







## Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
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1 Mar 2018	17h15m30.60s	-17 13' 35.4"	2.1649	2.0894	7.5	80.8	26.9	-11.39	103.49	57.29	93.7	Oph
2 Mar 2018	17h17m06.24s	-17 14' 57.0"	2.1645	2.0775	7.4	81.4	26.9	-11.06	103.94	56.83	93.5	Oph
3 Mar 2018	17h18m41.15s	-17 16' 14.4"	2.1641	2.0656	7.4	82.1	27.0	-10.72	104.41	56.37	93.4	Oph
4 Mar 2018	17h20m15.31s	-17 17' 27.7"	2.1638	2.0537	7.4	82.7	27.0	-10.38	104.87	55.89	93.2	Oph
5 Mar 2018	17h21m48.70s	-17 18' 36.8"	2.1634	2.0418	7.4	83.3	27.1	-10.04	105.33	55.41	93.1	Oph
6 Mar 2018	17h23m21.31s	-17 19' 41.9"	2.1630	2.0299	7.4	83.9	27.1	-9.70	105.80	54.91	93.0	Oph
7 Mar 2018	17h24m53.12s	-17 20' 43.0"	2.1627	2.0180	7.4	84.6	27.2	-9.35	106.27	54.40	92.8	Oph
8 Mar 2018	17h26m24.11s	-17 21' 40.4"	2.1623	2.0060	7.4	85.2	27.2	-9.01	106.74	53.89	92.7	Oph
9 Mar 2018	17h27m54.25s	-17 22' 34.0"	2.1620	1.9941	7.4	85.8	27.3	-8.66	107.21	53.36	92.5	Oph
10 Mar 2018	17h29m23.54s	-17 23' 23.9"	2.1616	1.9822	7.3	86.5	27.3	-8.31	107.68	52.82	92.4	Oph
11 Mar 2018	17h30m51.94s	-17 24' 10.3"	2.1613	1.9702	7.3	87.1	27.3	-7.96	108.16	52.28	92.3	Oph
12 Mar 2018	17h32m19.44s	-17 24' 53.2"	2.1610	1.9583	7.3	87.8	27.4	-7.60	108.64	51.72	92.1	Oph
13 Mar 2018	17h33m46.03s	-17 25' 32.7"	2.1606	1.9463	7.3	88.4	27.4	-7.25	109.12	51.14	92.0	Oph
14 Mar 2018	17h35m11.67s	-17 26' 09.0"	2.1603	1.9344	7.3	89.1	27.4	-6.89	109.60	50.56	91.9	Oph
15 Mar 2018	17h36m36.36s	-17 26' 42.2"	2.1600	1.9225	7.3	89.7	27.4	-6.53	110.09	49.97	91.7	Oph
16 Mar 2018	17h38m02.06s	-17 27' 12.3"	2.1597	1.9106	7.3	90.4	27.4	-6.17	110.58	49.36	91.6	Oph
17 Mar 2018	17h39m22.77s	-17 27' 39.5"	2.1594	1.8987	7.3	91.0	27.4	-5.80	111.08	48.74	91.5	Oph
18 Mar 2018	17h40m44.45s	-17 28' 03.9"	2.1591	1.8868	7.2	91.7	27.4	-5.44	111.58	48.12	91.4	Oph
19 Mar 2018	17h42m05.09s	-17 28' 25.7"	2.1588	1.8749	7.2	92.4	27.4	-5.07	112.08	47.48	91.3	Oph
20 Mar 2018	17h43m24.68s	-17 28' 44.8"	2.1585	1.8630	7.2	93.0	27.4	-4.70	112.58	46.82	91.2	Sgr
21 Mar 2018	17h44m43.18s	-17 29' 01.6"	2.1582	1.8511	7.2	93.7	27.4	-4.33	113.09	46.16	91.1	Sgr
22 Mar 2018	17h46m00.59s	-17 29' 16.0"	2.1580	1.8393	7.2	94.4	27.4	-3.96	113.60	45.49	91.0	Sgr
23 Mar 2018	17h47m16.88s	-17 29' 28.3"	2.1577	1.8275	7.2	95.1	27.4	-3.58	114.12	44.81	90.9	Sgr
24 Mar 2018	17h48m32.03s	-17 29' 38.5"	2.1574	1.8157	7.2	95.8	27.4	-3.21	114.64	44.11	90.8	Sgr
25 Mar 2018	17h49m46.04s	-17 29' 46.8"	2.1572	1.8039	7.1	96.5	27.3	-2.83	115.16	43.41	90.7	Sgr
26 Mar 2018	17h50m58.88s	-17 29' 53.4"	2.1569	1.7922	7.1	97.2	27.3	-2.45	115.69	42.70	90.6	Sgr
27 Mar 2018	17h52m10.53s	-17 29' 58.3"	2.1567	1.7804	7.1	97.9	27.3	-2.07	116.23	41.97	90.5	Sgr
28 Mar 2018	17h53m24.98s	-17 30' 01.8"	2.1564	1.7687	7.1	98.6	27.2	-1.69	116.77	41.24	90.5	Sgr
29 Mar 2018	17h54m30.21s	-17 30' 03.9"	2.1562	1.7571	7.1	99.3	27.2	-1.31	117.31	40.49	90.4	Sgr
30 Mar 2018	17h55m38.19s	-17 30' 04.8"	2.1559	1.7455	7.1	100.0	27.1	-0.92	117.86	39.73	90.3	Sgr
31 Mar 2018	17h56m44.91s	-17 30' 04.6"	2.1557	1.7339	7.0	100.7	27.1	-0.54	118.41	38.96	90.3	Sgr
1 Apr 2018	17h57m54.34s	-17 30' 03.5"	2.1555	1.7223	7.0	101.4	27.0	-0.15	118.97	38.17	90.2	Sgr
2 Apr 2018	17h58m54.46s	-17 30' 01.6"	2.1553	1.7108	7.0	102.1	27.0	0.24	119.54	37.38	90.2	Sgr
3 Apr 2018	17h59m57.26s	-17 29' 59.1"	2.1551	1.6993	7.0	102.9	26.9	0.63	120.11	36.56	90.1	Sgr
4 Apr 2018	18h00m58.69s	-17 29' 56.1"	2.1549	1.6878	7.0	103.6	26.8	1.01	120.69	35.73	90.1	Sgr
5 Apr 2018	18h01m58.75s	-17 29' 52.7"	2.1547	1.6764	7.0	104.4	26.7	1.40	121.27	34.89	90.1	Sgr
6 Apr 2018	18h02m57.39s	-17 29' 49.2"	2.1545	1.6651	6.9	105.1	26.6	1.80	121.86	34.03	90.1	Sgr
7 Apr 2018	18h03m54.61s	-17 29' 45.6"	2.1543	1.6537	6.9	105.9	26.5	2.19	122.45	33.16	90.1	Sgr
8 Apr 2018	18h04m50.37s	-17 29' 42.1"	2.1541	1.6425	6.9	106.6	26.4	2.58	123.06	32.27	90.1	Sgr
9 Apr 2018	18h05m44.65s	-17 29' 38.8"	2.1539	1.6313	6.9	107.4	26.3	2.97	123.67	31.37	90.1	Sgr
10 Apr 2018	18h06m37.42s	-17 29' 36.0"	2.1537	1.6201	6.9	108.1	26.2	3.36	124.28	30.45	90.2	Sgr
11 Apr 2018	18h07m28.65s	-17 29' 33.7"	2.1536	1.6090	6.9	108.9	26.1	3.76	124.91	29.51	90.2	Sgr
12 Apr 2018	18h08m18.33s	-17 29' 32.2"	2.1534	1.5979	6.8	109.7	26.0	4.15	125.54	28.56	90.3	Sgr
13 Apr 2018	18h09m06.42s	-17 29' 31.5"	2.1533	1.5869	6.8	110.5	25.9	4.54	126.18	27.60	90.4	Sgr
14 Apr 2018	18h09m52.90s	-17 29' 31.9"	2.1531	1.5760	6.8	111.3	25.7	4.93	126.83	26.62	90.5	Sgr
15 Apr 2018	18h10m37.75s	-17 29' 33.5"	2.1530	1.5651	6.8	112.1	25.6	5.33	127.48	25.62	90.7	Sgr
16 Apr 2018	18h11m20.94s	-17 29' 36.5"	2.1528	1.5543	6.8	112.9	25.4	5.72	128.15	24.61	90.8	Sgr
17 Apr 2018	18h12m02.45s	-17 29' 41.0"	2.1527	1.5436	6.7	113.7	25.3	6.11	128.82	23.59	91.0	Sgr
18 Apr 2018	18h12m42.26s	-17 29' 47.2"	2.1526	1.5329	6.7	114.5	25.1	6.50	129.50	22.56	91.3	Sgr
19 Apr 2018	18h13m20.34s	-17 29' 55.2"	2.1525	1.5223	6.7	115.3	24.9	6.89	130.19	21.51	91.5	Sgr
20 Apr 2018	18h13m56.69s	-17 30' 05.3"	2.1523	1.5118	6.7	116.1	24.8	7.28	130.89	20.46	91.9	Sgr
21 Apr 2018	18h14m31.27s	-17 30' 17.6"	2.1522	1.5014	6.7	117.0	24.6	7.67	131.60	19.39	92.2	Sgr
22 Apr 2018	18h15m04.07s	-17 30' 32.2"	2.1521	1.4911	6.6	117.8	24.4	8.05	132.32	18.32	92.7	Sgr
23 Apr 2018	18h15m35.08s	-17 30' 49.3"	2.1520	1.4808	6.6	118.7	24.2	8.44	133.05	17.23	93.2	Sgr
24 Apr 2018	18h16m04.27s	-17 31' 09.1"	2.1519	1.4707	6.6	119.5	24.0	8.82	133.78	16.14	93.8	Sgr
25 Apr 2018	18h16m31.64s	-17 31' 31.7"	2.1518	1.4606	6.6	120.4	23.8	9.20	134.53	15.04	94.5	Sgr
26 Apr 2018	18h16m57.15s	-17 31' 57.3"	2.1518	1.4506	6.6	121.2	23.6	9.58	135.29	13.93	95.4	Sgr
27 Apr 2018	18h17m20.80s	-17 32' 26.0"	2.1517	1.4407	6.5	122.1	23.3	9.95	136.06	12.82	96.5	Sgr
28 Apr 2018	18h17m42.56s	-17 32' 57.9"	2.1516	1.4310	6.5	123.0	23.1	10.32	136.84	11.70	97.8	Sgr
29 Apr 2018	18h18m02.42s	-17 33' 33.3"	2.1516	1.4213	6.5	123.9	22.9	10.69	137.63	10.58	99.4	Sgr
30 Apr 2018	18h18m20.35s	-17 34' 12.2"	2.1515	1.4117	6.5	124.8	22.6	11.06	138.43	9.46	101.4	Sgr
1 Mai 2018	18h18m36.34s	-17 34' 54.7"	2.1514	1.4023	6.5	125.7	22.4	11.42	139.25	8.34	104.1	Sgr
2 Mai 2018	18h18m50.38s	-17 35' 41.1"	2.1514	1.3929	6.4	126.6	22.1	11.78	140.07	7.24	107.6	Sgr
3 Mai 2018	18h19m02.43s	-17 36' 31.4"	2.1514	1.3837	6.4	127.5	21.8	12.13	140.91	6.17	112.4	Sgr
4 Mai 2018	18h19m12.49s	-17 37' 25.7"	2.1513	1.3746	6.4	128.4	21.5	12.48	141.76	5.15	119.3	Sgr
5 Mai 2018	18h19m20.54s	-17 38' 24.3"	2.1513	1.3656	6.4	129.3	21.3	12.83	142.62	4.24	129.4	Sgr
6 Mai 2018	18h19m26.56s	-17 39' 27.1"	2.1513	1.3567	6.4	130.3	21.0	13.17	143.49	3.52	144.5	Sgr
7 Mai 2018	18h19m30.54s	-17 40' 34.3"	2.1512	1.3480	6.3	131.2	20.7	13.50	144.37	3.16	165.1	Sgr
8 Mai 2018	18h19m32.47s	-17 41' 46.0"	2.1512	1.3394	6.3	132.2	20.3	13.83	145.27	3.26	187.5	Sgr
9 Mai 2018	18h19m32.33s	-17 43' 02.3"	2.1512	1.3309	6.3	133.1	20.0	14.15	146.18	3.81	206.0	Sgr
10 Mai 2018	18h19m30.12s	-17 44' 23.4"	2.1512	1.3226	6.3	134.1	19.7	14.47	147.10	4.65	218.9	Sgr
11 Mai 2018	18h19m25.83s	-17 45' 49.2"	2.1512	1.3144	6.2	135.1	19.4	14.78	148.04	5.66	227.6	Sgr
12 Mai 2018	18h19m19.46s	-17 47' 19.9"	2.1512	1.3063	6.2	136.1	19.0	15.08	148.99	6.76	233.5	Sgr
13 Mai 2018	18h19m11.00s	-17 48' 55.5"	2.1512	1.2984	6.2	137.1	18.7	15.38	149.95	7.91	237.7	Sgr

# Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination		r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
14 Mai 2018	18h19m00.46s	-17 50'	36.2"	2.1513	1.2907	6.2	138.1	18.3	15.66	150.92	9.09	240.9	Sgr
15 Mai 2018	18h18m47.83s	-17 52'	21.9"	2.1513	1.2831	6.2	139.1	17.9	15.94	151.91	10.29	243.2	Sgr
16 Mai 2018	18h18m33.13s	-17 54'	12.7"	2.1513	1.2756	6.1	140.1	17.5	16.21	152.90	11.50	245.1	Sgr
17 Mai 2018	18h18m16.37s	-17 56'	08.7"	2.1514	1.2684	6.1	141.1	17.2	16.47	153.92	12.71	246.6	Sgr
18 Mai 2018	18h17m57.56s	-17 58'	10.0"	2.1514	1.2613	6.1	142.2	16.8	16.72	154.94	13.92	247.8	Sgr
19 Mai 2018	18h17m36.71s	-18 00'	16.4"	2.1515	1.2543	6.1	143.2	16.4	16.96	155.98	15.13	248.8	Sgr
20 Mai 2018	18h17m13.86s	-18 02'	28.1"	2.1515	1.2476	6.0	144.2	16.0	17.19	157.02	16.32	249.6	Sgr
21 Mai 2018	18h16m49.02s	-18 04'	45.1"	2.1516	1.2410	6.0	145.3	15.5	17.41	158.08	17.50	250.3	Sgr
22 Mai 2018	18h16m22.22s	-18 07'	07.3"	2.1516	1.2346	6.0	146.4	15.1	17.62	159.16	18.67	250.9	Sgr
23 Mai 2018	18h15m53.48s	-18 09'	34.8"	2.1517	1.2284	6.0	147.4	14.7	17.82	160.24	19.83	251.4	Sgr
24 Mai 2018	18h15m22.83s	-18 12'	07.4"	2.1518	1.2224	5.9	148.5	14.2	18.00	161.34	20.96	251.8	Sgr
25 Mai 2018	18h14m50.31s	-18 14'	45.2"	2.1519	1.2166	5.9	149.6	13.8	18.17	162.44	22.08	252.2	Sgr
26 Mai 2018	18h14m15.94s	-18 17'	28.2"	2.1520	1.2109	5.9	150.7	13.3	18.33	163.56	23.18	252.5	Sgr
27 Mai 2018	18h13m39.76s	-18 20'	16.2"	2.1521	1.2055	5.9	151.8	12.9	18.48	164.69	24.26	252.8	Sgr
28 Mai 2018	18h13m01.80s	-18 23'	09.3"	2.1522	1.2003	5.8	152.9	12.4	18.61	165.83	25.32	253.1	Sgr
29 Mai 2018	18h12m22.11s	-18 26'	07.2"	2.1523	1.1952	5.8	154.0	11.9	18.73	166.97	26.35	253.3	Sgr
30 Mai 2018	18h11m40.73s	-18 29'	10.0"	2.1524	1.1904	5.8	155.1	11.5	18.83	168.13	27.35	253.5	Sgr
31 Mai 2018	18h10m57.69s	-18 32'	17.6"	2.1525	1.1858	5.8	156.2	11.0	18.92	169.29	28.33	253.7	Sgr
1 Jun 2018	18h10m13.05s	-18 35'	29.8"	2.1526	1.1814	5.8	157.3	10.5	18.99	170.47	29.28	253.9	Sgr
2 Jun 2018	18h09m26.86s	-18 38'	46.5"	2.1527	1.1772	5.7	158.4	10.0	19.05	171.65	30.19	254.0	Sgr
3 Jun 2018	18h08m39.17s	-18 42'	07.6"	2.1529	1.1732	5.7	159.6	9.5	19.09	172.84	31.07	254.2	Sgr
4 Jun 2018	18h07m50.03s	-18 45'	33.1"	2.1530	1.1694	5.7	160.7	9.0	19.12	174.03	31.91	254.3	Sgr
5 Jun 2018	18h06m59.52s	-18 49'	02.6"	2.1532	1.1659	5.7	161.8	8.5	19.13	175.23	32.72	254.4	Sgr
6 Jun 2018	18h06m07.68s	-18 52'	36.2"	2.1533	1.1626	5.6	163.0	7.9	19.12	176.43	33.48	254.5	Sgr
7 Jun 2018	18h05m14.59s	-18 56'	13.6"	2.1535	1.1595	5.6	164.1	7.4	19.10	177.64	34.21	254.6	Sgr
8 Jun 2018	18h04m20.33s	-18 59'	54.8"	2.1536	1.1566	5.6	165.2	6.9	19.06	178.86	34.88	254.6	Sgr
9 Jun 2018	18h03m24.95s	-19 03'	39.5"	2.1538	1.1540	5.6	166.4	6.4	19.01	180.07	35.52	254.7	Sgr
10 Jun 2018	18h02m28.55s	-19 07'	27.6"	2.1540	1.1516	5.5	167.5	5.9	18.93	181.29	36.10	254.7	Sgr
11 Jun 2018	18h01m31.19s	-19 11'	18.9"	2.1542	1.1494	5.5	168.6	5.3	18.84	182.51	36.63	254.8	Sgr
12 Jun 2018	18h00m32.98s	-19 15'	13.3"	2.1543	1.1475	5.5	169.7	4.8	18.74	183.74	37.11	254.8	Sgr
13 Jun 2018	17h59m33.99s	-19 19'	10.6"	2.1545	1.1459	5.5	170.8	4.3	18.61	184.96	37.54	254.8	Sgr
14 Jun 2018	17h58m42.32s	-19 23'	10.5"	2.1547	1.1444	5.4	171.9	3.8	18.47	186.18	37.90	254.8	Sgr
15 Jun 2018	17h57m34.06s	-19 27'	13.1"	2.1549	1.1432	5.4	173.0	3.3	18.31	187.40	38.22	254.8	Sgr
16 Jun 2018	17h56m33.30s	-19 31'	18.0"	2.1551	1.1423	5.4	174.0	2.8	18.14	188.62	38.47	254.7	Sgr
17 Jun 2018	17h55m32.16s	-19 35'	25.2"	2.1554	1.1416	5.4	174.9	2.4	17.95	189.83	38.66	254.7	Sgr
18 Jun 2018	17h54m30.72s	-19 39'	34.4"	2.1556	1.1411	5.3	175.6	2.1	17.74	191.04	38.80	254.6	Sgr
19 Jun 2018	17h53m29.08s	-19 43'	45.6"	2.1558	1.1409	5.3	176.2	1.8	17.52	192.25	38.88	254.5	Sgr
20 Jun 2018	17h52m27.33s	-19 47'	58.4"	2.1560	1.1410	5.3	176.4	1.7	17.28	193.45	38.90	254.5	Sgr
21 Jun 2018	17h51m25.58s	-19 52'	12.8"	2.1563	1.1412	5.3	176.2	1.8	17.02	194.65	38.87	254.4	Sgr
22 Jun 2018	17h50m23.91s	-19 56'	28.6"	2.1565	1.1418	5.3	175.7	2.0	16.75	195.84	38.78	254.3	Sgr
23 Jun 2018	17h49m22.41s	-20 00'	45.7"	2.1568	1.1425	5.4	174.9	2.4	16.46	197.02	38.63	254.1	Sgr
24 Jun 2018	17h48m21.19s	-20 05'	03.9"	2.1570	1.1435	5.4	174.0	2.8	16.16	198.19	38.44	254.0	Sgr
25 Jun 2018	17h47m20.32s	-20 09'	23.0"	2.1573	1.1448	5.4	173.1	3.3	15.84	199.36	38.19	253.9	Sgr
26 Jun 2018	17h46m19.90s	-20 13'	42.9"	2.1575	1.1463	5.4	172.0	3.8	15.51	200.52	37.89	253.7	Sgr
27 Jun 2018	17h45m20.01s	-20 18'	03.5"	2.1578	1.1480	5.5	170.9	4.3	15.17	201.67	37.54	253.5	Sgr
28 Jun 2018	17h44m20.74s	-20 22'	24.6"	2.1581	1.1500	5.5	169.8	4.8	14.81	202.81	37.14	253.3	Sgr
29 Jun 2018	17h43m22.17s	-20 26'	46.1"	2.1583	1.1522	5.5	168.7	5.3	14.44	203.94	36.69	253.1	Oph
30 Jun 2018	17h42m24.39s	-20 31'	07.9"	2.1586	1.1546	5.5	167.6	5.8	14.05	205.06	36.20	252.9	Oph
1 Jul 2018	17h41m27.47s	-20 35'	29.8"	2.1589	1.1573	5.6	166.5	6.3	13.66	206.17	35.66	252.6	Oph
2 Jul 2018	17h40m31.50s	-20 39'	51.9"	2.1592	1.1602	5.6	165.4	6.8	13.25	207.26	35.08	252.3	Oph
3 Jul 2018	17h39m36.55s	-20 44'	13.8"	2.1595	1.1634	5.6	164.2	7.4	12.83	208.35	34.45	252.0	Oph
4 Jul 2018	17h38m42.69s	-20 48'	35.7"	2.1598	1.1667	5.6	163.1	7.9	12.40	209.43	33.78	251.6	Oph
5 Jul 2018	17h37m50.02s	-20 52'	57.3"	2.1601	1.1703	5.7	162.0	8.4	11.96	210.49	33.07	251.3	Oph
6 Jul 2018	17h36m58.58s	-20 57'	18.7"	2.1604	1.1742	5.7	160.8	8.9	11.51	211.54	32.33	250.9	Oph
7 Jul 2018	17h36m08.46s	-21 01'	39.6"	2.1608	1.1782	5.7	159.7	9.4	11.05	212.58	31.54	250.4	Oph
8 Jul 2018	17h35m19.72s	-21 06'	00.2"	2.1611	1.1825	5.7	158.6	9.9	10.58	213.61	30.72	249.9	Oph
9 Jul 2018	17h34m32.44s	-21 10'	20.2"	2.1614	1.1870	5.8	157.5	10.4	10.11	214.62	29.87	249.4	Oph
10 Jul 2018	17h33m46.66s	-21 14'	39.6"	2.1618	1.1917	5.8	156.3	10.9	9.62	215.62	28.99	248.8	Oph
11 Jul 2018	17h33m02.47s	-21 18'	58.5"	2.1621	1.1966	5.8	155.2	11.4	9.13	216.61	28.07	248.1	Oph
12 Jul 2018	17h32m19.90s	-21 23'	16.7"	2.1625	1.2018	5.8	154.1	11.8	8.63	217.58	27.13	247.4	Oph
13 Jul 2018	17h31m39.04s	-21 27'	34.3"	2.1628	1.2071	5.9	153.0	12.3	8.13	218.55	26.17	246.6	Oph
14 Jul 2018	17h30m59.92s	-21 31'	51.2"	2.1632	1.2127	5.9	151.9	12.8	7.62	219.50	25.18	245.7	Oph
15 Jul 2018	17h30m22.59s	-21 36'	07.3"	2.1635	1.2184	5.9	150.8	13.2	7.10	220.44	24.17	244.7	Oph
16 Jul 2018	17h29m42.69s	-21 40'	22.7"	2.1639	1.2244	5.9	149.8	13.7	6.58	221.36	23.15	243.6	Oph
17 Jul 2018	17h29m13.52s	-21 44'	37.3"	2.1643	1.2305	6.0	148.7	14.1	6.05	222.27	22.13	242.4	Oph
18 Jul 2018	17h28m41.84s	-21 48'	51.1"	2.1647	1.2369	6.0	147.6	14.6	5.52	223.17	21.09	241.0	Oph
19 Jul 2018	17h28m12.11s	-21 53'	04.2"	2.1650	1.2434	6.0	146.5	15.0	4.99	224.06	20.06	239.5	Oph
20 Jul 2018	17h27m44.36s	-21 57'	16.3"	2.1654	1.2501	6.0	145.5	15.4	4.45	224.93	19.03	237.8	Oph
21 Jul 2018	17h27m18.61s	-22 01'	27.7"	2.1658	1.2570	6.1	144.4	15.8	3.91	225.79	18.00	235.9	Oph
22 Jul 2018	17h26m54.88s	-22 05'	38.1"	2.1662	1.2641	6.1	143.4	16.2	3.37	226.64	17.00	233.7	Oph
23 Jul 2018	17h26m33.18s	-22 09'	47.6"	2.1666	1.2713	6.1	142.4	16.6	2.82	227.48	16.01	231.3	Oph
24 Jul 2018	17h26m13.53s	-22 13'	56.2"	2.1671	1.2787	6.1	141.4	17.0	2.27	228.31	15.05	228.5	Oph
25 Jul 2018	17h25m55.95s	-22 18'	03.8"	2.1675	1.2863	6.2	140.3	17.4	1.72	229.12	14.13	225.4	Oph
26 Jul 2018	17h25m40.43s	-22 22'	10.4"	2.1679	1.2940	6.2	139.3	17.8	1.17	229.92	13.25	221.8	Oph

## Ephemeride des Kleinplaneten (4) Vesta

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
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27 Jul 2018	17h25m26.99s	-22 26' 16.0"	2.1683	1.3019	6.2	138.3	18.1	0.62	230.71	12.43	217.7	Oph
28 Jul 2018	17h25m15.63s	-22 30' 20.6"	2.1687	1.3100	6.2	137.3	18.5	0.06	231.49	11.69	213.1	Oph
29 Jul 2018	17h25m06.36s	-22 34' 24.1"	2.1692	1.3182	6.3	136.3	18.9	-0.49	232.26	11.02	207.9	Oph
30 Jul 2018	17h24m59.17s	-22 38' 26.5"	2.1696	1.3266	6.3	135.4	19.2	-1.05	233.02	10.46	202.1	Oph
31 Jul 2018	17h24m54.06s	-22 42' 27.7"	2.1701	1.3351	6.3	134.4	19.5	-1.60	233.77	10.02	195.7	Oph
1 Aug 2018	17h24m51.04s	-22 46' 27.8"	2.1705	1.3437	6.3	133.4	19.9	-2.16	234.51	9.71	188.8	Oph
2 Aug 2018	17h24m50.10s	-22 50' 26.7"	2.1710	1.3525	6.3	132.5	20.2	-2.71	235.24	9.55	181.6	Oph
3 Aug 2018	17h24m51.23s	-22 54' 24.3"	2.1714	1.3614	6.4	131.5	20.5	-3.26	235.95	9.54	174.3	Oph
4 Aug 2018	17h24m54.44s	-22 58' 20.7"	2.1719	1.3705	6.4	130.6	20.8	-3.82	236.66	9.68	167.1	Oph
5 Aug 2018	17h24m59.71s	-23 02' 15.8"	2.1724	1.3797	6.4	129.7	21.1	-4.37	237.36	9.96	160.3	Oph
6 Aug 2018	17h25m07.04s	-23 06' 09.6"	2.1729	1.3890	6.4	128.7	21.4	-4.92	238.05	10.38	154.0	Oph
7 Aug 2018	17h25m16.43s	-23 10' 02.0"	2.1733	1.3984	6.5	127.8	21.6	-5.47	238.73	10.91	148.2	Oph
8 Aug 2018	17h25m27.86s	-23 13' 53.0"	2.1738	1.4080	6.5	126.9	21.9	-6.02	239.40	11.53	143.0	Oph
9 Aug 2018	17h25m41.32s	-23 17' 42.6"	2.1743	1.4177	6.5	126.0	22.2	-6.57	240.06	12.23	138.4	Oph
10 Aug 2018	17h25m56.82s	-23 21' 30.8"	2.1748	1.4275	6.5	125.1	22.4	-7.11	240.72	12.99	134.4	Oph
11 Aug 2018	17h26m14.33s	-23 25' 17.4"	2.1753	1.4374	6.5	124.2	22.7	-7.65	241.36	13.81	130.8	Oph
12 Aug 2018	17h26m33.85s	-23 29' 02.5"	2.1758	1.4474	6.6	123.3	22.9	-8.20	242.00	14.67	127.7	Oph
13 Aug 2018	17h26m55.35s	-23 32' 46.0"	2.1763	1.4576	6.6	122.5	23.1	-8.73	242.63	15.55	124.9	Oph
14 Aug 2018	17h27m18.83s	-23 36' 27.8"	2.1768	1.4678	6.6	121.6	23.4	-9.27	243.25	16.46	122.4	Oph
15 Aug 2018	17h27m44.26s	-23 40' 08.0"	2.1774	1.4781	6.6	120.7	23.6	-9.80	243.87	17.38	120.3	Oph
16 Aug 2018	17h28m11.62s	-23 43' 46.5"	2.1779	1.4886	6.7	119.9	23.8	-10.34	244.48	18.31	118.3	Oph
17 Aug 2018	17h28m40.89s	-23 47' 23.2"	2.1784	1.4991	6.7	119.0	24.0	-10.87	245.08	19.24	116.6	Oph
18 Aug 2018	17h29m12.05s	-23 50' 58.0"	2.1790	1.5097	6.7	118.2	24.2	-11.39	245.67	20.18	115.0	Oph
19 Aug 2018	17h29m45.07s	-23 54' 30.9"	2.1795	1.5204	6.7	117.4	24.4	-11.92	246.26	21.12	113.6	Oph
20 Aug 2018	17h30m19.93s	-23 58' 01.9"	2.1800	1.5312	6.7	116.5	24.5	-12.44	246.84	22.05	112.3	Oph
21 Aug 2018	17h30m56.61s	-24 01' 30.7"	2.1806	1.5420	6.8	115.7	24.7	-12.96	247.41	22.98	111.1	Oph
22 Aug 2018	17h31m35.07s	-24 04' 57.5"	2.1811	1.5530	6.8	114.9	24.9	-13.47	247.98	23.90	110.1	Oph
23 Aug 2018	17h32m15.29s	-24 08' 22.1"	2.1817	1.5640	6.8	114.1	25.0	-13.98	248.54	24.81	109.1	Oph
24 Aug 2018	17h32m57.26s	-24 11' 44.4"	2.1823	1.5751	6.8	113.3	25.2	-14.49	249.10	25.72	108.2	Oph
25 Aug 2018	17h33m40.93s	-24 15' 04.4"	2.1828	1.5862	6.8	112.5	25.3	-15.00	249.65	26.61	107.3	Oph
26 Aug 2018	17h34m26.30s	-24 18' 21.9"	2.1834	1.5975	6.9	111.7	25.5	-15.50	250.19	27.50	106.5	Oph
27 Aug 2018	17h35m13.33s	-24 21' 37.0"	2.1840	1.6088	6.9	110.9	25.6	-16.00	250.73	28.37	105.8	Oph
28 Aug 2018	17h36m02.00s	-24 24' 49.5"	2.1846	1.6201	6.9	110.1	25.7	-16.50	251.27	29.24	105.1	Oph
29 Aug 2018	17h36m52.29s	-24 27' 59.4"	2.1851	1.6315	6.9	109.4	25.9	-16.99	251.80	30.09	104.4	Oph
30 Aug 2018	17h37m44.17s	-24 31' 06.5"	2.1857	1.6430	6.9	108.6	26.0	-17.48	252.32	30.94	103.8	Oph
31 Aug 2018	17h38m37.62s	-24 34' 10.9"	2.1863	1.6546	6.9	107.8	26.1	-17.97	252.84	31.77	103.2	Oph
1 Sep 2018	17h39m32.62s	-24 37' 12.4"	2.1869	1.6662	7.0	107.1	26.2	-18.46	253.36	32.59	102.7	Oph