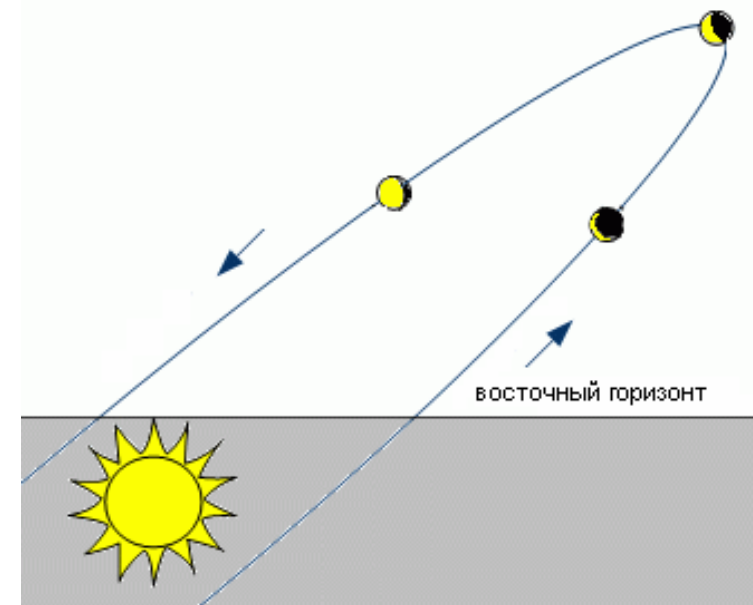


Конфигурации Меркурия в 2027 году

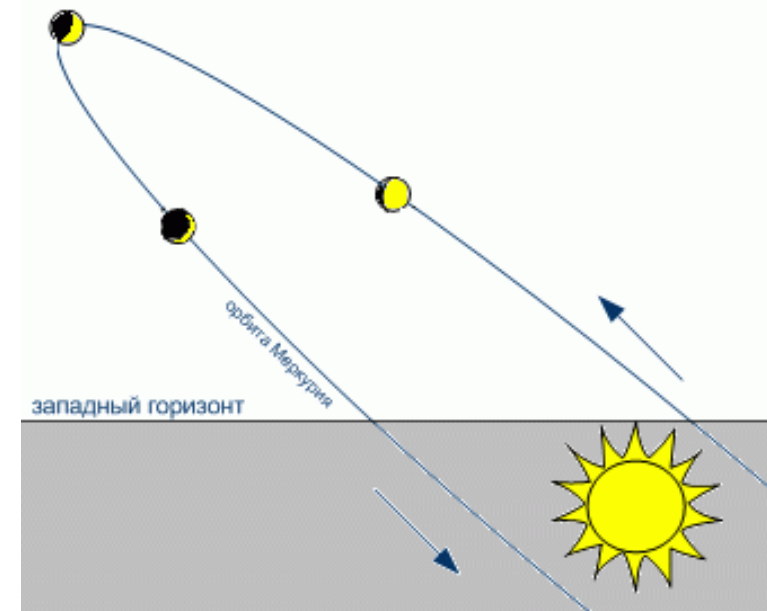
- 1 января - верхнее соединение с Солнцем
 3 февраля - вечерняя (восточная) элонгация 18 градусов
 9 февраля - стояние к попятному движению
 18 февраля - нижнее соединение с Солнцем
 2 марта - стояние к прямому движению
 17 марта - утренняя (западная) элонгация 28 градусов
 28 апреля - верхнее соединение с Солнцем
 28 мая - вечерняя (восточная) элонгация 23 градуса
 10 июня - стояние к попятному движению
 23 июня - нижнее соединение с Солнцем
 4 июля - стояние к прямому движению
 15 июля - утренняя (западная) элонгация 21 градус
 11 августа - верхнее соединение с Солнцем
 24 сентября - вечерняя (восточная) элонгация 26 градусов
 7 октября - стояние к попятному движению
 19 октября - нижнее соединение с Солнцем
 28 октября - стояние к прямому движению
 4 ноября - утренняя (западная) элонгация 19 градусов
 11 декабря - верхнее соединение с Солнцем

Пояснение для эфемерид больших планет. В эфемеридах планет приводятся: Дата (год, месяц, день), Пр. восх. – прямое восхождение, Склонение – склонение, Расстояние – геоцентрическое расстояние от Земли до планеты в астрономических единицах, dia – видимый диаметр в секундах дуги, mag – звездная величина, Elong – видимое угловое удаление (элонгация) от Солнца в градусах, I – фазовый угол (угол при центре планеты между направлениями на Солнце и Землю), Фаза – величина освещенной части диска планеты (от 0 до 100%), Limb – позиционный угол средней точки светлого лимба в градусах (отсчитывается от точки севера против часовой стрелки от 0° до 360°), De – угол наклона оси планеты к картинной плоскости перпендикулярной лучу зрения в градусах, причем знак указывает наклон северного «+» или южного «-» полюса планеты к Земле (для Сатурна это также наклон колец), Pr – позиционный угол северного полюса планеты по отношению к полюсу мира в градусах (отсчитывается при центре планеты против часовой стрелки от 0° до 360°). Годичные эфемериды планет и таблицы восходов и заходов планет сгенерированы программой Ossulft v4.0, карты видимого движения – программой Guide 8.0, текстовое описание выполнено с помощью программы Starry Night Backyard 3.1.

Утренние и вечерние видимости Меркурия



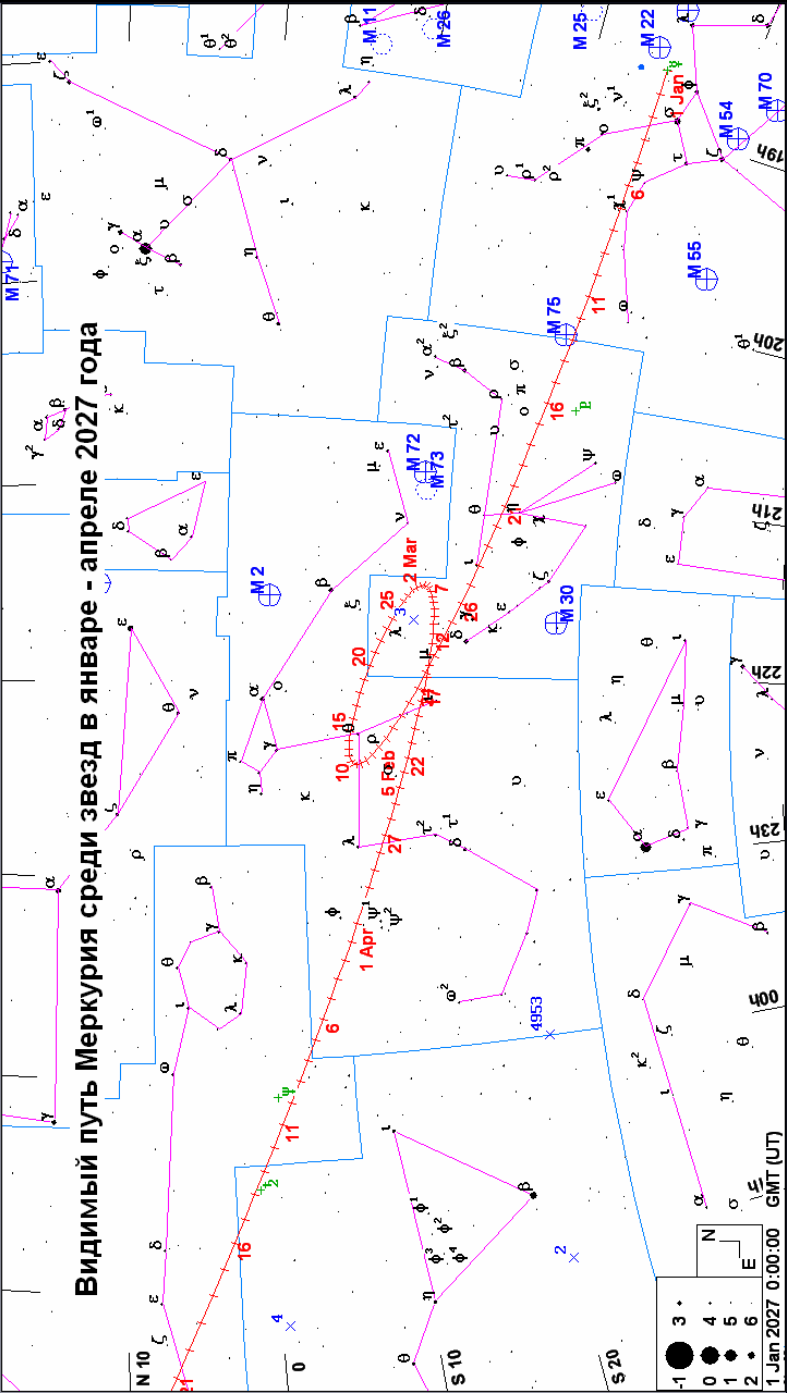
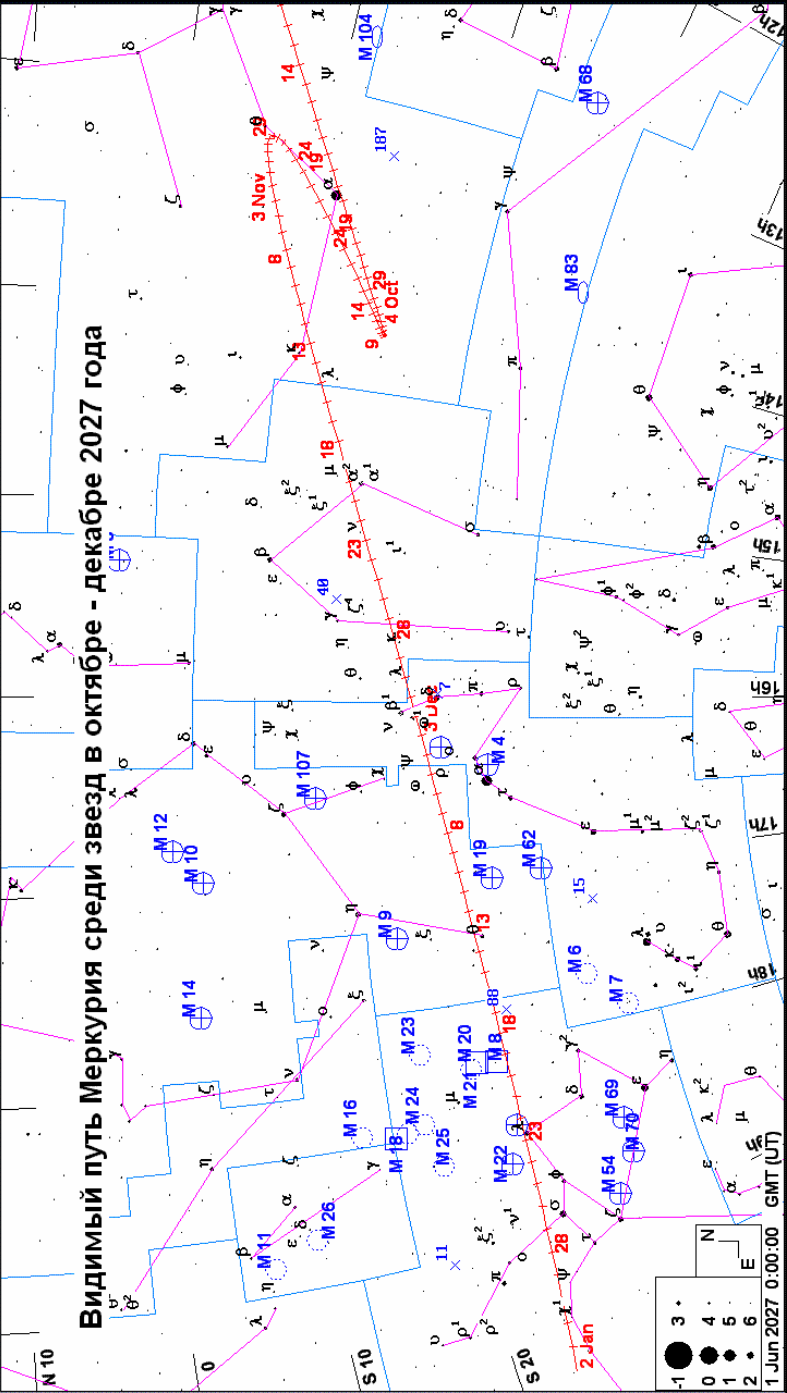
Путь планеты во время утренней видимости

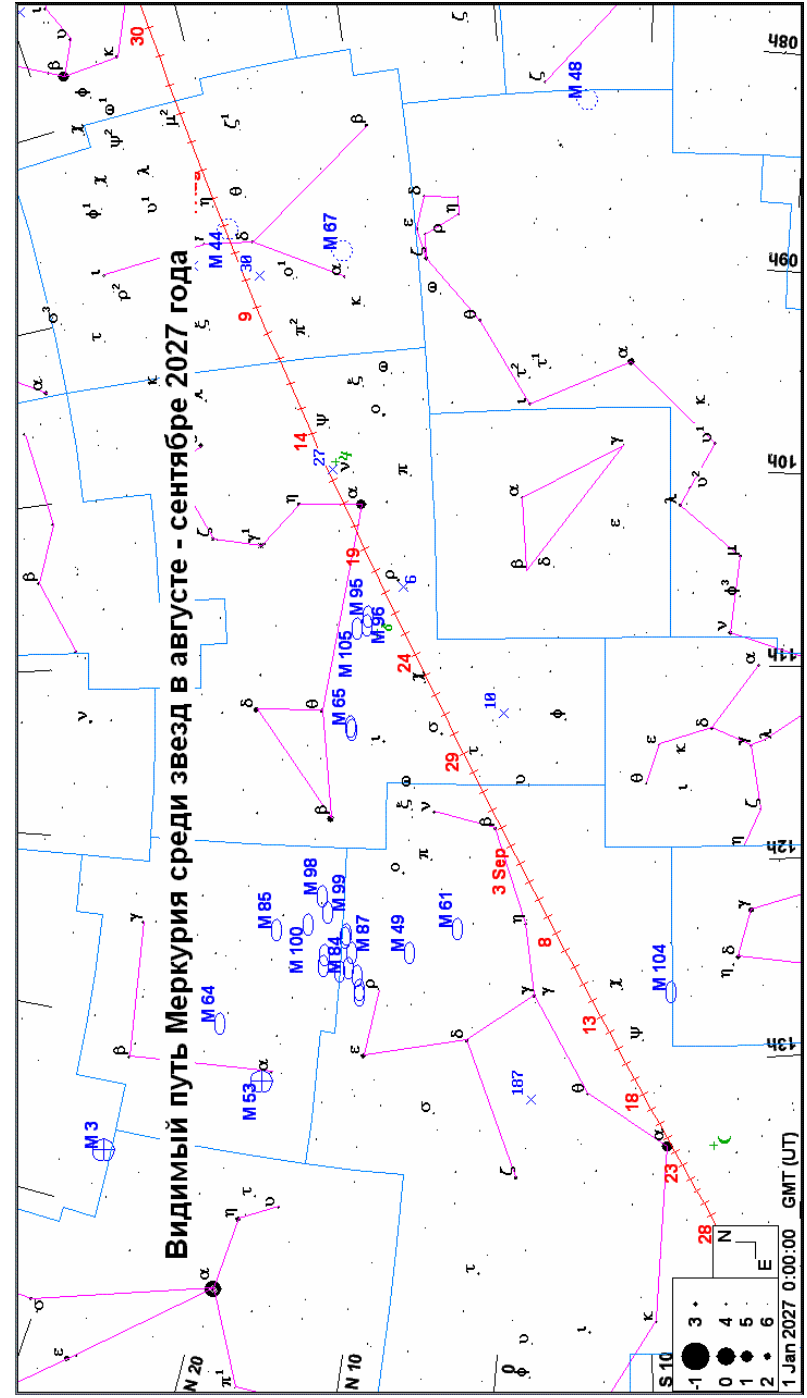
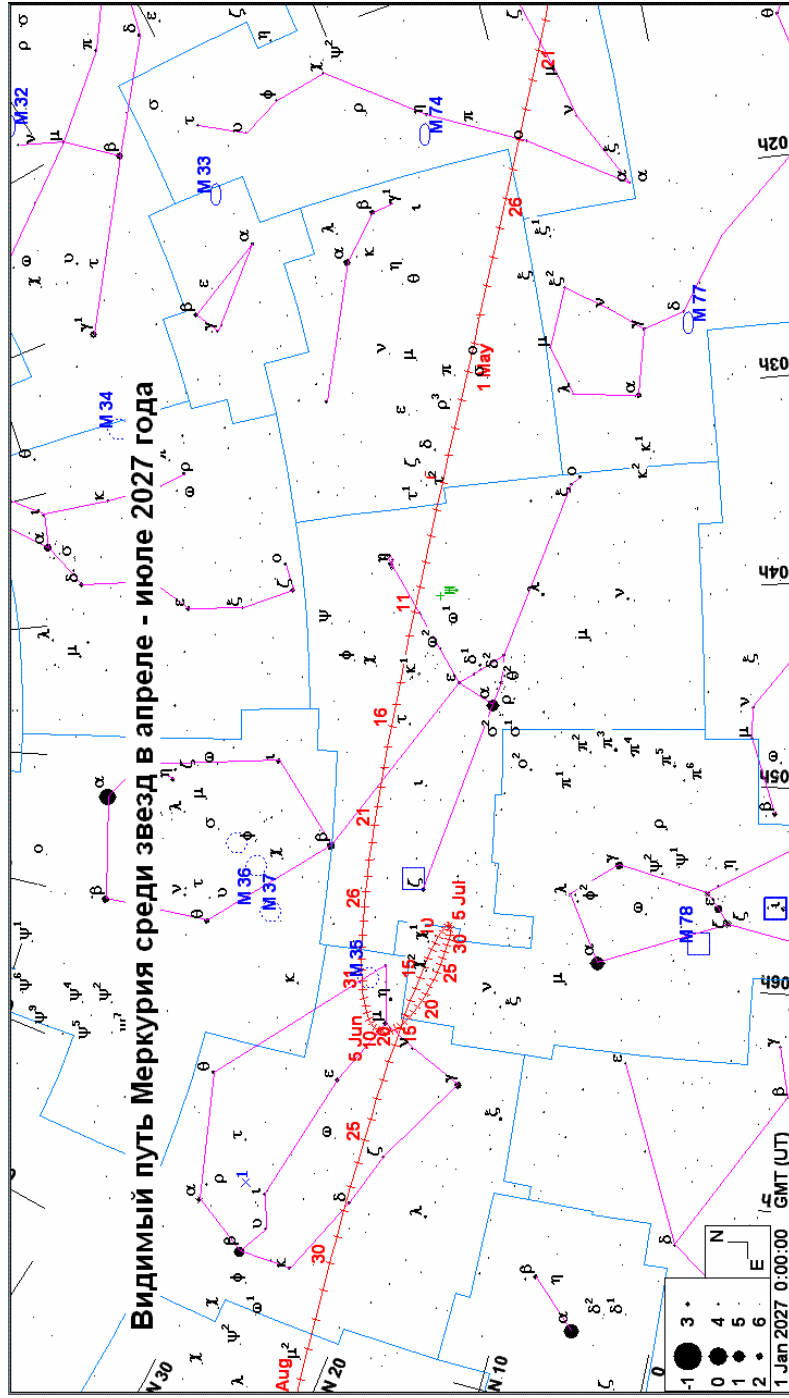


Путь планеты во время вечерней видимости

МЕРКУРИЙ

Дата													Дата													
год мес д			Пр. восх.			Склонение			Расстояние			dia	mag			Elong	I	фаза Limb			De	Pr	год мес д			
			h m s	o ' "			АУ	"				"				о	о				о	о				
2027	Jan	1	18 42 0.70	-24 48 27.5	1.440429	4.6	-1.3	1.8w	4	99.9	9.5	-4	0	2027	Jul	3	5 48 17.19	18 46 7.6	0.625580	10.7	2.8	14.1w	146	8.7	69.9	9 353
2027	Jan	4	19 3 16.37	-24 32 35.0	1.431764	4.7	-1.3	2.3e	5	99.8	318.1	-4	358	2027	Jul	6	5 47 57.08	19 0 25.9	0.667084	10.0	2.0	16.8w	136	13.9	74.0	9 353
2027	Jan	7	19 24 37.33	-24 3 14.6	1.417597	4.7	-1.2	3.8e	8	99.5	294.1	-4	355	2027	Jul	9	5 50 45.20	19 25 20.1	0.716813	9.3	1.4	18.8w	127	20.0	77.3	8 354
2027	Jan	10	19 45 59.27	-23 20 6.6	1.397558	4.8	-1.2	5.5e	13	98.8	282.2	-4	353	2027	Jul	12	5 56 49.85	19 57 57.3	0.773885	8.6	0.8	20.1w	117	27.0	80.2	8 354
2027	Jan	13	20 7 16.84	-22 22 59.0	1.371160	4.9	-1.1	7.3e	18	97.7	274.6	-5	350	2027	Jul	15	6 6 12.93	20 34 40.7	0.837274	8.0	0.4	20.7w	108	34.9	83.0	8 355
2027	Jan	16	20 28 23.09	-21 11 51.8	1.337808	5.0	-1.0	9.2e	23	95.9	268.9	-5	348	2027	Jul	18	6 18 52.47	21 11 17.4	0.905703	7.4	0.0	20.5w	97	43.6	86.0	7 357
2027	Jan	19	20 49 8.50	-19 47 5.1	1.296819	5.2	-1.0	11.2e	30	93.3	264.3	-5	346	2027	Jul	21	6 34 43.18	21 43 2.9	0.977481	6.8	-0.4	19.7w	87	53.0	89.3	7 359
2027	Jan	22	21 9 19.45	-18 9 31.3	1.247493	5.4	-1.0	13.1e	38	89.6	260.3	-5	343	2027	Jul	24	6 53 34.75	22 4 48.1	1.050338	6.4	-0.7	18.1w	75	63.0	92.9	6 1
2027	Jan	25	21 28 35.91	-16 20 55.6	1.189266	5.6	-0.9	15.0e	47	84.2	256.9	-6	342	2027	Jul	27	7 15 8.55	22 11 18.9	1.121349	6.0	-0.9	16.0w	63	73.0	96.9	6 4
2027	Jan	28	21 46 28.22	-14 24 26.2	1.121996	6.0	-0.9	16.6e	58	76.8	253.7	-6	340	2027	Jul	30	7 38 54.28	21 57 56.3	1.187115	5.6	-1.1	13.4w	50	82.3	101.5	6 7
2027	Jan	31	22 2 13.66	-12 25 11.7	1.046422	6.4	-0.8	17.8e	70	66.9	250.9	-7	339	2027	Aug	2	8 4 9.58	21 21 34.1	1.244299	5.4	-1.4	10.5w	37	90.0	107.1	6 9
2027	Feb	3	22 14 54.76	-10 30 54.1	0.964747	6.9	-0.7	18.3e	85	54.7	248.1	-7	337	2027	Aug	5	8 30 5.20	20 21 28.3	1.290386	5.2	-1.6	7.3w	24	95.5	114.6	5 12
2027	Feb	6	22 23 23.17	- 8 51 49.5	0.881069	7.6	-0.3	17.8e	101	40.6	245.3	-8	337	2027	Aug	8	8 55 54.33	18 59 23.3	1.324236	5.0	-1.9	4.1w	13	98.7	128.7	5 15
2027	Feb	9	22 26 33.77	- 7 39 38.3	0.801282	8.3	0.4	16.1e	118	26.3	241.8	-9	336	2027	Aug	11	9 21 0.95	17 18 50.0	1.346116	5.0	-2.1	1.8e	5	99.8	181.8	5 18
2027	Feb	12	22 23 51.07	- 7 4 40.7	0.732157	9.1	1.6	12.8e	137	13.7	236.5	-9	337	2027	Aug	14	9 45 3.11	15 24 1.9	1.357244	4.9	-1.8	3.2e	9	99.3	256.3	5 20
2027	Feb	15	22 15 41.50	- 7 11 51.3	0.679801	9.8	3.3	8.2e	155	4.8	225.1	-10	337	2027	Aug	17	10 7 51.26	13 19 4.0	1.359244	4.9	-1.4	6.0e	17	97.9	274.2	5 22
2027	Feb	18	22 3 51.43	- 7 56 58.9	0.648045	10.3	5.1	4.0e	169	1.0	181.4	-11	338	2027	Aug	20	10 29 24.42	11 7 26.5	1.353720	4.9	-1.1	8.7e	23	95.9	281.4	5 24
2027	Feb	21	21 51 5.25	- 9 6 50.9	0.637477	10.5	4.4	6.1w	163	2.2	107.0	-11	339	2027	Aug	23	10 49 46.52	8 51 58.6	1.342054	5.0	-0.8	11.2e	29	93.6	285.7	5 25
2027	Feb	24	21 40 5.86	-10 24 31.7	0.645662	10.3	2.9	11.4w	149	7.2	87.8	-10	340	2027	Aug	26	11 9 3.68	6 34 52.4	1.325335	5.0	-0.6	13.6e	35	91.1	288.5	5 26
2027	Feb	27	21 32 40.50	-11 35 58.9	0.668425	10.0	1.8	16.3w	135	14.4	81.1	-10	341	2027	Aug	29	11 27 22.53	4 17 51.1	1.304375	5.1	-0.5	15.8e	40	88.6	290.7	5 27
2027	Mar	2	21 29 27.88	-12 32 59.8	0.701335	9.5	1.1	20.2w	124	22.3	77.5	-9	341	2027	Sep	1	11 44 49.25	2 2 16.8	1.279749	5.2	-0.3	17.7e	44	86.0	292.2	5 28
2027	Mar	5	21 30 18.06	-13 12 16.6	0.740640	9.0	0.7	23.2w	114	29.9	75.0	-8	341	2027	Sep	4	12 1 29.03	- 0 10 42.7	1.251852	5.3	-0.2	19.5e	48	83.3	293.5	5 28
2027	Mar	8	21 34 38.29	-13 33 20.2	0.783549	8.5	0.4	25.3w	105	37.0	73.0	-8	341	2027	Sep	7	12 17 25.78	- 2 20 9.0	1.220944	5.5	-0.2	21.1e	52	80.6	294.4	5 28
2027	Mar	11	21 41 50.53	-13 36 54.6	0.828144	8.1	0.3	26.6w	98	43.3	71.2	-7	340	2027	Sep	10	12 32 41.89	- 4 25 8.6	1.187188	5.6	-0.1	22.6e	56	77.7	295.2	5 29
2027	Mar	14	21 51 19.93	-13 24 6.2	0.873175	7.7	0.2	27.4w	91	49.0	69.6	-7	339	2027	Sep	13	12 47 18.06	- 6 24 48.9	1.150675	5.8	-0.1	23.8e	60	74.6	295.7	5 29
2027	Mar	17	22 2 37.69	-12 56 1.5	0.917858	7.3	0.1	27.6w	85	53.9	68.0	-6	339	2027	Sep	16	13 1 12.84	- 8 18 14.1	1.111461	6.0	0.0	24.8e	65	71.3	296.1	5 29
2027	Mar	20	22 15 21.30	-12 13 40.1	0.961716	6.9	0.1	27.5w	80	58.4	66.5	-6	338	2027	Sep	19	13 14 22.17	-10 4 20.8	1.069591	6.2	0.0	25.6e	69	67.6	296.4	5 28
2027	Mar	23	22 29 13.79	-11 17 53.4	1.004462	6.7	0.0	27.0w	76	62.5	65.2	-5	336	2027	Sep	22	13 26 38.61	-11 41 52.9	1.025142	6.5	0.0	26.1e	74	63.5	296.7	5 28
2027	Mar	26	22 44 2.73	-10 9 26.2	1.045913	6.4	0.0	26.2w	71	66.2	63.9	-5	335	2027	Sep	25	13 37 50.35	-13 9 13.5	0.978269	6.8	0.0	26.3e	80	58.7	296.9	5 28
2027	Mar	29	22 59 39.41	- 8 48 57.9	1.085938	6.2	-0.1	25.1w	67	69.7	62.7	-4	335	2027	Sep	28	13 47 39.83	-14 24 15.5	0.929280	7.2	0.1	26.0e	86	53.3	297.1	5 27
2027	Apr	1	23 15 58.14	- 7 17 4.6	1.124412	5.9	-0.1	23.7w	62	73.1	61.6	-4	334	2027	Oct	1	13 55 42.16	-15 24 7.0	0.878756	7.6	0.1	25.3e	94	46.9	297.5	5 27
2027	Apr	4	23 32 55.83	- 5 34 19.7	1.161180	5.8	-0.2	22.2w	58	76.4	60.7	-3	333	2027	Oct	4	14 1 23.86	-16 4 54.0	0.827724	8.1	0.3	23.9e	102	39.5	298.0	5 27
2027	Apr	7	23 50 31.60	- 3 41 15.9	1.196016	5.6	-0.3	20.4w	53	79.7	60.0	-3	332	2027	Oct	7	14 4 3.34	-16 21 23.3	0.777916	8.6	0.6	21.7e	112	31.1	298.9	5 27
2027	Apr	10	0 8 46.52	- 1 38 27.5	1.228579	5.4	-0.4	18.3w	49	83.1	59.4	-3	332	2027	Oct	10	14 2 56.23	-16 7 4.7	0.732092	9.1	1.1	18.4e	124	21.8	300.3	5 27
2027	Apr	13	0 27 43.41	0 33 26.6	1.258366	5.3	-0.6	16.0w	43	86.4	58.9	-2	331	2027	Oct	13	13 57 30.93	-15 15 22.7	0.694353	9.6	2.0	13.9e	139	12.4	302.7	5 27
2027	Apr	16	0 47 26.57	2 53 38.4	1.284647	5.2	-0.8	13.5w	37	89.8	58.6	-2	331	2027	Oct	16	13 47 58.48	-13 43 20.9	0.670162	10.0	3.5	8.3e	156	4.5	307.6	5 27
2027	Apr	19	1 8 1.34	5 21 2.5	1.306402	5.1	-1.0	10.8w	30	93.1	58.5	-2	332	2027	Oct	19	13 35 47.27	-11 38 20.8	0.665492	10.0	5.9	2.1e	174	0.3	338.4	4 28
2027	Apr	22	1 29 33.28	7 54 5.6	1.322266	5.1	-1.3	7.8w	23	96.2	58.3	-2	332	2027												





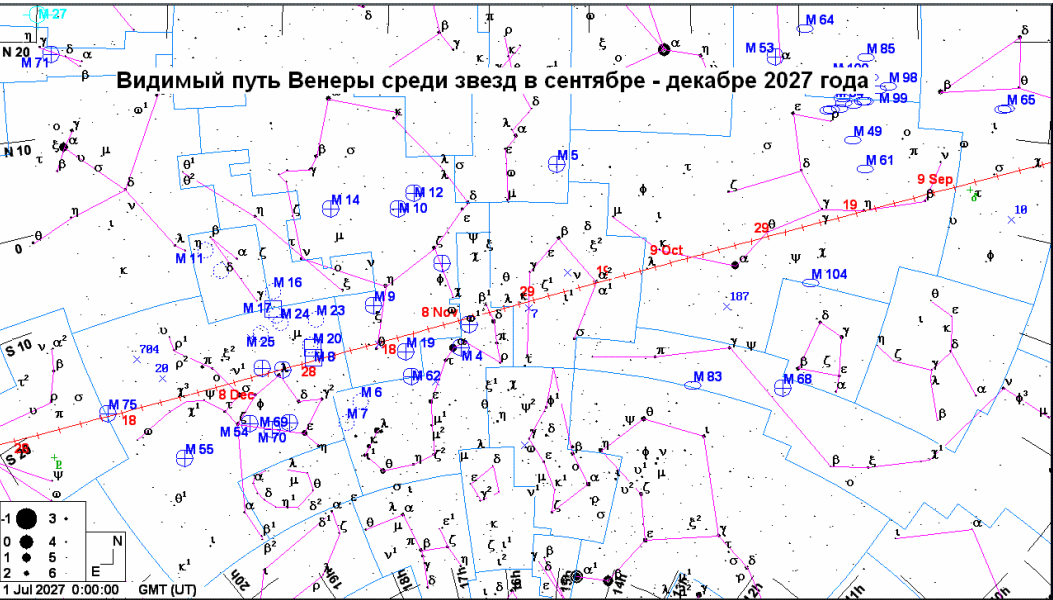
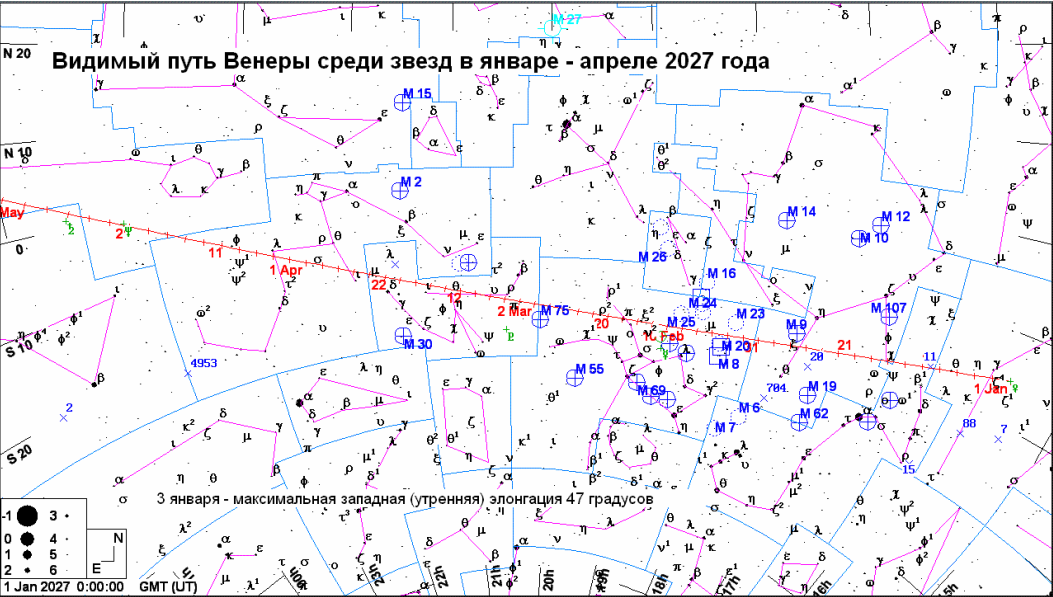
Видимый путь Марса среди звезд в январе - сентябре 2027 года

11 января - стояние с переходом к попятному движению
 19 февраля - противостояние с Солнцем
 2 апреля - стояние с переходом к прямому движению

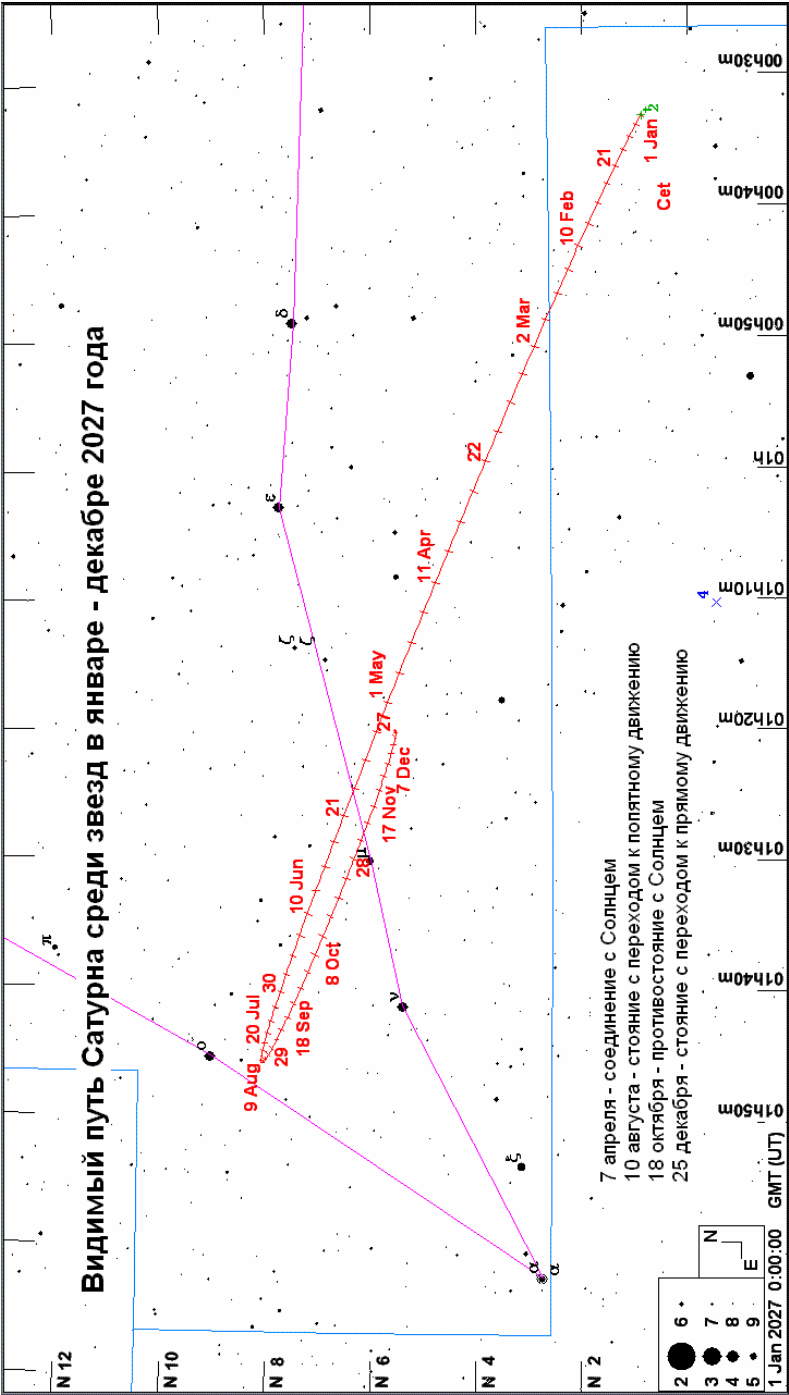
1 Jan 2027 0:00:00 GMT (UT)

Дата		Пр. восх			Склонение			Расстояние		dia	mag	Elong	I	фаза	Limb	De	Pr
год	мес	д	h	m	s	о	'	"	AU	"		о			о		о
2027	Jan	1	15	26	24.72	-15	16	22.1	0.653362	25.7	-4.6	46.9w	91	48.7	107.5	-2	15
2027	Jan	6	15	46	56.52	-16	27	47.5	0.691360	24.3	-4.5	46.9w	88	51.4	105.8	-2	13
2027	Jan	11	16	8	19.08	-17	35	29.6	0.729316	23.1	-4.5	46.8w	86	53.9	103.9	-2	11
2027	Jan	16	16	30	27.77	-18	37	17.5	0.767159	21.9	-4.4	46.5w	83	56.3	101.7	-2	10
2027	Jan	21	16	53	18.34	-19	31	14.0	0.804841	20.9	-4.4	46.1w	80	58.5	99.5	-2	7
2027	Jan	26	17	46	46.65	-20	15	33.2	0.842305	20.0	-4.4	45.6w	78	60.7	97.0	-2	5
2027	Jan	31	17	40	47.60	-20	48	40.4	0.879463	19.1	-4.3	45.0w	75	62.7	94.5	-2	3
2027	Feb	5	18	5	14.85	-21	9	17.3	0.916242	18.4	-4.3	44.4w	73	64.7	91.8	-2	1
2027	Feb	10	18	30	1.42	-21	16	24.7	0.952602	17.7	-4.2	43.7w	71	66.5	89.1	-1	358
2027	Feb	15	18	55	0.24	-21	9	23.1	0.988528	17.0	-4.2	42.9w	68	68.3	86.4	-1	356
2027	Feb	20	19	20	4.63	-20	47	51.2	1.024018	16.4	-4.1	42.1w	66	70.1	83.7	-1	353
2027	Feb	25	19	45	8.53	-20	11	44.3	1.059046	15.9	-4.1	41.2w	64	71.7	81.0	-1	351
2027	Mar	2	20	10	6.14	-19	21	16.0	1.093556	15.4	-4.1	40.3w	62	73.3	78.5	-1	349
2027	Mar	7	20	34	52.15	-18	16	58.0	1.127496	14.9	-4.1	39.4w	60	74.9	76.1	-1	347
2027	Mar	12	20	59	22.34	-16	59	38.1	1.160841	14.5	-4.0	38.4w	58	76.3	73.8	0	345
2027	Mar	17	21	23	33.87	-15	30	15.6	1.193588	14.1	-4.0	37.4w	56	77.8	71.8	0	343
2027	Mar	22	21	47	25.56	-13	49	56.2	1.225743	13.7	-4.0	36.4w	54	79.1	69.9	0	342
2027	Mar	27	22	10	57.64	-11	59	50.6	1.257280	13.4	-3.9	35.3w	52	80.5	68.3	0	340
2027	Apr	1	22	34	11.18	-10	1	15.5	1.288141	13.1	-3.9	34.2w	51	81.8	66.9	0	339
2027	Apr	6	22	57	7.98	-7	55	32.5	1.318274	12.8	-3.9	33.1w	49	83.0	65.7	0	338
2027	Apr	11	23	19	50.53	-5	44	6.1	1.347643	12.5	-3.9	32.0w	47	84.2	64.9	0	338
2027	Apr	16	23	42	22.03	-3	28	20.6	1.376238	12.2	-3.9	30.9w	45	85.4	64.2	0	337
2027	Apr	21	0	4	46.49	-1	9	37.7	1.404053	12.0	-3.9	29.7w	43	86.5	63.9	0	337
2027	Apr	26	0	27	8.42	-1	10	41.5	1.431051	11.8	-3.8	28.5w	41	87.6	63.8	0	337
2027	May	1	0	49	32.39	-3	31	13.5	1.457165	11.5	-3.8	27.3w	39	88.6	63.9	0	337
2027	May	6	1	12	2.83	-5	50	32.7	1.482330	11.3	-3.8	26.1w	38	89.6	64.4	0	3

МАРС

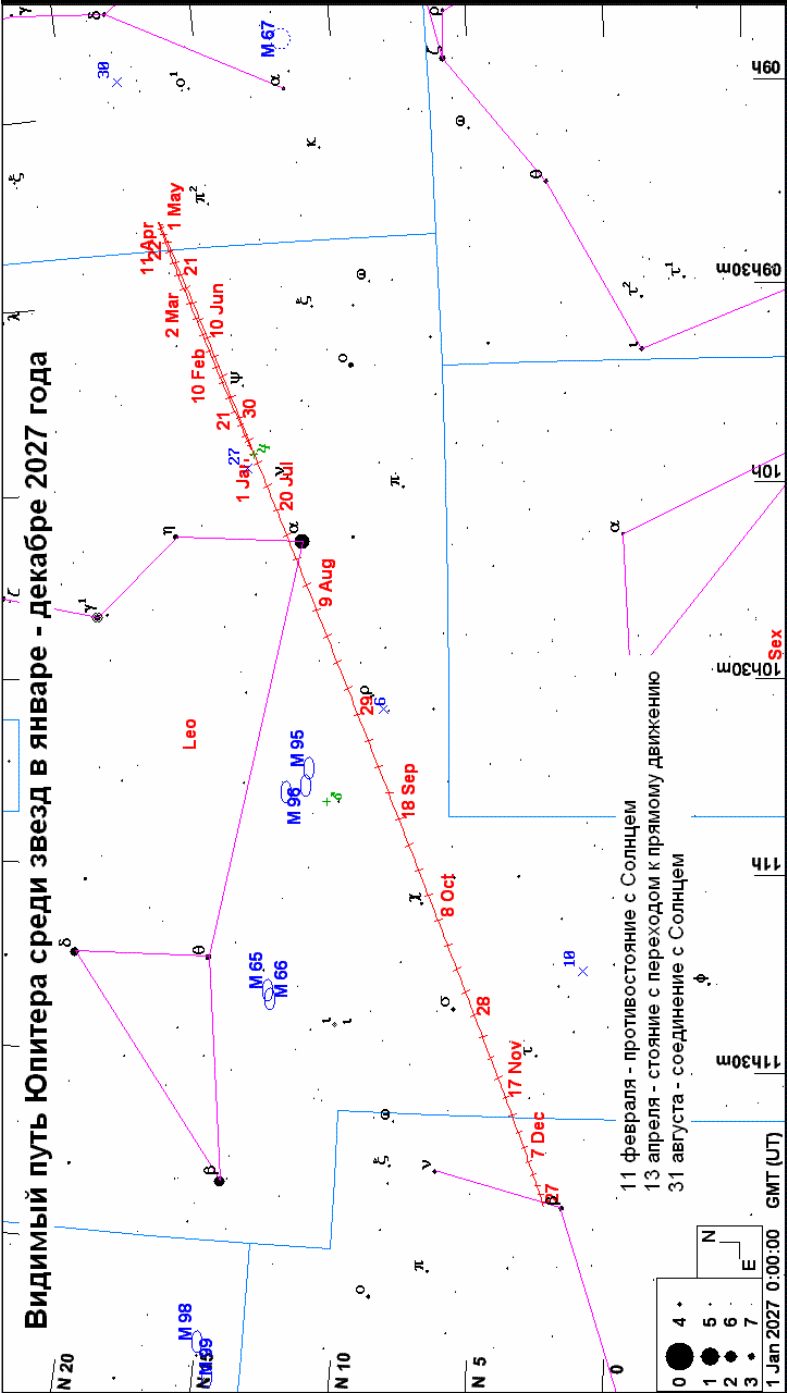


Дата			Пр. восх.			Склонение			Расстояние	dia	mag	Elong	I	фаза	Limb	De	Pr
год	мес	д	h	m	s	о	'	"	AU	"		о	о	о	о	о	о
2027	Jan	1	10	49	14.15	11	2	32.7	0.913817	10.2	-0.1	120.4w	31	92.9	110.4	23	16
2027	Jan	6	10	51	7.00	11	2	28.4	0.875069	10.7	-0.3	125.1w	29	93.6	109.9	23	16
2027	Jan	11	10	51	52.06	11	9	19.5	0.838384	11.2	-0.4	130.0w	27	94.5	109.4	22	16
2027	Jan	16	10	51	24.96	11	23	19.4	0.804248	11.6	-0.5	135.3w	25	95.4	108.5	22	16
2027	Jan	21	10	49	42.80	11	44	25.5	0.773153	12.1	-0.6	140.8w	22	96.3	107.5	22	16
2027	Jan	26	10	46	44.24	12	12	19.0	0.745579	12.6	-0.8	146.7w	19	97.3	106.0	22	15
2027	Jan	31	10	42	29.98	12	46	21.9	0.722043	13.0	-0.9	152.9w	16	98.1	103.8	21	15
2027	Feb	5	10	37	4.75	13	25	24.4	0.703088	13.3	-1.0	159.3w	12	98.9	100.3	21	14
2027	Feb	10	10	30	38.55	14	7	42.2	0.689203	13.6	-1.1	165.8w	8	99.5	93.8	21	13
2027	Feb	15	10	23	26.70	14	51	5.8	0.680751	13.7	-1.2	172.1w	5	99.8	77.1	20	12
2027	Feb	20	10	15	48.53	15	33	17.6	0.677918	13.8	-1.2	175.5w	3	99.9	14.7	20	10
2027	Feb	25	10	8	5.01	16	12	12.3	0.680728	13.7	-1.2	171.3e	5	99.8	320.9	20	9
2027	Mar	2	10	0	37.46	16	46	4.3	0.689093	13.6	-1.1	165.0e	9	99.4	306.6	20	8
2027	Mar	7	9	53	46.42	17	13	31.8	0.702791	13.3	-1.0	158.5e	13	98.8	300.6	19	7
2027	Mar	12	9	47	49.57	17	33	44.1	0.721448	13.0	-0.9	152.2e	16	98.0	297.2	19	6
2027	Mar	17	9	42	59.89	17	46	23.4	0.744563	12.6	-0.7	146.1e	19	97.1	295.0	19	5
2027	Mar	22	9	39	24.65	17	51	41.7	0.771571	12.1	-0.6	140.3e	22	96.2	293.4	19	5
2027	Mar	27	9	37	6.16	17	50	8.2	0.801935	11.7	-0.5	134.9e	25	95.3	292.3	19	4
2027	Apr	1	9	36	3.74	17	42	15.1	0.835178	11.2	-0.4	129.8e	27	94.4	291.5	19	4
2027	Apr	6	9	36	14.81	17	28	32.6	0.870838	10.7	-0.2	125.0e	30	93.5	290.9	19	4
2027	Apr	11	9	37	35.26	17	9	29.3	0.908465	10.3	-0.1	120.5e	31	92.7	290.6	20	4
2027	Apr	16	9	39	59.61	16	45	33.3	0.947621	9.9	0.0	116.3e	33	92.0	290.3	20	5
2027	Apr	21	9	43	21.42	16	17	12.3	0.987929	9.5	0.1	112.3e	34	91.4	290.2	20	5
2027	Apr	26	9	47	34.37	15	44	49.3	1.029105	9.1	0.2	108.6e	35	90.8	290.2	21	6
2027	May	1	9	52	33.01	15	8	40.3	1.070915	8.7	0.3	105.1e	36	90.4	290.3	21	7
2027	May	6	9	58	12.54	14	28	57.2	1.113134	8.4	0.4	101.7e	37	90.0	290.5	22	8
2027	May	11	10	4	28.60	13	45	50.8	1.155535	8.1	0.5	98.6e	37	89.7	290.7	22	9
2027	May	16	10	11	16.81	12	59	33.6	1.197901	7.8	0.6	95.6e	38	89.5	290.9	23	10
2027	May	21	10	18	33.07	12	10	18.8	1.240075	7.5	0.6	92.7e	38	89.3	291.1	23	11
2027	May	26	10	26	14.01	11	18	16.7	1.281957	7.3	0.7	90.0e	38	89.2	291.4	24	12
2027	May	31	10	34	17.07	10	23	34.5	1.323457	7.1	0.8	87.4e	38	89.2	291.7	24	14
2027	Jun	5	10	42	40.21	9	26	19.0	1.364474	6.9	0.8	84.8e	38	89.2	291.9	25	15
2027	Jun	10	10	51	21.58	8	26	37.9	1.404885	6.7	0.9	82.4e	38	89.2	292.2	25	16
2027	Jun	15	11	0	19.23	7	24	42.7	1.444584	6.5	0.9	80.1e	38	89.3	292.4	25	18
2027	Jun	20	11	9	31.52	6	20	44.2	1.483520	6.3	1.0	77.8e	38	89.4	292.7	26	19
2027	Jun	25	11	18	57.32	5	14	51.7	1.521669	6.2	1.0	75.6e	38	89.5	292.8	26	21
2027	Jun	30	11	28	35.97	4	7	12.9	1.559001	6.0	1.1	73.5e	37	89.7	293.0	26	22
2027	Jul	5	11	38	27.08	2	57	55.8	1.595466	5.9	1.1	71.5e	37	89.9	293.1	26	24
2027	Jul	10	11	48	30.21	1	47	10.7	1.630985	5.7	1.1	69.5e	37	90.1	293.2	26	25
2027	Jul	15	11	58	44.78	0	35	10.8	1.665516	5.6	1.2	67.5e	36	90.3	293.3	26	27
2027	Jul	20	12	9	10.46	-	0	37	51.9	5.5	1.2	65.6e	36	90.5	293.3	26	28
2027	Jul	25	12	19	47.31	-	1	51	46.5	5.4	1.2	63.8e	35	90.8	293.2	26	30
2027	Jul	30	12	30	35.63	-	3	6	22.7	5.3	1.2	62.0e	35	91.0	293.1	26	31
2027	Aug	4	12	41	35.85	-	4	21	29.2	5.2	1.3	60.2e	34	91.3	293.0	25	32
2027	Aug	9	12	52	48.20	-	5	36	51.8	5.1	1.3	58.5e	34	91.6	292.8	25	33
2027	Aug	14	13	4	12.81	-	6	52	14.5	5.1	1.3	56.8e	33	91.9	292.5	24	34
2027	Aug	19	13	15	50.02	-	8	7	22.6	5.0	1.3	55.1e	33	92.1	292.2	24	35
2027	Aug	24	13	27	40.42	-	9	22	1.7	4.9	1.3	53.5e	32	92.4	291.8	23	36
2027	Aug	29	13	39	44.76	-	10	35	57.2	4.8	1.3	51.9e	31	92.7	291.3	22	37
2027	Sep	3	13	52	3.77	-	11	48	52.7	4.8	1.3	50.3e	31	93.0	290.8	21	38
2027	Sep	8	14	4	37.86	-	13	0	29.2	4.7	1.3	48.8e	30	93.3	290.2	20	38
2027	Sep	13	14	17	27.36	-	14	10	26.8	4.7	1.4	47.2e	29	93.6	289.5	19	38
2027	Sep	18	14	30	32.73	-	15	18	26.3	4.6	1.4	45.7e	29	93.9	288.8	18	39
2027	Sep	23	14	43	54.56	-	16	24	8.5	4.6	1.4	44.2e	28	94.2	288.0	17	39
2027	Sep	28	14	57	33.50	-	17	27	13.5	4.5	1.4	42.8e	27	94.5	287.1	16	39
2027	Oct	3	15	11	29.92	-	18	27	19.4	4.5	1.4	41.3e	26	94.8	286.2	14	39
2027	Oct	8	15	25	43.79	-	19	24	3.1	4.5	1.3	39.9e	26	95.1	285.1	13	38
2027	Oct	13	15	40	14.92	-	20	17	1.6	4.4	1.3	38.5e	25	95.3	284.1	12	38
2027	Oct	18	15	55	3.14	-	21	5	52.7	4.4	1.3	37.1e	24	95.6	282.9	10	37
2027	Oct	23	16	10	8.27	-	21	50	14.7	4.4	1.3	35.7e	23	95.9	281.7	9	36
2027	Oct	28	16	25	29.96	-	22	29	45.9	4.3	1.3	34.3e	23	96.1	280.4	7	35
2027	Nov	2	16	41	7.39	-	23	4	4.3	4.3	1.3	33.0e	22	96.4	279.0	6	34
2027	Nov	7	16	56	59.30	-	23	32	49.5	4.3	1.3	31.6e	21	96.6	277.7	4	33
2027	Nov	12	17	13	4.23	-	23	55	42.9	4.3	1.3	30.3e	20	96.9	276.2	2	31
2027	Nov	17	17	29	20.67	-	24	12	28.2	4.2	1.3	29.0e	20	97.1	274.8	1	30
2027	Nov	22	17	45	47.13	-	24	22	51.2	4.2	1.3	27.7e	19	97.3	273.3	-1	28
2027	Nov	27	18	2	21.91	-	24	26	40.0	4.2	1.3	26.4e	18	97.5	271.8	-3	26
2027	Dec	2	18	19	2.90	-	24	23	45.5	4.2	1.3	25.2e	17	97.8	270.3	-4	24
2027	Dec	7	18	35	47.77	-	24	14	2.7	4.2	1.3	23.9e	16	98.0	268.8	-6	22
2027	Dec	12	18	52	34.26	-	23	57	30.0	4.1	1.2	22.7e	16	98.1	267.4	-8	20
2027	Dec	17	19	9	20.32	-	23	34	9.3	4.1	1.2	21.5e	15	98.3	265.9	-9	18
2027	Dec	22	19	26	4.20	-	23	4	4.8	4.1	1.2	20.3e	14	98.5	264.6	-11	16
2027	Dec	27	19	42	44.14	-	22	27	24.4	4.1	1.2	19.1e	13	98.7	263.3	-12	13



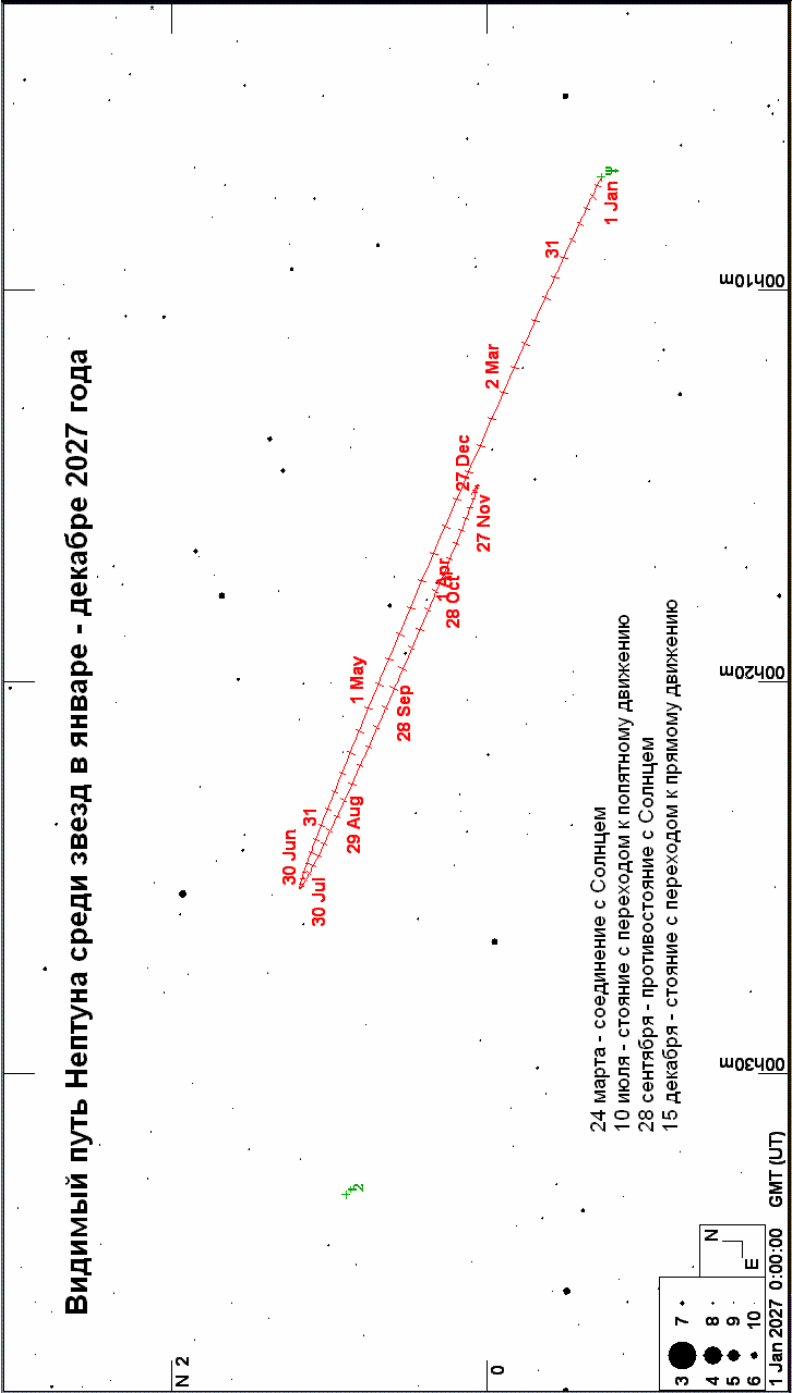
ЮПИТЕР

Дата			Пр. восх.			Склонение			Расстояние	dia	mag	Elong	I	фаза	Limb	De	Pr
год	мес	д	h	m	s	о	'	"	АУ	"		о	о		о	о	о
2027	Jan	1	9	54	30.77	13	42	21.0	4.606865	42.7	-2.3	133.9w	8	99.6	109.0	0	22
2027	Jan	6	9	53	13.03	13	50	23.9	4.552925	43.3	-2.3	139.3w	7	99.6	108.7	0	22
2027	Jan	11	9	51	38.59	13	59	49.0	4.504741	43.7	-2.3	144.8w	6	99.7	108.3	0	22
2027	Jan	16	9	49	48.89	14	10	26.4	4.462853	44.1	-2.3	150.4w	5	99.8	107.9	0	22
2027	Jan	21	9	47	45.76	14	22	4.2	4.427714	44.5	-2.4	156.0w	4	99.9	107.2	0	22
2027	Jan	26	9	45	31.20	14	34	30.0	4.399682	44.8	-2.4	161.7w	3	99.9	106.3	0	22
2027	Jan	31	9	43	7.40	14	47	30.6	4.379080	45.0	-2.4	167.4w	2	100.0	104.6	0	21
2027	Feb	5	9	40	36.86	15	0	51.9	4.366188	45.1	-2.4	173.0w	1	100.0	100.5	0	21
2027	Feb	10	9	38	2.40	15	14	18.2	4.361186	45.2	-2.4	178.4w	0	100.0	66.6	0	21
2027	Feb	15	9	35	26.99	15	27	33.9	4.364126	45.1	-2.4	175.3e	1	100.0	301.8	0	21
2027	Feb	20	9	32	53.56	15	40	24.5	4.374926	45.0	-2.4	169.7e	2	100.0	294.4	0	21
2027	Feb	25	9	30	24.83	15	52	37.4	4.393418	44.8	-2.4	164.0e	3	99.9	292.2	0	21
2027	Mar	2	9	28	3.40	16	4	1.2	4.419398	44.6	-2.4	158.4e	4	99.9	291.0	0	20
2027	Mar	7	9	25	51.77	16	14	25.3	4.452593	44.2	-2.3	152.9e	5	99.8	290.2	0	20
2027	Mar	12	9	23	52.28	16	23	40.6	4.492628	43.8	-2.3	147.4e	6	99.7	289.7	0	20
2027	Mar	17	9	22	6.94	16	31	39.5	4.539028	43.4	-2.3	141.9e	7	99.7	289.2	0	20
2027	Mar	22	9	20	37.30	16	38	17.2	4.591253	42.9	-2.3	136.6e	7	99.6	288.9	0	20
2027	Mar	27	9	19	24.48	16	43	30.8	4.648767	42.4	-2.2	131.3e	8	99.5	288.6	0	20
2027	Apr	1	9	18	29.37	16	47	18.3	4.711043	41.8	-2.2	126.2e	9	99.4	288.4	0	20
2027	Apr	6	9	17	52.64	16	49	38.2	4.777523	41.2	-2.2	121.1e	9	99.4	288.2	0	20
2027	Apr	11	9	17	34.70	16	50	29.8	4.847608	40.6	-2.1	116.1e	10	99.3	288.1	0	20
2027	Apr	16	9	17	35.61	16	49	53.7	4.920667	40.0	-2.1	111.2e	10	99.2	288.0	0	20
2027	Apr	21	9	17	55.09	16	47	52.1	4.996096	39.4	-2.1	106.4e	10	99.2	287.9	0	20
2027	Apr	26	9	18	32.68	16	44	27.2	5.073355	38.8	-2.0	101.7e	11	99.2	287.9	0	20
2027	May	1	9	19	27.89	16	39	41.0	5.151930	38.2	-2.0	97.1e	11	99.1	287.8	0	20
2027	May	6	9	20	40.16	16	33	35.3	5.231300	37.6	-2.0	92.5e	11	99.1	287.8	0	20
2027	May	11	9	22	8.81	16	26	12.3	5.310929	37.1	-1.9	88.1e	11	99.1	287.9	0	20
2027	May	16	9	23	52.99	16	17	35.0	5.390297	36.5	-1.9	83.7e	11	99.1	287.9	0	20
2027	May	21	9	25	51.73	16	7	46.5	5.468955	36.0	-1.9	79.4e	11	99.1	287.9	0	20
2027	May	26	9	28	4.13	15	56	49.9	5.546510	35.5	-1.8	75.1e	10	99.2	288.0	0	20
2027	May	31	9	30	29.38	15	44	47.3	5.622582	35.0	-1.8	70.9e	10	99.2	288.1	0	21
2027	Jun	5	9	33	6.64	15	31	40.8	5.696784	34.6	-1.8	66.8e	10	99.2	288.2	0	21
2027	Jun	10	9	35	55.07	15	17	33.3	5.768719	34.1	-1.7	62.7e	10	99.3	288.3	0	21
2027	Jun	15	9	38	53.70	15	2	27.9	5.838038	33.7	-1.7	58.7e	9	99.3	288.4	0	21
2027	Jun	20	9	42	1.64	14	46	27.6	5.904462	33.4	-1.7	54.8e	9	99.4	288.5	0	21
2027	Jun	25	9	45	18.08	14	29	35.1	5.967738	33.0	-1.7	50.8e	8	99.5	288.6	0	21
2027	Jun	30	9	48	42.33	14	11	52.5	6.027615	32.7	-1.7	46.9e	8	99.5	288.7	0	22
2027	Jul	5	9	52	13.68	13	53	22.2	6.083822	32.4	-1.6	43.1e	7	99.6	288.7	0	22
2027	Jul	10	9	55	51.36	13	34	7.2	6.136095	32.1	-1.6	39.2e	7	99.6	288.8	0	22
2027	Jul	15	9	59	34.59	13	14	11.0	6.184235	31.8	-1.6	35.4e	6	99.7	288.8	-1	22
2027	Jul	20	10	3	22.69	12	53	36.6	6.228093	31.6	-1.6	31.7e	6	99.8	288.9	-1	23
2027	Jul	25	10	7	15.05	12	32	26.5	6.267523	31.4	-1.6	27.9e	5	99.8	288.8	-1	23
2027	Jul	30	10	11	11.12	12	10	43.2	6.302369	31.2	-1.6	24.2e	4	99.9	288.7	-1	23
2027	Aug	4	10	15	10.33	11	48	29.7	6.332459	31.1	-1.6	20.4e	4	99.9	288.5	-1	23
2027	Aug	9	10	19	12.02	11	25	49.7	6.357648	31.0	-1.6	16.7e	3	99.9	288.1	-1	23
2027	Aug	14	10	23	15.56	11	2	46.8	6.377863	30.9	-1.6	13.0e	2	100.0	287.3	-1	23
2027	Aug	19	10	27	20.42	10	39	24.4	6.393053	30.8	-1.6	9.2e	2	100.0	285.8	-1	24
2027	Aug	24	10	31	26.12	10	15	45.3	6.403163	30.8	-1.6	5.5e	1	100.0	282.2	-1	24
2027	Aug	29	10	35	32.17	9	51	52.8	6.408120	30.7	-1.6	2.0e	0	100.0	263.9	-1	24
2027	Sep	3	10	39	38.03	9	27	50.7	6.407849	30.7	-1.6	2.2w	0	100.0	136.5	-1	24
2027	Sep	8	10	43	43.08	9	3	43.6	6.402334	30.8	-1.6	5.9w	1	100.0	121.2	-1	24
2027	Sep	13	10	47	46.77	8	39	35.4	6.391611	30.8	-1.6	9.6w	2	100.0	117.7	-1	24
2027	Sep	18	10	51	48.58	8	15	30.0	6.375729	30.9	-1.6	13.4w	2	100.0	116.3	-1	25
2027	Sep	23	10	55	48.05	7	51	31.0	6.354724	31.0	-1.6	17.2w	3	99.9	115.5	-1	25
2027	Sep	28	10	59	44.65	7	27	42.6	6.328621	31.1	-1.6	21.0w	4	99.9	115.1	-1	25
2027	Oct	3	11	3	37.75	7	4	10.0	6.297470	31.3	-1.6	24.9w	4	99.8	114.8	-1	25
2027	Oct	8	11	7	26.69	6	40	58.1	6.261396	31.5	-1.6	28.8w	5	99.8	114.6	-1	25
2027	Oct	13	11	11	10.87	6	18	11.8	6.220559	31.7	-1.6	32.7w	6	99.8	114.4	-1	25
2027	Oct	18	11	14	49.72	5	55	55.5	6.175122	31.9	-1.6	36.7w	6	99.7	114.3	-1	25
2027	Oct	23	11	18	22.65	5	34	13.8	6.125239	32.2	-1.6	40.7w	7	99.6	114.2	-1	25
2027	Oct	28	11	21	48.99	5	13	12.2	6.071067	32.4	-1.6	44.8w	7	99.6	114.1	-1	25
2027	Nov	2	11	25	7.95	4	52	56.7	6.012822	32.8	-1.6	48.9w	8	99.5	114.1	-2	25
2027	Nov	7	11	28	18.75	4	33	33.0	5.950793	33.1	-1.7	53.0w	8	99.5	114.0	-2	25
2027	Nov	12	11	31	20.69	4	15	6.5	5.885286	33.5	-1.7	57.2w	9	99.4	113.9	-2	25
2027	Nov	17	11	34	13.06	3	57	42.1	5.816612	33.9	-1.7	61.5w	9	99.4	113.9	-2	25
2027	Nov	22	11	36	55.12	3	41	25.5	5.745073	34.3	-1.7	65.8w	10	99.3	113.8	-2	25
2027	Nov	27	11	39	26.00	3	26	22.9	5.671005	34.7	-1.8	70.2w	10	99.3	113.7	-2	25
2027	Dec	2	11	41	44.78	3	12	40.5	5.594825	35.2	-1.8	74.6w	10	99.2	113.7	-2	25
2027	Dec	7	11	43	50.66	3	0	24.0	5.516997	35.7	-1.8	79.1w	10	99.2	113.6	-2	26
2027	Dec	12	11	45	42.86	2	49	38.2	5.437999	36.2	-1.9	83.7w	10	99.2	113.5	-2	26
2027	Dec	17	11	47	20.69	2	40	27.8	5.358302	36.8	-1.9	88.4w	10	99.2	113.4	-2	26
2027	Dec	22	11	48	43.37	2	32	57.8	5.278378	37.3	-1.9	93.1w	10	99.2	113.3	-2	26
2027	Dec	27	11	49	50.12	2	27	13.2	5.198761	37.9	-1.9	97.9w	10	99.2	113.2	-2	26



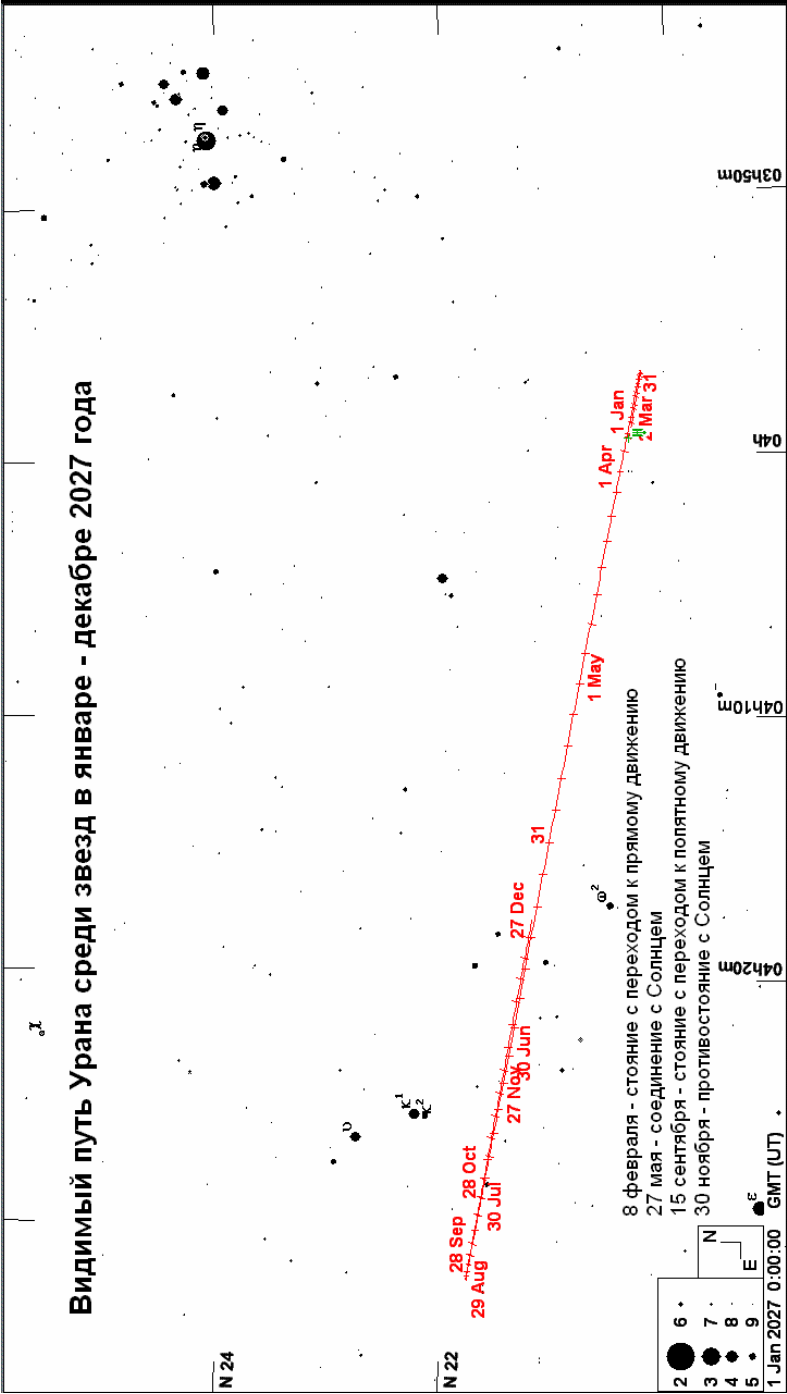
CATYPH

Дата			Пр. восх.			Склонение			Расстояние	dia	mag	Elong	I	фаза	Limb	De	Pr
год	мес	д	h	m	s	o	'	"	AU	"		o	o	o	o	o	o
2027	Jan	1	0	33	5.38	0	53	48.6	9.389495	17.7	0.8	88.0e	6	99.7	246.9	-6	3
2027	Jan	6	0	33	49.87	0	59	55.2	9.472171	17.6	0.9	83.1e	6	99.7	247.1	-6	3
2027	Jan	11	0	34	43.69	1	6	59.5	9.554014	17.4	0.9	78.3e	6	99.7	247.3	-7	3
2027	Jan	16	0	35	46.48	1	14	58.4	9.634416	17.3	0.9	73.5e	6	99.7	247.6	-7	3
2027	Jan	21	0	36	57.82	1	23	48.5	9.712817	17.2	0.9	68.7e	6	99.8	247.8	-7	3
2027	Jan	26	0	38	17.24	1	33	26.4	9.788729	17.0	0.9	64.0e	5	99.8	248.0	-7	3
2027	Jan	31	0	39	44.32	1	43	48.8	9.861696	16.9	0.9	59.3e	5	99.8	248.3	-7	3
2027	Feb	5	0	41	18.62	1	54	52.6	9.931245	16.8	0.9	54.7e	5	99.8	248.6	-8	3
2027	Feb	10	0	42	59.65	2	6	34.0	9.996917	16.7	0.9	50.1e	5	99.8	248.9	-8	3
2027	Feb	15	0	44	46.87	2	18	49.1	10.058297	16.6	0.9	45.6e	4	99.9	249.3	-8	3
2027	Feb	20	0	46	39.71	2	31	33.7	10.115039	16.5	0.8	41.0e	4	99.9	249.7	-8	3
2027	Feb	25	0	48	37.65	2	44	44.2	10.166870	16.4	0.8	36.5e	4	99.9	250.2	-8	3
2027	Mar	2	0	50	40.19	2	58	17.3	10.213519	16.3	0.8	32.1e	3	99.9	250.8	-9	3
2027	Mar	7	0	52	46.84	3	12	9.3	10.254712	16.3	0.8	27.7e	3	99.9	251.5	-9	3
2027	Mar	12	0	54	57.06	3	26	16.4	10.290205	16.2	0.8	23.3e	2	100.0	252.5	-9	3
2027	Mar	17	0	57	10.27	3	40	34.6	10.319816	16.1	0.7	18.9e	2	100.0	253.9	-9	3
2027	Mar	22	0	59	25.91	3	55	0.2	10.343438	16.1	0.7	14.6e	2	100.0	256.0	-10	3
2027	Mar	27	1	1	43.50	4	9	29.9	10.361000	16.1	0.7	10.3e	1	100.0	259.8	-10	3
2027	Apr	1	1	4	2.56	4	24	0.7	10.372423	16.1	0.7	6.2e	1	100.0	268.6	-10	3
2027	Apr	6	1	6	22.58	4	38	29.1	10.377634	16.1	0.6	2.7e	0	100.0	304.1	-11	3
2027	Apr	11	1	8	43.04	4	52	51.6	10.376602	16.1	0.6	3.6w	0	100.0	29.2	-11	3
2027	Apr	16	1	11	3.37	5	7	4.6	10.369367	16.1	0.6	7.4w	1	100.0	50.3	-11	3
2027	Apr	21	1	13	23.08	5	21	5.2	10.356026	16.1	0.6	11.6w	1	100.0	56.8	-11	3
2027	Apr	26	1	15	41.69	5	34	50.5	10.336681	16.1	0.7	15.8w	2	100.0	59.9	-12	2
2027	May	1	1	17	58.76	5	48	17.8	10.311422	16.2	0.7	20.0w	2	100.0	61.8	-12	2
2027	May	6	1	20	13.78	6	1	24.1	10.280359	16.2	0.7	24.2w	3	100.0	63.0	-12	2
2027	May	11	1	22	26.20	6	14	6.2	10.243653	16.3	0.7	28.4w	3	99.9	63.9	-12	2
2027	May	16	1	24	35.50	6	26	21.2	10.201538	16.3	0.7	32.7w	3	99.9	64.7	-13	2
2027	May	21	1	26	41.22	6	38	6.8	10.154273	16.4	0.7	36.9w	4	99.9	65.2	-13	2
2027	May	26	1	28	42.91	6	49	20.5	10.102103	16.5	0.7	41.2w	4	99.9	65.7	-13	2
2027	May	31	1	30	40.10	7	0	0.0	10.045270	16.6	0.7	45.5w	4	99.9	66.2	-13	2
2027	Jun	5	1	32	32.27	7	10	2.6	9.984052	16.7	0.6	49.7w	5	99.8	66.6	-13	2
2027	Jun	10	1	34	18.89	7	19	25.6	9.918786	16.8	0.6	54.1w	5	99.8	66.9	-14	2
2027	Jun	15	1	35	59.48	7	28	7.0	9.849871	16.9	0.6	58.4w	5	99.8	67.2	-14	2
2027	Jun	20	1	37	33.61	7	36	4.9	9.777694	17.0	0.6	62.8w	6	99.8	67.5	-14	2
2027	Jun	25	1	39	0.87	7	43	17.4	9.702631	17.2	0.6	67.1w	6	99.7	67.8	-14	2
2027	Jun	30	1	40	20.81	7	49	42.6	9.625071	17.3	0.6	71.6w	6	99.7	68.1	-14	2
2027	Jul	5	1	41	32.94	7	55	18.4	9.545447	17.5	0.6	76.0w	6	99.7	68.3	-14	2
2027	Jul	10	1	42	36.82	8	0	3.0	9.464260	17.6	0.6	80.5w	6	99.7	68.6	-14	2
2027	Jul	15	1	43	32.11	8	3	55.4	9.382034	17.8	0.5	85.0w	6	99.7	68.8	-14	2
2027	Jul	20	1	44	18.51	8	6	54.7	9.299265	17.9	0.5	89.6w	6	99.7	69.0	-14	2
2027	Jul	25	1	44	55.73	8	8	59.9	9.216443	18.1	0.5	94.2w	6	99.7	69.3	-14	2
2027	Jul	30	1	45	23.50	8	10	10.1	9.134082	18.2	0.5	98.9w	6	99.7	69.5	-14	2
2027	Aug	4	1	45	41.55	8	10	24.7	9.052745	18.4	0.5	103.6w	6	99.7	69.7	-14	2
2027	Aug	9	1	45	49.76	8	9	43.8	8.973041	18.6	0.4	108.3w	6	99.7	70.0	-14	2
2027	Aug	14	1	45	48.11	8	8	8.2	8.895553	18.7	0.4	113.1w	6	99.8	70.2	-14	2
2027	Aug	19	1	45	36.69	8	5	38.9	8.820825	18.9	0.4	118.0w	5	99.8	70.5	-14	2
2027	Aug	24	1	45	15.58	8	2	17.1	8.749395	19.0	0.3	122.9w	5	99.8	70.8	-14	2
2027	Aug	29	1	44	44.97	7	58	4.5	8.681815	19.2	0.3	127.9w	5	99.8	71.1	-14	2
2027	Sep	3	1	44	5.14	7	53	3.2	8.618671	19.3	0.3	132.9w	5	99.8	71.5	-14	2
2027	Sep	8	1	43	16.56	7	47	16.8	8.560530	19.5	0.3	137.9w	4	99.9	72.0	-14	2
2027	Sep	13	1	42	19.85	7	40	49.3	8.507883	19.6	0.2	143.0w	4	99.9	72.6	-14	2
2027	Sep	18	1	41	15.70	7	33	45.0	8.461166	19.7	0.2	148.2w	3	99.9	73.3	-14	2
2027	Sep	23	1	40	4.84	7	26	8.5	8.420788	19.8	0.2	153.3w	3	99.9	74.3	-14	2
2027	Sep	28	1	38	48.12	7	18	5.0	8.387147	19.9	0.1	158.5w	2	100.0	75.9	-14	2
2027	Oct	3	1	37	26.53	7	9	40.7	8.360619	19.9	0.1	163.8w	2	100.0	78.3	-13	2
2027	Oct	8	1	36	1.20	7	1	2.6	8.341482	20.0	0.1	169.0w	1	100.0	83.1	-13	2
2027	Oct	13	1	34	33.33	6	52	17.7	8.329908	20.0	0.1	174.0w	1	100.0	95.9	-13	2
2027	Oct	18	1	33	4.08	6	43	33.0	8.325997	20.0	0.1	177.2w	0	100.0	158.2	-13	2
2027	Oct	23	1	31	34.64	6	34	55.2	8.329806	20.0	0.1	174.0e	1	100.0	221.1	-13	2
2027	Oct	28	1	30	6.22	6	26	31.6	8.341355	20.0	0.1	168.9e	1	100.0	234.1	-13	2
2027	Nov	2	1	28	40.07	6	18	29.9	8.360582	19.9	0.2	163.7e	2	100.0	238.9	-12	2
2027	Nov	7	1	27	17.46	6	10	57.0	8.387300	19.9	0.2	158.4e	2	100.0	241.3	-12	2
2027	Nov	12	1	25	59.53	6	3	59.5	8.421231	19.8	0.2	153.0e	3	99.9	242.8	-12	2
2027	Nov	17	1	24	47.28	5	57	43.0	8.462043	19.7	0.3	147.7e	3	99.9	243.9	-12	2
2027	Nov	22	1	23	41.64	5	52	12.5	8.509383	19.6	0.3	142.4e	4	99.9	244.6	-12	2
2027	Nov	27	1	22	43.48	5	47	33.0	8.562858	19.5	0.3	137.1e	4	99.9	245.2	-12	2
2027	Dec	2	1	21	53.63	5	43	48.8	8.621986	19.3	0.4	131.8e	5	99.8	245.7	-12	2
2027	Dec	7	1	21	12.76	5	41	3.2	8.686200	19.2	0.4	126.6e	5	99.8	246.1	-12	2
2027	Dec	12	1	20	41.34	5	39	18.3	8.754902	19.0	0.4	121.4e	5	99.8	246.4	-12	2
2027	Dec	17	1	20	19.73	5	38	35.4	8.827496	18.9	0.5	116.2e	5	99.8	246.8	-12	2
2027	Dec	22	1	20	8.17	5	38	55.4	8.903406	18.7	0.5	111.1e	6	99.8	247.0	-12	2
2027	Dec	27	1	20	6.90	5	40	19.0	8.982023	18.6	0.5	106.0e	6	99.7	247.3	-12	2



УРАН

Дата			Пр. восх.			Склонение			Расстояние	dia	mag	Elong	I	фаза	Limb	De	Pr
год	мес	д	h	m	s	o	'	"	AU	"		o	o	o	o	o	o
2027	Jan	1	3	59	24.10	20	24	14.8	18.640577	3.7	5.6	142.0e	2	100.0	258.3	72	285
2027	Jan	6	3	58	47.86	20	22	35.1	18.695989	3.7	5.6	136.7e	2	100.0	258.3	72	284
2027	Jan	11	3	58	15.88	20	21	7.4	18.757085	3.7	5.6	131.5e	2	100.0	258.3	72	284
2027	Jan	16	3	57	48.51	20	19	52.9	18.823310	3.6	5.6	126.3e	2	100.0	258.2	72	284
2027	Jan	21	3	57	26.05	20	18	52.3	18.894065	3.6	5.6	121.1e	2	100.0	258.2	72	284
2027	Jan	26	3	57	8.68	20	18	6.5	18.968750	3.6	5.6	116.0e	3	99.9	258.2	72	284
2027	Jan	31	3	56	56.60	20	17	36.1	19.046790	3.6	5.7	110.8e	3	99.9	258.2	72	284
2027	Feb	5	3	56	49.95	20	17	21.6	19.127564	3.6	5.7	105.7e	3	99.9	258.2	72	284
2027	Feb	10	3	56	48.85	20	17	23.4	19.210402	3.6	5.7	100.7e	3	99.9	258.2	72	284
2027	Feb	15	3	56	53.34	20	17	41.4	19.294611	3.6	5.7	95.6e	3	99.9	258.2	72	284
2027	Feb	20	3	57	3.37	20	18	15.6	19.379512	3.5	5.7	90.6e	3	99.9	258.3	72	284
2027	Feb	25	3	57	18.86	20	19	5.7	19.464482	3.5	5.7	85.7e	3	99.9	258.3	72	284
2027	Mar	2	3	57	39.73	20	20	11.2	19.548923	3.5	5.7	80.7e	3	99.9	258.3	72	284
2027	Mar	7	3	58	5.88	20	21	31.9	19.632213	3.5	5.7	75.8e	3	99.9	258.4	72	284
2027	Mar	12	3	58	37.15	20	23	7.0	19.713721	3.5	5.7	70.9e	3	99.9	258.5	72	284
2027	Mar	17	3	59	13.33	20	24	55.6	19.792839	3.5	5.7	66.1e	3	99.9	258.5	72	285
2027	Mar	22	3	59	54.17	20	26	56.9	19.869022	3.5	5.7	61.3e	3	99.9	258.6	73	285
2027	Mar	27	4	0	39.41	20	29	10.0	19.941799	3.4	5.8	56.5e	2	100.0	258.7	73	285
2027	Apr	1	4	1	28.80	20	31	33.9	20.010709	3.4	5.8	51.8e	2	100.0	258.8	73	286
2027	Apr	6	4	2	22.09	20	34	7.6	20.075287	3.4	5.8	47.0e	2	100.0	258.8	73	286
2027	Apr	11	4	3	18.97	20	36	50.1	20.135086	3.4	5.8	42.3e	2	100.0	258.9	73	287
2027	Apr	16	4	4	19.11	20	39	40.0	20.189717	3.4	5.8	37.7e	2	100.0	259.1	73	287
2027	Apr	21	4	5	22.14	20	42	36.4	20.238877	3.4	5.8	33.0e	2	100.0	259.2	74	288
2027	Apr	26	4	6	27.76	20	45	38.0	20.282311	3.4	5.8	28.4e	1	100.0	259.3	74	288
2027	May	1	4	7	35.65	20	48	44.0	20.319766	3.4	5.8	23.8e	1	100.0	259.5	74	289
2027	May	6	4	8	45.48	20	51	53.1	20.350999	3.4	5.8	19.3e	1	100.0	259.6	74	289
2027	May	11	4	9	56.87	20	55	4.2	20.375803	3.4	5.8	14.7e	1	100.0	259.8	75	290
2027	May	16	4	11	9.46	20	58	16.3	20.394052	3.4	5.8	10.2e	1	100.0	260.1	75	290
2027	May	21	4	12	22.87	21	1	28.3	20.405695	3.4	5.8	5.6e	0	100.0	260.7	75	291
2027	May	26	4	13	36.79	21	4	39.4	20.410695	3.4	5.8	1.1e	0	100.0	265.1	75	292
2027	May	31	4	14	50.87	21	7	48.6	20.409020	3.4	5.8	3.4w	0	100.0	78.0	76	293
2027	Jun	5	4	16	4.76	21	10	55.1	20.400653	3.4	5.8	7.9w	0	100.0	79.2	76	293
2027	Jun	10	4	17	18.08	21	13	57.9	20.385637	3.4	5.8	12.4w	1	100.0	79.6	76	294
2027	Jun	15	4	18	30.46	21	16	56.1	20.364100	3.4	5.8	16.9w	1	100.0	79.8	76	295
2027	Jun	20	4	19	41.56	21	19	49.2	20.336211	3.4	5.8	21.4w	1	100.0	80.0	77	296
2027	Jun	25	4	20	51.08	21	22	36.4	20.302138	3.4	5.8	25.9w	1	100.0	80.2	77	296
2027	Jun	30	4	21	58.67	21	25	17.2	20.262053	3.4	5.8	30.4w	2	100.0	80.3	77	297
2027	Jul	5	4	23	4.00	21	27	50.8	20.216162	3.4	5.8	34.9w	2	100.0	80.5	77	298
2027	Jul	10	4	24	6.71	21	30	16.6	20.164746	3.4	5.8	39.4w	2	100.0	80.6	77	299
2027	Jul	15	4	25	6.47	21	32	34.1	20.108155	3.4	5.8	43.9w	2	100.0	80.7	78	299
2027	Jul	20	4	26	3.00	21	34	43.0	20.046744	3.4	5.8	48.5w	2	100.0	80.8	78	300
2027	Jul	25	4	26	56.02	21	36	42.7	19.980864	3.4	5.8	53.0w	2	100.0	80.9	78	301
2027	Jul	30	4	27	45.26	21	38	32.9	19.910880	3.4	5.7	57.6w	3	100.0	81.0	78	302
2027	Aug	4	4	28	30.40	21	40	13.1	19.837204	3.5	5.7	62.2w	3	99.9	81.1	78	302
2027	Aug	9	4	29	11.17	21	41	43.1	19.760329	3.5	5.7	66.9w	3	99.9	81.1	78	303
2027	Aug	14	4	29	47.35	21	43	2.5	19.680778	3.5	5.7	71.5w	3	99.9	81.2	78	303
2027	Aug	19	4	30	18.76	21	44	11.2	19.599056	3.5	5.7	76.2w	3	99.9	81.2	79	304
2027	Aug	24	4	30	45.22	21	45	8.9	19.515665	3.5	5.7	80.9w	3	99.9	81.3	79	304
2027	Aug	29	4	31	6.54	21	45	55.4	19.431129	3.5	5.7	85.6w	3	99.9	81.3	79	304
2027	Sep	3	4	31	22.56	21	46	30.5	19.346028	3.5	5.7	90.4w	3	99.9	81.4	79	305
2027	Sep	8	4	31	33.18	21	46	54.2	19.260996	3.6	5.7	95.2w	3	99.9	81.4	79	305
2027	Sep	13	4	31	38.35	21	47	6.5	19.176648	3.6	5.7	100.1w	3	99.9	81.4	79	305
2027	Sep	18	4	31	38.09	21	47	7.3	19.093569	3.6	5.7	104.9w	3	99.9	81.4	79	305
2027	Sep	23	4	31	32.40	21	46	56.6	19.012336	3.6	5.6	109.8w	3	99.9	81.4	79	305
2027	Sep	28	4	31	21.32	21	46	34.6	18.933542	3.6	5.6	114.8w	3	99.9	81.4	79	305
2027	Oct	3	4	31	4.93	21	46	1.4	18.857828	3.6	5.6	119.8w	3	99.9	81.4	79	304
2027	Oct	8	4	30	43.40	21	45	17.3	18.785824	3.6	5.6	124.8w	2	100.0	81.4	79	304
2027	Oct	13	4	30	16.99	21	44	22.6	18.718098	3.7	5.6	129.8w	2	100.0	81.4	79	304
2027	Oct	18	4	29	45.95	21	43	17.8	18.655171	3.7	5.6	134.9w	2	100.0	81.3	78	303
2027	Oct	23	4	29	10.57	21	42	3.3	18.597538	3.7	5.6	140.0w	2	100.0	81.3	78	303
2027	Oct	28	4	28	31.19	21	40	39.7	18.545702	3.7	5.6	145.1w	2	100.0	81.2	78	302
2027	Nov	2	4	27	48.20	21	39	7.7	18.500157	3.7	5.6	150.3w	1	100.0	81.2	78	302
2027	Nov	7	4	27	2.09	21	37	28.3	18.461318	3.7	5.6	155.5w	1	100.0	81.2	78	301
2027	Nov	12	4	26	13.38	21	35	42.3	18.429510	3.7	5.6	160.7w	1	100.0	81.2	78	300
2027	Nov	17	4	25	22.58	21	33	50.7	18.404989	3.7	5.6	165.9w	1	100.0	81.2	78	300
2027	Nov	22	4	24	30.21	21	31	54.7	18.387976	3.7	5.6	171.2w	0	100.0	81.3	77	299
2027	Nov	27	4	23	36.83	21	29	55.5	18.378672	3.7	5.6	176.4w	0	100.0	82.1	77	298
2027	Dec	2	4	22	43.07	21	27	54.4	18.377207	3.7	5.6	178.3e	0	100.0	257.6	77	298
2027	Dec	7	4	21	49.54	21	25	52.9	18.383595	3.7	5.6	173.0e	0	100.0	259.8	77	297
2027	Dec	12	4	20	56.85	21	23	52.4	18.397756	3.7	5.6	167.7e	1	100.0	260.0	77	297
2027	Dec	17	4	20	5.57	21	21	54.2	18.419544	3.7	5.6	162.4e	1	100.0	260.1	77	296
2027	Dec	22	4	19	16.25	21	19	59.8	18.448791	3.7	5.6	157.2e	1	100.0	260.1	77	295
2027	Dec	27	4	18	29.43	21	18	10.6	18.485284	3.7	5.6	151.9e	1	100.0	260.0	76	295



НЕПТУН

год	мес	д	Пр.	восх.	Склонение	Расстояние	dia	mag	Elong	I	фаза	Limb	De	Pr				
			h	m	s	о	'	"	о	'	о	'	о	'				
2027	Jan	1	0	7	6.41	-	0	43	53.4	30.0071119	2.4	7.9	81.4e	2	100.0	246.8	-19	317
2027	Jan	6	0	7	19.79	-	0	42	13.3	30.092278	2.4	7.9	76.4e	2	100.0	246.9	-19	317
2027	Jan	11	0	7	36.23	-	0	40	13.8	30.175675	2.4	7.9	71.3e	2	100.0	247.0	-19	317
2027	Jan	16	0	7	55.62	-	0	37	55.6	30.256654	2.4	7.9	66.3e	2	100.0	247.2	-19	317
2027	Jan	21	0	8	17.82	-	0	35	19.8	30.334611	2.4	7.9	61.4e	2	100.0	247.3	-19	316
2027	Jan	26	0	8	42.69	-	0	32	27.3	30.409014	2.4	7.9	56.4e	2	100.0	247.5	-19	316
2027	Jan	31	0	9	10.08	-	0	29	19.1	30.479358	2.4	7.9	51.4e	1	100.0	247.7	-19	316
2027	Feb	5	0	9	39.85	-	0	25	56.4	30.545124	2.4	7.9	46.5e	1	100.0	247.9	-19	316
2027	Feb	10	0	10	11.80	-	0	22	20.5	30.605817	2.4	7.9	41.6e	1	100.0	248.1	-19	316
2027	Feb	15	0	10	45.73	-	0	18	32.7	30.660997	2.4	7.9	36.7e	1	100.0	248.4	-19	316
2027	Feb	20	0	11	21.41	-	0	14	34.6	30.710309	2.4	7.9	31.8e	1	100.0	248.8	-19	316
2027	Feb	25	0	11	58.63	-	0	10	27.6	30.753470	2.4	7.9	26.9e	1	100.0	249.2	-19	316
2027	Mar	2	0	12	37.19	-	0	6	13.1	30.790207	2.4	7.9	22.1e	1	100.0	249.9	-19	316
2027	Mar	7	0	13	16.87	-	0	1	52.5	30.820260	2.4	8.0	17.3e	1	100.0	250.9	-19	316
2027	Mar	12	0	13	57.43	0	2	32.6	30.843416	2.4	8.0	12.5e	0	100.0	252.7	-19	316	
2027	Mar	17	0	14	38.62	0	7	0.4	30.859543	2.4	8.0	7.7e	0	100.0	256.6	-19	316	
2027	Mar	22	0	15	20.19	0	11	29.5	30.868598	2.4	8.0	3.1e	0	100.0	272.1	-19	316	
2027	Mar	27	0	16	1.93	0	15	58.4	30.870579	2.4	8.0	2.4w	0	100.0	31.8	-18	316	
2027	Apr	1	0	16	43.61	0	20	25.7	30.865486	2.4	8.0	6.8w	0	100.0	55.3	-18	316	
2027	Apr	6	0	17	25.01	0	24	49.8	30.853346	2.4	8.0	11.5w	0	100.0	60.0	-18	316	
2027	Apr	11	0	18	5.88	0	29	9.2	30.834250	2.4	8.0	16.2w	1	100.0	62.0	-18	316	
2027	Apr	16	0	18	45.98	0	33	22.5	30.808374	2.4	7.9	20.9w	1	100.0	63.1	-18	316	
2027	Apr	21	0	19	25.11	0	37	28.1	30.775960	2.4	7.9	25.6w	1	100.0	63.8	-18	316	
2027	Apr	26	0	20	3.06	0	41	25.0	30.737250	2.4	7.9	30.3w	1	100.0	64.3	-18	315	
2027	May	1	0	20	39.64	0	45	11.9	30.692493	2.4	7.9	35.0w	1	100.0	64.7	-18	315	
2027	May	6	0	21	14.65	0	48	47.5	30.641973	2.4	7.9	39.7w	1	100.0	65.0	-18	315	
2027	May	11	0	21	47.88	0	52	10.5	30.586044	2.4	7.9	44.4w	1	100.0	65.3	-18	315	
2027	May	16	0	22	19.14	0	55	19.9	30.525132	2.4	7.9	49.1w	1	100.0	65.5	-18	315	
2027	May	21	0	22	48.29	0	58	14.6	30.459681	2.4	7.9	53.8w	2	100.0	65.7	-18	315	
2027	May	26	0	23	15.18	1	0	54.0	30.390119	2.4	7.9	58.4w	2	100.0	65.8	-18	315	
2027	May	31	0	23	39.67	1	3	17.0	30.316881	2.4	7.9	63.1w	2	100.0	66.0	-18	315	
2027	Jun	5	0	24	1.61	1	5	23.0	30.240448	2.4	7.9	67.8w	2	100.0	66.1	-18	315	
2027	Jun	10	0	24	20.88	1	7	11.0	30.161360	2.4	7.9	72.5w	2	100.0	66.3	-18	315	
2027	Jun	15	0	24	37.37	1	8	40.6	30.080199	2.4	7.9	77.2w	2	100.0	66.4	-18	315	
2027	Jun	20	0	24	51.03	1	9	51.6	29.997517	2.4	7.9	81.9w	2	100.0	66.5	-18	315	
2027	Jun	25	0	25	1.79	1	10	43.5	29.913849	2.4	7.9	86.7w	2	100.0	66.6	-18	315	
2027	Jun	30	0	25	9.59	1	11	16.2	29.829739	2.5	7.9	91.4w	2	100.0	66.7	-18	315	
2027	Jul	5	0	25	14.38	1	11	29.4	29.745773	2.5	7.9	96.1w	2	100.0	66.9	-18	315	
2027	Jul	10	0	25	16.16	1	11	23.1	29.662578	2.5	7.9	100.9w	2	100.0	67.0	-18	315	
2027	Jul	15	0	25	14.94	1	10	57.7	29.580767	2.5	7.9	105.7w	2	100.0	67.1	-17	315	
2027	Jul	20	0	25	10.77	1	10	13.5	29.500899	2.5	7.9	110.5w	2	100.0	67.2	-18	315	
2027	Jul	25	0	25	3.69	1	9	10.9	29.423513	2.5	7.8	115.3w	2	100.0	67.4	-18	315	
2027	Jul	30	0	24	53.78	1	7	50.4	29.349158	2.5	7.8	120.1w	2	100.0	67.5	-18	315	
2027	Aug	4	0	24	41.10	1	6	12.7	29.278406	2.5	7.8	124.9w	2	100.0	67.7	-18	315	
2027	Aug	9	0	24	25.80	1	4	18.8	29.211829	2.5	7.8	129.8w	1	100.0	67.9	-18	315	
2027	Aug	14	0	24	8.01	1	2	9.7	29.149929	2.5	7.8	134.7w	1	100.0	68.1	-18	315	
2027	Aug	19	0	23	47.93	0	59	46.6	29.093148	2.5	7.8	139.6w	1	100.0	68.4	-18	315	
2027	Aug	24	0	23	25.71	0	57	10.7	29.041904	2.5	7.8	144.5w	1	100.0	68.7	-18	315	
2027	Aug	29	0	23	1.55	0	54	23.4	28.996610	2.5	7.8	149.4w	1	100.0	69.1	-18	315	
2027	Sep	3	0	22	35.67	0	51	26.1	28.957677	2.5	7.8	154.3w	1	100.0	69.7	-18	315	
2027	Sep	8	0	22	8.33	0	48	20.7	28.925452	2.5	7.8	159.3w	1	100.0	70.5	-18	315	
2027	Sep	13	0	21	39.79	0	45	8.8	28.900187	2.5	7.8	164.3w	1	100.0	71.9	-18	315	
2027	Sep	18	0	21	10.32	0	41	52.4	28.882072	2.5	7.8	169.3w	0	100.0	74.4	-18	315	
2027	Sep	23	0	20	40.20	0	38	33.0	28.871268	2.5	7.8	174.2w	0	100.0	81.2	-18	315	
2027	Sep	28	0	20	9.70	0	35	12.6	28.867919	2.5	7.8	178.4w	0	100.0	134.7	-18	315	
2027	Oct	3	0	19	39.12	0	31	53.1	28.872122	2.5	7.8	175.3e	0	100.0	228.5	-18	316	
2027	Oct	8	0	19	8.78	0	28	36.8	28.883870	2.5	7.8	170.4e	0	100.0	238.0	-18	316	
2027	Oct	13	0	18	39.00	0	25	25.4	28.903063	2.5	7.8	165.3e	0	100.0	241.0	-18	316	
2027	Oct	18	0	18	10.04	0	22	20.8	28.929550	2.5	7.8	160.3e	1	100.0	242.6	-18	316	
2027	Oct	23	0	17	42.19	0	19	24.7	28.963159	2.5	7.8	155.2e	1	100.0	243.5	-18	316	
2027	Oct	28	0	17	15.73	0	16	38.9	29.003688	2.5	7.8	150.1e	1	100.0	244.1	-18	316	
2027	Nov	2	0	16	50.94	0	14	5.3	29.050852	2.5	7.8	145.0e	1	100.0	244.5	-18	316	
2027	Nov	7	0	16	28.09	0	11	45.4	29.104265	2.5	7.8	139.9e	1	100.0	244.9	-18	316	
2027	Nov	12	0	16	7.41	0	9	40.7	29.163484	2.5	7.8	134.8e	1	100.0	245.2	-18	316	
2027	Nov	17	0	15	49.10	0	7	52.3	29.228040	2.5	7.8	129.7e	1	100.0	245.4	-18	316	
2027	Nov	22	0	15	33.34	0	6	21.3	29.297463	2.5	7.8	124.5e	2	100.0	245.6	-18	316	
2027	Nov	27	0	15	20.31	0	5	8.8	29.371246	2.5	7.8	119.4e	2	100.0	245.8	-18	316	
2027	Dec	2	0	15	10.17	0	4	15.8	29.448801	2.5	7.9	114.3e	2	100.0	246.0	-18	316	
2027	Dec	7	0	15	3.05	0	3	42.9	29.529481	2.5	7.9	109.2e	2	100.0	246.1	-18	316	
2027	Dec	12	0	14	59.02	0	3	30.4	29.612631	2.5	7.9	104.1e	2	100.0	246.2	-18	316	
2027	Dec	17	0	14	58.13	0	3	38.6	29.697614	2.5	7.9	99.0e	2	100.0	246.4	-18	316	
2027	Dec	22	0	15	0.43	0	4	7.6	29.783814	2.5	7.9	94.0e	2	100.0	246.5	-18	316	
2027	Dec	27	0	15	5.93	0	4	57.4	29.870575	2.4	7.9	88.9e	2	100.0	246.6	-18	316	

ДАТА	Солнце			Меркурий		Венера		Марс		Юпитер		Сатурн		Уран		Нептун	
	Восх.	Заход		Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход
2027 Oct 2	6 5	17 38	8 54	17 46	7 27	18 2	10 23	18 38	3 37	17 11	18 8	7 47	19 19	12 24	17 34	5 52	
2027 Oct 4	6 9	17 33	8 52	17 38	7 34	17 57	10 24	18 33	3 31	17 4	18 0	7 38	19 11	12 16	17 26	5 44	
2027 Oct 6	6 13	17 28	8 48	17 31	7 41	17 52	10 24	18 28	3 26	16 57	17 52	7 29	19 3	12 8	17 18	5 36	
2027 Oct 8	6 17	17 23	8 41	17 24	7 49	17 48	10 25	18 23	3 21	16 49	17 44	7 20	18 55	12 0	17 10	5 28	
2027 Oct 10	6 21	17 17	8 30	17 16	7 56	17 43	10 26	18 18	3 15	16 42	17 36	7 11	18 47	11 52	17 2	5 19	
2027 Oct 12	6 25	17 12	8 16	17 8	8 4	17 39	10 26	18 13	3 10	16 35	17 27	7 2	18 39	11 44	16 54	5 11	
2027 Oct 14	6 29	17 7	7 57	17 1	8 11	17 35	10 27	18 9	3 4	16 27	17 19	6 54	18 31	11 35	16 46	5 3	
2027 Oct 16	6 33	17 2	7 35	16 54	8 19	17 31	10 28	18 4	2 59	16 20	17 15	6 49	18 23	11 27	16 38	4 55	
2027 Oct 18	6 37	16 57	7 10	16 47	8 27	17 26	10 28	18 0	2 53	16 13	17 7	6 40	18 15	11 19	16 30	4 46	
2027 Oct 20	6 42	16 52	6 44	16 40	8 34	17 23	10 29	17 55	2 47	16 5	16 59	6 31	18 7	11 11	16 22	4 38	
2027 Oct 22	6 46	16 47	6 19	16 34	8 42	17 19	10 30	17 51	2 42	15 58	16 51	6 22	17 58	11 3	16 14	4 30	
2027 Oct 24	6 50	16 43	5 56	16 28	8 49	17 15	10 30	17 47	2 36	15 50	16 43	6 13	17 50	10 54	16 6	4 22	
2027 Oct 26	6 54	16 38	5 38	16 23	8 57	17 12	10 31	17 43	2 31	15 43	16 34	6 4	17 42	10 46	15 58	4 14	
2027 Oct 28	6 58	16 33	5 24	16 17	9 5	17 9	10 31	17 39	2 25	15 36	16 26	5 56	17 34	10 38	15 50	4 5	
2027 Oct 30	7 3	16 29	5 15	16 13	9 12	17 6	10 31	17 35	2 19	15 28	16 18	5 47	17 26	10 30	15 42	3 57	
2027 Nov 1	7 7	16 24	5 11	16 8	9 19	17 3	10 32	17 32	2 13	15 21	16 10	5 38	17 18	10 21	15 34	3 49	
2027 Nov 3	7 11	16 20	5 11	16 3	9 27	17 1	10 32	17 28	2 8	15 14	16 2	5 29	17 10	10 13	15 26	3 41	
2027 Nov 5	7 15	16 16	5 15	15 59	9 34	16 59	10 32	17 25	2 2	15 6	15 54	5 20	17 2	10 5	15 18	3 33	
2027 Nov 7	7 20	16 11	5 21	15 55	9 41	16 57	10 32	17 22	1 56	14 59	15 45	5 12	16 54	9 56	15 10	3 25	
2027 Nov 9	7 24	16 7	5 28	15 50	9 47	16 56	10 32	17 19	1 50	14 51	15 37	5 3	16 46	9 48	15 2	3 17	
2027 Nov 11	7 28	16 4	5 38	15 46	9 54	16 54	10 32	17 16	1 44	14 44	15 29	4 54	16 37	9 40	14 54	3 8	
2027 Nov 13	7 32	16 0	5 48	15 42	10 0	16 54	10 32	17 14	1 38	14 36	15 21	4 46	16 29	9 31	14 46	3 0	
2027 Nov 15	7 37	15 56	5 59	15 38	10 6	16 54	10 31	17 11	1 32	14 29	15 13	4 37	16 21	9 23	14 38	2 52	
2027 Nov 17	7 41	15 53	6 10	15 35	10 12	16 54	10 31	17 9	1 26	14 21	15 5	4 28	16 13	9 15	14 31	2 44	
2027 Nov 19	7 45	15 50	6 22	15 31	10 17	16 54	10 30	17 7	1 20	14 14	14 57	4 20	16 5	9 6	14 23	2 36	
2027 Nov 21	7 49	15 47	6 34	15 28	10 22	16 55	10 30	17 5	1 14	14 7	14 48	4 11	15 57	8 58	14 15	2 28	
2027 Nov 23	7 53	15 44	6 47	15 24	10 27	16 57	10 29	17 3	1 7	13 59	14 40	4 3	15 49	8 50	14 7	2 20	
2027 Nov 25	7 56	15 41	6 59	15 21	10 31	16 59	10 28	17 2	1 1	13 52	14 32	3 54	15 40	8 41	13 59	2 12	
2027 Nov 27	8 0	15 39	7 11	15 19	10 34	17 1	10 27	17 1	0 55	13 44	14 24	3 46	15 32	8 33	13 51	2 4	
2027 Nov 29	8 4	15 36	7 23	15 17	10 37	17 4	10 25	17 0	0 48	13 36	14 16	3 37	15 28	8 28	13 43	1 56	
2027 Dec 1	8 7	15 34	7 35	15 15	10 40	17 8	10 24	16 59	0 42	13 29	14 8	3 29	15 20	8 20	13 35	1 48	
2027 Dec 3	8 10	15 33	7 47	15 13	10 42	17 12	10 22	16 58	0 35	13 21	14 0	3 20	15 12	8 12	13 27	1 40	
2027 Dec 5	8 14	15 31	7 59	15 12	10 43	17 16	10 20	16 57	0 29	13 14	13 52	3 12	15 4	8 3	13 19	1 32	
2027 Dec 7	8 16	15 30	8 10	15 12	10 45	17 21	10 18	16 57	0 22	13 6	13 44	3 4	14 55	7 55	13 11	1 24	
2027 Dec 9	8 19	15 29	8 21	15 13	10 45	17 26	10 16	16 57	0 15	12 59	13 36	2 56	14 47	7 47	13 3	1 16	
2027 Dec 11	8 22	15 28	8 31	15 14	10 45	17 32	10 14	16 57	0 9	12 51	13 28	2 48	14 39	7 38	12 55	1 8	
2027 Dec 13	8 24	15 28	8 41	15 15	10 45	17 38	10 12	16 57	0 2	12 44	13 20	2 39	14 31	7 30	12 47	1 0	
2027 Dec 15	8 26	15 27	8 50	15 18	10 44	17 44	10 9	16 57	23 55	12 36	13 12	2 31	14 23	7 21	12 39	0 52	
2027 Dec 17	8 28	15 28	8 58	15 22	10 43	17 50	10 6	16 57	23 48	12 28	13 4	2 23	14 15	7 13	12 32	0 44	
2027 Dec 19	8 29	15 28	9 6	15 26	10 42	17 57	10 3	16 58	23 41	12 21	12 56	2 15	14 7	7 5	12 24	0 36	
2027 Dec 21	8 31	15 29	9 13	15 32	10 40	18 4	10 0	16 58	23 34	12 13	12 48	2 7	13 58	6 56	12 16	0 28	
2027 Dec 23	8 32	15 30	9 19	15 38	10 38	18 11	9 57	16 59	23 27	12 5	12 40	1 59	13 50	6 48	12 8	0 21	
2027 Dec 25	8 32	15 31	9 24	15 46	10 35	18 18	9 54	17 0	23 20	11 58	12 32	1 52	13 42	6 40	12 0	0 13	
2027 Dec 27	8 33	15 32	9 28	15 54	10 32	18 25	9 50	17 1	23 12	11 50	12 24	1 44	13 34	6 31	11 52	0 5	
2027 Dec 29	8 33	15 34	9 31	16 3	10 29	18 32	9 46	17 2	23 5	11 42	12 16	1 36	13 26	6 23	11 44	23 57	
2027 Dec 31	8 33	15 36	9 33	16 14	10 26	18 40	9 43	17 4	22 58	11 34	12 8	1 28	13 18	6 15	11 36	23 49	

Восходы и заходы Солнца и планет (φ=56°, λ=0°)

ДАТА	Солнце		Меркурий		Венера		Марс		Юпитер		Сатурн		Уран		Нептун	
	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход
2027 Jan 1	8 33	15 38	8 50	15 18	4 19	13 17	20 58	11 22	19 45	10 44	11 44	0 7	13 2	5 44	11 28	23 31
2027 Jan 3	8 32	15 40	8 55	15 26	4 22	13 14	20 51	11 14	19 36	10 36	11 37	24 0	12 54	5 36	11 20	23 24
2027 Jan 5	8 31	15 43	8 59	15 34	4 26	13 11	20 44	11 7	19 28	10 28	11 29	23 52	12 46	5 27	11 12	23 16
2027 Jan 7	8 30	15 46	9 2	15 44	4 30	13 8	20 36	11 0	19 19	10 20	11 21	23 45	12 38	5 19	11 4	23 8
2027 Jan 9	8 29	15 49	9 4	15 55	4 33	13 5	20 28	10 53	19 10	10 12	11 13	23 38	12 29	5 11	10 57	23 0
2027 Jan 11	8 27	15 52	9 5	16 6	4 37	13 3	20 20	10 45	19 1	10 4	11 5	23 30	12 21	5 3	10 49	22 53
2027 Jan 13	8 25	15 55	9 6	16 18	4 41	13 1	20 12	10 38	18 52	9 56	10 57	23 23	12 13	4 55	10 41	22 45
2027 Jan 15	8 23	15 59	9 5	16 31	4 45	12 59	20 3	10 30	18 43	9 48	10 50	23 16	12 5	4 47	10 33	22 37
2027 Jan 17	8 21	16 3	9 4	16 44	4 49	12 57	19 54	10 23	18 33	9 40	10 42	23 9	11 57	4 38	10 25	22 30
2027 Jan 19	8 18	16 7	9 3	16 58	4 53	12 56	19 44	10 15	18 24	9 31	10 34	23 2	11 49	4 30	10 17	22 22
2027 Jan 21	8 16	16 11	9 0	17 12	4 57	12 54	19 35	10 7	18 15	9 23	10 26	22 55	11 41	4 22	10 9	22 14
2027 Jan 23	8 13	16 15	8 57	17 25	5 1	12 53	19 25	10 0	18 5	9 15	10 19	22 48	11 33	4 14	10 1	22 7
2027 Jan 25	8 10	16 19	8 53	17 39	5 5	12 53	19 14	9 52	17 56	9 7	10 11	22 41	11 25	4 6	9 54	21 59
2027 Jan 27	8 6	16 23	8 48	17 52	5 9	12 52	19 3	9 44	17 47	8 59	10 3	22 34	11 17	3 58	9 46	21 51
2027 Jan 29	8 3	16 27	8 43	18 5	5 12	12 52	18 52	9 36	17 37	8 50	9 55	22 27	11 9	3 50	9 38	21 44
2027 Jan 31	7 59	16 32	8 36	18 16	5 15	12 53	18 41	9 28	17 28	8 42	9 48	22 20	11 2	3 42	9 30	21 36
2027 Feb 2	7 55	16 36	8 29	18 25	5 19	12 53	18 29	9 19	17 18	8 34	9 40	22 13	10 54	3 34	9 22	21 29
2027 Feb 4	7 51	16 40	8 20	18 32	5 21	12 54	18 18	9 11	17 9	8 25	9 32	22 6	10 46	3 26	9 14	21 21
2027 Feb 6	7 47	16 45	8 11	18 36	5 24	12 55	18 5	9 3	16 59	8 17	9 24	22 0	10 38	3 18	9 7	21 14
2027 Feb 8	7 43	16 49	8 0	18 36	5 27	12 57	17 53	8 54	16 49	8 9	9 17	21 53	10 30	3 10	8 59	21 6
2027 Feb 10	7 39	16 53	7 49	18 32	5 29	12 59	17 40	8 45	16 40	8 1	9 9	21 46	10 22	3 2	8 51	20 58
2027 Feb 12	7 35	16 58	7 37	18 24	5 31	13 1	17 28	8 37	16 30	7 52	9 1	21 39	10 14	2 54	8 43	20 51
2027 Feb 14	7 30	17 2	7 24	18 11	5 32	13 4	17 15	8 28	16 21	7 44	8 54	21 33	10 6	2 47	8 35	20 43
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2027 Feb 26	7 2	17 28	6 18	16 13	5 36	13 26	16 1	7 37	15 28	6 58	8 8	20 53	9 19	2 0	7 48	19 58
2027 Feb 28	6 57	17 33	6 11	15 57	5 35	13 31	15 49	7 28	15 18	6 50	8 0	20 46	9 11	1 52	7 40	19 51
2027 Mar 2	6 52	17 37	6 6	15 43	5 34	13 36	15 36	7 19	15 9	6 41	7 52	20 40	9 3	1 44	7 33	19 43
2027 Mar 4	6 46	17 41	6 1	15 33	5 33	13 41	15 24	7 10	15 0	6 33	7 45	20 33	8 55	1 37	7 25	19 36
2027 Mar 6	6 41	17 46	5 57	15 24	5 32	13 46	15 12	7 0	14 50	6 25	7 37	20 27	8 48	1 29	7 17	19 28
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2027 Mar 12	6 26	17 58	5 48	15 12	5 26	14 3	14 38	6 33	14 23	6 0	7 14	20 7	8 24	1 6	6 54	19 6
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2027 Mar 28	5 44	18 31	5 27	15 47	5 3	14 53	13 22	5 20	13 12	4 55	6 14	19 16	7 22	0 6	5 51	18 6
2027 Mar 30	5 38	18 35	5 24	15 55	4 59	15 0	13 14	5 11	13 4	4 46	6 6	19 10	7 15	23 59	5 43	17 59

ДАТА	Солнце		Меркурий		Венера		Марс		Юпитер		Сатурн		Уран		Нептун	
	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход
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2027 Apr 3	5 28	18 43	5 17	16 15	4 52	15 13	12 59	4 54	12 47	4 30	5 51	18 57	6 59	23 44	5 28	17 44
2027 Apr 5	5 22	18 47	5 13	16 26	4 48	15 19	12 52	4 46	12 39	4 22	5 44	18 51	6 52	23 36	5 20	17 37
2027 Apr 7	5 17	18 51	5 10	16 38	4 44	15 26	12 45	4 37	12 31	4 14	5 36	18 44	6 44	23 29	5 12	17 29
2027 Apr 9	5 12	18 56	5 6	16 50	4 39	15 32	12 39	4 29	12 23	4 6	5 29	18 38	6 36	23 22	5 4	17 22
2027 Apr 11	5 7	19 0	5 2	17 3	4 35	15 39	12 32	4 21	12 15	3 58	5 21	18 31	6 29	23 14	4 57	17 14
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2027 Apr 15	4 57	19 8	4 54	17 31	4 27	15 52	12 21	4 4	11 59	3 42	5 6	18 19	6 13	23 0	4 41	16 59
2027 Apr 17	4 52	19 12	4 50	17 46	4 22	15 58	12 15	3 56	11 51	3 35	4 58	18 12	6 6	22 52	4 33	16 52
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2027 Apr 23	4 37	19 24	4 38	18 36	4 9	16 18	12 0	3 33	11 28	3 11	4 36	17 53	5 43	22 30	4 10	16 29
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2027 May 1	4 18	19 40	4 24	19 54	3 51	16 45	11 43	3 2	10 59	2 40	4 6	17 27	5 12	22 1	3 38	15 59
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2027 May 21	3 38	20 19	4 20	22 35	3 8	17 53	11 10	1 49	9 50	1 23	2 50	16 22	3 56	20 49	2 20	14 44
2027 May 23	3 35	20 22	4 23	22 41	3 4	18 0	11 7	1 42	9 43	1 16	2 43	16 15	3 48	20 41	2 12	14 36
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2027 Jun 8	3 17	20 45	4 38	22 10	2 38	18 56	10 50	0 45	8 53	0 16	1 42	15 22	2 48	19 44	1 10	13 35
2027 Jun 10	3 16	20 47	4 36	21 58	2 35	19 3	10 48	0 39	8 47	0 8	1 35	15 15	2 40	19 36	1 2	13 27
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2027 Jun 20	3 14	20 53	4 7	20 43	2 28	19 34	10 40	0 4	8 17	23 31	0 57	14 40	2 2	19 0	0 23	12 48
2027 Jun 22	3 14	20 54	3 58	20 27	2 27	19 40	10 38	23 57	8 11	23 24	0 49	14 33	1 55	18 53	0 15	12 41
2027 Jun 24	3 15	20 54	3 48	20 11	2 27	19 45	10 37	23 51	8 6	23 16	0 41	14 26	1 47	18 45	0 7	12 33
2027 Jun 26	3 15	20 54	3 38	19 57	2 27	19 50	10 35	23 44	8 0	23 9	0 34	14 19	1 39	18 38	23 59	12 25
2027 Jun 28	3 17	20 54	3 27	19 43	2 28	19 55	10 34	23 37	7 54	23 2	0 26	14 12	1 32	18 31	23 51	12 17
2027 Jun 30	3 18	20 53	3 16	19 31	2 29	19 59	10 33	23 30	7 48	22 54	0 18	14 5	1 24	18 24	23 43	12 9

ДАТА	Солнце		Меркурий		Венера		Марс		Юпитер		Сатурн		Уран		Нептун	
	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход	Восх.	Заход
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2027 Jul 4	3 21	20 51	2 56	19 12	2 33	20 7	10 30	23 17	7 37	22 40	0 3	13 51	1 9	18 9	23 27	11 54
2027 Jul 6	3 23	20 50	2 47	19 6	2 35	20 10	10 29	23 10	7 31	22 32	23 55	13 43	1 1	18 2	23 19	11 46
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2027 Jul 18	3 39	20 37	2 13	19 7	2 59	20 20	10 23	22 30	6 58	21 48	23 9	12 59	0 16	17 17	22 32	10 58
2027 Jul 20	3 43	20 34	2 12	19 12	3 4	20 20	10 23	22 23	6 53	21 41	23 1	12 52	0 8	17 10	22 24	10 50
2027 Jul 22	3 46	20 31	2 13	19 19	3 10	20 20	10 22	22 17	6 47	21 34	22 54	12 44	0 0	17 2	22 16	10 42
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2027 Aug 1	4 4	20 13	2 52	19 52	3 41	20 13	10 19	21 44	6 21	20 57	22 15	12 6	23 22	16 25	21 37	10 2
2027 Aug 3	4 8	20 9	3 6	19 56	3 48	20 11	10 18	21 38	6 15	20 50	22 7	11 58	23 14	16 18	21 29	9 54
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2027 Sep 4	5 10	18 53	7 10	19 17	5 45	19 9	10 17	19 57	4 51	18 54	20 1	9 48	21 10	14 15	19 22	7 44
2027 Sep 6	5 14	18 47	7 22	19 11	5 52	19 5	10 17	19 51	4 46	18 46	19 53	9 39	21 2	14 7	19 14	7 35
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