





## Ephemeride des Kleinplaneten (5) Astraea

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
1 Dez 2019	08h26m37.46s	+14 03' 13.6"	2.1541	1.4568	10.4	122.5	22.7	38.64	121.25	13.82	103.0	Cnc
2 Dez 2019	08h27m00.11s	+14 01' 59.9"	2.1528	1.4459	10.4	123.4	22.5	39.09	122.20	12.65	102.5	Cnc
3 Dez 2019	08h27m20.93s	+14 00' 54.8"	2.1516	1.4352	10.4	124.4	22.2	39.54	123.17	11.48	102.0	Cnc
4 Dez 2019	08h27m39.90s	+13 59' 58.4"	2.1503	1.4246	10.3	125.3	22.0	39.99	124.15	10.29	101.4	Cnc
5 Dez 2019	08h27m57.02s	+13 59' 10.8"	2.1491	1.4141	10.3	126.2	21.7	40.44	125.15	9.09	100.5	Cnc
6 Dez 2019	08h28m12.26s	+13 58' 32.3"	2.1478	1.4037	10.3	127.2	21.4	40.89	126.17	7.89	99.3	Cnc
7 Dez 2019	08h28m25.61s	+13 58' 03.1"	2.1466	1.3934	10.3	128.1	21.2	41.35	127.20	6.68	97.7	Cnc
8 Dez 2019	08h28m37.06s	+13 57' 43.2"	2.1454	1.3833	10.2	129.1	20.9	41.80	128.26	5.47	95.3	Cnc
9 Dez 2019	08h28m46.60s	+13 57' 32.9"	2.1442	1.3733	10.2	130.1	20.6	42.25	129.34	4.27	91.4	Cnc
10 Dez 2019	08h28m54.21s	+13 57' 32.3"	2.1430	1.3634	10.2	131.1	20.3	42.70	130.43	3.10	84.4	Cnc
11 Dez 2019	08h28m59.88s	+13 57' 41.6"	2.1419	1.3537	10.2	132.0	20.0	43.15	131.55	2.02	69.3	Cnc
12 Dez 2019	08h29m03.60s	+13 58' 00.9"	2.1407	1.3441	10.1	133.0	19.6	43.60	132.69	1.32	31.3	Cnc
13 Dez 2019	08h29m05.36s	+13 58' 30.3"	2.1395	1.3347	10.1	134.0	19.3	44.05	133.85	1.64	341.5	Cnc
14 Dez 2019	08h29m05.15s	+13 59' 10.0"	2.1384	1.3254	10.1	135.1	19.0	44.49	135.04	2.63	318.8	Cnc
15 Dez 2019	08h29m02.96s	+14 00' 00.1"	2.1373	1.3163	10.1	136.1	18.6	44.93	136.25	3.81	309.3	Cnc
16 Dez 2019	08h28m58.79s	+14 01' 00.7"	2.1361	1.3073	10.0	137.1	18.3	45.37	137.48	5.05	304.4	Cnc
17 Dez 2019	08h28m52.62s	+14 02' 12.0"	2.1350	1.2985	10.0	138.1	17.9	45.80	138.74	6.32	301.4	Cnc
18 Dez 2019	08h28m44.45s	+14 03' 33.9"	2.1339	1.2899	10.0	139.2	17.5	46.23	140.02	7.60	299.4	Cnc
19 Dez 2019	08h28m34.28s	+14 05' 06.6"	2.1328	1.2814	9.9	140.3	17.2	46.66	141.33	8.89	298.1	Cnc
20 Dez 2019	08h28m22.11s	+14 06' 50.2"	2.1317	1.2731	9.9	141.3	16.8	47.08	142.67	10.18	297.1	Cnc
21 Dez 2019	08h28m07.95s	+14 08' 44.8"	2.1307	1.2650	9.9	142.4	16.4	47.49	144.03	11.47	296.3	Cnc
22 Dez 2019	08h27m51.80s	+14 10' 50.2"	2.1296	1.2570	9.9	143.5	16.0	47.90	145.42	12.76	295.7	Cnc
23 Dez 2019	08h27m33.68s	+14 13' 06.7"	2.1285	1.2493	9.8	144.6	15.5	48.30	146.84	14.04	295.3	Cnc
24 Dez 2019	08h27m13.60s	+14 15' 34.1"	2.1275	1.2417	9.8	145.7	15.1	48.69	148.29	15.31	294.9	Cnc
25 Dez 2019	08h26m51.58s	+14 18' 12.5"	2.1265	1.2343	9.8	146.8	14.7	49.08	149.77	16.57	294.6	Cnc
26 Dez 2019	08h26m27.64s	+14 21' 01.8"	2.1255	1.2271	9.7	147.9	14.2	49.45	151.28	17.81	294.4	Cnc
27 Dez 2019	08h26m01.82s	+14 24' 01.9"	2.1245	1.2201	9.7	149.0	13.8	49.81	152.82	19.03	294.2	Cnc
28 Dez 2019	08h25m34.14s	+14 27' 12.8"	2.1235	1.2134	9.7	150.1	13.3	50.17	154.39	20.23	294.0	Cnc
29 Dez 2019	08h25m04.64s	+14 30' 34.4"	2.1225	1.2068	9.6	151.3	12.9	50.51	155.98	21.41	293.9	Cnc
30 Dez 2019	08h24m33.36s	+14 34' 06.4"	2.1215	1.2005	9.6	152.4	12.4	50.84	157.61	22.56	293.8	Cnc
31 Dez 2019	08h24m00.33s	+14 37' 48.9"	2.1205	1.1943	9.6	153.6	11.9	51.15	159.27	23.69	293.7	Cnc
1 Jan 2020	08h23m25.61s	+14 41' 41.6"	2.1196	1.1884	9.6	154.7	11.4	51.45	160.96	24.79	293.6	Cnc
2 Jan 2020	08h22m49.23s	+14 45' 44.3"	2.1186	1.1827	9.5	155.9	10.9	51.74	162.67	25.85	293.6	Cnc
3 Jan 2020	08h22m11.26s	+14 49' 56.7"	2.1177	1.1773	9.5	157.0	10.4	52.01	164.41	26.88	293.6	Cnc
4 Jan 2020	08h21m31.74s	+14 54' 18.8"	2.1168	1.1720	9.5	158.2	9.9	52.26	166.18	27.87	293.5	Cnc
5 Jan 2020	08h20m50.73s	+14 58' 50.2"	2.1159	1.1670	9.4	159.4	9.4	52.49	167.97	28.83	293.5	Cnc
6 Jan 2020	08h20m08.28s	+15 03' 30.7"	2.1150	1.1622	9.4	160.6	8.9	52.71	169.79	29.74	293.5	Cnc
7 Jan 2020	08h19m24.47s	+15 08' 19.9"	2.1141	1.1577	9.4	161.8	8.4	52.90	171.64	30.62	293.5	Cnc
8 Jan 2020	08h18m39.35s	+15 13' 17.7"	2.1132	1.1534	9.3	163.0	7.8	53.08	173.50	31.45	293.5	Cnc
9 Jan 2020	08h17m53.00s	+15 18' 23.6"	2.1124	1.1493	9.3	164.1	7.3	53.24	175.38	32.24	293.6	Cnc
10 Jan 2020	08h17m05.47s	+15 23' 37.3"	2.1115	1.1455	9.3	165.3	6.8	53.37	177.29	32.98	293.6	Cnc
11 Jan 2020	08h16m16.84s	+15 28' 58.5"	2.1107	1.1419	9.2	166.5	6.2	53.48	179.21	33.67	293.6	Cnc
12 Jan 2020	08h15m27.19s	+15 34' 26.9"	2.1099	1.1386	9.2	167.7	5.7	53.57	181.14	34.32	293.7	Cnc
13 Jan 2020	08h14m36.59s	+15 40' 02.0"	2.1090	1.1355	9.2	168.9	5.2	53.64	183.09	34.92	293.7	Cnc
14 Jan 2020	08h13m45.11s	+15 45' 43.6"	2.1082	1.1327	9.1	170.0	4.6	53.68	185.04	35.46	293.8	Cnc
15 Jan 2020	08h12m52.83s	+15 51' 31.1"	2.1074	1.1301	9.1	171.2	4.1	53.70	187.00	35.95	293.8	Cnc
16 Jan 2020	08h11m59.85s	+15 57' 24.2"	2.1067	1.1278	9.1	172.3	3.6	53.69	188.97	36.39	293.9	Cnc
17 Jan 2020	08h11m06.24s	+16 03' 22.5"	2.1059	1.1257	9.0	173.4	3.1	53.66	190.94	36.77	294.0	Cnc
18 Jan 2020	08h10m12.11s	+16 09' 25.6"	2.1051	1.1239	9.0	174.4	2.6	53.61	192.91	37.09	294.1	Cnc
19 Jan 2020	08h09m17.53s	+16 15' 33.0"	2.1044	1.1223	9.0	175.3	2.2	53.53	194.87	37.35	294.2	Cnc
20 Jan 2020	08h08m22.62s	+16 21' 44.3"	2.1037	1.1210	8.9	175.9	1.9	53.43	196.83	37.54	294.3	Cnc
21 Jan 2020	08h07m27.46s	+16 27' 59.1"	2.1030	1.1200	8.9	176.3	1.7	53.30	198.78	37.67	294.4	Cnc
22 Jan 2020	08h06m32.17s	+16 34' 16.8"	2.1022	1.1192	8.9	176.3	1.7	53.15	200.72	37.74	294.5	Cnc
23 Jan 2020	08h05m36.84s	+16 40' 37.0"	2.1015	1.1187	8.9	175.9	1.9	52.98	202.65	37.74	294.7	Cnc
24 Jan 2020	08h04m41.57s	+16 46' 59.3"	2.1009	1.1184	9.0	175.1	2.3	52.78	204.56	37.68	294.8	Cnc
25 Jan 2020	08h03m46.48s	+16 53' 23.2"	2.1002	1.1184	9.0	174.2	2.7	52.56	206.45	37.55	295.0	Cnc
26 Jan 2020	08h02m51.66s	+16 59' 48.2"	2.0995	1.1187	9.0	173.2	3.2	52.32	208.32	37.36	295.2	Cnc
27 Jan 2020	08h01m57.22s	+17 06' 13.8"	2.0989	1.1192	9.1	172.1	3.7	52.06	210.17	37.10	295.4	Cnc
28 Jan 2020	08h01m03.26s	+17 12' 39.7"	2.0982	1.1200	9.1	171.0	4.2	51.77	212.00	36.78	295.6	Cnc
29 Jan 2020	08h00m09.88s	+17 19' 05.4"	2.0976	1.1210	9.1	169.8	4.8	51.47	213.80	36.40	295.9	Cnc
30 Jan 2020	07h59m17.18s	+17 25' 30.4"	2.0970	1.1223	9.1	168.7	5.3	51.15	215.57	35.96	296.1	Cnc
31 Jan 2020	07h58m25.25s	+17 31' 54.3"	2.0964	1.1238	9.2	167.5	5.8	50.81	217.32	35.46	296.4	Cnc
1 Feb 2020	07h57m34.20s	+17 38' 16.7"	2.0958	1.1256	9.2	166.3	6.4	50.45	219.04	34.91	296.7	Cnc
2 Feb 2020	07h56m44.10s	+17 44' 37.3"	2.0953	1.1276	9.2	165.1	6.9	50.07	220.73	34.30	297.0	Cnc
3 Feb 2020	07h55m55.05s	+17 50' 55.5"	2.0947	1.1299	9.3	163.9	7.5	49.68	222.38	33.64	297.4	Cnc
4 Feb 2020	07h55m07.13s	+17 57' 11.1"	2.0941	1.1324	9.3	162.7	8.0	49.27	224.01	32.94	297.8	Gem
5 Feb 2020	07h54m20.43s	+18 03' 23.7"	2.0936	1.1352	9.3	161.5	8.6	48.85	225.61	32.18	298.2	Gem
6 Feb 2020	07h53m35.01s	+18 09' 32.9"	2.0931	1.1381	9.3	160.3	9.1	48.42	227.17	31.38	298.7	Gem
7 Feb 2020	07h52m50.96s	+18 15' 38.5"	2.0926	1.1414	9.4	159.2	9.7	47.97	228.71	30.55	299.2	Gem
8 Feb 2020	07h52m08.35s	+18 21' 40.1"	2.0921	1.1448	9.4	158.0	10.2	47.52	230.21	29.67	299.7	Gem
9 Feb 2020	07h51m27.23s	+18 27' 37.4"	2.0916	1.1485	9.4	156.8	10.7	47.05	231.68	28.76	300.3	Gem
10 Feb 2020	07h50m47.67s	+18 33' 30.1"	2.0911	1.1524	9.5	155.6	11.2	46.57	233.12	27.82	301.0	Gem
11 Feb 2020	07h50m09.73s	+18 39' 18.0"	2.0907	1.1565	9.5	154.5	11.7	46.08	234.53	26.85	301.7	Gem
12 Feb 2020	07h49m33.46s	+18 45' 00.9"	2.0902	1.1609	9.5	153.3	12.2	45.59	235.91	25.85	302.5	Gem

## Ephemeride des Kleinplaneten (5) Astraea

Datum	RA	Deklination	r	delta	mag	Elong	Phase	Höhe	Az.	Gesch.	PA	Stb
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13 Feb 2020	07h48m58.93s	+18 50' 38.5"	2.0898	1.1654	9.5	152.2	12.7	45.09	237.26	24.82	303.4	Gem
14 Feb 2020	07h48m26.18s	+18 56' 10.6"	2.0894	1.1702	9.6	151.0	13.2	44.58	238.58	23.77	304.4	Gem
15 Feb 2020	07h47m55.25s	+19 01' 37.0"	2.0889	1.1752	9.6	149.9	13.7	44.06	239.87	22.71	305.5	Gem
16 Feb 2020	07h47m26.21s	+19 06' 57.4"	2.0885	1.1803	9.6	148.7	14.2	43.54	241.14	21.62	306.7	Gem
17 Feb 2020	07h46m59.09s	+19 12' 11.8"	2.0882	1.1857	9.6	147.6	14.7	43.02	242.37	20.53	308.1	Gem
18 Feb 2020	07h46m33.94s	+19 17' 19.9"	2.0878	1.1913	9.7	146.5	15.1	42.49	243.58	19.42	309.6	Gem
19 Feb 2020	07h46m10.80s	+19 22' 21.5"	2.0874	1.1971	9.7	145.4	15.6	41.96	244.76	18.31	311.4	Gem
20 Feb 2020	07h45m49.71s	+19 27' 16.6"	2.0871	1.2030	9.7	144.3	16.1	41.42	245.92	17.20	313.4	Gem
21 Feb 2020	07h45m30.87s	+19 32' 04.7"	2.0868	1.2092	9.7	143.2	16.5	40.88	247.05	16.11	315.8	Gem
22 Feb 2020	07h45m13.96s	+19 36' 46.1"	2.0864	1.2155	9.8	142.1	16.9	40.34	248.16	15.02	318.5	Gem
23 Feb 2020	07h44m59.17s	+19 41' 20.6"	2.0861	1.2220	9.8	141.0	17.3	39.80	249.24	13.97	321.6	Gem
24 Feb 2020	07h44m46.54s	+19 45' 48.0"	2.0858	1.2287	9.8	140.0	17.8	39.26	250.30	12.96	325.3	Gem
25 Feb 2020	07h44m36.07s	+19 50' 08.2"	2.0855	1.2356	9.8	138.9	18.2	38.72	251.33	12.00	329.6	Gem
26 Feb 2020	07h44m27.80s	+19 54' 21.0"	2.0853	1.2426	9.9	137.9	18.6	38.18	252.35	11.11	334.7	Gem
27 Feb 2020	07h44m21.72s	+19 58' 26.6"	2.0850	1.2498	9.9	136.8	19.0	37.63	253.34	10.32	340.5	Gem
28 Feb 2020	07h44m17.85s	+20 02' 24.6"	2.0848	1.2571	9.9	135.8	19.3	37.09	254.31	9.65	347.3	Gem
29 Feb 2020	07h44m16.18s	+20 06' 15.1"	2.0845	1.2646	9.9	134.8	19.7	36.55	255.27	9.13	354.9	Gem
1 Mar 2020	07h44m16.73s	+20 09' 58.1"	2.0843	1.2723	10.0	133.8	20.1	36.01	256.20	8.79	3.3	Gem
2 Mar 2020	07h44m19.48s	+20 13' 33.5"	2.0841	1.2801	10.0	132.8	20.4	35.47	257.11	8.65	12.2	Gem
3 Mar 2020	07h44m24.43s	+20 17' 01.1"	2.0839	1.2880	10.0	131.8	20.8	34.94	258.01	8.72	21.0	Gem
4 Mar 2020	07h44m31.57s	+20 20' 21.1"	2.0838	1.2961	10.0	130.8	21.1	34.40	258.88	8.98	29.5	Gem
5 Mar 2020	07h44m40.90s	+20 23' 33.3"	2.0836	1.3043	10.1	129.8	21.4	33.87	259.75	9.42	37.4	Gem
6 Mar 2020	07h44m52.39s	+20 26' 37.8"	2.0834	1.3126	10.1	128.8	21.8	33.34	260.59	10.02	44.3	Gem
7 Mar 2020	07h45m06.03s	+20 29' 34.5"	2.0833	1.3211	10.1	127.9	22.1	32.81	261.42	10.73	50.4	Gem
8 Mar 2020	07h45m21.80s	+20 32' 23.3"	2.0832	1.3296	10.1	126.9	22.4	32.29	262.23	11.54	55.6	Gem
9 Mar 2020	07h45m39.69s	+20 35' 04.4"	2.0831	1.3383	10.2	126.0	22.7	31.76	263.02	12.43	60.1	Gem
10 Mar 2020	07h45m59.67s	+20 37' 37.6"	2.0830	1.3471	10.2	125.1	23.0	31.24	263.81	13.36	64.0	Gem
11 Mar 2020	07h46m21.71s	+20 40' 03.0"	2.0829	1.3561	10.2	124.2	23.2	30.72	264.57	14.34	67.3	Gem
12 Mar 2020	07h46m45.81s	+20 42' 20.6"	2.0828	1.3651	10.2	123.2	23.5	30.21	265.33	15.34	70.2	Gem
13 Mar 2020	07h47m11.93s	+20 44' 30.4"	2.0827	1.3743	10.3	122.3	23.8	29.70	266.07	16.37	72.6	Gem
14 Mar 2020	07h47m40.06s	+20 46' 32.3"	2.0827	1.3835	10.3	121.4	24.0	29.19	266.80	17.41	74.8	Gem
15 Mar 2020	07h48m10.18s	+20 48' 26.3"	2.0827	1.3928	10.3	120.6	24.3	28.68	267.51	18.46	76.8	Gem