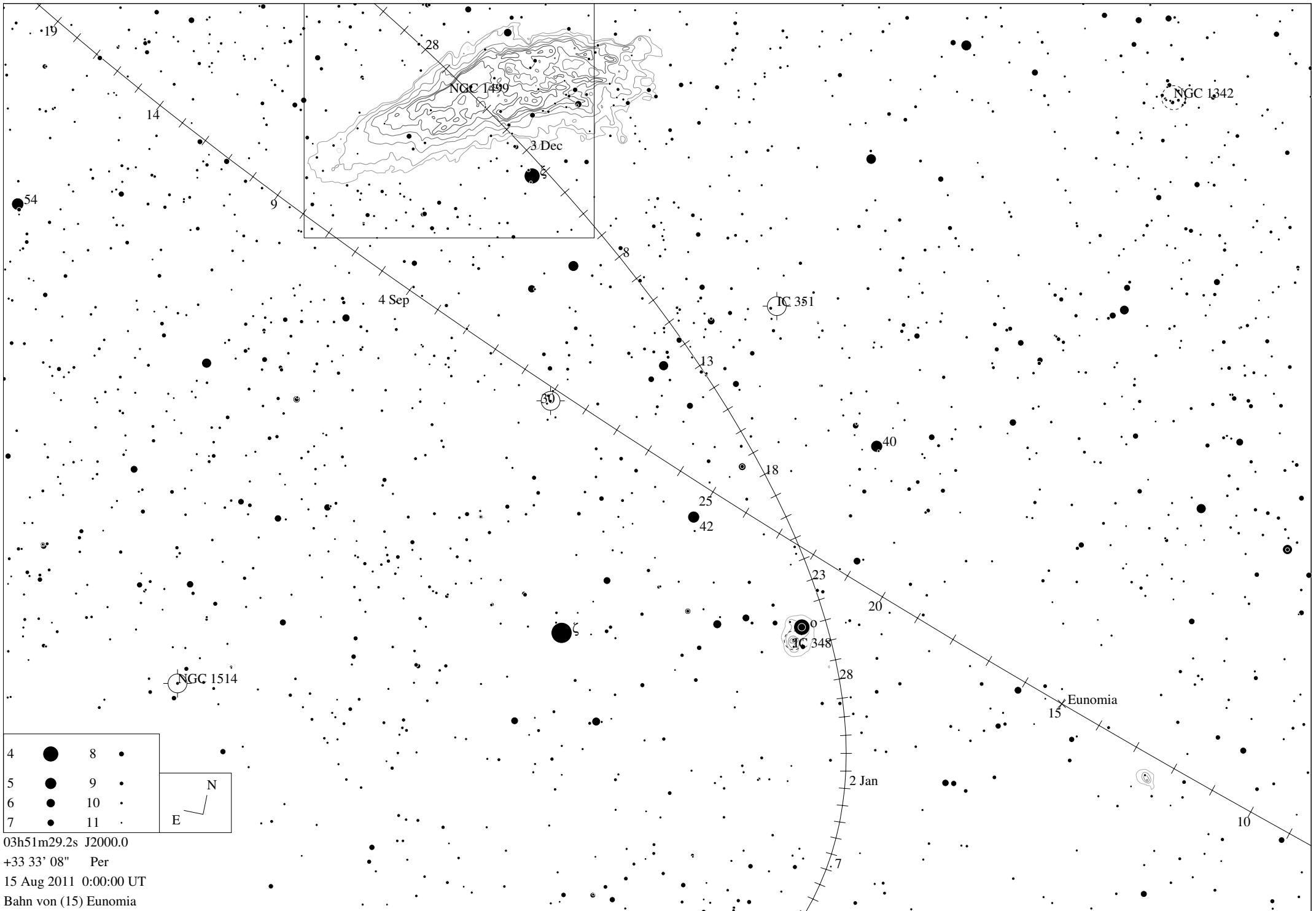
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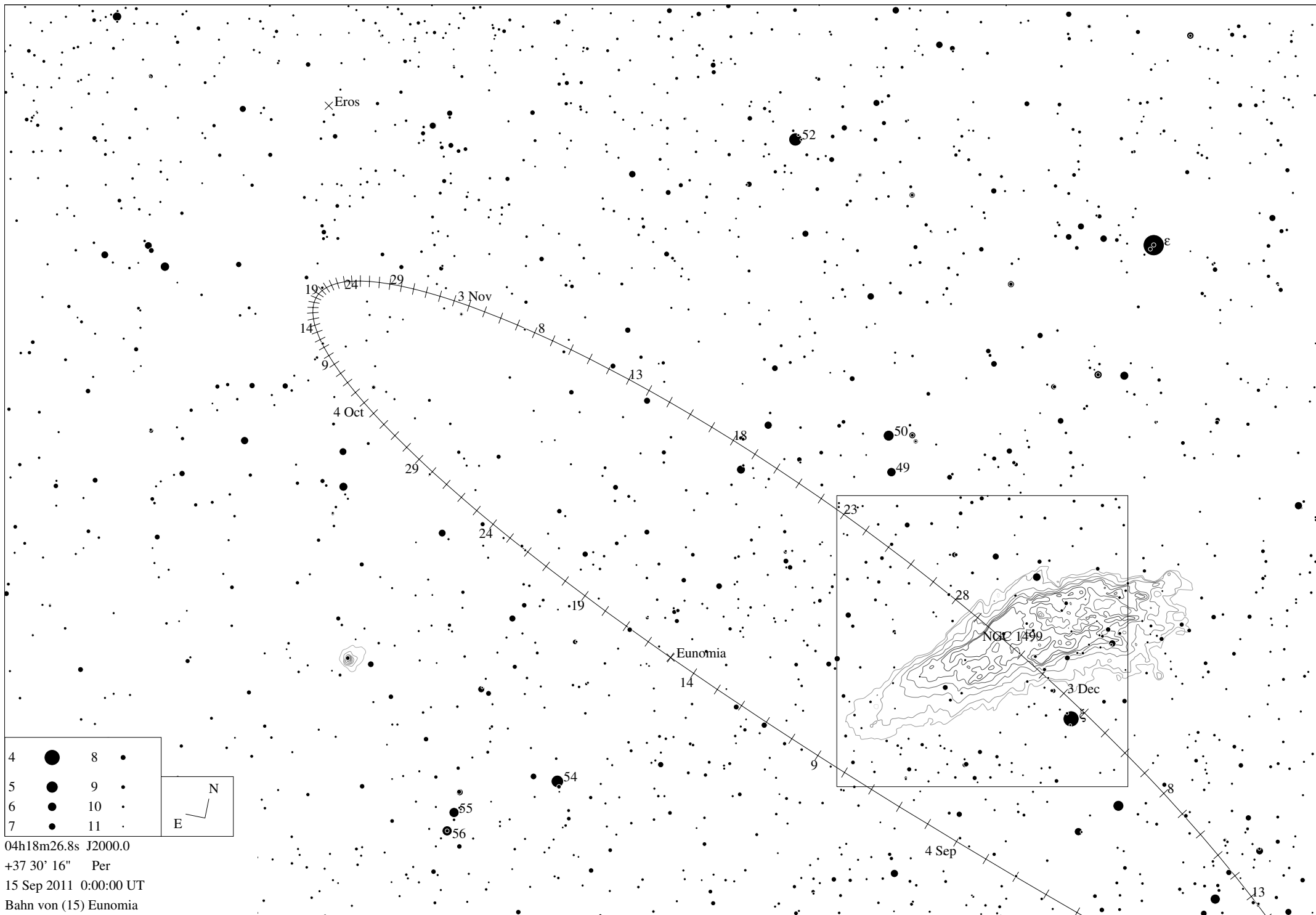
60

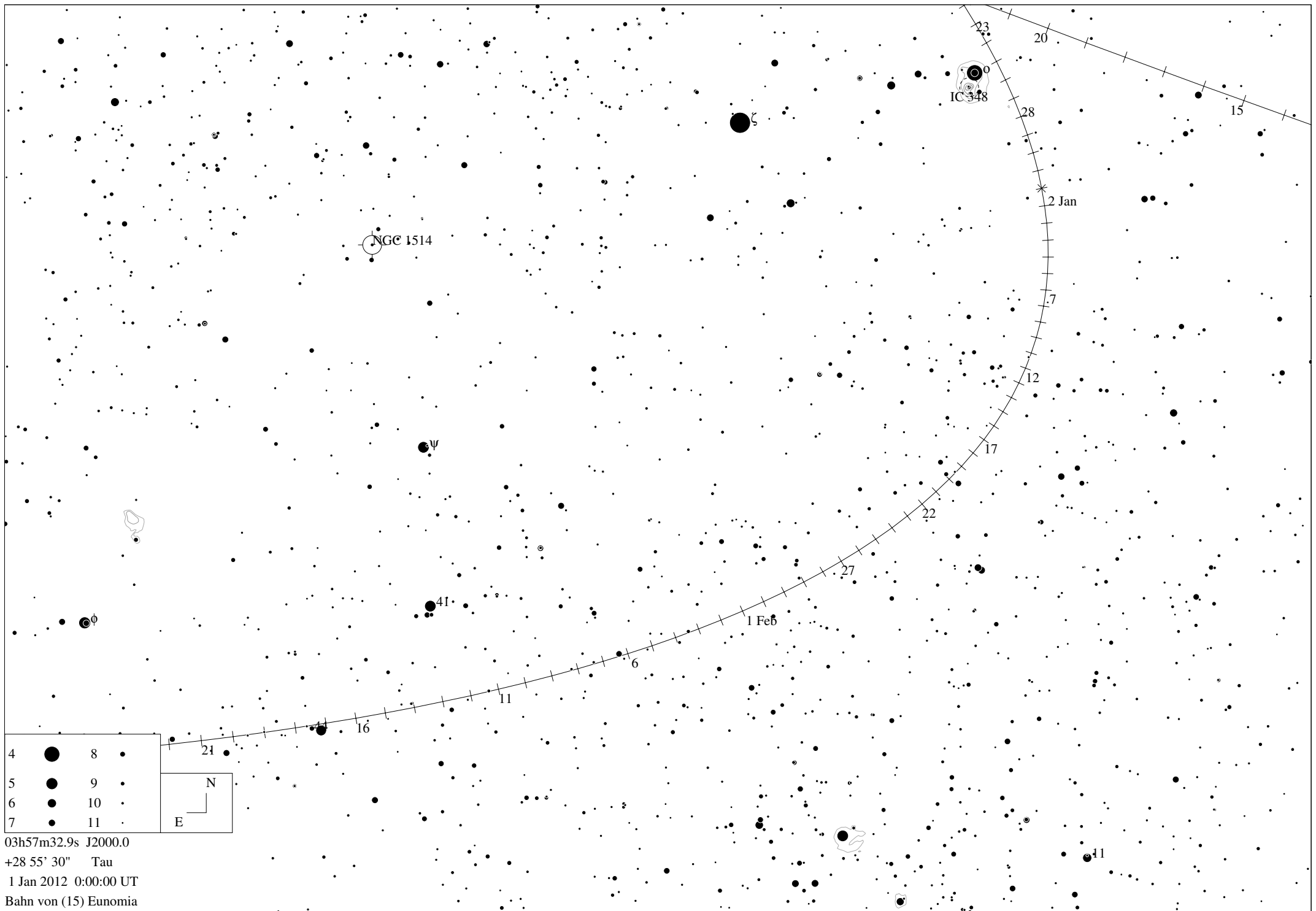
51

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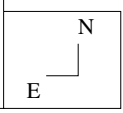
41

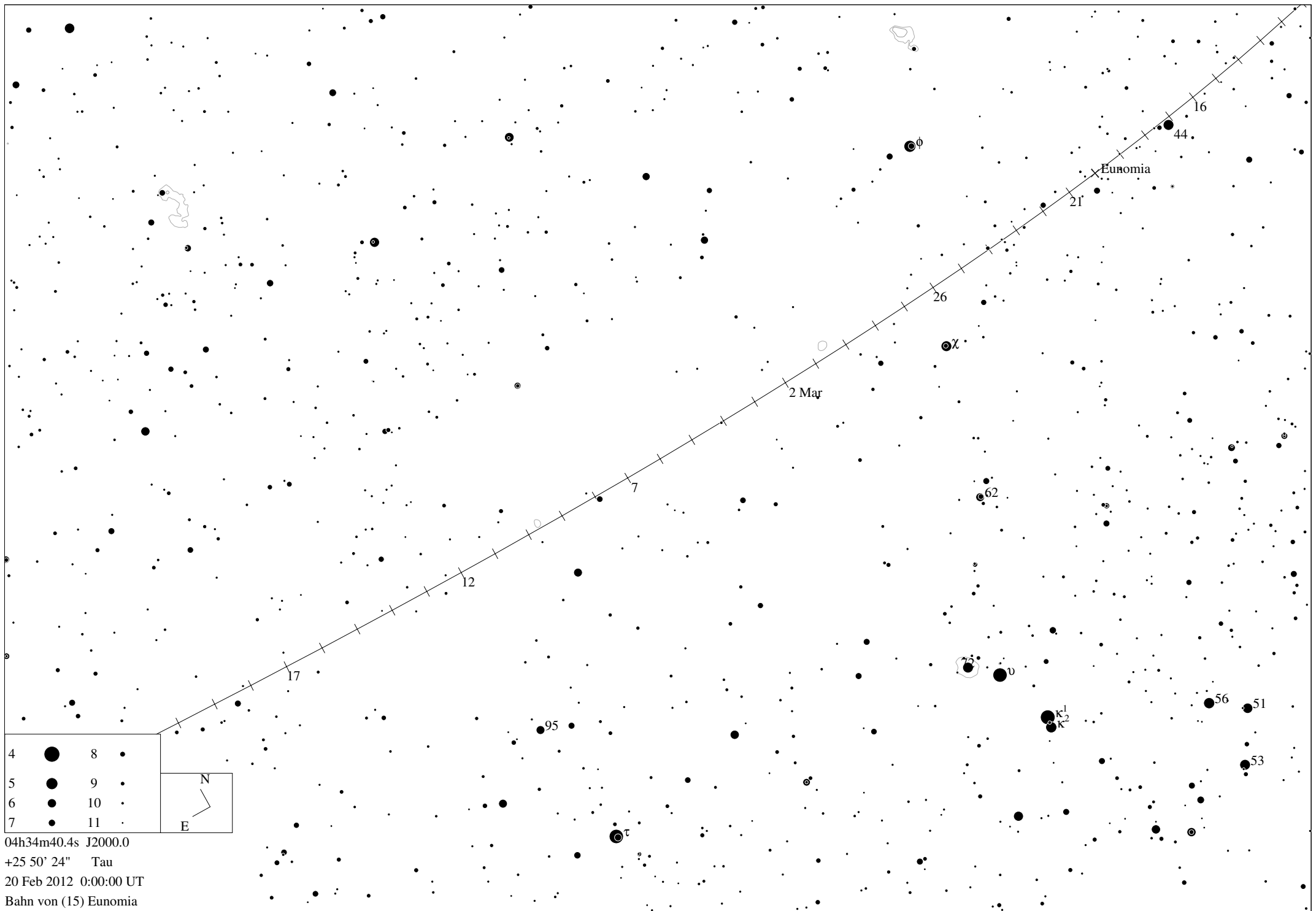


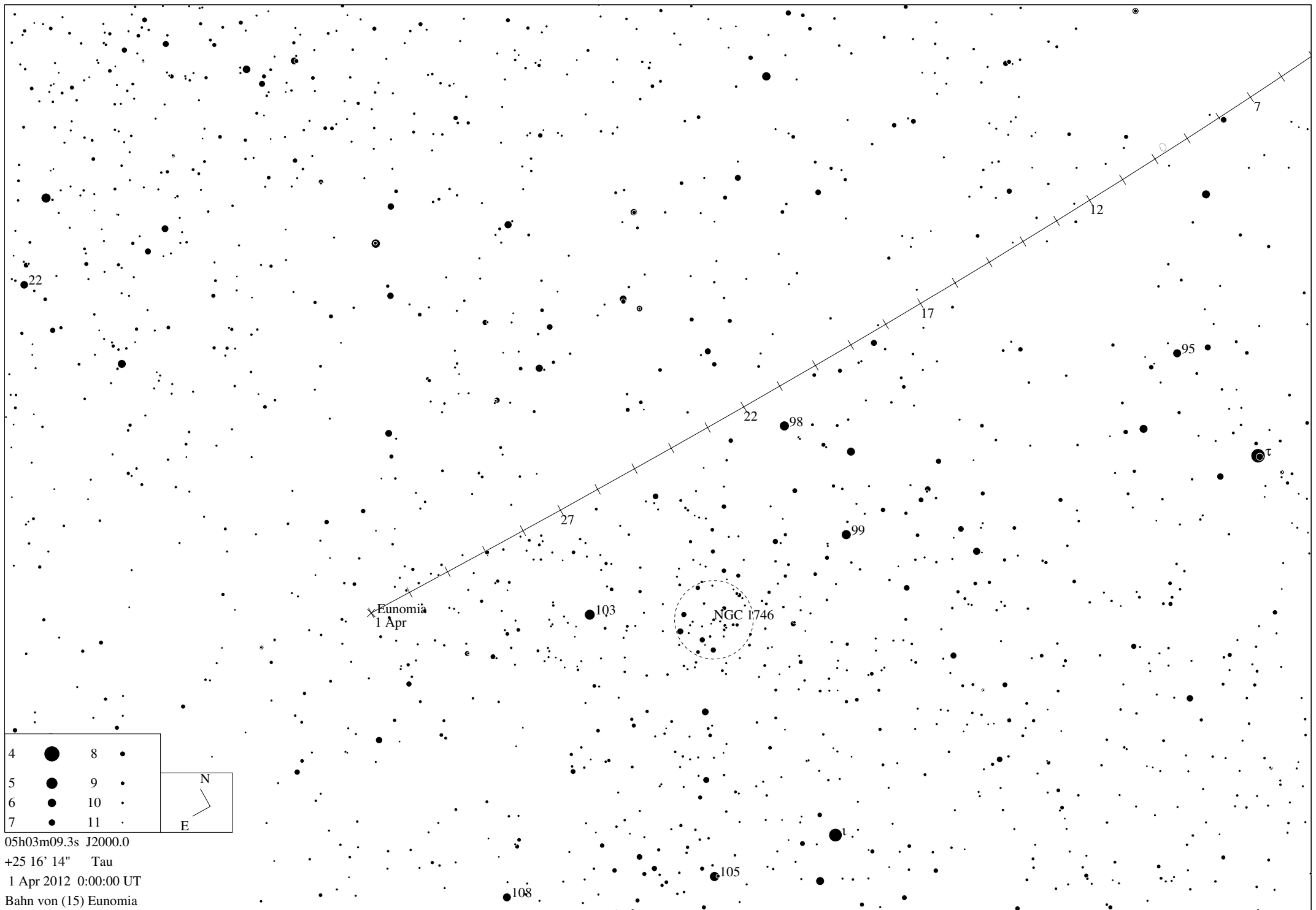




4	●	8	●
5	●	9	●
6	●	10	●
7	●	11	●







Ephemeride des Kleinplaneten (15) Eunomia

<u>Datum</u>	<u>RA</u>	<u>Deklination</u>	<u>r</u>	<u>delta</u>	<u>mag</u>	<u>Elong</u>	<u>Phase</u>	<u>Höhe</u>	<u>Az.</u>	<u>Gesch.</u>	<u>PA</u>
1 Jul 2011	02h12m22.79s	+24 02' 19.1"	2.1591	2.4756	9.9	60.2	24.1	12.54	66.78	71.27	64.4 Ari
2 Jul 2011	02h14m15.34s	+24 14' 29.3"	2.1585	2.4659	9.9	60.7	24.2	12.99	67.03	71.06	64.5 Ari
3 Jul 2011	02h16m07.80s	+24 26' 35.6"	2.1579	2.4561	9.9	61.2	24.4	13.44	67.28	70.84	64.6 Ari
4 Jul 2011	02h18m00.17s	+24 38' 37.9"	2.1574	2.4464	9.9	61.6	24.5	13.89	67.53	70.62	64.6 Ari
5 Jul 2011	02h19m52.42s	+24 50' 36.2"	2.1569	2.4366	9.9	62.1	24.6	14.34	67.78	70.40	64.7 Ari
6 Jul 2011	02h21m44.57s	+25 02' 30.4"	2.1564	2.4267	9.9	62.6	24.7	14.79	68.02	70.17	64.8 Ari
7 Jul 2011	02h23m36.60s	+25 14' 20.4"	2.1559	2.4169	9.9	63.1	24.9	15.24	68.27	69.94	64.8 Ari
8 Jul 2011	02h25m28.50s	+25 26' 06.3"	2.1554	2.4070	9.9	63.5	25.0	15.69	68.52	69.70	64.9 Ari
9 Jul 2011	02h27m20.27s	+25 37' 47.9"	2.1549	2.3971	9.9	64.0	25.1	16.14	68.76	69.46	65.0 Ari
10 Jul 2011	02h29m11.90s	+25 49' 25.3"	2.1544	2.3871	9.9	64.5	25.2	16.59	69.01	69.22	65.0 Ari
11 Jul 2011	02h31m03.39s	+26 00' 58.5"	2.1540	2.3772	9.9	65.0	25.3	17.04	69.26	68.97	65.1 Ari
12 Jul 2011	02h32m54.72s	+26 12' 27.3"	2.1535	2.3672	9.9	65.5	25.4	17.48	69.51	68.72	65.2 Ari
13 Jul 2011	02h34m45.91s	+26 23' 51.8"	2.1531	2.3572	9.9	65.9	25.5	17.93	69.75	68.46	65.2 Ari
14 Jul 2011	02h36m36.92s	+26 35' 12.0"	2.1527	2.3471	9.9	66.4	25.6	18.38	70.00	68.21	65.3 Ari
15 Jul 2011	02h38m27.77s	+26 46' 27.7"	2.1522	2.3371	9.9	66.9	25.8	18.82	70.25	67.94	65.3 Ari
16 Jul 2011	02h40m18.43s	+26 57' 39.1"	2.1518	2.3270	9.8	67.4	25.9	19.27	70.49	67.67	65.4 Ari
17 Jul 2011	02h42m08.90s	+27 08' 46.0"	2.1515	2.3169	9.8	67.9	26.0	19.71	70.74	67.40	65.5 Ari
18 Jul 2011	02h43m59.17s	+27 19' 48.4"	2.1511	2.3067	9.8	68.4	26.1	20.16	70.99	67.12	65.5 Ari
19 Jul 2011	02h45m49.23s	+27 30' 46.3"	2.1507	2.2966	9.8	68.9	26.2	20.60	71.23	66.84	65.6 Ari
20 Jul 2011	02h47m39.07s	+27 41' 39.7"	2.1504	2.2864	9.8	69.4	26.3	21.05	71.48	66.55	65.7 Ari
21 Jul 2011	02h49m28.66s	+27 52' 28.5"	2.1500	2.2762	9.8	69.9	26.3	21.49	71.73	66.25	65.7 Ari
22 Jul 2011	02h51m18.01s	+28 03' 12.7"	2.1497	2.2660	9.8	70.4	26.4	21.93	71.98	65.95	65.8 Ari
23 Jul 2011	02h53m07.10s	+28 13' 52.3"	2.1494	2.2558	9.8	70.9	26.5	22.38	72.23	65.64	65.9 Ari
24 Jul 2011	02h54m55.91s	+28 24' 27.3"	2.1491	2.2455	9.8	71.4	26.6	22.82	72.48	65.32	65.9 Ari
25 Jul 2011	02h56m44.43s	+28 34' 57.6"	2.1488	2.2352	9.8	71.9	26.7	23.26	72.73	65.00	66.0 Ari
26 Jul 2011	02h58m32.64s	+28 45' 23.1"	2.1485	2.2249	9.8	72.4	26.8	23.71	72.98	64.66	66.0 Ari
27 Jul 2011	03h00m20.53s	+28 55' 44.0"	2.1482	2.2146	9.8	72.9	26.9	24.15	73.23	64.32	66.1 Ari
28 Jul 2011	03h02m08.09s	+29 06' 00.0"	2.1480	2.2043	9.8	73.4	26.9	24.59	73.49	63.98	66.1 Ari
29 Jul 2011	03h03m55.29s	+29 16' 11.3"	2.1477	2.1939	9.7	74.0	27.0	25.04	73.74	63.62	66.2 Ari
30 Jul 2011	03h05m42.12s	+29 26' 17.8"	2.1475	2.1835	9.7	74.5	27.1	25.48	74.00	63.26	66.2 Ari
31 Jul 2011	03h07m28.56s	+29 36' 19.4"	2.1473	2.1731	9.7	75.0	27.2	25.92	74.25	62.89	66.3 Ari
1 Aug 2011	03h09m14.59s	+29 46' 16.2"	2.1471	2.1627	9.7	75.5	27.2	26.37	74.51	62.51	66.3 Ari
2 Aug 2011	03h11m00.21s	+29 56' 08.1"	2.1469	2.1523	9.7	76.0	27.3	26.81	74.77	62.12	66.4 Ari
3 Aug 2011	03h12m45.39s	+30 05' 55.1"	2.1467	2.1419	9.7	76.6	27.4	27.25	75.03	61.73	66.4 Ari
4 Aug 2011	03h14m30.12s	+30 15' 37.2"	2.1465	2.1314	9.7	77.1	27.4	27.70	75.29	61.33	66.5 Ari
5 Aug 2011	03h16m14.39s	+30 25' 14.3"	2.1464	2.1210	9.7	77.6	27.5	28.14	75.55	60.92	66.5 Ari
6 Aug 2011	03h17m58.17s	+30 34' 46.5"	2.1462	2.1105	9.7	78.2	27.6	28.59	75.82	60.51	66.6 Ari
7 Aug 2011	03h19m41.46s	+30 44' 13.7"	2.1461	2.1000	9.7	78.7	27.6	29.03	76.09	60.09	66.6 Ari
8 Aug 2011	03h21m24.23s	+30 53' 36.0"	2.1460	2.0895	9.7	79.3	27.7	29.48	76.35	59.66	66.6 Ari
9 Aug 2011	03h23m06.48s	+31 02' 53.4"	2.1459	2.0790	9.6	79.8	27.7	29.92	76.62	59.23	66.7 Ari
10 Aug 2011	03h24m48.19s	+31 12' 05.8"	2.1458	2.0685	9.6	80.4	27.8	30.37	76.90	58.79	66.7 Per
11 Aug 2011	03h26m29.33s	+31 21' 13.2"	2.1457	2.0580	9.6	80.9	27.8	30.82	77.17	58.35	66.7 Per
12 Aug 2011	03h28m09.90s	+31 30' 15.7"	2.1456	2.0475	9.6	81.5	27.8	31.26	77.44	57.89	66.8 Per
13 Aug 2011	03h29m49.88s	+31 39' 13.3"	2.1455	2.0370	9.6	82.0	27.9	31.71	77.72	57.43	66.8 Per
14 Aug 2011	03h31m29.23s	+31 48' 05.9"	2.1455	2.0265	9.6	82.6	27.9	32.16	78.00	56.96	66.8 Per
15 Aug 2011	03h33m07.95s	+31 56' 53.6"	2.1454	2.0159	9.6	83.2	28.0	32.61	78.29	56.48	66.8 Per
16 Aug 2011	03h34m46.02s	+32 05' 36.3"	2.1454	2.0054	9.6	83.7	28.0	33.06	78.57	55.99	66.8 Per
17 Aug 2011	03h36m23.40s	+32 14' 14.2"	2.1454	1.9949	9.6	84.3	28.0	33.51	78.86	55.49	66.8 Per
18 Aug 2011	03h38m00.08s	+32 22' 47.1"	2.1454	1.9843	9.6	84.9	28.0	33.96	79.15	54.98	66.8 Per
19 Aug 2011	03h39m36.03s	+32 31' 15.0"	2.1454	1.9738	9.5	85.4	28.1	34.41	79.44	54.46	66.8 Per
20 Aug 2011	03h41m11.23s	+32 39' 38.1"	2.1454	1.9632	9.5	86.0	28.1	34.87	79.74	53.93	66.8 Per
21 Aug 2011	03h42m45.65s	+32 47' 56.2"	2.1455	1.9527	9.5	86.6	28.1	35.32	80.04	53.39	66.8 Per
22 Aug 2011	03h44m19.27s	+32 56' 09.4"	2.1455	1.9421	9.5	87.2	28.1	35.78	80.34	52.84	66.8 Per
23 Aug 2011	03h45m52.06s	+33 04' 17.7"	2.1456	1.9316	9.5	87.8	28.1	36.23	80.65	52.28	66.8 Per
24 Aug 2011	03h47m24.00s	+33 12' 21.0"	2.1456	1.9211	9.5	88.4	28.1	36.69	80.95	51.70	66.8 Per
25 Aug 2011	03h48m55.04s	+33 20' 19.5"	2.1457	1.9105	9.5	89.0	28.1	37.15	81.27	51.11	66.7 Per
26 Aug 2011	03h50m25.17s	+33 28' 13.0"	2.1458	1.9000	9.5	89.6	28.1	37.61	81.58	50.51	66.7 Per
27 Aug 2011	03h51m54.36s	+33 36' 01.6"	2.1459	1.8895	9.4	90.2	28.1	38.08	81.90	49.90	66.6 Per
28 Aug 2011	03h53m22.58s	+33 43' 45.3"	2.1460	1.8790	9.4	90.8	28.1	38.54	82.23	49.28	66.6 Per
29 Aug 2011	03h54m49.79s	+33 51' 24.1"	2.1462	1.8684	9.4	91.4	28.1	39.01	82.56	48.64	66.5 Per
30 Aug 2011	03h56m15.98s	+33 58' 57.9"	2.1463	1.8579	9.4	92.1	28.0	39.48	82.89	47.99	66.5 Per
31 Aug 2011	03h57m41.10s	+34 06' 26.7"	2.1465	1.8475	9.4	92.7	28.0	39.94	83.23	47.33	66.4 Per
1 Sep 2011	03h59m05.14s	+34 13' 50.7"	2.1466	1.8370	9.4	93.3	28.0	40.42	83.57	46.66	66.3 Per
2 Sep 2011	04h00m28.07s	+34 21' 09.6"	2.1468	1.8265	9.4	94.0	28.0	40.89	83.92	45.98	66.2 Per
3 Sep 2011	04h01m49.86s	+34 28' 23.6"	2.1470	1.8161	9.4	94.6	27.9	41.37	84.27	45.29	66.1 Per
4 Sep 2011	04h03m10.48s	+34 35' 32.6"	2.1472	1.8057	9.3	95.2	27.9	41.84	84.63	44.59	66.0 Per
5 Sep 2011	04h04m29.91s	+34 42' 36.7"	2.1474	1.7953	9.3	95.9	27.8	42.32	85.00	43.88	65.9 Per
6 Sep 2011	04h05m48.12s	+34 49' 35.9"	2.1477	1.7849	9.3	96.5	27.8	42.81	85.37	43.15	65.7 Per
7 Sep 2011	04h07m05.09s	+34 56' 30.0"	2.1479	1.7746	9.3	97.2	27.7	43.29	85.74	42.42	65.6 Per
8 Sep 2011	04h08m20.78s	+35 03' 19.2"	2.1481	1.7642	9.3	97.9	27.7	43.78	86.12	41.68	65.4 Per
9 Sep 2011	04h09m35.16s	+35 10' 03.5"	2.1484	1.7539	9.3	98.5	27.6	44.27	86.51	40.92	65.3 Per
10 Sep 2011	04h10m48.21s	+35 16' 42.8"	2.1487	1.7437	9.3	99.2	27.6	44.76	86.91	40.15	65.1 Per
11 Sep 2011	04h11m59.90s	+35 23' 17.1"	2.1490	1.7334	9.2	99.9	27.5	45.25	87.31	39.37	64.9 Per

Ephemeride des Kleinplaneten (15) Eunomia

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA
12 Sep 2011	04h13m10.18s	+35 29' 46.5"	2.1493	1.7232	9.2	100.6	27.4	45.75	87.72	38.57	64.7 Per
13 Sep 2011	04h14m19.03s	+35 36' 10.8"	2.1496	1.7130	9.2	101.3	27.3	46.25	88.14	37.76	64.5 Per
14 Sep 2011	04h15m26.41s	+35 42' 30.2"	2.1499	1.7029	9.2	102.0	27.2	46.75	88.56	36.94	64.2 Per
15 Sep 2011	04h16m32.29s	+35 48' 44.5"	2.1502	1.6928	9.2	102.7	27.2	47.26	89.00	36.11	63.9 Per
16 Sep 2011	04h17m36.63s	+35 54' 53.8"	2.1506	1.6827	9.2	103.4	27.1	47.77	89.44	35.26	63.7 Per
17 Sep 2011	04h18m39.40s	+36 00' 58.0"	2.1509	1.6727	9.2	104.1	27.0	48.28	89.89	34.40	63.3 Per
18 Sep 2011	04h19m40.56s	+36 06' 57.0"	2.1513	1.6627	9.1	104.8	26.9	48.79	90.36	33.52	63.0 Per
19 Sep 2011	04h20m40.07s	+36 12' 50.9"	2.1517	1.6527	9.1	105.5	26.7	49.31	90.83	32.63	62.6 Per
20 Sep 2011	04h21m37.89s	+36 18' 39.6"	2.1521	1.6428	9.1	106.3	26.6	49.83	91.31	31.72	62.2 Per
21 Sep 2011	04h22m33.99s	+36 24' 23.0"	2.1525	1.6329	9.1	107.0	26.5	50.36	91.80	30.80	61.8 Per
22 Sep 2011	04h23m28.32s	+36 30' 01.0"	2.1529	1.6231	9.1	107.7	26.4	50.88	92.31	29.86	61.3 Per
23 Sep 2011	04h24m17.84s	+36 35' 33.7"	2.1534	1.6134	9.1	108.5	26.2	51.41	92.82	28.92	60.8 Per
24 Sep 2011	04h25m11.55s	+36 41' 00.9"	2.1538	1.6036	9.0	109.2	26.1	51.95	93.35	27.95	60.3 Per
25 Sep 2011	04h26m00.36s	+36 46' 22.5"	2.1542	1.5940	9.0	110.0	25.9	52.49	93.90	26.98	59.6 Per
26 Sep 2011	04h26m47.26s	+36 51' 38.4"	2.1547	1.5844	9.0	110.8	25.8	53.03	94.45	25.99	59.0 Per
27 Sep 2011	04h27m32.21s	+36 56' 48.5"	2.1552	1.5749	9.0	111.5	25.6	53.58	95.03	24.99	58.3 Per
28 Sep 2011	04h28m15.18s	+37 01' 52.7"	2.1557	1.5654	9.0	112.3	25.5	54.12	95.62	23.98	57.5 Per
29 Sep 2011	04h28m56.13s	+37 06' 51.0"	2.1562	1.5560	9.0	113.1	25.3	54.68	96.22	22.96	56.6 Per
30 Sep 2011	04h29m35.03s	+37 11' 43.0"	2.1567	1.5467	8.9	113.9	25.1	55.23	96.84	21.93	55.6 Per
1 Okt 2011	04h30m11.85s	+37 16' 28.8"	2.1572	1.5374	8.9	114.7	24.9	55.79	97.48	20.90	54.6 Per
2 Okt 2011	04h30m46.57s	+37 21' 08.2"	2.1578	1.5282	8.9	115.5	24.8	56.36	98.14	19.86	53.4 Per
3 Okt 2011	04h31m19.16s	+37 25' 41.0"	2.1583	1.5191	8.9	116.3	24.6	56.92	98.82	18.82	52.1 Per
4 Okt 2011	04h31m49.59s	+37 30' 07.1"	2.1589	1.5101	8.9	117.2	24.4	57.49	99.53	17.77	50.7 Per
5 Okt 2011	04h32m17.84s	+37 34' 26.4"	2.1594	1.5012	8.9	118.0	24.1	58.07	100.25	16.73	49.0 Per
6 Okt 2011	04h32m43.88s	+37 38' 38.6"	2.1600	1.4923	8.8	118.8	23.9	58.64	101.00	15.69	47.2 Per
7 Okt 2011	04h33m07.68s	+37 42' 43.6"	2.1606	1.4836	8.8	119.7	23.7	59.22	101.78	14.66	45.0 Per
8 Okt 2011	04h33m29.23s	+37 46' 41.3"	2.1612	1.4749	8.8	120.5	23.5	59.80	102.58	13.64	42.6 Per
9 Okt 2011	04h33m48.48s	+37 50' 31.4"	2.1618	1.4664	8.8	121.4	23.2	60.39	103.42	12.63	39.7 Per
10 Okt 2011	04h34m05.43s	+37 54' 13.7"	2.1624	1.4579	8.8	122.2	23.0	60.98	104.28	11.65	36.4 Per
11 Okt 2011	04h34m20.05s	+37 57' 48.0"	2.1631	1.4495	8.7	123.1	22.7	61.57	105.18	10.70	32.4 Per
12 Okt 2011	04h34m32.31s	+38 01' 14.1"	2.1637	1.4413	8.7	124.0	22.5	62.16	106.11	9.81	27.7 Per
13 Okt 2011	04h34m41.20s	+38 04' 31.8"	2.1644	1.4331	8.7	124.9	22.2	62.75	107.09	8.97	22.0 Per
14 Okt 2011	04h34m49.70s	+38 07' 40.8"	2.1651	1.4251	8.7	125.7	22.0	63.35	108.10	8.23	15.3 Per
15 Okt 2011	04h34m54.78s	+38 10' 40.9"	2.1657	1.4172	8.7	126.6	21.7	63.95	109.16	7.62	7.3 Per
16 Okt 2011	04h34m57.43s	+38 13' 31.7"	2.1664	1.4094	8.6	127.6	21.4	64.54	110.27	7.16	358.0 Per
17 Okt 2011	04h34m57.64s	+38 16' 13.0"	2.1671	1.4017	8.6	128.5	21.1	65.14	111.43	6.91	347.8 Per
18 Okt 2011	04h34m55.39s	+38 18' 44.6"	2.1679	1.3941	8.6	129.4	20.8	65.74	112.64	6.87	337.1 Per
19 Okt 2011	04h34m50.68s	+38 21' 06.1"	2.1686	1.3867	8.6	130.3	20.5	66.34	113.91	7.06	326.5 Per
20 Okt 2011	04h34m43.50s	+38 23' 17.1"	2.1693	1.3794	8.6	131.2	20.2	66.93	115.25	7.47	316.7 Per
21 Okt 2011	04h34m33.84s	+38 25' 17.4"	2.1701	1.3723	8.5	132.2	19.9	67.52	116.65	8.06	308.1 Per
22 Okt 2011	04h34m21.71s	+38 27' 06.7"	2.1708	1.3653	8.5	133.1	19.6	68.11	118.13	8.80	300.7 Per
23 Okt 2011	04h34m07.10s	+38 28' 44.5"	2.1716	1.3584	8.5	134.1	19.2	68.70	119.70	9.65	294.5 Per
24 Okt 2011	04h33m50.03s	+38 30' 10.6"	2.1724	1.3517	8.5	135.0	18.9	69.27	121.34	10.58	289.3 Per
25 Okt 2011	04h33m30.51s	+38 31' 24.6"	2.1732	1.3451	8.5	136.0	18.5	69.85	123.08	11.58	284.9 Per
26 Okt 2011	04h33m08.56s	+38 32' 26.0"	2.1740	1.3387	8.4	136.9	18.2	70.41	124.93	12.61	281.1 Per
27 Okt 2011	04h32m44.21s	+38 33' 14.7"	2.1748	1.3325	8.4	137.9	17.8	70.96	126.88	13.68	277.9 Per
28 Okt 2011	04h32m17.48s	+38 33' 50.1"	2.1756	1.3264	8.4	138.9	17.5	71.50	128.95	14.77	275.1 Per
29 Okt 2011	04h31m48.41s	+38 34' 11.9"	2.1765	1.3205	8.4	139.9	17.1	72.03	131.14	15.87	272.6 Per
30 Okt 2011	04h31m17.05s	+38 34' 19.9"	2.1773	1.3148	8.4	140.8	16.7	72.54	133.46	16.97	270.4 Per
31 Okt 2011	04h30m43.43s	+38 34' 13.7"	2.1782	1.3092	8.3	141.8	16.4	73.04	135.93	18.07	268.5 Per
1 Nov 2011	04h30m07.60s	+38 33' 52.9"	2.1791	1.3039	8.3	142.8	16.0	73.51	138.54	19.17	266.7 Per
2 Nov 2011	04h29m29.63s	+38 33' 17.3"	2.1799	1.2987	8.3	143.8	15.6	73.95	141.31	20.26	265.0 Per
3 Nov 2011	04h28m49.55s	+38 32' 26.6"	2.1808	1.2937	8.3	144.8	15.2	74.37	144.23	21.34	263.5 Per
4 Nov 2011	04h28m07.44s	+38 31' 20.4"	2.1817	1.2889	8.3	145.8	14.8	74.76	147.32	22.41	262.2 Per
5 Nov 2011	04h27m23.36s	+38 29' 58.6"	2.1826	1.2843	8.3	146.8	14.4	75.11	150.57	23.46	260.8 Per
6 Nov 2011	04h26m37.36s	+38 28' 20.9"	2.1836	1.2799	8.2	147.8	14.0	75.42	153.98	24.49	259.6 Per
7 Nov 2011	04h25m49.53s	+38 26' 27.0"	2.1845	1.2757	8.2	148.8	13.6	75.69	157.54	25.50	258.4 Per
8 Nov 2011	04h24m59.93s	+38 24' 16.7"	2.1854	1.2717	8.2	149.7	13.2	75.91	161.24	26.49	257.3 Per
9 Nov 2011	04h24m08.64s	+38 21' 49.9"	2.1864	1.2679	8.2	150.7	12.8	76.09	165.06	27.45	256.3 Per
10 Nov 2011	04h23m15.74s	+38 19' 06.3"	2.1873	1.2644	8.2	151.7	12.4	76.21	168.99	28.39	255.2 Per
11 Nov 2011	04h22m21.32s	+38 16' 05.9"	2.1883	1.2610	8.1	152.6	12.0	76.28	172.98	29.30	254.2 Per
12 Nov 2011	04h21m25.46s	+38 12' 48.4"	2.1893	1.2579	8.1	153.6	11.6	76.29	177.03	30.18	253.3 Per
13 Nov 2011	04h20m28.25s	+38 09' 13.8"	2.1903	1.2550	8.1	154.5	11.2	76.24	181.08	31.03	252.3 Per
14 Nov 2011	04h19m29.79s	+38 05' 22.1"	2.1913	1.2523	8.1	155.4	10.8	76.14	185.12	31.84	251.4 Per
15 Nov 2011	04h18m30.17s	+38 01' 13.1"	2.1923	1.2499	8.1	156.4	10.4	75.98	189.10	32.62	250.5 Per
16 Nov 2011	04h17m29.49s	+37 56' 46.9"	2.1933	1.2477	8.1	157.2	10.1	75.76	193.01	33.36	249.6 Per
17 Nov 2011	04h16m27.85s	+37 52' 03.5"	2.1944	1.2457	8.0	158.1	9.7	75.48	196.81	34.06	248.8 Per
18 Nov 2011	04h15m25.37s	+37 47' 02.9"	2.1954	1.2439	8.0	158.9	9.3	75.16	200.49	34.72	247.9 Per
19 Nov 2011	04h14m22.15s	+37 41' 45.3"	2.1965	1.2424	8.0	159.7	9.0	74.78	204.03	35.34	247.0 Per
20 Nov 2011	04h13m18.30s	+37 36' 10.8"	2.1975	1.2412	8.0	160.5	8.6	74.36	207.42	35.91	246.2 Per
21 Nov 2011	04h12m13.94s	+37 30' 19.5"	2.1986	1.2401	8.0	161.2	8.3	73.89	210.65	36.44	245.3 Per
22 Nov 2011	04h11m09.18s	+37 24' 11.7"	2.1997	1.2394	8.0	161.8	8.0	73.39	213.72	36.92	244.5 Per
23 Nov 2011	04h10m04.14s	+37 17' 47.6"	2.2008	1.2389	8.0	162.4	7.8	72.85	216.63	37.35	243.6 Per
24 Nov 2011	04h08m58.96s	+37 11' 07.4"	2.2019	1.2386	7.9	163.0	7.5	72.27	219.39	37.73	242.8 Per

Ephemeride des Kleinplaneten (15) Eunomia

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA
25 Nov 2011	04h07m53.74s	+37 04' 11.7"	2.2030	1.2386	7.9	163.4	7.3	71.67	222.00	38.05	241.9 Per
26 Nov 2011	04h06m48.62s	+36 57' 00.6"	2.2041	1.2388	7.9	163.8	7.2	71.03	224.46	38.32	241.0 Per
27 Nov 2011	04h05m43.71s	+36 49' 34.8"	2.2053	1.2393	7.9	164.1	7.0	70.38	226.79	38.54	240.1 Per
28 Nov 2011	04h04m39.14s	+36 41' 54.5"	2.2064	1.2401	7.9	164.4	6.9	69.70	229.00	38.71	239.3 Per
29 Nov 2011	04h03m35.03s	+36 34' 00.5"	2.2075	1.2411	7.9	164.5	6.9	69.00	231.08	38.82	238.4 Per
30 Nov 2011	04h02m31.49s	+36 25' 53.1"	2.2087	1.2424	7.9	164.5	6.8	68.28	233.05	38.88	237.5 Per
1 Dez 2011	04h01m28.64s	+36 17' 33.0"	2.2099	1.2439	7.9	164.4	6.9	67.55	234.92	38.90	236.5 Per
2 Dez 2011	04h00m26.57s	+36 09' 00.8"	2.2111	1.2457	7.9	164.3	6.9	66.81	236.69	38.86	235.6 Per
3 Dez 2011	03h59m25.40s	+36 00' 17.2"	2.2122	1.2477	8.0	164.0	7.0	66.05	238.38	38.77	234.7 Per
4 Dez 2011	03h58m25.23s	+35 51' 22.6"	2.2134	1.2500	8.0	163.7	7.2	65.28	239.98	38.64	233.7 Per
5 Dez 2011	03h57m26.07s	+35 42' 12.2"	2.2147	1.2526	8.0	163.3	7.4	64.51	241.50	38.48	232.7 Per
6 Dez 2011	03h56m28.82s	+35 32' 57.8"	2.2159	1.2554	8.0	162.8	7.6	63.72	242.96	38.25	231.7 Per
7 Dez 2011	03h55m31.48s	+35 23' 34.6"	2.2171	1.2585	8.0	162.2	7.8	62.93	244.35	37.99	230.7 Per
8 Dez 2011	03h54m36.17s	+35 14' 03.3"	2.2184	1.2618	8.0	161.6	8.1	62.14	245.68	37.68	229.7 Per
9 Dez 2011	03h53m42.29s	+35 04' 24.6"	2.2196	1.2654	8.0	160.9	8.4	61.34	246.96	37.34	228.6 Per
10 Dez 2011	03h52m49.92s	+34 54' 39.3"	2.2209	1.2692	8.1	160.1	8.7	60.54	248.19	36.96	227.5 Per
11 Dez 2011	03h51m59.12s	+34 44' 48.1"	2.2221	1.2733	8.1	159.4	9.0	59.73	249.36	36.54	226.4 Per
12 Dez 2011	03h51m09.97s	+34 34' 51.6"	2.2234	1.2776	8.1	158.6	9.3	58.92	250.50	36.09	225.3 Per
13 Dez 2011	03h50m22.52s	+34 24' 50.6"	2.2247	1.2822	8.1	157.7	9.7	58.12	251.59	35.61	224.1 Per
14 Dez 2011	03h49m36.82s	+34 14' 45.9"	2.2260	1.2870	8.1	156.8	10.0	57.31	252.65	35.10	222.9 Per
15 Dez 2011	03h48m52.95s	+34 04' 38.0"	2.2273	1.2920	8.2	155.9	10.4	56.50	253.67	34.56	221.6 Per
16 Dez 2011	03h48m10.93s	+33 54' 27.8"	2.2286	1.2973	8.2	155.0	10.7	55.69	254.65	34.01	220.3 Per
17 Dez 2011	03h47m30.83s	+33 44' 15.8"	2.2299	1.3028	8.2	154.1	11.1	54.89	255.61	33.42	219.0 Per
18 Dez 2011	03h46m52.69s	+33 34' 02.9"	2.2312	1.3086	8.2	153.1	11.5	54.08	256.54	32.82	217.6 Per
19 Dez 2011	03h46m16.55s	+33 23' 49.5"	2.2325	1.3146	8.3	152.2	11.9	53.28	257.44	32.21	216.1 Per
20 Dez 2011	03h45m42.44s	+33 13' 36.5"	2.2339	1.3208	8.3	151.2	12.3	52.49	258.32	31.57	214.6 Per
21 Dez 2011	03h45m10.41s	+33 03' 24.4"	2.2352	1.3272	8.3	150.2	12.6	51.69	259.17	30.93	213.0 Per
22 Dez 2011	03h44m40.48s	+32 53' 13.9"	2.2366	1.3339	8.3	149.2	13.0	50.90	260.01	30.28	211.3 Per
23 Dez 2011	03h44m12.69s	+32 43' 05.6"	2.2380	1.3408	8.4	148.2	13.4	50.11	260.82	29.62	209.6 Per
24 Dez 2011	03h43m47.06s	+32 33' 00.0"	2.2393	1.3479	8.4	147.2	13.8	49.33	261.61	28.96	207.7 Per
25 Dez 2011	03h43m23.61s	+32 22' 57.8"	2.2407	1.3553	8.4	146.2	14.1	48.56	262.39	28.31	205.8 Per
26 Dez 2011	03h43m02.37s	+32 12' 59.5"	2.2421	1.3628	8.4	145.2	14.5	47.78	263.15	27.66	203.8 Per
27 Dez 2011	03h42m43.34s	+32 03' 05.7"	2.2435	1.3706	8.5	144.2	14.8	47.02	263.89	27.03	201.7 Per
28 Dez 2011	03h42m26.52s	+31 53' 16.7"	2.2449	1.3785	8.5	143.2	15.2	46.26	264.62	26.41	199.4 Per
29 Dez 2011	03h42m11.94s	+31 43' 33.2"	2.2463	1.3867	8.5	142.2	15.6	45.50	265.33	25.81	197.1 Per
30 Dez 2011	03h41m59.58s	+31 33' 55.5"	2.2477	1.3951	8.5	141.2	15.9	44.75	266.03	25.24	194.7 Per
31 Dez 2011	03h41m49.44s	+31 24' 24.1"	2.2492	1.4036	8.6	140.2	16.2	44.01	266.72	24.70	192.2 Per
1 Jan 2012	03h41m41.52s	+31 14' 59.4"	2.2506	1.4124	8.6	139.2	16.6	43.28	267.40	24.20	189.6 Per
2 Jan 2012	03h41m35.81s	+31 05' 41.6"	2.2520	1.4213	8.6	138.2	16.9	42.55	268.06	23.73	186.9 Per
3 Jan 2012	03h41m32.29s	+30 56' 31.2"	2.2535	1.4304	8.6	137.2	17.2	41.82	268.72	23.30	184.1 Tau
4 Jan 2012	03h41m30.95s	+30 47' 28.4"	2.2549	1.4397	8.7	136.2	17.6	41.11	269.36	22.92	181.2 Tau
5 Jan 2012	03h41m31.78s	+30 38' 33.5"	2.2564	1.4491	8.7	135.3	17.9	40.40	270.00	22.59	178.2 Tau
6 Jan 2012	03h41m34.76s	+30 29' 46.8"	2.2579	1.4588	8.7	134.3	18.2	39.70	270.63	22.31	175.2 Tau
7 Jan 2012	03h41m39.86s	+30 21' 08.4"	2.2594	1.4686	8.7	133.3	18.5	39.00	271.24	22.09	172.1 Tau
8 Jan 2012	03h41m47.07s	+30 12' 38.6"	2.2609	1.4785	8.8	132.3	18.8	38.31	271.85	21.92	169.0 Tau
9 Jan 2012	03h41m56.37s	+30 04' 17.5"	2.2624	1.4887	8.8	131.4	19.0	37.63	272.46	21.81	165.8 Tau
10 Jan 2012	03h42m07.73s	+29 56' 05.3"	2.2639	1.4989	8.8	130.4	19.3	36.96	273.05	21.76	162.7 Tau
11 Jan 2012	03h42m21.12s	+29 48' 02.1"	2.2654	1.5094	8.8	129.5	19.6	36.29	273.64	21.76	159.6 Tau
12 Jan 2012	03h42m36.53s	+29 40' 08.0"	2.2669	1.5199	8.9	128.5	19.8	35.63	274.22	21.82	156.5 Tau
13 Jan 2012	03h42m53.93s	+29 32' 23.1"	2.2684	1.5307	8.9	127.6	20.1	34.98	274.80	21.94	153.4 Tau
14 Jan 2012	03h43m13.29s	+29 24' 47.5"	2.2699	1.5415	8.9	126.6	20.4	34.33	275.37	22.11	150.4 Tau
15 Jan 2012	03h43m34.59s	+29 17' 21.1"	2.2715	1.5525	8.9	125.7	20.6	33.69	275.93	22.33	147.5 Tau
16 Jan 2012	03h43m57.82s	+29 10' 04.2"	2.2730	1.5637	9.0	124.8	20.8	33.06	276.49	22.60	144.7 Tau
17 Jan 2012	03h44m22.94s	+29 02' 56.6"	2.2746	1.5749	9.0	123.8	21.1	32.44	277.04	22.91	142.0 Tau
18 Jan 2012	03h44m49.93s	+28 55' 58.4"	2.2762	1.5863	9.0	122.9	21.3	31.82	277.59	23.27	139.3 Tau
19 Jan 2012	03h45m18.77s	+28 49' 09.6"	2.2777	1.5979	9.0	122.0	21.5	31.21	278.14	23.67	136.8 Tau
20 Jan 2012	03h45m49.44s	+28 42' 30.1"	2.2793	1.6095	9.1	121.1	21.7	30.61	278.68	24.11	134.4 Tau
21 Jan 2012	03h46m21.91s	+28 36' 00.0"	2.2809	1.6213	9.1	120.2	21.9	30.01	279.21	24.58	132.1 Tau
22 Jan 2012	03h46m56.16s	+28 29' 39.2"	2.2825	1.6332	9.1	119.3	22.1	29.42	279.74	25.08	129.9 Tau
23 Jan 2012	03h47m32.16s	+28 23' 27.6"	2.2841	1.6452	9.1	118.4	22.3	28.84	280.27	25.61	127.8 Tau
24 Jan 2012	03h48m09.89s	+28 17' 25.3"	2.2857	1.6573	9.1	117.5	22.4	28.27	280.79	26.16	125.8 Tau
25 Jan 2012	03h48m49.32s	+28 11' 32.0"	2.2873	1.6695	9.2	116.7	22.6	27.70	281.31	26.73	123.9 Tau
26 Jan 2012	03h49m30.42s	+28 05' 47.7"	2.2889	1.6818	9.2	115.8	22.8	27.14	281.82	27.31	122.2 Tau
27 Jan 2012	03h50m13.17s	+28 00' 12.4"	2.2905	1.6942	9.2	114.9	22.9	26.58	282.33	27.91	120.5 Tau
28 Jan 2012	03h50m57.52s	+27 54' 45.8"	2.2921	1.7067	9.2	114.1	23.1	26.03	282.84	28.52	118.9 Tau
29 Jan 2012	03h51m43.46s	+27 49' 27.9"	2.2938	1.7193	9.3	113.2	23.2	25.49	283.35	29.14	117.5 Tau
30 Jan 2012	03h52m30.96s	+27 44' 18.6"	2.2954	1.7320	9.3	112.4	23.4	24.96	283.85	29.77	116.1 Tau
31 Jan 2012	03h53m19.98s	+27 39' 17.6"	2.2970	1.7448	9.3	111.5	23.5	24.43	284.35	30.40	114.8 Tau
1 Feb 2012	03h54m10.49s	+27 34' 24.9"	2.2987	1.7576	9.3	110.7	23.6	23.90	284.84	31.04	113.5 Tau
2 Feb 2012	03h55m02.46s	+27 29' 40.3"	2.3004	1.7705	9.3	109.9	23.8	23.39	285.34	31.67	112.4 Tau
3 Feb 2012	03h55m55.87s	+27 25' 03.6"	2.3020	1.7835	9.4	109.0	23.9	22.88	285.83	32.31	111.3 Tau
4 Feb 2012	03h56m50.69s	+27 20' 34.7"	2.3037	1.7966	9.4	108.2	24.0	22.37	286.32	32.94	110.2 Tau
5 Feb 2012	03h57m46.88s	+27 16' 13.5"	2.3054	1.8097	9.4	107.4	24.1	21.87	286.80	33.58	109.3 Tau
6 Feb 2012	03h58m44.42s	+27 11' 59.6"	2.3070	1.8229	9.4	106.6	24.2	21.38	287.29	34.21	108.4 Tau

Ephemeride des Kleinplaneten (15) Eunomia

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA
7 Feb 2012	03h59m43.28s	+27 07' 53.0"	2.3087	1.8362	9.4	105.8	24.3	20.89	287.77	34.83	107.5 Tau
8 Feb 2012	04h00m43.43s	+27 03' 53.5"	2.3104	1.8495	9.5	105.0	24.4	20.41	288.25	35.45	106.7 Tau
9 Feb 2012	04h01m44.84s	+27 00' 00.8"	2.3121	1.8629	9.5	104.2	24.4	19.94	288.72	36.07	105.9 Tau
10 Feb 2012	04h02m47.50s	+26 56' 14.9"	2.3138	1.8764	9.5	103.4	24.5	19.47	289.20	36.68	105.2 Tau
11 Feb 2012	04h03m51.38s	+26 52' 35.5"	2.3155	1.8899	9.5	102.6	24.6	19.00	289.67	37.29	104.5 Tau
12 Feb 2012	04h04m56.45s	+26 49' 02.4"	2.3173	1.9034	9.5	101.9	24.6	18.54	290.14	37.89	103.9 Tau
13 Feb 2012	04h06m02.70s	+26 45' 35.5"	2.3190	1.9170	9.6	101.1	24.7	18.09	290.61	38.49	103.2 Tau
14 Feb 2012	04h07m10.09s	+26 42' 14.6"	2.3207	1.9307	9.6	100.3	24.7	17.64	291.08	39.08	102.7 Tau
15 Feb 2012	04h08m18.62s	+26 38' 59.5"	2.3224	1.9444	9.6	99.6	24.8	17.20	291.54	39.66	102.1 Tau
16 Feb 2012	04h09m28.26s	+26 35' 49.9"	2.3242	1.9581	9.6	98.8	24.8	16.76	292.01	40.24	101.6 Tau
17 Feb 2012	04h10m39.00s	+26 32' 45.9"	2.3259	1.9719	9.6	98.0	24.9	16.32	292.47	40.81	101.1 Tau
18 Feb 2012	04h11m50.81s	+26 29' 47.0"	2.3277	1.9857	9.6	97.3	24.9	15.89	292.93	41.38	100.6 Tau
19 Feb 2012	04h13m03.67s	+26 26' 53.3"	2.3294	1.9996	9.7	96.6	24.9	15.47	293.39	41.94	100.2 Tau
20 Feb 2012	04h14m17.57s	+26 24' 04.4"	2.3312	2.0134	9.7	95.8	25.0	15.05	293.84	42.49	99.8 Tau
21 Feb 2012	04h15m32.48s	+26 21' 20.3"	2.3329	2.0274	9.7	95.1	25.0	14.64	294.30	43.04	99.4 Tau
22 Feb 2012	04h16m48.39s	+26 18' 40.7"	2.3347	2.0413	9.7	94.3	25.0	14.23	294.75	43.57	99.0 Tau
23 Feb 2012	04h18m05.27s	+26 16' 05.4"	2.3365	2.0553	9.7	93.6	25.0	13.82	295.20	44.10	98.7 Tau
24 Feb 2012	04h19m23.11s	+26 13' 34.3"	2.3383	2.0693	9.7	92.9	25.0	13.42	295.66	44.62	98.4 Tau
25 Feb 2012	04h20m41.88s	+26 11' 07.2"	2.3400	2.0833	9.8	92.2	25.0	13.02	296.11	45.13	98.1 Tau
26 Feb 2012	04h22m01.56s	+26 08' 43.9"	2.3418	2.0973	9.8	91.5	25.0	12.63	296.55	45.63	97.8 Tau
27 Feb 2012	04h23m22.13s	+26 06' 24.2"	2.3436	2.1114	9.8	90.7	25.0	12.24	297.00	46.12	97.5 Tau
28 Feb 2012	04h24m43.58s	+26 04' 07.9"	2.3454	2.1254	9.8	90.0	25.0	11.86	297.45	46.60	97.2 Tau
29 Feb 2012	04h26m05.87s	+26 01' 55.0"	2.3472	2.1395	9.8	89.3	25.0	11.48	297.89	47.07	97.0 Tau
1 Mär 2012	04h27m29.00s	+25 59' 45.1"	2.3490	2.1536	9.8	88.6	24.9	11.10	298.34	47.53	96.8 Tau
2 Mär 2012	04h28m52.94s	+25 57' 38.1"	2.3508	2.1677	9.9	87.9	24.9	10.73	298.78	47.98	96.6 Tau
3 Mär 2012	04h30m17.67s	+25 55' 33.9"	2.3527	2.1818	9.9	87.2	24.9	10.36	299.22	48.43	96.4 Tau
4 Mär 2012	04h31m43.17s	+25 53' 32.3"	2.3545	2.1959	9.9	86.6	24.9	9.99	299.66	48.86	96.2 Tau
5 Mär 2012	04h33m09.42s	+25 51' 33.1"	2.3563	2.2100	9.9	85.9	24.8	9.63	300.10	49.28	96.0 Tau
6 Mär 2012	04h34m36.41s	+25 49' 36.1"	2.3581	2.2241	9.9	85.2	24.8	9.27	300.54	49.70	95.9 Tau
7 Mär 2012	04h36m04.11s	+25 47' 41.2"	2.3600	2.2382	9.9	84.5	24.7	8.92	300.98	50.10	95.7 Tau
8 Mär 2012	04h37m32.52s	+25 45' 48.2"	2.3618	2.2523	9.9	83.8	24.7	8.57	301.41	50.50	95.6 Tau
9 Mär 2012	04h39m01.61s	+25 43' 56.9"	2.3636	2.2664	10.0	83.2	24.7	8.22	301.85	50.89	95.5 Tau
10 Mär 2012	04h40m31.37s	+25 42' 07.3"	2.3655	2.2805	10.0	82.5	24.6	7.87	302.28	51.27	95.3 Tau
11 Mär 2012	04h42m01.78s	+25 40' 19.1"	2.3673	2.2946	10.0	81.8	24.5	7.53	302.72	51.64	95.2 Tau
12 Mär 2012	04h43m32.83s	+25 38' 32.2"	2.3692	2.3087	10.0	81.2	24.5	7.19	303.15	52.01	95.1 Tau
13 Mär 2012	04h45m04.52s	+25 36' 46.5"	2.3711	2.3227	10.0	80.5	24.4	6.86	303.59	52.37	95.0 Tau
14 Mär 2012	04h46m36.82s	+25 35' 01.7"	2.3729	2.3368	10.0	79.9	24.4	6.53	304.02	52.73	95.0 Tau
15 Mär 2012	04h48m09.72s	+25 33' 17.9"	2.3748	2.3508	10.0	79.2	24.3	6.20	304.45	53.08	94.9 Tau
16 Mär 2012	04h49m43.22s	+25 31' 34.7"	2.3767	2.3649	10.0	78.6	24.2	5.87	304.88	53.42	94.8 Tau
17 Mär 2012	04h51m17.30s	+25 29' 52.1"	2.3785	2.3789	10.1	77.9	24.1	5.55	305.31	53.76	94.8 Tau
18 Mär 2012	04h52m51.95s	+25 28' 10.0"	2.3804	2.3929	10.1	77.3	24.1	5.23	305.74	54.09	94.7 Tau
19 Mär 2012	04h54m27.16s	+25 26' 28.2"	2.3823	2.4069	10.1	76.6	24.0	4.91	306.17	54.41	94.7 Tau
20 Mär 2012	04h56m02.92s	+25 24' 46.6"	2.3842	2.4208	10.1	76.0	23.9	4.59	306.60	54.73	94.6 Tau
21 Mär 2012	04h57m39.21s	+25 23' 05.0"	2.3861	2.4348	10.1	75.3	23.8	4.28	307.02	55.04	94.6 Tau
22 Mär 2012	04h59m16.02s	+25 21' 23.4"	2.3880	2.4487	10.1	74.7	23.7	3.97	307.45	55.35	94.6 Tau
23 Mär 2012	05h00m53.33s	+25 19' 41.5"	2.3899	2.4626	10.1	74.1	23.6	3.66	307.88	55.65	94.6 Tau
24 Mär 2012	05h02m31.14s	+25 17' 59.4"	2.3918	2.4765	10.1	73.5	23.6	3.36	308.30	55.94	94.6 Tau
25 Mär 2012	05h04m09.43s	+25 16' 16.8"	2.3937	2.4903	10.2	72.8	23.5	3.06	308.73	56.22	94.6 Tau
26 Mär 2012	05h05m48.19s	+25 14' 33.6"	2.3956	2.5041	10.2	72.2	23.4	2.76	309.15	56.50	94.6 Tau
27 Mär 2012	05h07m27.40s	+25 12' 49.8"	2.3975	2.5179	10.2	71.6	23.3	2.46	309.58	56.77	94.6 Tau
28 Mär 2012	05h09m07.06s	+25 11' 05.2"	2.3994	2.5316	10.2	71.0	23.2	2.16	310.00	57.03	94.6 Tau
29 Mär 2012	05h10m47.14s	+25 09' 19.7"	2.4013	2.5453	10.2	70.3	23.1	1.87	310.43	57.29	94.6 Tau
30 Mär 2012	05h12m27.63s	+25 07' 33.2"	2.4032	2.5590	10.2	69.7	22.9	1.58	310.85	57.54	94.6 Tau
31 Mär 2012	05h14m08.53s	+25 05' 45.6"	2.4051	2.5726	10.2	69.1	22.8	1.29	311.28	57.78	94.6 Tau
1 Apr 2012	05h15m49.82s	+25 03' 56.7"	2.4071	2.5862	10.2	68.5	22.7	1.00	311.70	58.02	94.7 Tau