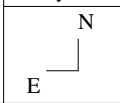


4	●	8	●
5	●	9	●
6	●	10	●
7	●	11	●



19.

36

x Eros

6

42

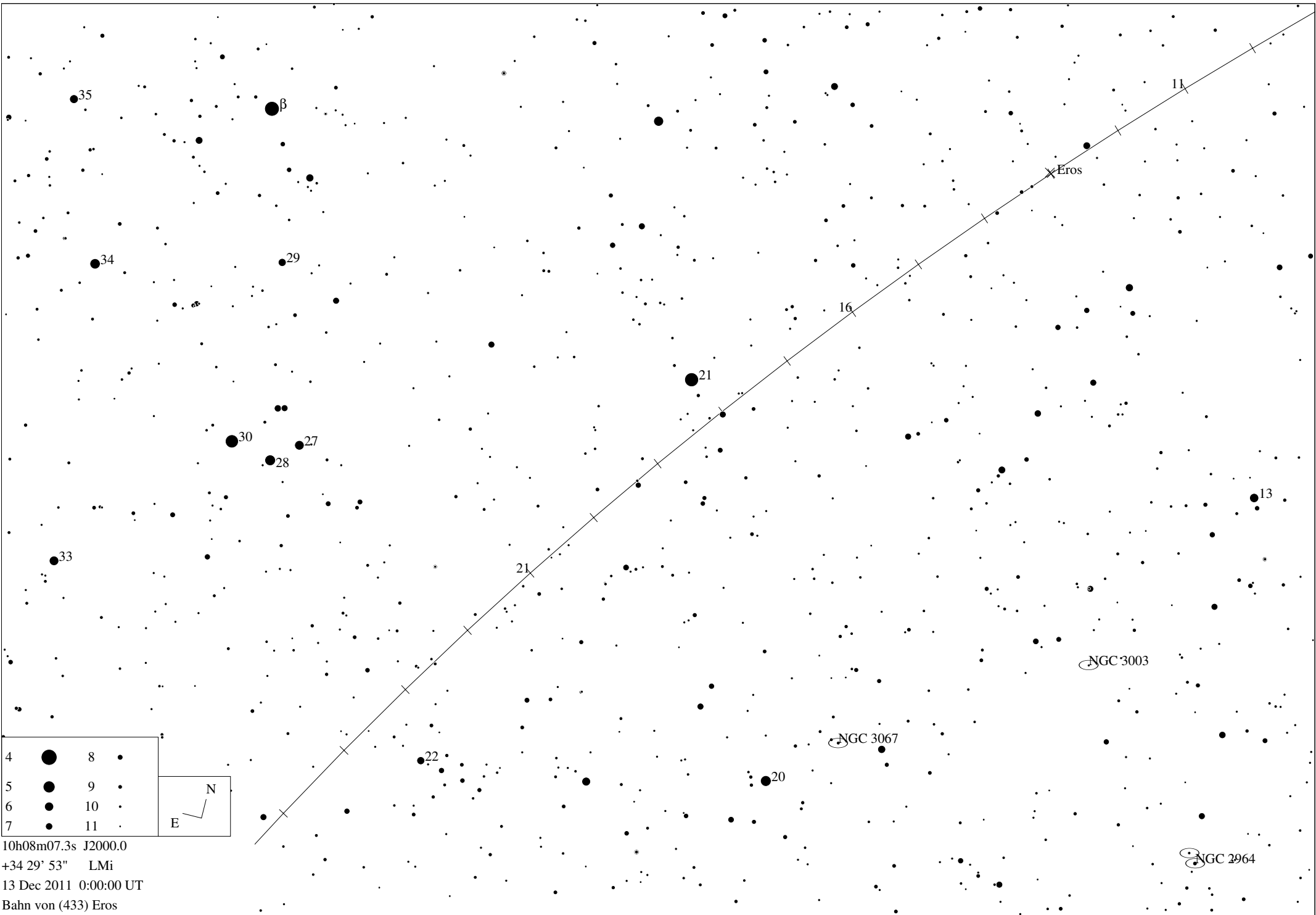
NGC 2782

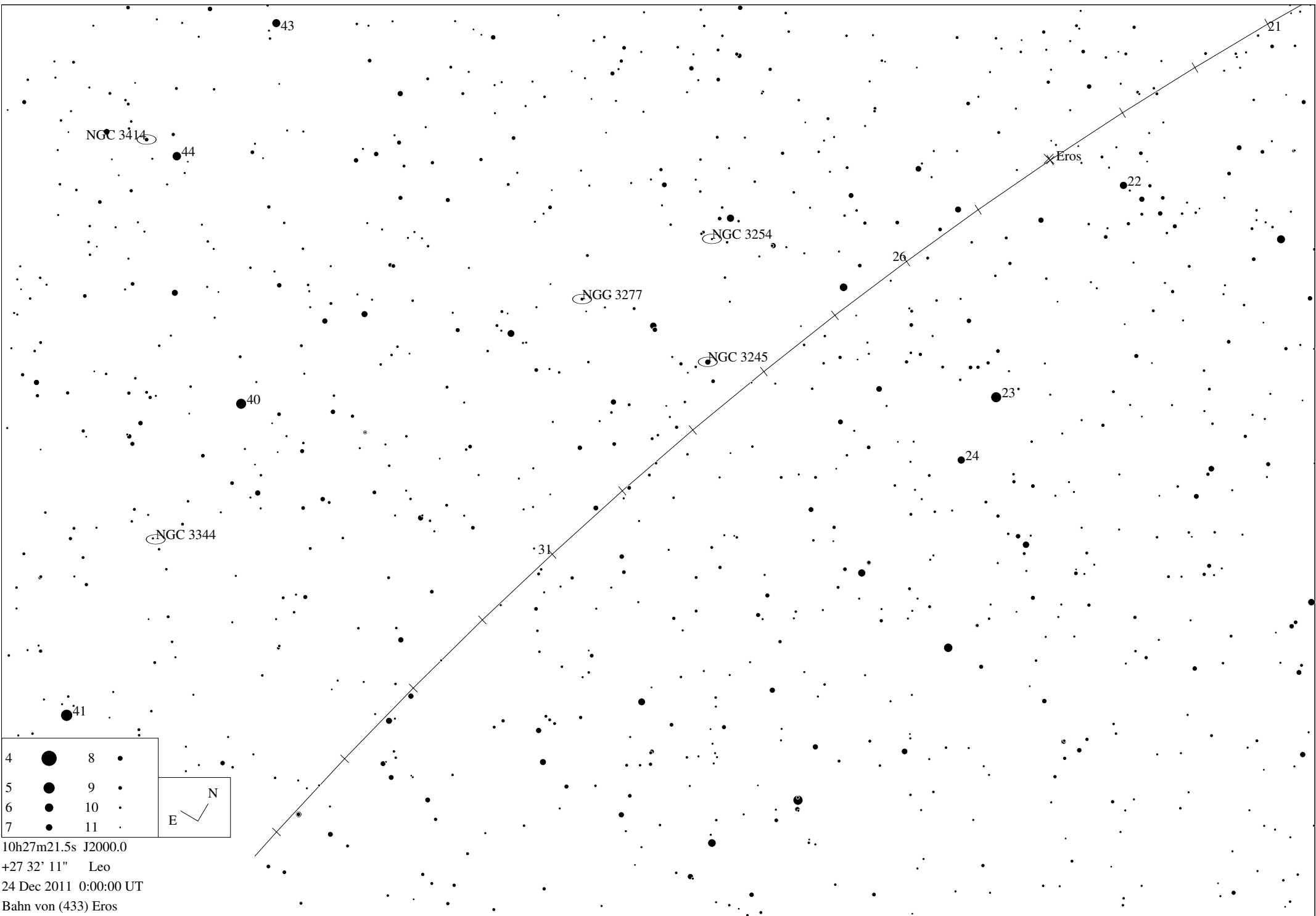
43

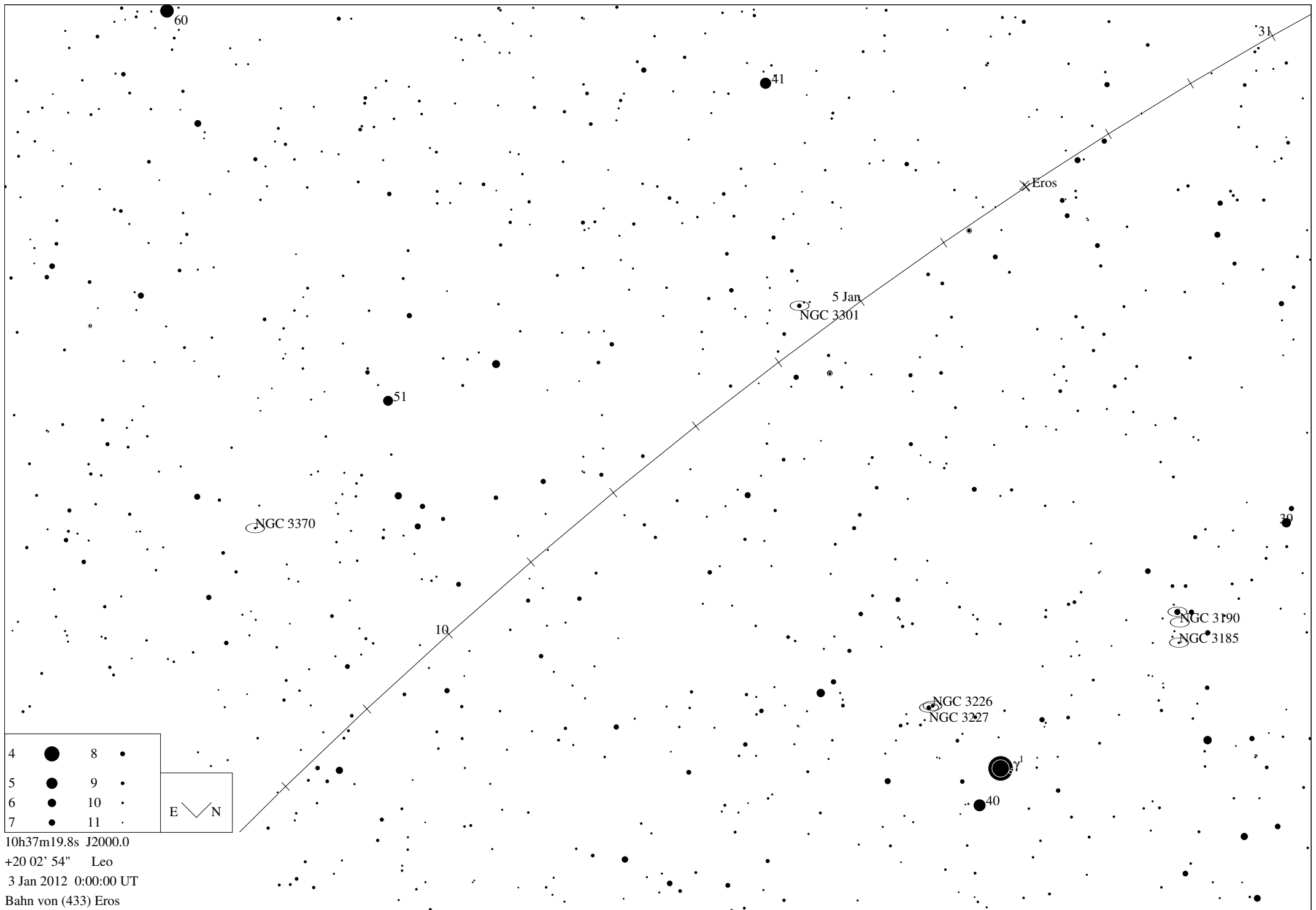
11

38

10







60

31

41

x Eros

5 Jan

NGC 3301

51

NGC 3370

30

NGC 3190

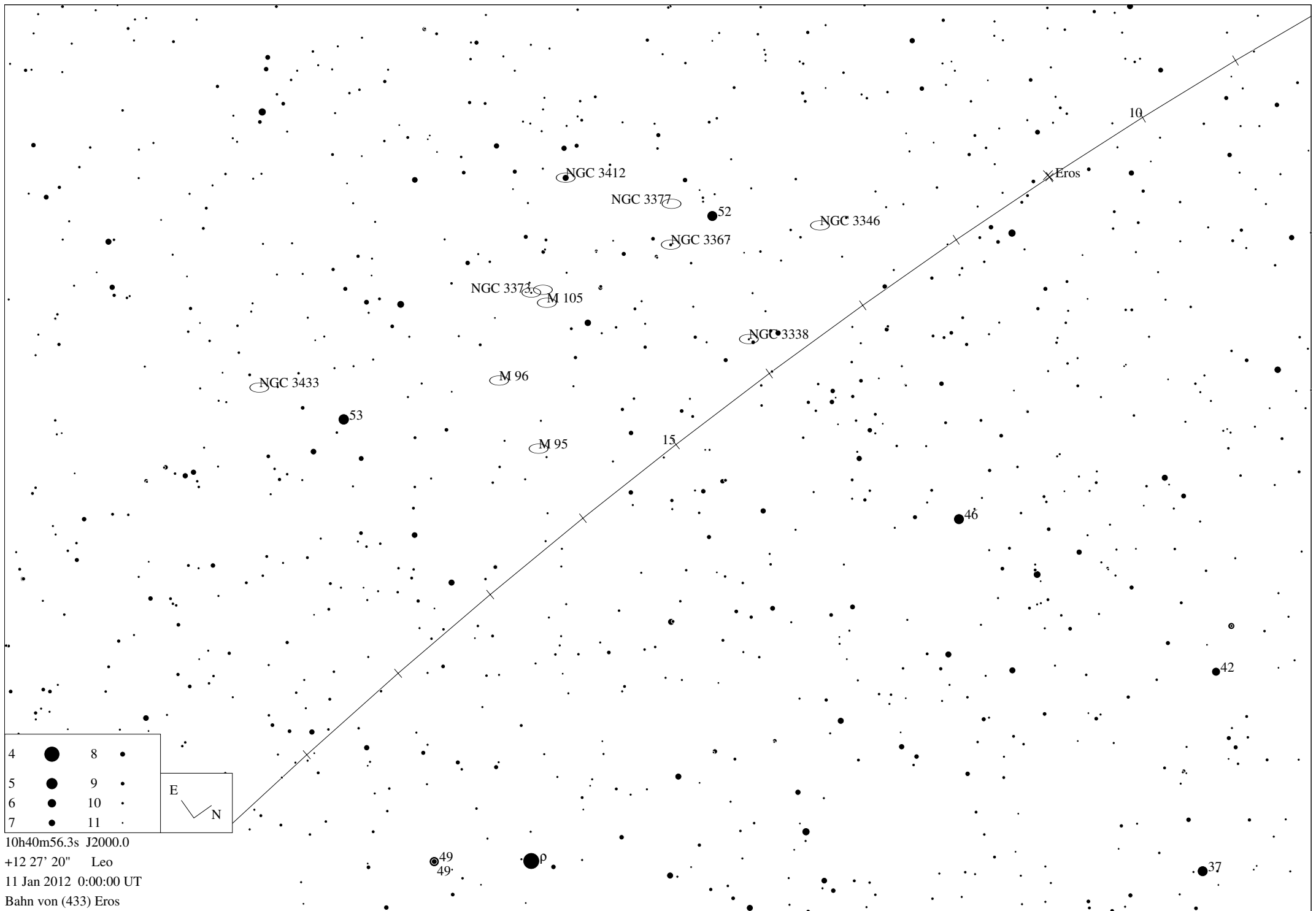
NGC 3185

NGC 3226

NGC 3227

γ¹

40



NGC 3412

NGC 3377

52

NGC 3346

NGC 3367

Eros

NGC 3373

M 105

NGC 3338

NGC 3433

M 96

53

M 95

15

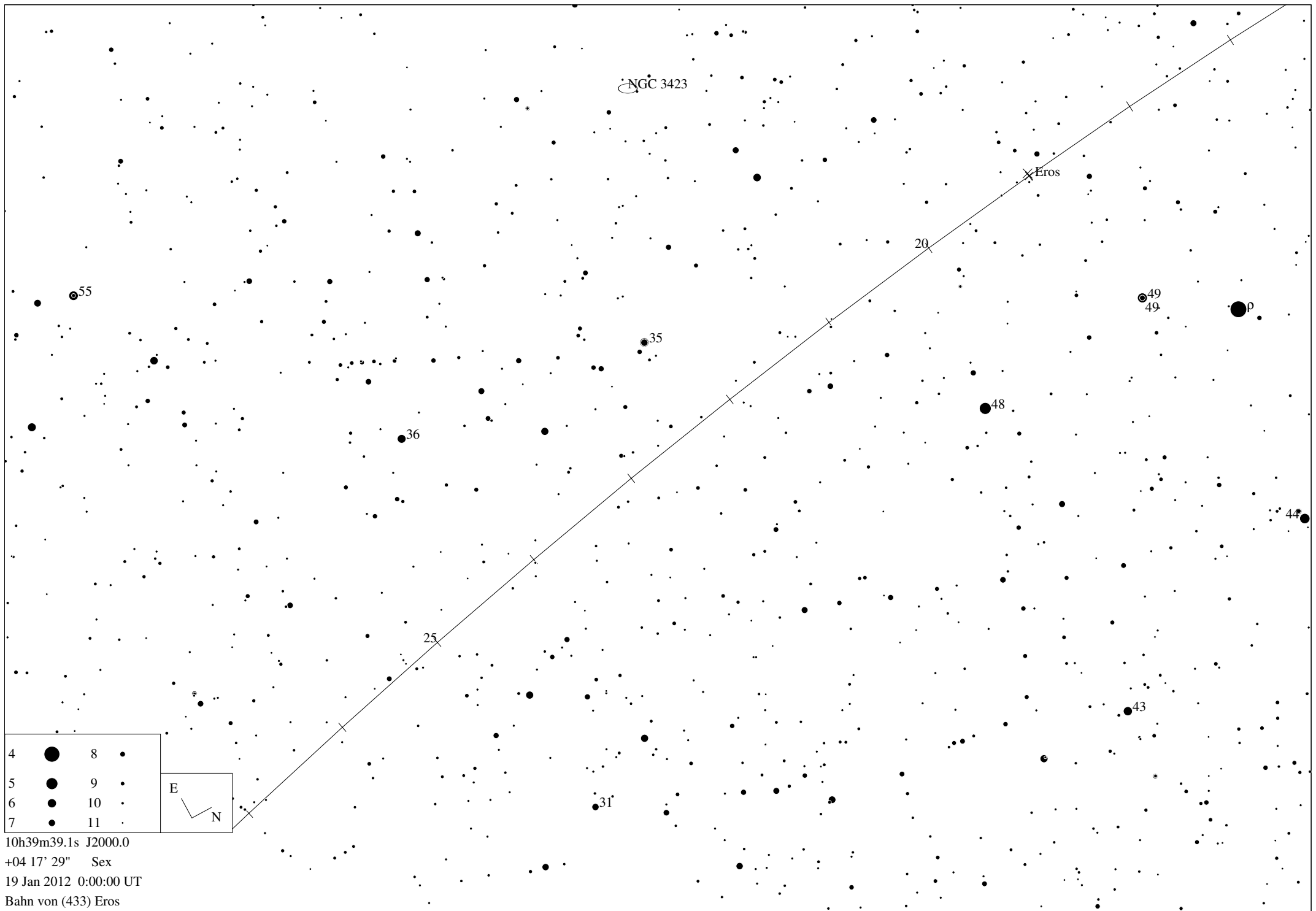
46

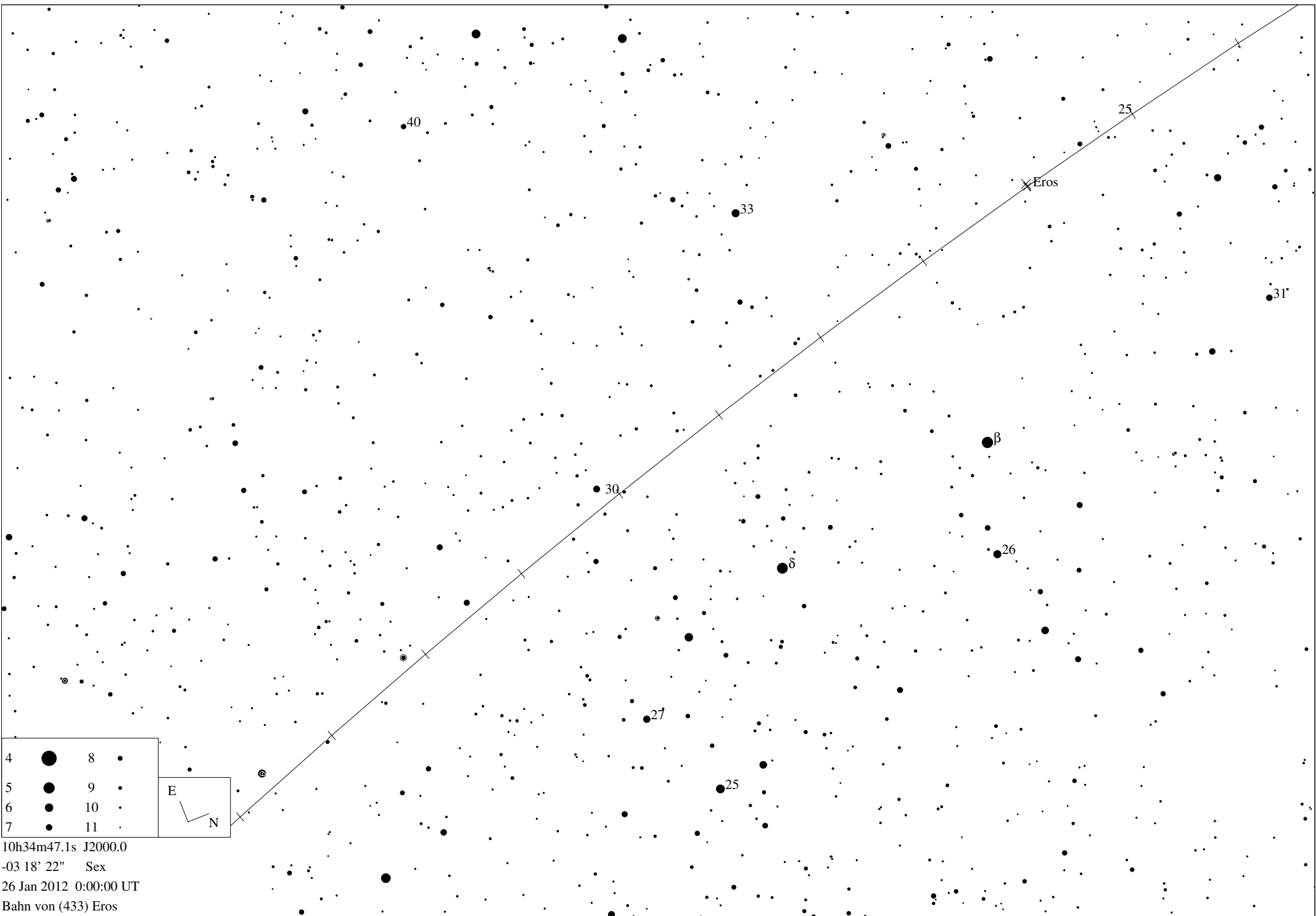
42

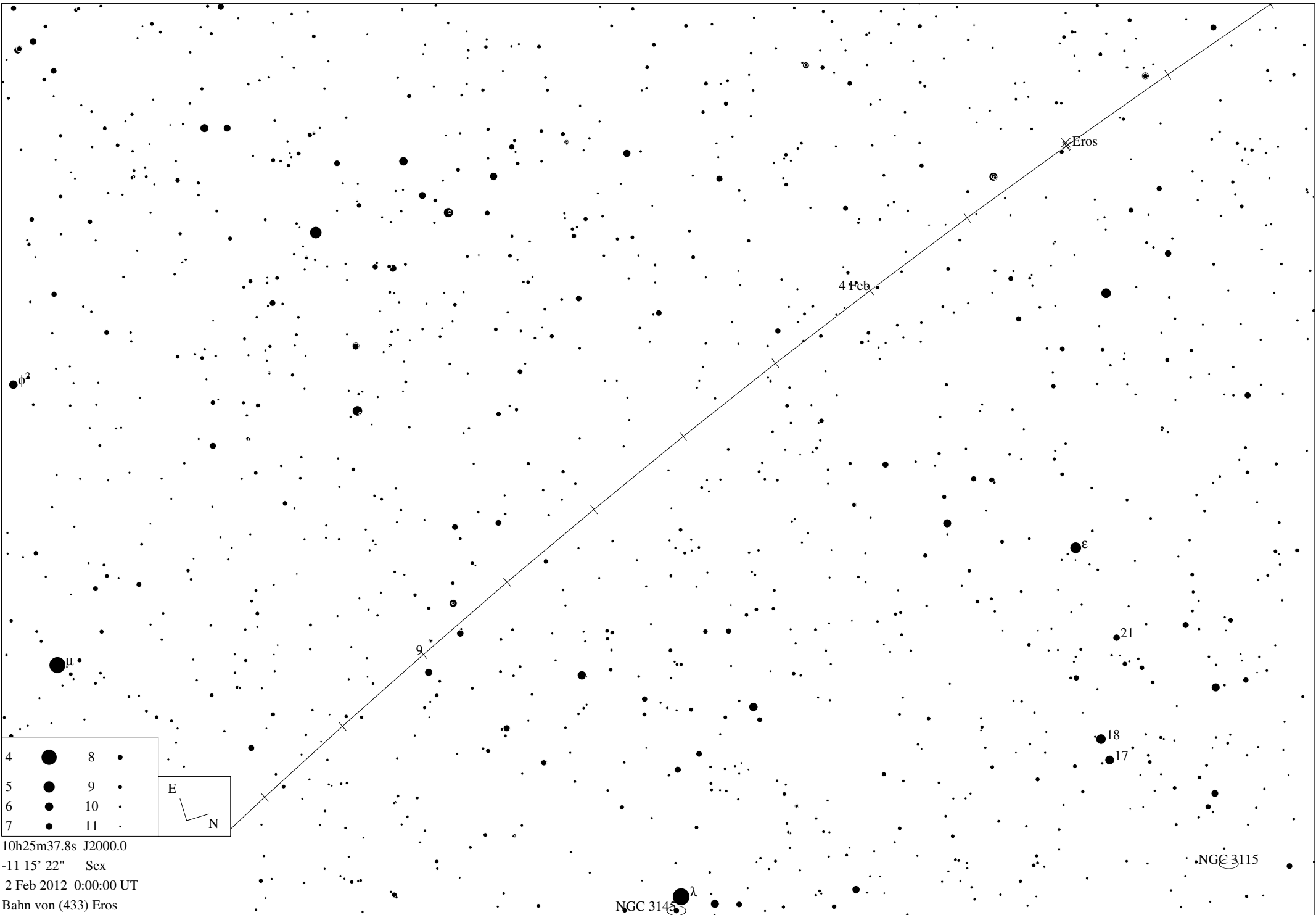
49

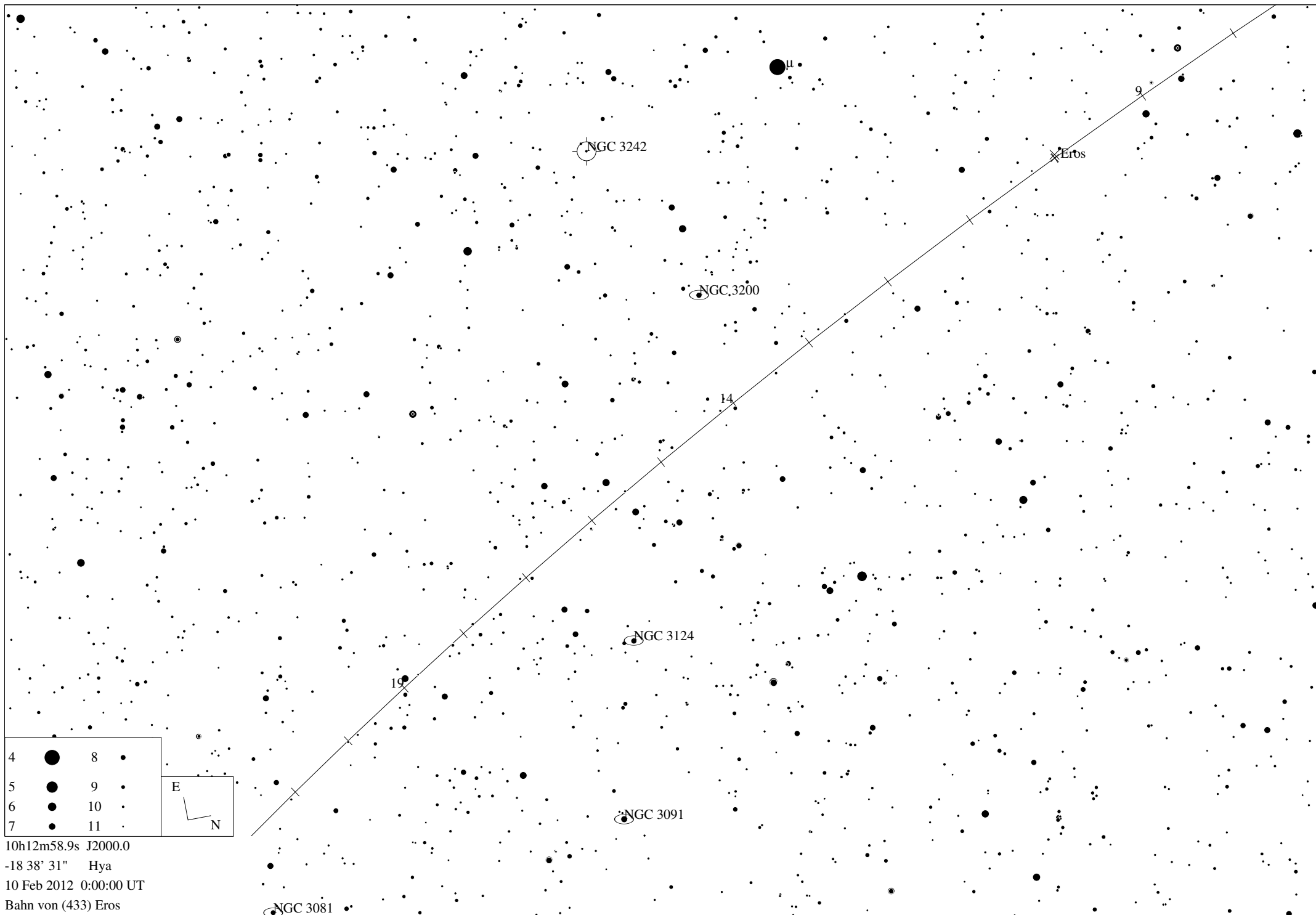
p

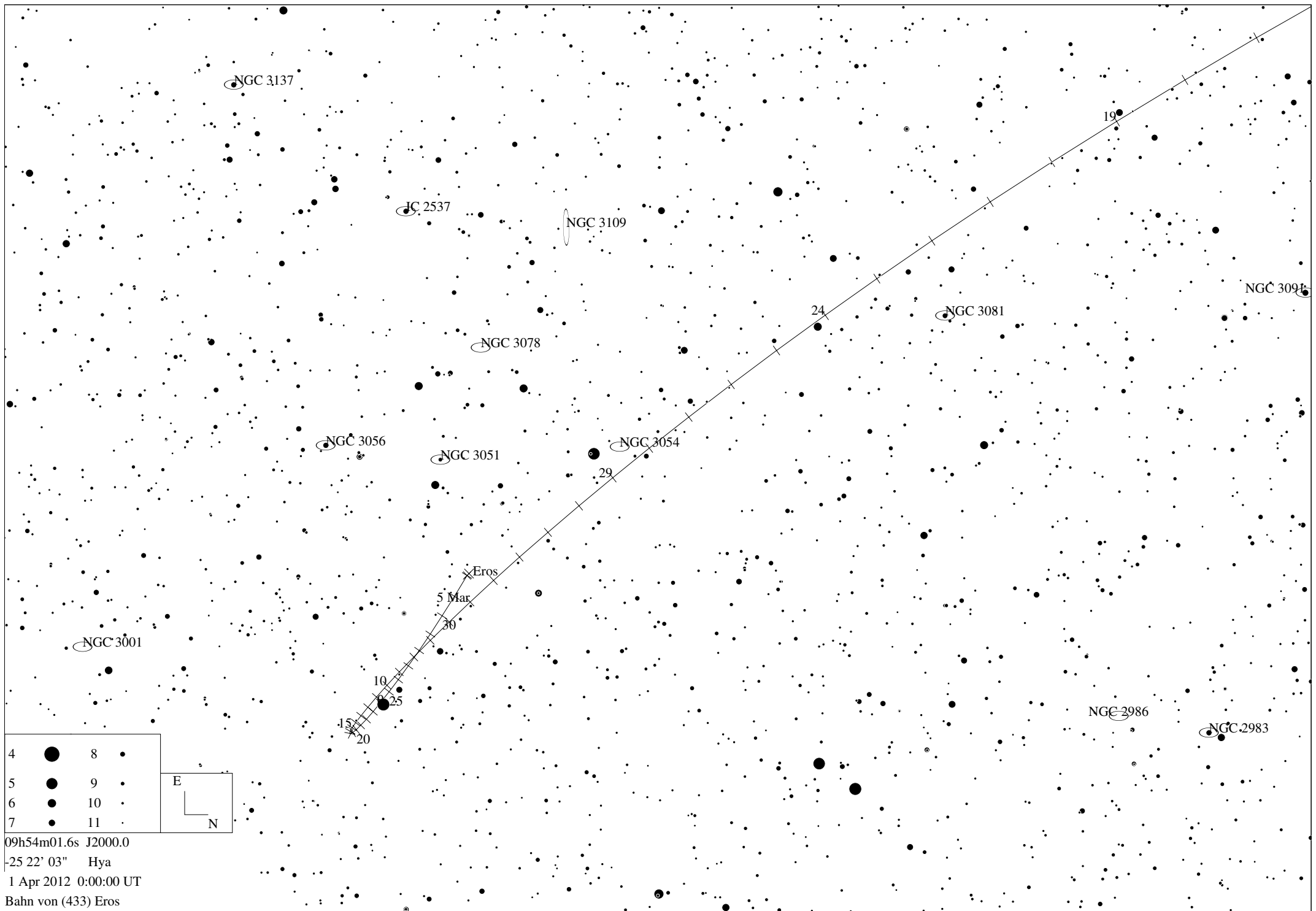
37











NGC 3137

IC 2537

NGC 3109

19

NGC 3091

24

NGC 3081

NGC 3078

NGC 3056

NGC 3051

NGC 3054

29

Eros

5 Mar

30

NGC 3001

10

25

15

20

NGC 2986

NGC 2983

Ephemeride des Kleinplaneten (433) Eros

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	
1 Dez 2011	09h18m44.06s	+42 24' 33.5"	1.1882	0.3547	10.6	116.6	47.9	51.44	81.31	98.12	117.9	UMa
2 Dez 2011	09h21m56.27s	+42 05' 00.6"	1.1861	0.3500	10.5	116.9	47.9	51.37	81.86	98.22	119.1	UMa
3 Dez 2011	09h25m05.58s	+41 44' 42.1"	1.1840	0.3452	10.5	117.1	47.8	51.30	82.44	98.36	120.4	UMa
4 Dez 2011	09h28m11.96s	+41 23' 37.5"	1.1819	0.3406	10.5	117.4	47.8	51.22	83.05	98.52	121.6	Lyn
5 Dez 2011	09h31m15.32s	+41 01' 46.0"	1.1798	0.3359	10.4	117.7	47.7	51.15	83.68	98.72	122.9	Lyn
6 Dez 2011	09h34m15.62s	+40 39' 07.1"	1.1778	0.3313	10.4	118.0	47.6	51.07	84.33	98.95	124.2	Lyn
7 Dez 2011	09h37m12.78s	+40 15' 40.3"	1.1759	0.3268	10.4	118.3	47.6	50.99	85.01	99.22	125.5	Lyn
8 Dez 2011	09h40m06.74s	+39 51' 24.9"	1.1740	0.3223	10.3	118.6	47.5	50.91	85.72	99.53	126.8	Lyn
9 Dez 2011	09h42m57.45s	+39 26' 20.3"	1.1721	0.3179	10.3	118.9	47.4	50.83	86.45	99.87	128.1	LMI
10 Dez 2011	09h45m44.84s	+39 00' 26.0"	1.1702	0.3135	10.3	119.2	47.3	50.74	87.21	100.26	129.5	LMI
11 Dez 2011	09h48m28.84s	+38 33' 41.2"	1.1684	0.3091	10.2	119.5	47.2	50.66	87.99	100.69	130.9	LMI
12 Dez 2011	09h51m09.40s	+38 06' 05.4"	1.1666	0.3048	10.2	119.8	47.1	50.57	88.80	101.16	132.3	LMI
13 Dez 2011	09h53m46.44s	+37 37' 37.9"	1.1649	0.3006	10.2	120.2	46.9	50.48	89.64	101.68	133.7	LMI
14 Dez 2011	09h56m19.90s	+37 08' 18.0"	1.1632	0.2964	10.1	120.5	46.8	50.38	90.51	102.24	135.1	LMI
15 Dez 2011	09h58m49.70s	+36 38' 05.2"	1.1616	0.2922	10.1	120.8	46.7	50.28	91.41	102.85	136.5	LMI
16 Dez 2011	10h01m15.77s	+36 06' 58.7"	1.1600	0.2881	10.0	121.2	46.5	50.18	92.34	103.51	138.0	LMI
17 Dez 2011	10h03m38.05s	+35 34' 57.7"	1.1584	0.2841	10.0	121.6	46.4	50.08	93.29	104.22	139.5	LMI
18 Dez 2011	10h05m56.45s	+35 02' 01.7"	1.1569	0.2800	10.0	121.9	46.2	49.97	94.28	104.99	140.9	LMI
19 Dez 2011	10h08m10.90s	+34 28' 09.7"	1.1555	0.2761	9.9	122.3	46.0	49.85	95.30	105.82	142.4	LMI
20 Dez 2011	10h10m21.33s	+33 53' 20.9"	1.1540	0.2722	9.9	122.7	45.8	49.73	96.35	106.71	144.0	LMI
21 Dez 2011	10h12m27.66s	+33 17' 34.6"	1.1526	0.2684	9.9	123.1	45.6	49.61	97.43	107.68	145.5	LMI
22 Dez 2011	10h14m29.84s	+32 40' 49.7"	1.1513	0.2646	9.8	123.5	45.4	49.48	98.54	108.72	147.0	LMI
23 Dez 2011	10h16m27.80s	+32 03' 05.4"	1.1500	0.2608	9.8	124.0	45.2	49.35	99.68	109.84	148.6	LMI
24 Dez 2011	10h18m21.49s	+31 24' 20.6"	1.1488	0.2572	9.7	124.4	44.9	49.21	100.85	111.05	150.1	LMI
25 Dez 2011	10h20m10.86s	+30 44' 34.4"	1.1476	0.2536	9.7	124.9	44.7	49.06	102.06	112.36	151.7	LMI
26 Dez 2011	10h21m55.87s	+30 03' 45.8"	1.1464	0.2500	9.7	125.3	44.4	48.90	103.30	113.76	153.2	LMI
27 Dez 2011	10h23m36.49s	+29 21' 54.0"	1.1453	0.2465	9.6	125.8	44.1	48.73	104.57	115.25	154.8	LMI
28 Dez 2011	10h25m12.69s	+28 38' 57.9"	1.1443	0.2431	9.6	126.3	43.9	48.55	105.88	116.84	156.3	LMI
29 Dez 2011	10h26m44.45s	+27 54' 56.9"	1.1433	0.2398	9.5	126.8	43.5	48.37	107.22	118.53	157.8	LMI
30 Dez 2011	10h28m11.74s	+27 09' 50.2"	1.1423	0.2365	9.5	127.3	43.2	48.17	108.59	120.30	159.3	Leo
31 Dez 2011	10h29m34.53s	+26 23' 37.3"	1.1414	0.2333	9.5	127.8	42.9	47.96	109.99	122.16	160.8	Leo
1 Jan 2012	10h31m02.81s	+25 36' 17.7"	1.1405	0.2301	9.4	128.3	42.5	47.73	111.42	124.10	162.3	Leo
2 Jan 2012	10h32m06.54s	+24 47' 50.9"	1.1397	0.2271	9.4	128.9	42.2	47.49	112.88	126.12	163.7	Leo
3 Jan 2012	10h33m15.70s	+23 58' 16.9"	1.1389	0.2241	9.3	129.5	41.8	47.24	114.38	128.22	165.1	Leo
4 Jan 2012	10h34m20.27s	+23 07' 35.6"	1.1382	0.2212	9.3	130.0	41.4	46.97	115.90	130.37	166.5	Leo
5 Jan 2012	10h35m20.23s	+22 15' 47.2"	1.1375	0.2183	9.3	130.6	41.0	46.68	117.45	132.58	167.9	Leo
6 Jan 2012	10h36m15.54s	+21 22' 51.8"	1.1369	0.2156	9.2	131.2	40.6	46.38	119.03	134.84	169.2	Leo
7 Jan 2012	10h37m06.19s	+20 28' 50.2"	1.1364	0.2129	9.2	131.8	40.2	46.05	120.63	137.14	170.5	Leo
8 Jan 2012	10h37m52.15s	+19 33' 43.1"	1.1358	0.2103	9.2	132.4	39.7	45.71	122.26	139.46	171.8	Leo
9 Jan 2012	10h38m33.38s	+18 37' 31.5"	1.1354	0.2078	9.1	133.0	39.3	45.35	123.91	141.80	173.1	Leo
10 Jan 2012	10h39m09.86s	+17 40' 16.8"	1.1350	0.2054	9.1	133.7	38.8	44.96	125.58	144.14	174.3	Leo
11 Jan 2012	10h39m41.56s	+16 42' 00.5"	1.1346	0.2031	9.0	134.3	38.3	44.55	127.27	146.47	175.6	Leo
12 Jan 2012	10h40m08.45s	+15 42' 44.6"	1.1343	0.2008	9.0	134.9	37.9	44.13	128.98	148.78	176.8	Leo
13 Jan 2012	10h40m30.48s	+14 42' 31.3"	1.1340	0.1987	9.0	135.6	37.4	43.67	130.71	151.05	177.9	Leo
14 Jan 2012	10h40m47.63s	+13 41' 23.2"	1.1338	0.1967	8.9	136.2	36.9	43.20	132.45	153.27	179.1	Leo
15 Jan 2012	10h40m59.86s	+12 39' 23.1"	1.1336	0.1947	8.9	136.9	36.4	42.70	134.21	155.42	180.3	Leo
16 Jan 2012	10h41m07.16s	+11 36' 34.2"	1.1335	0.1929	8.9	137.6	35.8	42.18	135.97	157.49	181.4	Leo
17 Jan 2012	10h41m09.51s	+10 33' 00.3"	1.1335	0.1912	8.8	138.2	35.3	41.63	137.75	159.46	182.5	Leo
18 Jan 2012	10h41m06.89s	+09 28' 45.1"	1.1335	0.1895	8.8	138.9	34.8	41.07	139.53	161.32	183.6	Leo
19 Jan 2012	10h40m59.33s	+08 23' 53.1"	1.1335	0.1880	8.8	139.5	34.3	40.47	141.31	163.05	184.7	Leo
20 Jan 2012	10h40m46.83s	+07 18' 28.8"	1.1336	0.1866	8.8	140.2	33.8	39.86	143.10	164.64	185.7	Leo
21 Jan 2012	10h40m29.44s	+06 12' 37.3"	1.1338	0.1853	8.7	140.8	33.3	39.22	144.89	166.06	186.8	Sex
22 Jan 2012	10h40m07.22s	+05 06' 24.0"	1.1340	0.1841	8.7	141.4	32.7	38.56	146.68	167.29	187.8	Sex
23 Jan 2012	10h39m40.22s	+03 59' 54.4"	1.1342	0.1830	8.7	142.1	32.2	37.88	148.46	168.33	188.8	Sex
24 Jan 2012	10h39m08.55s	+02 53' 14.6"	1.1345	0.1821	8.7	142.7	31.8	37.17	150.24	169.15	189.8	Sex
25 Jan 2012	10h38m32.30s	+01 46' 30.8"	1.1349	0.1812	8.6	143.2	31.3	36.45	152.00	169.75	190.8	Sex
26 Jan 2012	10h37m51.58s	+00 39' 49.5"	1.1353	0.1805	8.6	143.8	30.8	35.71	153.76	170.09	191.7	Sex
27 Jan 2012	10h37m06.53s	-00 26' 42.5"	1.1357	0.1799	8.6	144.3	30.4	34.95	155.51	170.18	192.6	Sex
28 Jan 2012	10h36m17.28s	-01 32' 58.5"	1.1362	0.1794	8.6	144.9	29.9	34.17	157.24	170.00	193.6	Sex
29 Jan 2012	10h35m23.99s	-02 38' 51.6"	1.1368	0.1791	8.6	145.3	29.5	33.38	158.96	169.55	194.5	Sex
30 Jan 2012	10h34m26.80s	-03 44' 14.6"	1.1374	0.1788	8.6	145.8	29.1	32.58	160.66	168.82	195.4	Sex
31 Jan 2012	10h33m25.89s	-04 49' 00.7"	1.1380	0.1787	8.6	146.2	28.8	31.76	162.34	167.81	196.3	Sex
1 Feb 2012	10h32m21.44s	-05 53' 02.9"	1.1387	0.1787	8.6	146.6	28.5	30.94	164.01	166.53	197.1	Sex
2 Feb 2012	10h31m13.62s	-06 56' 14.5"	1.1395	0.1789	8.6	146.9	28.2	30.10	165.65	164.96	198.0	Sex
3 Feb 2012	10h30m02.63s	-07 58' 28.8"	1.1403	0.1791	8.5	147.2	27.9	29.26	167.27	163.12	198.9	Sex
4 Feb 2012	10h28m48.68s	-08 59' 39.5"	1.1411	0.1795	8.5	147.5	27.6	28.41	168.87	161.02	199.8	Sex
5 Feb 2012	10h27m31.97s	-09 59' 40.6"	1.1420	0.1799	8.6	147.7	27.4	27.57	170.44	158.66	200.6	Sex
6 Feb 2012	10h26m12.70s	-10 58' 26.2"	1.1430	0.1805	8.6	147.9	27.3	26.71	172.00	156.06	201.5	Sex
7 Feb 2012	10h24m51.10s	-11 55' 51.1"	1.1440	0.1812	8.6	148.1	27.1	25.86	173.53	153.23	202.4	Hya
8 Feb 2012	10h23m27.38s	-12 51' 50.1"	1.1450	0.1821	8.6	148.2	27.0	25.01	175.03	150.19	203.3	Hya
9 Feb 2012	10h22m01.77s	-13 46' 18.6"	1.1461	0.1830	8.6	148.2	26.9	24.17	176.51	146.94	204.2	Hya
10 Feb 2012	10h20m34.49s	-14 39' 12.4"	1.1473	0.1840	8.6	148.3	26.9	23.33	177.97	143.51	205.1	Hya
11 Feb 2012	10h19m05.76s	-15 30' 27.7"	1.1484	0.1852	8.6	148.3	26.9	22.49	179.41	139.91	206.0	Hya
12 Feb 2012	10h17m35.82s	-16 20' 01.1"	1.1497	0.1864	8.6	148.2	26.9	21.67	180.82	136.16	207.0	Hya

Ephemeride des Kleinplaneten (433) Eros

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA
13 Feb 2012	10h16m04.93s	-17 07' 49.7"	1.1510	0.1878	8.6	148.1	26.9	20.85	182.20	132.26	207.9 Hya
14 Feb 2012	10h14m33.33s	-17 53' 51.1"	1.1523	0.1892	8.7	148.0	27.0	20.04	183.57	128.24	208.9 Hya
15 Feb 2012	10h13m01.28s	-18 38' 03.2"	1.1537	0.1907	8.7	147.9	27.1	19.24	184.91	124.11	209.9 Hya
16 Feb 2012	10h11m29.08s	-19 20' 24.6"	1.1551	0.1924	8.7	147.7	27.2	18.45	186.23	119.88	210.9 Hya
17 Feb 2012	10h09m56.98s	-20 00' 54.3"	1.1565	0.1941	8.7	147.5	27.3	17.68	187.53	115.58	211.9 Hya
18 Feb 2012	10h08m25.30s	-20 39' 31.7"	1.1580	0.1960	8.8	147.3	27.4	16.92	188.80	111.21	212.9 Hya
19 Feb 2012	10h06m54.30s	-21 16' 16.8"	1.1596	0.1979	8.8	147.1	27.6	16.17	190.05	106.79	213.9 Hya
20 Feb 2012	10h05m24.29s	-21 51' 10.0"	1.1612	0.1999	8.8	146.9	27.7	15.44	191.28	102.33	214.9 Hya
21 Feb 2012	10h03m55.56s	-22 24' 12.0"	1.1628	0.2020	8.9	146.6	27.9	14.72	192.49	97.85	215.9 Hya
22 Feb 2012	10h02m28.37s	-22 55' 24.0"	1.1645	0.2042	8.9	146.3	28.1	14.02	193.68	93.36	216.9 Hya
23 Feb 2012	10h01m03.00s	-23 24' 47.6"	1.1662	0.2064	8.9	146.0	28.3	13.33	194.85	88.88	218.0 Hya
24 Feb 2012	09h59m39.71s	-23 52' 24.7"	1.1679	0.2088	8.9	145.7	28.5	12.66	196.00	84.41	219.0 Hya
25 Feb 2012	09h58m18.74s	-24 18' 17.2"	1.1697	0.2112	9.0	145.4	28.7	12.01	197.13	79.97	220.0 Hya
26 Feb 2012	09h57m00.31s	-24 42' 27.7"	1.1716	0.2137	9.0	145.1	28.9	11.37	198.23	75.57	221.0 Hya
27 Feb 2012	09h55m44.64s	-25 04' 58.6"	1.1734	0.2163	9.0	144.7	29.2	10.74	199.32	71.21	222.1 Hya
28 Feb 2012	09h54m31.92s	-25 25' 52.7"	1.1754	0.2189	9.1	144.4	29.4	10.13	200.39	66.90	223.1 Hya
29 Feb 2012	09h53m22.33s	-25 45' 12.8"	1.1773	0.2217	9.1	144.0	29.6	9.54	201.45	62.66	224.2 Hya
1 Mär 2012	09h52m16.01s	-26 03' 01.9"	1.1793	0.2244	9.2	143.7	29.8	8.96	202.48	58.48	225.3 Hya
2 Mär 2012	09h51m13.12s	-26 19' 23.1"	1.1813	0.2273	9.2	143.4	30.1	8.40	203.50	54.38	226.4 Hya
3 Mär 2012	09h50m13.77s	-26 34' 19.3"	1.1834	0.2302	9.2	143.0	30.3	7.85	204.50	50.36	227.6 Ant
4 Mär 2012	09h49m18.07s	-26 47' 53.8"	1.1855	0.2332	9.3	142.6	30.5	7.32	205.48	46.42	228.8 Ant
5 Mär 2012	09h48m26.10s	-27 00' 09.7"	1.1876	0.2363	9.3	142.3	30.7	6.80	206.45	42.56	230.0 Ant
6 Mär 2012	09h47m37.93s	-27 11' 10.0"	1.1898	0.2394	9.3	141.9	30.9	6.29	207.40	38.80	231.3 Ant
7 Mär 2012	09h46m53.61s	-27 20' 57.7"	1.1920	0.2426	9.4	141.6	31.1	5.80	208.33	35.13	232.8 Ant
8 Mär 2012	09h46m13.19s	-27 29' 36.0"	1.1942	0.2458	9.4	141.2	31.4	5.32	209.26	31.55	234.4 Ant
9 Mär 2012	09h45m36.69s	-27 37' 07.6"	1.1965	0.2491	9.5	140.9	31.6	4.86	210.16	28.08	236.1 Ant
10 Mär 2012	09h45m04.13s	-27 43' 35.3"	1.1988	0.2525	9.5	140.5	31.8	4.41	211.06	24.70	238.2 Ant
11 Mär 2012	09h44m35.50s	-27 49' 02.0"	1.2012	0.2559	9.5	140.2	32.0	3.97	211.93	21.42	240.6 Ant
12 Mär 2012	09h44m10.84s	-27 53' 30.1"	1.2035	0.2593	9.6	139.8	32.2	3.54	212.80	18.24	243.6 Ant
13 Mär 2012	09h43m50.13s	-27 57' 02.4"	1.2059	0.2629	9.6	139.5	32.4	3.12	213.65	15.19	247.4 Ant
14 Mär 2012	09h43m33.38s	-27 59' 41.5"	1.2084	0.2664	9.6	139.1	32.6	2.72	214.50	12.27	252.6 Ant
15 Mär 2012	09h43m20.59s	-28 01' 29.8"	1.2108	0.2701	9.7	138.8	32.8	2.32	215.32	9.53	260.3 Ant
16 Mär 2012	09h43m11.77s	-28 02' 30.1"	1.2133	0.2738	9.7	138.4	33.0	1.94	216.14	7.11	272.8 Ant
17 Mär 2012	09h43m06.90s	-28 02' 44.7"	1.2158	0.2775	9.8	138.1	33.1	1.56	216.95	5.28	294.6 Ant
18 Mär 2012	09h43m05.98s	-28 02' 16.3"	1.2184	0.2813	9.8	137.8	33.3	1.20	217.74	4.67	327.4 Ant
19 Mär 2012	09h43m08.99s	-28 01' 07.2"	1.2209	0.2852	9.8	137.4	33.5	0.85	218.52	5.58	357.5 Ant
20 Mär 2012	09h43m15.92s	-27 59' 20.0"	1.2235	0.2891	9.9	137.1	33.7	0.51	219.30	7.39	15.8 Ant
21 Mär 2012	09h43m26.72s	-27 56' 57.1"	1.2262	0.2930	9.9	136.7	33.8	0.17	220.06	9.54	26.5 Ant
22 Mär 2012	09h43m41.37s	-27 54' 00.8"	1.2288	0.2971	9.9	136.4	34.0	-0.16	220.81	11.80	33.2 Ant
23 Mär 2012	09h43m59.82s	-27 50' 33.4"	1.2315	0.3011	10.0	136.1	34.2	-0.47	221.55	14.09	37.9 Ant
24 Mär 2012	09h44m22.02s	-27 46' 37.1"	1.2342	0.3053	10.0	135.7	34.3	-0.78	222.28	16.36	41.4 Ant
25 Mär 2012	09h44m47.93s	-27 42' 14.0"	1.2369	0.3095	10.1	135.4	34.5	-1.09	222.99	18.58	44.2 Ant
26 Mär 2012	09h45m17.48s	-27 37' 26.1"	1.2397	0.3137	10.1	135.1	34.6	-1.38	223.70	20.76	46.5 Ant
27 Mär 2012	09h45m50.60s	-27 32' 15.5"	1.2424	0.3180	10.1	134.7	34.8	-1.67	224.40	22.89	48.4 Ant
28 Mär 2012	09h46m27.23s	-27 26' 44.0"	1.2452	0.3224	10.2	134.4	34.9	-1.95	225.09	24.95	50.1 Ant
29 Mär 2012	09h47m07.30s	-27 20' 53.4"	1.2481	0.3268	10.2	134.1	35.1	-2.22	225.77	26.96	51.6 Ant
30 Mär 2012	09h47m50.71s	-27 14' 45.4"	1.2509	0.3312	10.2	133.8	35.2	-2.49	226.44	28.91	53.0 Ant
31 Mär 2012	09h48m37.40s	-27 08' 21.7"	1.2537	0.3357	10.3	133.4	35.4	-2.76	227.10	30.80	54.2 Ant
1 Apr 2012	09h49m27.28s	-27 01' 43.7"	1.2566	0.3403	10.3	133.1	35.5	-3.01	227.76	32.63	55.3 Ant