

Полутеневое лунное затмение 17 августа 2027 года

Penumbral Lunar Eclipse of 2027 Aug 17

Geocentric Conjunction = 08:24:16.1 UT J.D. = 2461634.85019
Greatest Eclipse = 07:13:34.0 UT J.D. = 2461634.80109
Penumbral Magnitude = 0.5714 P. Radius = 1.1897° Gamma = 1.2799
Umbral Magnitude = -0.5211 U. Radius = 0.6526° Axis = 1.1546°

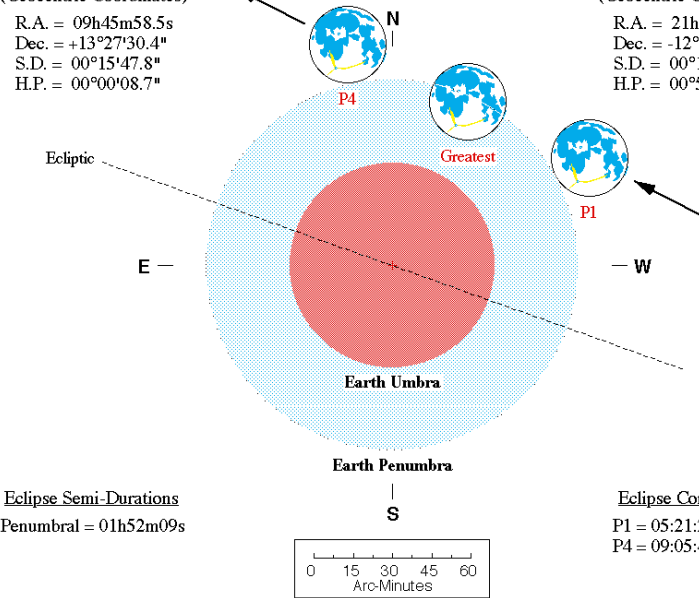
Saros Series = 148 Member = 4 of 71

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 09h45m58.5s
Dec. = +13°27'30.4"
S.D. = 00°15'47.8"
H.P. = 00°00'08.7"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 21h43m58.7s
Dec. = -12°24'40.5"
S.D. = 00°14'44.9"
H.P. = 00°54'07.7"

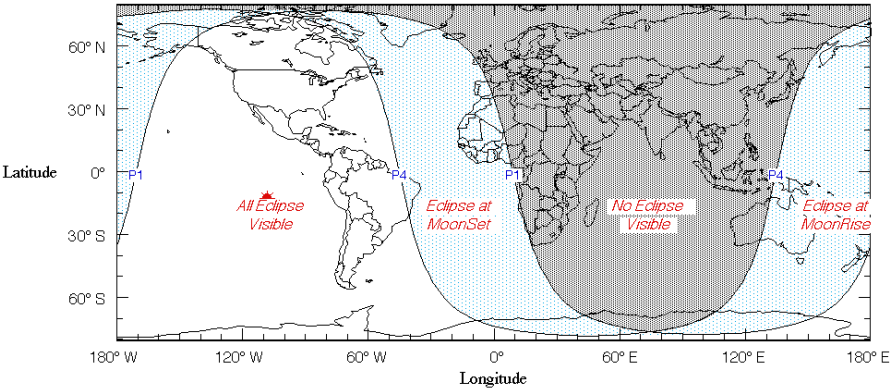


Eclipse Semi-Durations
Penumbral = 01h52m09s

Eclipse Contacts
P1 = 05:21:27 UT
P4 = 09:05:45 UT

Eph. = Newcomb/ILE
ΔT = 84.9 s

F. Espenak, NASA's GSFC - 2004 Jul 07
<http://sunearth.gsfc.nasa.gov/eclipse/eclipse.html>



ЗАТМЕНИЯ

Кольцеобразное солнечное затмение 06 февраля 2027 года

Annular Solar Eclipse of 2027 Feb 06

Geocentric Conjunction = 15:44:15.0 UT J.D. = 2461443.155730
Greatest Eclipse = 15:59:24.2 UT J.D. = 2461443.166253

Eclipse Magnitude = 0.9281 Gamma = -0.2950

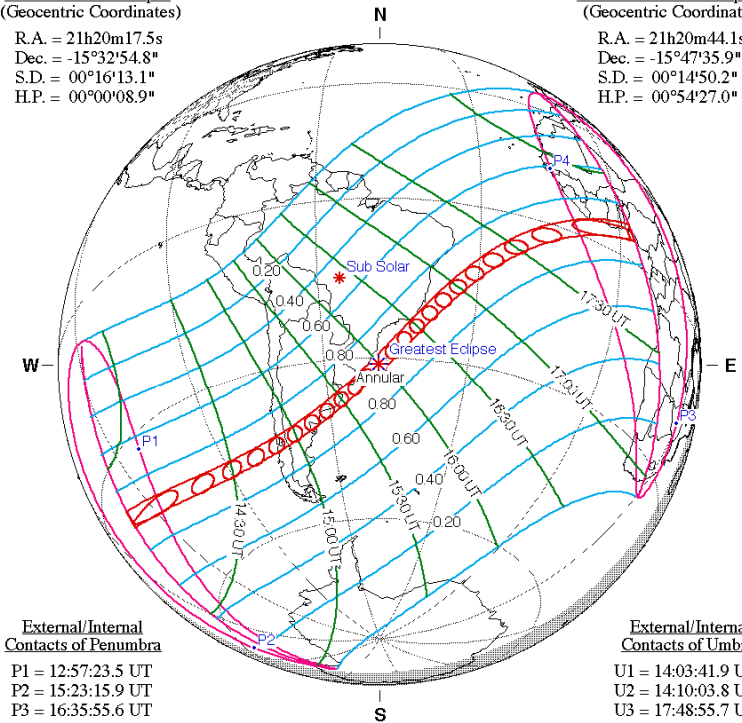
Saros Series = 131 Member = 52 of 71

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 21h20m17.5s
Dec. = -15°32'54.8"
S.D. = 00°16'13.1"
H.P. = 00°00'08.9"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 21h20m44.1s
Dec. = -15°47'35.9"
S.D. = 00°14'50.2"
H.P. = 00°54'27.0"



External/Internal
Contacts of Penumbra

P1 = 12:57:23.5 UT
P2 = 15:23:15.9 UT
P3 = 16:35:55.6 UT
P4 = 19:01:26.9 UT

External/Internal
Contacts of Umbra

U1 = 14:03:41.9 UT
U2 = 14:10:03.8 UT
U3 = 17:48:55.7 UT
U4 = 17:55:13.4 UT

Local Circumstances at Greatest Eclipse

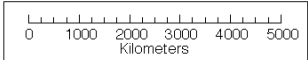
Lat. = 31°17.8'S Sun Alt. = 72.7°
Long. = 048°25.3'W Sun Azm. = 333.5°
Path Width = 281.6 km Duration = 07m51.0s

Ephemeris & Constants

Eph. = Newcomb/ILE
ΔT = 84.3 s
k1 = 0.2724880
k2 = 0.2722810
Δb = 0.0" Δl = 0.0"

Geocentric Libration
(Optical + Physical)

l = -2.83°
b = 0.38°
c = -16.24°
Brown Lun. No. = 1288



F. Espenak, NASA's GSFC - Fri, Jul 2,
sunearth.gsfc.nasa.gov/eclipse/eclipse.html

Полутеневое лунное затмение 20 февраля 2027 года

Penumbral Lunar Eclipse of 2027 Feb 20

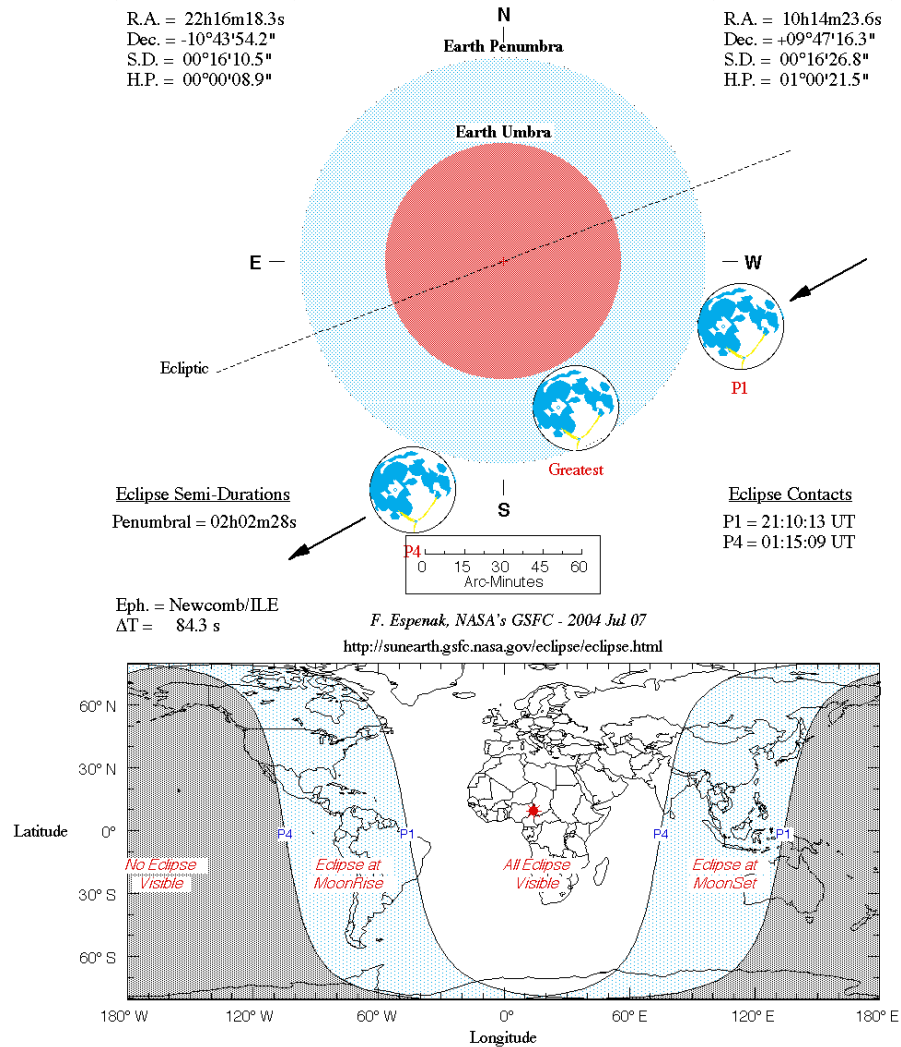
Geocentric Conjunction = 00:07:44.3 UT J.D. = 2461457.50537
Greatest Eclipse = 23:12:43.2 UT J.D. = 2461457.46717
Penumbral Magnitude = 0.9516 P. Radius = 1.3019° Gamma = -1.0482
Umbral Magnitude = -0.0516 U. Radius = 0.7519° Axis = 1.0543°
Saros Series = 143 Member = 19 of 73

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 22h16m18.3s
Dec. = -10°43'54.2"
S.D. = 00°16'10.5"
H.P. = 00°00'08.9"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 10h14m23.6s
Dec. = +09°47'16.3"
S.D. = 00°16'26.8"
H.P. = 01°00'21.5"



Полное солнечное затмение 02 августа 2027 года

Total Solar Eclipse of 2027 Aug 02

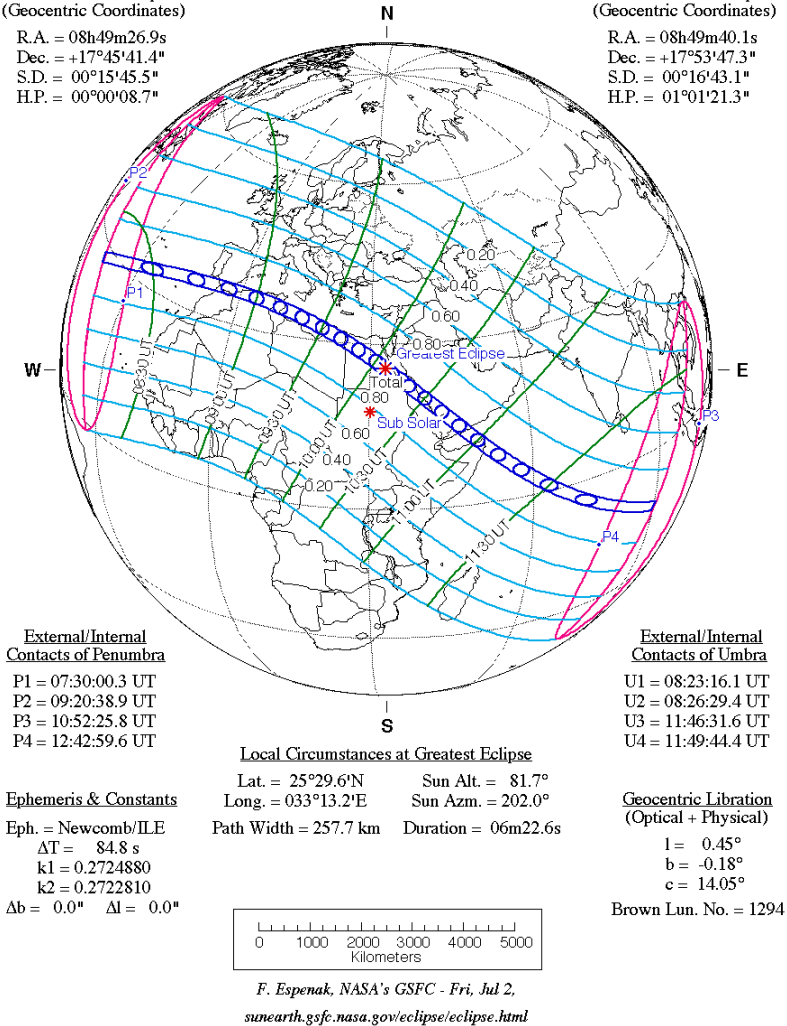
Geocentric Conjunction = 10:00:49.5 UT J.D. = 2461619.917240
Greatest Eclipse = 10:06:28.6 UT J.D. = 2461619.921164
Eclipse Magnitude = 1.0790 Gamma = 0.1419
Saros Series = 136 Member = 38 of 71

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 08h49m26.9s
Dec. = +17°45'41.4"
S.D. = 00°15'45.5"
H.P. = 00°00'08.7"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 08h49m40.1s
Dec. = +17°53'47.3"
S.D. = 00°16'43.1"
H.P. = 01°01'21.3"



Комета P/Encke (2P)

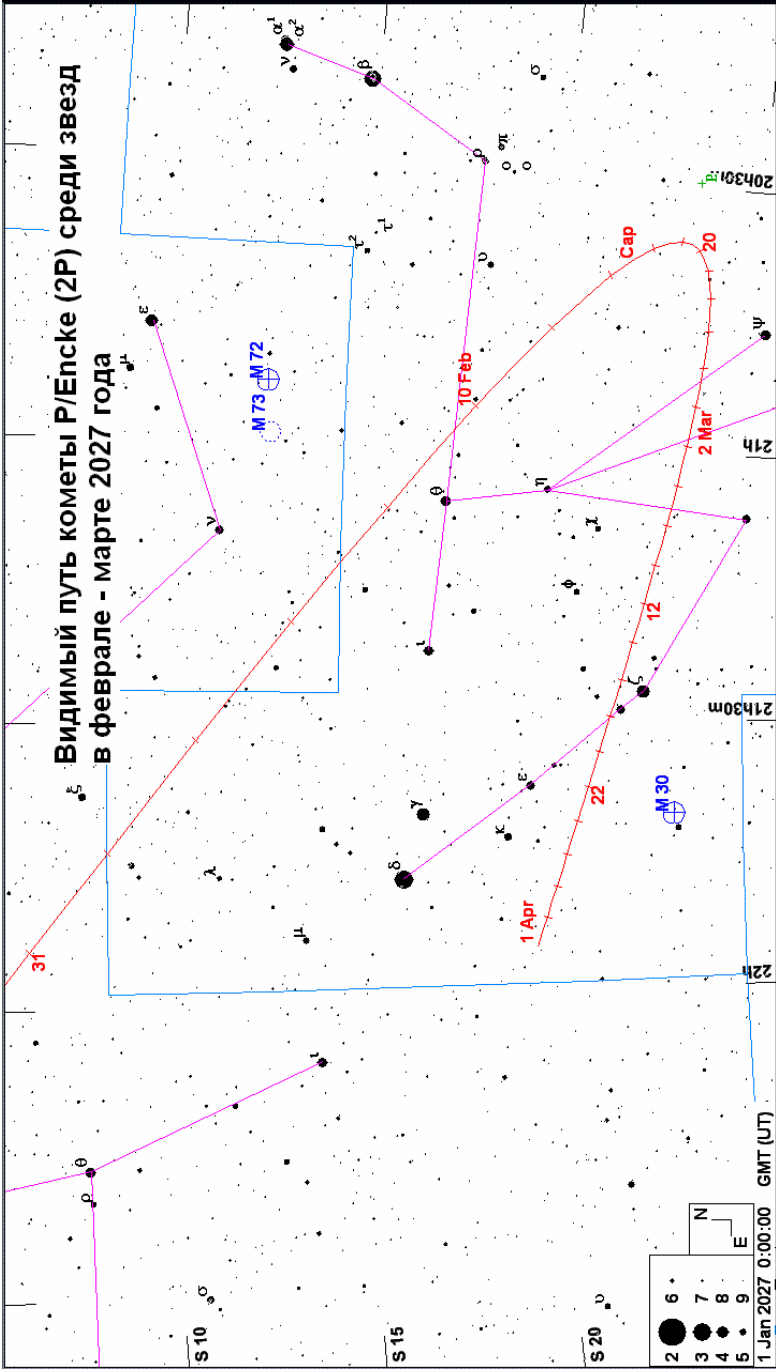
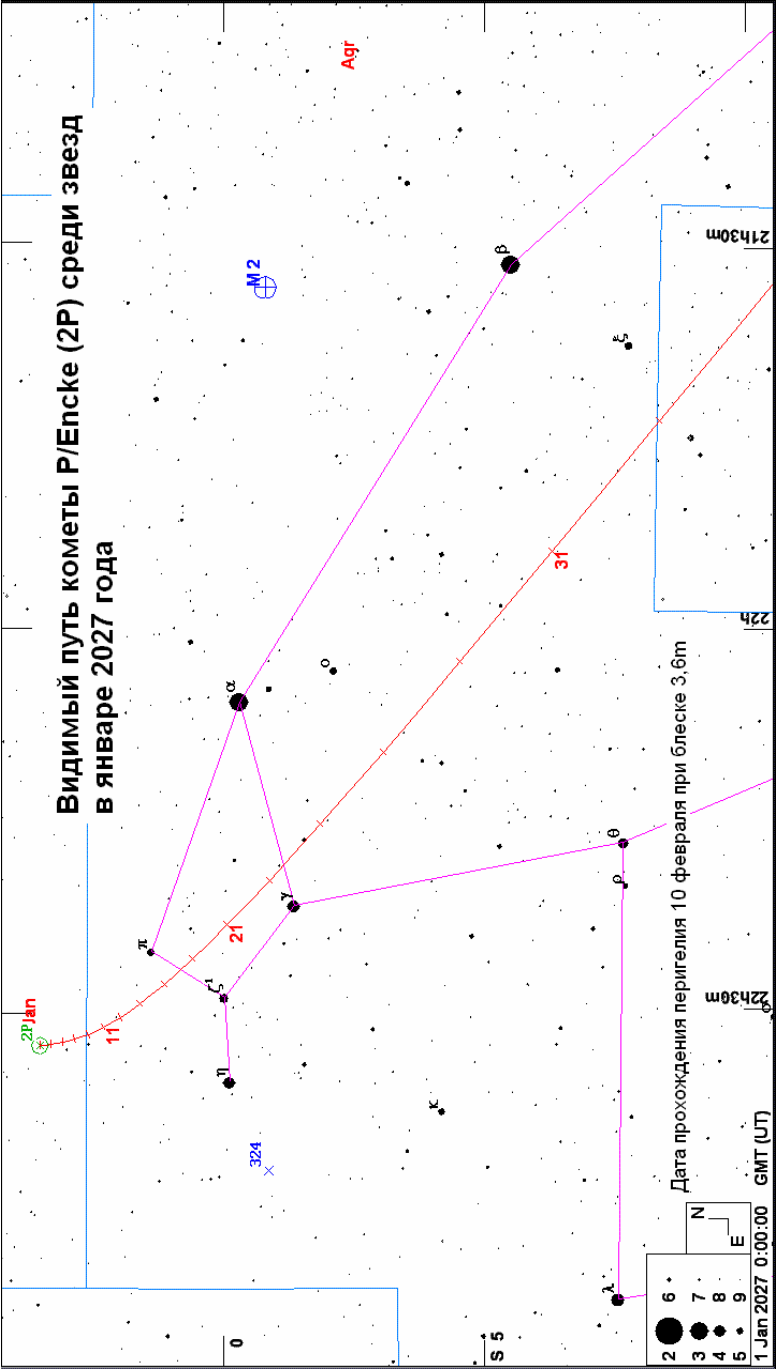
Дата	α(2000.0)	δ(2000.0)	r	Δ	m	elon.	V	PA	con.
1 Jan 2027	22h32m30.27s	N 3 31.022'	0.965	0.888	11.0	61.8	15.37	184.2	Peg
2 Jan 2027	22h32m26.84s	N 3 24.871'	0.948	0.883	10.9	60.8	15.65	184.8	Peg
3 Jan 2027	22h32m22.97s	N 3 18.592'	0.931	0.878	10.8	59.7	16.04	185.9	Peg
4 Jan 2027	22h32m18.42s	N 3 12.150'	0.914	0.873	10.6	58.7	16.56	187.3	Peg
5 Jan 2027	22h32m12.96s	N 3 05.502'	0.897	0.867	10.5	57.6	17.21	189.2	Peg
6 Jan 2027	22h32m06.30s	N 2 58.604'	0.880	0.861	10.3	56.5	18.03	191.4	Peg
7 Jan 2027	22h31m58.15s	N 2 51.406'	0.863	0.854	10.2	55.4	19.04	193.9	Peg
8 Jan 2027	22h31m48.19s	N 2 43.853'	0.845	0.848	10.0	54.4	20.29	196.6	Peg
9 Jan 2027	22h31m36.05s	N 2 35.885'	0.828	0.841	9.9	53.3	21.81	199.4	Aqr
10 Jan 2027	22h31m21.35s	N 2 27.435'	0.810	0.833	9.7	52.1	23.63	202.3	Aqr
11 Jan 2027	22h31m03.65s	N 2 18.427'	0.792	0.826	9.6	51.0	25.80	205.1	Aqr
12 Jan 2027	22h30m42.48s	N 2 08.779'	0.774	0.818	9.4	49.9	28.36	207.8	Aqr
13 Jan 2027	22h30m17.31s	N 1 58.398'	0.756	0.809	9.2	48.7	31.36	210.5	Aqr
14 Jan 2027	22h29m47.56s	N 1 47.181'	0.738	0.801	9.0	47.5	34.85	212.9	Aqr
15 Jan 2027	22h29m12.59s	N 1 35.015'	0.720	0.792	8.9	46.3	38.88	215.1	Aqr
16 Jan 2027	22h28m31.69s	N 1 21.770'	0.702	0.783	8.7	45.0	43.51	217.2	Aqr
17 Jan 2027	22h27m44.07s	N 1 07.305'	0.683	0.774	8.5	43.8	48.81	219.0	Aqr
18 Jan 2027	22h26m48.86s	N 0 51.462'	0.665	0.764	8.3	42.4	54.83	220.7	Aqr
19 Jan 2027	22h25m45.11s	N 0 34.065'	0.647	0.754	8.0	41.1	61.65	222.2	Aqr
20 Jan 2027	22h24m31.76s	N 0 14.919'	0.628	0.744	7.8	39.7	69.36	223.5	Aqr
21 Jan 2027	22h23m07.65s	S 0 06.190'	0.610	0.734	7.6	38.2	78.02	224.6	Aqr
22 Jan 2027	22h21m31.51s	S 0 29.497'	0.591	0.723	7.4	36.7	87.73	225.6	Aqr
23 Jan 2027	22h19m41.98s	S 0 55.261'	0.573	0.713	7.1	35.1	98.56	226.5	Aqr
24 Jan 2027	22h17m37.57s	S 1 23.756'	0.555	0.702	6.9	33.4	110.60	227.3	Aqr
25 Jan 2027	22h15m16.71s	S 1 55.278'	0.537	0.692	6.6	31.6	123.89	227.9	Aqr
26 Jan 2027	22h12m37.77s	S 2 30.130'	0.519	0.682	6.4	29.8	138.46	228.5	Aqr
27 Jan 2027	22h09m39.08s	S 3 08.623'	0.501	0.672	6.1	27.8	154.31	229.0	Aqr
28 Jan 2027	22h06m19.02s	S 3 51.053'	0.483	0.662	5.9	25.8	171.34	229.4	Aqr
29 Jan 2027	22h02m36.10s	S 4 37.687'	0.466	0.653	5.6	23.6	189.39	229.8	Aqr
30 Jan 2027	21h58m29.11s	S 5 28.734'	0.450	0.645	5.3	21.3	208.14	230.1	Aqr
31 Jan 2027	21h53m57.26s	S 6 24.308'	0.434	0.638	5.1	18.9	227.12	230.4	Aqr
1 Feb 2027	21h49m00.44s	S 7 24.387'	0.418	0.632	4.8	16.3	245.67	230.6	Aqr
2 Feb 2027	21h43m39.48s	S 8 28.767'	0.404	0.628	4.6	13.7	262.94	230.8	Cap
3 Feb 2027	21h37m56.38s	S 9 37.012'	0.390	0.625	4.4	10.9	277.86	230.9	Cap
4 Feb 2027	21h31m54.61s	S10 48.421'	0.378	0.624	4.1	8.1	289.26	231.0	Cap
5 Feb 2027	21h25m39.26s	S12 02.021'	0.367	0.626	4.0	5.3	295.92	231.1	Aqr
6 Feb 2027	21h19m17.05s	S13 16.584'	0.358	0.630	3.8	2.7	296.82	231.1	Aqr
7 Feb 2027	21h12m56.06s	S14 30.704'	0.350	0.637	3.7	2.0	291.24	230.9	Cap
8 Feb 2027	21h06m45.32s	S15 42.899'	0.344	0.647	3.6	4.2	279.01	230.7	Cap
9 Feb 2027	21h00m54.04s	S16 51.751'	0.340	0.660	3.6	6.8	260.58	230.2	Cap
10 Feb 2027	20h55m30.76s	S17 56.034'	0.339	0.675	3.6	9.4	236.96	229.5	Cap
11 Feb 2027	20h50m42.58s	S18 54.819'	0.339	0.693	3.7	11.8	209.64	228.3	Cap
12 Feb 2027	20h46m34.55s	S19 47.526'	0.342	0.713	3.8	14.0	180.32	226.7	Cap
13 Feb 2027	20h43m09.42s	S20 33.920'	0.347	0.735	3.9	16.1	150.67	224.2	Cap
14 Feb 2027	20h40m27.73s	S21 14.066'	0.354	0.758	4.1	17.9	122.19	220.7	Cap
15 Feb 2027	20h38m28.10s	S21 48.257'	0.362	0.783	4.4	19.6	96.11	215.4	Cap
16 Feb 2027	20h37m07.79s	S22 16.935'	0.373	0.808	4.6	21.0	73.48	207.4	Cap
17 Feb 2027	20h36m23.17s	S22 40.622'	0.384	0.834	4.9	22.4	55.37	195.1	Cap
18 Feb 2027	20h36m10.17s	S22 59.866'	0.397	0.859	5.2	23.5	43.13	176.7	Cap
19 Feb 2027	20h36m24.66s	S23 15.202'	0.411	0.885	5.4	24.6	37.99	153.4	Cap
20 Feb 2027	20h37m02.65s	S23 27.131'	0.426	0.911	5.7	25.5	39.21	131.7	Cap
21 Feb 2027	20h38m00.49s	S23 36.107'	0.442	0.936	6.0	26.4	43.99	115.9	Cap
22 Feb 2027	20h39m14.90s	S23 42.531'	0.458	0.961	6.3	27.1	49.90	105.5	Cap
23 Feb 2027	20h40m43.01s	S23 46.757'	0.475	0.985	6.6	27.9	55.69	98.5	Cap
24 Feb 2027	20h42m22.31s	S23 49.089'	0.492	1.009	6.9	28.5	60.89	93.6	Cap
25 Feb 2027	20h44m10.69s	S23 49.792'	0.510	1.032	7.2	29.1	65.36	90.1	Cap
26 Feb 2027	20h46m06.35s	S23 49.091'	0.528	1.055	7.5	29.7	69.09	87.4	Cap
27 Feb 2027	20h48m07.76s	S23 47.182'	0.546	1.077	7.7	30.3	72.14	85.3	Cap
28 Feb 2027	20h50m13.64s	S23 44.232'	0.564	1.098	8.0	30.8	74.59	83.6	Cap
1 Mar 2027	20h52m22.92s	S23 40.383'	0.583	1.119	8.2	31.3	76.51	82.2	Cap
2 Mar 2027	20h54m34.70s	S23 35.759'	0.601	1.139	8.5	31.8	77.98	81.0	Cap
3 Mar 2027	20h56m48.25s	S23 30.467'	0.619	1.159	8.7	32.3	79.06	80.0	Cap

КОМЕТЫ

Среди комет доступными для малых и средних телескопов будут небесные страницы: P/Encke (2P), A/2025 Y1 и P/Honda-Mrkos-Pajdusakova (45P)„ ожидаемый блеск которых составит около 10m и ярче Следует отметить, что **приведенный список может значительно меняться**, ввиду открытия новых комет и увеличения блеска ожидаемых, а также потерь известных комет. В таблице приведен список некоторых комет, проходящих перигелий в 2027 году (с перигелийным расстоянием около 2 а.е. и меньше). Оперативно - на <http://aerith.net>
Все эфемериды - Guide 8.0.

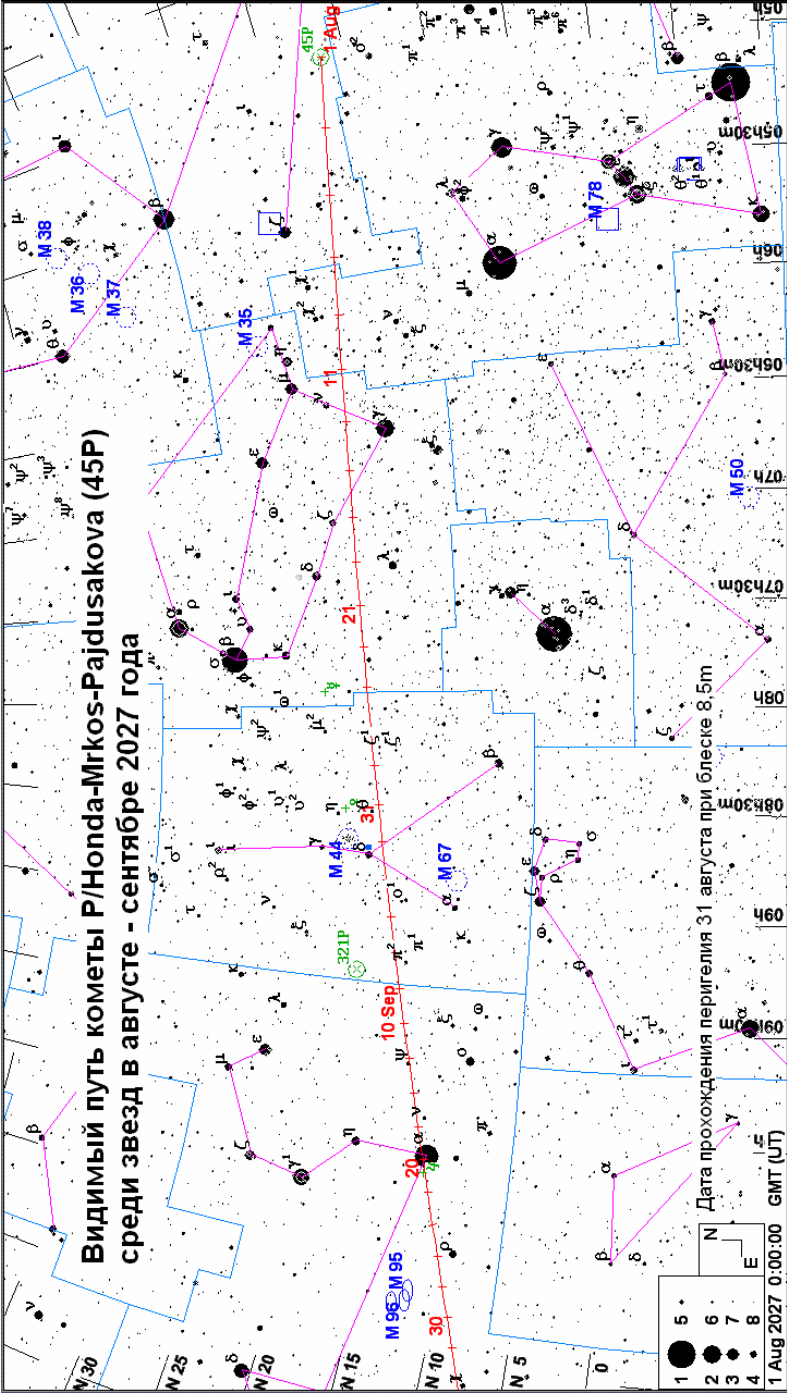
Некоторые кометы, проходящие перигелий в 2027 году.

№	Комета	день	мес	периг. (а.е.)	эксцентр.	абс. m
1	P/Encke (2P)	10.2352	2	0.338800	0.847248	11.5
2	PANSTARRS (P/2013 W1)	15.9241	3	1.414716	0.593927	17.5
3	P/Garradd (296P)	20.4161	3	1.776625	0.487022	14.0
4	P/PANSTARRS (311P)	29.8074	3	1.936330	0.115377	17.0
5	P/NEAT (312P)	15.5205	3	1.991773	0.426524	16.0
6	P/Russell-LINEAR (156P)	30.6066	4	1.334118	0.614712	15.5
7	P/LINEAR (160P)	7.2313	4	1.796239	0.524881	15.5
8	P/LINEAR (354P)	2.4954	4	2.005128	0.124462	15.5
9	P/LINEAR-Skiff (371P)	26.1142	4	2.188986	0.476386	16.0
10	PANSTARRS (P/2017 S8)	4.5679	5	1.691605	0.391147	16.0
11	P/NEOWISE (417P)	20.8888	5	1.570087	0.536235	16.5
12	P/Scotti (430P)	22.3978	5	1.549771	0.500488	16.5
13	P/WISE (461P)	3.1294	5	1.354193	0.569394	18.5
14	P/Hug-Bell (178P)	21.5376	6	1.881248	0.482128	13.5
15	P/LONEOS (182P)	5.3635	6	0.990404	0.664068	18.0
16	P/Gibbs (406P)	24.9987	6	1.643959	0.540815	17.0
17	P/Sanguin (92P)	15.4752	7	1.818024	0.659919	12.0
18	P/LONEOS (201P)	20.3079	7	1.216310	0.637404	14.0
19	ATLAS (P/2021 Q5)	14.5919	8	1.234238	0.624193	15.0
20	P/Pons-Winnecke (7P)	25.1368	8	1.136658	0.660221	10.0
21	P/Honda-Mrkos-Pajdusakova (45P)	31.7181	8	0.557924	0.817487	13.5
22	P/SOHO (322P)	11.5710	8	0.050569	0.979843	19.0
23	P/NEAT (189P)	12.4292	9	1.198644	0.591903	19.0
24	P/Barnard-Boattini (206P)	14.3070	9	1.570483	0.550373	19.0
25	P/Levy (255P)	25.1008	9	0.847176	0.712025	20.0
26	P/McNaught (278P)	15.3122	9	1.971238	0.454767	14.0
27	P/Catalina (300P)	13.6762	9	0.828704	0.692580	16.0
28	P/LINEAR-Catalina (329P)	25.7690	9	1.663915	0.678794	13.5
29	P/PANSTARRS (348P)	19.2676	9	2.182112	0.307514	14.0
30	P/Leonard (449P)	25.2804	9	1.872948	0.479667	16.0
31	Boattini (P/2011 Y2)	2.2803	10	1.798217	0.711147	15.0
32	A/2025 Y1	15.0163	10	2.608837	0.998395	6.0
33	P/Kowal (104P)	12.9405	10	1.072193	0.665826	16.0
34	P/Lemmon (405P)	29.5720	10	1.115876	0.690298	17.5
35	P/LINEAR (197P)	22.1610	11	1.115115	0.617052	16.5
36	P/Spacewatch (293P)	29.0666	11	2.110476	0.419673	14.5
37	P/PANSTARRS (400P)	3.2283	11	2.103423	0.409456	15.5
38	P/Gibbs (428P)	17.9474	11	1.681579	0.518079	15.0
39	P/Schwassmann-Wachmann (73P)	21.1332	12	0.903213	0.704310	11.5
40	P/Hill (369P)	19.1379	12	1.944677	0.555790	15.0



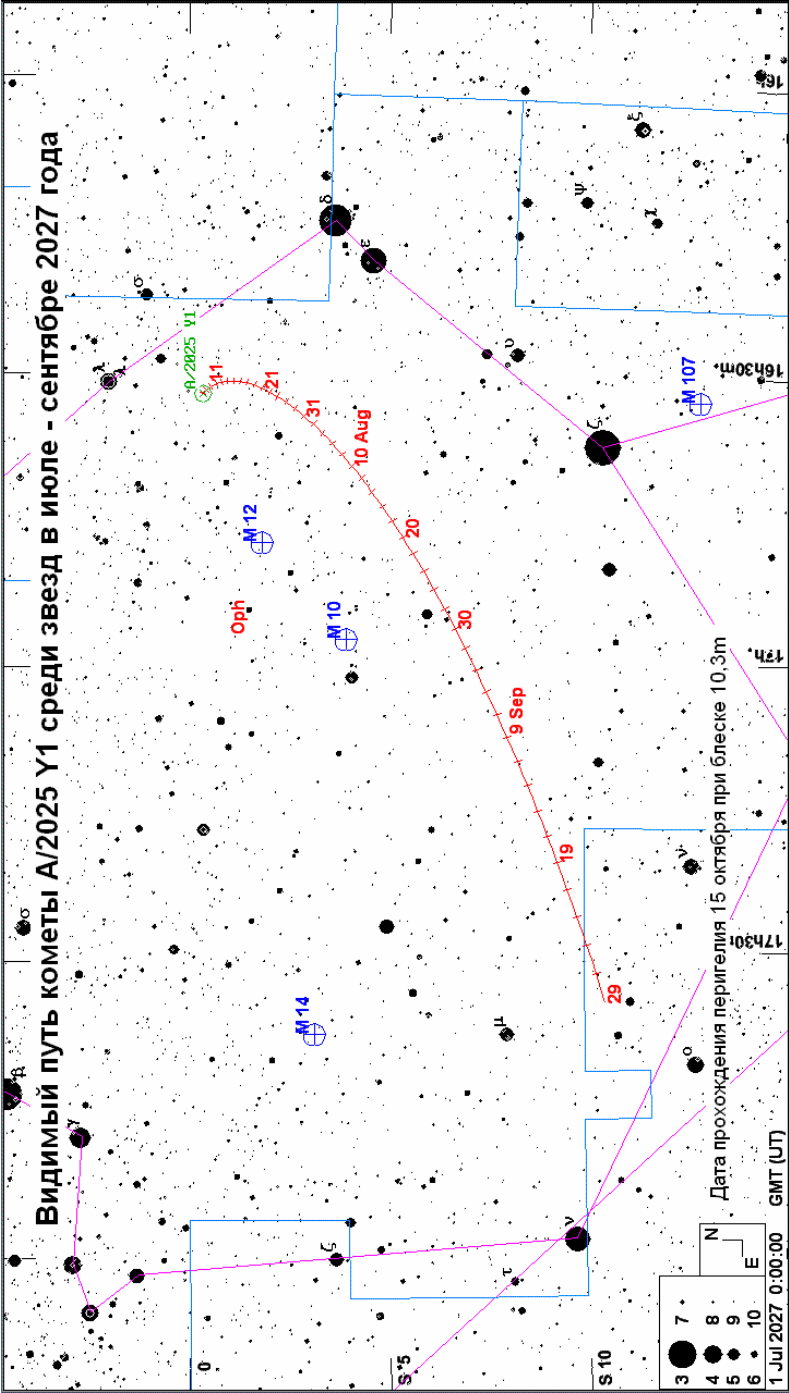
Комета A/2025 Y1

Дата	$\alpha(2000.0)$	$\delta(2000.0)$	r	Δ	m	elon.	V	PA	con.
1 Jul 2027	16h32m05.17s	S 0 24.379'	2.839	1.968	9.7	142.0	11.06	230.1	Oph
2 Jul 2027	16h31m52.87s	S 0 27.307'	2.835	1.970	9.7	141.2	10.91	226.2	Oph
3 Jul 2027	16h31m41.54s	S 0 30.414'	2.831	1.972	9.7	140.4	10.80	222.3	Oph
4 Jul 2027	16h31m31.20s	S 0 33.697'	2.827	1.974	9.7	139.6	10.72	218.1	Oph
5 Jul 2027	16h31m21.88s	S 0 37.156'	2.823	1.977	9.7	138.9	10.69	213.9	Oph
6 Jul 2027	16h31m13.61s	S 0 40.787'	2.819	1.980	9.7	138.1	10.69	209.7	Oph
7 Jul 2027	16h31m06.42s	S 0 44.588'	2.815	1.982	9.7	137.3	10.75	205.4	Oph
8 Jul 2027	16h31m00.33s	S 0 48.556'	2.811	1.985	9.7	136.5	10.85	201.1	Oph
9 Jul 2027	16h30m55.37s	S 0 52.687'	2.807	1.989	9.7	135.7	11.00	196.8	Oph
10 Jul 2027	16h30m51.55s	S 0 56.980'	2.803	1.992	9.7	134.9	11.20	192.6	Oph
11 Jul 2027	16h30m48.88s	S 1 01.430'	2.800	1.996	9.7	134.1	11.45	188.6	Oph
12 Jul 2027	16h30m47.40s	S 1 06.035'	2.796	1.999	9.7	133.3	11.74	184.7	Oph
13 Jul 2027	16h30m47.11s	S 1 10.791'	2.792	2.003	9.7	132.5	12.07	180.9	Oph
14 Jul 2027	16h30m48.03s	S 1 15.696'	2.788	2.007	9.7	131.7	12.45	177.4	Oph
15 Jul 2027	16h30m50.18s	S 1 20.745'	2.785	2.011	9.7	130.9	12.87	174.0	Oph
16 Jul 2027	16h30m53.55s	S 1 25.936'	2.781	2.016	9.7	130.1	13.32	170.8	Oph
17 Jul 2027	16h30m58.17s	S 1 31.266'	2.777	2.020	9.7	129.3	13.80	167.8	Oph
18 Jul 2027	16h31m04.05s	S 1 36.731'	2.774	2.025	9.7	128.5	14.31	164.9	Oph
19 Jul 2027	16h31m11.19s	S 1 42.328'	2.770	2.030	9.7	127.7	14.85	162.3	Oph
20 Jul 2027	16h31m19.61s	S 1 48.054'	2.767	2.035	9.8	126.9	15.41	159.8	Oph
21 Jul 2027	16h31m29.31s	S 1 53.905'	2.763	2.040	9.8	126.1	16.00	157.4	Oph
22 Jul 2027	16h31m40.30s	S 1 59.879'	2.760	2.045	9.8	125.3	16.60	155.2	Oph
23 Jul 2027	16h31m52.59s	S 2 05.972'	2.756	2.050	9.8	124.5	17.22	153.1	Oph
24 Jul 2027	16h32m06.19s	S 2 12.181'	2.753	2.056	9.8	123.8	17.86	151.2	Oph
25 Jul 2027	16h32m21.10s	S 2 18.502'	2.750	2.061	9.8	123.0	18.51	149.3	Oph
26 Jul 2027	16h32m37.33s	S 2 24.932'	2.746	2.067	9.8	122.2	19.18	147.6	Oph
27 Jul 2027	16h32m54.89s	S 2 31.468'	2.743	2.073	9.8	121.4	19.85	146.0	Oph
28 Jul 2027	16h33m13.77s	S 2 38.107'	2.740	2.079	9.8	120.7	20.54	144.4	Oph
29 Jul 2027	16h33m33.99s	S 2 44.845'	2.737	2.085	9.8	119.9	21.23	142.9	Oph
30 Jul 2027	16h33m55.55s	S 2 51.678'	2.734	2.092	9.8	119.1	21.94	141.5	Oph
31 Jul 2027	16h34m18.46s	S 2 58.603'	2.730	2.098	9.8	118.4	22.65	140.2	Oph
1 Aug 2027	16h34m42.71s	S 3 05.617'	2.727	2.104	9.8	117.6	23.36	138.9	Oph
2 Aug 2027	16h35m08.32s	S 3 12.716'	2.724	2.111	9.8	116.9	24.08	137.7	Oph
3 Aug 2027	16h35m35.28s	S 3 19.895'	2.721	2.118	9.8	116.1	24.81	136.6	Oph
4 Aug 2027	16h36m03.59s	S 3 27.153'	2.718	2.124	9.8	115.4	25.53	135.5	Oph
5 Aug 2027	16h36m33.26s	S 3 34.483'	2.715	2.131	9.8	114.6	26.26	134.4	Oph
6 Aug 2027	16h37m04.28s	S 3 41.883'	2.712	2.138	9.8	113.9	26.99	133.4	Oph
7 Aug 2027	16h37m36.64s	S 3 49.349'	2.710	2.146	9.8	113.1	27.71	132.5	Oph
8 Aug 2027	16h38m10.34s	S 3 56.877'	2.707	2.153	9.8	112.4	28.44	131.5	Oph
9 Aug 2027	16h38m45.39s	S 4 04.464'	2.704	2.160	9.8	111.7	29.16	130.7	Oph
10 Aug 2027	16h39m21.76s	S 4 12.106'	2.701	2.167	9.8	110.9	29.88	129.8	Oph
11 Aug 2027	16h39m59.45s	S 4 19.799'	2.699	2.175	9.8	110.2	30.60	129.0	Oph
12 Aug 2027	16h40m38.46s	S 4 27.539'	2.696	2.183	9.8	109.5	31.31	128.2	Oph
13 Aug 2027	16h41m18.78s	S 4 35.325'	2.693	2.190	9.9	108.8	32.02	127.5	Oph
14 Aug 2027	16h42m00.40s	S 4 43.151'	2.691	2.198	9.9	108.1	32.73	126.7	Oph
15 Aug 2027	16h42m43.31s	S 4 51.015'	2.688	2.206	9.9	107.4	33.43	126.0	Oph
16 Aug 2027	16h43m27.51s	S 4 58.915'	2.686	2.214	9.9	106.7	34.13	125.3	Oph
17 Aug 2027	16h44m12.98s	S 5 06.846'	2.683	2.222	9.9	106.0	34.82	124.7	Oph
18 Aug 2027	16h44m59.72s	S 5 14.805'	2.681	2.230	9.9	105.3	35.51	124.0	Oph
19 Aug 2027	16h45m47.72s	S 5 22.790'	2.678	2.238	9.9	104.6	36.19	123.4	Oph
20 Aug 2027	16h46m36.98s	S 5 30.798'	2.676	2.246	9.9	103.9	36.87	122.8	Oph
21 Aug 2027	16h47m27.47s	S 5 38.825'	2.673	2.254	9.9	103.2	37.55	122.2	Oph
22 Aug 2027	16h48m19.21s	S 5 46.869'	2.671	2.263	9.9	102.5	38.22	121.7	Oph
23 Aug 2027	16h49m12.17s	S 5 54.927'	2.669	2.271	9.9	101.8	38.88	121.1	Oph
24 Aug 2027	16h50m06.36s	S 6 02.996'	2.667	2.280	9.9	101.2	39.54	120.6	Oph
25 Aug 2027	16h51m01.75s	S 6 11.072'	2.665	2.288	9.9	100.5	40.20	120.1	Oph
26 Aug 2027	16h51m58.36s	S 6 19.154'	2.662	2.297	9.9	99.8	40.85	119.6	Oph
27 Aug 2027	16h52m56.16s	S 6 27.238'	2.660	2.306	9.9	99.1	41.49	119.0	Oph
28 Aug 2027	16h53m55.16s	S 6 35.321'	2.658	2.314	9.9	98.5	42.14	118.6	Oph
29 Aug 2027	16h54m55.34s	S 6 43.400'	2.656	2.323	10.0	97.8	42.77	118.1	Oph
30 Aug 2027	16h55m56.70s	S 6 51.473'	2.654	2.332	10.0	97.2	43.40	117.6	Oph
31 Aug 2027	16h56m59.22s	S 6 59.537'	2.652	2.341	10.0	96.5	44.03	117.1	Oph



Комета P/Honda-Mrkos-Pajdusakova (45P)

Дата	$\alpha(2000.0)$	$\delta(2000.0)$	r	Δ	m	elon.	V	PA	con.
1 Aug 2027	4h53m52.47s	N16 27.274'	0.825	0.567	10.6	54.3	341.74	79.9	Tau
2 Aug 2027	5h03m08.34s	N16 49.946'	0.812	0.575	10.5	53.0	335.50	80.6	Tau
3 Aug 2027	5h12m15.71s	N17 10.686'	0.798	0.583	10.4	51.8	328.96	81.3	Tau
4 Aug 2027	5h21m13.99s	N17 29.529'	0.785	0.593	10.3	50.6	322.23	81.9	Tau
5 Aug 2027	5h30m02.68s	N17 46.521'	0.772	0.603	10.2	49.4	315.37	82.6	Tau
6 Aug 2027	5h38m41.45s	N18 01.721'	0.760	0.613	10.0	48.3	308.46	83.2	Tau
7 Aug 2027	5h47m10.06s	N18 15.195'	0.747	0.625	9.9	47.2	301.58	83.9	Tau
8 Aug 2027	5h55m28.40s	N18 27.011'	0.734	0.637	9.8	46.2	294.78	84.5	Ori
9 Aug 2027	6h03m36.48s	N18 37.245'	0.722	0.649	9.7	45.2	288.11	85.2	Ori
10 Aug 2027	6h11m34.39s	N18 45.971'	0.710	0.662	9.6	44.2	281.63	85.8	Ori
11 Aug 2027	6h19m22.28s	N18 53.261'	0.698	0.676	9.5	43.3	275.36	86.5	Ori
12 Aug 2027	6h27m00.42s	N18 59.189'	0.687	0.690	9.4	42.5	269.33	87.1	Gem
13 Aug 2027	6h34m29.08s	N19 03.823'	0.676	0.705	9.3	41.7	263.58	87.7	Gem
14 Aug 2027	6h41m48.63s	N19 07.227'	0.665	0.720	9.2	40.9	258.12	88.3	Gem
15 Aug 2027	6h48m59.44s	N19 09.464'	0.654	0.736	9.1	40.2	252.95	89.0	Gem
16 Aug 2027	6h56m01.92s	N19 10.588'	0.644	0.752	9.1	39.4	248.09	89.6	Gem
17 Aug 2027	7h02m56.50s	N19 10.650'	0.634	0.768	9.0	38.8	243.54	90.2	Gem
18 Aug 2027	7h09m43.61s	N19 09.698'	0.625	0.785	8.9	38.1	239.30	90.8	Gem
19 Aug 2027	7h16m23.68s	N19 07.772'	0.616	0.803	8.8	37.5	235.36	91.4	Gem
20 Aug 2027	7h22m57.13s	N19 04.911'	0.608	0.820	8.7	36.9	231.71	92.0	Gem
21 Aug 2027	7h29m24.39s	N19 01.146'	0.600	0.839	8.7	36.4	228.33	92.6	Gem
22 Aug 2027	7h35m45.83s	N18 56.507'	0.593	0.857	8.6	35.8	225.22	93.1	Gem
23 Aug 2027	7h42m01.84s	N18 51.021'	0.586	0.876	8.6	35.3	222.35	93.7	Gem
24 Aug 2027	7h48m12.74s	N18 44.712'	0.580	0.895	8.5	34.8	219.70	94.3	Gem
25 Aug 2027	7h54m18.85s	N18 37.601'	0.575	0.914	8.5	34.3	217.25	94.9	Gem
26 Aug 2027	8h00m20.42s	N18 29.709'	0.570	0.933	8.5	33.8	214.98	95.4	Cnc
27 Aug 2027	8h06m17.69s	N18 21.055'	0.566	0.953	8.5	33.4	212.85	96.0	Cnc
28 Aug 2027	8h12m10.85s	N18 11.659'	0.563	0.973	8.5	32.9	210.86	96.6	Cnc
29 Aug 2027	8h18m00.05s	N18 01.541'	0.561	0.993	8.5	32.5	208.96	97.1	Cnc
30 Aug 2027	8h23m45.40s	N17 50.721'	0.559	1.013	8.5	32.1	207.14	97.7	Cnc
31 Aug 2027	8h29m26.99s	N17 39.221'	0.558	1.033	8.5	31.7	205.37	98.2	Cnc
1 Sep 2027	8h35m04.85s	N17 27.063'	0.558	1.053	8.5	31.3	203.63	98.7	Cnc
2 Sep 2027	8h40m39.01s	N17 14.272'	0.559	1.073	8.6	30.9	201.91	99.3	Cnc
3 Sep 2027	8h46m09.46s	N17 00.875'	0.560	1.093	8.7	30.6	200.18	99.8	Cnc
4 Sep 2027	8h51m36.16s	N16 46.898'	0.562	1.113	8.7	30.2	198.44	100.3	Cnc
5 Sep 2027	8h56m59.08s	N16 32.372'	0.565	1.133	8.8	29.9	196.67	100.8	Cnc
6 Sep 2027	9h02m18.14s	N16 17.327'	0.569	1.153	8.9	29.5	194.86	101.3	Cnc
7 Sep 2027	9h07m33.30s	N16 01.796'	0.573	1.173	9.0	29.2	193.00	101.7	Cnc
8 Sep 2027	9h12m44.47s	N15 45.810'	0.578	1.193	9.1	28.9	191.10	102.2	Cnc
9 Sep 2027	9h17m51.60s	N15 29.405'	0.584	1.212	9.2	28.6	189.14	102.6	Cnc
10 Sep 2027	9h22m54.60s	N15 12.615'	0.590	1.231	9.4	28.4	187.14	103.1	Leo
11 Sep 2027	9h27m53.44s	N14 55.473'	0.597	1.251	9.5	28.1	185.09	103.5	Leo
12 Sep 2027	9h32m48.04s	N14 38.013'	0.605	1.270	9.6	27.9	182.99	103.9	Leo
13 Sep 2027	9h37m38.37s	N14 20.270'	0.613	1.288	9.8	27.6	180.85	104.3	Leo
14 Sep 2027	9h42m24.39s	N14 02.277'	0.621	1.307	9.9	27.4	178.68	104.6	Leo
15 Sep 2027	9h47m06.09s	N13 44.064'	0.630	1.326	10.1	27.2	176.47	105.0	Leo
16 Sep 2027	9h51m43.45s	N13 25.664'	0.640	1.344	10.3	27.0	174.24	105.3	Leo
17 Sep 2027	9h56m16.47s	N13 07.105'	0.650	1.362	10.4	26.9	171.99	105.7	Leo
18 Sep 2027	10h00m45.16s	N12 48.416'	0.660	1.379	10.6	26.7	169.73	106.0	Leo
19 Sep 2027	10h05m09.55s	N12 29.624'	0.671	1.397	10.8	26.6	167.47	106.3	Leo
20 Sep 2027	10h09m29.67s	N12 10.754'	0.682	1.414	10.9	26.4	165.20	106.6	Leo
21 Sep 2027	10h13m45.55s	N11 51.830'	0.693	1.431	11.1	26.3	162.93	106.9	Leo
22 Sep 2027	10h17m57.24s	N11 32.873'	0.705	1.448	11.3	26.2	160.67	107.1	Leo
23 Sep 2027	10h22m04.79s	N11 13.905'	0.717	1.465	11.4	26.2	158.42	107.4	Leo
24 Sep 2027	10h26m08.27s	N10 54.946'	0.729	1.481	11.6	26.1	156.19	107.6	Leo
25 Sep 2027	10h30m07.72s	N10 36.013'	0.741	1.498	11.8	26.1	153.97	107.8	Leo
26 Sep 2027	10h34m03.23s	N10 17.122'	0.754	1.514	11.9	26.0	151.77	108.1	Leo
27 Sep 2027	10h37m54.84s	N 9 58.291'	0.767	1.529	12.1	26.0	149.60	108.3	Leo
28 Sep 2027	10h41m42.65s	N 9 39.532'	0.780	1.545	12.3	26.0	147.45	108.5	Leo
29 Sep 2027	10h45m26.72s	N 9 20.858'	0.793	1.560	12.4	26.0	145.32	108.7	Leo

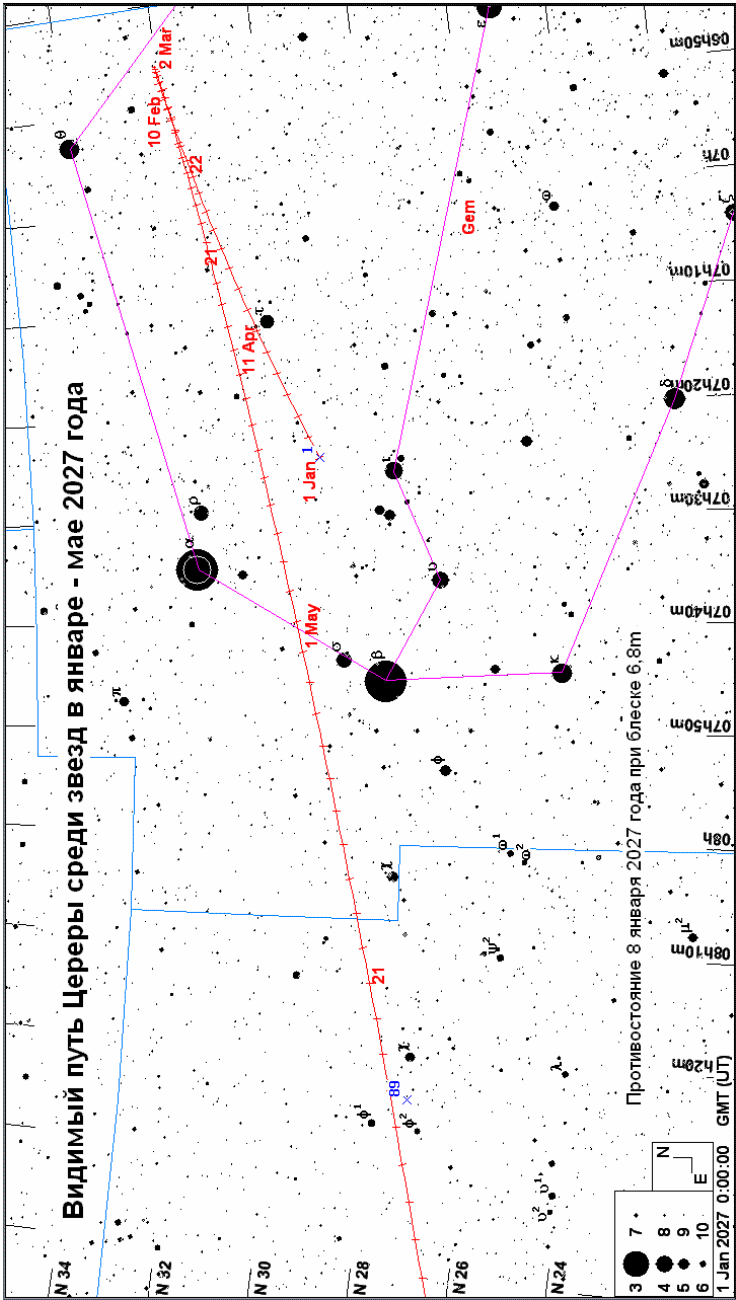


Астероид (2) Паллада

Дата	$\alpha(2015.0)$	$\delta(2015.0)$	r	Δ	m	elon.	V	PA	con.
1 Jan 2027	1h03m15.58s	S19 53.395'	2.598	2.462	9.3	86.7	28.64	59.0	Cet
6 Jan 2027	1h06m58.48s	S19 22.770'	2.586	2.514	9.3	83.0	32.36	60.0	Cet
11 Jan 2027	1h11m09.15s	S18 49.482'	2.574	2.564	9.3	79.5	35.84	60.9	Cet
16 Jan 2027	1h15m45.86s	S18 13.915'	2.561	2.613	9.4	76.1	39.08	61.8	Cet
21 Jan 2027	1h20m46.80s	S17 36.421'	2.549	2.660	9.4	72.8	42.08	62.7	Cet
26 Jan 2027	1h26m10.29s	S16 57.293'	2.537	2.705	9.4	69.7	44.88	63.5	Cet
31 Jan 2027	1h31m55.00s	S16 16.772'	2.525	2.749	9.4	66.6	47.53	64.2	Cet
5 Feb 2027	1h37m59.79s	S15 35.096'	2.513	2.790	9.4	63.6	50.02	64.9	Cet
10 Feb 2027	1h44m23.52s	S14 52.514'	2.501	2.830	9.4	60.8	52.35	65.7	Cet
15 Feb 2027	1h51m05.04s	S14 09.274'	2.489	2.867	9.4	58.0	54.52	66.4	Cet
20 Feb 2027	1h58m03.16s	S13 25.598'	2.477	2.902	9.4	55.3	56.54	67.1	Cet
25 Feb 2027	2h05m16.94s	S12 41.666'	2.465	2.935	9.4	52.8	58.44	67.8	Cet
2 Mar 2027	2h12m45.69s	S11 57.640'	2.454	2.965	9.4	50.3	60.26	68.5	Cet
7 Mar 2027	2h20m28.84s	S11 13.701'	2.442	2.993	9.4	47.9	61.99	69.2	Cet
12 Mar 2027	2h28m25.72s	S10 30.042'	2.430	3.018	9.4	45.7	63.60	70.0	Cet
17 Mar 2027	2h36m35.62s	S 9 46.859'	2.419	3.041	9.4	43.5	65.11	70.7	Cet
22 Mar 2027	2h44m57.84s	S 9 04.317'	2.407	3.062	9.4	41.4	66.52	71.5	Cet
27 Mar 2027	2h53m31.88s	S 8 22.554'	2.396	3.081	9.4	39.5	67.88	72.3	Eri
1 Apr 2027	3h02m17.42s	S 7 41.712'	2.385	3.097	9.3	37.6	69.18	73.0	Eri
6 Apr 2027	3h11m14.03s	S 7 01.963'	2.374	3.111	9.3	35.9	70.41	73.8	Eri
11 Apr 2027	3h20m21.41s	S 6 23.462'	2.363	3.123	9.3	34.2	71.57	74.7	Eri
16 Apr 2027	3h29m38.92s	S 5 46.383'	2.353	3.133	9.3	32.7	72.64	75.5	Eri
21 Apr 2027	3h39m06.03s	S 5 10.857'	2.342	3.142	9.3	31.3	73.65	76.4	Eri
26 Apr 2027	3h48m42.42s	S 4 37.000'	2.332	3.148	9.2	30.0	74.63	77.2	Eri
1 May 2027	3h58m27.81s	S 4 04.944'	2.321	3.152	9.2	28.8	75.56	78.1	Eri
6 May 2027	4h08m21.83s	S 3 34.834'	2.311	3.155	9.2	27.8	76.43	79.0	Eri
11 May 2027	4h18m23.95s	S 3 06.815'	2.301	3.156	9.2	26.9	77.22	80.0	Eri
16 May 2027	4h28m33.52s	S 2 41.007'	2.292	3.156	9.2	26.1	77.95	80.9	Eri
21 May 2027	4h38m50.03s	S 2 17.500'	2.282	3.154	9.1	25.5	78.62	81.8	Eri
26 May 2027	4h49m13.07s	S 1 56.381'	2.273	3.151	9.1	25.0	79.27	82.8	Ori
31 May 2027	4h59m42.23s	S 1 37.746'	2.264	3.146	9.1	24.6	79.86	83.8	Ori
5 Jun 2027	5h10m16.97s	S 1 21.697'	2.255	3.140	9.1	24.3	80.39	84.7	Ori
10 Jun 2027	5h20m56.58s	S 1 08.318'	2.246	3.133	9.1	24.2	80.84	85.7	Ori
15 Jun 2027	5h31m40.26s	S 0 57.657'	2.238	3.125	9.1	24.2	81.22	86.7	Ori
20 Jun 2027	5h42m27.44s	S 0 49.738'	2.230	3.116	9.1	24.4	81.56	87.7	Ori
25 Jun 2027	5h53m17.59s	S 0 44.589'	2.222	3.106	9.0	24.6	81.85	88.7	Ori
30 Jun 2027	6h04m10.15s	S 0 42.240'	2.215	3.095	9.0	24.9	82.09	89.7	Ori
5 Jul 2027	6h15m04.44s	S 0 42.715'	2.207	3.082	9.0	25.4	82.26	90.7	Ori
10 Jul 2027	6h25m59.59s	S 0 46.003'	2.200	3.069	9.0	25.9	82.34	91.6	Mon
15 Jul 2027	6h36m54.83s	S 0 52.056'	2.194	3.055	9.0	26.6	82.35	92.6	Mon
20 Jul 2027	6h47m49.57s	S 1 00.817'	2.187	3.040	9.0	27.3	82.32	93.5	Mon
25 Jul 2027	6h58m43.29s	S 1 12.236'	2.181	3.024	9.0	28.1	82.24	94.4	Mon
30 Jul 2027	7h09m35.42s	S 1 26.259'	2.175	3.007	9.0	29.0	82.10	95.4	Mon
4 Aug 2027	7h20m25.24s	S 1 42.813'	2.170	2.989	9.0	30.0	81.87	96.2	Mon
9 Aug 2027	7h31m11.96s	S 2 01.785'	2.165	2.970	9.0	31.0	81.56	97.1	Mon
14 Aug 2027	7h41m54.95s	S 2 23.040'	2.160	2.950	9.0	32.1	81.19	97.9	Mon
19 Aug 2027	7h52m33.77s	S 2 46.446'	2.156	2.928	9.0	33.3	80.77	98.7	Mon
24 Aug 2027	8h03m08.02s	S 3 11.881'	2.151	2.906	9.0	34.6	80.29	99.5	Mon
29 Aug 2027	8h13m37.21s	S 3 39.216'	2.148	2.882	9.0	35.9	79.75	100.2	Hya
3 Sep 2027	8h24m00.72s	S 4 08.293'	2.144	2.857	9.0	37.3	79.11	100.9	Hya
8 Sep 2027	8h34m17.91s	S 4 38.921'	2.141	2.831	9.0	38.8	78.39	101.6	Hya
13 Sep 2027	8h44m28.37s	S 5 10.902'	2.139	2.803	9.0	40.4	77.60	102.1	Hya
18 Sep 2027	8h54m31.77s	S 5 44.056'	2.136	2.774	9.0	42.0	76.77	102.7	Hya
23 Sep 2027	9h04m27.82s	S 6 18.208'	2.134	2.744	9.0	43.7	75.87	103.2	Hya
28 Sep 2027	9h14m16.06s	S 6 53.171'	2.133	2.712	9.0	45.5	74.88	103.7	Hya
3 Oct 2027	9h23m55.86s	S 7 28.721'	2.131	2.678	9.0	47.4	73.78	104.1	Hya
8 Oct 2027	9h33m26.67s	S 8 04.610'	2.131	2.643	9.0	49.3	72.59	104.4	Hya
13 Oct 2027	9h42m48.09s	S 8 40.601'	2.130	2.606	9.0	51.3	71.32	104.7	Sex
18 Oct 2027	9h51m59.75s	S 9 16.472'	2.130	2.567	8.9	53.5	69.98	104.9	Sex
23 Oct 2027	10h01m01.11s	S 9 52.019'	2.130	2.527	8.9	55.7	68.55	105.0	Sex
28 Oct 2027	10h09m51.72s	S10 26.946'	2.131	2.485	8.9	57.9	66.97	105.0	Sex
2 Nov 2027	10h18m30.54s	S11 00.980'	2.132	2.441	8.9	60.3	65.25	105.0	Sex
7 Nov 2027	10h26m56.79s	S11 33.811'	2.133	2.395	8.9	62.8	63.41	104.8	Sex
12 Nov 2027	10h35m09.73s	S12 05.143'	2.135	2.348	8.8	65.4	61.45	104.5	Hya
17 Nov 2027	10h43m08.58s	S12 34.677'	2.137	2.299	8.8	68.1	59.36	104.0	Hya
22 Nov 2027	10h50m52.34s	S13 02.099'	2.140	2.249	8.8	70.9	57.10	103.4	Hya
27 Nov 2027	10h58m19.63s	S13 27.033'	2.143	2.197	8.7	73.8	54.64	102.6	Crt
2 Dec 2027	11h05m28.91s	S13 49.056'	2.146	2.144	8.7	76.8	51.97	101.5	Crt
7 Dec 2027	11h12m18.70s	S14 07.731'	2.150	2.090	8.7	80.0	49.13	100.0	Crt
12 Dec 2027	11h18m47.49s	S14 22.615'	2.154	2.034	8.6	83.3	46.11	98.2	Crt
17 Dec 2027	11h24m53.63s	S14 33.241'	2.158	1.978	8.6	86.7	42.93	95.8	Crt
22 Dec 2027	11h30m35.10s	S14 39.084'	2.162	1.921	8.5	90.3	39.56	92.6	Crt
27 Dec 2027	11h35m49.46s	S14 39.532'	2.167	1.864	8.4	94.0	36.06	88.3	Crt

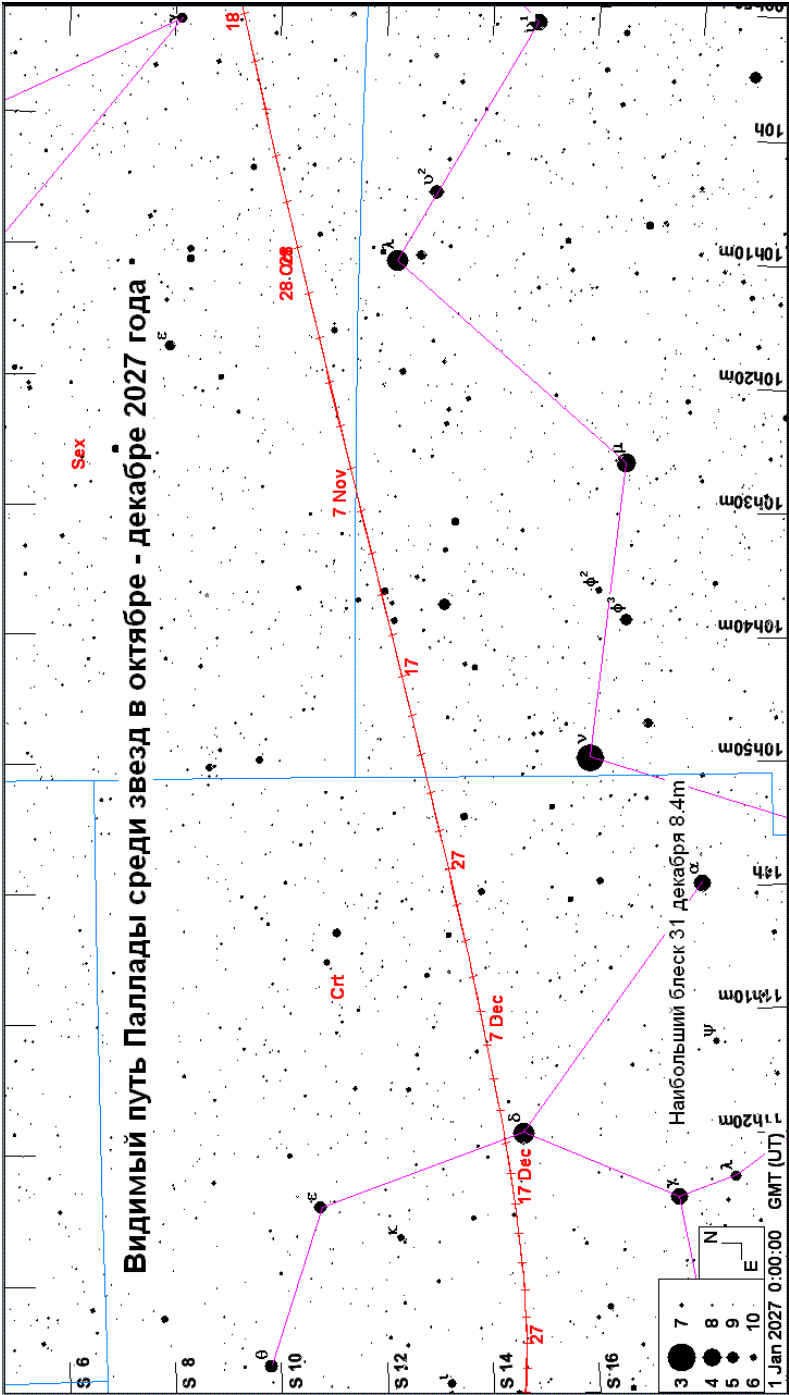
АСТЕРОИДЫ

Астероид Церера станет самой яркой в этом году. Блеск Весты 31 декабря достигнет 7m (созвездие Льва). Блеска 6.8m 7 января 2027 года достигнет Церера (созвездие Близнецов). Подробные карты путей астероидов и комет имеются в ежемесечном Календаре наблюдателя на <http://www.astronet.ru/db/news/> . Все карты созданы программой Guide 8.0



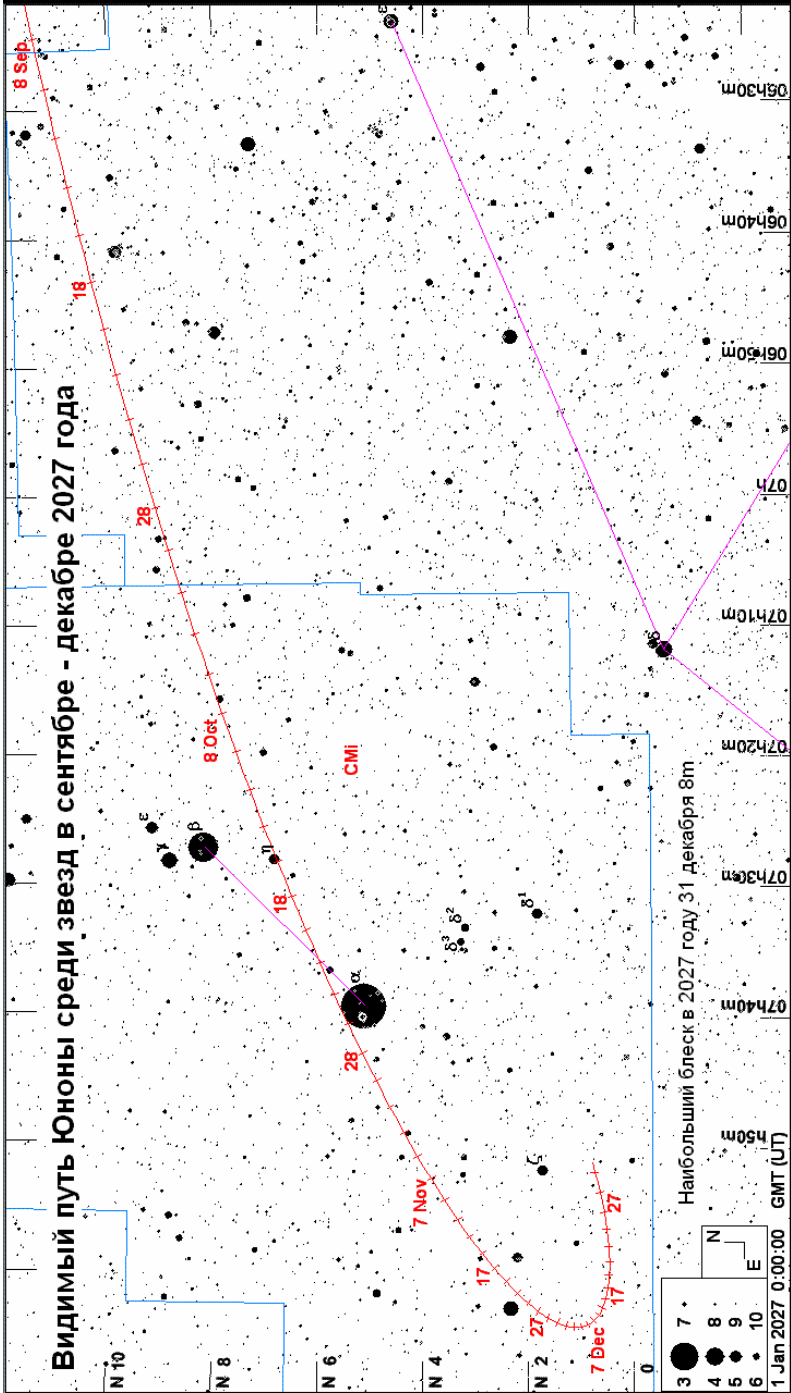
Астероид (1) Церера

Дата	α(2015.0)	δ(2015.0)	r	Δ	m	elon.	V	PA	con.
1 Jan 2027	7h24m12.82s	N29 18.365'	2.609	1.637	6.9	168.9	36.57	295.6	Gem
6 Jan 2027	7h19m09.58s	N29 48.952'	2.606	1.628	6.8	172.1	37.38	293.2	Gem
11 Jan 2027	7h13m57.34s	N30 17.076'	2.603	1.627	6.8	171.1	37.04	291.0	Gem
16 Jan 2027	7h08m47.06s	N30 42.146'	2.600	1.632	6.9	166.9	35.54	289.0	Gem
21 Jan 2027	7h03m49.52s	N31 03.776'	2.597	1.645	7.0	161.5	33.01	287.2	Gem
26 Jan 2027	6h59m14.41s	N31 21.801'	2.594	1.664	7.1	155.9	29.61	285.5	Gem
31 Jan 2027	6h55m10.19s	N31 36.231'	2.591	1.690	7.3	150.2	25.45	283.9	Gem
5 Feb 2027	6h51m44.19s	N31 47.209'	2.589	1.722	7.4	144.6	20.67	282.3	Gem
10 Feb 2027	6h49m02.19s	N31 54.987'	2.586	1.759	7.5	139.1	15.46	280.7	Gem
15 Feb 2027	6h47m08.06s	N31 59.884'	2.584	1.801	7.6	133.7	10.03	278.5	Gem
20 Feb 2027	6h46m03.59s	N32 02.248'	2.581	1.847	7.7	128.6	4.57	273.7	Gem
25 Feb 2027	6h45m48.88s	N32 02.407'	2.579	1.896	7.8	123.6	1.05	135.0	Gem
2 Mar 2027	6h46m23.17s	N32 00.631'	2.577	1.949	7.9	118.8	6.16	105.6	Gem
7 Mar 2027	6h47m45.16s	N31 57.133'	2.574	2.004	8.0	114.1	11.23	102.7	Gem
12 Mar 2027	6h49m52.88s	N31 52.071'	2.572	2.062	8.0	109.6	16.08	101.6	Gem
17 Mar 2027	6h52m43.76s	N31 45.566'	2.570	2.121	8.1	105.3	20.62	100.9	Gem
22 Mar 2027	6h56m14.62s	N31 37.696'	2.568	2.182	8.2	101.2	24.82	100.6	Gem
27 Mar 2027	7h00m22.23s	N31 28.493'	2.566	2.243	8.3	97.2	28.71	100.5	Gem
1 Apr 2027	7h05m03.70s	N31 17.946'	2.564	2.305	8.3	93.3	32.33	100.5	Gem
6 Apr 2027	7h10m16.18s	N31 06.047'	2.563	2.367	8.4	89.6	35.71	100.7	Gem
11 Apr 2027	7h15m57.36s	N30 52.686'	2.561	2.429	8.4	85.9	38.80	100.9	Gem
16 Apr 2027	7h22m04.17s	N30 37.857'	2.559	2.490	8.5	82.4	41.62	101.1	Gem
21 Apr 2027	7h28m33.75s	N30 21.518'	2.558	2.552	8.5	79.0	44.17	101.5	Gem
26 Apr 2027	7h35m23.65s	N30 03.614'	2.556	2.612	8.6	75.7	46.52	101.9	Gem
1 May 2027	7h42m31.77s	N29 44.081'	2.555	2.671	8.6	72.5	48.69	102.3	Gem
6 May 2027	7h49m56.20s	N29 22.863'	2.554	2.730	8.7	69.3	50.69	102.8	Gem
11 May 2027	7h57m35.08s	N28 59.922'	2.553	2.787	8.7	66.2	52.51	103.3	Gem
16 May 2027	8h05m26.43s	N28 35.240'	2.552	2.842	8.7	63.2	54.15	103.9	Gem
21 May 2027	8h13m28.44s	N28 08.807'	2.551	2.896	8.7	60.3	55.65	104.4	Cnc
26 May 2027	8h21m39.64s	N27 40.606'	2.550	2.948	8.7	57.4	57.02	104.9	Cnc
31 May 2027	8h29m58.82s	N27 10.623'	2.549	2.999	8.8	54.6	58.30	105.5	Cnc
5 Jun 2027	8h38m24.85s	N26 38.858'	2.548	3.048	8.8	51.8	59.48	106.1	Cnc
10 Jun 2027	8h46m56.60s	N26 05.337'	2.548	3.095	8.8	49.1	60.55	106.6	Cnc
15 Jun 2027	8h55m32.85s	N25 30.104'	2.547	3.140	8.8	46.4	61.50	107.2	Cnc
20 Jun 2027	9h04m12.60s	N24 53.200'	2.547	3.183	8.8	43.7	62.37	107.7	Cnc
25 Jun 2027	9h12m55.11s	N24 14.661'	2.546	3.223	8.8	41.1	63.18	108.2	Cnc
30 Jun 2027	9h21m39.79s	N23 34.524'	2.546	3.262	8.8	38.5	63.93	108.7	Cnc
5 Jul 2027	9h30m26.11s	N22 52.845'	2.546	3.298	8.8	35.9	64.62	109.2	Leo
10 Jul 2027	9h39m13.42s	N22 09.704'	2.546	3.332	8.8	33.4	65.23	109.7	Leo
15 Jul 2027	9h48m01.07s	N21 25.188'	2.546	3.364	8.8	30.9	65.77	110.1	Leo
20 Jul 2027	9h56m48.61s	N20 39.374'	2.546	3.393	8.7	28.4	66.26	110.6	Leo
25 Jul 2027	10h05m35.79s	N19 52.329'	2.546	3.420	8.7	26.0	66.71	111.0	Leo
30 Jul 2027	10h14m22.44s	N19 04.129'	2.547	3.444	8.7	23.6	67.13	111.3	Leo
4 Aug 2027	10h23m08.34s	N18 14.865'	2.547	3.466	8.7	21.2	67.50	111.7	Leo
9 Aug 2027	10h31m53.16s	N17 24.650'	2.547	3.486	8.6	18.9	67.80	112.0	Leo
14 Aug 2027	10h40m36.60s	N16 33.592'	2.548	3.502	8.6	16.6	68.05	112.2	Leo
19 Aug 2027	10h49m18.57s	N15 41.785'	2.549	3.517	8.6	14.4	68.27	112.5	Leo
24 Aug 2027	10h57m59.05s	N14 49.315'	2.549	3.528	8.5	12.3	68.46	112.7	Leo
29 Aug 2027	11h06m38.07s	N13 56.279'	2.550	3.537	8.5	10.5	68.63	112.8	Leo
3 Sep 2027	11h15m15.55s	N13 02.793'	2.551	3.543	8.5	8.9	68.73	113.0	Leo
8 Sep 2027	11h23m51.28s	N12 08.985'	2.552	3.547	8.4	7.9	68.78	113.1	Leo
13 Sep 2027	11h32m25.15s	N11 14.970'	2.553	3.547	8.4	7.6	68.78	113.1	Leo
18 Sep 2027	11h40m57.18s	N10 20.849'	2.555	3.545	8.5	8.2	68.76	113.2	Leo
23 Sep 2027	11h49m27.42s	N 9 26.719'	2.556	3.541	8.5	9.4	68.71	113.2	Vir
28 Sep 2027	11h57m55.91s	N 8 32.692'	2.557	3.533	8.5	11.2	68.61	113.1	Vir
3 Oct 2027	12h06m22.51s	N 7 38.900'	2.559	3.523	8.6	13.2	68.45	113.0	Vir
8 Oct 2027	12h14m47.02s	N 6 45.474'	2.560	3.510	8.6	15.4	68.23	112.9	Vir
13 Oct 2027	12h23m09.31s	N 5 52.529'	2.562	3.494	8.6	17.8	67.96	112.8	Vir
18 Oct 2027	12h31m29.32s	N 5 00.167'	2.563	3.475	8.7	20.2	67.65	112.6	Vir
23 Oct 2027	12h39m46.96s	N 4 08.482'	2.565	3.454	8.7	22.8	67.30	112.4	Vir
28 Oct 2027	12h48m02.16s	N 3 17.617'	2.567	3.430	8.7	25.4	66.88	112.1	Vir
2 Nov 2027	12h56m14.57s	N 2 27.696'	2.569	3.403	8.7	28.0	66.38	111.8	Vir
7 Nov 2027	13h04m23.79s	N 1 38.845'	2.571	3.373	8.8	30.7	65.80	111.5	Vir
12 Nov 2027	13h12m29.52s	N 0 51.167'	2.573	3.341	8.8	33.4	65.17	111.2	Vir
17 Nov 2027	13h20m31.48s	N 0 04.760'	2.575	3.306	8.8	36.2	64.47	110.8	Vir
22 Nov 2027	13h28m29.35s	S 0 40.275'	2.578	3.269	8.8	39.0	63.71	110.4	Vir
27 Nov 2027	13h36m22.63s	S 1 23.817'	2.580	3.229	8.8	41.9	62.83	109.9	Vir
2 Dec 2027	13h44m10.57s	S 2 05.744'	2.583	3.186	8.8	44.8	61.85	109.4	Vir
7 Dec 2027	13h51m52.45s	S 2 45.957'	2.585	3.142	8.8	47.8	60.77	108.9	Vir
12 Dec 2027	13h59m27.58s	S 3 24.373'	2.588	3.094	8.8	50.8	59.59	108.4	Vir
17 Dec 2027	14h06m55.27s	S 4 00.917'	2.590	3.045	8.8	53.9	58.32	107.8	Vir
22 Dec 2027	14h14m14.70s	S 4 35.504'	2.593	2.994	8.8	57.0	56.92	107.2	Vir
27 Dec 2027	14h21m24.76s	S 5 08.037'	2.596	2.941	8.8	60.2	55.36	106.6	Vir
1 Jan 2028	14h28m24.17s	S 5 38.435'	2.598	2.886	8.7	63.4	53.65	105.9	Vir



Астероид (4) Веста

Дата	α(2015.0)	δ(2015.0)	r	Δ	m	elon.	V	PA	con.
1 Jan 2027	1h10m19.70s	S 0 28.706'	2.526	2.225	7.8	96.0	32.12	51.8	Cet
6 Jan 2027	1h13m55.12s	N 0 11.965'	2.529	2.294	7.9	92.1	35.40	54.1	Cet
11 Jan 2027	1h17m56.75s	N 0 54.296'	2.531	2.364	8.0	88.2	38.44	55.9	Cet
16 Jan 2027	1h22m22.60s	N 1 38.014'	2.534	2.433	8.0	84.4	41.22	57.5	Cet
21 Jan 2027	1h27m10.65s	N 2 22.857'	2.537	2.501	8.1	80.8	43.75	58.8	Cet
26 Jan 2027	1h32m19.06s	N 3 08.596'	2.539	2.569	8.1	77.2	46.05	60.0	Psc
31 Jan 2027	1h37m46.36s	N 3 55.044'	2.542	2.636	8.2	73.7	48.17	61.0	Psc
5 Feb 2027	1h43m31.31s	N 4 42.026'	2.544	2.702	8.2	70.2	50.12	62.0	Psc
10 Feb 2027	1h49m32.70s	N 5 29.359'	2.547	2.767	8.3	66.9	51.90	62.8	Psc
15 Feb 2027	1h55m49.30s	N 6 16.858'	2.549	2.830	8.3	63.6	53.48	63.7	Psc
20 Feb 2027	2h02m19.86s	N 7 04.342'	2.551	2.891	8.3	60.3	54.90	64.5	Psc
25 Feb 2027	2h09m03.39s	N 7 51.661'	2.553	2.951	8.4	57.2	56.19	65.2	Cet
2 Mar 2027	2h15m59.15s	N 8 38.689'	2.555	3.008	8.4	54.0	57.38	66.0	Cet
7 Mar 2027	2h23m06.52s	N 9 25.293'	2.557	3.064	8.4	50.9	58.46	66.7	Cet
12 Mar 2027	2h30m24.79s	N10 11.336'	2.559	3.117	8.4	47.9	59.43	67.4	Cet
17 Mar 2027	2h37m53.21s	N10 56.673'	2.561	3.167	8.4	44.9	60.27	68.2	Ari
22 Mar 2027	2h45m31.03s	N11 41.175'	2.562	3.215	8.4	42.0	61.02	68.9	Ari
27 Mar 2027	2h53m17.74s	N12 24.737'	2.564	3.260	8.5	39.0	61.70	69.6	Ari
1 Apr 2027	3h01m12.97s	N13 07.258'	2.565	3.303	8.5	36.2	62.32	70.4	Ari
6 Apr 2027	3h09m16.26s	N13 48.631'	2.566	3.343	8.5	33.3	62.88	71.1	Ari
11 Apr 2027	3h17m27.27s	N14 28.752'	2.568	3.380	8.5	30.5	63.36	71.9	Ari
16 Apr 2027	3h25m45.34s	N15 07.512'	2.569	3.414	8.4	27.7	63.75	72.7	Tau
21 Apr 2027	3h34m09.95s	N15 44.818'	2.570	3.445	8.4	25.0	64.10	73.5	Tau
26 Apr 2027	3h42m40.79s	N16 20.596'	2.571	3.473	8.4	22.2	64.41	74.3	Tau
1 May 2027	3h51m17.56s	N16 54.772'	2.571	3.499	8.4	19.5	64.69	75.1	Tau
6 May 2027	3h59m59.91s	N17 27.266'	2.572	3.521	8.4	16.9	64.92	75.9	Tau
11 May 2027	4h08m47.36s	N17 58.001'	2.573	3.540	8.4	14.2	65.09	76.8	Tau
16 May 2027	4h17m39.30s	N18 26.909'	2.573	3.555	8.3	11.6	65.20	77.6	Tau
21 May 2027	4h26m35.28s	N18 53.936'	2.574	3.568	8.3	9.0	65.29	78.5	Tau
26 May 2027	4h35m34.98s	N19 19.041'	2.574	3.578	8.2	6.5	65.35	79.4	Tau
31 May 2027	4h44m38.05s	N19 42.177'	2.574	3.584	8.2	4.2	65.40	80.2	Tau
5 Jun 2027	4h53m44.04s	N20 03.303'	2.574	3.587	8.2	2.6	65.40	81.1	Tau
10 Jun 2027	5h02m52.34s	N20 22.383'	2.574	3.587	8.2	3.1	65.34	82.0	Tau
15 Jun 2027	5h12m02.29s	N20 39.396'	2.574	3.584	8.2	5.1	65.25	82.9	Tau
20 Jun 2027	5h21m13.44s	N20 54.333'	2.574	3.578	8.3	7.5	65.13	83.8	Tau
25 Jun 2027	5h30m25.37s	N21 07.190'	2.573	3.568	8.3	10.0	65.00	84.8	Tau
30 Jun 2027	5h39m37.65s	N21 17.962'	2.573	3.556	8.3	12.6	64.84	85.7	Tau
5 Jul 2027	5h48m49.67s	N21 26.656'	2.573	3.540	8.4	15.1	64.63	86.6	Tau
10 Jul 2027	5h58m00.70s	N21 33.292'	2.572	3.522	8.4	17.7	64.37	87.4	Ori
15 Jul 2027	6h07m10.06s	N21 37.902'	2.571	3.500	8.4	20.4	64.07	88.3	Gem
20 Jul 2027	6h16m17.26s	N21 40.526'	2.570	3.475	8.4	23.0	63.74	89.2	Gem
25 Jul 2027	6h25m21.83s	N21 41.207'	2.570	3.447	8.4	25.6	63.39	90.1	Gem
30 Jul 2027	6h34m23.20s	N21 39.995'	2.568	3.417	8.5	28.3	62.99	90.9	Gem
4 Aug 2027	6h43m20.65s	N21 36.955'	2.567	3.383	8.5	31.0	62.52	91.7	Gem
9 Aug 2027	6h52m13.36s	N21 32.171'	2.566	3.347	8.5	33.7	61.98	92.5	Gem
14 Aug 2027	7h01m00.67s	N21 25.733'	2.565	3.308	8.5	36.5	61.40	93.3	Gem
19 Aug 2027	7h09m42.04s	N21 17.735'	2.563	3.266	8.5	39.2	60.77	94.0	Gem
24 Aug 2027	7h18m16.90s	N21 08.275'	2.562	3.222	8.5	42.1	60.08	94.7	Gem
29 Aug 2027	7h26m44.56s	N20 57.467'	2.560	3.175	8.4	44.9	59.31	95.4	Gem
3 Sep 2027	7h35m04.13s	N20 45.448'	2.559	3.125	8.4	47.8	58.44	96.1	Gem
8 Sep 2027	7h43m14.70s	N20 32.369'	2.557	3.073	8.4	50.7	57.47	96.6	Gem
13 Sep 2027	7h51m15.53s	N20 18.383'	2.555	3.019	8.4	53.7	56.42	97.2	Gem
18 Sep 2027	7h59m05.94s	N20 03.644'	2.553	2.963	8.4	56.7	55.27	97.7	Gem
23 Sep 2027	8h06m45.15s	N19 48.322'	2.551	2.905	8.3	59.8	54.02	98.1	Cnc
28 Sep 2027	8h14m12.13s	N19 32.611'	2.549	2.844	8.3	62.9	52.61	98.5	Cnc
3 Oct 2027	8h21m25.68s	N19 16.730'	2.547	2.782	8.3	66.1	51.04	98.8	Cnc
8 Oct 2027	8h28m24.61s	N19 00.908'	2.544	2.719	8.2	69.3	49.31	99.0	Cnc
13 Oct 2027	8h35m07.87s	N18 45.373'	2.542	2.654	8.2	72.7	47.43	99.1	Cnc
18 Oct 2027	8h41m34.30s	N18 30.359'	2.539	2.587	8.2	76.1	45.38	99.1	Cnc
23 Oct 2027	8h47m42.43s	N18 16.138'	2.537	2.520	8.1	79.6	43.12	99.0	Cnc
28 Oct 2027	8h53m30.88s	N18 02.981'	2.534	2.452	8.0	83.2	40.61	98.6	Cnc
2 Nov 2027	8h58m57.59s	N17 51.218'	2.531	2.383	8.0	86.9	37.84	98.1	Cnc
7 Nov 2027	9h04m00.72s	N17 41.162'	2.528	2.314	7.9	90.7	34.82	97.2	Cnc
12 Nov 2027	9h08m38.47s	N17 33.119'	2.525	2.245	7.8	94.6	31.56	96.0	Cnc
17 Nov 2027	9h12m48.86s	N17 27.408'	2.522	2.176	7.8	98.7	28.05	94.2	Cnc
22 Nov 2027	9h16m29.56s	N17 24.369'	2.519	2.108	7.7	102.9	24.24	91.4	Cnc
27 Nov 2027	9h19m37.88s	N17 24.366'	2.516	2.041	7.6	107.2	20.18	87.2	Cnc
2 Dec 2027	9h22m11.18s	N17 27.733'	2.512	1.975	7.5	111.7	16.01	80.1	Leo
7 Dec 2027	9h24m07.03s	N17 34.748'	2.509	1.911	7.4	116.3	12.04	67.3	Leo
12 Dec 2027	9h25m23.19s	N17 45.635'	2.506	1.850	7.3	121.2	9.06	43.1	Leo
17 Dec 2027	9h25m57.52s	N18 00.565'	2.502	1.791	7.2	126.2	8.73	6.7	Leo
22 Dec 2027	9h25m47.92s	N18 19.560'	2.498	1.736	7.1	131.4	11.61	337.9	Leo
27 Dec 2027	9h24m52.73s	N18 42.881'	2.495	1.685	7.0	136.8	16.16	322.3	Leo



Астероид (3) Юнона

Дата	α(2015.0)	δ(2015.0)	r	Δ	m	elon.	V	PA	con.
1 Jan 2027	21h40m18.12s	S12 02.069'	2.371	2.986	10.3	43.4	66.14	78.1	Cap
6 Jan 2027	21h49m08.97s	S11 33.700'	2.357	3.016	10.3	40.5	67.53	77.3	Cap
11 Jan 2027	21h58m07.90s	S11 02.944'	2.344	3.044	10.3	37.7	68.83	76.6	Cap
16 Jan 2027	22h07m14.07s	S10 29.921'	2.330	3.069	10.2	34.9	70.03	75.9	Aqr
21 Jan 2027	22h16m26.74s	S 9 54.761'	2.317	3.091	10.2	32.1	71.15	75.2	Aqr
26 Jan 2027	22h25m45.37s	S 9 17.583'	2.304	3.111	10.2	29.4	72.22	74.7	Aqr
31 Jan 2027	22h35m09.65s	S 8 38.494'	2.291	3.128	10.2	26.7	73.25	74.1	Aqr
5 Feb 2027	22h44m39.28s	S 7 57.614'	2.278	3.142	10.1	24.0	74.22	73.7	Aqr
10 Feb 2027	22h54m13.88s	S 7 15.087'	2.265	3.154	10.1	21.4	75.13	73.2	Aqr
15 Feb 2027	23h03m53.06s	S 6 31.072'	2.252	3.164	10.0	18.9	75.96	72.9	Aqr
20 Feb 2027	23h13m36.51s	S 5 45.729'	2.240	3.171	10.0	16.4	76.75	72.6	Aqr
25 Feb 2027	23h23m24.16s	S 4 59.198'	2.227	3.175	10.0	13.9	77.51	72.3	Aqr
2 Mar 2027	23h33m16.03s	S 4 11.615'	2.215	3.178	9.9	11.5	78.24	72.1	Aqr
7 Mar 2027	23h43m12.13s	S 3 23.136'	2.203	3.177	9.9	9.1	78.93	72.0	Aqr
12 Mar 2027	23h53m12.35s	S 2 33.935'	2.191	3.175	9.8	6.8	79.56	71.9	Psc
17 Mar 2027	0h03m16.59s	S 1 44.197'	2.180	3.170	9.7	4.7	80.14	71.8	Psc
22 Mar 2027	0h13m24.81s	S 0 54.095'	2.169	3.163	9.7	2.9	80.69	71.9	Psc
27 Mar 2027	0h23m37.20s	S 0 03.783'	2.157	3.154	9.6	2.4	81.23	71.9	Psc
1 Apr 2027	0h33m53.95s	N 0 46.578'	2.147	3.143	9.6	3.7	81.74	72.1	Cet
6 Apr 2027	0h44m15.15s	N 1 36.803'	2.136	3.130	9.7	5.6	82.22	72.3	Cet
11 Apr 2027	0h54m40.83s	N 2 26.706'	2.126	3.115	9.7	7.7	82.64	72.5	Cet
16 Apr 2027	1h05m10.93s	N 3 16.086'	2.116	3.098	9.7	9.7	83.02	72.8	Psc
21 Apr 2027	1h15m45.52s	N 4 04.765'	2.106	3.079	9.7	11.8	83.38	73.2	Psc
26 Apr 2027	1h26m24.80s	N 4 52.578'	2.097	3.059	9.8	13.9	83.74	73.6	Psc
1 May 2027	1h37m08.92s	N 5 39.348'	2.087	3.037	9.8	16.0	84.06	74.0	Psc
6 May 2027	1h47m57.89s	N 6 24.878'	2.079	3.014	9.8	18.1	84.34	74.6	Psc
11 May 2027	1h58m51.56s	N 7 08.966'	2.070	2.989	9.8	20.1	84.57	75.2	Psc
16 May 2027	2h09m49.72s	N 7 51.420'	2.062	2.963	9.8	22.1	84.75	75.8	Cet
21 May 2027	2h20m52.31s	N 8 32.070'	2.054	2.936	9.8	24.1	84.92	76.5	Cet
26 May 2027	2h31m59.32s	N 9 10.751'	2.047	2.908	9.8	26.1	85.07	77.2	Cet
31 May 2027	2h43m10.61s	N 9 47.285'	2.040	2.878	9.8	28.1	85.18	78.0	Cet
5 Jun 2027	2h54m25.82s	N10 21.488'	2.034	2.847	9.8	30.1	85.23	78.8	Ari
10 Jun 2027	3h05m44.41s	N10 53.179'	2.028	2.815	9.8	32.0	85.21	79.7	Ari
15 Jun 2027	3h17m05.84s	N11 22.203'	2.022	2.783	9.8	34.0	85.15	80.6	Ari
20 Jun 2027	3h28m29.69s	N11 48.428'	2.016	2.749	9.8	35.9	85.06	81.6	Tau
25 Jun 2027	3h39m55.53s	N12 11.721'	2.012	2.715	9.8	37.9	84.94	82.6	Tau
30 Jun 2027	3h51m22.72s	N12 31.949'	2.007	2.679	9.8	39.8	84.75	83.6	Tau
5 Jul 2027	4h02m50.39s	N12 48.984'	2.003	2.643	9.7	41.8	84.48	84.7	Tau
10 Jul 2027	4h14m17.48s	N13 02.722'	2.000	2.607	9.7	43.7	84.12	85.8	Tau
15 Jul 2027	4h25m43.04s	N13 13.096'	1.997	2.569	9.7	45.7	83.71	87.0	Tau
20 Jul 2027	4h37m06.24s	N13 20.054'	1.994	2.531	9.7	47.7	83.25	88.1	Tau
25 Jul 2027	4h48m26.15s	N13 23.549'	1.992	2.492	9.7	49.7	82.72	89.3	Ori
30 Jul 2027	4h59m41.67s	N13 23.546'	1.990	2.453	9.7	51.7	82.09	90.5	Ori
4 Aug 2027	5h10m51.42s	N13 20.032'	1.989	2.413	9.6	53.8	81.34	91.8	Ori
9 Aug 2027	5h21m53.96s	N13 13.033'	1.988	2.372	9.6	55.8	80.48	93.0	Ori
14 Aug 2027	5h32m48.07s	N13 02.607'	1.988	2.331	9.6	57.9	79.54	94.3	Ori
19 Aug 2027	5h43m32.60s	N12 48.824'	1.988	2.289	9.6	60.1	78.50	95.6	Tau
24 Aug 2027	5h54m06.32s	N12 31.758'	1.989	2.247	9.6	62.3	77.35	96.8	Ori
29 Aug 2027	6h04m27.77s	N12 11.508'	1.990	2.204	9.5	64.5	76.04	98.2	Ori
3 Sep 2027	6h14m35.24s	N11 48.207'	1.992	2.161	9.5	66.8	74.56	99.5	Ori
8 Sep 2027	6h24m27.11s	N11 22.033'	1.994	2.117	9.5	69.1	72.93	100.8	Ori
13 Sep 2027	6h34m02.00s	N10 53.176'	1.997	2.073	9.4	71.5	71.15	102.1	Mon
18 Sep 2027	6h43m18.52s	N10 21.831'	2.000	2.028	9.4	74.0	69.22	103.5	Mon
23 Sep 2027	6h52m15.15s	N 9 48.207'	2.003	1.984	9.4	76.5	67.09	104.9	Gem
28 Sep 2027	7h00m50.02s	N 9 12.543'	2.007	1.938	9.3	79.1	64.72	106.3	Mon
3 Oct 2027	7h09m01.05s	N 8 35.132'	2.012	1.893	9.3	81.8	62.08	107.8	CMi
8 Oct 2027	7h16m46.35s	N 7 56.299'	2.017	1.847	9.2	84.7	59.22	109.4	CMi
13 Oct 2027	7h24m04.16s	N 7 16.370'	2.022	1.802	9.2	87.6	56.12	111.0	CMi
18 Oct 2027	7h30m52.61s	N 6 35.684'	2.028	1.756	9.1	90.6	52.76	112.7	CMi
23 Oct 2027	7h37m09.30s	N 5 54.608'	2.034	1.711	9.1	93.7	49.09	114.7	CMi
28 Oct 2027	7h42m52.12s	N 5 13.573'	2.040	1.665	9.0	97.0	45.05	116.9	CMi
2 Nov 2027	7h47m58.20s	N 4 33.076'	2.047	1.621	9.0	100.4	40.68	119.4	CMi
7 Nov 2027	7h52m25.18s	N 3 53.642'	2.055	1.577	8.9	103.9	36.02	122.4	CMi
12 Nov 2027	7h56m10.88s	N 3 15.808'	2.062	1.534	8.8	107.6	31.09	126.2	CMi
17 Nov 2027	7h59m13.08s	N 2 40.144'	2.071	1.492	8.7	111.5	25.93	131.4	CMi
22 Nov 2027	8h01m29.41s	N 2 07.278'	2.079	1.452	8.7	115.5	20.62	139.1	CMi
27 Nov 2027	8h02m57.58s	N 1 37.928'	2.088	1.414	8.6	119.8	15.47	151.9	CMi
2 Dec 2027	8h03m36.10s	N 1 12.855'	2.097	1.378	8.5	124.1	11.36	175.1	CMi
7 Dec 2027	8h03m24.63s	N 0 52.798'	2.106	1.345	8.4	128.7	10.14	211.6	CMi
12 Dec 2027	8h02m23.89s	N 0 38.448'	2.116	1.316	8.3	133.3	12.76	243.8	CMi
17 Dec 2027	8h00m35.64s	N 0 30.439'	2.126	1.290	8.3	138.1	17.45	262.4	CMi
22 Dec 2027	7h58m02.76s	N 0 29.350'	2.136	1.268	8.2	142.9	22.73	273.2	CMi
27 Dec 2027	7h54m49.88s	N 0 35.650'	2.147	1.251	8.1	147.6	27.81	280.5	CMi

