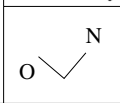
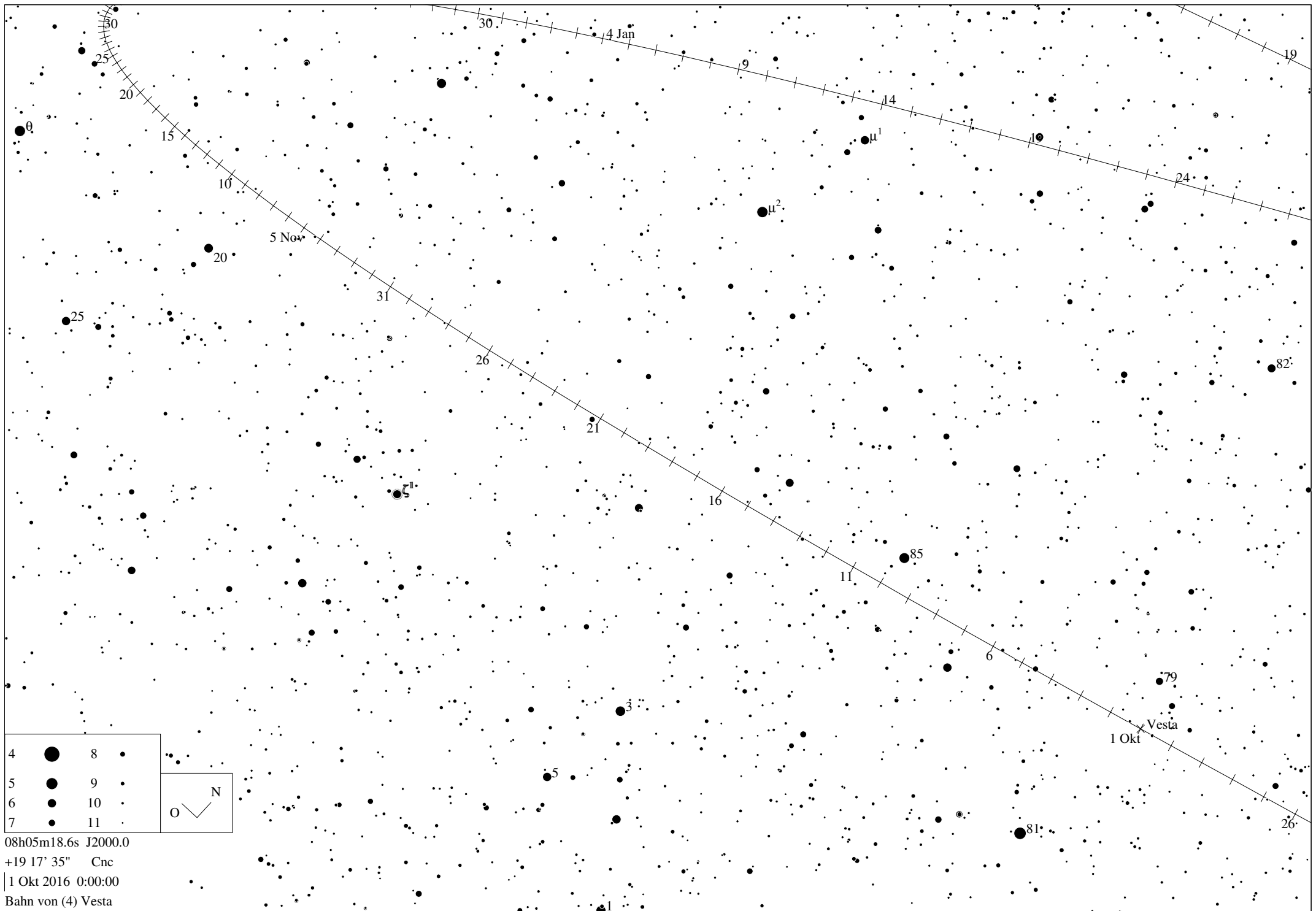
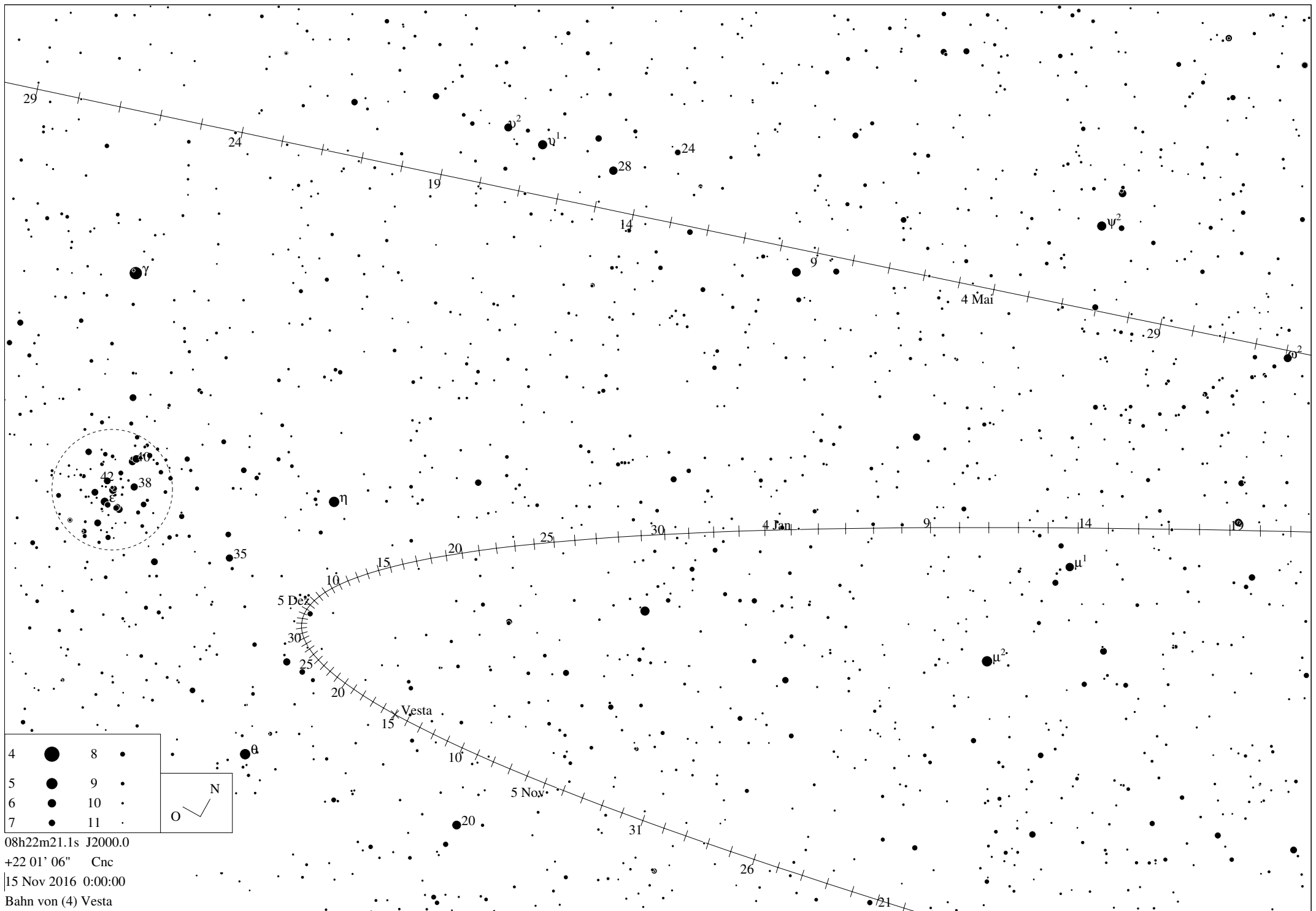


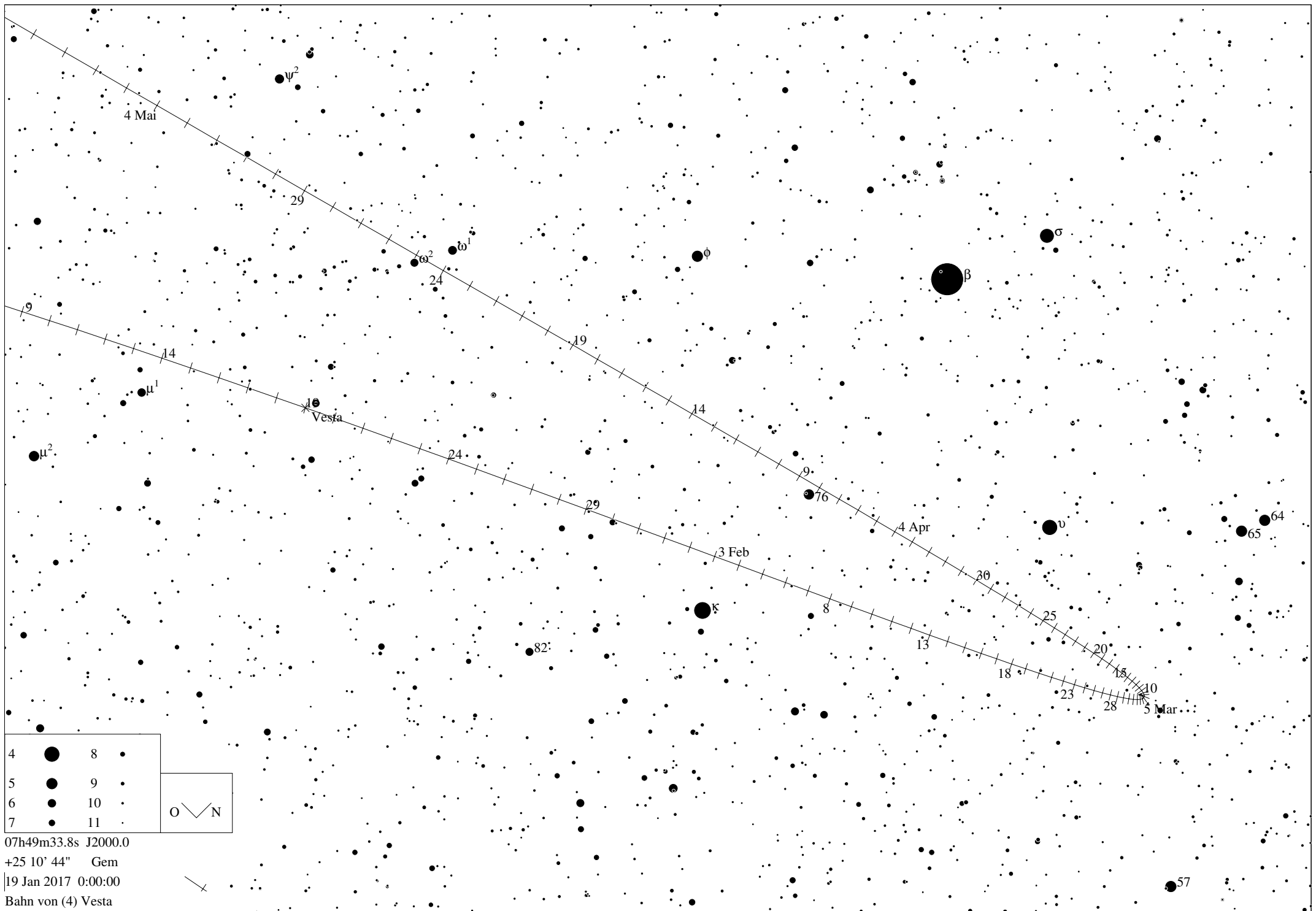
4		8	
5		9	
6		10	
7		11	



07h21m52.2s J2000.0
+20 25' 27" Gem
1 Sep 2016 0:00:00
Bahn von (4) Vesta

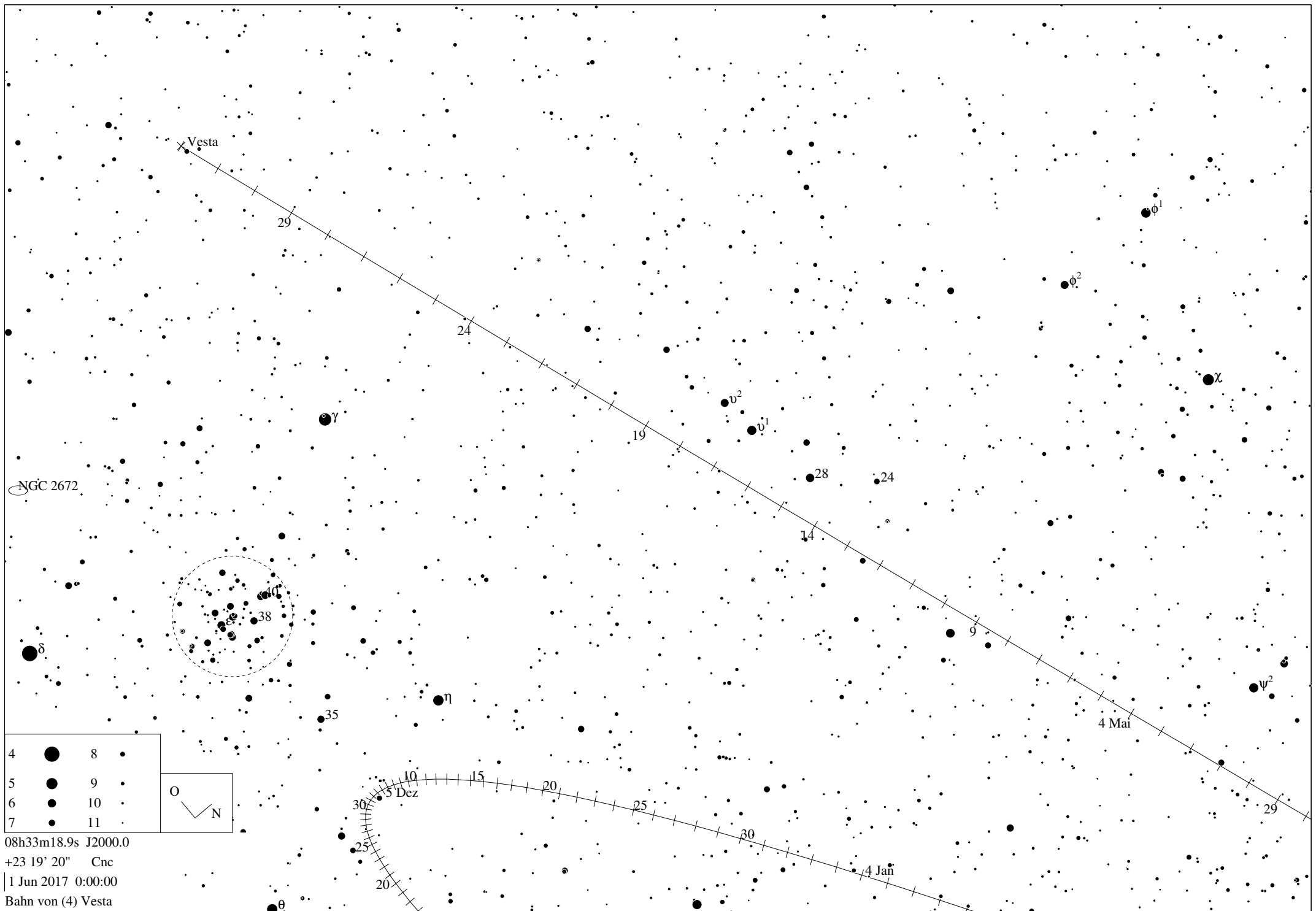






07h49m33.8s J2000.0
 +25 10' 44" Gem
 19 Jan 2017 0:00:00
 Bahn von (4) Vesta





Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
1 Sep 2016	07h01m18.37s	+20 46' 31.3"	2.5674	3.0190	8.4	54.5	18.7	4.09	61.00	55.41	93.3	Gem
2 Sep 2016	07h02m52.64s	+20 45' 08.7"	2.5672	3.0080	8.4	55.1	18.8	4.39	61.47	55.17	93.5	Gem
3 Sep 2016	07h04m26.47s	+20 43' 43.6"	2.5670	2.9970	8.4	55.7	18.9	4.70	61.94	54.92	93.6	Gem
4 Sep 2016	07h05m59.86s	+20 42' 16.0"	2.5668	2.9859	8.4	56.3	19.1	5.00	62.41	54.67	93.7	Gem
5 Sep 2016	07h07m32.79s	+20 40' 46.1"	2.5666	2.9747	8.4	56.9	19.2	5.31	62.88	54.41	93.8	Gem
6 Sep 2016	07h09m05.25s	+20 39' 14.0"	2.5664	2.9634	8.4	57.5	19.3	5.62	63.35	54.15	93.9	Gem
7 Sep 2016	07h10m37.25s	+20 37' 39.6"	2.5662	2.9520	8.4	58.1	19.5	5.93	63.83	53.88	94.1	Gem
8 Sep 2016	07h12m08.77s	+20 36' 03.1"	2.5660	2.9405	8.4	58.7	19.6	6.24	64.30	53.61	94.2	Gem
9 Sep 2016	07h13m39.79s	+20 34' 24.6"	2.5658	2.9290	8.4	59.3	19.7	6.56	64.78	53.34	94.3	Gem
10 Sep 2016	07h15m10.33s	+20 32' 44.1"	2.5656	2.9174	8.4	59.9	19.9	6.87	65.25	53.06	94.4	Gem
11 Sep 2016	07h16m40.36s	+20 31' 01.7"	2.5654	2.9057	8.4	60.6	20.0	7.19	65.73	52.77	94.5	Gem
12 Sep 2016	07h18m09.88s	+20 29' 17.6"	2.5652	2.8939	8.4	61.2	20.1	7.52	66.21	52.48	94.6	Gem
13 Sep 2016	07h19m38.88s	+20 27' 31.7"	2.5649	2.8821	8.4	61.8	20.2	7.84	66.70	52.19	94.7	Gem
14 Sep 2016	07h21m07.36s	+20 25' 44.2"	2.5647	2.8702	8.3	62.4	20.3	8.16	67.18	51.89	94.8	Gem
15 Sep 2016	07h22m35.30s	+20 23' 55.2"	2.5645	2.8582	8.3	63.1	20.5	8.49	67.66	51.59	94.9	Gem
16 Sep 2016	07h24m02.71s	+20 22' 04.7"	2.5642	2.8462	8.3	63.7	20.6	8.82	68.15	51.28	95.0	Gem
17 Sep 2016	07h25m29.56s	+20 20' 12.8"	2.5640	2.8340	8.3	64.3	20.7	9.16	68.64	50.97	95.1	Gem
18 Sep 2016	07h26m55.86s	+20 18' 19.7"	2.5637	2.8219	8.3	65.0	20.8	9.49	69.13	50.65	95.2	Gem
19 Sep 2016	07h28m21.60s	+20 16' 25.4"	2.5635	2.8096	8.3	65.6	20.9	9.83	69.62	50.32	95.3	Gem
20 Sep 2016	07h29m46.76s	+20 14' 30.1"	2.5632	2.7973	8.3	66.2	21.0	10.17	70.11	49.99	95.3	Gem
21 Sep 2016	07h31m11.33s	+20 12' 33.7"	2.5630	2.7849	8.3	66.9	21.1	10.51	70.61	49.66	95.4	Gem
22 Sep 2016	07h32m35.31s	+20 10' 36.5"	2.5627	2.7724	8.3	67.5	21.2	10.85	71.11	49.31	95.5	Gem
23 Sep 2016	07h33m58.67s	+20 08' 38.5"	2.5624	2.7599	8.3	68.2	21.3	11.20	71.61	48.96	95.6	Gem
24 Sep 2016	07h35m21.42s	+20 06' 39.8"	2.5622	2.7473	8.3	68.8	21.4	11.55	72.11	48.60	95.6	Gem
25 Sep 2016	07h36m43.53s	+20 04' 40.6"	2.5619	2.7347	8.3	69.5	21.5	11.90	72.61	48.23	95.7	Gem
26 Sep 2016	07h38m04.99s	+20 02' 40.9"	2.5616	2.7220	8.3	70.2	21.6	12.26	73.12	47.86	95.8	Gem
27 Sep 2016	07h39m25.80s	+20 00' 40.9"	2.5613	2.7092	8.3	70.8	21.7	12.61	73.62	47.47	95.8	Gem
28 Sep 2016	07h40m45.93s	+19 58' 40.6"	2.5610	2.6964	8.2	71.5	21.8	12.97	74.13	47.08	95.9	Gem
29 Sep 2016	07h42m05.38s	+19 56' 40.2"	2.5607	2.6835	8.2	72.2	21.9	13.34	74.65	46.68	95.9	Gem
30 Sep 2016	07h43m24.13s	+19 54' 39.8"	2.5604	2.6706	8.2	72.8	21.9	13.70	75.16	46.27	96.0	Gem
1 Okt 2016	07h44m42.16s	+19 52' 39.5"	2.5601	2.6576	8.2	73.5	22.0	14.07	75.68	45.85	96.0	Gem
2 Okt 2016	07h45m59.48s	+19 50' 39.4"	2.5598	2.6446	8.2	74.2	22.1	14.44	76.20	45.43	96.1	Gem
3 Okt 2016	07h47m16.06s	+19 48' 39.6"	2.5595	2.6315	8.2	74.9	22.2	14.81	76.72	45.00	96.1	Gem
4 Okt 2016	07h48m31.89s	+19 46' 40.3"	2.5592	2.6184	8.2	75.6	22.2	15.19	77.24	44.56	96.2	Gem
5 Okt 2016	07h49m46.95s	+19 44' 41.5"	2.5589	2.6052	8.2	76.2	22.3	15.57	77.77	44.11	96.2	Gem
6 Okt 2016	07h51m01.25s	+19 42' 43.5"	2.5586	2.5920	8.2	76.9	22.4	15.95	78.30	43.65	96.2	Gem
7 Okt 2016	07h52m14.76s	+19 40' 46.2"	2.5583	2.5787	8.2	77.6	22.4	16.34	78.83	43.18	96.2	Gem
8 Okt 2016	07h53m27.47s	+19 38' 49.9"	2.5580	2.5654	8.2	78.3	22.5	16.72	79.37	42.71	96.2	Gem
9 Okt 2016	07h54m39.38s	+19 36' 54.6"	2.5576	2.5521	8.1	79.0	22.5	17.12	79.91	42.23	96.2	Gem
10 Okt 2016	07h55m50.46s	+19 35' 00.4"	2.5573	2.5387	8.1	79.7	22.6	17.51	80.45	41.74	96.2	Cnc
11 Okt 2016	07h57m00.71s	+19 33' 07.6"	2.5570	2.5253	8.1	80.5	22.6	17.91	81.00	41.24	96.2	Cnc
12 Okt 2016	07h58m10.11s	+19 31' 16.2"	2.5566	2.5119	8.1	81.2	22.7	18.31	81.54	40.74	96.2	Cnc
13 Okt 2016	07h59m18.66s	+19 29' 26.4"	2.5563	2.4985	8.1	81.9	22.7	18.71	82.10	40.23	96.2	Cnc
14 Okt 2016	08h00m26.33s	+19 27' 38.2"	2.5559	2.4850	8.1	82.6	22.8	19.12	82.65	39.71	96.2	Cnc
15 Okt 2016	08h01m33.13s	+19 25' 51.8"	2.5556	2.4715	8.1	83.3	22.8	19.53	83.21	39.18	96.2	Cnc
16 Okt 2016	08h02m39.03s	+19 24' 07.4"	2.5552	2.4579	8.1	84.1	22.8	19.94	83.77	38.64	96.1	Cnc
17 Okt 2016	08h03m44.02s	+19 22' 25.0"	2.5549	2.4444	8.1	84.8	22.9	20.36	84.34	38.09	96.1	Cnc
18 Okt 2016	08h04m48.08s	+19 20' 44.8"	2.5545	2.4308	8.0	85.5	22.9	20.78	84.91	37.53	96.0	Cnc
19 Okt 2016	08h05m51.20s	+19 19' 07.1"	2.5541	2.4172	8.0	86.3	22.9	21.20	85.48	36.96	96.0	Cnc
20 Okt 2016	08h06m53.37s	+19 17' 31.8"	2.5538	2.4036	8.0	87.0	22.9	21.63	86.06	36.38	95.9	Cnc
21 Okt 2016	08h07m54.55s	+19 15' 59.1"	2.5534	2.3900	8.0	87.8	22.9	22.06	86.64	35.79	95.8	Cnc
22 Okt 2016	08h08m54.75s	+19 14' 29.2"	2.5530	2.3763	8.0	88.6	22.9	22.49	87.23	35.18	95.7	Cnc
23 Okt 2016	08h09m53.93s	+19 13' 02.3"	2.5526	2.3627	8.0	89.3	22.9	22.93	87.82	34.57	95.6	Cnc
24 Okt 2016	08h10m52.08s	+19 11' 38.5"	2.5522	2.3490	8.0	90.1	22.9	23.37	88.42	33.94	95.5	Cnc
25 Okt 2016	08h11m49.17s	+19 10' 17.9"	2.5519	2.3353	8.0	90.9	22.9	23.81	89.02	33.30	95.3	Cnc
26 Okt 2016	08h12m45.20s	+19 09' 00.7"	2.5515	2.3217	7.9	91.6	22.9	24.26	89.62	32.64	95.2	Cnc
27 Okt 2016	08h13m40.13s	+19 07' 47.1"	2.5511	2.3080	7.9	92.4	22.9	24.71	90.23	31.98	95.0	Cnc
28 Okt 2016	08h14m33.96s	+19 06' 37.2"	2.5507	2.2943	7.9	93.2	22.9	25.16	90.85	31.30	94.9	Cnc
29 Okt 2016	08h15m26.66s	+19 05' 31.1"	2.5503	2.2807	7.9	94.0	22.9	25.62	91.47	30.61	94.7	Cnc
30 Okt 2016	08h16m18.21s	+19 04' 29.0"	2.5498	2.2670	7.9	94.8	22.8	26.08	92.10	29.91	94.4	Cnc
31 Okt 2016	08h17m08.59s	+19 03' 31.0"	2.5494	2.2534	7.9	95.6	22.8	26.55	92.73	29.20	94.2	Cnc
1 Nov 2016	08h17m57.79s	+19 02' 37.4"	2.5490	2.2398	7.9	96.4	22.8	27.02	93.37	28.47	93.9	Cnc
2 Nov 2016	08h18m45.79s	+19 01' 48.2"	2.5486	2.2261	7.8	97.2	22.7	27.49	94.01	27.74	93.7	Cnc
3 Nov 2016	08h19m32.56s	+19 01' 03.6"	2.5482	2.2126	7.8	98.0	22.7	27.97	94.66	26.99	93.3	Cnc
4 Nov 2016	08h20m18.10s	+19 00' 23.8"	2.5478	2.1990	7.8	98.9	22.6	28.45	95.32	26.24	93.0	Cnc
5 Nov 2016	08h21m02.37s	+18 59' 48.9"	2.5473	2.1854	7.8	99.7	22.6	28.93	95.99	25.47	92.6	Cnc
6 Nov 2016	08h21m45.37s	+18 59' 19.0"	2.5469	2.1719	7.8	100.5	22.5	29.42	96.66	24.69	92.2	Cnc
7 Nov 2016	08h22m27.08s	+18 58' 54.3"	2.5465	2.1585	7.8	101.4	22.4	29.91	97.34	23.91	91.8	Cnc
8 Nov 2016	08h23m07.36s	+18 58' 35.5"	2.5460	2.1450	7.7	102.2	22.4	30.41	98.02	23.11	91.3	Cnc
9 Nov 2016	08h23m46.42s	+18 58' 21.6"	2.5456	2.1316	7.7	103.1	22.3	30.91	98.72	22.31	90.7	Cnc
10 Nov 2016	08h24m24.14s	+18 58' 13.4"	2.5451	2.1183	7.7	103.9	22.2	31.41	99.42	21.49	90.1	Cnc
11 Nov 2016	08h25m00.49s	+18 58' 11.0"	2.5447	2.1050	7.7	104.8	22.1	31.91	100.13	20.67	89.4	Cnc
12 Nov 2016	08h25m35.46s	+18 58' 14.5"	2.5442	2.0917	7.7	105.7	22.0	32.42	100.85	19.84	88.7	Cnc
13 Nov 2016	08h26m09.02s	+18 58' 24.0"	2.5438	2.0785	7.7	106.5	21.9	32.94	101.58	19.00	87.9	Cnc

Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
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14 Nov 2016	08h26m41.16s	+18 58' 39.8"	2.5433	2.0653	7.6	107.4	21.8	33.45	102.32	18.16	86.9	Cnc
15 Nov 2016	08h27m11.87s	+18 59' 01.8"	2.5428	2.0522	7.6	108.3	21.7	33.97	103.07	17.31	85.9	Cnc
16 Nov 2016	08h27m41.10s	+18 59' 30.4"	2.5424	2.0392	7.6	109.2	21.5	34.50	103.83	16.45	84.7	Cnc
17 Nov 2016	08h28m08.86s	+19 00' 05.6"	2.5419	2.0262	7.6	110.1	21.4	35.03	104.60	15.59	83.4	Cnc
18 Nov 2016	08h28m35.10s	+19 00' 47.6"	2.5414	2.0133	7.6	111.0	21.3	35.56	105.38	14.72	81.9	Cnc
19 Nov 2016	08h28m59.82s	+19 01' 36.5"	2.5409	2.0004	7.6	111.9	21.1	36.09	106.17	13.85	80.2	Cnc
20 Nov 2016	08h29m22.98s	+19 02' 32.5"	2.5405	1.9877	7.5	112.9	21.0	36.63	106.97	12.98	78.2	Cnc
21 Nov 2016	08h29m44.56s	+19 03' 35.6"	2.5400	1.9750	7.5	113.8	20.8	37.17	107.79	12.12	75.9	Cnc
22 Nov 2016	08h30m04.55s	+19 04' 46.1"	2.5395	1.9624	7.5	114.7	20.7	37.71	108.61	11.28	73.2	Cnc
23 Nov 2016	08h30m22.91s	+19 06' 03.9"	2.5390	1.9498	7.5	115.7	20.5	38.26	109.46	10.45	70.0	Cnc
24 Nov 2016	08h30m39.63s	+19 07' 29.4"	2.5385	1.9374	7.5	116.6	20.3	38.81	110.31	9.65	66.2	Cnc
25 Nov 2016	08h30m54.68s	+19 09' 02.4"	2.5380	1.9251	7.4	117.6	20.2	39.36	111.18	8.89	61.7	Cnc
26 Nov 2016	08h31m08.06s	+19 10' 43.2"	2.5375	1.9128	7.4	118.6	20.0	39.92	112.07	8.18	56.4	Cnc
27 Nov 2016	08h31m19.73s	+19 12' 31.9"	2.5370	1.9007	7.4	119.5	19.8	40.47	112.97	7.56	50.0	Cnc
28 Nov 2016	08h31m29.68s	+19 14' 28.5"	2.5364	1.8887	7.4	120.5	19.6	41.03	113.88	7.04	42.5	Cnc
29 Nov 2016	08h31m37.89s	+19 16' 33.1"	2.5359	1.8768	7.4	121.5	19.4	41.60	114.82	6.65	34.0	Cnc
30 Nov 2016	08h31m44.36s	+19 18' 45.7"	2.5354	1.8650	7.4	122.5	19.1	42.16	115.77	6.43	24.5	Cnc
1 Dez 2016	08h31m49.05s	+19 21' 06.5"	2.5349	1.8533	7.3	123.5	18.9	42.73	116.74	6.40	14.5	Cnc
2 Dez 2016	08h31m51.96s	+19 23' 35.5"	2.5344	1.8418	7.3	124.5	18.7	43.29	117.73	6.56	4.7	Cnc
3 Dez 2016	08h31m53.08s	+19 26' 12.7"	2.5338	1.8303	7.3	125.6	18.5	43.86	118.74	6.89	355.6	Cnc
4 Dez 2016	08h31m52.40s	+19 28' 58.1"	2.5333	1.8191	7.3	126.6	18.2	44.43	119.77	7.39	347.4	Cnc
5 Dez 2016	08h31m49.90s	+19 31' 51.9"	2.5328	1.8079	7.3	127.6	18.0	45.00	120.82	8.02	340.4	Cnc
6 Dez 2016	08h31m45.58s	+19 34' 53.9"	2.5322	1.7969	7.2	128.7	17.7	45.57	121.90	8.76	334.4	Cnc
7 Dez 2016	08h31m39.42s	+19 38' 04.2"	2.5317	1.7861	7.2	129.7	17.4	46.14	123.00	9.57	329.4	Cnc
8 Dez 2016	08h31m31.43s	+19 41' 22.7"	2.5311	1.7754	7.2	130.8	17.1	46.71	124.12	10.45	325.2	Cnc
9 Dez 2016	08h31m21.60s	+19 44' 49.5"	2.5306	1.7649	7.2	131.8	16.9	47.28	125.27	11.37	321.7	Cnc
10 Dez 2016	08h31m09.93s	+19 48' 24.5"	2.5300	1.7545	7.1	132.9	16.6	47.85	126.45	12.34	318.7	Cnc
11 Dez 2016	08h30m56.40s	+19 52' 07.7"	2.5295	1.7443	7.1	134.0	16.3	48.41	127.65	13.32	316.1	Cnc
12 Dez 2016	08h30m41.03s	+19 55' 58.9"	2.5289	1.7343	7.1	135.1	16.0	48.98	128.88	14.33	313.8	Cnc
13 Dez 2016	08h30m23.80s	+19 59' 58.3"	2.5283	1.7244	7.1	136.2	15.6	49.54	130.14	15.36	311.9	Cnc
14 Dez 2016	08h30m04.72s	+20 04' 05.5"	2.5278	1.7148	7.1	137.3	15.3	50.09	131.44	16.40	310.2	Cnc
15 Dez 2016	08h29m43.79s	+20 08' 20.7"	2.5272	1.7053	7.0	138.4	15.0	50.65	132.76	17.45	308.7	Cnc
16 Dez 2016	08h29m21.01s	+20 12' 43.6"	2.5266	1.6960	7.0	139.5	14.6	51.19	134.12	18.50	307.3	Cnc
17 Dez 2016	08h28m56.38s	+20 17' 14.2"	2.5260	1.6869	7.0	140.6	14.3	51.74	135.52	19.56	306.1	Cnc
18 Dez 2016	08h28m29.90s	+20 21' 52.3"	2.5254	1.6779	7.0	141.8	14.0	52.27	136.95	20.62	305.1	Cnc
19 Dez 2016	08h28m01.58s	+20 26' 37.7"	2.5249	1.6692	6.9	142.9	13.6	52.80	138.41	21.67	304.1	Cnc
20 Dez 2016	08h27m31.43s	+20 31' 30.4"	2.5243	1.6607	6.9	144.1	13.2	53.32	139.92	22.72	303.2	Cnc
21 Dez 2016	08h26m59.47s	+20 36' 30.1"	2.5237	1.6525	6.9	145.2	12.8	53.84	141.47	23.76	302.4	Cnc
22 Dez 2016	08h26m25.70s	+20 41' 36.6"	2.5231	1.6444	6.9	146.4	12.5	54.34	143.05	24.80	301.6	Cnc
23 Dez 2016	08h25m50.15s	+20 46' 49.7"	2.5225	1.6365	6.9	147.6	12.1	54.83	144.68	25.82	300.9	Cnc
24 Dez 2016	08h25m12.85s	+20 52' 09.1"	2.5219	1.6289	6.8	148.7	11.7	55.31	146.35	26.82	300.2	Cnc
25 Dez 2016	08h24m33.81s	+20 57' 34.6"	2.5213	1.6215	6.8	149.9	11.3	55.78	148.06	27.81	299.6	Cnc
26 Dez 2016	08h23m53.06s	+21 03' 06.0"	2.5207	1.6144	6.8	151.1	10.9	56.24	149.82	28.77	299.1	Cnc
27 Dez 2016	08h23m10.63s	+21 08' 42.9"	2.5201	1.6074	6.8	152.3	10.5	56.67	151.63	29.71	298.5	Cnc
28 Dez 2016	08h22m26.57s	+21 14' 25.0"	2.5194	1.6008	6.7	153.5	10.0	57.10	153.47	30.63	298.1	Cnc
29 Dez 2016	08h21m40.91s	+21 20' 12.0"	2.5188	1.5943	6.7	154.7	9.6	57.50	155.37	31.53	297.6	Cnc
30 Dez 2016	08h20m53.69s	+21 26' 03.6"	2.5182	1.5882	6.7	155.9	9.2	57.89	157.30	32.39	297.1	Cnc
31 Dez 2016	08h20m04.96s	+21 31' 59.5"	2.5176	1.5822	6.7	157.1	8.7	58.26	159.29	33.22	296.7	Cnc
1 Jan 2017	08h19m14.76s	+21 37' 59.2"	2.5169	1.5766	6.7	158.4	8.3	58.60	161.31	34.02	296.3	Cnc
2 Jan 2017	08h18m23.15s	+21 44' 02.4"	2.5163	1.5712	6.6	159.6	7.8	58.93	163.38	34.78	295.9	Cnc
3 Jan 2017	08h17m30.19s	+21 50' 08.7"	2.5157	1.5661	6.6	160.8	7.4	59.23	165.49	35.51	295.6	Cnc
4 Jan 2017	08h16m35.93s	+21 56' 17.8"	2.5150	1.5612	6.6	162.1	6.9	59.50	167.64	36.20	295.2	Cnc
5 Jan 2017	08h15m40.44s	+22 02' 29.2"	2.5144	1.5566	6.6	163.3	6.5	59.75	169.83	36.84	294.9	Cnc
6 Jan 2017	08h14m43.77s	+22 08' 42.6"	2.5138	1.5523	6.5	164.5	6.0	59.97	172.05	37.45	294.6	Cnc
7 Jan 2017	08h13m45.99s	+22 14' 57.4"	2.5131	1.5483	6.5	165.8	5.5	60.17	174.30	38.01	294.3	Cnc
8 Jan 2017	08h12m47.17s	+22 21' 13.5"	2.5125	1.5445	6.5	167.0	5.1	60.33	176.58	38.53	294.0	Cnc
9 Jan 2017	08h11m47.38s	+22 27' 30.2"	2.5118	1.5411	6.5	168.2	4.6	60.47	178.89	39.01	293.7	Cnc
10 Jan 2017	08h10m46.69s	+22 33' 47.3"	2.5111	1.5379	6.4	169.5	4.1	60.57	181.21	39.44	293.4	Cnc
11 Jan 2017	08h09m45.16s	+22 40' 04.4"	2.5105	1.5350	6.4	170.7	3.6	60.64	183.55	39.83	293.1	Cnc
12 Jan 2017	08h08m42.88s	+22 46' 20.9"	2.5098	1.5323	6.4	171.9	3.2	60.69	185.91	40.17	292.9	Cnc
13 Jan 2017	08h07m39.91s	+22 52' 36.6"	2.5092	1.5300	6.3	173.1	2.7	60.70	188.27	40.47	292.6	Cnc
14 Jan 2017	08h06m36.32s	+22 58' 51.0"	2.5085	1.5279	6.3	174.2	2.3	60.67	190.63	40.72	292.4	Cnc
15 Jan 2017	08h05m32.20s	+23 05' 03.7"	2.5078	1.5262	6.3	175.3	1.9	60.62	192.99	40.92	292.1	Cnc
16 Jan 2017	08h04m27.62s	+23 11' 14.4"	2.5071	1.5247	6.3	176.2	1.5	60.53	195.34	41.07	291.9	Cnc
17 Jan 2017	08h03m22.67s	+23 17' 22.6"	2.5065	1.5235	6.2	176.9	1.2	60.41	197.68	41.17	291.6	Cnc
18 Jan 2017	08h02m17.43s	+23 23' 28.0"	2.5058	1.5226	6.2	177.1	1.1	60.26	200.00	41.22	291.4	Cnc
19 Jan 2017	08h01m11.98s	+23 29' 30.2"	2.5051	1.5221	6.2	176.8	1.2	60.08	202.30	41.22	291.2	Cnc
20 Jan 2017	08h00m06.40s	+23 35' 28.8"	2.5044	1.5217	6.3	176.1	1.5	59.87	204.58	41.17	291.0	Gem
21 Jan 2017	07h59m00.80s	+23 41' 23.5"	2.5037	1.5217	6.3	175.1	1.9	59.62	206.83	41.07	290.7	Gem
22 Jan 2017	07h57m55.25s	+23 47' 13.9"	2.5030	1.5220	6.3	174.1	2.3	59.35	209.04	40.91	290.5	Gem
23 Jan 2017	07h56m49.84s	+23 52' 59.7"	2.5023	1.5226	6.3	172.9	2.8	59.05	211.22	40.70	290.3	Gem
24 Jan 2017	07h55m44.66s	+23 58' 40.6"	2.5016	1.5234	6.4	171.7	3.3	58.73	213.36	40.44	290.1	Gem
25 Jan 2017	07h54m39.81s	+24 04' 16.2"	2.5009	1.5246	6.4	170.5	3.7	58.38	215.46	40.13	290.0	Gem
26 Jan 2017	07h53m35.37s	+24 09' 46.4"	2.5002	1.5260	6.4	169.3	4.2	58.00	217.52	39.77	289.8	Gem

Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
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27 Jan 2017	07h52m31.43s	+24 15' 10.7"	2.4995	1.5277	6.4	168.1	4.7	57.60	219.54	39.35	289.6	Gem
28 Jan 2017	07h51m28.08s	+24 20' 29.1"	2.4988	1.5297	6.5	166.8	5.2	57.18	221.51	38.89	289.4	Gem
29 Jan 2017	07h50m25.40s	+24 25' 41.1"	2.4981	1.5320	6.5	165.6	5.6	56.74	223.44	38.38	289.3	Gem
30 Jan 2017	07h49m23.49s	+24 30' 46.7"	2.4973	1.5346	6.5	164.3	6.1	56.28	225.32	37.82	289.1	Gem
31 Jan 2017	07h48m22.42s	+24 35' 45.6"	2.4966	1.5374	6.5	163.1	6.6	55.80	227.15	37.21	289.0	Gem
1 Feb 2017	07h47m22.28s	+24 40' 37.6"	2.4959	1.5405	6.5	161.9	7.1	55.31	228.94	36.57	288.8	Gem
2 Feb 2017	07h46m23.15s	+24 45' 22.7"	2.4952	1.5439	6.6	160.6	7.5	54.79	230.68	35.87	288.7	Gem
3 Feb 2017	07h45m25.09s	+24 50' 00.6"	2.4944	1.5476	6.6	159.4	8.0	54.27	232.38	35.14	288.6	Gem
4 Feb 2017	07h44m28.20s	+24 54' 31.2"	2.4937	1.5515	6.6	158.2	8.5	53.73	234.03	34.37	288.4	Gem
5 Feb 2017	07h43m32.52s	+24 58' 54.6"	2.4930	1.5556	6.6	157.0	8.9	53.17	235.64	33.56	288.3	Gem
6 Feb 2017	07h42m38.13s	+25 03' 10.4"	2.4922	1.5601	6.6	155.7	9.4	52.61	237.21	32.72	288.2	Gem
7 Feb 2017	07h41m45.09s	+25 07' 18.9"	2.4915	1.5647	6.7	154.5	9.8	52.04	238.74	31.85	288.2	Gem
8 Feb 2017	07h40m53.46s	+25 11' 19.7"	2.4908	1.5697	6.7	153.3	10.2	51.45	240.22	30.95	288.1	Gem
9 Feb 2017	07h40m03.28s	+25 15' 13.0"	2.4900	1.5748	6.7	152.1	10.7	50.86	241.67	30.02	288.0	Gem
10 Feb 2017	07h39m14.62s	+25 18' 58.7"	2.4893	1.5802	6.7	150.9	11.1	50.26	243.08	29.07	288.0	Gem
11 Feb 2017	07h38m11.94s	+25 22' 36.8"	2.4885	1.5859	6.7	149.7	11.5	49.66	244.45	28.09	287.9	Gem
12 Feb 2017	07h37m42.03s	+25 26' 07.3"	2.4877	1.5918	6.8	148.5	12.0	49.05	245.78	27.09	287.9	Gem
13 Feb 2017	07h36m58.19s	+25 29' 30.2"	2.4870	1.5978	6.8	147.4	12.4	48.43	247.09	26.07	287.9	Gem
14 Feb 2017	07h36m16.03s	+25 32' 45.5"	2.4862	1.6042	6.8	146.2	12.8	47.81	248.35	25.02	287.9	Gem
15 Feb 2017	07h35m35.61s	+25 35' 53.2"	2.4855	1.6107	6.8	145.0	13.2	47.19	249.59	23.96	287.9	Gem
16 Feb 2017	07h34m56.96s	+25 38' 53.4"	2.4847	1.6175	6.8	143.9	13.6	46.56	250.80	22.88	287.9	Gem
17 Feb 2017	07h34m20.11s	+25 41' 46.1"	2.4839	1.6244	6.9	142.7	13.9	45.93	251.97	21.79	288.0	Gem
18 Feb 2017	07h33m45.09s	+25 44' 31.3"	2.4832	1.6316	6.9	141.6	14.3	45.30	253.12	20.67	288.1	Gem
19 Feb 2017	07h33m11.94s	+25 47' 09.2"	2.4824	1.6389	6.9	140.5	14.7	44.67	254.24	19.55	288.2	Gem
20 Feb 2017	07h32m40.68s	+25 49' 39.7"	2.4816	1.6465	6.9	139.3	15.1	44.04	255.33	18.41	288.3	Gem
21 Feb 2017	07h32m11.34s	+25 52' 03.0"	2.4808	1.6543	6.9	138.2	15.4	43.40	256.40	17.27	288.5	Gem
22 Feb 2017	07h31m43.94s	+25 54' 19.0"	2.4800	1.6622	7.0	137.1	15.8	42.77	257.45	16.11	288.8	Gem
23 Feb 2017	07h31m18.50s	+25 56' 27.9"	2.4793	1.6703	7.0	136.0	16.1	42.14	258.47	14.95	289.1	Gem
24 Feb 2017	07h30m55.04s	+25 58' 29.8"	2.4785	1.6786	7.0	134.9	16.4	41.51	259.47	13.78	289.5	Gem
25 Feb 2017	07h30m33.58s	+26 00' 24.7"	2.4777	1.6871	7.0	133.8	16.8	40.88	260.44	12.60	290.0	Gem
26 Feb 2017	07h30m14.12s	+26 02' 12.7"	2.4769	1.6957	7.0	132.7	17.1	40.25	261.40	11.43	290.6	Gem
27 Feb 2017	07h29m56.67s	+26 03' 54.0"	2.4761	1.7046	7.1	131.7	17.4	39.63	262.33	10.25	291.4	Gem
28 Feb 2017	07h29m41.26s	+26 05' 28.5"	2.4753	1.7135	7.1	130.6	17.7	39.01	263.25	9.07	292.4	Gem
1 Mar 2017	07h29m27.87s	+26 06' 56.5"	2.4745	1.7226	7.1	129.6	18.0	38.39	264.15	7.90	293.8	Gem
2 Mar 2017	07h29m16.51s	+26 08' 17.9"	2.4737	1.7319	7.1	128.5	18.3	37.77	265.03	6.74	295.7	Gem
3 Mar 2017	07h29m07.19s	+26 09' 32.9"	2.4729	1.7413	7.1	127.5	18.6	37.15	265.89	5.59	298.3	Gem
4 Mar 2017	07h28m59.89s	+26 10' 41.6"	2.4721	1.7508	7.2	126.4	18.8	36.54	266.74	4.46	302.4	Gem
5 Mar 2017	07h28m54.61s	+26 11' 44.1"	2.4713	1.7605	7.2	125.4	19.1	35.94	267.57	3.38	309.1	Gem
6 Mar 2017	07h28m51.35s	+26 12' 40.5"	2.4704	1.7703	7.2	124.4	19.3	35.33	268.38	2.39	321.7	Gem
7 Mar 2017	07h28m50.08s	+26 13' 30.9"	2.4696	1.7803	7.2	123.4	19.6	34.73	269.18	1.67	347.9	Gem
8 Mar 2017	07h28m50.80s	+26 14' 15.3"	2.4688	1.7903	7.2	122.4	19.8	34.13	269.97	1.59	29.2	Gem
9 Mar 2017	07h28m53.49s	+26 14' 53.9"	2.4680	1.8005	7.2	121.4	20.1	33.54	270.74	2.21	58.8	Gem
10 Mar 2017	07h28m58.14s	+26 15' 26.7"	2.4672	1.8107	7.3	120.4	20.3	32.95	271.50	3.13	73.2	Gem
11 Mar 2017	07h29m04.72s	+26 15' 53.8"	2.4663	1.8211	7.3	119.5	20.5	32.37	272.25	4.14	80.7	Gem
12 Mar 2017	07h29m13.23s	+26 16' 15.3"	2.4655	1.8316	7.3	118.5	20.7	31.79	272.99	5.19	85.2	Gem
13 Mar 2017	07h29m23.64s	+26 16' 31.2"	2.4647	1.8421	7.3	117.5	20.9	31.21	273.71	6.25	88.1	Gem
14 Mar 2017	07h29m35.94s	+26 16' 41.6"	2.4638	1.8528	7.3	116.6	21.1	30.64	274.43	7.31	90.1	Gem
15 Mar 2017	07h29m50.10s	+26 16' 46.6"	2.4630	1.8636	7.3	115.7	21.3	30.07	275.13	8.37	91.7	Gem
16 Mar 2017	07h30m06.11s	+26 16' 46.3"	2.4622	1.8744	7.4	114.7	21.5	29.50	275.82	9.42	92.8	Gem
17 Mar 2017	07h30m23.96s	+26 16' 40.6"	2.4613	1.8853	7.4	113.8	21.7	28.94	276.50	10.47	93.7	Gem
18 Mar 2017	07h30m43.61s	+26 16' 29.6"	2.4605	1.8963	7.4	112.9	21.9	28.39	277.18	11.50	94.5	Gem
19 Mar 2017	07h31m05.06s	+26 16' 13.4"	2.4596	1.9074	7.4	112.0	22.0	27.84	277.84	12.53	95.1	Gem
20 Mar 2017	07h31m28.28s	+26 15' 52.0"	2.4588	1.9185	7.4	111.1	22.2	27.29	278.49	13.54	95.6	Gem
21 Mar 2017	07h31m53.25s	+26 15' 25.5"	2.4579	1.9298	7.4	110.2	22.4	26.75	279.14	14.55	96.1	Gem
22 Mar 2017	07h32m19.96s	+26 14' 53.8"	2.4571	1.9410	7.5	109.3	22.5	26.21	279.78	15.54	96.5	Gem
23 Mar 2017	07h32m48.38s	+26 14' 17.1"	2.4562	1.9524	7.5	108.4	22.6	25.68	280.41	16.53	96.8	Gem
24 Mar 2017	07h33m18.49s	+26 13' 35.4"	2.4554	1.9638	7.5	107.5	22.8	25.15	281.03	17.50	97.1	Gem
25 Mar 2017	07h33m50.27s	+26 12' 48.7"	2.4545	1.9752	7.5	106.6	22.9	24.62	281.64	18.46	97.4	Gem
26 Mar 2017	07h34m23.69s	+26 11' 57.0"	2.4536	1.9867	7.5	105.8	23.0	24.10	282.25	19.41	97.6	Gem
27 Mar 2017	07h34m58.75s	+26 11' 00.3"	2.4528	1.9983	7.5	104.9	23.1	23.58	282.85	20.35	97.8	Gem
28 Mar 2017	07h35m35.42s	+26 09' 58.8"	2.4519	2.0099	7.5	104.1	23.3	23.07	283.44	21.28	98.1	Gem
29 Mar 2017	07h36m13.66s	+26 08' 52.4"	2.4510	2.0215	7.6	103.2	23.4	22.56	284.03	22.19	98.2	Gem
30 Mar 2017	07h36m53.47s	+26 07' 41.1"	2.4502	2.0332	7.6	102.4	23.5	22.06	284.61	23.09	98.4	Gem
31 Mar 2017	07h37m34.81s	+26 06' 25.0"	2.4493	2.0449	7.6	101.6	23.6	21.55	285.18	23.98	98.6	Gem
1 Apr 2017	07h38m17.66s	+26 05' 04.1"	2.4484	2.0566	7.6	100.7	23.6	21.06	285.75	24.85	98.7	Gem
2 Apr 2017	07h39m01.99s	+26 03' 38.4"	2.4475	2.0684	7.6	99.9	23.7	20.57	286.31	25.71	98.9	Gem
3 Apr 2017	07h39m47.77s	+26 02' 08.0"	2.4467	2.0802	7.6	99.1	23.8	20.08	286.87	26.55	99.0	Gem
4 Apr 2017	07h40m34.99s	+26 00' 32.8"	2.4458	2.0920	7.6	98.3	23.9	19.59	287.42	27.38	99.2	Gem
5 Apr 2017	07h41m23.60s	+25 58' 52.8"	2.4449	2.1038	7.7	97.5	23.9	19.11	287.96	28.20	99.3	Gem
6 Apr 2017	07h42m13.59s	+25 57' 08.2"	2.4440	2.1156	7.7	96.7	24.0	18.63	288.50	29.00	99.4	Gem
7 Apr 2017	07h43m04.93s	+25 55' 18.8"	2.4431	2.1274	7.7	95.9	24.0	18.16	289.04	29.78	99.6	Gem
8 Apr 2017	07h43m57.58s	+25 53' 24.8"	2.4422	2.1393	7.7	95.2	24.1	17.69	289.57	30.56	99.7	Gem
9 Apr 2017	07h44m51.53s	+25 51' 26.0"	2.4414	2.1512	7.7	94.4	24.1	17.22	290.10	31.32	99.8	Gem
10 Apr 2017	07h45m46.75s	+25 49' 22.6"	2.4405	2.1630	7.7	93.6	24.2	16.76	290.62	32.06	99.9	Gem

Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
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11 Apr 2017	07h46m43.22s	+25 47' 14.4"	2.4396	2.1749	7.7	92.9	24.2	16.30	291.14	32.80	100.0	Gem
12 Apr 2017	07h47m40.91s	+25 45' 01.5"	2.4387	2.1868	7.7	92.1	24.3	15.84	291.65	33.52	100.2	Gem
13 Apr 2017	07h48m39.80s	+25 42' 44.0"	2.4378	2.1986	7.8	91.3	24.3	15.39	292.16	34.23	100.3	Gem
14 Apr 2017	07h49m39.86s	+25 40' 21.7"	2.4369	2.2105	7.8	90.6	24.3	14.94	292.67	34.93	100.4	Gem
15 Apr 2017	07h50m41.09s	+25 37' 54.6"	2.4360	2.2223	7.8	89.9	24.3	14.49	293.17	35.62	100.5	Gem
16 Apr 2017	07h51m43.44s	+25 35' 22.9"	2.4351	2.2342	7.8	89.1	24.3	14.05	293.67	36.29	100.6	Gem
17 Apr 2017	07h52m46.92s	+25 32' 46.4"	2.4341	2.2460	7.8	88.4	24.3	13.61	294.16	36.96	100.7	Gem
18 Apr 2017	07h53m51.48s	+25 30' 05.2"	2.4332	2.2578	7.8	87.7	24.3	13.17	294.66	37.62	100.8	Gem
19 Apr 2017	07h54m57.12s	+25 27' 19.2"	2.4323	2.2697	7.8	86.9	24.4	12.73	295.14	38.26	101.0	Gem
20 Apr 2017	07h56m03.82s	+25 24' 28.4"	2.4314	2.2815	7.8	86.2	24.3	12.30	295.63	38.90	101.1	Gem
21 Apr 2017	07h57m11.55s	+25 21' 32.9"	2.4305	2.2932	7.8	85.5	24.3	11.87	296.11	39.53	101.2	Gem
22 Apr 2017	07h58m20.29s	+25 18' 32.6"	2.4296	2.3050	7.9	84.8	24.3	11.45	296.59	40.14	101.3	Gem
23 Apr 2017	07h59m30.04s	+25 15' 27.5"	2.4287	2.3167	7.9	84.1	24.3	11.02	297.07	40.75	101.4	Gem
24 Apr 2017	08h00m40.76s	+25 12' 17.6"	2.4277	2.3285	7.9	83.4	24.3	10.60	297.54	41.35	101.5	Cnc
25 Apr 2017	08h01m52.45s	+25 09' 02.9"	2.4268	2.3401	7.9	82.7	24.3	10.18	298.01	41.94	101.6	Cnc
26 Apr 2017	08h03m05.08s	+25 05' 43.4"	2.4259	2.3518	7.9	82.0	24.3	9.77	298.48	42.52	101.7	Cnc
27 Apr 2017	08h04m18.63s	+25 02' 19.1"	2.4250	2.3634	7.9	81.3	24.2	9.35	298.95	43.09	101.8	Cnc
28 Apr 2017	08h05m33.09s	+24 58' 50.0"	2.4240	2.3750	7.9	80.6	24.2	8.94	299.41	43.65	102.0	Cnc
29 Apr 2017	08h06m48.43s	+24 55' 16.1"	2.4231	2.3866	7.9	80.0	24.2	8.54	299.88	44.20	102.1	Cnc
30 Apr 2017	08h08m04.63s	+24 51' 37.3"	2.4222	2.3981	7.9	79.3	24.1	8.13	300.34	44.74	102.2	Cnc
1 Mai 2017	08h09m21.67s	+24 47' 53.7"	2.4213	2.4096	7.9	78.6	24.1	7.73	300.79	45.27	102.3	Cnc
2 Mai 2017	08h10m39.54s	+24 44' 05.4"	2.4203	2.4211	7.9	77.9	24.0	7.32	301.25	45.79	102.4	Cnc
3 Mai 2017	08h11m58.20s	+24 40' 12.2"	2.4194	2.4325	8.0	77.3	24.0	6.93	301.70	46.30	102.5	Cnc
4 Mai 2017	08h13m17.65s	+24 36' 14.1"	2.4185	2.4439	8.0	76.6	23.9	6.53	302.15	46.80	102.6	Cnc
5 Mai 2017	08h14m37.86s	+24 32' 11.3"	2.4175	2.4552	8.0	76.0	23.9	6.13	302.60	47.28	102.7	Cnc
6 Mai 2017	08h15m58.81s	+24 28' 03.6"	2.4166	2.4665	8.0	75.3	23.8	5.74	303.05	47.76	102.9	Cnc
7 Mai 2017	08h17m20.49s	+24 23' 51.1"	2.4156	2.4777	8.0	74.7	23.8	5.35	303.50	48.24	103.0	Cnc
8 Mai 2017	08h18m42.88s	+24 19' 33.8"	2.4147	2.4889	8.0	74.0	23.7	4.96	303.94	48.70	103.1	Cnc
9 Mai 2017	08h20m05.96s	+24 15' 11.6"	2.4137	2.5000	8.0	73.4	23.6	4.57	304.39	49.15	103.2	Cnc
10 Mai 2017	08h21m29.71s	+24 10' 44.6"	2.4128	2.5111	8.0	72.8	23.6	4.19	304.83	49.60	103.3	Cnc
11 Mai 2017	08h22m54.12s	+24 06' 12.8"	2.4119	2.5222	8.0	72.1	23.5	3.80	305.27	50.04	103.4	Cnc
12 Mai 2017	08h24m19.18s	+24 01' 36.0"	2.4109	2.5332	8.0	71.5	23.4	3.42	305.71	50.47	103.5	Cnc
13 Mai 2017	08h25m44.87s	+23 56' 54.5"	2.4100	2.5441	8.0	70.9	23.3	3.04	306.15	50.90	103.7	Cnc
14 Mai 2017	08h27m11.18s	+23 52' 08.0"	2.4090	2.5550	8.0	70.2	23.3	2.66	306.59	51.32	103.8	Cnc
15 Mai 2017	08h28m38.09s	+23 47' 16.7"	2.4080	2.5658	8.0	69.6	23.2	2.29	307.03	51.73	103.9	Cnc
16 Mai 2017	08h30m05.59s	+23 42' 20.5"	2.4071	2.5766	8.0	69.0	23.1	1.91	307.46	52.14	104.0	Cnc
17 Mai 2017	08h31m33.68s	+23 37' 19.4"	2.4061	2.5873	8.0	68.4	23.0	1.54	307.90	52.54	104.1	Cnc
18 Mai 2017	08h33m02.32s	+23 32' 13.5"	2.4052	2.5980	8.1	67.8	22.9	1.17	308.33	52.93	104.2	Cnc
19 Mai 2017	08h34m31.53s	+23 27' 02.6"	2.4042	2.6086	8.1	67.2	22.8	0.80	308.77	53.32	104.4	Cnc
20 Mai 2017	08h36m01.27s	+23 21' 46.9"	2.4033	2.6192	8.1	66.6	22.7	0.43	309.20	53.71	104.5	Cnc
21 Mai 2017	08h37m31.55s	+23 16' 26.3"	2.4023	2.6296	8.1	66.0	22.6	0.06	309.63	54.09	104.6	Cnc
22 Mai 2017	08h39m02.35s	+23 11' 00.8"	2.4013	2.6401	8.1	65.4	22.5	-0.30	310.07	54.46	104.7	Cnc
23 Mai 2017	08h40m33.66s	+23 05' 30.4"	2.4004	2.6504	8.1	64.8	22.4	-0.67	310.50	54.83	104.8	Cnc
24 Mai 2017	08h42m05.47s	+22 59' 55.1"	2.3994	2.6607	8.1	64.2	22.3	-1.03	310.93	55.19	104.9	Cnc
25 Mai 2017	08h43m37.76s	+22 54' 15.0"	2.3984	2.6710	8.1	63.6	22.2	-1.39	311.36	55.55	105.1	Cnc
26 Mai 2017	08h45m10.53s	+22 48' 30.0"	2.3975	2.6811	8.1	63.0	22.1	-1.75	311.79	55.90	105.2	Cnc
27 Mai 2017	08h46m43.56s	+22 42' 41.3"	2.3965	2.6912	8.1	62.4	22.0	-2.11	312.22	56.25	105.3	Cnc
28 Mai 2017	08h48m17.24s	+22 36' 46.6"	2.3955	2.7013	8.1	61.8	21.9	-2.47	312.65	56.59	105.4	Cnc
29 Mai 2017	08h49m51.37s	+22 30' 47.1"	2.3945	2.7112	8.1	61.2	21.8	-2.82	313.08	56.92	105.5	Cnc
30 Mai 2017	08h51m25.92s	+22 24' 42.8"	2.3936	2.7211	8.1	60.7	21.7	-3.18	313.51	57.25	105.6	Cnc
31 Mai 2017	08h53m00.87s	+22 18' 33.7"	2.3926	2.7309	8.1	60.1	21.5	-3.53	313.94	57.56	105.7	Cnc
1 Jun 2017	08h54m36.23s	+22 12' 19.9"	2.3916	2.7407	8.1	59.5	21.4	-3.88	314.37	57.88	105.9	Cnc