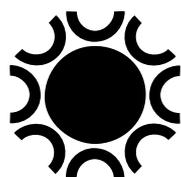


Hemelkalender 2024

ASTRONOMISCH JAARBOEK, UITGEGEVEN DOOR DE VERENIGING VOOR STERRENKUNDE



50^{STE} JAARGANG

Inhoud

Zon, schemering	4
Maan	12
Mercurius	20
Venus	28
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Jupiter	44
Saturnus	52
Uranus	60
Neptunus	68

Zon, schemering

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astronomisch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astronomisch		
1 januari	05:44	06:24	07:06	07:45	127	11:46	165	15:47	233	16:26	17:08	17:48	0.983318	32.53
2 januari	05:44	06:24	07:06	07:45	127	11:46	165	15:48	233	16:27	17:09	17:49	0.983310	32.53
3 januari	05:44	06:24	07:06	07:45	127	11:47	165	15:49	233	16:28	17:10	17:50	0.983307	32.53
4 januari	05:44	06:24	07:06	07:44	126	11:47	175	15:50	234	16:29	17:11	17:51	0.983309	32.53
5 januari	05:44	06:23	07:05	07:44	126	11:48	175	15:52	234	16:30	17:12	17:52	0.983317	32.53
6 januari	05:43	06:23	07:05	07:44	126	11:48	175	15:53	234	16:31	17:13	17:53	0.983330	32.53
7 januari	05:43	06:23	07:05	07:44	126	11:49	175	15:54	234	16:33	17:14	17:54	0.983347	32.53
8 januari	05:43	06:23	07:05	07:43	126	11:49	175	15:55	234	16:34	17:16	17:55	0.983368	32.53
9 januari	05:43	06:23	07:04	07:43	125	11:49	175	15:57	235	16:35	17:17	17:56	0.983394	32.53
10 januari	05:43	06:22	07:04	07:42	125	11:50	175	15:58	235	16:36	17:18	17:58	0.983424	32.53
11 januari	05:42	06:22	07:03	07:42	125	11:50	175	15:59	235	16:38	17:19	17:59	0.983457	32.53
12 januari	05:42	06:21	07:03	07:41	125	11:51	185	16:01	236	16:39	17:20	18:00	0.983494	32.53
13 januari	05:42	06:21	07:02	07:40	124	11:51	185	16:02	236	16:40	17:22	18:01	0.983534	32.52
14 januari	05:41	06:20	07:02	07:40	124	11:51	185	16:04	236	16:42	17:23	18:02	0.983578	32.52
15 januari	05:41	06:20	07:01	07:39	124	11:52	185	16:05	236	16:43	17:24	18:03	0.983626	32.52
16 januari	05:40	06:19	07:00	07:38	123	11:52	185	16:07	237	16:44	17:25	18:05	0.983677	32.52
17 januari	05:39	06:19	07:00	07:37	123	11:52	185	16:08	237	16:46	17:27	18:06	0.983733	32.52
18 januari	05:39	06:18	06:59	07:36	123	11:53	195	16:10	237	16:47	17:28	18:07	0.983794	32.52
19 januari	05:38	06:17	06:58	07:35	122	11:53	195	16:11	238	16:49	17:29	18:09	0.983859	32.51
20 januari	05:37	06:17	06:57	07:34	122	11:53	195	16:13	238	16:50	17:31	18:10	0.983930	32.51
21 januari	05:37	06:16	06:56	07:33	122	11:54	195	16:15	239	16:52	17:32	18:11	0.984006	32.51
22 januari	05:36	06:15	06:55	07:32	121	11:54	205	16:16	239	16:53	17:34	18:13	0.984088	32.51
23 januari	05:35	06:14	06:54	07:31	121	11:54	205	16:18	239	16:55	17:35	18:14	0.984175	32.50
24 januari	05:34	06:13	06:53	07:30	120	11:55	205	16:20	240	16:56	17:37	18:15	0.984269	32.50
25 januari	05:33	06:12	06:52	07:29	120	11:55	205	16:21	240	16:58	17:38	18:17	0.984368	32.50
26 januari	05:32	06:11	06:51	07:28	120	11:55	205	16:23	241	16:59	17:39	18:18	0.984473	32.49
27 januari	05:31	06:10	06:50	07:26	119	11:55	215	16:25	241	17:01	17:41	18:20	0.984585	32.49
28 januari	05:30	06:09	06:49	07:25	119	11:55	215	16:26	242	17:02	17:42	18:21	0.984702	32.49
29 januari	05:29	06:08	06:48	07:24	118	11:56	215	16:28	242	17:04	17:44	18:23	0.984825	32.48
30 januari	05:28	06:07	06:46	07:22	118	11:56	225	16:30	242	17:06	17:45	18:24	0.984954	32.48
31 januari	05:27	06:05	06:45	07:21	117	11:56	225	16:32	243	17:07	17:47	18:26	0.985088	32.47
1 februari	05:26	06:04	06:44	07:19	117	11:56	225	16:33	243	17:09	17:49	18:27	0.985227	32.47
2 februari	05:25	06:03	06:42	07:18	116	11:56	225	16:35	244	17:11	17:50	18:29	0.985372	32.46
3 februari	05:23	06:02	06:41	07:16	116	11:56	235	16:37	244	17:12	17:52	18:30	0.985520	32.46
4 februari	05:22	06:00	06:40	07:15	115	11:56	235	16:39	245	17:14	17:53	18:32	0.985674	32.45
5 februari	05:21	05:59	06:38	07:13	115	11:56	235	16:40	245	17:16	17:55	18:33	0.985831	32.45
6 februari	05:19	05:58	06:37	07:12	114	11:57	245	16:42	246	17:17	17:56	18:35	0.985992	32.44
7 februari	05:18	05:56	06:35	07:10	114	11:57	245	16:44	246	17:19	17:58	18:36	0.986157	32.44
8 februari	05:16	05:55	06:34	07:08	113	11:57	245	16:46	247	17:21	18:00	18:38	0.986324	32.43
9 februari	05:15	05:53	06:32	07:07	113	11:57	245	16:48	247	17:22	18:01	18:39	0.986495	32.43
10 februari	05:13	05:52	06:30	07:05	112	11:57	255	16:49	248	17:24	18:03	18:41	0.986668	32.42
11 februari	05:12	05:50	06:29	07:03	112	11:57	255	16:51	249	17:26	18:04	18:42	0.986843	32.41
12 februari	05:10	05:48	06:27	07:01	111	11:57	255	16:53	249	17:27	18:06	18:44	0.987021	32.41
13 februari	05:09	05:47	06:25	07:00	111	11:57	265	16:55	250	17:29	18:08	18:46	0.987201	32.40
14 februari	05:07	05:45	06:24	06:58	110	11:57	265	16:56	250	17:31	18:09	18:47	0.987384	32.40
15 februari	05:05	05:43	06:22	06:56	109	11:57	265	16:58	251	17:32	18:11	18:49	0.987570	32.39
16 februari	05:04	05:42	06:20	06:54	109	11:57	275	17:00	251	17:34	18:12	18:50	0.987759	32.38
17 februari	05:02	05:40	06:18	06:52	108	11:57	275	17:02	252	17:36	18:14	18:52	0.987951	32.38
18 februari	05:00	05:38	06:16	06:50	108	11:57	285	17:04	252	17:37	18:16	18:54	0.988148	32.37
19 februari	04:58	05:36	06:15	06:48	107	11:56	285	17:05	253	17:39	18:17	18:55	0.988348	32.37
20 februari	04:57	05:35	06:13	06:46	107	11:56	285	17:07	254	17:41	18:19	18:57	0.988552	32.36
21 februari	04:55	05:33	06:11	06:44	106	11:56	295	17:09	254	17:42	18:21	18:59	0.988761	32.35

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astrono- misch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astrono- misch		
22 februari	04:53	05:31	06:09	06:42	105	11:56	29S	17:11	25S	17:44	18:22	19:00	0.988974	32.34
23 februari	04:51	05:29	06:07	06:40	105	11:56	29S	17:12	25S	17:46	18:24	19:02	0.989191	32.34
24 februari	04:49	05:27	06:05	06:38	104	11:56	30S	17:14	256	17:47	18:26	19:04	0.989413	32.33
25 februari	04:47	05:25	06:03	06:36	104	11:56	30S	17:16	257	17:49	18:27	19:05	0.989639	32.32
26 februari	04:45	05:23	06:01	06:34	103	11:56	30S	17:18	257	17:51	18:29	19:07	0.989869	32.32
27 februari	04:43	05:21	05:59	06:32	102	11:55	31S	17:19	258	17:52	18:30	19:09	0.990104	32.31
28 februari	04:41	05:19	05:57	06:30	102	11:55	31S	17:21	258	17:54	18:32	19:10	0.990342	32.30
29 februari	04:39	05:17	05:55	06:28	101	11:55	32S	17:23	259	17:56	18:34	19:12	0.990585	32.29
1 maart	04:37	05:15	05:53	06:26	101	11:55	32S	17:24	260	17:57	18:35	19:14	0.990831	32.28
2 maart	04:35	05:13	05:51	06:24	100	11:55	32S	17:26	260	17:59	18:37	19:16	0.991080	32.28
3 maart	04:33	05:11	05:49	06:22	99	11:54	33S	17:28	261	18:01	18:39	19:17	0.991333	32.27
4 maart	04:30	05:09	05:47	06:20	99	11:54	33S	17:30	261	18:02	18:41	19:19	0.991588	32.26
5 maart	04:28	05:07	05:45	06:17	98	11:54	33S	17:31	262	18:04	18:42	19:21	0.991845	32.25
6 maart	04:26	05:05	05:43	06:15	98	11:54	34S	17:33	263	18:06	18:44	19:23	0.992105	32.24
7 maart	04:24	05:02	05:40	06:13	97	11:53	34S	17:35	263	18:07	18:46	19:24	0.992366	32.23
8 maart	04:22	05:00	05:38	06:11	96	11:53	35S	17:36	264	18:09	18:47	19:26	0.992629	32.23
9 maart	04:19	04:58	05:36	06:09	96	11:53	35S	17:38	265	18:11	18:49	19:28	0.992892	32.22
10 maart	04:17	04:56	05:34	06:07	95	11:53	35S	17:40	265	18:12	18:51	19:30	0.993155	32.21
11 maart	04:15	04:54	05:32	06:04	95	11:52	36S	17:41	266	18:14	18:52	19:32	0.993420	32.20
12 maart	04:12	04:51	05:30	06:02	94	11:52	36S	17:43	266	18:16	18:54	19:33	0.993684	32.19
13 maart	04:10	04:49	05:27	06:00	93	11:52	37S	17:45	267	18:17	18:56	19:35	0.993949	32.18
14 maart	04:08	04:47	05:25	05:58	93	11:52	37S	17:46	268	18:19	18:58	19:37	0.994214	32.17
15 maart	04:05	04:45	05:23	05:56	92	11:51	37S	17:48	268	18:21	18:59	19:39	0.994480	32.17
16 maart	04:03	04:42	05:21	05:53	91	11:51	38S	17:50	269	18:22	19:01	19:41	0.994747	32.16
17 maart	04:00	04:40	05:18	05:51	91	11:51	38S	17:51	270	18:24	19:03	19:43	0.995015	32.15
18 maart	03:58	04:38	05:16	05:49	90	11:50	39S	17:53	270	18:26	19:04	19:45	0.995284	32.14
19 maart	03:55	04:35	05:14	05:47	90	11:50	39S	17:55	271	18:27	19:06	19:46	0.995555	32.13
20 maart	03:53	04:33	05:12	05:45	89	11:50	39S	17:56	271	18:29	19:08	19:48	0.995828	32.12
21 maart	03:50	04:31	05:09	05:42	88	11:50	40S	17:58	272	18:31	19:10	19:50	0.996103	32.11
22 maart	03:48	04:28	05:07	05:40	88	11:49	40S	18:00	273	18:32	19:11	19:52	0.996379	32.10
23 maart	03:45	04:26	05:05	05:38	87	11:49	41S	18:01	273	18:34	19:13	19:54	0.996657	32.10
24 maart	03:43	04:24	05:03	05:36	86	11:49	41S	18:03	274	18:36	19:15	19:56	0.996938	32.09
25 maart	03:40	04:21	05:00	05:33	86	11:48	41S	18:04	275	18:38	19:17	19:58	0.997221	32.08
26 maart	03:37	04:19	04:58	05:31	85	11:48	42S	18:06	275	18:39	19:19	20:00	0.997505	32.07
27 maart	03:35	04:16	04:56	05:29	85	11:48	42S	18:08	276	18:41	19:20	20:02	0.997791	32.06
28 maart	03:32	04:14	04:54	05:27	84	11:47	43S	18:09	276	18:43	19:22	20:04	0.998080	32.05
29 maart	03:29	04:12	04:51	05:24	83	11:47	43S	18:11	277	18:44	19:24	20:06	0.998369	32.04
30 maart	03:27	04:09	04:49	05:22	83	11:47	43S	18:13	278	18:46	19:26	20:09	0.998660	32.03
31 maart	03:24	04:07	04:47	05:20	82	11:47	44S	18:14	278	18:48	19:28	20:11	0.998953	32.02
1 april	03:21	04:04	04:44	05:18	81	11:46	44S	18:16	279	18:49	19:30	20:13	0.999246	32.01
2 april	03:19	04:02	04:42	05:16	81	11:46	44S	18:17	279	18:51	19:32	20:15	0.999539	32.00
3 april	03:16	03:59	04:40	05:13	80	11:46	45S	18:19	280	18:53	19:33	20:17	0.999833	31.99
4 april	03:13	03:57	04:38	05:11	80	11:45	45S	18:21	281	18:54	19:35	20:19	1.000126	31.98
5 april	03:10	03:54	04:35	05:09	79	11:45	46S	18:22	281	18:56	19:37	20:22	1.000419	31.97
6 april	03:07	03:52	04:33	05:07	78	11:45	46S	18:24	282	18:58	19:39	20:24	1.000711	31.97
7 april	03:05	03:49	04:31	05:05	78	11:45	46S	18:26	283	19:00	19:41	20:26	1.001001	31.96
8 april	03:02	03:47	04:28	05:02	77	11:44	47S	18:27	283	19:01	19:43	20:29	1.001289	31.95
9 april	02:59	03:45	04:26	05:00	77	11:44	47S	18:29	284	19:03	19:45	20:31	1.001575	31.94
10 april	02:56	03:42	04:24	04:58	76	11:44	47S	18:30	284	19:05	19:47	20:33	1.001859	31.93
11 april	02:53	03:40	04:22	04:56	75	11:43	48S	18:32	285	19:07	19:49	20:36	1.002141	31.92
12 april	02:50	03:37	04:19	04:54	75	11:43	48S	18:34	285	19:08	19:51	20:38	1.002421	31.91
13 april	02:47	03:35	04:17	04:52	74	11:43	49S	18:35	286	19:10	19:53	20:41	1.002699	31.90

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astrono- misch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astrono- misch		
14 april	02:45	03:32	04:15	04:50	74	11:43	49S	18:37	287	19:12	19:55	20:43	1.002975	31.89
15 april	02:42	03:30	04:13	04:47	73	11:42	49S	18:39	287	19:14	19:57	20:46	1.003250	31.88
16 april	02:39	03:27	04:10	04:45	73	11:42	50S	18:40	288	19:15	19:59	20:48	1.003524	31.88
17 april	02:36	03:25	04:08	04:43	72	11:42	50S	18:42	288	19:17	20:01	20:51	1.003796	31.87
18 april	02:33	03:22	04:06	04:41	71	11:42	50S	18:43	289	19:19	20:03	20:53	1.004068	31.86
19 april	02:29	03:20	04:04	04:39	71	11:42	51S	18:45	290	19:21	20:05	20:56	1.004339	31.85
20 april	02:26	03:17	04:02	04:37	70	11:41	51S	18:47	290	19:22	20:07	20:59	1.004610	31.84
21 april	02:23	03:15	03:59	04:35	70	11:41	51S	18:48	291	19:24	20:09	21:01	1.004879	31.83
22 april	02:20	03:12	03:57	04:33	69	11:41	52S	18:50	291	19:26	20:11	21:04	1.005149	31.82
23 april	02:17	03:10	03:55	04:31	69	11:41	52S	18:52	292	19:28	20:13	21:07	1.005418	31.82
24 april	02:14	03:07	03:53	04:29	68	11:41	52S	18:53	292	19:30	20:16	21:10	1.005686	31.81
25 april	02:11	03:05	03:51	04:27	67	11:40	53S	18:55	293	19:31	20:18	21:12	1.005954	31.80
26 april	02:08	03:02	03:49	04:25	67	11:40	53S	18:56	293	19:33	20:20	21:15	1.006222	31.79
27 april	02:04	03:00	03:47	04:23	66	11:40	53S	18:58	294	19:35	20:22	21:18	1.006489	31.78
28 april	02:01	02:57	03:45	04:21	66	11:40	54S	19:00	294	19:37	20:24	21:21	1.006755	31.77
29 april	01:58	02:55	03:43	04:20	65	11:40	54S	19:01	295	19:39	20:26	21:24	1.007020	31.77
30 april	01:55	02:53	03:40	04:18	65	11:40	54S	19:03	295	19:40	20:29	21:27	1.007283	31.76
1 mei	01:51	02:50	03:38	04:16	64	11:40	55S	19:04	296	19:42	20:31	21:30	1.007545	31.75
2 mei	01:48	02:48	03:36	04:14	64	11:39	55S	19:06	296	19:44	20:33	21:34	1.007805	31.74
3 mei	01:45	02:45	03:34	04:12	63	11:39	55S	19:07	297	19:46	20:35	21:37	1.008062	31.73
4 mei	01:41	02:43	03:32	04:11	63	11:39	55S	19:09	297	19:47	20:37	21:40	1.008317	31.72
5 mei	01:38	02:41	03:31	04:09	62	11:39	56S	19:11	298	19:49	20:40	21:44	1.008568	31.72
6 mei	01:34	02:38	03:29	04:07	62	11:39	56S	19:12	298	19:51	20:42	21:47	1.008815	31.71
7 mei	01:31	02:36	03:27	04:05	61	11:39	56S	19:14	299	19:53	20:44	21:50	1.009058	31.70
8 mei	01:27	02:34	03:25	04:04	61	11:39	57S	19:15	299	19:54	20:46	21:54	1.009297	31.69
9 mei	01:24	02:31	03:23	04:02	60	11:39	57S	19:17	300	19:56	20:48	21:58	1.009532	31.69
10 mei	01:20	02:29	03:21	04:01	60	11:39	57S	19:18	300	19:58	20:51	22:01		

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astrono- misch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astrono- misch		
5 juni	-	01:41	02:47	03:32	51	11:41	62S	19:51	309	20:36	21:42	-	1.014626	31.53
6 juni	-	01:40	02:46	03:31	51	11:41	62S	19:52	309	20:37	21:44	-	1.014763	31.52
7 juni	-	01:39	02:46	03:31	51	11:42	62S	19:53	309	20:38	21:45	-	1.014894	31.52
8 juni	-	01:38	02:45	03:30	51	11:42	62S	19:54	309	20:39	21:47	-	1.015020	31.51
9 juni	-	01:37	02:44	03:30	51	11:42	62S	19:54	310	20:40	21:48	-	1.015140	31.51
10 juni	-	01:36	02:44	03:30	50	11:42	62S	19:55	310	20:41	21:49	-	1.015254	31.51
11 juni	-	01:35	02:44	03:29	50	11:42	62S	19:56	310	20:42	21:50	-	1.015363	31.50
12 juni	-	01:35	02:43	03:29	50	11:43	62S	19:56	310	20:42	21:51	-	1.015467	31.50
13 juni	-	01:34	02:43	03:29	50	11:43	62S	19:57	310	20:43	21:52	-	1.015566	31.50
14 juni	-	01:34	02:43	03:29	50	11:43	63S	19:57	310	20:44	21:53	-	1.015660	31.49
15 juni	-	01:33	02:43	03:29	50	11:43	63S	19:58	310	20:44	21:54	-	1.015750	31.49
16 juni	-	01:33	02:43	03:29	50	11:43	63S	19:58	310	20:45	21:54	-	1.015835	31.49
17 juni	-	01:33	02:43	03:29	50	11:44	63S	19:59	310	20:45	21:55	-	1.015916	31.49
18 juni	-	01:33	02:43	03:29	50	11:44	63S	19:59	310	20:45	21:55	-	1.015993	31.48
19 juni	-	01:33	02:43	03:29	50	11:44	63S	19:59	310	20:46	21:56	-	1.016067	31.48
20 juni	-	01:33	02:43	03:29	50	11:44	63S	20:00	310	20:46	21:56	-	1.016137	31.48
21 juni	-	01:33	02:43	03:29	50	11:44	63S	20:00	310	20:46	21:56	-	1.016203	31.48
22 juni	-	01:33	02:43	03:29	50	11:45	63S	20:00	310	20:46	21:56	-	1.016266	31.48
23 juni	-	01:34	02:44	03:30	50	11:45	63S	20:00	310	20:46	21:56	-	1.016326	31.47
24 juni	-	01:34	02:44	03:30	50	11:45	63S	20:00	310	20:46	21:56	-	1.016383	31.47
25 juni	-	01:35	02:44	03:30	50	11:45	63S	20:00	310	20:46	21:56	-	1.016436	31.47
26 juni	-	01:35	02:45	03:31	50	11:46	63S	20:00	310	20:46	21:55	-	1.016486	31.47
27 juni	-	01:36	02:45	03:31	50	11:46	62S	20:00	310	20:46	21:55	-	1.016532	31.47
28 juni	-	01:37	02:46	03:32	50	11:46	62S	20:00	310	20:46	21:54	-	1.016574	31.47
29 juni	-	01:38	02:47	03:33	50	11:46	62S	20:00	310	20:45	21:54	-	1.016612	31.47
30 juni	-	01:39	02:47	03:33	50	11:46	62S	19:59	310	20:45	21:53	-	1.016644	31.46
1 juli	-	01:40	02:48	03:34	50	11:47	62S	19:59	310	20:45	21:52	-	1.016672	31.46
2 juli	-	01:41	02:49	03:35	51	11:47	62S	19:59	309	20:44	21:52	-	1.016694	31.46
3 juli	-	01:42	02:50	03:35	51	11:47	62S	19:58	309	20:44	21:51	-	1.016711	31.46
4 juli	-	01:44	02:51	03:36	51	11:47	62S	19:58	309	20:43	21:50	-	1.016721	31.46
5 juli	-	01:45	02:52	03:37	51	11:47	62S	19:57	309	20:42	21:49	-	1.016725	31.46
6 juli	-	01:47	02:53	03:38	51	11:47	62S	19:57	309	20:42	21:47	-	1.016724	31.46
7 juli	-	01:48	02:54	03:39	51	11:48	62S	19:56	308	20:41	21:46	-	1.016716	31.46
8 juli	-	01:50	02:55	03:40	52	11:48	62S	19:55	308	20:40	21:45	-	1.016702	31.46
9 juli	-	01:51	02:56	03:41	52	11:48	61S	19:55	308	20:39	21:43	-	1.016682	31.46
10 juli	-	01:53	02:57	03:42	52	11:48	61S	19:54	308	20:38	21:42	-	1.016656	31.46
11 juli	-	01:55	02:58	03:43	52	11:48	61S	19:53	308	20:37	21:40	-	1.016624	31.47
12 juli	-	01:56	03:00	03:44	53	11:48	61S	19:52	307	20:36	21:39	-	1.016588	31.47
13 juli	-	01:58	03:01	03:45	53	11:48	61S	19:52	307	20:35	21:37	-	1.016546	31.47
14 juli	-	02:00	03:02	03:46	53	11:49	61S	19:51	307	20:34	21:36	-	1.016499	31.47
15 juli	-	02:02	03:04	03:47	53	11:49	61S	19:50	306	20:33	21:34	-	1.016447	31.47
16 juli	-	02:04	03:05	03:48	54	11:49	60S	19:49	306	20:32	21:32	23:36	1.016391	31.47
17 juli	00:02	02:06	03:06	03:49	54	11:49	60S	19:48	306	20:30	21:30	23:23	1.016330	31.47
18 juli	00:15	02:08	03:08	03:51	54	11:49	60S	19:46	305	20:29	21:28	23:14	1.016266	31.48
19 juli	00:24	02:10	03:09	03:52	55	11:49	60S	19:45	305	20:28	21:26	23:07	1.016198	31.48
20 juli	00:31	02:12	03:11	03:53	55	11:49	60S	19:44	305	20:26	21:25	23:01	1.016126	31.48
21 juli	00:37	02:14	03:12	03:54	55	11:49	60S	19:43	304	20:25	21:23	22:55	1.016052	31.48
22 juli	00:43	02:16	03:14	03:56	56	11:49	59S	19:42	304	20:23	21:20	22:50	1.015974	31.49
23 juli	00:49	02:18	03:15	03:57	56	11:49	59S	19:40	304	20:22	21:18	22:45	1.015893	31.49
24 juli	00:53	02:20	03:17	03:58	56	11:49	59S	19:39	303	20:20	21:16	22:41	1.015809	31.49
25 juli	00:58	02:22	03:18	04:00	57	11:49	59S	19:38	303	20:19	21:14	22:36	1.015721	31.49
26 juli	01:03	02:24	03:20	04:01	57	11:49	58S	19:36	303	20:17	21:12	22:32	1.015631	31.50

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astrono- misch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astrono- misch		
27 juli	01:07	02:27	03:22	04:02	58	11:49	58S	19:35	302	20:15	21:10	22:27	1.015536	31.50
28 juli	01:11	02:29	03:23	04:04	58	11:49	58S	19:33	302	20:14	21:08	22:23	1.015437	31.50
29 juli	01:15	02:31	03:25	04:05	58	11:49	58S	19:32	301	20:12	21:06	22:19	1.015334	31.51
30 juli	01:19	02:33	03:27	04:07	59	11:49	58S	19:30	301	20:10	21:03	22:15	1.015227	31.51
31 juli	01:23	02:35	03:28	04:08	59	11:49	57S	19:29	300	20:08	21:01	22:12	1.015114	31.51
1 augustus	01:27	02:37	03:30	04:10	60	11:49	57S	19:27	300	20:07	20:59	22:08	1.014996	31.52
2 augustus	01:30	02:40	03:32	04:11	60	11:49	57S	19:26	300	20:05	20:56	22:04	1.014872	31.52
3 augustus	01:34	02:42	03:33	04:13	61	11:49	57S	19:24	299	20:03	20:54	22:01	1.014744	31.52
4 augustus	01:37	02:44	03:35	04:14	61	11:49	56S	19:22	299	20:01	20:52	21:57	1.014609	31.53
5 augustus	01:41	02:46	03:37	04:15	62	11:49	56S	19:21	298	19:59	20:49	21:54	1.014469	31.53
6 augustus	01:44	02:48	03:38	04:17	62	11:48	56S	19:19	298	19:57	20:47	21:50	1.014324	31.54
7 augustus	01:47	02:50	03:40	04:18	63	11:48	55S	19:17	297	19:55	20:45	21:47	1.014173	31.54
8 augustus	01:51	02:52	03:42	04:20	63	11:48	55S	19:15	297	19:53	20:42	21:43	1.014018	31.55
9 augustus	01:54	02:55	03:44	04:22	63	11:48	55S	19:13	296	19:51	20:40	21:40	1.013857	31.55
10 augustus	01:57	02:57	03:45	04:23	64	11:48	55S	19:12	296	19:49	20:37	21:36	1.013691	31.56
11 augustus	02:00	02:59	03:47	04:25	64	11:48	54S	19:10	295	19:47	20:35	21:33	1.013521	31.56
12 augustus	02:03	03:01	03:49	04:26	65	11:48	54S	19:08	295	19:45	20:33	21:30	1.013346	31.57
13 augustus	02:06	03:03	03:50	04:28	66	11:47	54S	19:06	294	19:43	20:30	21:26	1.013167	31.57
14 augustus	02:09	03:05	03:52	04:29	66	11:47	53S	19:04	294	19:41	20:28	21:23	1.012985	31.58
15 augustus	02:12	03:07	03:54	04:31	67	11:47	53S	19:02	293	19:39	20:25	21:20	1.012799	31.58
16 augustus	02:14	03:09	03:56	04:32	67	11:47	53S	19:00	293	19:37	20:23	21:17	1.012610	31.59
17 augustus	02:17	03:11	03:57	04:34	68	11:47	52S	18:58	292	19:35	20:20	21:14	1.012418	31.60
18 augustus	02:20	03:13	03:59	04:35	68	11:46	52S	18:56	292	19:32	20:18	21:10	1.012224	31.60
19 augustus	02:23	03:15	04:01	04:37	69	11:46	52S	18:54	291	19:30	20:15	21:07	1.012028	31.61
20 augustus	02:25	03:17	04:02	04:38	69	11:46	51S	18:52	290	19:28	20:13	21:04	1.011829	31.61
21 augustus	02:28	03:19	04:04	04:40	70	11:46	51S	18:50	290	19:26	20:10	21:01	1.011629	31.62
22 augustus	02:30	03:21	04:06	04:42	70	11:45	51S	18:48	289	19:24	20:08	20:58	1.011427	31.63
23 augustus	02:33	03:23	04:08	04:43	71	11:45	50S	18:46	289	19:21	20:05	20:55	1.011223	31.63
24 augustus	02:36	03:25	04:09	04:45	71	11:45	50S	18:44	288	19:19	20:03	20:52	1.011017	31.64
25 augustus	02:38	03:27	04:11	04:46	72	11:45	50							

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astronomisch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astronomisch		
17 september	03:28	04:09	04:49	05:22	86	11:37	415	17:51	274	18:24	19:03	19:44	1.005099	31.83
18 september	03:30	04:11	04:50	05:23	86	11:37	415	17:49	273	18:22	19:01	19:42	1.004825	31.83
19 september	03:32	04:13	04:52	05:25	87	11:36	405	17:47	273	18:19	18:58	19:39	1.004551	31.84
20 september	03:34	04:14	04:53	05:26	88	11:36	405	17:44	272	18:17	18:56	19:37	1.004278	31.85
21 september	03:35	04:16	04:55	05:28	88	11:35	405	17:42	272	18:15	18:54	19:34	1.004004	31.86
22 september	03:37	04:18	04:57	05:29	89	11:35	395	17:40	271	18:13	18:51	19:31	1.003731	31.87
23 september	03:39	04:19	04:58	05:31	89	11:35	395	17:38	270	18:10	18:49	19:29	1.003457	31.88
24 september	03:41	04:21	05:00	05:32	90	11:34	385	17:35	270	18:08	18:47	19:26	1.003183	31.89
25 september	03:43	04:23	05:01	05:34	91	11:34	385	17:33	269	18:06	18:44	19:24	1.002907	31.90
26 september	03:45	04:24	05:03	05:36	91	11:34	385	17:31	268	18:04	18:42	19:21	1.002631	31.90
27 september	03:46	04:26	05:04	05:37	92	11:33	375	17:29	268	18:01	18:40	19:19	1.002354	31.91
28 september	03:48	04:28	05:06	05:39	92	11:33	375	17:26	267	17:59	18:37	19:17	1.002075	31.92
29 september	03:50	04:29	05:08	05:40	93	11:33	375	17:24	267	17:57	18:35	19:14	1.001795	31.93
30 september	03:52	04:31	05:09	05:42	94	11:32	365	17:22	266	17:55	18:33	19:12	1.001513	31.94
1 oktober	03:53	04:33	05:11	05:44	94	11:32	365	17:20	265	17:52	18:30	19:09	1.001230	31.95
2 oktober	03:55	04:34	05:12	05:45	95	11:32	355	17:17	265	17:50	18:28	19:07	1.000945	31.96
3 oktober	03:57	04:36	05:14	05:47	96	11:31	355	17:15	264	17:48	18:26	19:05	1.000658	31.97
4 oktober	03:59	04:37	05:15	05:48	96	11:31	355	17:13	264	17:46	18:24	19:02	1.000370	31.98
5 oktober	04:00	04:39	05:17	05:50	97	11:31	345	17:11	263	17:44	18:22	19:00	1.000081	31.99
6 oktober	04:02	04:41	05:19	05:52	97	11:31	345	17:09	262	17:41	18:19	18:58	0.999790	31.99
7 oktober	04:04	04:42	05:20	05:53	98	11:30	335	17:06	262	17:39	18:17	18:56	0.999498	32.00
8 oktober	04:05	04:44	05:22	05:55	99	11:30	335	17:04	261	17:37	18:15	18:54	0.999206	32.01
9 oktober	04:07	04:45	05:23	05:56	99	11:30	335	17:02	260	17:35	18:13	18:51	0.998913	32.02
10 oktober	04:09	04:47	05:25	05:58	100	11:29	325	17:00	260	17:33	18:11	18:49	0.998619	32.03
11 oktober	04:10	04:49	05:27	06:00	100	11:29	325	16:58	259	17:31	18:09	18:47	0.998326	32.04
12 oktober	04:12	04:50	05:28	06:01	101	11:29	325	16:56	259	17:29	18:07	18:45	0.998033	32.05
13 oktober	04:13	04:52	05:30	06:03	102	11:29	315	16:54	258	17:27	18:05	18:43	0.997741	32.06
14 oktober	04:15	04:53	05:31	06:05	102	11:28	315	16:52	258	17:25	18:03	18:41	0.997451	32.07
15 oktober	04:17	04:55	05:33	06:06	103	11:28	305	16:49	257	17:23	18:01	18:39	0.997162	32.08
16 oktober	04:18	04:56	05:35	06:08	103	11:28	305	16:47	256	17:21	17:59	18:37	0.996875	32.09
17 oktober	04:20	04:58	05:36	06:09	104	11:28	305	16:45	256	17:19	17:57	18:35	0.996590	32.10
18 oktober	04:22	05:00	05:38	06:11	105	11:28	295	16:43	255	17:17	17:55	18:33	0.996308	32.11
19 oktober	04:23	05:01	05:39	06:13	105	11:27	295	16:41	255	17:15	17:53	18:31	0.996029	32.12
20 oktober	04:25	05:03	05:41	06:14	106	11:27	295	16:39	254	17:13	17:51	18:29	0.995752	32.12
21 oktober	04:26	05:04	05:43	06:16	106	11:27	285	16:37	253	17:11	17:49	18:27	0.995478	32.13
22 oktober	04:28	05:06	05:44	06:18	107	11:27	285	16:35	253	17:09	17:47	18:25	0.995205	32.14
23 oktober	04:29	05:07	05:46	06:20	107	11:27	285	16:33	252	17:07	17:45	18:23	0.994935	32.15
24 oktober	04:31	05:09	05:47	06:21	108	11:27	275	16:31	252	17:05	17:44	18:21	0.994667	32.16
25 oktober	04:32	05:11	05:49	06:23	109	11:27	275	16:29	251	17:03	17:42	18:20	0.994400	32.17
26 oktober	04:34	05:12	05:51	06:25	109	11:26	275	16:28	251	17:02	17:40	18:18	0.994135	32.18
27 oktober	04:36	05:14	05:52	06:26	110	11:26	265	16:26	250	17:00	17:38	18:16	0.993871	32.19
28 oktober	04:37	05:15	05:54	06:28	110	11:26	265	16:24	250	16:58	17:37	18:15	0.993608	32.19
29 oktober	04:39	05:17	05:55	06:30	111	11:26	265	16:22	249	16:56	17:35	18:13	0.993346	32.20
30 oktober	04:40	05:18	05:57	06:31	111	11:26	255	16:20	248	16:55	17:33	18:11	0.993085	32.21
31 oktober	04:42	05:20	05:59	06:33	112	11:26	255	16:18	248	16:53	17:32	18:10	0.992825	32.22
1 november	04:43	05:21	06:00	06:35	112	11:26	255	16:17	247	16:51	17:30	18:08	0.992566	32.23
2 november	04:45	05:23	06:02	06:37	113	11:26	245	16:15	247	16:50	17:29	18:07	0.992308	32.24
3 november	04:46	05:24	06:03	06:38	113	11:26	245	16:13	246	16:48	17:27	18:05	0.992051	32.24
4 november	04:48	05:26	06:05	06:40	114	11:26	245	16:12	246	16:47	17:26	18:04	0.991795	32.25
5 november	04:49	05:27	06:07	06:42	114	11:26	235	16:10	245	16:45	17:24	18:02	0.991541	32.26
6 november	04:51	05:29	06:08	06:44	115	11:26	235	16:08	245	16:43	17:23	18:01	0.991287	32.27
7 november	04:52	05:31	06:10	06:45	115	11:26	235	16:07	244	16:42	17:21	18:00	0.991036	32.28
8 november	04:54	05:32	06:11	06:47	116	11:26	225	16:05	244	16:41	17:20	17:58	0.990787	32.29

2024	Ochtendschemering			Opkomst		Culminatie		Ondergang		Avondschemering			Afstand (AE)	Diameter (°)
	Astronomisch	Nautisch	Burgerlijk	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Burgerlijk	Nautisch	Astronomisch		
09 november	04:55	05:34	06:13	06:49	116	11:26	225	16:04	243	16:39	17:19	17:57	0.990539	32.29
10 november	04:56	05:35	06:15	06:50	117	11:27	225	16:02	243	16:38	17:17	17:56	0.990295	32.30
11 november	04:58	05:36	06:16	06:52	117	11:27	225	16:01	242	16:36	17:16	17:55	0.990054	32.31
12 november	04:59	05:38	06:18	06:54	118	11:27	215	15:59	242	16:35	17:15	17:54	0.989816	32.32
13 november	05:01	05:39	06:19	06:55	118	11:27	215	15:58	242	16:34	17:14	17:52	0.989582	32.32
14 november	05:02	05:41	06:21	06:57	119	11:27	215	15:57	241	16:33	17:13	17:51	0.989353	32.33
15 november	05:04	05:42	06:22	06:59	119	11:27	215	15:55	241	16:31	17:12	17:50	0.989128	32.34
16 november	05:05	05:44	06:24	07:00	120	11:27	205	15:54	240	16:30	17:11	17:49	0.988908	32.35
17 november	05:06	05:45	06:25	07:02	120	11:28	205	15:53	240	16:29	17:09	17:48	0.988692	32.35
18 november	05:08	05:47	06:27	07:04	120	11:28	205	15:51	239	16:28	17:09	17:47	0.988482	32.36
19 november	05:09	05:48	06:28	07:05	121	11:28	205	15:50	239	16:27	17:08	17:47	0.988276	32.37
20 november	05:10	05:49	06:30	07:07	121	11:28	195	15:49	239	16:26	17:07	17:46	0.988075	32.37
21 november	05:12	05:51	06:31	07:08	122	11:29	195	15:48	238	16:25	17:06	17:45	0.987879	32.38
22 november	05:13	05:52	06:33	07:10	122	11:29	195	15:47	238	16:24	17:05	17:44	0.987686	32.39
23 november	05:14	05:53	06:34	07:12	122	11:29	195	15:46	238	16:23	17:04	17:44	0.987498	32.39
24 november	05:15	05:55	06:36	07:13	123	11:29	195	15:45	237	16:23	17:04	17:43	0.987313	32.40
25 november	05:17	05:56	06:37	07:15	123	11:30	185	15:44	237	16:22	17:03	17:42	0.987132	32.41
26 november	05:18	05:57	06:38	07:16	123	11:30	185	15:43	237	16:21	17:02	17:42	0.986954	32.41
27 november	05:19	05:59	06:40	07:18	124	11:30	185	15:43	236	16:20	17:02	17:41	0.986779	32.42
28 november	05:20	06:00	06:41	07:19	124	11:31	185	15:42	236	16:20	17:01	17:41	0.986608	32.42
29 november	05:21	06:01	06:42	07:20	124	11:31	185	15:41	236	16:19	17:01	17:40	0.986440	32.43
30 november	05:23	06:02	06:44	07:22	125	11:31	175	15:41	235	16:19	17:00	17:40	0.986275	32.43
1 december	05:24	06:03	06:45	07:23	125	11:32	175	15:40	235	16:18	17:00	17:39	0.986112	32.44
2 december	05:25	06:05	06:46	07:25	125	11:32	175	15:39	235	16:18	16:59	17:39	0.985953	32.44
3 december	05:26	06:06	06:47	07:26	125	11:33	175	15:39	235	16:17	16:59	17:39	0.985797	32.45
4 december	05:27	06:07	06:49	07:27	126	11:33	175	15:38	234					

Maan

2024	UT	Verschijsel	Afstand (km)
1 januari	15:28	Apogeum	404909
4 januari	3:30	Laatste Kwartier	401014
4 januari	18:52	Dalende knoop	
11 januari	11:57	Nieuwe Maan	365203
13 januari	10:36	Perigeum	362267
17 januari	14:05	Klimmende knoop	
18 januari	3:53	Eerste Kwartier	374668
25 januari	17:54	Volle Maan	400995
29 januari	8:14	Apogeum	405777
31 januari	20:17	Dalende knoop	
2 februari	23:18	Laatste Kwartier	394438
9 februari	22:59	Nieuwe Maan	358746
10 februari	18:53	Perigeum	358088
13 februari	17:01	Klimmende knoop	
16 februari	15:01	Eerste Kwartier	380697
24 februari	12:30	Volle Maan	405917
25 februari	14:59	Apogeum	406312
27 februari	22:53	Dalende knoop	
3 maart	15:23	Laatste Kwartier	386520
10 maart	7:04	Perigeum	356895
10 maart	9:00	Nieuwe Maan	356902
12 maart	1:18	Klimmende knoop	
17 maart	4:11	Eerste Kwartier	388177
23 maart	15:45	Apogeum	406294
25 maart	7:00	Volle Maan	405394
26 maart	4:07	Dalende knoop	
2 april	3:15	Laatste Kwartier	379186
7 april	17:51	Perigeum	358850
8 april	12:20	Klimmende knoop	
8 april	18:21	Nieuwe Maan	359807
15 april	19:13	Eerste Kwartier	395631
20 april	2:10	Apogeum	405623
22 april	10:45	Dalende knoop	
23 april	23:49	Volle Maan	399781
1 mei	11:27	Laatste Kwartier	373620
5 mei	21:54	Klimmende knoop	
5 mei	22:04	Perigeum	363163
8 mei	3:22	Nieuwe Maan	366739
15 mei	11:48	Eerste Kwartier	401392
17 mei	18:59	Apogeum	404640
19 mei	16:35	Dalende knoop	
23 mei	13:53	Volle Maan	390646
30 mei	17:13	Laatste Kwartier	370420
2 juni	3:08	Klimmende knoop	
2 juni	7:16	Perigeum	368102
6 juni	12:38	Nieuwe Maan	376369
14 juni	5:18	Eerste Kwartier	404000
14 juni	13:35	Apogeum	404077
15 juni	20:17	Dalende knoop	
22 juni	1:08	Volle Maan	380042
27 juni	11:30	Perigeum	369286
28 juni	21:53	Laatste Kwartier	369872

2024	UT	Verschijsel	Afstand (km)
29 juni	4:26	Klimmende knoop	
5 juli	22:57	Nieuwe Maan	387023
12 juli	8:11	Apogeum	404362
12 juli	22:27	Dalende knoop	
13 juli	22:49	Eerste Kwartier	402735
21 juli	10:17	Volle Maan	369929
24 juli	5:41	Perigeum	364917
26 juli	5:33	Klimmende knoop	
28 juli	2:52	Laatste Kwartier	372036
4 augustus	11:13	Nieuwe Maan	396839
9 augustus	1:06	Dalende knoop	
9 augustus	1:31	Apogeum	405297
12 augustus	15:19	Eerste Kwartier	397980
19 augustus	18:26	Volle Maan	361969
21 augustus	5:02	Perigeum	360196
22 augustus	10:27	Klimmende knoop	
26 augustus	9:26	Laatste Kwartier	376704
3 september	1:56	Nieuwe Maan	403895
5 september	5:43	Dalende knoop	
5 september	14:54	Apogeum	406211
11 september	6:06	Eerste Kwartier	391039
18 september	2:34	Volle Maan	357485
18 september	13:22	Perigeum	357286
18 september	19:51	Klimmende knoop	
24 september	18:50	Laatste Kwartier	383362
2 oktober	11:52	Dalende knoop	
2 oktober	18:49	Nieuwe Maan	406515
2 oktober	19:39	Apogeum	406516
10 oktober	18:55	Eerste Kwartier	383541
16 oktober	7:05	Klimmende knoop	
17 oktober	0:51	Perigeum	357175
17 oktober	11:26	Volle Maan	357367
24 oktober	8:03	Laatste Kwartier	391091
29 oktober	17:44	Dalende knoop	
29 oktober	22:50	Apogeum	406161
1 november	12:47	Nieuwe Maan	403829
9 november	5:55	Eerste Kwartier	376944
12 november	15:59	Klimmende knoop	
14 november	11:16	Perigeum	360109
15 november	21:28	Volle Maan	361873
23 november	1:28	Laatste Kwartier	398385
25 november	21:31	Dalende knoop	
26 november	11:56	Apogeum	405314
1 december	6:21	Nieuwe Maan	396280
8 december	15:27	Eerste Kwartier	372342
9 december	19:36	Klimmende knoop	
12 december	13:20	Perigeum	365361
15 december	9:02	Volle Maan	370402
22 december	22:18	Laatste Kwartier	403246
22 december	23:21	Dalende knoop	
24 december	7:25	Apogeum	404485
30 december	22:27	Nieuwe Maan	385604

2024	Opkomst		Culminatie		Ondergang		Fase	Diameter (°)	Afstand (km)	Libratie	
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				b (°)	l (°)
1 januari	21:35	78	03:45	50S	10:47	286	0.78	29.5	404634	-4.7	0.0
2 januari	22:44	87	04:25	45S	10:58	278	0.70	29.5	404796	-3.6	-1.3
3 januari	23:53	96	05:04	39S	11:09	269	0.61	29.6	403739	-2.4	-2.7
4 januari	-	-	05:43	33S	11:20	260	0.52	29.8	401417	-1.1	-4.0
5 januari	01:03	105	06:24	28S	11:32	251	0.42	30.0	397883	0.3	-5.2
6 januari	02:17	115	07:08	22S	11:46	242	0.32	30.4	393297	1.7	-6.1
7 januari	03:35	123	07:56	17S	12:06	234	0.23	30.8	387930	3.0	-6.6
8 januari	04:56	131	08:49	13S	12:34	227	0.15	31.3	382151	4.3	-6.8
9 januari	06:16	137	09:47	11S	13:14	222	0.08	31.7	376402	5.3	-6.4
10 januari	07:27	139	10:50	10S	14:13	222	0.03	32.2	371158	6.1	-5.6
11 januari	08:21	136	11:54	12S	15:31	225	0.01	32.6	366869	6.5	-4.4
12 januari	09:00	130	12:56	15S	17:01	232	0.01	32.8	363889	6.5	-2.8
13 januari	09:27	122	13:54	20S	18:34	242	0.03	33.0	362430	6.0	-1.1
14 januari	09:47	112	14:48	26S	20:05	253	0.09	33.0	362520	5.2	0.6
15 januari	10:03	101	15:39	33S	21:32	264	0.17	32.8	364022	4.0	2.2
16 januari	10:16	90	16:27	40S	22:56	275	0.26	32.6	366667	2.5	3.5
17 januari	10:30	80	17:15	47S	-	-	0.37	32.3	370120	0.9	4.5
18 januari	10:44	69	18:03	53S	00:19	286	0.48	31.9	374047	-0.7	5.3
19 januari	11:01	60	18:53	59S	01:42	296	0.59	31.6	378159	-2.2	5.7
20 januari	11:24	52	19:45	63S	03:05	305	0.70	31.3	382240	-3.6	5.9
21 januari	11:53	46	20:40	66S	04:25	312	0.79	30.9	386153	-4.7	5.8
22 januari	12:34	42	21:35	67S	05:38	317	0.86	30.6	389824	-5.6	5.6
23 januari	13:28	42	22:30	67S	06:39	318	0.93	30.4	393223	-6.3	5.2
24 januari	14:33	45	23:23	65S	07:25	316	0.97	30.1	396335	-6.5	4.6
25 januari	15:45	50	-	-	07:58	312	0.99	29.9	399136	-6.5	3.8
26 januari	16:59	57	00:12	61S	08:22	305	1.00	29.7	401576	-6.2	2.9
27 januari	18:11	66	00:58	57S	08:40	298	0.98	29.6	403568	-5.6	1.9
28 januari	19:22	74	01:41	52S	08:54	289	0.95	29.5	404991	-4.8	0.7
29 januari	20:31	84	02:22	47S	09:05	281	0.91	29.4	405700	-3.7	-0.7
30 januari	21:39	93	03:01	41S	09:16	272	0.84	29.5	405543	-2.5	-2.1
31 januari	22:48	102	03:40	35S	09:26	263	0.77	29.5	404382	-1.2	-3.5
1 februari	24:00	111	04:19	30S	09:37	254	0.69	29.7	402120	0.2	-4.8
2 februari	-	-	05:01	24S	09:50	245	0.60	30.0	398726	1.5	-6.0
3 februari	01:14	120	05:46	19S	10:07	237	0.50	30.3	394253	2.9	-7.0
4 februari	02:32	128	06:35	15S	10:30	230	0.40	30.7	388863	4.1	-7.6
5 februari	03:51	135	07:30	12S	11:02	224	0.30	31.2	382829	5.2	-7.8
6 februari	05:06	138	08:29	10S	11:51	221	0.21	31.7	376540	6.0	-7.5
7 februari	06:08	138	09:32	10S	12:59	222	0.12	32.2	370475	6.5	-6.6
8 februari	06:54	134	10:35	13S	14:24	228	0.06	32.7	365159	6.6	-5.3
9 februari	07:26	127	11:36	17S	15:57	237	0.02	33.1	361095	6.3	-3.7
10 februari	07:49	117	12:33	23S	17:32	247	0.00	33.3	358682	5.5	-1.7
11 februari	08:07	106	13:27	30S	19:04	259	0.02	33.4	358141	4.3	0.3
12 februari	08:21	95	14:18	37S	20:33	271	0.06	33.2	359472	2.9	2.2
13 februari	08:35	83	15:08	45S	22:01	283	0.13	33.0	362462	1.2	3.9
14 februari	08:50	73	15:58	51S	23:27	293	0.22	32.6	366735	-0.5	5.3
15 februari	09:06	63	16:49	57S	-	-	0.33	32.1	371835	-2.1	6.2
16 februari	09:27	54	17:41	62S	00:52	303	0.43	31.7	377305	-3.5	6.8
17 februari	09:54	47	18:35	65S	02:15	311	0.54	31.2	382748	-4.8	7.0
18 februari	10:31	43	19:31	67S	03:31	316	0.64	30.8	387858	-5.7	6.9
19 februari	11:21	41	20:26	67S	04:36	319	0.74	30.4	392434	-6.3	6.5
20 februari	12:23	43	21:19	66S	05:26	317	0.82	30.1	396368	-6.7	5.8
21 februari	13:33	48	22:09	63S	06:02	314	0.89	29.9	399621	-6.7	5.0

2024	Opkomst		Culminatie		Ondergang		Libratie				
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)	Fase	Diameter (')	Afstand (km)	b (°)	l (°)
22 februari	14:46	55	22:56	59S	06:28	308	0.94	29.7	402204	-6.4	4.0
23 februari	15:59	63	23:39	54S	06:47	300	0.98	29.6	404146	-5.8	2.9
24 februari	17:11	71	-	-	07:01	292	1.00	29.5	405469	-5.0	1.7
25 februari	18:20	81	00:20	49S	07:13	283	1.00	29.4	406180	-3.9	0.4
26 februari	19:29	90	01:00	43S	07:24	275	0.98	29.4	406252	-2.7	-1.0
27 februari	20:38	99	01:39	37S	07:34	266	0.95	29.4	405634	-1.4	-2.4
28 februari	21:48	108	02:18	31S	07:45	257	0.90	29.5	404250	0.0	-3.8
29 februari	23:01	117	02:58	26S	07:57	248	0.83	29.7	402027	1.4	-5.1
1 maart	-	-	03:41	21S	08:11	240	0.75	29.9	398906	2.7	-6.2
2 maart	00:16	126	04:28	16S	08:31	232	0.66	30.3	394875	4.0	-7.2
3 maart	01:34	133	05:19	13S	08:58	226	0.57	30.6	389994	5.1	-7.8
4 maart	02:48	138	06:15	10S	09:38	222	0.46	31.1	384414	5.9	-8.0
5 maart	03:54	139	07:14	10S	10:35	221	0.36	31.6	378399	6.5	-7.8
6 maart	04:46	137	08:15	11S	11:50	224	0.26	32.1	372320	6.7	-7.2
7 maart	05:23	131	09:16	15S	13:19	232	0.16	32.6	366645	6.6	-6.1
8 maart	05:49	122	10:14	20S	14:52	241	0.09	33.0	361888	6.0	-4.5
9 maart	06:09	112	11:10	26S	16:26	253	0.03	33.3	358539	4.9	-2.6
10 maart	06:25	101	12:03	33S	17:58	265	0.00	33.5	356979	3.5	-0.6
11 maart	06:39	89	12:54	41S	19:29	277	0.01	33.4	357400	1.9	1.4
12 maart	06:54	78	13:45	48S	20:59	289	0.04	33.2	359758	0.1	3.3
13 maart	07:09	67	14:38	55S	22:28	299	0.10	32.8	363788	-1.6	4.9
14 maart	07:28	57	15:32	60S	23:56	308	0.18	32.4	369057	-3.2	6.1
15 maart	07:54	49	16:27	64S	-	-	0.28	31.9	375050	-4.6	6.9
16 maart	08:28	44	17:24	67S	01:18	315	0.38	31.3	381256	-5.6	7.3
17 maart	09:14	41	18:20	67S	02:29	318	0.48	30.8	387227	-6.4	7.3
18 maart	10:13	42	19:15	66S	03:25	318	0.59	30.4	392619	-6.8	6.9
19 maart	11:22	46	20:06	64S	04:05	315	0.68	30.1	397201	-6.8	6.2
20 maart	12:35	52	20:54	60S	04:34	310	0.77	29.8	400848	-6.6	5.3
21 maart	13:48	60	21:38	56S	04:54	303	0.84	29.6	403527	-6.0	4.2
22 maart	15:00	68	22:20	51S	05:10	295	0.91	29.5	405271	-5.2	2.9
23 maart	16:10	77	22:59	45S	05:22	286	0.95	29.4	406153	-4.2	1.6
24 maart	17:19	87	23:38	39S	05:33	278	0.98	29.4	406262	-3.0	0.2
25 maart	18:28	96	-	-	05:43	269	1.00	29.4	405682	-1.7	-1.2
26 maart	19:38	106	00:17	33S	05:53	260	1.00	29.5	404478	-0.3	-2.5
27 maart	20:50	115	00:58	28S	06:05	251	0.97	29.7	402685	1.1	-3.8
28 maart	22:05	123	01:40	22S	06:18	242	0.93	29.8	400310	2.5	-4.9
29 maart	23:22	131	02:25	17S	06:36	234	0.88	30.1	397343	3.8	-5.9
30 maart	-	-	03:15	14S	07:00	227	0.81	30.3	393774	4.9	-6.7
31 maart	00:37	136	04:08	11S	07:34	222	0.72	30.7	389616	5.9	-7.2
1 april	01:45	139	05:05	10S	08:24	221	0.62	31.0	384931	6.5	-7.4
2 april	02:41	138	06:04	10S	09:30	222	0.52	31.4	379854	6.8	-7.3
3 april	03:21	134	07:02	13S	10:51	228	0.41	31.9	374612	6.7	-6.7
4 april	03:51	127	08:00	17S	12:20	236	0.30	32.3	369527	6.3	-5.8
5 april	04:12	117	08:55	23S	13:51	247	0.20	32.7	364999	5.4	-4.6
6 april	04:29	107	09:47	29S	15:22	258	0.11	33.0	361466	4.2	-3.0
7 april	04:44	95	10:38	37S	16:52	270	0.05	33.2	359334	2.6	-1.3
8 april	04:58	84	11:29	44S	18:22	282	0.01	33.3	358904	0.9	0.6
9 april	05:12	73	12:22	52S	19:53	294	0.00	33.2	360300	-0.9	2.4
10 april	05:30	62	13:16	58S	21:24	304	0.02	32.9	363436	-2.6	4.0
11 april	05:52	53	14:12	63S	22:53	312	0.07	32.5	368025	-4.1	5.4
12 april	06:23	46	15:11	66S	-	-	0.14	32.0	373636	-5.3	6.3
13 april	07:05	42	16:09	67S	00:12	317	0.23	31.5	379764	-6.2	6.9

2024	Opkomst		Culminatie		Ondergang		Libratie				
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)	Fase	Diameter (')	Afstand (km)	b (°)	l (°)
14 april	08:00	41	17:06	67S	01:17	319	0.32	31.0	385909	-6.7	7.0
15 april	09:08	44	18:00	65S	02:04	317	0.42	30.5	391629	-6.8	6.7
16 april	10:21	50	18:50	62S	02:37	312	0.52	30.1	396583	-6.7	6.1
17 april	11:35	57	19:35	57S	03:00	305	0.62	29.8	400537	-6.2	5.1
18 april	12:48	65	20:18	52S	03:17	298	0.71	29.6	403368	-5.4	4.0
19 april	13:58	74	20:58	47S	03:31	289	0.79	29.5	405053	-4.5	2.6
20 april	15:07	84	21:37	41S	03:42	281	0.86	29.4	405647	-3.3	1.3
21 april	16:16	93	22:16	35S	03:52	272	0.92	29.5	405263	-2.0	-0.1
22 april	17:26	102	22:56	29S	04:02	263	0.96	29.6	404050	-0.6	-1.5
23 april	18:38	112	23:38	24S	04:13	254	0.99	29.7	402166	0.8	-2.7
24 april	19:53	121	-	-	04:26	245	1.00	29.9	399760	2.2	-3.8
25 april	21:10	128	00:23	19S	04:42	237	0.99	30.1	396957	3.5	-4.7
26 april	22:27	135	01:11	15S	05:04	229	0.96	30.3	393848	4.7	-5.5
27 april	23:38	139	02:04	12S	05:35	224	0.91	30.6	390490	5.7	-5.9
28 april	-	-	03:00	10S	06:20	221	0.84	30.9	386921	6.3	-6.2
29 april	00:37	139	03:58	10S	07:21	222	0.76	31.2	383174	6.7	-6.2
30 april	01:22	136	04:56	12S	08:37	226	0.66	31.5	379303	6.7	-5.9
1 mei	01:54	129	05:52	15S	10:01	233	0.55	31.8	375407	6.4	-5.4
2 mei	02:17	121	06:46	20S	11:29	243	0.44	32.1	371648	5.6	-4.6
3 mei	02:34	111	07:38	27S	12:56	253	0.33	32.4	368253	4.5	-3.6
4 mei	02:49	100	08:28	34S	14:23	265	0.23	32.7	365507	3.1	-2.4
5 mei	03:03	89	09:17	41S	15:50	277	0.13	32.8	363715	1.5	-1.0
6 mei	03:17	78	10:07	48S	17:19	288	0.06	32.9	363151	-0.2	0.4
7 mei	03:32	67	11:00	55S	18:50	299	0.02	32.8	363999	-1.9	1.9
8 mei	03:52	57	11:55	60S	20:20	308	0.00	32.6	366304	-3.5	3.3
9 mei	04:18	49	12:53	65S	21:46	315	0.01	32.3	369948	-4.8	4.5
10 mei	04:55	44	13:53	67S	22:59	318	0.05	31.9	374660	-5.8	5.4
11 mei	05:46	41	14:52	67S	23:56	318	0.10	31.4	380055	-6.5	6.0
12 mei	06:50	43	15:49	66S	-	-	0.18	31.0	385690	-6.7	6.2
13 mei	08:03	48	16:42	63S	00:36	314	0.26	30.5	391124	-6.6	5.9
14 mei	09:18	54	17:30	59S	01:03	308	0.36	30.2	395964	-6.2	5.3
15 mei	10:33	62	18:14	54S	01:23	301	0.45	29.9	399898	-5.6	4.4
16 mei	11:45	71	18:56	49S	01:38	292	0.55	29.7	402713	-4.6	3.3
17 mei	12:54	80	19:35	43S	01:50	284	0.64	29.5	404300	-3.5	1.9
18 mei	14:03	90	20:14	37S	02:00	275	0.73	29.5	404649	-2.3	0.5
19 mei	15:12	99	20:53	32S	02:10	266	0.81	29.6	403842	-0.9	-0.8
20 mei	16:23	108	21:34	26S	02:21	257	0.88	29.7	402031	0.5	-2.1
21 mei	17:37	117	22:18	21S	02:33	248	0.93	29.9	399421	1.9	-3.2
22 mei	18:54	126	23:06	16S	02:48	240	0.97	30.1	396244	3.2	-4.2
23 mei	20:12	133	23:58	13S	03:08	232	1.00	30.4	392739	4.4	-4.8
24 mei	21:27	138	-	-	03:36	226	1.00	30.7	389119	5.4	-5.2
25 mei	22:31	139	00:53	10S	04:17	222	0.98	31.0	385562	6.1	-5.3
26 mei	23:21	137	01:52	10S	05:14	221	0.93	31.3	382193	6.6	-5.2
27 mei	23:57	131	02:51	11S	06:26	225	0.87	31.5	379088	6.6	-4.8
28 mei	-	-	03:48	14S	07:49	231	0.79	31.7	376284	6.3	-4.2
29 mei	00:22	123	04:43	19S	09:15	240	0.69	32.0	373803	5.6	-3.6
30 mei	00:41	114	05:34	25S	10:42	250	0.58	32.1	371669	4.6	-2.7
31 mei	00:56	104	06:23	31S	12:07	261	0.47	32.3	369940	3.3	-1.9
1 juni	01:09	93	07:11	38S	13:31	273	0.36	32.4	368709	1.8	-0.9
2 juni	01:23	82	08:00	45S	14:56	284	0.25	32.5	368108	0.2	0.2
3 juni	01:37	72	08:49	52S	16:23	295	0.16	32.4	368283	-1.5	1.2
4 juni	01:54	62	09:42	58S	17:52	304	0.08	32.3	369362	-3.0	2.3

2024	Opkomst		Culminatie		Ondergang		Libratie				
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Fase	Diameter (')	Afstand (km)	b (°)	l (°)
5 juni	02:17	53	10:38	63S	19:19	312	0.03	32.2	371419	-4.4	3.3
6 juni	02:48	46	11:37	66S	20:38	317	0.00	31.9	374435	-5.5	4.2
7 juni	03:33	42	12:37	67S	21:43	318	0.00	31.6	378285	-6.2	4.9
8 juni	04:31	42	13:35	67S	22:30	316	0.03	31.2	382741	-6.6	5.2
9 juni	05:42	45	14:31	64S	23:03	311	0.07	30.8	387494	-6.6	5.3
10 juni	06:58	51	15:22	61S	23:26	304	0.13	30.5	392190	-6.2	5.0
11 juni	08:15	59	16:08	56S	23:43	296	0.21	30.1	396472	-5.6	4.4
12 juni	09:28	68	16:51	51S	23:56	287	0.30	29.9	400015	-4.7	3.4
13 juni	10:39	77	17:31	45S	-	-	0.39	29.7	402555	-3.7	2.3
14 juni	11:48	86	18:10	40S	00:07	278	0.48	29.6	403910	-2.5	1.0
15 juni	12:57	95	18:49	34S	00:17	269	0.57	29.6	403995	-1.1	-0.4
16 juni	14:07	105	19:29	28S	00:28	260	0.67	29.7	402820	0.2	-1.8
17 juni	15:19	114	20:12	23S	00:39	251	0.75	29.8	400493	1.6	-3.1
18 juni	16:35	123	20:58	18S	00:53	243	0.83	30.1	397205	2.9	-4.1
19 juni	17:53	130	21:48	14S	01:11	235	0.90	30.4	393220	4.1	-4.9
20 juni	19:10	136	22:43	11S	01:35	228	0.95	30.7	388847	5.1	-5.3
21 juni	20:20	139	23:41	10S	02:11	223	0.99	31.1	384413	5.9	-5.4
22 juni	21:16	138	-	-	03:02	221	1.00	31.4	380228	6.4	-5.1
23 juni	21:57	133	00:42	11S	04:11	223	0.99	31.7	376552	6.5	-4.6
24 juni	22:26	126	01:41	13S	05:33	229	0.95	32.0	373569	6.3	-3.8
25 juni	22:47	117	02:38	18S	07:01	237	0.89	32.2	371374	5.7	-2.8
26 juni	23:03	107	03:31	23S	08:29	247	0.81	32.3	369977	4.7	-1.8
27 juni	23:17	96	04:21	30S	09:55	258	0.71	32.3	369326	3.4	-0.8
28 juni	23:30	85	05:09	36S	11:19	269	0.61	32.3	369332	1.9	0.2
29 juni	23:43	75	05:57	43S	12:43	281	0.49	32.3	369908	0.3	1.1
30 juni	23:59	65	06:45	50S	14:07	291	0.38	32.2	370989	-1.3	2.0
1 juli	-	-	07:36	56S	15:34	301	0.27	32.1	372545	-2.8	2.8
2 juli	00:19	55	08:29	61S	17:00	310	0.18	31.9	374572	-4.2	3.5
3 juli	00:47	48	09:26	65S	18:21	316	0.10	31.7	377078	-5.3	4.1
4 juli	01:25	43	10:24	67S	19:30	318	0.05	31.4	380058	-6.1	4.6
5 juli	02:17	41	11:23	67S	20:24	317	0.01	31.2	383463	-6.5	4.9
6 juli	03:24	44	12:20	65S	21:02	313	0.00	30.9	387190	-6.5	5.0
7 juli	04:39	49	13:12	62S	21:28	307	0.01	30.5	391071	-6.3	4.8
8 juli	05:56	56	14:01	58S	21:47	299	0.05	30.3	394886	-5.7	4.3
9 juli	07:11	64	14:45	53S	22:02	290	0.10	30.0	398377	-4.8	3.5
10 juli	08:24	73	15:27	47S	22:13	281	0.16	29.8	401275	-3.8	2.5
11 juli	09:33	83	16:06	42S	22:24	273	0.24	29.6	403328	-2.6	1.3
12 juli	10:42	92	16:45	36S	22:34	264	0.32	29.5	404328	-1.3	-0.1
13 juli	11:51	101	17:24	30S	22:45	255	0.41	29.6	404130	0.1	-1.5
14 juli	13:01	110	18:05	25S	22:57	246	0.51	29.7	402673	1.4	-2.9
15 juli	14:15	119	18:49	20S	23:13	238	0.60	29.9	399990	2.7	-4.1
16 juli	15:31	127	19:37	15S	23:34	230	0.69	30.1	396213	3.9	-5.1
17 juli	16:49	134	20:29	12S	-	-	0.78	30.5	391575	5.0	-5.8
18 juli	18:02	138	21:26	10S	00:04	225	0.86	30.9	386393	5.8	-6.1
19 juli	19:05	139	22:27	10S	00:48	221	0.93	31.3	381053	6.4	-6.0
20 juli	19:53	136	23:27	12S	01:50	222	0.97	31.8	375969	6.6	-5.5
21 juli	20:26	129	-	-	03:09	226	1.00	32.2	371541	6.4	-4.6
22 juli	20:50	120	00:27	16S	04:37	234	0.99	32.5	368100	5.8	-3.4
23 juli	21:09	110	01:23	21S	06:08	243	0.97	32.6	365869	4.9	-2.1
24 juli	21:23	99	02:15	27S	07:37	255	0.91	32.7	364931	3.6	-0.7
25 juli	21:37	88	03:05	34S	09:04	266	0.83	32.7	365233	2.1	0.7
26 juli	21:50	77	03:54	41S	10:30	278	0.74	32.6	366607	0.4	2.0

2024	Opkomst		Culminatie		Ondergang		Libratie				
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)	Fase	Diameter (')	Afstand (km)	b (°)	l (°)
27 juli	22:05	67	04:43	48S	11:55	289	0.63	32.4	368823	-1.2	3.0
28 juli	22:24	58	05:33	55S	13:22	299	0.51	32.1	371635	-2.8	3.9
29 juli	22:48	50	06:25	60S	14:47	308	0.40	31.9	374823	-4.2	4.6
30 juli	23:22	44	07:20	64S	16:10	315	0.30	31.6	378215	-5.3	5.1
31 juli	-	-	08:17	67S	17:22	318	0.20	31.3	381698	-6.1	5.4
1 augustus	00:09	41	09:15	67S	18:20	318	0.12	31.0	385201	-6.5	5.6
2 augustus	01:10	42	10:12	66S	19:02	315	0.06	30.7	388681	-6.6	5.5
3 augustus	02:22	47	11:05	64S	19:31	309	0.02	30.5	392093	-6.4	5.2
4 augustus	03:39	53	11:55	60S	19:52	302	0.00	30.2	395375	-5.8	4.7
5 augustus	04:55	61	12:41	55S	20:08	293	0.00	30.0	398430	-5.0	3.9
6 augustus	06:09	70	13:23	50S	20:20	285	0.02	29.8	401125	-4.0	3.0
7 augustus	07:20	79	14:03	44S	20:31	276	0.06	29.6	403294	-2.8	1.8
8 augustus	08:29	89	14:42	38S	20:41	267	0.11	29.5	404754	-1.5	0.5
9 augustus	09:37	98	15:21	32S	20:52	258	0.18	29.5	405325	-0.1	-0.9
10 augustus	10:47	107	16:01	27S	21:03	249	0.26	29.5	404852	1.3	-2.3
11 augustus	11:58	116	16:43	21S	21:17	241	0.35	29.6	403228	2.6	-3.7
12 augustus	13:12	124	17:28	17S	21:35	233	0.44	29.8	400415	3.8	-4.9
13 augustus	14:28	132	18:18	13S	22:00	227	0.54	30.1	396465	4.9	-6.0
14 augustus	15:43	137	19:12	11S	22:36	222	0.64	30.5	391534	5.8	-6.6
15 augustus	16:50	139	20:10	10S	23:29	221	0.73	31.0	385883	6.4	-6.9
16 augustus	17:44	138	21:10	11S	-	-	0.82	31.4	379876	6.7	-6.8
17 augustus	18:24	133	22:10	14S	00:40	223	0.90	31.9	373958	6.6	-6.2
18 augustus	18:52	125	23:08	18S	02:04	229	0.95	32.4	368617	6.1	-5.2
19 augustus	19:12	115	-	-	03:36	239	0.99	32.8	364319	5.3	-3.8
20 augustus	19:29	104	00:03	24S	05:08	249	1.00	33.0	361444	4.0	-2.2
21 augustus	19:43	93	00:55	31S	06:39	261	0.98	33.2	360223	2.5	-0.4
22 augustus	19:56	81	01:46	39S	08:08	273	0.93	33.1	360695	0.8	1.3
23 augustus	20:11	70	02:36	46S	09:37	285	0.85	32.9	362714	-0.9	2.9
24 augustus	20:28	60	03:27	53S	11:06	296	0.76	32.6	365986	-2.6	4.3
25 augustus	20:51	52	04:20	59S	12:34	306	0.66	32.3	370138	-4.1	5.4
26 augustus	21:22	45	05:15	63S	13:59	313	0.54	31.9	374783	-5.2	6.2
27 augustus	22:05	41	06:13	66S	15:16	318	0.43	31.5	379579	-6.1	6.6
28 augustus	23:02	41	07:11	67S	16:18	319	0.33	31.1	384258	-6.6	6.8
29 augustus	-	-	08:07	67S	17:04	317	0.24	30.7	388637	-6.8	6.7
30 augustus	00:11	45	09:01	65S	17:36	311	0.16	30.4	392609	-6.6	6.4
31 augustus	01:26	51	09:52	61S	17:59	304	0.09	30.2	396123	-6.1	5.8
1 september	02:42	58	10:38	57S	18:16	296	0.04	29.9	399162	-5.3	4.9
2 september	03:56	67	11:21	51S	18:29	288	0.01	29.7	401714	-4.3	3.9
3 september	05:08	76	12:02	46S	18:40	279	0.00	29.6	403754	-3.1	2.8
4 september	06:17	86	12:41	40S	18:50	270	0.01	29.5	405233	-1.8	1.5
5 september	07:26	95	13:20	34S	19:00	261	0.03	29.4	406073	-0.4	0.1
6 september	08:35	104	13:59	28S	19:10	252	0.08	29.4	406172	1.0	-1.3
7 september	09:45	113	14:40	23S	19:23	243	0.13	29.5	405418	2.4	-2.8
8 september	10:58	122	15:23	18S	19:39	236	0.20	29.6	403708	3.6	-4.1
9 september	12:13	129	16:10	14S	20:00	229	0.29	29.8	400969	4.8	-5.4
10 september	13:27	135	17:01	11S	20:31	223	0.38	30.1	397186	5.7	-6.4
11 september	14:36	139	17:56	10S	21:15	221	0.48	30.4	392425	6.4	-7.1
12 september	15:35	139	18:54	10S	22:16	221	0.58	30.9	386849	6.7	-7.4
13 september	16:19	136	19:53	12S	23:33	226	0.68	31.4	380734	6.8	-7.4
14 september	16:51	129	20:51	16S	-	-	0.78	31.9	374466	6.5	-6.9
15 september	17:14	120	21:46	21S	01:00	234	0.86	32.4	368519	5.7	-5.9
16 september	17:32	110	22:40	27S	02:32	243	0.93	32.9	363413	4.6	-4.6

2024	Opkomst		Culminatie		Ondergang		Libratie				
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)	Fase	Diameter (')	Afstand (km)	b (°)	l (°)
17 september	17:47	99	23:32	35S	04:04	25S	0.98	33.2	359641	3.2	-2.9
18 september	18:01	87	-	-	05:35	267	1.00	33.4	357592	1.5	-1.0
19 september	18:15	75	00:23	42S	07:06	279	0.99	33.4	357470	-0.3	1.0
20 september	18:32	64	01:16	50S	08:38	291	0.95	33.3	359255	-2.1	2.9
21 september	18:53	55	02:09	56S	10:10	302	0.88	32.9	362711	-3.7	4.6
22 september	19:21	47	03:06	62S	11:40	311	0.79	32.5	367440	-5.0	6.0
23 september	20:00	42	04:04	66S	13:04	317	0.69	32.0	372962	-6.0	7.0
24 september	20:54	41	05:04	67S	14:13	319	0.59	31.5	378799	-6.6	7.6
25 september	22:00	43	06:02	67S	15:04	318	0.48	31.1	384533	-6.8	7.8
26 september	23:14	49	06:58	66S	15:41	313	0.38	30.6	389841	-6.7	7.6
27 september	-	-	07:49	62S	16:06	307	0.28	30.3	394506	-6.3	7.1
28 september	00:30	56	08:37	58S	16:24	299	0.20	30.0	398410	-5.5	6.3
29 september	01:45	64	09:20	53S	16:38	291	0.13	29.8	401515	-4.5	5.2
30 september	02:57	73	10:01	48S	16:49	282	0.07	29.6	403834	-3.4	4.0
1 oktober	04:07	82	10:41	42S	16:59	273	0.03	29.5	405410	-2.1	2.7
2 oktober	05:16	92	11:19	36S	17:09	264	0.01	29.4	406290	-0.7	1.3
3 oktober	06:25	101	11:58	30S	17:19	255	0.00	29.4	406506	0.7	-0.1
4 oktober	07:35	110	12:39	25S	17:31	246	0.01	29.4	406066	2.1	-1.5
5 oktober	08:47	119	13:21	20S	17:46	238	0.04	29.5	404947	3.4	-2.9
6 oktober	10:01	127	14:07	15S	18:05	231	0.09	29.6	403109	4.5	-4.1
7 oktober	11:15	134	14:56	12S	18:32	225	0.15	29.8	400500	5.5	-5.3
8 oktober	12:25	138	15:49	10S	19:10	221	0.23	30.1	397084	6.2	-6.2
9 oktober	13:27	140	16:45	10S	20:03	221	0.32	30.4	392864	6.7	-6.9
10 oktober	14:15	138	17:41	11S	21:12	224	0.42	30.8	387907	6.8	-7.3
11 oktober	14:51	132	18:38	14S	22:33	230	0.52	31.2	382370	6.6	-7.3
12 oktober	15:16	125	19:32	18S	24:00	239	0.63	31.7	376514	6.0	-7.0
13 oktober	15:36	115	20:25	24S	-	-	0.74	32.2	370706	5.1	-6.2
14 oktober	15:51	105	21:16	31S	01:29	249	0.83	32.7	365399	3.8	-5.1
15 oktober	16:05	93	22:07	38S	02:58	261	0.91	33.1	361087	2.3	-3.6
16 oktober	16:19	82	22:59	46S	04:28	273	0.97	33.3	358232	0.5	-1.8
17 oktober	16:35	70	23:52	53S	06:00	285	1.00	33.4	357181	-1.3	0.1
18 oktober	16:53	60	-	-	07:33	296	1.00	33.4	358088	-3.0	2.1
19 oktober	17:18	51	00:49	59S	09:08	307	0.96	33.1	360881	-4.5	4.0
20 oktober	17:53	44	01:49	64S	10:38	314	0.91	32.7	365269	-5.6	5.6
21 oktober	18:43	41	02:50	67S	11:57	319	0.83	32.2	370806	-6.4	6.8
22 oktober	19:46	42	03:51	67S	12:58	319	0.74	31.7	376970	-6.8	7.6
23 oktober	21:00	46	04:50	66S	13:41	315	0.64	31.2	383249	-6.7	7.9
24 oktober	22:17	53	05:44	64S	14:10	309	0.54	30.7	389195	-6.3	7.8
25 oktober	23:33	61	06:34	60S	14:30	302	0.43	30.3	394465	-5.7	7.3
26 oktober	-	-	07:19	55S	14:46	293	0.34	30.0	398831	-4.7	6.4
27 oktober	00:46	70	08:01	49S	14:58	285	0.25	29.7	402172	-3.6	5.3
28 oktober	01:57	79	08:40	44S	15:08	276	0.17	29.5	404466	-2.3	4.0
29 oktober	03:06	89	09:19	38S	15:18	267	0.11	29.4	405757	-1.0	2.5
30 oktober	04:14	98	09:58	32S	15:28	258	0.06	29.4	406141	0.4	1.1
31 oktober	05:24	107	10:38	26S	15:40	249	0.02	29.4	405733	1.8	-0.3
1 november	06:35	116	11:20	21S	15:53	241	0.00	29.5	404649	3.1	-1.6
2 november	07:49	124	12:05	17S	16:11	233	0.00	29.6	402983	4.3	-2.9
3 november	09:04	132	12:53	13S	16:36	227	0.02	29.8	400803	5.3	-3.9
4 november	10:16	137	13:45	11S	17:10	222	0.06	30.0	398142	6.0	-4.9
5 november	11:21	139	14:40	10S	17:58	221	0.11	30.2	395009	6.5	-5.6
6 november	12:13	138	15:36	10S	19:02	222	0.18	30.5	391407	6.7	-6.1
7 november	12:51	134	16:31	13S	20:18	228	0.27	30.8	387350	6.6	-6.4
8 november	13:19	127	17:25	17S	21:41	235	0.37	31.2	382896	6.1	-6.4

2024	Opkomst		Culminatie		Ondergang		Libratie				
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)	Fase	Diameter (')	Afstand (km)	b (°)	l (°)
9 november	13:40	119	18:16	22S	23:06	245	0.47	31.6	378169	5.3	-6.2
10 november	13:56	109	19:06	28S	-	-	0.58	32.0	373376	4.1	-5.6
11 november	14:10	98	19:55	35S	00:31	256	0.69	32.4	368815	2.7	-4.8
12 november	14:24	87	20:44	42S	01:57	267	0.79	32.7	364856	1.1	-3.6
13 november	14:38	76	21:36	49S	03:25	279	0.88	33.0	361899	-0.6	-2.2
14 november	14:54	65	22:30	56S	04:55	290	0.95	33.2	360313	-2.3	-0.5
15 november	15:16	55	23:28	62S	06:29	301	0.99	33.1	360362	-3.9	1.3
16 november	15:46	47	-	-	08:02	310	1.00	33.0	362141	-5.1	3.0
17 november	16:28	42	00:30	65S	09:30	317	0.98	32.7	365547	-6.0	4.6
18 november	17:27	41	01:33	67S	10:42	319	0.94	32.3	370289	-6.5	5.9
19 november	18:40	44	02:35	67S	11:34	317	0.87	31.8	375940	-6.6	6.8
20 november	19:58	51	03:33	65S	12:10	312	0.79	31.3	382004	-6.3	7.3
21 november	21:17	58	04:26	61S	12:34	304	0.70	30.8	387991	-5.7	7.2
22 november	22:32	67	05:14	57S	12:51	296	0.61	30.4	393468	-4.8	6.7
23 november	23:44	76	05:57	51S	13:05	288	0.51	30.0	398095	-3.7	5.9
24 november	-	-	06:38	46S	13:16	279	0.41	29.7	401645	-2.5	4.7
25 november	00:54	86	07:17	40S	13:26	270	0.32	29.6	403999	-1.2	3.4
26 november	02:02	95	07:56	34S	13:36	261	0.24	29.5	405143	0.2	2.0
27 november	03:11	104	08:35	28S	13:47	252	0.16	29.5	405150	1.5	0.6
28 november	04:22	113	09:17	23S	14:00	243	0.10	29.6	404160	2.8	-0.8
29 november	05:35	122	10:01	18S	14:17	236	0.05	29.7	402354	4.0	-2.0
30 november	06:50	129	10:48	14S	14:39	229	0.02	29.9	399931	5.0	-3.1
1 december	08:04	135	11:40	11S	15:10	224	0.00	30.1	397083	5.8	-3.9
2 december	09:13	139	12:35	10S	15:55	221	0.01	30.3	393976	6.4	-4.5
3 december	10:09	139	13:31	10S	16:55	222	0.03	30.6	390732	6.6	-4.9
4 december	10:52	135	14:27	12S	18:08	226	0.08	30.8	387431	6.5	-5.1
5 december	11:23	129	15:21	15S	19:29	233	0.14	31.1	384114	6.0	-5.2
6 december	11:45	121	16:13	20S	20:53	242	0.23	31.4	380803	5.2	-5.0
7 december	12:02	112	17:02	26S	22:17	252	0.32	31.6	377524	4.2	-4.7
8 december	12:17	102	17:50	33S	23:40	263	0.43	31.9	374335	2.8	-4.2
9 december	12:30	91	18:37	40S	-	-	0.54	32.2	371347	1.3	-3.5
10 december	12:43	80	19:26	47S	01:03	274	0.65	32.4	368734	-0.3	-2.6
11 december	12:58	70	20:17	53S	02:29	286	0.76	32.6	366723	-1.9	-1.5
12 december	13:16	60	21:11	59S	03:58	297	0.85	32.7	365567	-3.4	-0.2
13 december	13:41	51	22:10	64S	05:29	306	0.92	32.7	365501	-4.7	1.1
14 december	14:17	44	23:12	67S	06:58	314	0.97	32.6	366684	-5.7	2.5
15 december	15:07	41	-	-	08:18	318	1.00	32.4	369155	-6.3	3.9
16 december	16:15	43	00:15	67S	09:20	318	0.99	32.0	372811	-6.5	5.0
17 december	17:33	48	01:16	66S	10:04	314	0.96	31.7	377406	-6.3	5.8
18 december	18:54	55	02:13	63S	10:34	308	0.92	31.2	382586	-5.8	6.1
19 december	20:13	64	03:04	59S	10:54	300	0.85	30.8	387935	-4.9	6.1
20 december	21:27	73	03:51	53S	11:10	291	0.77	30.4	393030	-3.9	5.6
21 december	22:39	82	04:33	48S	11:22	282	0.68	30.1	397487	-2.6	4.8
22 december	23:48	92	05:13	42S	11:33	273	0.59	29.8	400992	-1.3	3.7
23 december	-	-	05:53	36S	11:43	264	0.49	29.6	403329	0.0	2.4
24 december	00:57	101	06:32	30S	11:53	255	0.40	29.5	404383	1.4	1.0
25 december	02:07	110	07:12	25S	12:06	247	0.31	29.6	404145	2.7	-0.4
26 december	03:19	119	07:55	20S	12:20	238	0.23	29.7	402705	3.9	-1.7
27 december	04:33	127	08:41	16S	12:40	231	0.15	29.8	400239	4.9	-2.9
28 december	05:48	133	09:31	12S	13:08	225	0.09	30.1	396986	5.7	-3.8
29 december	06:59	138	10:25	10S	13:48	222	0.04	30.4	393229	6.3	-4.4
30 december	08:01	139	11:22	10S	14:43	221	0.01	30.7	389262	6.5	-4.7
31 december	08:50	137	12:19	11S	15:54	224	0.00	31.0	385358	6.5	-4.8

Mercurius

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (^{''})	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
1 januari	06:11	122	10:27	19S	14:43	238	1.1	0.16	9.0	13.4 O
2 januari	06:07	122	10:23	19S	14:39	238	1.6	0.12	9.2	11.9 O
3 januari	06:04	123	10:20	19S	14:35	237	2.2	0.09	9.4	10.1 O
4 januari	06:02	123	10:17	19S	14:31	237	2.9	0.05	9.6	8.2 O
5 januari	06:00	123	10:14	19S	14:28	237	3.8	0.03	9.8	6.2 O
6 januari	05:59	123	10:13	18S	14:26	237	4.7	0.01	9.9	4.3 O
7 januari	05:59	124	10:11	18S	14:23	236	5.4	0.01	10.0	3.0 O
8 januari	05:59	124	10:10	18S	14:21	236	5.4	0.01	10.0	3.1 W
9 januari	05:59	124	10:09	18S	14:19	236	4.7	0.02	10.0	4.6 W
10 januari	06:00	124	10:09	18S	14:18	235	3.8	0.03	10.0	6.6 W
11 januari	06:01	125	10:09	18S	14:17	235	3.0	0.05	9.9	8.6 W
12 januari	06:02	125	10:09	17S	14:16	235	2.4	0.08	9.8	10.6 W
13 januari	06:04	125	10:10	17S	14:16	235	1.9	0.11	9.6	12.5 W
14 januari	06:05	126	10:10	17S	14:15	234	1.4	0.15	9.5	14.2 W
15 januari	06:07	126	10:11	17S	14:15	234	1.1	0.18	9.3	15.8 W
16 januari	06:09	126	10:12	17S	14:15	234	0.9	0.22	9.1	17.2 W
17 januari	06:11	126	10:14	17S	14:16	234	0.7	0.26	8.9	18.5 W
18 januari	06:13	127	10:15	17S	14:17	233	0.5	0.29	8.7	19.7 W
19 januari	06:15	127	10:16	17S	14:17	233	0.4	0.33	8.5	20.7 W
20 januari	06:17	127	10:18	16S	14:19	233	0.3	0.36	8.3	21.5 W
21 januari	06:20	127	10:20	16S	14:20	233	0.2	0.39	8.1	22.3 W
22 januari	06:22	127	10:22	16S	14:21	233	0.1	0.43	7.9	22.9 W
23 januari	06:24	127	10:24	16S	14:23	233	0.1	0.45	7.8	23.4 W
24 januari	06:26	127	10:25	16S	14:25	233	0.1	0.48	7.6	23.9 W
25 januari	06:28	127	10:28	16S	14:27	233	0.0	0.51	7.4	24.2 W
26 januari	06:30	127	10:30	16S	14:30	233	0.0	0.53	7.3	24.5 W
27 januari	06:32	127	10:32	16S	14:32	233	0.0	0.56	7.1	24.7 W
28 januari	06:34	127	10:34	16S	14:35	233	0.0	0.58	7.0	24.8 W
29 januari	06:35	127	10:36	17S	14:38	233	0.0	0.60	6.9	24.9 W
30 januari	06:37	127	10:39	17S	14:41	233	-0.1	0.62	6.8	25.0 W
31 januari	06:38	126	10:41	17S	14:44	234	-0.1	0.64	6.6	25.0 W
1 februari	06:40	126	10:44	17S	14:48	234	-0.1	0.66	6.5	24.9 W
2 februari	06:41	126	10:46	17S	14:51	234	-0.1	0.67	6.4	24.8 W
3 februari	06:43	125	10:49	17S	14:55	235	-0.1	0.69	6.3	24.7 W
4 februari	06:44	125	10:51	18S	14:59	235	-0.1	0.70	6.2	24.5 W
5 februari	06:45	125	10:54	18S	15:03	235	-0.1	0.72	6.2	24.3 W
6 februari	06:46	124	10:56	18S	15:08	236	-0.1	0.73	6.1	24.1 W
7 februari	06:47	124	10:59	18S	15:12	236	-0.1	0.74	6.0	23.9 W
8 februari	06:47	123	11:02	19S	15:17	237	-0.1	0.75	5.9	23.6 W
9 februari	06:48	123	11:04	19S	15:21	238	-0.1	0.77	5.8	23.3 W
10 februari	06:49	122	11:07	19S	15:26	238	-0.2	0.78	5.8	23.0 W
11 februari	06:49	121	11:10	20S	15:31	239	-0.2	0.79	5.7	22.6 W
12 februari	06:49	121	11:13	20S	15:37	240	-0.2	0.80	5.7	22.3 W
13 februari	06:50	120	11:15	20S	15:42	240	-0.2	0.81	5.6	21.9 W
14 februari	06:50	119	11:18	21S	15:47	241	-0.2	0.82	5.5	21.5 W
15 februari	06:50	118	11:21	21S	15:53	242	-0.2	0.82	5.5	21.1 W
16 februari	06:50	118	11:24	22S	15:59	243	-0.2	0.83	5.4	20.7 W
17 februari	06:50	117	11:26	22S	16:04	244	-0.3	0.84	5.4	20.2 W
18 februari	06:50	116	11:29	23S	16:10	245	-0.3	0.85	5.4	19.8 W
19 februari	06:49	115	11:32	23S	16:16	246	-0.3	0.86	5.3	19.3 W
20 februari	06:49	114	11:35	24S	16:22	246	-0.3	0.86	5.3	18.8 W
21 februari	06:48	113	11:38	25S	16:29	248	-0.3	0.87	5.2	18.3 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
22 februari	06:48	112	11:41	25S	16:35	249	-0.4	0.88	5.2	17.7 W
23 februari	06:47	111	11:44	26S	16:42	250	-0.4	0.89	5.2	17.2 W
24 februari	06:47	110	11:47	27S	16:48	251	-0.4	0.89	5.1	16.6 W
25 februari	06:46	109	11:49	27S	16:55	252	-0.5	0.90	5.1	16.1 W
26 februari	06:45	107	11:52	28S	17:01	253	-0.5	0.91	5.1	15.5 W
27 februari	06:44	106	11:55	29S	17:08	254	-0.5	0.91	5.1	14.9 W
28 februari	06:43	105	11:58	30S	17:15	256	-0.6	0.92	5.0	14.2 W
29 februari	06:42	104	12:01	30S	17:22	257				
1 maart	06:41	102	12:04	31S	17:29	258	-0.6	0.93	5.0	13.6 W
2 maart	06:40	101	12:07	32S	17:37	259	-0.7	0.93	5.0	12.9 W
3 maart	06:39	100	12:10	33S	17:44	261	-0.7	0.94	5.0	12.2 W
4 maart	06:38	98	12:13	34S	17:51	262	-0.8	0.94	5.0	11.5 W
5 maart	06:36	97	12:16	35S	17:59	264	-0.8	0.95	5.0	10.8 W
6 maart	06:35	96	12:19	35S	18:06	265	-0.9	0.96	4.9	10.1 W
7 maart	06:33	94	12:22	36S	18:13	266	-0.9	0.96	4.9	9.4 W
8 maart	06:32	93	12:25	37S	18:21	268	-1.0	0.97	4.9	8.6 W
9 maart	06:30	91	12:28	38S	18:28	269	-1.1	0.97	4.9	7.8 W
10 maart	06:29	90	12:31	39S	18:36	271	-1.2	0.98	4.9	7.0 W
11 maart	06:27	88	12:34	40S	18:43	272	-1.2	0.98	4.9	6.2 W
12 maart	06:25	87	12:37	41S	18:50	274	-1.3	0.99	4.9	5.4 W
13 maart	06:23	86	12:39	42S	18:57	275	-1.4	0.99	4.9	4.5 W
14 maart	06:21	84	12:42	43S	19:04	277	-1.6	0.99	4.9	3.7 W
15 maart	06:19	83	12:44	44S	19:11	278	-1.7	1.00	4.9	2.9 W
16 maart	06:17	81	12:46	45S	19:18	279	-1.8	1.00	4.9	2.1 W
17 maart	06:15	80	12:48	45S	19:24	281	-1.9	1.00	5.0	1.6 O
18 maart	06:12	79	12:50	46S	19:30	282	-2.0	1.00	5.0	1.5 O
19 maart	06:10	77	12:51	47S	19:35	283	-1.9	1.00	5.0	2.0 O
20 maart	06:07	76	12:52	48S	19:40	285	-1.9	1.00	5.0	2.8 O
21 maart	06:04	75	12:53	48S	19:44	286	-1.8	0.99	5.1	3.7 O
22 maart	06:02	74	12:54	49S	19:48	287	-1.7	0.99	5.1	4.6 O
23 maart	05:59	73	12:54	50S	19:51	288	-1.7	0.98	5.1	5.6 O
24 maart	05:55	72	12:54	50S	19:54	289	-1.6	0.97	5.2	6.6 O
25 maart	05:52	71	12:53	51S	19:56	290	-1.6	0.96	5.3	7.6 O
26 maart	05:49	70	12:52	51S	19:57	290	-1.5	0.94	5.3	8.6 O
27 maart	05:45	69	12:51	52S	19:58	291	-1.5	0.92	5.4	9.6 O
28 maart	05:42	69	12:49	52S	19:57	291	-1.4	0.90	5.5	10.6 O
29 maart	05:38	68	12:47	52S	19:56	292	-1.4	0.88	5.5	11.6 O
30 maart	05:34	68	12:44	53S	19:55	292	-1.3	0.86	5.6	12.5 O
31 maart	05:30	68	12:41	53S	19:52	292	-1.2	0.83	5.7	13.4 O
1 april	05:26	68	12:37	53S	19:49	292	-1.1	0.80	5.8	14.3 O
2 april	05:22	68	12:33	53S	19:45	292	-1.1	0.77	6.0	15.1 O
3 april	05:18	68	12:29	53S	19:40	292	-1.0	0.73	6.1	15.9 O
4 april	05:14	68	12:24	53S	19:34	292	-0.9	0.69	6.2	16.6 O
5 april	05:09	68	12:19	52S	19:28	292	-0.8	0.66	6.4	17.3 O
6 april	05:05	68	12:14	52S	19:21	291	-0.6	0.62	6.5	17.8 O
7 april	05:01	69	12:08	52S	19:13	291	-0.5	0.58	6.7	18.3 O
8 april	04:57	69	12:02	52S	19:05	290	-0.4	0.54	6.9	18.8 O
9 april	04:53	70	11:56	51S	18:57	290	-0.3	0.51	7.1	19.1 O
10 april	04:49	71	11:49	51S	18:49	289	-0.2	0.47	7.3	19.3 O
11 april	04:45	71	11:43	50S	18:40	288	-0.1	0.43	7.5	19.4 O
12 april	04:41	72	11:37	50S	18:31	287	0.1	0.40	7.7	19.5 O
13 april	04:37	73	11:30	49S	18:22	287	0.2	0.36	7.9	19.4 O

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
14 april	04:34	74	11:24	49S	18:13	286	0.4	0.33	8.2	19.3 O
15 april	04:30	75	11:18	48S	18:04	285	0.5	0.29	8.4	19.0 O
16 april	04:27	75	11:12	48S	17:55	284	0.7	0.26	8.7	18.6 O
17 april	04:23	76	11:06	47S	17:47	283	0.9	0.23	8.9	18.2 O
18 april	04:20	77	11:00	47S	17:39	282	1.1	0.20	9.2	17.6 O
19 april	04:17	78	10:55	46S	17:31	282	1.3	0.18	9.4	16.9 O
20 april	04:14	79	10:49	46S	17:24	281	1.6	0.15	9.7	16.1 O
21 april	04:11	79	10:45	45S	17:17	280	1.9	0.13	9.9	15.2 O
22 april	04:08	80	10:40	45S	17:11	280	2.2	0.11	10.2	14.2 O
23 april	04:05	80	10:36	45S	17:05	279	2.5	0.09	10.4	13.2 O
24 april	04:02	81	10:32	45S	17:00	279	2.9	0.07	10.7	12.0 O
25 april	04:00	81	10:28	44S	16:55	279	3.3	0.05	10.9	10.7 O
26 april	03:57	81	10:24	44S	16:51	278	3.8	0.04	11.1	9.4 O
27 april	03:55	82	10:21	44S	16:47	278	4.3	0.03	11.3	8.0 O
28 april	03:52	82	10:18	44S	16:44	278	4.8	0.02	11.5	6.5 O
29 april	03:50	82	10:16	44S	16:41	278	5.4	0.01	11.6	5.0 O
30 april	03:48	82	10:13	44S	16:39	278	6.0	0.00	11.7	3.4 O
1 mei	03:45	82	10:11	44S	16:37	278	6.6	0.00	11.9	1.9 O
2 mei	03:43	82	10:09	44S	16:35	278	7.1	0.00	11.9	0.7 W
3 mei	03:41	82	10:07	44S	16:34	278	6.7	0.00	12.0	1.7 W
4 mei	03:39	82	10:06	44S	16:34	279	6.1	0.00	12.0	3.3 W
5 mei	03:37	81	10:05	44S	16:33	279	5.6	0.01	12.0	4.9 W
6 mei	03:35	81	10:04	44S	16:33	279	5.0	0.02	12.0	6.4 W
7 mei	03:33	81	10:03	45S	16:34	280	4.5	0.02	12.0	8.0 W
8 mei	03:31	80	10:02	45S	16:35	280	4.1	0.03	11.9	9.5 W
9 mei	03:29	80	10:02	45S	16:36	280	3.7	0.05	11.8	11.0 W
10 mei	03:27	79	10:02	46S	16:37	281	3.3	0.06	11.7	12.4 W
11 mei	03:25	79	10:01	46S	16:39	282	3.0	0.07	11.5	13.7 W
12 mei	03:23	78	10:02	46S	16:41	282	2.7	0.09	11.4	14.9 W
13 mei	03:21	78	10:02	47S	16:43	283	2.4	0.10	11.2	16.1 W
14 mei	03:20	77	10:02	47S	16:46	284	2.2	0.12	11.1	17.2 W
15 mei	03:18	76	10:03	48S	16:49	284	2.0	0.13	10.9	18.3 W
16 mei	03:16	75	10:04	48S	16:52	285	1.8	0.15	10.7	19.2 W
17 mei	03:15	75	10:04	49S	16:56	286	1.6	0.17	10.5	20.1 W
18 mei	03:13	74	10:06	49S	17:00	287	1.5	0.18	10.3	20.9 W
19 mei	03:12	73	10:07	50S	17:04	288	1.4	0.20	10.1	21.6 W
20 mei	03:10	72	10:08	50S	17:08	288	1.2	0.22	9.9	22.2 W
21 mei	03:09	71	10:10	51S	17:12	289	1.1	0.24	9.8	22.8 W
22 mei	03:08	70	10:11	51S	17:17	290	1.0	0.25	9.6	23.3 W
23 mei	03:06	69	10:13	52S	17:22	291	0.9	0.27	9.4	23.7 W
24 mei	03:05	68	10:15	52S	17:28	292	0.9	0.29	9.2	24.1 W
25 mei	03:04	67	10:18	53S	17:33	293	0.8	0.31	9.0	24.4 W
26 mei	03:03	66	10:20	54S	17:39	294	0.7	0.33	8.8	24.6 W
27 mei	03:02	65	10:23	54S	17:45	295	0.7	0.34	8.6	24.7 W
28 mei	03:02	64	10:25	55S	17:51	296	0.6	0.36	8.4	24.8 W
29 mei	03:01	63	10:28	55S	17:58	297	0.5	0.38	8.3	24.9 W
30 mei	03:01	62	10:32	56S	18:05	298	0.5	0.40	8.1	24.9 W
31 mei	03:00	61	10:35	57S	18:12	299	0.4	0.42	7.9	24.8 W
1 juni	03:00	60	10:39	57S	18:19	300	0.4	0.44	7.8	24.7 W
2 juni	03:00	59	10:42	58S	18:27	302	0.3	0.46	7.6	24.5 W
3 juni	03:01	58	10:46	58S	18:34	303	0.2	0.48	7.4	24.3 W
4 juni	03:01	57	10:50	59S	18:42	304	0.2	0.49	7.3	24.0 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
5 juni	03:02	56	10:55	60S	18:50	305	0.1	0.51	7.1	23.7 W
6 juni	03:03	55	10:59	60S	18:58	306	0.1	0.54	7.0	23.3 W
7 juni	03:04	54	11:04	61S	19:06	306	0.0	0.56	6.9	22.8 W
8 juni	03:06	53	11:09	61S	19:15	307	-0.1	0.58	6.7	22.4 W
9 juni	03:08	52	11:14	62S	19:23	308	-0.2	0.60	6.6	21.8 W
10 juni	03:10	51	11:20	62S	19:31	309	-0.2	0.62	6.5	21.3 W
11 juni	03:12	51	11:25	62S	19:39	310	-0.3	0.64	6.4	20.7 W
12 juni	03:15	50	11:30	63S	19:47	310	-0.4	0.67	6.3	20.0 W
13 juni	03:18	49	11:36	63S	19:55	311	-0.5	0.69	6.1	19.3 W
14 juni	03:22	49	11:42	63S	20:03	312	-0.6	0.71	6.0	18.5 W
15 juni	03:26	48	11:47	64S	20:10	312	-0.6	0.74	5.9	17.7 W
16 juni	03:30	48	11:53	64S	20:17	312	-0.7	0.76	5.8	16.9 W
17 juni	03:35	48	11:59	64S	20:24	313	-0.8	0.78	5.8	16.0 W
18 juni	03:39	47	12:04	64S	20:30	313	-0.9	0.81	5.7	15.1 W
19 juni	03:45	47	12:10	64S	20:36	313	-1.0	0.83	5.6	14.1 W
20 juni	03:50	47	12:15	64S	20:41	313	-1.1	0.85	5.5	13.1 W
21 juni	03:56	47	12:21	64S	20:46	313	-1.2	0.88	5.4	12.0 W
22 juni	04:01	47	12:26	64S	20:50	312	-1.3	0.90	5.4	11.0 W
23 juni	04:07	48	12:31	64S	20:54	312	-1.4	0.92	5.3	9.9 W
24 juni	04:14	48	12:36	64S	20:58	312	-1.5	0.93	5.3	8.7 W
25 juni	04:20	48	12:41	63S	21:01	311	-1.6	0.95	5.2	7.6 W
26 juni	04:26	49	12:45	63S	21:03	311	-1.7	0.97	5.2	6.4 W
27 juni	04:33	49	12:50	63S	21:06	310	-1.8	0.98	5.2	5.2 W
28 juni	04:39	50	12:54	63S	21:07	310	-2.0	0.99	5.1	4.0 W
29 juni	04:45	51	12:58	62S	21:09	309	-2.1	0.99	5.1	2.9 W
30 juni	04:52	51	13:02	62S	21:10	308	-2.2	1.00	5.1	1.9 W
1 juli	04:58	52	13:05	62S	21:11	308	-2.3	1.00	5.1	1.3 W
2 juli	05:04	53	13:09	61S	21:11	307	-2.2	1.00	5.1	1.7 O
3 juli	05:10	54	13:12	61S	21:12	306	-2.1	0.99	5.1	2.6 O
4 juli	05:16	54	13:15	60S	21:11	305	-1.9	0.99	5.1	3.7 O
5 juli	05:22	55	13:18	60S	21:11	304	-1.8	0.98	5.1	4.8 O
6 juli	05:28	56	13:20	59S	21:11	303	-1.6	0.97	5.1	6.0 O
7 juli	05:34	57	13:23	59S	21:10	302	-1.5	0.96	5.1	7.1 O
8 juli	05:39	58	13:25	58S	21:09	302	-1.4	0.95	5.1	8.2 O
9 juli	05:44	59	13:27	58S	21:07	301	-1.3	0.94	5.2	9.3 O
10 juli	05:49	60	13:29	57S	21:06	300	-1.2	0.93	5.2	10.3 O
11 juli	05:54	61	13:30	57S	21:04	299	-1.1	0.91	5.2	11.3 O
12 juli	05:59	62	13:32	56S	21:03	298	-1.0	0.90	5.3	12.3 O
13 juli	06:03	62	13:33	56S	21:01	297	-0.9	0.88	5.3	13.3 O
14 juli	06:08	63	13:34	55S	20:59	296	-0.9	0.87	5.3	14.2 O
15 juli	06:12	64	13:35	54S	20:56	295	-0.8	0.85	5.4	15.1 O
16 juli	06:15	65	13:36	54S	20:54	294	-0.7	0.84	5.4	16.0 O
17 juli	06:19	66	13:36	53S	20:51	293	-0.6	0.83	5.5	16.8 O
18 juli	06:22	67	13:36	53S	20:49	292	-0.6	0.81	5.5	17.6 O
19 juli	06:25	68	13:36	52S	20:46	291	-0.5	0.80	5.6	18.4 O
20 juli	06:28	69	13:36	52S	20:43	291	-0.4	0.78	5.7	19.2 O
21 juli	06:31	70	13:36	51S	20:39	290	-0.4	0.77	5.7	19.9 O
22 juli	06:33	71	13:35	51S	20:36	289	-0.3	0.75	5.8	20.6 O
23 juli	06:35	71	13:35	50S	20:33	288	-0.2	0.74	5.9	21.2 O
24 juli	06:37	72	13:34	50S	20:29	287	-0.2	0.73	5.9	21.8 O
25 juli	06:38	73	13:33	49S	20:26	287	-0.1	0.71	6.0	22.4 O
26 juli	06:39	74	13:31	49S	20:22	286	-0.1	0.70	6.1	23.0 O

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
27 juli	06:40	74	13:29	48S	20:18	285	-0.1	0.69	6.1	23.5 O
28 juli	06:40	75	13:28	48S	20:14	284	0.0	0.67	6.2	24.0 O
29 juli	06:40	76	13:25	48S	20:09	284	0.0	0.66	6.3	24.5 O
30 juli	06:40	76	13:23	47S	20:05	283	0.1	0.65	6.4	24.9 O
31 juli	06:39	77	13:20	47S	20:01	283	0.1	0.63	6.5	25.3 O
1 augustus	06:38	77	13:17	47S	19:56	282	0.1	0.62	6.6	25.7 O
2 augustus	06:36	78	13:14	46S	19:51	282	0.2	0.61	6.7	26.0 O
3 augustus	06:34	78	13:11	46S	19:47	281	0.2	0.59	6.8	26.3 O
4 augustus	06:31	79	13:07	46S	19:42	281	0.2	0.58	6.9	26.6 O
5 augustus	06:28	79	13:03	46S	19:37	281	0.3	0.57	7.0	26.8 O
6 augustus	06:25	79	12:58	45S	19:31	281	0.3	0.55	7.1	27.0 O
7 augustus	06:20	79	12:53	45S	19:26	280	0.3	0.54	7.2	27.2 O
8 augustus	06:16	80	12:48	45S	19:21	280	0.3	0.52	7.3	27.3 O
9 augustus	06:11	80	12:43	45S	19:15	280	0.4	0.51	7.4	27.4 O
10 augustus	06:05	80	12:37	45S	19:10	281	0.4	0.49	7.5	27.4 O
11 augustus	05:59	79	12:31	45S	19:04	281	0.4	0.48	7.7	27.4 O
12 augustus	05:52	79	12:25	46S	18:59	281	0.4	0.46	7.8	27.3 O
13 augustus	05:44	79	12:19	46S	18:53	281	0.5	0.44	7.9	27.2 O
14 augustus	05:37	79	12:12	46S	18:48	282	0.5	0.43	8.1	27.0 O
15 augustus	05:29	78	12:05	46S	18:42	282	0.5	0.41	8.2	26.8 O
16 augustus	05:20	78	11:58	47S	18:37	283	0.6	0.39	8.3	26.5 O
17 augustus	05:11	77	11:51	47S	18:32	283	0.6	0.37	8.5	26.1 O
18 augustus	05:02	76	11:44	47S	18:27	284	0.7	0.35	8.6	25.7 O
19 augustus	04:53	76	11:37	48S	18:22	285	0.7	0.33	8.8	25.2 O
20 augustus	04:44	75	11:30	48S	18:18	285	0.8	0.31	9.0	24.7 O
21 augustus	04:35	74	11:24	49S	18:13	286	0.8	0.29	9.1	24.0 O
22 augustus	04:27	74	11:17	49S	18:09	287	0.9	0.27	9.3	23.3 O
23 augustus	04:18	73	11:11	50S	18:05	287	1.0	0.25	9.4	22.5 O
24 augustus	04:10	72	11:05	50S	18:02	288	1.1	0.23	9.6	21.6 O
25 augustus	04:02	72	11:00	50S	17:59	289	1.3	0.21	9.8	20.6 O
26 augustus	03:55	71	10:55	51S	17:56	289	1.4	0.19	9.9	19.6 O
27 augustus	03:48	70	10:50	51S	17:54	290	1.6	0.16	10.1	18.4 O
28 augustus	03:42	70	10:46	51S	17:51	291	1.8	0.14	10.2	17.1 O
29 augustus	03:37	69	10:43	52S	17:50	291	2.1	0.12	10.3	15.8 O
30 augustus	03:32	69	10:40	52S	17:48	291	2.4	0.10	10.4	14.3 O
31 augustus	03:29	68	10:37	52S	17:47	292	2.7	0.08	10.5	12.8 O
1 september	03:26	68	10:36	52S	17:46	292	3.1	0.06	10.6	11.2 O
2 september	03:24	68	10:34	52S	17:45	292	3.6	0.05	10.7	9.6 O
3 september	03:22	68	10:33	53S	17:44	292	4.1	0.03	10.7	7.9 O
4 september	03:22	68	10:33	52S	17:44	292	4.6	0.02	10.7	6.4 O
5 september	03:22	68	10:33	52S	17:44	292	5.1	0.01	10.7	4.9 O
6 september	03:23	68	10:33	52S	17:43	292	5.5	0.01	10.6	4.0 W
7 september	03:25	69	10:34	52S	17:43	291	5.5	0.01	10.5	3.8 W
8 september	03:27	69	10:36	52S	17:43	291	5.2	0.01	10.4	4.5 W
9 september	03:30	69	10:37	52S	17:43	290	4.6	0.02	10.3	5.7 W
10 september	03:34	70	10:39	51S	17:43	290	4.0	0.03	10.1	7.2 W
11 september	03:38	71	10:41	51S	17:43	289	3.3	0.05	9.9	8.7 W
12 september	03:43	71	10:44	50S	17:43	288	2.7	0.07	9.7	10.1 W
13 september	03:48	72	10:46	50S	17:43	287	2.2	0.10	9.4	11.5 W
14 september	03:54	73	10:49	49S	17:42	286	1.7	0.13	9.2	12.8 W
15 september	03:59	74	10:52	49S	17:42	285	1.3	0.16	8.9	13.9 W
16 september	04:05	75	10:54	48S	17:42	284	1.0	0.20	8.7	14.9 W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
2024										
17 september	04:12	76	10:57	47S	17:41	283	0.7	0.24	8.4	15.8 W
18 september	04:18	77	11:00	47S	17:41	282	0.4	0.28	8.2	16.5 W
19 september	04:25	78	11:03	46S	17:40	281	0.2	0.32	7.9	17.0 W
20 september	04:31	79	11:06	45S	17:39	280	0.0	0.37	7.7	17.4 W
21 september	04:38	81	11:09	44S	17:38	279	-0.2	0.42	7.4	17.7 W
22 september	04:44	82	11:12	44S	17:37	278	-0.3	0.46	7.2	17.8 W
23 september	04:51	83	11:15	43S	17:36	276	-0.4	0.51	7.0	17.8 W
24 september	04:58	84	11:18	42S	17:35	275	-0.5	0.55	6.8	17.7 W
25 september	05:04	86	11:20	41S	17:34	274	-0.6	0.60	6.6	17.5 W
26 september	05:11	87	11:23	41S	17:33	273	-0.7	0.64	6.4	17.2 W
27 september	05:17	88	11:26	40S	17:32	271	-0.8	0.68	6.3	16.8 W
28 september	05:24	89	11:28	39S	17:31	270	-0.9	0.72	6.1	16.3 W
29 september	05:30	91	11:31	38S	17:29	269	-1.0	0.75	6.0	15.8 W
30 september	05:37	92	11:33	37S	17:28	268	-1.0	0.78	5.9	15.2 W
1 oktober	05:43	93	11:36	37S	17:27	266	-1.1	0.81	5.7	14.5 W
2 oktober	05:49	94	11:38	36S	17:25	265	-1.1	0.84	5.6	13.9 W
3 oktober	05:55	95	11:41	35S	17:24	264	-1.1	0.86	5.5	13.2 W
4 oktober	06:02	97	11:43	34S	17:22	263	-1.2	0.88	5.4	12.4 W
5 oktober	06:08	98	11:45	34S	17:21	262	-1.2	0.90	5.4	11.7 W
6 oktober	06:14	99	11:47	33S	17:19	260	-1.2	0.92	5.3	10.9 W
7 oktober	06:20	100	11:50	32S	17:18	259	-1.2	0.93	5.2	10.1 W
8 oktober	06:25	101	11:52	31S	17:16	258	-1.2	0.95	5.1	9.3 W
9 oktober	06:31	103	11:54	31S	17:15	257	-1.3	0.96	5.1	8.6 W
10 oktober	06:37	104	11:56	30S	17:13	256	-1.3	0.97	5.0	7.8 W
11 oktober	06:43	105	11:58	29S	17:12	255	-1.3	0.97	5.0	7.0 W
12 oktober	06:48	106	12:00	29S	17:10	253	-1.3	0.98	5.0	6.2 W
13 oktober	06:54	107	12:02	28S	17:09	252	-1.3	0.98	4.9	5.5 W
14 oktober	07:00	108	12:04	27S	17:07	251	-1.4	0.99	4.9	4.7 W
15 oktober	07:05	109	12:06	27S	17:06	250	-1.4	0.99	4.8	4.0 W
16 oktober	07:11	110	12:08	26S	17:04	249	-1.4	1.00	4.8	3.3 W
17 oktober	07:16	111	12:10	25S	17:03	248	-1.5	1.00	4.8	2.5 W
18 oktober	07:21	112	12:12	25S	17:01	247	-1.5	1.00	4.8	1.9 W
19 oktober	07:27	113	12:14	24S	17:00	246	-1.6	1.00	4.8	1.3 W
20 oktober	07:32	114	12:16	23S	16:59	245	-1.6	1.00	4.7	0.8 O
21 oktober	07:37	115	12:18	23S	16:57	244	-1.6	1.00	4.7	0.9 O
22 oktober	07:43	116	12:20	22S	16:56	243	-1.5	1.00	4.7	1.3 O
23 oktober	07:48	117	12:22	22S	16:55	242	-1.4	1.00	4.7	1.9 O
24 oktober	07:53	118	12:24	21S	16:54	241	-1.3	1.00	4.7	2.5 O
25 oktober	07:58	119	12:26	21S	16:53	240	-1.2	1.00	4.7	3.2 O
26 oktober	08:03	120	12:28	20S	16:52	240	-1.1	0.99	4.7	3.8 O
27 oktober	08:08	121	12:30	20S	16:51	239	-1.1	0.99	4.7	4.4 O
28 oktober	08:13	122	12:32	19S	16:50	238	-1.0	0.99	4.7	5.0 O
29 oktober	08:17	123	12:34	19S	16:49	237	-0.9	0.99	4.7	5.6 O
30 oktober	08:22	123	12:35	18S	16:48	236	-0.9	0.99	4.7	6.2 O
31 oktober	08:27	124	12:37	18S	16:47	236	-0.8	0.98	4.7	6.8 O
1 november	08:31	125	12:39	18S	16:46	235	-0.8	0.98	4.7	7.4 O
2 november	08:36	126	12:41	17S	16:46	234	-0.8	0.98	4.7	8.0 O
3 november	08:40	126	12:43	17S	16:45	233	-0.7	0.97	4.7	8.6 O
4 november	08:44	127	12:45	16S	16:45	233	-0.7	0.97	4.7	9.1 O
5 november	08:48	128	12:47	16S	16:44	232	-0.7	0.97	4.8	9.7 O
6 november	08:52	128	12:48	16S	16:44	232	-0.6	0.96	4.8	10.2 O
7 november	08:56	129	12:50	15S	16:44	231	-0.6	0.96	4.8	10.8 O
8 november	08:59	129	12:52	15S	16:44	231	-0.6	0.95	4.8	11.3 O

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
2024										
9 november	09:03	130	12:53	15S	16:43	230	-0.6	0.95	4.8	11.8 O
10 november	09:06	130	12:55	15S	16:43	230	-0.5	0.95	4.9	12.4 O
11 november	09:09	131	12:56	15S	16:43	229	-0.5	0.94	4.9	12.9 O
12 november	09:11	131	12:57	14S	16:43	229	-0.5	0.93	4.9	13.4 O
13 november	09:14	131	12:59	14S	16:43	229	-0.5	0.93	5.0	13.9 O
14 november	09:16	131	13:00	14S	16:43	228	-0.5	0.92	5.0	14.4 O
15 november	09:17	132	13:00	14S	16:43	228	-0.5	0.92	5.0	14.9 O
16 november	09:18	132	13:01	14S	16:43	228	-0.5	0.91	5.1	15.3 O
17 november	09:19	132	13:01	14S	16:43	228	-0.5	0.90	5.1	15.8 O
18 november	09:20	132	13:01	14S	16:43	228	-0.5	0.89	5.2	16.3 O
19 november	09:20	132	13:01	14S	16:43	228	-0.5	0.89	5.2	16.7 O
20 november	09:19	132	13:00	14S	16:42	228	-0.5	0.88	5.3	17.2 O
21 november	09:18	132	12:59	14S	16:41	228	-0.5	0.87	5.3	17.6 O
22 november	09:16	132	12:58	14S	16:40	228	-0.5	0.86	5.4	18.0 O
23 november	09:13	132	12:56	14S	16:39	229	-0.5	0.85	5.5	18.4 O
24 november	09:10	131	12:53	14S	16:38	229	-0.5	0.83	5.5	18.8 O
25 november	09:05	131	12:50	14S	16:36	229	-0.5	0.82	5.6	19.2 O
26 november	09:00	131	12:46	15S	16:33	230	-0.5	0.81	5.7	19.5 O
27 november	08:54	130	12:42	15S	16:30	230	-0.5	0.79	5.8	19.9 O
28 november	08:47	130	12:37	15S	16:27	230	-0.4	0.77	5.9	20.2 O
29 november	08:39	129	12:31	15S	16:23	231	-0.4	0.76	5.9	20.4 O
30 november	08:30	128	12:24	16S	16:18	232	-0.4	0.74	6.1	20.7 O
1 december	08:20	128	12:16	16S	16:13	232	-0.4	0.72	6.2	20.9 O
2 december	08:09	127	12:08	16S	16:07	233	-0.4	0.69	6.3	21.1 O
3 december	07:58	126	11:59	17S	16:01	234	-0.4	0.67	6.4	21.2 O
4 december	07:46	125	11:50	17S	15:55	235	-0.4	0.64	6.6	21.3 O
5 december	07:33	125	11:40	18S	15:48	236	-0.4	0.62	6.7	21.3 O
6 december	07:21	124	11:31	18S	15:42	236	-0.3	0.59	6.9	21.2 O
7 december	07:08	123	11:21	19S	15:35	237	-0.3	0.55	7.0	21.1 O
8 december	06:56	122	11:12	19S	15:28	238	-0.2	0.52	7.2	20.8 O
9 december	06:45	122	11:03	20S	15:22	239	-0.2	0.48	7.4	20.5 O
10 december	06:35	121	10:55	20S	15:16	239	-0.1	0.44	7.6	20.0 O
11 december	06:25	120	10:47	20S	15:10	240	0.0	0.40	7.8	19.4 O
12 december	06:17	120	10:41	20S	15:05	240	0.1	0.36	8.0	18.7 O
13 december	06:10	120	10:34	21S	15:00	240	0.2	0.31	8.3	17.8 O
14 december	06:03	120	10:29	21S	14:55	241	0.4	0.27	8.5	16.7 O
15 december	05:58	119	10:25	21S	14:51	241	0.7	0.22	8.7	15.5 O
16 december	05:54	119	10:21	21S	14:47	241	1.0	0.18	9.0	14.1 O
17 december	05:51	120	10:17	21S	14:43	240	1.5	0.13	9.2	12.4 O
18 december	05:49	120	10:15	20S	14:40	240	2.0	0.10	9.4	10.7 O
19 december	05:48	120	10:13	20S	14:37	240	2.7	0.06	9.6	8.7 O
20 december	05:47	120	10:11	20S	14:34	240	3.6	0.04	9.7	6.6 O
21 december	05:47	121	10:10	20S	14:32	239	4.6	0.02	9.8	4.5 O
22 december	05:48	121	10:09	20S	14:30	239	5.5	0.01	9.9	2.7 O
23 december	05:49	121	10:09	20S	14:28	238	5.7	0.00	9.9	2.3 W
24 december	05:50	122	10:08	19S	14:27	238	5.0	0.01	9.9	3.8 W
25 december	05:52	122	10:09	19S	14:25	238	4.0	0.03	9.9	5.9 W
26 december	05:54	123	10:09	19S	14:24	237	3.1	0.05	9.8	8.0 W
27 december	05:56	123	10:10	18S	14:23	237	2.4	0.08	9.6	10.1 W
28 december	05:58	124	10:11	18S	14:22	236	1.8	0.11	9.5	12.0 W
29 december	06:01	124	10:12	18S	14:22	236	1.4	0.15	9.3	13.7 W
30 december	06:04	125	10:13	18S	14:21	235	1.0	0.19	9.1	15.3 W
31 december	06:07	125	10:14	17S	14:21	235	0.7	0.23	8.9	16.8 W

Venus

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)				
1 januari	04:41	120	09:06	205	13:31	240	-4.0	0.779	14.1	37.5 W
2 januari	04:43	120	09:07	205	13:31	240	-4.0	0.781	14.0	37.3 W
3 januari	04:46	121	09:08	205	13:30	239	-4.0	0.784	14.0	37.1 W
4 januari	04:48	121	09:10	205	13:30	239	-4.0	0.787	13.9	36.9 W
5 januari	04:51	122	09:11	195	13:30	238	-4.0	0.790	13.8	36.7 W
6 januari	04:54	122	09:12	195	13:30	238	-4.0	0.793	13.8	36.5 W
7 januari	04:56	122	09:13	195	13:29	237	-4.0	0.795	13.7	36.3 W
8 januari	04:59	123	09:14	195	13:29	237	-4.0	0.798	13.6	36.1 W
9 januari	05:01	123	09:15	195	13:29	237	-4.0	0.801	13.6	35.9 W
10 januari	05:03	123	09:17	185	13:29	236	-4.0	0.804	13.5	35.7 W
11 januari	05:06	124	09:18	185	13:30	236	-4.0	0.806	13.4	35.4 W
12 januari	05:08	124	09:19	185	13:30	236	-4.0	0.809	13.4	35.2 W
13 januari	05:10	124	09:20	185	13:30	236	-4.0	0.812	13.3	35.0 W
14 januari	05:13	125	09:22	185	13:31	235	-4.0	0.814	13.2	34.8 W
15 januari	05:15	125	09:23	185	13:31	235	-4.0	0.817	13.2	34.6 W
16 januari	05:17	125	09:24	175	13:31	235	-4.0	0.819	13.1	34.4 W
17 januari	05:19	125	09:26	175	13:32	235	-4.0	0.822	13.1	34.2 W
18 januari	05:21	125	09:27	175	13:33	234	-4.0	0.824	13.0	34.0 W
19 januari	05:23	126	09:28	175	13:33	234	-4.0	0.827	12.9	33.8 W
20 januari	05:25	126	09:30	175	13:34	234	-4.0	0.829	12.9	33.6 W
21 januari	05:27	126	09:31	175	13:35	234	-4.0	0.832	12.8	33.3 W
22 januari	05:29	126	09:32	175	13:36	234	-4.0	0.834	12.8	33.1 W
23 januari	05:30	126	09:34	175	13:37	234	-4.0	0.836	12.7	32.9 W
24 januari	05:32	126	09:35	175	13:38	234	-4.0	0.839	12.7	32.7 W
25 januari	05:34	126	09:37	175	13:40	234	-4.0	0.841	12.6	32.5 W
26 januari	05:35	126	09:38	175	13:41	234	-4.0	0.844	12.6	32.3 W
27 januari	05:37	126	09:39	175	13:42	234	-4.0	0.846	12.5	32.1 W
28 januari	05:38	126	09:41	175	13:44	234	-4.0	0.848	12.4	31.8 W
29 januari	05:39	126	09:42	175	13:45	234	-4.0	0.850	12.4	31.6 W
30 januari	05:41	126	09:44	175	13:47	234	-3.9	0.853	12.3	31.4 W
31 januari	05:42	126	09:45	175	13:48	234	-3.9	0.855	12.3	31.2 W
1 februari	05:43	126	09:46	175	13:50	234	-3.9	0.857	12.3	31.0 W
2 februari	05:44	126	09:48	175	13:52	234	-3.9	0.859	12.2	30.7 W
3 februari	05:45	126	09:49	175	13:54	234	-3.9	0.862	12.2	30.5 W
4 februari	05:46	126	09:51	175	13:56	234	-3.9	0.864	12.1	30.3 W
5 februari	05:47	126	09:52	175	13:58	234	-3.9	0.866	12.1	30.1 W
6 februari	05:47	125	09:53	175	14:00	235	-3.9	0.868	12.0	29.9 W
7 februari	05:48	125	09:55	175	14:02	235	-3.9	0.870	12.0	29.6 W
8 februari	05:48	125	09:56	185	14:04	235	-3.9	0.872	11.9	29.4 W
9 februari	05:49	125	09:57	185	14:06	235	-3.9	0.874	11.9	29.2 W
10 februari	05:49	125	09:59	185	14:08	236	-3.9	0.876	11.8	29.0 W
11 februari	05:50	124	10:00	185	14:11	236	-3.9	0.878	11.8	28.7 W
12 februari	05:50	124	10:01	185	14:13	236	-3.9	0.880	11.8	28.5 W
13 februari	05:50	124	10:03	185	14:16	236	-3.9	0.882	11.7	28.3 W
14 februari	05:50	123	10:04	195	14:18	237	-3.9	0.884	11.7	28.1 W
15 februari	05:50	123	10:05	195	14:21	237	-3.9	0.886	11.6	27.8 W
16 februari	05:50	123	10:06	195	14:23	238	-3.9	0.888	11.6	27.6 W
17 februari	05:50	122	10:08	195	14:26	238	-3.9	0.890	11.6	27.4 W
18 februari	05:50	122	10:09	195	14:28	238	-3.9	0.892	11.5	27.2 W
19 februari	05:50	121	10:10	205	14:31	239	-3.9	0.894	11.5	26.9 W
20 februari	05:50	121	10:11	205	14:34	239	-3.9	0.896	11.4	26.7 W
21 februari	05:49	121	10:13	205	14:37	240	-3.9	0.897	11.4	26.5 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
22 februari	05:49	120	10:14	205	14:39	240	-3.9	0.899	11.4	26.3 W
23 februari	05:48	120	10:15	215	14:42	241	-3.9	0.901	11.3	26.0 W
24 februari	05:48	119	10:16	215	14:45	241	-3.9	0.903	11.3	25.8 W
25 februari	05:47	119	10:17	215	14:48	242	-3.9	0.905	11.3	25.6 W
26 februari	05:47	118	10:18	225	14:51	242	-3.9	0.906	11.2	25.3 W
27 februari	05:46	118	10:19	225	14:54	243	-3.9	0.908	11.2	25.1 W
28 februari	05:45	117	10:20	225	14:57	243	-3.9	0.910	11.2	24.9 W
29 februari	05:44	116	10:21	225	14:59	244	-3.9	0.912	11.1	24.6 W
1 maart	05:43	116	10:23	235	15:02	244	-3.9	0.913	11.1	24.4 W
2 maart	05:43	115	10:24	235	15:05	245	-3.9	0.915	11.1	24.2 W
3 maart	05:42	115	10:25	245	15:08	245	-3.9	0.917	11.0	23.9 W
4 maart	05:41	114	10:26	245	15:11	246	-3.9	0.918	11.0	23.7 W
5 maart	05:40	114	10:26	245	15:14	247	-3.9	0.920	11.0	23.5 W
6 maart	05:38	113	10:27	255	15:17	247	-3.9	0.922	10.9	23.2 W
7 maart	05:37	112	10:28	255	15:20	248	-3.9	0.923	10.9	23.0 W
8 maart	05:36	112	10:29	255	15:23	249	-3.9	0.925	10.9	22.8 W
9 maart	05:35	111	10:30	265	15:26	249	-3.9	0.926	10.9	22.5 W
10 maart	05:34	110	10:31	265	15:29	250	-3.9	0.928	10.8	22.3 W
11 maart	05:32	110	10:32	275	15:32	251	-3.9	0.929	10.8	22.1 W
12 maart	05:31	109	10:33	275	15:35	251	-3.9	0.931	10.8	21.8 W
13 maart	05:30	108	10:34	275	15:38	252	-3.9	0.932	10.7	21.6 W
14 maart	05:28	108	10:34	285	15:41	253	-3.9	0.934	10.7	21.3 W
15 maart	05:27	107	10:35	285	15:44	253	-3.9	0.935	10.7	21.1 W
16 maart	05:25	106	10:36	295	15:47	254	-3.9	0.937	10.7	20.9 W
17 maart	05:24	106	10:37	295	15:50	255	-3.9	0.938	10.6	20.6 W
18 maart	05:22	105	10:38	305	15:54	255	-3.9	0.940	10.6	20.4 W
19 maart	05:21	104	10:38	305	15:57	256	-3.9	0.941	10.6	20.1 W
20 maart	05:19	103	10:39	305	16:00	257	-3.9	0.943	10.6	19.9 W
21 maart	05:18	103	10:40	315	16:03	258	-3.9	0.944	10.5	19.7 W
22 maart	05:16	102	10:40	315	16:06	258	-3.9	0.945	10.5	19.4 W
23 maart	05:15	101	10:41	325	16:09	259	-3.9	0.947	10.5	19.2 W
24 maart	05:13	101	10:42	325	16:12	260	-3.9	0.948	10.5	18.9 W
25 maart	05:11	100	10:42	335	16:15	261	-3.9	0.949	10.4	18.7 W
26 maart	05:10	99	10:43	335	16:18	261	-3.9	0.951	10.4	18.4 W
27 maart	05:08	98	10:44	345	16:21	262	-3.9	0.952	10.4	18.2 W
28 maart	05:06	98	10:44	345	16:24	263	-3.9	0.953	10.4	18.0 W
29 maart	05:05	97	10:45	355	16:27	264	-3.9	0.954	10.3	17.7 W
30 maart	05:03	96	10:46	355	16:30	264	-3.9	0.956	10.3	17.5 W
31 maart	05:01	95	10:46	365	16:33	265	-3.9	0.957	10.3	17.2 W
1 april	04:59	95	10:47	365	16:36	266	-3.9	0.958	10.3	17.0 W
2 april	04:58	94	10:48	375	16:39	267	-3.9	0.959	10.3	16.7 W
3 april	04:56	93	10:48	375	16:42	267	-3.9	0.961	10.2	16.5 W
4 april	04:54	92	10:49	385	16:45	268	-3.9	0.962	10.2	16.2 W
5 april	04:52	91	10:49	385	16:48	269	-3.9	0.963	10.2	16.0 W
6 april	04:50	91	10:50	385	16:51	270	-3.9	0.964	10.2	15.7 W
7 april	04:49	90	10:50	395	16:54	270	-3.9	0.965	10.2	15.5 W
8 april	04:47	89	10:51	395	16:57	271	-3.9	0.966	10.1	15.2 W
9 april	04:45	88	10:52	405	17:00	272	-3.9	0.967	10.1	15.0 W
10 april	04:43	88	10:52	405	17:03	273	-3.9	0.968	10.1	14.7 W
11 april	04:41	87	10:53	415	17:06	274	-3.9	0.969	10.1	14.5 W
12 april	04:40	86	10:53	415	17:09	274	-3.9	0.970	10.1	14.2 W
13 april	04:38	85	10:54	425	17:12	275	-3.9	0.972	10.1	14.0 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
14 april	04:36	84	10:55	425	17:15	276	-3.9	0.973	10.0	13.7 W
15 april	04:34	84	10:55	435	17:18	277	-3.9	0.974	10.0	13.5 W
16 april	04:32	83	10:56	435	17:21	277	-3.9	0.974	10.0	13.2 W
17 april	04:30	82	10:56	445	17:24	278	-3.9	0.975	10.0	12.9 W
18 april	04:29	81	10:57	445	17:27	279	-3.9	0.976	10.0	12.7 W
19 april	04:27	81	10:58	455	17:30	280	-3.9	0.977	10.0	12.4 W
20 april	04:25	80	10:58	455	17:33	281	-3.9	0.978	10.0	12.2 W
21 april	04:23	79	10:59	465	17:36	281	-3.9	0.979	9.9	11.9 W
22 april	04:22	78	11:00	465	17:39	282	-3.9	0.980	9.9	11.7 W
23 april	04:20	78	11:00	475	17:42	283	-3.9	0.981	9.9	11.4 W
24 april	04:18	77	11:01	475	17:45	284	-3.9	0.982	9.9	11.1 W
25 april	04:16	76	11:02	485	17:48	284	-3.9	0.983	9.9	10.9 W
26 april	04:15	75	11:02	485	17:51	285	-3.9	0.983	9.9	10.6 W
27 april	04:13	75	11:03	495	17:54	286	-3.9	0.984	9.9	10.4 W
28 april	04:11	74	11:04	495	17:57	287	-3.9	0.985	9.8	10.1 W
29 april	04:10	73	11:04	495	18:00	287	-3.9	0.986	9.8	9.8 W
30 april	04:08	72	11:05	505	18:03	288	-3.9	0.986	9.8	9.6 W
1 mei	04:06	72	11:06	505	18:07	289	-3.9	0.987	9.8	9.3 W
2 mei	04:05	71	11:07	515	18:10	290	-3.9	0.988	9.8	9.1 W
3 mei	04:03	70	11:07	515	18:13	290	-3.9	0.989	9.8	8.8 W
4 mei	04:02	69	11:08	525	18:16	291	-3.9	0.989	9.8	8.5 W
5 mei	04:00	69	11:09	525	18:19	292	-3.9	0.990	9.8	8.3 W
6 mei	03:59	68	11:10	535	18:22	292	-3.9	0.990	9.8	8.0 W
7 mei	03:57	67	11:11	535	18:25	293	-3.9	0.991	9.8	7.7 W
8 mei	03:56	67	11:11	535	18:28	294	-3.9	0.992	9.7	7.5 W
9 mei	03:54	66	11:12	545	18:31	294	-3.9	0.992	9.7	7.2 W
10 mei	03:53	65	11:13	545	18:35	295	-3.9	0.993	9.7	6.9 W
11 mei	03:52	65	11:14	555	18:38	296	-3.9	0.993	9.7	6.7 W
12 mei	03:50	64	11:15	555	18:41	296	-3.9	0.994	9.7	6.4 W
13 mei	03:49	63	11:16	555	18:44	297	-3.9	0.994	9.7	6.1 W
14 mei	03:48	63	11:17	565	18:47	298	-3.9	0.995	9.7	5.9 W
15 mei	03:47	62	11:18	565	18:50	298	-3.9	0.995	9.7	5.6 W
16 mei	03:46	61	11:19	565	18:53	299	-3.9	0.996	9.7	5.3 W
17 mei	03:45	61	11:20	575	18:56	300	-3.9	0.996	9.7	5.1 W
18 mei	03:43	60	11:21	575	18:59	300	-3.9	0.997	9.7	4.8 W
19 mei	03:42	60	11:22	575	19:02	301	-3.9	0.997	9.7	4.5 W
20 mei	03:42	59	11:23	585	19:05	301	-3.9	0.997	9.7	4.3 W
21 mei	03:41	59	11:24	585	19:08	302	-3.9	0.998	9.7	4.0 W
22 mei	03:40	58	11:25	585	19:11	302	-3.9	0.998	9.6	3.7 W
23 mei	03:39	57	11:26	595	19:14	303	-3.9	0.998	9.6	3.5 W
24 mei	03:38	57	11:27	595	19:17	303	-3.9	0.998	9.6	3.2 W
25 mei	03:38	56	11:28	595	19:20	304	-3.9	0.999	9.6	2.9 W
26 mei	03:37	56	11:30	605	19:23	304	-3.9	0.999	9.6	2.6 W
27 mei	03:36	55	11:31	605	19:26	305	-3.9	0.999	9.6	2.4 W
28 mei	03:36	55	11:32	605	19:29	305	-3.9	0.999	9.6	2.1 W
29 mei	03:36	54	11:33	605	19:32	306	-3.9	0.999	9.6	1.8 W
30 mei	03:35	54	11:34	615	19:35	306	-3.9	1.000	9.6	1.6 W
31 mei	03:35	54	11:36	615	19:37	307	-3.9	1.000	9.6	1.3 W
1 juni	03:35	53	11:37	615	19:40	307	-3.9	1.000	9.6	1.0 W
2 juni	03:35	53	11:38	615	19:43	307	-3.9	1.000	9.6	0.7 W
3 juni	03:35	52	11:40	615	19:45	308	-3.9	1.000	9.6	0.5 W
4 juni	03:35	52	11:41	625	19:48	308	-3.9	1.000	9.6	0.2 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
5 juni	03:35	52	11:42	62S	19:51	308	-3.9	1.000	9.6	0.1 O
6 juni	03:35	51	11:44	62S	19:53	309	-3.9	1.000	9.6	0.4 O
7 juni	03:35	51	11:45	62S	19:55	309	-3.9	1.000	9.6	0.6 O
8 juni	03:35	51	11:46	62S	19:58	309	-3.9	1.000	9.6	0.9 O
9 juni	03:36	51	11:48	62S	20:00	310	-3.9	1.000	9.6	1.2 O
10 juni	03:36	50	11:49	63S	20:02	310	-3.9	1.000	9.6	1.5 O
11 juni	03:37	50	11:50	63S	20:04	310	-3.9	1.000	9.6	1.7 O
12 juni	03:38	50	11:52	63S	20:06	310	-3.9	0.999	9.6	2.0 O
13 juni	03:38	50	11:53	63S	20:08	310	-3.9	0.999	9.6	2.3 O
14 juni	03:39	50	11:55	63S	20:10	310	-3.9	0.999	9.6	2.6 O
15 juni	03:40	49	11:56	63S	20:12	311	-3.9	0.999	9.6	2.8 O
16 juni	03:41	49	11:57	63S	20:14	311	-3.9	0.999	9.6	3.1 O
17 juni	03:42	49	11:59	63S	20:16	311	-3.9	0.998	9.6	3.4 O
18 juni	03:44	49	12:00	63S	20:17	311	-3.9	0.998	9.6	3.7 O
19 juni	03:45	49	12:02	63S	20:19	311	-3.9	0.998	9.6	3.9 O
20 juni	03:46	49	12:03	63S	20:20	311	-3.9	0.997	9.7	4.2 O
21 juni	03:48	49	12:05	63S	20:22	311	-3.9	0.997	9.7	4.5 O
22 juni	03:49	49	12:06	63S	20:23	311	-3.9	0.997	9.7	4.8 O
23 juni	03:51	49	12:08	63S	20:24	311	-3.9	0.996	9.7	5.1 O
24 juni	03:52	49	12:09	63S	20:25	311	-3.9	0.996	9.7	5.3 O
25 juni	03:54	49	12:10	63S	20:26	311	-3.9	0.995	9.7	5.6 O
26 juni	03:56	50	12:12	63S	20:27	310	-3.9	0.995	9.7	5.9 O
27 juni	03:58	50	12:13	63S	20:28	310	-3.9	0.994	9.7	6.2 O
28 juni	04:00	50	12:15	63S	20:29	310	-3.9	0.994	9.7	6.4 O
29 juni	04:02	50	12:16	63S	20:29	310	-3.9	0.993	9.7	6.7 O
30 juni	04:04	50	12:17	63S	20:30	310	-3.9	0.993	9.7	7.0 O
1 juli	04:06	50	12:19	62S	20:31	309	-3.9	0.992	9.7	7.3 O
2 juli	04:09	51	12:20	62S	20:31	309	-3.9	0.991	9.7	7.5 O
3 juli	04:11	51	12:22	62S	20:31	309	-3.9	0.991	9.7	7.8 O
4 juli	04:14	51	12:23	62S	20:32	309	-3.9	0.990	9.8	8.1 O
5 juli	04:16	52	12:24	62S	20:32	308	-3.9	0.989	9.8	8.4 O
6 juli	04:19	52	12:26	62S	20:32	308	-3.9	0.989	9.8	8.7 O
7 juli	04:21	52	12:27	61S	20:32	308	-3.9	0.988	9.8	8.9 O
8 juli	04:24	53	12:28	61S	20:32	307	-3.9	0.987	9.8	9.2 O
9 juli	04:26	53	12:29	61S	20:31	307	-3.9	0.986	9.8	9.5 O
10 juli	04:29	53	12:31	61S	20:31	306	-3.9	0.985	9.8	9.8 O
11 juli	04:32	54	12:32	61S	20:31	306	-3.9	0.985	9.8	10.0 O
12 juli	04:35	54	12:33	60S	20:31	305	-3.9	0.984	9.8	10.3 O
13 juli	04:38	55	12:34	60S	20:30	305	-3.9	0.983	9.9	10.6 O
14 juli	04:40	55	12:36	60S	20:30	305	-3.9	0.982	9.9	10.9 O
15 juli	04:43	56	12:37	60S	20:29	304	-3.9	0.981	9.9	11.1 O
16 juli	04:46	56	12:38	59S	20:28	304	-3.9	0.980	9.9	11.4 O
17 juli	04:49	57	12:39	59S	20:28	303	-3.9	0.979	9.9	11.7 O
18 juli	04:52	57	12:40	59S	20:27	302	-3.9	0.978	9.9	12.0 O
19 juli	04:55	58	12:41	58S	20:26	302	-3.9	0.977	9.9	12.2 O
20 juli	04:58	58	12:42	58S	20:25	301	-3.9	0.976	10.0	12.5 O
21 juli	05:01	59	12:43	58S	20:24	301	-3.9	0.975	10.0	12.8 O
22 juli	05:04	59	12:44	57S	20:23	300	-3.9	0.974	10.0	13.1 O
23 juli	05:07	60	12:45	57S	20:22	300	-3.9	0.973	10.0	13.3 O
24 juli	05:11	61	12:46	57S	20:21	299	-3.9	0.972	10.0	13.6 O
25 juli	05:14	61	12:47	56S	20:20	298	-3.9	0.970	10.0	13.9 O
26 juli	05:17	62	12:48	56S	20:19	298	-3.9	0.969	10.1	14.2 O

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
27 juli	05:20	63	12:49	56S	20:17	297	-3.9	0.968	10.1	14.4 O
28 juli	05:23	63	12:50	55S	20:16	296	-3.9	0.967	10.1	14.7 O
29 juli	05:26	64	12:51	55S	20:15	296	-3.9	0.966	10.1	15.0 O
30 juli	05:29	65	12:52	54S	20:13	295	-3.9	0.964	10.1	15.2 O
31 juli	05:32	65	12:53	54S	20:12	294	-3.9	0.963	10.2	15.5 O
1 augustus	05:36	66	12:54	54S	20:10	294	-3.9	0.962	10.2	15.8 O
2 augustus	05:39	67	12:55	53S	20:09	293	-3.9	0.960	10.2	16.1 O
3 augustus	05:42	67	12:55	53S	20:07	292	-3.9	0.959	10.2	16.3 O
4 augustus	05:45	68	12:56	52S	20:06	292	-3.9	0.958	10.2	16.6 O
5 augustus	05:48	69	12:57	52S	20:04	291	-3.9	0.956	10.3	16.9 O
6 augustus	05:51	69	12:58	51S	20:03	290	-3.9	0.955	10.3	17.1 O
7 augustus	05:54	70	12:58	51S	20:01	289	-3.9	0.953	10.3	17.4 O
8 augustus	05:57	71	12:59	51S	19:59	289	-3.9	0.952	10.3	17.7 O
9 augustus	06:01	72	13:00	50S	19:58	288	-3.9	0.951	10.3	17.9 O
10 augustus	06:04	72	13:00	50S	19:56	287	-3.9	0.949	10.4	18.2 O
11 augustus	06:07	73	13:01	49S	19:54	286	-3.9	0.948	10.4	18.5 O
12 augustus	06:10	74	13:02	49S	19:52	286	-3.9	0.946	10.4	18.7 O
13 augustus	06:13	75	13:02	48S	19:50	285	-3.9	0.945	10.4	19.0 O
14 augustus	06:16	75	13:03	48S	19:49	284	-3.9	0.943	10.5	19.3 O
15 augustus	06:19	76	13:04	47S	19:47	283	-3.9	0.941	10.5	19.5 O
16 augustus	06:22	77	13:04	47S	19:45	283	-3.9	0.940	10.5	19.8 O
17 augustus	06:25	78	13:05	46S	19:43	282	-3.9	0.938	10.5	20.1 O
18 augustus	06:28	79	13:05	46S	19:41	281	-3.9	0.937	10.6	20.3 O
19 augustus	06:32	79	13:06	45S	19:39	280	-3.9	0.935	10.6	20.6 O
20 augustus	06:35	80	13:07	45S	19:37	279	-3.9	0.933	10.6	20.9 O
21 augustus	06:38	81	13:07	44S	19:35	279	-3.9	0.932	10.7	21.1 O
22 augustus	06:41	82	13:08	44S	19:33	278	-3.9	0.930	10.7	21.4 O
23 augustus	06:44	83	13:08	43S	19:31	277	-3.9	0.928	10.7	21.6 O
24 augustus	06:47	83	13:09	43S	19:29	276	-3.9	0.926	10.7	21.9 O
25 augustus	06:50	84	13:09	42S	19:27	275	-3.9	0.925	10.8	22.2 O
26 augustus	06:53	85	13:10	42S	19:25	275	-3.9	0.923	10.8	22.4 O
27 augustus	06:56	86	13:10	41S	19:23	274	-3.9	0.921	10.8	22.7 O
28 augustus	06:59	87	13:11	41S	19:21	273	-3.9	0.919	10.9	22.9 O
29 augustus	07:02	87	13:11	40S	19:19	272	-3.9	0.917	10.9	23.2 O
30 augustus	07:05	88	13:12	40S	19:17	271	-3.9	0.916	10.9	23.4 O
31 augustus	07:08	89	13:12	39S	19:15	270	-3.9	0.914	11.0	23.7 O
1 september	07:11	90	13:13	39S	19:13	270	-3.9	0.912	11.0	24.0 O
2 september	07:14	91	13:13	38S	19:11	269	-3.9	0.910	11.0	24.2 O
3 september	07:17	92	13:14	38S	19:09	268	-3.9	0.908	11.1	24.5 O
4 september	07:20	92	13:14	37S	19:07	267	-3.9	0.906	11.1	24.7 O
5 september	07:23	93	13:15	37S	19:05	266	-3.9	0.904	11.1	25.0 O
6 september	07:26	94	13:15	36S	19:03	266	-3.9	0.902	11.2	25.2 O
7 september	07:29	95	13:16	36S	19:01	265	-3.9	0.900	11.2	25.5 O
8 september	07:32	96	13:16	35S	18:59	264	-3.9	0.898	11.2	25.7 O
9 september	07:35	96	13:17	35S	18:57	263	-3.9	0.896	11.3	26.0 O
10 september	07:39	97	13:17	34S	18:55	262	-3.9	0.894	11.3	26.2 O
11 september	07:42	98	13:18	34S	18:53	262	-3.9	0.892	11.4	26.5 O
12 september	07:45	99	13:18	33S	18:51	261	-3.9	0.890	11.4	26.7 O
13 september	07:48	100	13:19	33S	18:49	260	-3.9	0.888	11.4	27.0 O
14 september	07:51	101	13:20	32S	18:47	259	-3.9	0.886	11.5	27.2 O
15 september	07:54	101	13:20	32S	18:45	258	-3.9	0.884	11.5	27.5 O
16 september	07:57	102	13:21	31S	18:43	258	-3.9	0.882	11.6	27.7 O

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
17 september	08:00	103	13:21	315	18:41	257	-3.9	0.880	11.6	28.0 O
18 september	08:03	104	13:22	305	18:40	256	-3.9	0.878	11.6	28.2 O
19 september	08:06	104	13:22	305	18:38	255	-3.9	0.876	11.7	28.4 O
20 september	08:09	105	13:23	295	18:36	254	-3.9	0.874	11.7	28.7 O
21 september	08:12	106	13:24	295	18:34	254	-3.9	0.872	11.8	28.9 O
22 september	08:15	107	13:24	285	18:32	253	-3.9	0.869	11.8	29.2 O
23 september	08:19	108	13:25	285	18:30	252	-3.9	0.867	11.9	29.4 O
24 september	08:22	108	13:26	275	18:28	251	-3.9	0.865	11.9	29.6 O
25 september	08:25	109	13:26	275	18:27	251	-3.9	0.863	12.0	29.9 O
26 september	08:28	110	13:27	265	18:25	250	-3.9	0.861	12.0	30.1 O
27 september	08:31	111	13:28	265	18:23	249	-3.9	0.858	12.0	30.4 O
28 september	08:34	111	13:28	255	18:21	248	-3.9	0.856	12.1	30.6 O
29 september	08:37	112	13:29	255	18:20	248	-3.9	0.854	12.1	30.8 O
30 september	08:41	113	13:30	245	18:18	247	-3.9	0.851	12.2	31.1 O
1 oktober	08:44	114	13:31	245	18:16	246	-3.9	0.849	12.2	31.3 O
2 oktober	08:47	114	13:31	245	18:15	245	-3.9	0.847	12.3	31.5 O
3 oktober	08:50	115	13:32	235	18:13	245	-3.9	0.845	12.3	31.8 O
4 oktober	08:53	116	13:33	235	18:12	244	-3.9	0.842	12.4	32.0 O
5 oktober	08:56	116	13:34	225	18:10	243	-3.9	0.840	12.5	32.2 O
6 oktober	09:00	117	13:35	225	18:09	243	-3.9	0.838	12.5	32.5 O
7 oktober	09:03	118	13:36	225	18:08	242	-3.9	0.835	12.6	32.7 O
8 oktober	09:06	118	13:36	215	18:06	241	-3.9	0.833	12.6	32.9 O
9 oktober	09:09	119	13:37	215	18:05	241	-3.9	0.830	12.7	33.1 O
10 oktober	09:12	120	13:38	205	18:04	240	-3.9	0.828	12.7	33.4 O
11 oktober	09:15	120	13:39	205	18:02	239	-3.9	0.825	12.8	33.6 O
12 oktober	09:19	121	13:40	205	18:01	239	-3.9	0.823	12.8	33.8 O
13 oktober	09:22	122	13:41	195	18:00	238	-3.9	0.821	12.9	34.0 O
14 oktober	09:25	122	13:42	195	17:59	238	-3.9	0.818	13.0	34.3 O
15 oktober	09:28	123	13:43	195	17:58	237	-3.9	0.816	13.0	34.5 O
16 oktober	09:31	123	13:44	185	17:57	236	-3.9	0.813	13.1	34.7 O
17 oktober	09:34	124	13:45	185	17:56	236	-4.0	0.811	13.1	34.9 O
18 oktober	09:37	124	13:47	185	17:55	235	-4.0	0.808	13.2	35.1 O
19 oktober	09:40	125	13:48	175	17:55	235	-4.0	0.805	13.3	35.4 O
20 oktober	09:43	126	13:49	175	17:54	234	-4.0	0.803	13.3	35.6 O
21 oktober	09:46	126	13:50	175	17:53	234	-4.0	0.800	13.4	35.8 O
22 oktober	09:49	126	13:51	175	17:53	233	-4.0	0.798	13.5	36.0 O
23 oktober	09:52	127	13:52	165	17:52	233	-4.0	0.795	13.5	36.2 O
24 oktober	09:55	127	13:53	165	17:52	232	-4.0	0.792	13.6	36.4 O
25 oktober	09:57	128	13:55	165	17:51	232	-4.0	0.790	13.7	36.6 O
26 oktober	10:00	128	13:56	165	17:51	232	-4.0	0.787	13.8	36.8 O
27 oktober	10:03	129	13:57	155	17:51	231	-4.0	0.784	13.8	37.1 O
28 oktober	10:05	129	13:58	155	17:51	231	-4.0	0.782	13.9	37.3 O
29 oktober	10:08	129	14:00	155	17:51	230	-4.0	0.779	14.0	37.5 O
30 oktober	10:10	130	14:01	155	17:51	230	-4.0	0.776	14.0	37.7 O
31 oktober	10:13	130	14:02	155	17:51	230	-4.0	0.774	14.1	37.9 O
1 november	10:15	130	14:03	155	17:51	230	-4.0	0.771	14.2	38.1 O
2 november	10:18	131	14:05	145	17:51	229	-4.0	0.768	14.3	38.3 O
3 november	10:20	131	14:06	145	17:52	229	-4.0	0.765	14.4	38.5 O
4 november	10:22	131	14:07	145	17:52	229	-4.0	0.762	14.4	38.7 O
5 november	10:24	131	14:09	145	17:53	229	-4.0	0.760	14.5	38.9 O
6 november	10:26	132	14:10	145	17:54	228	-4.0	0.757	14.6	39.1 O
7 november	10:28	132	14:11	145	17:54	228	-4.0	0.754	14.7	39.3 O
8 november	10:30	132	14:13	145	17:55	228	-4.0	0.751	14.8	39.5 O

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)				
9 november	10:32	132	14:14	145	17:56	228	-4.0	0.748	14.9	39.7 O
10 november	10:34	132	14:15	145	17:57	228	-4.0	0.745	14.9	39.9 O
11 november	10:35	132	14:17	145	17:58	228	-4.1	0.742	15.0	40.0 O
12 november	10:37	132	14:18	145	17:59	228	-4.1	0.739	15.1	40.2 O
13 november	10:38	132	14:19	145	18:00	228	-4.1	0.736	15.2	40.4 O
14 november	10:40	132	14:21	145	18:02	228	-4.1	0.733	15.3	40.6 O
15 november	10:41	132	14:22	145	18:03	228	-4.1	0.730	15.4	40.8 O
16 november	10:42	132	14:23	145	18:05	228	-4.1	0.727	15.5	41.0 O
17 november	10:43	132	14:25	145	18:06	228	-4.1	0.724	15.6	41.2 O
18 november	10:44	132	14:26	145	18:08	228	-4.1	0.721	15.7	41.3 O
19 november	10:45	132	14:27	145	18:10	228	-4.1	0.718	15.8	41.5 O
20 november	10:46	132	14:29	145	18:12	228	-4.1	0.715	15.9	41.7 O
21 november	10:47	132	14:30	145	18:13	228	-4.1	0.711	16.0	41.9 O
22 november	10:47	131	14:31	145	18:15	229	-4.1	0.708	16.1	42.0 O
23 november	10:48	131	14:32	145	18:17	229	-4.1	0.705	16.2	42.2 O
24 november	10:48	131	14:34	145	18:20	229	-4.1	0.702	16.3	42.4 O
25 november	10:48	131	14:35	145	18:22	229	-4.1	0.698	16.4	42.5 O
26 november	10:49	131	14:36	155	18:24	230	-4.1	0.695	16.5	42.7 O
27 november	10:49	130	14:37	155	18:26	230	-4.1	0.692	16.7	42.9 O
28 november	10:49	130	14:38	155	18:29	230	-4.2	0.688	16.8	43.0 O
29 november	10:49	130	14:40	155	18:31	231	-4.2	0.685	16.9	43.2 O
30 november	10:48	129	14:41	155	18:33	231	-4.2	0.682	17.0	43.3 O
1 december	10:48	129	14:42	155	18:36	231	-4.2	0.678	17.1	43.5 O
2 december	10:48	128	14:43	165	18:38	232	-4.2	0.675	17.3	43.7 O
3 december	10:47	128	14:44	165	18:41	232	-4.2	0.671	17.4	43.8 O
4 december	10:47	128	14:45	165	18:43	232	-4.2	0.668	17.5	44.0 O
5 december	10:46	127	14:46	165	18:46	233	-4.2	0.664	17.6	44.1 O
6 december	10:46	127	14:47	175	18:49	233	-4.2	0.661	17.8	44.2 O
7 december	10:45	126	14:48	175	18:51	234	-4.2	0.657	17.9	44.4 O
8 december	10:44	126	14:49	175	18:54	234	-4.2	0.653	18.0	44.5 O
9 december	10:43	125	14:50	175	18:57	235	-4.2	0.650	18.2	44.7 O
10 december	10:42	125	14:50	185	18:59	235	-4.2	0.646	18.3	44.8 O
11 december	10:41	124	14:51	185	19:02	236	-4.2	0.642	18.5	44.9 O
12 december	10:40	124	14:52	185	19:05	236	-4.3	0.639	18.6	45.1 O
13 december	10:39	123	14:53	195	19:07	237	-4.3	0.635	18.8	45.2 O
14 december	10:37	123	14:53	195	19:10	238	-4.3	0.631	18.9	45.3 O
15 december	10:36	122	14:54	195	19:13	238	-4.3	0.627	19.1	45.4 O
16 december	10:35	121	14:55	205	19:16	239	-4.3	0.623	19.2	45.5 O
17 december	10:33	121	14:55	205	19:18	239	-4.3	0.619	19.4	45.7 O
18 december	10:32	120	14:56	205	19:21	240	-4.3	0.615	19.6	45.8 O
19 december	10:30	120	14:57	215	19:24	241	-4.3	0.611	19.7	45.9 O
20 december	10:28	119	14:57	215	19:27	241	-4.3	0.607	19.9	46.0 O
21 december	10:27	118	14:58	215	19:29	242	-4.3	0.603	20.1	46.1 O
22 december	10:25	118	14:58	225	19:32	243	-4.3	0.599	20.2	46.2 O
23 december	10:23	117	14:58	225	19:35	243	-4.3	0.595	20.4	46.3 O
24 december	10:21	116	14:59	235	19:37	244	-4.4	0.590	20.6	46.4 O
25 december	10:19	116	14:59	235	19:40	245	-4.4	0.586	20.8	46.4 O
26 december	10:17	115	14:59	235	19:42	245	-4.4	0.582	21.0	46.5 O
27 december	10:15	114	15:00	245	19:45	246	-4.4	0.577	21.2	46.6 O
28 december	10:13	114	15:00	245	19:48	247	-4.4	0.573	21.4	46.7 O
29 december	10:11	113	15:00	255	19:50	247	-4.4	0.569	21.6	46.7 O
30 december	10:09	112	15:00	255	19:53	248	-4.4	0.564	21.8	46.8 O
31 december	10:07	111	15:01	255	19:55	249	-4.4	0.559	22.0	46.9 O

Mars

2024	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)	
	UT (h:m)	Azimut (°)	UT (h:m)	Azimut (°)	UT (h:m)	Azimut (°)					
1 januari	06:57	129	10:50	155	14:42	231	1.4	0.99	3.9	12.7	W
2 januari	06:57	129	10:49	155	14:41	231	1.4	0.99	3.9	13.0	W
3 januari	06:56	129	10:48	155	14:41	231	1.4	0.99	3.9	13.3	W
4 januari	06:56	129	10:48	155	14:40	231	1.4	0.99	3.9	13.6	W
5 januari	06:55	129	10:47	155	14:39	231	1.4	0.99	3.9	13.8	W
6 januari	06:54	129	10:46	155	14:38	231	1.4	0.99	3.9	14.1	W
7 januari	06:54	129	10:46	155	14:38	231	1.4	0.99	3.9	14.4	W
8 januari	06:53	129	10:45	155	14:37	231	1.4	0.99	3.9	14.7	W
9 januari	06:52	129	10:44	155	14:37	231	1.4	0.99	3.9	14.9	W
10 januari	06:52	129	10:44	155	14:36	231	1.4	0.99	3.9	15.2	W
11 januari	06:51	129	10:43	155	14:35	231	1.4	0.99	3.9	15.5	W
12 januari	06:50	129	10:42	155	14:35	231	1.4	0.99	3.9	15.8	W
13 januari	06:49	129	10:42	155	14:34	231	1.4	0.99	3.9	16.0	W
14 januari	06:48	129	10:41	155	14:34	231	1.4	0.99	3.9	16.3	W
15 januari	06:47	129	10:40	155	14:34	231	1.4	0.99	3.9	16.6	W
16 januari	06:47	129	10:40	155	14:33	231	1.4	0.99	3.9	16.8	W
17 januari	06:46	129	10:39	155	14:33	231	1.4	0.99	3.9	17.1	W
18 januari	06:45	129	10:38	165	14:32	231	1.4	0.99	4.0	17.4	W
19 januari	06:44	129	10:38	165	14:32	231	1.4	0.99	4.0	17.6	W
20 januari	06:43	129	10:37	165	14:32	232	1.3	0.99	4.0	17.9	W
21 januari	06:42	128	10:37	165	14:32	232	1.3	0.99	4.0	18.2	W
22 januari	06:40	128	10:36	165	14:31	232	1.3	0.99	4.0	18.4	W
23 januari	06:39	128	10:35	165	14:31	232	1.3	0.99	4.0	18.7	W
24 januari	06:38	128	10:35	165	14:31	232	1.3	0.99	4.0	18.9	W
25 januari	06:37	128	10:34	165	14:31	232	1.3	0.99	4.0	19.2	W
26 januari	06:36	128	10:33	165	14:31	232	1.3	0.99	4.0	19.5	W
27 januari	06:35	128	10:33	165	14:31	232	1.3	0.99	4.0	19.7	W
28 januari	06:33	127	10:32	165	14:31	233	1.3	0.99	4.0	20.0	W
29 januari	06:32	127	10:31	165	14:31	233	1.3	0.99	4.0	20.2	W
30 januari	06:31	127	10:31	165	14:31	233	1.3	0.99	4.0	20.5	W
31 januari	06:29	127	10:30	175	14:31	233	1.3	0.99	4.0	20.7	W
1 februari	06:28	127	10:29	175	14:31	233	1.3	0.98	4.0	21.0	W
2 februari	06:27	126	10:29	175	14:31	234	1.3	0.98	4.0	21.2	W
3 februari	06:25	126	10:28	175	14:31	234	1.3	0.98	4.1	21.5	W
4 februari	06:24	126	10:27	175	14:31	234	1.3	0.98	4.1	21.7	W
5 februari	06:22	126	10:26	175	14:31	234	1.3	0.98	4.1	22.0	W
6 februari	06:21	126	10:26	175	14:31	234	1.3	0.98	4.1	22.2	W
7 februari	06:19	125	10:25	175	14:31	235	1.3	0.98	4.1	22.5	W
8 februari	06:18	125	10:24	175	14:32	235	1.3	0.98	4.1	22.7	W
9 februari	06:16	125	10:24	185	14:32	235	1.3	0.98	4.1	23.0	W
10 februari	06:14	125	10:23	185	14:32	235	1.3	0.98	4.1	23.2	W
11 februari	06:13	124	10:22	185	14:32	236	1.3	0.98	4.1	23.5	W
12 februari	06:11	124	10:22	185	14:32	236	1.3	0.98	4.1	23.7	W
13 februari	06:09	124	10:21	185	14:33	236	1.3	0.98	4.1	24.0	W
14 februari	06:08	124	10:20	185	14:33	237	1.3	0.98	4.1	24.2	W
15 februari	06:06	123	10:19	195	14:33	237	1.3	0.98	4.1	24.5	W
16 februari	06:04	123	10:19	195	14:34	237	1.3	0.98	4.1	24.7	W
17 februari	06:02	123	10:18	195	14:34	237	1.3	0.98	4.1	24.9	W
18 februari	06:01	122	10:17	195	14:34	238	1.3	0.98	4.2	25.2	W
19 februari	05:59	122	10:16	195	14:35	238	1.3	0.98	4.2	25.4	W
20 februari	05:57	122	10:16	195	14:35	238	1.3	0.98	4.2	25.7	W
21 februari	05:55	121	10:15	205	14:35	239	1.3	0.98	4.2	25.9	W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)				
2024										
22 februari	05:53	121	10:14	205	14:36	239	1.3	0.98	4.2	26.1 W
23 februari	05:51	121	10:13	205	14:36	239	1.3	0.98	4.2	26.4 W
24 februari	05:49	120	10:13	205	14:36	240	1.3	0.97	4.2	26.6 W
25 februari	05:47	120	10:12	205	14:37	240	1.3	0.97	4.2	26.8 W
26 februari	05:45	120	10:11	215	14:37	240	1.2	0.97	4.2	27.1 W
27 februari	05:43	119	10:10	215	14:38	241	1.2	0.97	4.2	27.3 W
28 februari	05:41	119	10:09	215	14:38	241	1.2	0.97	4.2	27.5 W
29 februari	05:39	119	10:09	215	14:39	241	1.2	0.97	4.2	27.8 W
1 maart	05:37	118	10:08	215	14:39	242	1.2	0.97	4.2	28.0 W
2 maart	05:35	118	10:07	225	14:39	242	1.2	0.97	4.2	28.2 W
3 maart	05:33	118	10:06	225	14:40	243	1.2	0.97	4.3	28.4 W
4 maart	05:31	117	10:05	225	14:40	243	1.2	0.97	4.3	28.7 W
5 maart	05:29	117	10:05	225	14:41	243	1.2	0.97	4.3	28.9 W
6 maart	05:27	116	10:04	225	14:41	244	1.2	0.97	4.3	29.1 W
7 maart	05:25	116	10:03	235	14:42	244	1.2	0.97	4.3	29.4 W
8 maart	05:22	116	10:02	235	14:42	245	1.2	0.97	4.3	29.6 W
9 maart	05:20	115	10:01	235	14:43	245	1.2	0.97	4.3	29.8 W
10 maart	05:18	115	10:00	235	14:43	245	1.2	0.97	4.3	30.0 W
11 maart	05:16	114	09:59	245	14:44	246	1.2	0.97	4.3	30.2 W
12 maart	05:14	114	09:59	245	14:44	246	1.2	0.97	4.3	30.5 W
13 maart	05:11	114	09:58	245	14:45	247	1.3	0.97	4.3	30.7 W
14 maart	05:09	113	09:57	245	14:45	247	1.3	0.97	4.3	30.9 W
15 maart	05:07	113	09:56	255	14:46	247	1.3	0.97	4.3	31.1 W
16 maart	05:04	112	09:55	255	14:46	248	1.3	0.96	4.4	31.3 W
17 maart	05:02	112	09:54	255	14:46	248	1.3	0.96	4.4	31.6 W
18 maart	05:00	112	09:53	255	14:47	249	1.3	0.96	4.4	31.8 W
19 maart	04:57	111	09:52	265	14:47	249	1.3	0.96	4.4	32.0 W
20 maart	04:55	111	09:51	265	14:48	250	1.3	0.96	4.4	32.2 W
21 maart	04:53	110	09:50	265	14:48	250	1.3	0.96	4.4	32.4 W
22 maart	04:50	110	09:49	265	14:49	250	1.3	0.96	4.4	32.6 W
23 maart	04:48	109	09:48	275	14:49	251	1.3	0.96	4.4	32.9 W
24 maart	04:46	109	09:47	275	14:50	251	1.3	0.96	4.4	33.1 W
25 maart	04:43	108	09:46	275	14:50	252	1.3	0.96	4.4	33.3 W
26 maart	04:41	108	09:45	285	14:51	252	1.2	0.96	4.4	33.5 W
27 maart	04:38	108	09:45	285	14:51	253	1.2	0.96	4.4	33.7 W
28 maart	04:36	107	09:44	285	14:52	253	1.2	0.96	4.4	33.9 W
29 maart	04:33	107	09:43	285	14:52	254	1.2	0.96	4.5	34.1 W
30 maart	04:31	106	09:42	295	14:53	254	1.2	0.96	4.5	34.3 W
31 maart	04:29	106	09:41	295	14:53	254	1.2	0.96	4.5	34.6 W
1 april	04:26	105	09:40	295	14:54	255	1.2	0.96	4.5	34.8 W
2 april	04:24	105	09:39	305	14:54	255	1.2	0.96	4.5	35.0 W
3 april	04:21	104	09:38	305	14:55	256	1.1	0.96	4.5	35.2 W
4 april	04:19	104	09:37	305	14:55	256	1.1	0.95	4.5	35.4 W
5 april	04:16	103	09:35	305	14:56	257	1.1	0.95	4.5	35.6 W
6 april	04:14	103	09:34	315	14:56	257	1.1	0.95	4.5	35.8 W
7 april	04:11	102	09:33	315	14:56	258	1.1	0.95	4.5	36.0 W
8 april	04:09	102	09:32	315	14:57	258	1.1	0.95	4.5	36.2 W
9 april	04:06	102	09:31	325	14:57	259	1.1	0.95	4.5	36.4 W
10 april	04:03	101	09:30	325	14:58	259	1.1	0.95	4.6	36.6 W
11 april	04:01	101	09:29	325	14:58	260	1.1	0.95	4.6	36.8 W
12 april	03:58	100	09:28	335	14:59	260	1.0	0.95	4.6	37.0 W
13 april	03:56	100	09:27	335	14:59	261	1.0	0.95	4.6	37.2 W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)				
2024										
14 april	03:53	99	09:26	335	15:00	261	1.1	0.95	4.6	37.4 W
15 april	03:51	99	09:25	335	15:00	262	1.1	0.95	4.6	37.6 W
16 april	03:48	98	09:24	345	15:00	262	1.1	0.95	4.6	37.8 W
17 april	03:46	98	09:23	345	15:01	263	1.1	0.95	4.6	38.0 W
18 april	03:43	97	09:22	345	15:01	263	1.1	0.95	4.6	38.2 W
19 april	03:40	97	09:21	355	15:02	264	1.1	0.95	4.6	38.5 W
20 april	03:38	96	09:20	355	15:02	264	1.1	0.95	4.6	38.7 W
21 april	03:35	96	09:19	355	15:03	264	1.1	0.95	4.6	38.9 W
22 april	03:33	95	09:17	365	15:03	265	1.2	0.94	4.7	39.1 W
23 april	03:30	95	09:16	365	15:03	265	1.2	0.94	4.7	39.3 W
24 april	03:27	94	09:15	365	15:04	266	1.2	0.94	4.7	39.5 W
25 april	03:25	94	09:14	365	15:04	266	1.2	0.94	4.7	39.7 W
26 april	03:22	93	09:13	375	15:05	267	1.2	0.94	4.7	39.9 W
27 april	03:20	93	09:12	375	15:05	267	1.2	0.94	4.7	40.1 W
28 april	03:17	92	09:11	375	15:05	268	1.2	0.94	4.7	40.3 W
29 april	03:14	92	09:10	385	15:06	268	1.2	0.94	4.7	40.5 W
30 april	03:12	91	09:09	385	15:06	269	1.2	0.94	4.7	40.7 W
1 mei	03:09	91	09:08	385	15:07	269	1.2	0.94	4.7	40.9 W
2 mei	03:07	90	09:06	395	15:07	270	1.2	0.94	4.7	41.1 W
3 mei	03:04	90	09:05	395	15:07	270	1.2	0.94	4.8	41.3 W
4 mei	03:01	89	09:04	395	15:08	271	1.2	0.94	4.8	41.5 W
5 mei	02:59	89	09:03	405	15:08	271	1.2	0.94	4.8	41.7 W
6 mei	02:56	88	09:02	405	15:08	272	1.2	0.94	4.8	41.9 W
7 mei	02:53	88	09:01	405	15:09	272	1.2	0.94	4.8	42.1 W
8 mei	02:51	88	09:00	405	15:09	273	1.2	0.94	4.8	42.3 W
9 mei	02:48	87	08:59	415	15:10	273	1.2	0.93	4.8	42.5 W
10 mei	02:46	87	08:57	415	15:10	274	1.1	0.93	4.8	42.7 W
11 mei	02:43	86	08:56	415	15:10	274	1.1	0.93	4.8	42.9 W
12 mei	02:40	86	08:55	425	15:11	275	1.1	0.93	4.8	43.1 W
13 mei	02:38	85	08:54	425	15:11	275	1.1	0.93	4.8	43.3 W
14 mei	02:35	85	08:53	425	15:11	276	1.1	0.93	4.9	43.5 W
15 mei	02:32	84	08:52	435	15:12	276	1.1	0.93	4.9	43.7 W
16 mei	02:30	84	08:51	435	15:12	277	1.1	0.93	4.9	43.9 W
17 mei	02:27	83	08:49	435	15:12	277	1.1	0.93	4.9	44.1 W
18 mei	02:25	83	08:48	435	15:13	278	1.1	0.93	4.9	44.3 W
19 mei	02:22	82	08:47	445	15:13	278	1.1	0.93	4.9	44.5 W
20 mei	02:19	82	08:46	445	15:13	278	1.1	0.93	4.9	44.7 W
21 mei	02:17	81	08:45	445	15:14	279	1.1	0.93	4.9	44.9 W
22 mei	02:14	81	08:44	455	15:14	279	1.1	0.93	4.9	45.1 W
23 mei	02:12	80	08:43	455	15:14	280	1.1	0.93	4.9	45.3 W
24 mei	02:09	80	08:42	455	15:15	280	1.1	0.93	5.0	45.5 W
25 mei	02:06	79	08:40	455	15:15	281	1.1	0.93	5.0	45.7 W
26 mei	02:04	79	08:39	465	15:15	281	1.1	0.93	5.0	45.9 W
27 mei	02:01	79	08:38	465	15:16	282	1.1	0.92	5.0	46.1 W
28 mei	01:59	78	08:37	465	15:16	282	1.1	0.92	5.0	46.3 W
29 mei	01:56	78	08:36	475	15:16	283	1.1	0.92	5.0	46.5 W
30 mei	01:54	77	08:35	475	15:17	283	1.1	0.92	5.0	46.7 W
31 mei	01:51	77	08:34	475	15:17	284	1.1	0.92	5.0	46.9 W
1 juni	01:48	76	08:32	475	15:17	284	1.1	0.92	5.0	47.1 W
2 juni	01:46	76	08:31	485	15:18	284	1.1	0.92	5.0	47.3 W
3 juni	01:43	75	08:30	485	15:18	285	1.1	0.92	5.1	47.5 W
4 juni	01:41	75	08:29	485	15:18	285	1.1	0.92	5.1	47.8 W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)				
2024										
5 juni	01:38	74	08:28	49S	15:18	286	1.1	0.92	5.1	48.0 W
6 juni	01:36	74	08:27	49S	15:19	286	1.1	0.92	5.1	48.2 W
7 juni	01:33	74	08:26	49S	15:19	287	1.1	0.92	5.1	48.4 W
8 juni	01:31	73	08:25	49S	15:19	287	1.1	0.92	5.1	48.6 W
9 juni	01:28	73	08:23	50S	15:20	288	1.1	0.92	5.1	48.8 W
10 juni	01:26	72	08:22	50S	15:20	288	1.1	0.92	5.1	49.0 W
11 juni	01:23	72	08:21	50S	15:20	288	1.1	0.92	5.1	49.2 W
12 juni	01:21	71	08:20	50S	15:20	289	1.1	0.92	5.2	49.5 W
13 juni	01:18	71	08:19	51S	15:21	289	1.1	0.92	5.2	49.7 W
14 juni	01:16	71	08:18	51S	15:21	290	1.1	0.91	5.2	49.9 W
15 juni	01:13	70	08:17	51S	15:21	290	1.0	0.91	5.2	50.1 W
16 juni	01:11	70	08:16	51S	15:21	291	1.0	0.91	5.2	50.3 W
17 juni	01:08	69	08:15	52S	15:22	291	1.0	0.91	5.2	50.5 W
18 juni	01:06	69	08:13	52S	15:22	291	1.0	0.91	5.2	50.8 W
19 juni	01:03	68	08:12	52S	15:22	292	1.0	0.91	5.2	51.0 W
20 juni	01:01	68	08:11	52S	15:22	292	1.0	0.91	5.2	51.2 W
21 juni	00:59	68	08:10	53S	15:23	293	1.0	0.91	5.3	51.4 W
22 juni	00:56	67	08:09	53S	15:23	293	1.0	0.91	5.3	51.7 W
23 juni	00:54	67	08:08	53S	15:23	293	1.0	0.91	5.3	51.9 W
24 juni	00:51	67	08:07	53S	15:23	294	0.9	0.91	5.3	52.1 W
25 juni	00:49	66	08:06	54S	15:23	294	0.9	0.91	5.3	52.3 W
26 juni	00:47	66	08:05	54S	15:23	294	1.0	0.91	5.3	52.6 W
27 juni	00:44	65	08:04	54S	15:24	295	1.0	0.91	5.3	52.8 W
28 juni	00:42	65	08:02	54S	15:24	295	1.0	0.91	5.3	53.0 W
29 juni	00:40	65	08:01	55S	15:24	296	1.0	0.91	5.4	53.2 W
30 juni	00:37	64	08:00	55S	15:24	296	1.0	0.91	5.4	53.5 W
1 juli	00:35	64	07:59	55S	15:24	296	1.0	0.91	5.4	53.7 W
2 juli	00:33	63	07:58	55S	15:24	297	1.0	0.91	5.4	53.9 W
3 juli	00:30	63	07:57	55S	15:25	297	1.0	0.90	5.4	54.2 W
4 juli	00:28	63	07:56	56S	15:25	297	1.1	0.90	5.4	54.4 W
5 juli	00:26	62	07:55	56S	15:25	298	1.1	0.90	5.4	54.7 W
6 juli	00:23	62	07:54	56S	15:25	298	1.1	0.90	5.5	54.9 W
7 juli	00:21	62	07:53	56S	15:25	298	1.1	0.90	5.5	55.1 W
8 juli	00:19	61	07:52	56S	15:25	299	1.1	0.90	5.5	55.4 W
9 juli	00:17	61	07:51	57S	15:25	299	1.1	0.90	5.5	55.6 W
10 juli	00:14	61	07:49	57S	15:25	299	1.1	0.90	5.5	55.9 W
11 juli	00:12	60	07:48	57S	15:25	300	1.1	0.90	5.5	56.1 W
12 juli	00:10	60	07:47	57S	15:25	300	1.1	0.90	5.5	56.4 W
13 juli	00:08	60	07:46	57S	15:25	300	1.1	0.90	5.6	56.6 W
14 juli	00:06	59	07:45	58S	15:25	301	1.0	0.90	5.6	56.9 W
15 juli	00:04	59	07:44	58S	15:25	301	1.1	0.90	5.6	57.1 W
16 juli	00:01	59	07:43	58S	15:25	301	1.0	0.90	5.6	57.4 W
17 juli	23:57	58	07:42	58S	15:25	302	1.0	0.90	5.6	57.6 W
18 juli	23:55	58	07:41	58S	15:25	302	1.0	0.90	5.6	57.9 W
19 juli	23:53	58	07:40	58S	15:25	302	1.0	0.90	5.6	58.1 W
20 juli	23:51	57	07:39	59S	15:25	303	1.0	0.90	5.7	58.4 W
21 juli	23:49	57	07:38	59S	15:25	303	1.0	0.90	5.7	58.6 W
22 juli	23:47	57	07:36	59S	15:25	303	0.9	0.89	5.7	58.9 W
23 juli	23:45	57	07:35	59S	15:24	303	0.9	0.89	5.7	59.2 W
24 juli	23:43	56	07:34	59S	15:24	304	0.9	0.89	5.7	59.4 W
25 juli	23:41	56	07:33	59S	15:24	304	0.9	0.89	5.7	59.7 W
26 juli	23:39	56	07:32	59S	15:24	304	0.9	0.89	5.8	60.0 W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)				
2024										
27 juli	23:37	56	07:31	60S	15:24	304	0.9	0.89	5.8	60.2 W
28 juli	23:35	55	07:30	60S	15:23	305	0.9	0.89	5.8	60.5 W
29 juli	23:33	55	07:29	60S	15:23	305	0.8	0.89	5.8	60.8 W
30 juli	23:31	55	07:28	60S	15:23	305	0.8	0.89	5.8	61.1 W
31 juli	23:29	55	07:27	60S	15:23	305	0.8	0.89	5.8	61.3 W
1 augustus	23:27	54	07:26	60S	15:22	306	0.8	0.89	5.9	61.6 W
2 augustus	23:26	54	07:25	60S	15:22	306	0.8	0.89	5.9	61.9 W
3 augustus	23:24	54	07:23	60S	15:22	306	0.8	0.89	5.9	62.2 W
4 augustus	23:22	54	07:22	61S	15:21	306	0.9	0.89	5.9	62.5 W
5 augustus	23:20	54	07:21	61S	15:21	306	0.9	0.89	5.9	62.8 W
6 augustus	23:18	53	07:20	61S	15:21	307	0.9	0.89	6.0	63.1 W
7 augustus	23:16	53	07:19	61S	15:20	307	0.9	0.89	6.0	63.3 W
8 augustus	23:15	53	07:18	61S	15:20	307	0.9	0.89	6.0	63.6 W
9 augustus	23:13	53	07:17	61S	15:19	307	0.9	0.89	6.0	63.9 W
10 augustus	23:11	53	07:16	61S	15:19	307	0.9	0.89	6.0	64.2 W
11 augustus	23:09	52	07:14	61S	15:18	307	0.9	0.89	6.1	64.5 W
12 augustus	23:08	52	07:13	61S	15:18	308	0.9	0.89	6.1	64.8 W
13 augustus	23:06	52	07:12	61S	15:17	308	0.9	0.89	6.1	65.1 W
14 augustus	23:04	52	07:11	62S	15:17	308	0.9	0.88	6.1	65.5 W
15 augustus	23:03	52	07:10	62S	15:16	308	0.9	0.88	6.1	65.8 W
16 augustus	23:01	52	07:09	62S	15:15	308	0.9	0.88	6.2	66.1 W
17 augustus	22:59	52	07:08	62S	15:15	308	0.9	0.88	6.2	66.4 W
18 augustus	22:58	51	07:06	62S	15:14	308	0.9	0.88	6.2	66.7 W
19 augustus	22:56	51	07:05	62S	15:13	309	0.9	0.88	6.2	67.0 W
20 augustus	22:54	51	07:04	62S	15:12	309	0.9	0.88	6.2	67.3 W
21 augustus	22:53	51	07:03	62S	15:12	309	0.9	0.88	6.3	67.7 W
22 augustus	22:51	51	07:02	62S	15:11	309	0.9	0.88	6.3	68.0 W
23 augustus	22:50	51	07:01	62S	15:10	309	0.8	0.88	6.3	68.3 W
24 augustus	22:48	51	06:59	62S	15:09	309	0.8	0.88	6.3	68.6 W
25 augustus	22:47	51	06:58	62S	15:08	309	0.8	0.88	6.4	69.0 W
26 augustus	22:45	51	06:57	62S	15:07	309	0.8	0.88	6.4	69.3 W
27 augustus	22:44	51	06:56	62S	15:06	309	0.8	0.88	6.4	69.7 W
28 augustus	22:42	51	06:54	62S	15:06	309	0.8	0.88	6.4	70.0 W
29 augustus	22:41	50	06:53	62S	15:05	310	0.7	0.88	6.5	70.3 W
30 augustus	22:39	50	06:52	62S	15:04	310	0.7	0.88	6.5	70.7 W
31 augustus	22:38	50	06:51	63S	15:02	310	0.7	0.88	6.5	71.0 W
1 september	22:36	50	06:49	63S	15:01	310	0.7	0.88	6.5	71.4 W
2 september	22:35	50	06:48	63S	15:00	310	0.7	0.88	6.6	71.7 W
3 september	22:33	50	06:47	63S	14:59	310	0.7	0.88	6.6	72.1 W
4 september	22:32	50	06:46	63S	14:58	310	0.7	0.88	6.6	72.5 W
5 september	22:30	50	06:44	63S	14:57	310	0.7	0.88	6.7	72.8 W
6 september	22:29	50	06:43	63S	14:56	310	0.6	0.88	6.7	73.2 W
7 september	22:28	50	06:42	63S	14:54	310	0.6	0.88	6.7	73.6 W
8 september	22:26	50	06:40	63S	14:53	310	0.6	0.88	6.7	73.9 W
9 september	22:25	50	06:39	63S	14:52	310	0.6	0.88	6.8	74.3 W
10 september	22:23	50	06:38	63S	14:51	310	0.6	0.88	6.8	74.7 W
11 september	22:22	50	06:36	63S	14:49	310	0.6	0.88	6.8	75.1 W
12 september	22:21	50	06:35	63S	14:48	310	0.7	0.88	6.9	75.5 W
13 september	22:19	50	06:33	63S	14:46	310	0.7	0.88	6.9	75.8 W
14 september	22:18	50	06:32	63S	14:45	310	0.7	0.88	6.9	76.2 W
15 september	22:16	50	06:31	63S	14:43	310	0.6	0.88	7.0	76.6 W
16 september	22:15	50	06:29	63S	14:42	310	0.7	0.88	7.0	77.0 W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)				
2024										
17 september	22:14	50	06:28	635	14:40	310	0.7	0.88	7.0	77.4 W
18 september	22:12	50	06:26	635	14:39	310	0.6	0.88	7.1	77.8 W
19 september	22:11	50	06:25	635	14:37	310	0.6	0.88	7.1	78.2 W
20 september	22:09	50	06:23	635	14:36	310	0.6	0.87	7.1	78.7 W
21 september	22:08	50	06:22	635	14:34	310	0.6	0.87	7.2	79.1 W
22 september	22:07	50	06:20	635	14:32	310	0.6	0.87	7.2	79.5 W
23 september	22:05	50	06:19	635	14:31	310	0.6	0.87	7.2	79.9 W
24 september	22:04	50	06:17	635	14:29	310	0.6	0.87	7.3	80.3 W
25 september	22:03	50	06:16	635	14:27	310	0.6	0.87	7.3	80.8 W
26 september	22:01	50	06:14	625	14:26	310	0.5	0.87	7.4	81.2 W
27 september	22:00	50	06:13	625	14:24	310	0.5	0.87	7.4	81.7 W
28 september	21:58	51	06:11	625	14:22	309	0.5	0.87	7.4	82.1 W
29 september	21:57	51	06:09	625	14:20	309	0.5	0.87	7.5	82.5 W
30 september	21:56	51	06:08	625	14:18	309	0.5	0.87	7.5	83.0 W
1 oktober	21:54	51	06:06	625	14:16	309	0.5	0.87	7.5	83.5 W
2 oktober	21:53	51	06:04	625	14:14	309	0.4	0.87	7.6	83.9 W
3 oktober	21:51	51	06:03	625	14:12	309	0.4	0.87	7.6	84.4 W
4 oktober	21:50	51	06:01	625	14:10	309	0.4	0.88	7.7	84.9 W
5 oktober	21:48	51	05:59	625	14:08	309	0.4	0.88	7.7	85.3 W
6 oktober	21:47	51	05:57	625	14:06	309	0.4	0.88	7.8	85.8 W
7 oktober	21:45	51	05:56	625	14:04	309	0.3	0.88	7.8	86.3 W
8 oktober	21:44	51	05:54	625	14:02	309	0.3	0.88	7.9	86.8 W
9 oktober	21:42	51	05:52	625	14:00	309	0.3	0.88	7.9	87.3 W
10 oktober	21:41	51	05:50	625	13:58	309	0.3	0.88	8.0	87.8 W
11 oktober	21:39	52	05:48	625	13:56	309	0.3	0.88	8.0	88.3 W
12 oktober	21:38	52	05:47	625	13:54	308	0.3	0.88	8.0	88.8 W
13 oktober	21:36	52	05:45	625	13:51	308	0.2	0.88	8.1	89.3 W
14 oktober	21:34	52	05:43	625	13:49	308	0.2	0.88	8.1	89.8 W
15 oktober	21:33	52	05:41	625	13:47	308	0.2	0.88	8.2	90.3 W
16 oktober	21:31	52	05:39	625	13:45	308	0.2	0.88	8.2	90.9 W
17 oktober	21:30	52	05:37	625	13:42	308	0.2	0.88	8.3	91.4 W
18 oktober	21:28	52	05:35	625	13:40	308	0.2	0.88	8.4	91.9 W
19 oktober	21:26	52	05:33	625	13:38	308	0.2	0.88	8.4	92.5 W
20 oktober	21:24	52	05:31	625	13:35	308	0.2	0.88	8.5	93.0 W
21 oktober	21:23	52	05:29	615	13:33	308	0.2	0.88	8.5	93.6 W
22 oktober	21:21	52	05:27	615	13:30	308	0.2	0.88	8.6	94.2 W
23 oktober	21:19	53	05:25	615	13:28	307	0.2	0.88	8.6	94.7 W
24 oktober	21:17	53	05:22	615	13:25	307	0.2	0.88	8.7	95.3 W
25 oktober	21:15	53	05:20	615	13:23	307	0.2	0.88	8.8	95.9 W
26 oktober	21:13	53	05:18	615	13:20	307	0.2	0.88	8.8	96.5 W
27 oktober	21:11	53	05:16	615	13:18	307	0.2	0.88	8.9	97.1 W
28 oktober	21:10	53	05:14	615	13:15	307	0.1	0.88	8.9	97.7 W
29 oktober	21:08	53	05:11	615	13:13	307	0.1	0.88	9.0	98.3 W
30 oktober	21:05	53	05:09	615	13:10	307	0.1	0.89	9.1	98.9 W
31 oktober	21:03	53	05:07	615	13:08	307	0.1	0.89	9.1	99.5 W
1 november	21:01	53	05:04	615	13:05	307	0.1	0.89	9.2	100.2 W
2 november	20:59	53	05:02	615	13:02	307	0.1	0.89	9.3	100.8 W
3 november	20:57	53	04:59	615	12:59	307	0.0	0.89	9.3	101.5 W
4 november	20:55	54	04:57	615	12:57	306	0.0	0.89	9.4	102.1 W
5 november	20:53	54	04:54	615	12:54	306	0.0	0.89	9.5	102.8 W
6 november	20:50	54	04:52	615	12:51	306	0.0	0.89	9.5	103.4 W
7 november	20:48	54	04:49	615	12:48	306	0.0	0.89	9.6	104.1 W
8 november	20:46	54	04:47	615	12:46	306	-0.1	0.89	9.7	104.8 W

	Opkomst		Culminatie		Ondergang		Magnitude	Fase	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)	UT (h:m)	Azimuth (°)				
2024										
9 november	20:43	54	04:44	615	12:43	306	-0.1	0.89	9.8	105.5 W
10 november	20:41	54	04:42	615	12:40	306	-0.1	0.90	9.8	106.2 W
11 november	20:38	54	04:39	615	12:37	306	-0.1	0.90	9.9	106.9 W
12 november	20:36	54	04:36	615	12:34	306	-0.2	0.90	10.0	107.7 W
13 november	20:33	54	04:33	615	12:31	306	-0.2	0.90	10.1	108.4 W
14 november	20:30	54	04:31	615	12:28	306	-0.2	0.90	10.1	109.1 W
15 november	20:27	54	04:28	605	12:25	306	-0.2	0.90	10.2	109.9 W
16 november	20:25	54	04:25	605	12:22	306	-0.3	0.90	10.3	110.6 W
17 november	20:22	54	04:22	605	12:19	306	-0.3	0.90	10.4	111.4 W
18 november	20:19	54	04:19	605	12:16	306	-0.3	0.91	10.5	112.2 W
19 november	20:16	54	04:16	605	12:13	306	-0.3	0.91	10.5	113.0 W
20 november	20:13	54	04:13	605	12:10	306	-0.3	0.91	10.6	113.8 W
21 november	20:10	54	04:10	605	12:07	306	-0.4	0.91	10.7	114.6 W
22 november	20:07	54	04:07	605	12:04	306	-0.4	0.91	10.8	115.4 W
23 november	20:04	54	04:04	605	12:00	306	-0.4	0.91	10.9	116.2 W
24 november	20:00	54	04:00	605	11:57	306	-0.4	0.91	11.0	117.1 W
25 november	19:57	54	03:57	605	11:54	306	-0.4	0.92	11.1	117.9 W
26 november	19:54	54	03:54	605	11:51	306	-0.4	0.92	11.2	118.8 W
27 november	19:50	54	03:50	605	11:47	306	-0.4	0.92	11.2	119.7 W
28 november	19:47	54	03:47	605	11:44	306	-0.4	0.92	11.3	120.6 W
29 november	19:43	54	03:44	605	11:41	306	-0.5	0.92	11.4	121.5 W
30 november	19:39	54	03:40	605	11:37	306	-0.5	0.92	11.5	122.4 W
1 december	19:36	54	03:37	605	11:34	306	-0.5	0.93	11.6	123.3 W
2 december	19:32	54	03:33	605	11:30	306	-0.5	0.93	11.7	124.2 W
3 december	19:28	54	03:29	615	11:27	306	-0.5	0.93	11.8	125.2 W
4 december	19:24	54	03:26	615	11:23	306	-0.5	0.93	11.9	126.2 W
5 december	19:20	54	03:22	615	11:20	306	-0.6	0.93	12.0	127.1 W
6 december	19:16	54	03:18	615	11:16	306	-0.6	0.94	12.1	128.1 W
7 december	19:12	54	03:14	615	11:13	306	-0.6	0.94	12.2	129.1 W
8 december	19:07	54	03:10	615	11:09	306	-0.6	0.94	12.3	130.2 W
9 december	19:03	54	03:06	615	11:05	306	-0.6	0.94	12.4	131.2 W
10 december	18:59	53	03:02	615	11:02	307	-0.7	0.94	12.5	132.2 W
11 december	18:54	53	02:58	615	10:58	307	-0.7	0.95	12.6	133.3 W
12 december	18:50	53	02:54	615	10:54	307	-0.7	0.95	12.7	134.4 W
13 december	18:45	53	02:50	615	10:51	307	-0.7	0.95	12.8	135.5 W
14 december	18:40	53	02:46	615	10:47	307	-0.8	0.95	12.9	136.6 W
15 december	18:35	53	02:41	615	10:43	307	-0.8	0.95	12.9	137.7 W
16 december	18:30	53	02:37	615	10:39	307	-0.8	0.96	13.0	138.8 W
17 december	18:25	53	02:32	615	10:35	307	-0.9	0.96	13.1	139.9 W
18 december	18:20	52	02:28	615	10:31	308	-0.9	0.96	13.2	141.1 W
19 december	18:15	52	02:23	615	10:27	308	-0.9	0.96	13.3	142.3 W
20 december	18:10	52	02:19	625	10:23	308	-1.0	0.97	13.4	143.4 W
21 december	18:05	52	02:14	625	10:19	308	-1.0	0.97	13.5	144.6 W
22 december	17:59	52	02:09	625	10:15	308	-1.0	0.97	13.6	145.8 W
23 december	17:54	52	02:05	625	10:11	308	-1.1	0.97	13.6	147.1 W
24 december	17:48	51	02:00	625	10:06	309	-1.1	0.97	13.7	148.3 W
25 december	17:43	51	01:55	625	10:02	309	-1.1	0.98	13.8	149.5 W
26 december	17:37	51	01:50	625	09:58	309	-1.1	0.98	13.9	150.8 W
27 december	17:31	51	01:45	625	09:54	309	-1.2	0.98	13.9	152.1 W
28 december	17:25	51	01:40	625	09:49	309	-1.2	0.98	14.0	153.3 W
29 december	17:19	50	01:35	625	09:45	310	-1.2	0.98	14.1	154.6 W
30 december	17:13	50	01:30	635	09:40	310	-1.2	0.98	14.1	155.9 W
31 december	17:07	50	01:24	635	09:36	310	-1.2	0.99	14.2	157.2 W

Jupiter

2024	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
1 januari	12:09	70	19:14	51S	02:22	290	-2.6	44.0	115.5 O
2 januari	12:05	70	19:10	51S	02:18	290	-2.6	43.8	114.5 O
3 januari	12:01	70	19:06	51S	02:14	290	-2.6	43.7	113.5 O
4 januari	11:57	70	19:02	52S	02:10	290	-2.6	43.6	112.5 O
5 januari	11:53	70	18:58	52S	02:07	290	-2.6	43.4	111.5 O
6 januari	11:49	70	18:54	52S	02:03	290	-2.5	43.3	110.5 O
7 januari	11:45	70	18:50	52S	01:59	290	-2.5	43.1	109.5 O
8 januari	11:42	69	18:46	52S	01:55	291	-2.5	43.0	108.5 O
9 januari	11:38	69	18:43	52S	01:51	291	-2.5	42.8	107.5 O
10 januari	11:34	69	18:39	52S	01:48	291	-2.5	42.7	106.5 O
11 januari	11:30	69	18:35	52S	01:44	291	-2.5	42.6	105.6 O
12 januari	11:26	69	18:31	52S	01:40	291	-2.5	42.4	104.6 O
13 januari	11:22	69	18:28	52S	01:37	291	-2.5	42.3	103.6 O
14 januari	11:18	69	18:24	52S	01:33	291	-2.5	42.1	102.6 O
15 januari	11:14	69	18:20	52S	01:29	291	-2.5	42.0	101.7 O
16 januari	11:10	69	18:16	52S	01:26	291	-2.5	41.8	100.7 O
17 januari	11:07	69	18:13	52S	01:22	291	-2.5	41.7	99.7 O
18 januari	11:03	69	18:09	52S	01:19	291	-2.5	41.6	98.8 O
19 januari	10:59	69	18:05	52S	01:15	291	-2.4	41.4	97.8 O
20 januari	10:55	69	18:02	52S	01:11	291	-2.4	41.3	96.9 O
21 januari	10:51	69	17:58	52S	01:08	291	-2.4	41.2	95.9 O
22 januari	10:48	69	17:54	52S	01:04	291	-2.4	41.0	95.0 O
23 januari	10:44	69	17:51	52S	01:01	291	-2.4	40.9	94.0 O
24 januari	10:40	69	17:47	52S	00:57	291	-2.4	40.7	93.1 O
25 januari	10:36	69	17:43	52S	00:54	291	-2.4	40.6	92.1 O
26 januari	10:32	69	17:40	52S	00:51	291	-2.4	40.5	91.2 O
27 januari	10:29	69	17:36	52S	00:47	291	-2.4	40.3	90.3 O
28 januari	10:25	69	17:33	52S	00:44	291	-2.4	40.2	89.4 O
29 januari	10:21	69	17:29	52S	00:40	291	-2.4	40.1	88.4 O
30 januari	10:17	69	17:25	52S	00:37	291	-2.4	39.9	87.5 O
31 januari	10:14	68	17:22	52S	00:34	291	-2.4	39.8	86.6 O
1 februari	10:10	68	17:18	52S	00:30	292	-2.3	39.7	85.7 O
2 februari	10:06	68	17:15	52S	00:27	292	-2.3	39.6	84.8 O
3 februari	10:02	68	17:11	52S	00:24	292	-2.3	39.4	83.9 O
4 februari	09:59	68	17:08	52S	00:20	292	-2.3	39.3	83.0 O
5 februari	09:55	68	17:04	52S	00:17	292	-2.3	39.2	82.1 O
6 februari	09:51	68	17:01	52S	00:14	292	-2.3	39.1	81.2 O
7 februari	09:47	68	16:57	52S	00:10	292	-2.3	38.9	80.3 O
8 februari	09:44	68	16:54	52S	00:07	292	-2.3	38.8	79.4 O
9 februari	09:40	68	16:50	53S	00:04	292	-2.3	38.7	78.5 O
10 februari	09:36	68	16:47	53S	00:01	292	-2.3	38.6	77.6 O
11 februari	09:33	68	16:44	53S	23:54	292	-2.3	38.5	76.7 O
12 februari	09:29	68	16:40	53S	23:51	292	-2.3	38.3	75.8 O
13 februari	09:25	68	16:37	53S	23:48	292	-2.3	38.2	74.9 O
14 februari	09:22	67	16:33	53S	23:45	293	-2.3	38.1	74.1 O
15 februari	09:18	67	16:30	53S	23:42	293	-2.3	38.0	73.2 O
16 februari	09:14	67	16:26	53S	23:39	293	-2.3	37.9	72.3 O
17 februari	09:11	67	16:23	53S	23:36	293	-2.2	37.8	71.5 O
18 februari	09:07	67	16:20	53S	23:33	293	-2.2	37.7	70.6 O
19 februari	09:03	67	16:16	53S	23:29	293	-2.2	37.5	69.7 O
20 februari	09:00	67	16:13	53S	23:26	293	-2.2	37.4	68.9 O
21 februari	08:56	67	16:10	53S	23:23	293	-2.2	37.3	68.0 O

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
22 februari	08:53	67	16:06	53S	23:20	293	-2.2	37.2	67.2 O
23 februari	08:49	67	16:03	53S	23:17	293	-2.2	37.1	66.3 O
24 februari	08:45	67	16:00	53S	23:14	293	-2.2	37.0	65.5 O
25 februari	08:42	67	15:56	53S	23:11	293	-2.2	36.9	64.6 O
26 februari	08:38	66	15:53	53S	23:08	294	-2.2	36.8	63.8 O
27 februari	08:35	66	15:50	53S	23:05	294	-2.2	36.7	62.9 O
28 februari	08:31	66	15:47	53S	23:02	294	-2.2	36.6	62.1 O
29 februari	08:27	66	15:43	54S	22:59	294	-2.2	36.5	61.3 O
1 maart	08:24	66	15:40	54S	22:56	294	-2.2	36.4	60.4 O
2 maart	08:20	66	15:37	54S	22:53	294	-2.2	36.3	59.6 O
3 maart	08:17	66	15:33	54S	22:51	294	-2.2	36.2	58.8 O
4 maart	08:13	66	15:30	54S	22:48	294	-2.2	36.2	57.9 O
5 maart	08:09	66	15:27	54S	22:45	294	-2.2	36.1	57.1 O
6 maart	08:06	66	15:24	54S	22:42	294	-2.2	36.0	56.3 O
7 maart	08:02	66	15:21	54S	22:39	295	-2.2	35.9	55.5 O
8 maart	07:59	65	15:17	54S	22:36	295	-2.1	35.8	54.7 O
9 maart	07:55	65	15:14	54S	22:33	295	-2.1	35.7	53.8 O
10 maart	07:52	65	15:11	54S	22:30	295	-2.1	35.6	53.0 O
11 maart	07:48	65	15:08	54S	22:27	295	-2.1	35.5	52.2 O
12 maart	07:45	65	15:05	54S	22:24	295	-2.1	35.5	51.4 O
13 maart	07:41	65	15:01	54S	22:22	295	-2.1	35.4	50.6 O
14 maart	07:38	65	14:58	54S	22:19	295	-2.1	35.3	49.8 O
15 maart	07:34	65	14:55	54S	22:16	295	-2.1	35.2	49.0 O
16 maart	07:31	65	14:52	54S	22:13	295	-2.1	35.2	48.2 O
17 maart	07:27	65	14:49	55S	22:10	296	-2.1	35.1	47.4 O
18 maart	07:24	64	14:45	55S	22:08	296	-2.1	35.0	46.6 O
19 maart	07:20	64	14:42	55S	22:05	296	-2.1	34.9	45.8 O
20 maart	07:17	64	14:39	55S	22:02	296	-2.1	34.9	45.0 O
21 maart	07:13	64	14:36	55S	21:59	296	-2.1	34.8	44.2 O
22 maart	07:10	64	14:33	55S	21:56	296	-2.1	34.7	43.4 O
23 maart	07:06	64	14:30	55S	21:54	296	-2.1	34.6	42.6 O
24 maart	07:03	64	14:27	55S	21:51	296	-2.1	34.6	41.8 O
25 maart	06:59	64	14:24	55S	21:48	296	-2.1	34.5	41.1 O
26 maart	06:56	64	14:20	55S	21:45	296	-2.1	34.5	40.3 O
27 maart	06:52	63	14:17	55S	21:43	297	-2.1	34.4	39.5 O
28 maart	06:49	63	14:14	55S	21:40	297	-2.1	34.3	38.7 O
29 maart	06:45	63	14:11	55S	21:37	297	-2.1	34.3	37.9 O
30 maart	06:42	63	14:08	55S	21:34	297	-2.1	34.2	37.2 O
31 maart	06:39	63	14:05	55S	21:32	297	-2.1	34.1	36.4 O
1 april	06:35	63	14:02	55S	21:29	297	-2.1	34.1	35.6 O
2 april	06:32	63	13:59	56S	21:26	297	-2.1	34.0	34.8 O
3 april	06:28	63	13:56	56S	21:23	297	-2.1	34.0	34.1 O
4 april	06:25	63	13:53	56S	21:21	297	-2.1	33.9	33.3 O
5 april	06:21	63	13:50	56S	21:18	298	-2.1	33.9	32.5 O
6 april	06:18	62	13:47	56S	21:15	298	-2.1	33.8	31.8 O
7 april	06:15	62	13:44	56S	21:13	298	-2.0	33.8	31.0 O
8 april	06:11	62	13:40	56S	21:10	298	-2.0	33.7	30.2 O
9 april	06:08	62	13:37	56S	21:07	298	-2.0	33.7	29.5 O
10 april	06:04	62	13:34	56S	21:05	298	-2.0	33.6	28.7 O
11 april	06:01	62	13:31	56S	21:02	298	-2.0	33.6	28.0 O
12 april	05:58	62	13:28	56S	20:59	298	-2.0	33.5	27.2 O
13 april	05:54	62	13:25	56S	20:57	298	-2.0	33.5	26.4 O

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
14 april	05:51	62	13:22	56S	20:54	299	-2.0	33.5	25.7 O
15 april	05:47	61	13:19	56S	20:51	299	-2.0	33.4	24.9 O
16 april	05:44	61	13:16	56S	20:49	299	-2.0	33.4	24.2 O
17 april	05:41	61	13:13	56S	20:46	299	-2.0	33.3	23.4 O
18 april	05:37	61	13:10	57S	20:43	299	-2.0	33.3	22.7 O
19 april	05:34	61	13:07	57S	20:41	299	-2.0	33.3	21.9 O
20 april	05:30	61	13:04	57S	20:38	299	-2.0	33.2	21.2 O
21 april	05:27	61	13:01	57S	20:35	299	-2.0	33.2	20.4 O
22 april	05:24	61	12:58	57S	20:33	299	-2.0	33.2	19.7 O
23 april	05:20	61	12:55	57S	20:30	299	-2.0	33.1	18.9 O
24 april	05:17	61	12:52	57S	20:27	300	-2.0	33.1	18.2 O
25 april	05:14	60	12:49	57S	20:25	300	-2.0	33.1	17.5 O
26 april	05:10	60	12:46	57S	20:22	300	-2.0	33.0	16.7 O
27 april	05:07	60	12:43	57S	20:19	300	-2.0	33.0	16.0 O
28 april	05:04	60	12:40	57S	20:17	300	-2.0	33.0	15.2 O
29 april	05:00	60	12:37	57S	20:14	300	-2.0	33.0	14.5 O
30 april	04:57	60	12:34	57S	20:12	300	-2.0	32.9	13.8 O
1 mei	04:54	60	12:31	57S	20:09	300	-2.0	32.9	13.0 O
2 mei	04:50	60	12:28	57S	20:06	300	-2.0	32.9	12.3 O
3 mei	04:47	60	12:25	57S	20:04	300	-2.0	32.9	11.6 O
4 mei	04:44	59	12:22	57S	20:01	301	-2.0	32.9	10.8 O
5 mei	04:40	59	12:19	58S	19:58	301	-2.0	32.8	10.1 O
6 mei	04:37	59	12:16	58S	19:56	301	-2.0	32.8	9.4 O
7 mei	04:34	59	12:13	58S	19:53	301	-2.0	32.8	8.6 O
8 mei	04:30	59	12:10	58S	19:51	301	-2.0	32.8	7.9 O
9 mei	04:27	59	12:07	58S	19:48	301	-2.0	32.8	7.2 O
10 mei	04:24	59	12:04	58S	19:45	301	-2.0	32.8	6.4 O
11 mei	04:20	59	12:01	58S	19:43	301	-2.0	32.8	5.7 O
12 mei	04:17	59	11:58	58S	19:40	301	-2.0	32.7	5.0 O
13 mei	04:14	59	11:55	58S	19:37	301	-2.0	32.7	4.3 O
14 mei	04:10	58	11:52	58S	19:35	302	-2.0	32.7	3.6 O
15 mei	04:07	58	11:50	58S	19:32	302	-2.0	32.7	2.8 O
16 mei	04:04	58	11:47	58S	19:29	302	-2.0	32.7	2.2 O
17 mei	04:01	58	11:44	58S	19:27	302	-2.0	32.7	1.5 O
18 mei	03:57	58	11:41	58S	19:24	302	-2.0	32.7	0.9 O
19 mei	03:54	58	11:38	58S	19:22	302	-2.0	32.7	0.7 O
20 mei	03:51	58	11:35	58S	19:19	302	-2.0	32.7	1.1 W
21 mei	03:47	58	11:32	58S	19:16	302	-2.0	32.7	1.8 W
22 mei	03:44	58	11:29	58S	19:14	302	-2.0	32.7	2.4 W
23 mei	03:41	58	11:26	59S	19:11	302	-2.0	32.7	3.1 W
24 mei	03:38	58	11:23	59S	19:08	302	-2.0	32.7	3.9 W
25 mei	03:34	57	11:20	59S	19:06	303	-2.0	32.7	4.6 W
26 mei	03:31	57	11:17	59S	19:03	303	-2.0	32.7	5.3 W
27 mei	03:28	57	11:14	59S	19:00	303	-2.0	32.7	6.0 W
28 mei	03:24	57	11:11	59S	18:58	303	-2.0	32.7	6.7 W
29 mei	03:21	57	11:08	59S	18:55	303	-2.0	32.7	7.4 W
30 mei	03:18	57	11:05	59S	18:52	303	-2.0	32.7	8.2 W
31 mei	03:15	57	11:02	59S	18:50	303	-2.0	32.8	8.9 W
1 juni	03:11	57	10:59	59S	18:47	303	-2.0	32.8	9.6 W
2 juni	03:08	57	10:56	59S	18:44	303	-2.0	32.8	10.3 W
3 juni	03:05	57	10:53	59S	18:42	303	-2.0	32.8	11.1 W
4 juni	03:02	57	10:50	59S	18:39	303	-2.0	32.8	11.8 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
5 juni	02:58	57	10:47	59S	18:36	304	-2.0	32.8	12.5 W
6 juni	02:55	56	10:44	59S	18:34	304	-2.0	32.8	13.2 W
7 juni	02:52	56	10:41	59S	18:31	304	-2.0	32.9	14.0 W
8 juni	02:49	56	10:38	59S	18:28	304	-2.0	32.9	14.7 W
9 juni	02:45	56	10:35	59S	18:26	304	-2.0	32.9	15.4 W
10 juni	02:42	56	10:32	59S	18:23	304	-2.0	32.9	16.1 W
11 juni	02:39	56	10:29	59S	18:20	304	-2.0	32.9	16.9 W
12 juni	02:36	56	10:26	59S	18:18	304	-2.0	33.0	17.6 W
13 juni	02:32	56	10:23	60S	18:15	304	-2.0	33.0	18.3 W
14 juni	02:29	56	10:21	60S	18:12	304	-2.0	33.0	19.0 W
15 juni	02:26	56	10:18	60S	18:09	304	-2.0	33.0	19.8 W
16 juni	02:23	56	10:15	60S	18:07	304	-2.0	33.1	20.5 W
17 juni	02:19	56	10:12	60S	18:04	304	-2.0	33.1	21.2 W
18 juni	02:16	55	10:09	60S	18:01	305	-2.0	33.1	21.9 W
19 juni	02:13	55	10:06	60S	17:59	305	-2.0	33.2	22.7 W
20 juni	02:10	55	10:03	60S	17:56	305	-2.0	33.2	23.4 W
21 juni	02:06	55	10:00	60S	17:53	305	-2.0	33.2	24.1 W
22 juni	02:03	55	09:57	60S	17:50	305	-2.0	33.3	24.9 W
23 juni	02:00	55	09:54	60S	17:48	305	-2.0	33.3	25.6 W
24 juni	01:57	55	09:51	60S	17:45	305	-2.0	33.3	26.3 W
25 juni	01:53	55	09:48	60S	17:42	305	-2.0	33.4	27.0 W
26 juni	01:50	55	09:45	60S	17:39	305	-2.0	33.4	27.8 W
27 juni	01:47	55	09:42	60S	17:37	305	-2.0	33.4	28.5 W
28 juni	01:44	55	09:39	60S	17:34	305	-2.0	33.5	29.2 W
29 juni	01:40	55	09:36	60S	17:31	305	-2.0	33.5	30.0 W
30 juni	01:37	55	09:33	60S	17:28	305	-2.0	33.6	30.7 W
1 juli	01:34	55	09:30	60S	17:25	305	-2.0	33.6	31.5 W
2 juli	01:31	55	09:27	60S	17:23	305	-2.0	33.7	32.2 W
3 juli	01:27	54	09:23	60S	17:20	306	-2.0	33.7	32.9 W
4 juli	01:24	54	09:20	60S	17:17	306	-2.0	33.7	33.7 W
5 juli	01:21	54	09:17	60S	17:14	306	-2.0	33.8	34.4 W
6 juli	01:18	54	09:14	60S	17:11	306	-2.0	33.8	35.1 W
7 juli	01:14	54	09:11	60S	17:08	306	-2.0	33.9	35.9 W
8 juli	01:11	54	09:08	60S	17:06	306	-2.0	33.9	36.6 W
9 juli	01:08	54	09:05	60S	17:03	306	-2.0	34.0	37.4 W
10 juli	01:05	54	09:02	61S	17:00	306	-2.0	34.0	38.1 W
11 juli	01:01	54	08:59	61S	16:57	306	-2.0	34.1	38.9 W
12 juli	00:58	54	08:56	61S	16:54	306	-2.1	34.2	39.6 W
13 juli	00:55	54	08:53	61S	16:51	306	-2.1	34.2	40.4 W
14 juli	00:52	54	08:50	61S	16:48	306	-2.1	34.3	41.1 W
15 juli	00:48	54	08:47	61S	16:46	306	-2.1	34.3	41.9 W
16 juli	00:45	54	08:44	61S	16:43	306	-2.1	34.4	42.6 W
17 juli	00:42	54	08:41	61S	16:40	306	-2.1	34.5	43.4 W
18 juli	00:39	54	08:38	61S	16:37	306	-2.1	34.5	44.1 W
19 juli	00:35	54	08:35	61S	16:34	306	-2.1	34.6	44.9 W
20 juli	00:32	54	08:31	61S	16:31	306	-2.1	34.6	45.6 W
21 juli	00:29	54	08:28	61S	16:28	306	-2.1	34.7	46.4 W
22 juli	00:26	53	08:25	61S	16:25	307	-2.1	34.8	47.2 W
23 juli	00:22	53	08:22	61S	16:22	307	-2.1	34.8	47.9 W
24 juli	00:19	53	08:19	61S	16:19	307	-2.1	34.9	48.7 W
25 juli	00:16	53	08:16	61S	16:16	307	-2.1	35.0	49.4 W
26 juli	00:12	53	08:13	61S	16:13	307	-2.1	35.1	50.2 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
27 juli	00:09	53	08:10	61S	16:10	307	-2.1	35.1	51.0 W
28 juli	00:06	53	08:06	61S	16:07	307	-2.1	35.2	51.8 W
29 juli	00:03	53	08:03	61S	16:04	307	-2.1	35.3	52.5 W
30 juli	23:56	53	08:00	61S	16:01	307	-2.1	35.4	53.3 W
31 juli	23:53	53	07:57	61S	15:58	307	-2.1	35.4	54.1 W
1 augustus	23:49	53	07:54	61S	15:55	307	-2.1	35.5	54.8 W
2 augustus	23:46	53	07:51	61S	15:52	307	-2.1	35.6	55.6 W
3 augustus	23:43	53	07:47	61S	15:49	307	-2.1	35.7	56.4 W
4 augustus	23:39	53	07:44	61S	15:46	307	-2.1	35.8	57.2 W
5 augustus	23:36	53	07:41	61S	15:43	307	-2.1	35.8	58.0 W
6 augustus	23:33	53	07:38	61S	15:40	307	-2.1	35.9	58.8 W
7 augustus	23:29	53	07:35	61S	15:37	307	-2.1	36.0	59.6 W
8 augustus	23:26	53	07:31	61S	15:34	307	-2.1	36.1	60.3 W
9 augustus	23:23	53	07:28	61S	15:30	307	-2.1	36.2	61.1 W
10 augustus	23:19	53	07:25	61S	15:27	307	-2.1	36.3	61.9 W
11 augustus	23:16	53	07:22	61S	15:24	307	-2.2	36.4	62.7 W
12 augustus	23:13	53	07:18	61S	15:21	307	-2.2	36.5	63.5 W
13 augustus	23:09	53	07:15	61S	15:18	307	-2.2	36.5	64.3 W
14 augustus	23:06	53	07:12	61S	15:15	307	-2.2	36.6	65.1 W
15 augustus	23:03	53	07:09	61S	15:11	307	-2.2	36.7	65.9 W
16 augustus	22:59	53	07:05	61S	15:08	307	-2.2	36.8	66.8 W
17 augustus	22:56	53	07:02	61S	15:05	307	-2.2	36.9	67.6 W
18 augustus	22:52	53	06:59	61S	15:02	307	-2.2	37.0	68.4 W
19 augustus	22:49	52	06:55	61S	14:59	308	-2.2	37.1	69.2 W
20 augustus	22:46	52	06:52	61S	14:55	308	-2.2	37.2	70.0 W
21 augustus	22:42	52	06:49	61S	14:52	308	-2.2	37.3	70.8 W
22 augustus	22:39	52	06:45	61S	14:49	308	-2.2	37.4	71.7 W
23 augustus	22:35	52	06:42	61S	14:46	308	-2.2	37.5	72.5 W
24 augustus	22:32	52	06:39	61S	14:42	308	-2.2	37.6	73.3 W
25 augustus	22:28	52	06:35	61S	14:39	308	-2.2	37.7	74.1 W
26 augustus	22:25	52	06:32	61S	14:36	308	-2.2	37.8	75.0 W
27 augustus	22:21	52	06:29	61S	14:32	308	-2.2	38.0	75.8 W
28 augustus	22:18	52	06:25	61S	14:29	308	-2.2	38.1	76.6 W
29 augustus	22:14	52	06:22	61S	14:26	308	-2.2	38.2	77.5 W
30 augustus	22:11	52	06:18	61S	14:22	308	-2.2	38.3	78.3 W
31 augustus	22:08	52	06:15	61S	14:19	308	-2.3	38.4	79.2 W
1 september	22:04	52	06:12	61S	14:16	308	-2.3	38.5	80.0 W
2 september	22:01	52	06:08	62S	14:12	308	-2.3	38.6	80.9 W
3 september	21:57	52	06:05	62S	14:09	308	-2.3	38.7	81.7 W
4 september	21:53	52	06:01	62S	14:05	308	-2.3	38.8	82.6 W
5 september	21:50	52	05:58	62S	14:02	308	-2.3	39.0	83.5 W
6 september	21:46	52	05:54	62S	13:59	308	-2.3	39.1	84.3 W
7 september	21:43	52	05:51	62S	13:55	308	-2.3	39.2	85.2 W
8 september	21:39	52	05:47	62S	13:52	308	-2.3	39.3	86.1 W
9 september	21:36	52	05:44	62S	13:48	308	-2.3	39.4	87.0 W
10 september	21:32	52	05:40	62S	13:45	308	-2.3	39.6	87.8 W
11 september	21:29	52	05:37	62S	13:41	308	-2.3	39.7	88.7 W
12 september	21:25	52	05:33	62S	13:38	308	-2.3	39.8	89.6 W
13 september	21:21	52	05:29	62S	13:34	308	-2.3	39.9	90.5 W
14 september	21:18	52	05:26	62S	13:31	308	-2.3	40.0	91.4 W
15 september	21:14	52	05:22	62S	13:27	308	-2.3	40.2	92.3 W
16 september	21:10	52	05:19	62S	13:23	308	-2.4	40.3	93.2 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
17 september	21:07	52	05:15	62S	13:20	308	-2.4	40.4	94.1 W
18 september	21:03	52	05:11	62S	13:16	308	-2.4	40.5	95.0 W
19 september	20:59	52	05:08	62S	13:13	308	-2.4	40.7	95.9 W
20 september	20:56	52	05:04	62S	13:09	308	-2.4	40.8	96.8 W
21 september	20:52	52	05:00	62S	13:05	308	-2.4	40.9	97.7 W
22 september	20:48	52	04:57	62S	13:02	308	-2.4	41.1	98.6 W
23 september	20:45	52	04:53	62S	12:58	308	-2.4	41.2	99.6 W
24 september	20:41	52	04:49	62S	12:54	308	-2.4	41.3	100.5 W
25 september	20:37	52	04:46	62S	12:51	308	-2.4	41.4	101.4 W
26 september	20:33	52	04:42	62S	12:47	308	-2.4	41.6	102.4 W
27 september	20:29	52	04:38	62S	12:43	308	-2.4	41.7	103.3 W
28 september	20:26	52	04:34	62S	12:39	308	-2.4	41.8	104.2 W
29 september	20:22	52	04:31	62S	12:36	308	-2.4	42.0	105.2 W
30 september	20:18	52	04:27	62S	12:32	308	-2.5	42.1	106.1 W
1 oktober	20:14	52	04:23	62S	12:28	308	-2.5	42.2	107.1 W
2 oktober	20:10	52	04:19	62S	12:24	308	-2.5	42.4	108.0 W
3 oktober	20:07	52	04:15	62S	12:20	308	-2.5	42.5	109.0 W
4 oktober	20:03	52	04:11	62S	12:16	308	-2.5	42.6	110.0 W
5 oktober	19:59	52	04:08	62S	12:13	308	-2.5	42.8	110.9 W
6 oktober	19:55	52	04:04	62S	12:09	308	-2.5	42.9	111.9 W
7 oktober	19:51	52	04:00	62S	12:05	308	-2.5	43.0	112.9 W
8 oktober	19:47	52	03:56	62S	12:01	308	-2.5	43.2	113.9 W
9 oktober	19:43	52	03:52	62S	11:57	308	-2.5	43.3	114.9 W
10 oktober	19:39	52	03:48	62S	11:53	308	-2.5	43.4	115.8 W
11 oktober	19:35	52	03:44	62S	11:49	308	-2.5	43.6	116.8 W
12 oktober	19:31	52	03:40	62S	11:45	308	-2.5	43.7	117.8 W
13 oktober	19:27	52	03:36	62S	11:41	308	-2.6	43.8	118.8 W
14 oktober	19:23	52	03:32	62S	11:37	308	-2.6	43.9	119.8 W
15 oktober	19:19	52	03:28	62S	11:33	308	-2.6	44.1	120.8 W
16 oktober	19:15	52	03:24	62S	11:29	308	-2.6	44.2	121.9 W
17 oktober	19:11	52	03:20	62S	11:25	308	-2.6	44.3	122.9 W
18 oktober	19:07	52	03:16	62S	11:21	308	-2.6	44.5	123.9 W
19 oktober	19:03	52	03:12	62S	11:17	308	-2.6	44.6	124.9 W
20 oktober	18:59	52	03:08	62S	11:13	308	-2.6	44.7	125.9 W
21 oktober	18:55	52	03:04	62S	11:09	308	-2.6	44.8	127.0 W
22 oktober	18:51	52	03:00	62S	11:04	308	-2.6	44.9	128.0 W
23 oktober	18:47	52	02:56	62S	11:00	308	-2.6	45.1	129.0 W
24 oktober	18:43	52	02:51	62S	10:56	308	-2.6	45.2	130.1 W
25 oktober	18:39	52	02:47	62S	10:52	308	-2.6	45.3	131.1 W
26 oktober	18:34	52	02:43	62S	10:48	308	-2.6	45.4	132.2 W
27 oktober	18:30	52	02:39	62S	10:44	308	-2.7	45.5	133.2 W
28 oktober	18:26	52	02:35	62S	10:39	308	-2.7	45.7	134.3 W
29 oktober	18:22	52	02:31	62S	10:35	308	-2.7	45.8	135.4 W
30 oktober	18:18	52	02:26	62S	10:31	308	-2.7	45.9	136.4 W
31 oktober	18:13	52	02:22	62S	10:27	308	-2.7	46.0	137.5 W
1 november	18:09	52	02:18	62S	10:22	308	-2.7	46.1	138.6 W
2 november	18:05	52	02:14	62S	10:18	308	-2.7	46.2	139.6 W
3 november	18:01	52	02:09	62S	10:14	308	-2.7	46.3	140.7 W
4 november	17:57	52	02:05	62S	10:09	308	-2.7	46.4	141.8 W
5 november	17:52	52	02:01	62S	10:05	308	-2.7	46.5	142.9 W
6 november	17:48	52	01:56	62S	10:01	308	-2.7	46.6	144.0 W
7 november	17:44	52	01:52	62S	09:56	308	-2.7	46.7	145.1 W
8 november	17:39	52	01:48	62S	09:52	308	-2.7	46.8	146.2 W

2024	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
9 november	17:35	52	01:43	62S	09:48	308	-2.7	46.9	147.3 W
10 november	17:31	52	01:39	62S	09:43	308	-2.7	47.0	148.4 W
11 november	17:26	52	01:35	62S	09:39	308	-2.7	47.1	149.5 W
12 november	17:22	52	01:30	62S	09:34	308	-2.7	47.2	150.6 W
13 november	17:18	52	01:26	62S	09:30	308	-2.8	47.2	151.7 W
14 november	17:13	52	01:22	62S	09:25	308	-2.8	47.3	152.8 W
15 november	17:09	52	01:17	62S	09:21	308	-2.8	47.4	153.9 W
16 november	17:05	52	01:13	61S	09:16	308	-2.8	47.5	155.0 W
17 november	17:00	52	01:08	61S	09:12	308	-2.8	47.5	156.2 W
18 november	16:56	52	01:04	61S	09:08	308	-2.8	47.6	157.3 W
19 november	16:52	52	01:00	61S	09:03	308	-2.8	47.7	158.4 W
20 november	16:47	52	00:55	61S	08:59	308	-2.8	47.7	159.5 W
21 november	16:43	52	00:51	61S	08:54	308	-2.8	47.8	160.7 W
22 november	16:38	52	00:46	61S	08:50	308	-2.8	47.8	161.8 W
23 november	16:34	52	00:42	61S	08:45	308	-2.8	47.9	162.9 W
24 november	16:30	52	00:37	61S	08:40	308	-2.8	47.9	164.1 W
25 november	16:25	52	00:33	61S	08:36	308	-2.8	48.0	165.2 W
26 november	16:21	52	00:28	61S	08:31	308	-2.8	48.0	166.3 W
27 november	16:16	52	00:24	61S	08:27	308	-2.8	48.0	167.5 W
28 november	16:12	52	00:19	61S	08:22	308	-2.8	48.1	168.6 W
29 november	16:07	52	00:15	61S	08:18	308	-2.8	48.1	169.8 W
30 november	16:03	53	00:10	61S	08:13	307	-2.8	48.1	170.9 W
1 december	15:59	53	00:06	61S	08:08	307	-2.8	48.2	172.1 W
2 december	15:54	53	00:01	61S	08:04	307	-2.8	48.2	173.2 W
3 december	15:50	53	23:52	61S	07:59	307	-2.8	48.2	174.3 W
4 december	15:45	53	23:48	61S	07:55	307	-2.8	48.2	175.5 W
5 december	15:41	53	23:43	61S	07:50	307	-2.8	48.2	176.6 W
6 december	15:36	53	23:39	61S	07:46	307	-2.8	48.2	177.7 W
7 december	15:32	53	23:34	61S	07:41	307	-2.8	48.2	178.8 W
8 december	15:28	53	23:30	61S	07:36	307	-2.8	48.2	179.3 O
9 december	15:23	53	23:25	61S	07:32	307	-2.8	48.2	178.5 O
10 december	15:19	53	23:21	61S	07:27	307	-2.8	48.2	177.5 O
11 december	15:14	53	23:16	61S	07:23	307	-2.8	48.2	176.3 O
12 december	15:10	53	23:12	61S	07:18	307	-2.8	48.2	175.2 O
13 december	15:05	53	23:07	61S	07:13	307	-2.8	48.1	174.1 O
14 december	15:01	53	23:03	61S	07:09	307	-2.8	48.1	172.9 O
15 december	14:57	53	22:58	61S	07:04	307	-2.8	48.1	171.8 O
16 december	14:52	53	22:54	61S	07:00	307	-2.8	48.0	170.6 O
17 december	14:48	53	22:49	61S	06:55	307	-2.8	48.0	169.5 O
18 december	14:43	53	22:45	61S	06:51	307	-2.8	48.0	168.3 O
19 december	14:39	53	22:40	61S	06:46	307	-2.8	47.9	167.2 O
20 december	14:34	53	22:36	61S	06:41	307	-2.8	47.9	166.0 O
21 december	14:30	53	22:31	61S	06:37	307	-2.8	47.8	164.9 O
22 december	14:26	53	22:27	61S	06:32	307	-2.8	47.8	163.7 O
23 december	14:21	53	22:22	61S	06:28	307	-2.8	47.7	162.6 O
24 december	14:17	53	22:18	61S	06:23	307	-2.8	47.6	161.5 O
25 december	14:13	53	22:13	61S	06:19	307	-2.8	47.6	160.3 O
26 december	14:08	53	22:09	61S	06:14	307	-2.8	47.5	159.2 O
27 december	14:04	53	22:05	61S	06:10	307	-2.8	47.4	158.1 O
28 december	13:59	53	22:00	61S	06:05	307	-2.8	47.4	156.9 O
29 december	13:55	53	21:56	61S	06:01	307	-2.8	47.3	155.8 O
30 december	13:51	53	21:51	61S	05:56	307	-2.7	47.2	154.7 O
31 december	13:46	53	21:47	61S	05:52	307	-2.7	47.1	153.5 O

Saturnus

2024	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (h:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
1 januari	10:19	108	15:23	27S	20:26	252	1.0	16.1	36.3	7.1	53.2 O
2 januari	10:15	108	15:19	27S	20:23	252	1.0	16.1	36.3	7.1	52.3 O
3 januari	10:12	108	15:16	27S	20:20	252	1.0	16.1	36.2	7.0	51.4 O
4 januari	10:08	108	15:12	28S	20:16	252	1.0	16.1	36.2	7.0	50.4 O
5 januari	10:04	108	15:08	28S	20:13	252	1.0	16.1	36.1	6.9	49.5 O
6 januari	10:00	108	15:05	28S	20:09	252	1.0	16.0	36.1	6.9	48.6 O
7 januari	09:57	108	15:01	28S	20:06	252	1.0	16.0	36.1	6.9	47.7 O
8 januari	09:53	108	14:58	28S	20:03	252	1.0	16.0	36.0	6.8	46.7 O
9 januari	09:49	108	14:54	28S	19:59	252	1.0	16.0	36.0	6.8	45.8 O
10 januari	09:45	108	14:51	28S	19:56	252	1.0	16.0	35.9	6.7	44.9 O
11 januari	09:42	108	14:47	28S	19:53	252	1.0	16.0	35.9	6.7	44.0 O
12 januari	09:38	108	14:43	28S	19:49	252	1.0	15.9	35.9	6.6	43.1 O
13 januari	09:34	107	14:40	28S	19:46	253	1.0	15.9	35.8	6.6	42.1 O
14 januari	09:30	107	14:36	28S	19:42	253	1.0	15.9	35.8	6.6	41.2 O
15 januari	09:27	107	14:33	28S	19:39	253	1.0	15.9	35.7	6.5	40.3 O
16 januari	09:23	107	14:29	28S	19:36	253	1.0	15.9	35.7	6.5	39.4 O
17 januari	09:19	107	14:26	28S	19:32	253	1.0	15.9	35.7	6.4	38.5 O
18 januari	09:15	107	14:22	28S	19:29	253	1.0	15.8	35.6	6.4	37.6 O
19 januari	09:12	107	14:19	28S	19:26	253	1.0	15.8	35.6	6.4	36.7 O
20 januari	09:08	107	14:15	28S	19:22	253	1.0	15.8	35.6	6.3	35.7 O
21 januari	09:04	107	14:12	28S	19:19	253	1.0	15.8	35.5	6.3	34.8 O
22 januari	09:00	107	14:08	28S	19:16	253	1.0	15.8	35.5	6.2	33.9 O
23 januari	08:57	107	14:05	28S	19:12	253	1.0	15.8	35.5	6.2	33.0 O
24 januari	08:53	107	14:01	28S	19:09	253	1.0	15.8	35.4	6.1	32.1 O
25 januari	08:49	107	13:58	28S	19:06	253	1.0	15.7	35.4	6.1	31.2 O
26 januari	08:46	107	13:54	28S	19:03	253	1.0	15.7	35.4	6.1	30.3 O
27 januari	08:42	107	13:50	28S	18:59	253	1.0	15.7	35.4	6.0	29.4 O
28 januari	08:38	107	13:47	28S	18:56	254	1.0	15.7	35.3	6.0	28.5 O
29 januari	08:34	106	13:43	28S	18:53	254	1.0	15.7	35.3	5.9	27.6 O
30 januari	08:31	106	13:40	29S	18:49	254	1.0	15.7	35.3	5.9	26.7 O
31 januari	08:27	106	13:36	29S	18:46	254	1.0	15.7	35.3	5.8	25.8 O
1 februari	08:23	106	13:33	29S	18:43	254	1.0	15.7	35.2	5.8	24.9 O
2 februari	08:19	106	13:29	29S	18:40	254	1.0	15.6	35.2	5.7	24.0 O
3 februari	08:16	106	13:26	29S	18:36	254	1.0	15.6	35.2	5.7	23.1 O
4 februari	08:12	106	13:22	29S	18:33	254	1.0	15.6	35.2	5.7	22.2 O
5 februari	08:08	106	13:19	29S	18:30	254	1.0	15.6	35.1	5.6	21.3 O
6 februari	08:05	106	13:15	29S	18:26	254	1.0	15.6	35.1	5.6	20.4 O
7 februari	08:01	106	13:12	29S	18:23	254	1.0	15.6	35.1	5.5	19.5 O
8 februari	07:57	106	13:09	29S	18:20	254	1.0	15.6	35.1	5.5	18.6 O
9 februari	07:53	106	13:05	29S	18:17	254	1.0	15.6	35.1	5.4	17.7 O
10 februari	07:50	106	13:02	29S	18:13	254	1.0	15.6	35.1	5.4	16.8 O
11 februari	07:46	106	12:58	29S	18:10	254	1.0	15.6	35.0	5.4	16.0 O
12 februari	07:42	105	12:55	29S	18:07	255	1.0	15.6	35.0	5.3	15.1 O
13 februari	07:39	105	12:51	29S	18:04	255	1.0	15.6	35.0	5.3	14.2 O
14 februari	07:35	105	12:48	29S	18:00	255	1.0	15.6	35.0	5.2	13.3 O
15 februari	07:31	105	12:44	29S	17:57	255	1.0	15.6	35.0	5.2	12.4 O
16 februari	07:27	105	12:41	29S	17:54	255	1.0	15.5	35.0	5.1	11.5 O
17 februari	07:24	105	12:37	29S	17:51	255	1.0	15.5	35.0	5.1	10.6 O
18 februari	07:20	105	12:34	29S	17:47	255	1.0	15.5	35.0	5.1	9.8 O
19 februari	07:16	105	12:30	29S	17:44	255	1.0	15.5	35.0	5.0	8.9 O
20 februari	07:13	105	12:27	29S	17:41	255	1.0	15.5	34.9	5.0	8.0 O
21 februari	07:09	105	12:23	29S	17:38	255	1.0	15.5	34.9	4.9	7.2 O

	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (hr:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
2024											
22 februari	07:05	105	12:20	30S	17:34	255	1.0	15.5	34.9	4.9	6.3 O
23 februari	07:02	105	12:16	30S	17:31	255	1.0	15.5	34.9	4.8	5.4 O
24 februari	06:58	105	12:13	30S	17:28	255	1.0	15.5	34.9	4.8	4.6 O
25 februari	06:54	105	12:09	30S	17:25	256	1.0	15.5	34.9	4.8	3.8 O
26 februari	06:50	104	12:06	30S	17:21	256	1.0	15.5	34.9	4.7	3.0 O
27 februari	06:47	104	12:02	30S	17:18	256	1.0	15.5	34.9	4.7	2.3 O
28 februari	06:43	104	11:59	30S	17:15	256	1.0	15.5	34.9	4.6	1.8 O
29 februari	06:39	104	11:55	30S	17:12	256	1.0	15.5	34.9	4.6	1.6 O
1 maart	06:36	104	11:52	30S	17:08	256	1.0	15.5	34.9	4.6	1.9 W
2 maart	06:32	104	11:49	30S	17:05	256	1.0	15.5	34.9	4.5	2.5 W
3 maart	06:28	104	11:45	30S	17:02	256	1.0	15.5	34.9	4.5	3.2 W
4 maart	06:24	104	11:42	30S	16:59	256	1.0	15.5	34.9	4.4	4.0 W
5 maart	06:21	104	11:38	30S	16:56	256	1.0	15.5	34.9	4.4	4.8 W
6 maart	06:17	104	11:35	30S	16:52	256	1.0	15.5	34.9	4.4	5.6 W
7 maart	06:13	104	11:31	30S	16:49	256	1.0	15.5	34.9	4.3	6.5 W
8 maart	06:10	104	11:28	30S	16:46	256	1.0	15.5	34.9	4.3	7.3 W
9 maart	06:06	104	11:24	30S	16:43	256	1.0	15.5	34.9	4.2	8.2 W
10 maart	06:02	104	11:21	30S	16:39	257	1.0	15.5	35.0	4.2	9.0 W
11 maart	05:59	103	11:17	30S	16:36	257	1.0	15.5	35.0	4.1	9.9 W
12 maart	05:55	103	11:14	30S	16:33	257	1.0	15.5	35.0	4.1	10.8 W
13 maart	05:51	103	11:10	30S	16:30	257	1.0	15.5	35.0	4.1	11.6 W
14 maart	05:47	103	11:07	30S	16:26	257	1.0	15.6	35.0	4.0	12.5 W
15 maart	05:44	103	11:03	31S	16:23	257	1.0	15.6	35.0	4.0	13.4 W
16 maart	05:40	103	11:00	31S	16:20	257	1.0	15.6	35.0	4.0	14.3 W
17 maart	05:36	103	10:56	31S	16:16	257	1.0	15.6	35.0	3.9	15.1 W
18 maart	05:33	103	10:53	31S	16:13	257	1.0	15.6	35.0	3.9	16.0 W
19 maart	05:29	103	10:49	31S	16:10	257	1.0	15.6	35.1	3.8	16.9 W
20 maart	05:25	103	10:46	31S	16:07	257	1.0	15.6	35.1	3.8	17.7 W
21 maart	05:21	103	10:42	31S	16:03	257	1.0	15.6	35.1	3.8	18.6 W
22 maart	05:18	103	10:39	31S	16:00	257	1.0	15.6	35.1	3.7	19.5 W
23 maart	05:14	103	10:35	31S	15:57	257	1.0	15.6	35.1	3.7	20.3 W
24 maart	05:10	103	10:32	31S	15:54	258	1.0	15.6	35.2	3.6	21.2 W
25 maart	05:07	102	10:28	31S	15:50	258	1.0	15.6	35.2	3.6	22.1 W
26 maart	05:03	102	10:25	31S	15:47	258	1.0	15.6	35.2	3.6	23.0 W
27 maart	04:59	102	10:21	31S	15:44	258	1.0	15.7	35.2	3.5	23.8 W
28 maart	04:55	102	10:18	31S	15:40	258	1.0	15.7	35.2	3.5	24.7 W
29 maart	04:52	102	10:14	31S	15:37	258	1.1	15.7	35.3	3.5	25.6 W
30 maart	04:48	102	10:11	31S	15:34	258	1.1	15.7	35.3	3.4	26.5 W
31 maart	04:44	102	10:07	31S	15:31	258	1.1	15.7	35.3	3.4	27.3 W
1 april	04:41	102	10:04	31S	15:27	258	1.1	15.7	35.3	3.3	28.2 W
2 april	04:37	102	10:00	31S	15:24	258	1.1	15.7	35.4	3.3	29.1 W
3 april	04:33	102	09:57	31S	15:21	258	1.1	15.7	35.4	3.3	29.9 W
4 april	04:29	102	09:53	31S	15:17	258	1.1	15.7	35.4	3.2	30.8 W
5 april	04:26	102	09:50	31S	15:14	258	1.1	15.8	35.5	3.2	31.7 W
6 april	04:22	102	09:46	31S	15:11	258	1.1	15.8	35.5	3.2	32.6 W
7 april	04:18	102	09:43	32S	15:07	258	1.1	15.8	35.5	3.1	33.4 W
8 april	04:14	102	09:39	32S	15:04	259	1.1	15.8	35.5	3.1	34.3 W
9 april	04:11	101	09:36	32S	15:01	259	1.1	15.8	35.6	3.1	35.2 W
10 april	04:07	101	09:32	32S	14:57	259	1.1	15.8	35.6	3.0	36.1 W
11 april	04:03	101	09:29	32S	14:54	259	1.1	15.8	35.6	3.0	36.9 W
12 april	04:00	101	09:25	32S	14:51	259	1.1	15.9	35.7	3.0	37.8 W
13 april	03:56	101	09:22	32S	14:47	259	1.1	15.9	35.7	2.9	38.7 W

	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (hr:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
2024											
14 april	03:52	101	09:18	32S	14:44	259	1.1	15.9	35.7	2.9	39.6 W
15 april	03:48	101	09:14	32S	14:41	259	1.1	15.9	35.8	2.9	40.4 W
16 april	03:45	101	09:11	32S	14:37	259	1.1	15.9	35.8	2.8	41.3 W
17 april	03:41	101	09:07	32S	14:34	259	1.1	15.9	35.9	2.8	42.2 W
18 april	03:37	101	09:04	32S	14:30	259	1.1	16.0	35.9	2.8	43.1 W
19 april	03:33	101	09:00	32S	14:27	259	1.1	16.0	35.9	2.7	43.9 W
20 april	03:30	101	08:57	32S	14:24	259	1.1	16.0	36.0	2.7	44.8 W
21 april	03:26	101	08:53	32S	14:20	259	1.1	16.0	36.0	2.7	45.7 W
22 april	03:22	101	08:50	32S	14:17	259	1.1	16.0	36.1	2.7	46.6 W
23 april	03:18	101	08:46	32S	14:14	259	1.1	16.0	36.1	2.6	47.5 W
24 april	03:15	101	08:42	32S	14:10	259	1.1	16.1	36.1	2.6	48.3 W
25 april	03:11	101	08:39	32S	14:07	259	1.1	16.1	36.2	2.6	49.2 W
26 april	03:07	100	08:35	32S	14:03	260	1.1	16.1	36.2	2.5	50.1 W
27 april	03:03	100	08:32	32S	14:00	260	1.1	16.1	36.3	2.5	51.0 W
28 april	03:00	100	08:28	32S	13:56	260	1.1	16.1	36.3	2.5	51.8 W
29 april	02:56	100	08:24	32S	13:53	260	1.1	16.2	36.4	2.5	52.7 W
30 april	02:52	100	08:21	32S	13:50	260	1.1	16.2	36.4	2.4	53.6 W
1 mei	02:48	100	08:17	32S	13:46	260	1.1	16.2	36.5	2.4	54.5 W
2 mei	02:45	100	08:14	32S	13:43	260	1.1	16.2	36.5	2.4	55.4 W
3 mei	02:41	100	08:10	32S	13:39	260	1.1	16.3	36.6	2.3	56.3 W
4 mei	02:37	100	08:06	32S	13:36	260	1.1	16.3	36.6	2.3	57.1 W
5 mei	02:33	100	08:03	32S	13:32	260	1.1	16.3	36.7	2.3	58.0 W
6 mei	02:30	100	07:59	33S	13:29	260	1.1	16.3	36.7	2.3	58.9 W
7 mei	02:26	100	07:56	33S	13:25	260	1.1	16.3	36.8	2.2	59.8 W
8 mei	02:22	100	07:52	33S	13:22	260	1.1	16.4	36.8	2.2	60.7 W
9 mei	02:18	100	07:48	33S	13:18	260	1.1	16.4	36.9	2.2	61.6 W
10 mei	02:14	100	07:45	33S	13:15	260	1.1	16.4	36.9	2.2	62.5 W
11 mei	02:11	100	07:41	33S	13:11	260	1.1	16.4	37.0	2.1	63.4 W
12 mei	02:07	100	07:37	33S	13:08	260	1.1	16.5	37.0	2.1	64.3 W
13 mei	02:03	100	07:34	33S	13:04	260	1.1	16.5	37.1	2.1	65.1 W
14 mei	01:59	100	07:30	33S	13:01	260	1.1	16.5	37.1	2.1	66.0 W
15 mei	01:56	100	07:26	33S	12:57	260	1.1	16.5	37.2	2.1	66.9 W
16 mei	01:52	100	07:23	33S	12:54	260	1.1	16.6	37.3	2.0	67.8 W
17 mei	01:48	100	07:19	33S	12:50	261	1.1	16.6	37.3	2.0	68.7 W
18 mei	01:44	99	07:15	33S	12:46	261	1.1	16.6	37.4	2.0	69.6 W
19 mei	01:40	99	07:12	33S	12:43	261	1.1	16.6	37.4	2.0	70.5 W
20 mei	01:37	99	07:08	33S	12:39	261	1.0	16.7	37.5	2.0	71.4 W
21 mei	01:33	99	07:04	33S	12:36	261	1.0	16.7	37.6	1.9	72.3 W
22 mei	01:29	99	07:01	33S	12:32	261	1.0	16.7	37.6	1.9	73.2 W
23 mei	01:25	99	06:57	33S	12:28	261	1.0	16.7	37.7	1.9	74.1 W
24 mei	01:21	99	06:53	33S	12:25	261	1.0	16.8	37.7	1.9	75.0 W
25 mei	01:18	99	06:49	33S	12:21	261	1.0	16.8	37.8	1.9	75.9 W
26 mei	01:14	99	06:46	33S	12:18	261	1.0	16.8	37.9	1.9	76.8 W
27 mei	01:10	99	06:42	33S	12:14	261	1.0	16.9	37.9	1.8	77.7 W
28 mei	01:06	99	06:38	33S	12:10	261	1.0	16.9	38.0	1.8	78.6 W
29 mei	01:02	99	06:34	33S	12:07	261	1.0	16.9	38.0	1.8	79.5 W
30 mei	00:59	99	06:31	33S	12:03	261	1.0	16.9	38.1	1.8	80.4 W
31 mei	00:55	99	06:27	33S	11:59	261	1.0	17.0	38.2	1.8	81.3 W
1 juni	00:51	99	06:23	33S	11:56	261	1.0	17.0	38.2	1.8	82.3 W
2 juni	00:47	99	06:19	33S	11:52	261	1.0	17.0	38.3	1.8	83.2 W
3 juni	00:43	99	06:16	33S	11:48	261	1.0	17.1	38.4	1.8	84.1 W
4 juni	00:39	99	06:12	33S	11:45	261	1.0	17.1	38.4	1.7	85.0 W

	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (hr:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
2024											
5 juni	00:36	99	06:08	33S	11:41	261	1.0	17.1	38.5	1.7	85.9 W
6 juni	00:32	99	06:04	33S	11:37	261	1.0	17.1	38.6	1.7	86.8 W
7 juni	00:28	99	06:01	33S	11:33	261	1.0	17.2	38.6	1.7	87.8 W
8 juni	00:24	99	05:57	33S	11:30	261	1.0	17.2	38.7	1.7	88.7 W
9 juni	00:20	99	05:53	33S	11:26	261	1.0	17.2	38.8	1.7	89.6 W
10 juni	00:16	99	05:49	33S	11:22	261	1.0	17.3	38.8	1.7	90.5 W
11 juni	00:12	99	05:45	33S	11:18	261	1.0	17.3	38.9	1.7	91.4 W
12 juni	00:09	99	05:42	33S	11:15	261	1.0	17.3	39.0	1.7	92.4 W
13 juni	00:05	99	05:38	33S	11:11	261	1.0	17.3	39.0	1.7	93.3 W
14 juni	00:01	99	05:34	33S	11:07	261	1.0	17.4	39.1	1.7	94.2 W
15 juni	23:53	99	05:30	33S	11:03	261	1.0	17.4	39.2	1.7	95.1 W
16 juni	23:49	99	05:26	33S	10:59	261	1.0	17.4	39.2	1.7	96.1 W
17 juni	23:45	99	05:22	33S	10:56	261	1.0	17.5	39.3	1.7	97.0 W
18 juni	23:42	99	05:19	33S	10:52	261	1.0	17.5	39.4	1.7	97.9 W
19 juni	23:38	99	05:15	33S	10:48	261	1.0	17.5	39.4	1.7	98.9 W
20 juni	23:34	99	05:11	33S	10:44	261	1.0	17.6	39.5	1.7	99.8 W
21 juni	23:30	99	05:07	33S	10:40	261	1.0	17.6	39.6	1.7	100.8 W
22 juni	23:26	99	05:03	33S	10:36	261	0.9	17.6	39.7	1.7	101.7 W
23 juni	23:22	99	04:59	33S	10:32	261	0.9	17.7	39.7	1.7	102.6 W
24 juni	23:18	99	04:55	33S	10:28	261	0.9	17.7	39.8	1.7	103.6 W
25 juni	23:14	99	04:51	33S	10:25	261	0.9	17.7	39.9	1.7	104.5 W
26 juni	23:10	99	04:48	33S	10:21	261	0.9	17.7	39.9	1.7	105.5 W
27 juni	23:07	99	04:44	33S	10:17	261	0.9	17.8	40.0	1.7	106.4 W
28 juni	23:03	99	04:40	33S	10:13	261	0.9	17.8	40.1	1.7	107.4 W
29 juni	22:59	99	04:36	33S	10:09	261	0.9	17.8	40.1	1.7	108.3 W
30 juni	22:55	99	04:32	33S	10:05	261	0.9	17.9	40.2	1.7	109.3 W
1 juli	22:51	99	04:28	33S	10:01	261	0.9	17.9	40.3	1.7	110.2 W
2 juli	22:47	99	04:24	33S	09:57	261	0.9	17.9	40.3	1.7	111.2 W
3 juli	22:43	99	04:20	33S	09:53	261	0.9	18.0	40.4	1.7	112.1 W
4 juli	22:39	99	04:16	33S	09:49	261	0.9	18.0	40.5	1.7	113.1 W
5 juli	22:35	99	04:12	33S	09:45	261	0.9	18.0	40.5	1.7	114.1 W
6 juli	22:31	99	04:08	33S	09:41	261	0.9	18.0	40.6	1.7	115.0 W
7 juli	22:27	99	04:04	33S	09:37	261	0.9	18.1	40.7	1.7	116.0 W
8 juli	22:23	99	04:00	33S	09:33	261	0.9	18.1	40.7	1.8	116.9 W
9 juli	22:20	99	03:56	33S	09:29	261	0.9	18.1	40.8	1.8	117.9 W
10 juli	22:16	99	03:52	33S	09:25	261	0.9	18.2	40.9	1.8	118.9 W
11 juli	22:12	99	03:48	33S	09:21	261	0.9	18.2	40.9	1.8	119.9 W
12 juli	22:08	99	03:44	33S	09:17	261	0.9	18.2	41.0	1.8	120.8 W
13 juli	22:04	99	03:40	33S	09:13	261	0.9	18.2	41.1	1.8	121.8 W
14 juli	22:00	99	03:36	33S	09:09	261	0.8	18.3	41.1	1.8	122.8 W
15 juli	21:56	99	03:32	33S	09:05	261	0.8	18.3	41.2	1.9	123.8 W
16 juli	21:52	99	03:28	33S	09:01	261	0.8	18.3	41.2	1.9	124.7 W
17 juli	21:48	99	03:24	33S	08:56	261	0.8	18.4	41.3	1.9	125.7 W
18 juli	21:44	99	03:20	33S	08:52	261	0.8	18.4	41.4	1.9	126.7 W
19 juli	21:40	99	03:16	33S	08:48	261	0.8	18.4	41.4	1.9	127.7 W
20 juli	21:36	99	03:12	33S	08:44	261	0.8	18.4	41.5	1.9	128.7 W
21 juli	21:32	99	03:08	33S	08:40	261	0.8	18.5	41.6	2.0	129.6 W
22 juli	21:28	99	03:04	33S	08:36	261	0.8	18.5	41.6	2.0	130.6 W
23 juli	21:24	99	03:00	33S	08:32	261	0.8	18.5	41.7	2.0	131.6 W
24 juli	21:20	99	02:56	33S	08:28	261	0.8	18.5	41.7	2.0	132.6 W
25 juli	21:16	99	02:52	33S	08:23	261	0.8	18.6	41.8	2.1	133.6 W
26 juli	21:12	99	02:48	33S	08:19	261	0.8	18.6	41.8	2.1	134.6 W

	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (hr:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
2024											
27 juli	21:08	99	02:44	33S	08:15	261	0.8	18.6	41.9	2.1	135.6 W
28 juli	21:04	99	02:40	33S	08:11	261	0.8	18.6	41.9	2.1	136.6 W
29 juli	21:00	99	02:35	33S	08:07	261	0.8	18.7	42.0	2.2	137.6 W
30 juli	20:56	99	02:31	33S	08:02	261	0.8	18.7	42.1	2.2	138.6 W
31 juli	20:52	100	02:27	33S	07:58	261	0.8	18.7	42.1	2.2	139.6 W
1 augustus	20:48	100	02:23	33S	07:54	260	0.8	18.7	42.2	2.2	140.6 W
2 augustus	20:44	100	02:19	33S	07:50	260	0.7	18.8	42.2	2.3	141.6 W
3 augustus	20:40	100	02:15	33S	07:46	260	0.7	18.8	42.3	2.3	142.6 W
4 augustus	20:36	100	02:11	33S	07:41	260	0.7	18.8	42.3	2.3	143.6 W
5 augustus	20:32	100	02:07	33S	07:37	260	0.7	18.8	42.3	2.3	144.6 W
6 augustus	20:28	100	02:03	33S	07:33	260	0.7	18.8	42.4	2.4	145.6 W
7 augustus	20:24	100	01:58	33S	07:29	260	0.7	18.9	42.4	2.4	146.7 W
8 augustus	20:20	100	01:54	33S	07:24	260	0.7	18.9	42.5	2.4	147.7 W
9 augustus	20:16	100	01:50	33S	07:20	260	0.7	18.9	42.5	2.5	148.7 W
10 augustus	20:12	100	01:46	33S	07:16	260	0.7	18.9	42.6	2.5	149.7 W
11 augustus	20:08	100	01:42	33S	07:11	260	0.7	18.9	42.6	2.5	150.7 W
12 augustus	20:04	100	01:38	33S	07:07	260	0.7	19.0	42.6	2.5	151.7 W
13 augustus	20:00	100	01:34	32S	07:03	260	0.7	19.0	42.7	2.6	152.8 W
14 augustus	19:56	100	01:29	32S	06:59	260	0.7	19.0	42.7	2.6	153.8 W
15 augustus	19:52	100	01:25	32S	06:54	260	0.7	19.0	42.8	2.6	154.8 W
16 augustus	19:48	100	01:21	32S	06:50	260	0.7	19.0	42.8	2.7	155.8 W
17 augustus	19:44	100	01:17	32S	06:46	260	0.7	19.0	42.8	2.7	156.8 W
18 augustus	19:40	100	01:13	32S	06:41	260	0.7	19.0	42.9	2.7	157.9 W
19 augustus	19:36	100	01:09	32S	06:37	260	0.7	19.1	42.9	2.8	158.9 W
20 augustus	19:32	100	01:04	32S	06:33	260	0.7	19.1	42.9	2.8	159.9 W
21 augustus	19:28	100	01:00	32S	06:28	260	0.7	19.1	42.9	2.8	160.9 W
22 augustus	19:24	100	00:56	32S	06:24	260	0.7	19.1	43.0	2.9	162.0 W
23 augustus	19:20	100	00:52	32S	06:20	260	0.6	19.1	43.0	2.9	163.0 W
24 augustus	19:16	101	00:48	32S	06:15	259	0.6	19.1	43.0	2.9	164.0 W
25 augustus	19:12	101	00:43	32S	06:11	259	0.6	19.1	43.0	3.0	165.0 W
26 augustus	19:08	101	00:39	32S	06:07	259	0.6	19.1	43.1	3.0	166.1 W
27 augustus	19:04	101	00:35	32S	06:02	259	0.6	19.1	43.1	3.1	167.1 W
28 augustus	19:00	101	00:31	32S	05:58	259	0.6	19.2	43.1	3.1	168.1 W
29 augustus	18:56	101	00:27	32S	05:54	259	0.6	19.2	43.1	3.1	169.1 W
30 augustus	18:51	101	00:22	32S	05:49	259	0.6	19.2	43.1	3.2	170.2 W
31 augustus	18:47	101	00:18	32S	05:45	259	0.6	19.2	43.1	3.2	171.2 W
1 september	18:43	101	00:14	32S	05:40	259	0.6	19.2	43.1	3.2	172.2 W
2 september	18:39	101	00:10	32S	05:36	259	0.6	19.2	43.2	3.3	173.2 W
3 september	18:35	101	00:06	32S	05:32	259	0.6	19.2	43.2	3.3	174.1 W
4 september	18:31	101	00:01	32S	05:27	259	0.6	19.2	43.2	3.3	175.1 W
5 september	18:27	101	23:53	32S	05:23	259	0.6	19.2	43.2	3.4	176.0 W
6 september	18:23	101	23:49	32S	05:19	259	0.6	19.2	43.2	3.4	176.8 W
7 september	18:19	101	23:44	32S	05:14	259	0.6	19.2	43.2	3.4	177.5 W
8 september	18:15	101	23:40	32S	05:10	259	0.6	19.2	43.2	3.5	177.8 W
9 september	18:11	101	23:36	32S	05:05	259	0.6	19.2	43.2	3.5	177.6 W
10 september	18:07	101	23:32	32S	05:01	259	0.6	19.2	43.2	3.5	177.1 O
11 september	18:03	101	23:28	32S	04:57	259	0.6	19.2	43.2	3.6	176.3 O
12 september	17:59	101	23:23	32S	04:52	259	0.6	19.2	43.2	3.6	175.4 O
13 september	17:55	102	23:19	32S	04:48	259	0.6	19.2	43.2	3.6	174.5 O
14 september	17:51	102	23:15	31S	04:44	258	0.6	19.2	43.2	3.7	173.5 O
15 september	17:47	102	23:11	31S	04:39	258	0.6	19.2	43.2	3.7	172.5 O
16 september	17:42	102	23:07	31S	04:35	258	0.6	19.2	43.1	3.7	171.5 O

	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (hr:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
2024											
17 september	17:38	102	23:02	31S	04:31	258	0.6	19.2	43.1	3.8	170.5 O
18 september	17:34	102	22:58	31S	04:26	258	0.6	19.2	43.1	3.8	169.5 O
19 september	17:30	102	22:54	31S	04:22	258	0.6	19.2	43.1	3.8	168.4 O
20 september	17:26	102	22:50	31S	04:18	258	0.6	19.1	43.1	3.9	167.4 O
21 september	17:22	102	22:46	31S	04:13	258	0.6	19.1	43.1	3.9	166.4 O
22 september	17:18	102	22:41	31S	04:09	258	0.6	19.1	43.0	3.9	165.3 O
23 september	17:14	102	22:37	31S	04:05	258	0.6	19.1	43.0	3.9	164.3 O
24 september	17:10	102	22:33	31S	04:00	258	0.6	19.1	43.0	4.0	163.3 O
25 september	17:06	102	22:29	31S	03:56	258	0.6	19.1	43.0	4.0	162.2 O
26 september	17:02	102	22:25	31S	03:52	258	0.6	19.1	43.0	4.0	161.2 O
27 september	16:58	102	22:20	31S	03:47	258	0.6	19.1	42.9	4.1	160.1 O
28 september	16:54	102	22:16	31S	03:43	258	0.6	19.1	42.9	4.1	159.1 O
29 september	16:50	102	22:12	31S	03:39	258	0.7	19.1	42.9	4.1	158.0 O
30 september	16:46	102	22:08	31S	03:34	258	0.7	19.0	42.8	4.1	157.0 O
1 oktober	16:42	102	22:04	31S	03:30	258	0.7	19.0	42.8	4.2	156.0 O
2 oktober	16:38	102	21:59	31S	03:26	258	0.7	19.0	42.8	4.2	154.9 O
3 oktober	16:33	102	21:55	31S	03:21	258	0.7	19.0	42.7	4.2	153.9 O
4 oktober	16:29	102	21:51	31S	03:17	258	0.7	19.0	42.7	4.2	152.8 O
5 oktober	16:25	102	21:47	31S	03:13	258	0.7	19.0	42.7	4.3	151.8 O
6 oktober	16:21	103	21:43	31S	03:08	258	0.7	18.9	42.6	4.3	150.7 O
7 oktober	16:17	103	21:39	31S	03:04	257	0.7	18.9	42.6	4.3	149.7 O
8 oktober	16:13	103	21:34	31S	03:00	257	0.7	18.9	42.5	4.3	148.6 O
9 oktober	16:09	103	21:30	31S	02:56	257	0.7	18.9	42.5	4.3	147.6 O
10 oktober	16:05	103	21:26	31S	02:51	257	0.7	18.9	42.5	4.4	146.6 O
11 oktober	16:01	103	21:22	31S	02:47	257	0.7	18.9	42.4	4.4	145.5 O
12 oktober	15:57	103	21:18	31S	02:43	257	0.7	18.8	42.4	4.4	144.5 O
13 oktober	15:53	103	21:14	31S	02:39	257	0.7	18.8	42.3	4.4	143.4 O
14 oktober	15:49	103	21:10	31S	02:35	257	0.7	18.8	42.3	4.4	142.4 O
15 oktober	15:45	103	21:06	31S	02:30	257	0.7	18.8	42.2	4.4	141.4 O
16 oktober	15:41	103	21:01	31S	02:26	257	0.7	18.7	42.2	4.5	140.3 O
17 oktober	15:37	103	20:57	31S	02:22	257	0.7	18.7	42.1	4.5	139.3 O
18 oktober	15:33	103	20:53	31S	02:18	257	0.7	18.7	42.1	4.5	138.2 O
19 oktober	15:29	103	20:49	31S	02:13	257	0.7	18.7	42.0	4.5	137.2 O
20 oktober	15:25	103	20:45	31S	02:09	257	0.7	18.7	42.0	4.5	136.2 O
21 oktober	15:21	103	20:41	31S	02:05	257	0.7	18.6	41.9	4.5	135.1 O
22 oktober	15:17	103	20:37	31S	02:01	257	0.8	18.6	41.9	4.5	134.1 O
23 oktober	15:13	103	20:33	31S	01:57	257	0.8	18.6	41.8	4.5	133.1 O
24 oktober	15:09	103	20:29	31S	01:53	257	0.8	18.6	41.7	4.5	132.0 O
25 oktober	15:05	103	20:25	31S	01:49	257	0.8	18.5	41.7	4.6	131.0 O
26 oktober	15:01	103	20:21	31S	01:44	257	0.8	18.5	41.6	4.6	130.0 O
27 oktober	14:57	103	20:17	31S	01:40	257	0.8	18.5	41.6	4.6	128.9 O
28 oktober	14:53	103	20:12	31S	01:36	257	0.8	18.5	41.5	4.6	127.9 O
29 oktober	14:49	103	20:08	31S	01:32	257	0.8	18.4	41.5	4.6	126.9 O
30 oktober	14:45	103	20:04	31S	01:28	257	0.8	18.4	41.4	4.6	125.8 O
31 oktober	14:41	103	20:00	31S	01:24	257	0.8	18.4	41.3	4.6	124.8 O
1 november	14:37	103	19:56	31S	01:20	257	0.8	18.3	41.3	4.6	123.8 O
2 november	14:33	103	19:52	31S	01:16	257	0.8	18.3	41.2	4.6	122.8 O
3 november	14:29	103	19:48	31S	01:12	257	0.8	18.3	41.1	4.6	121.7 O
4 november	14:25	103	19:44	31S	01:08	257	0.8	18.3	41.1	4.6	120.7 O
5 november	14:21	103	19:40	31S	01:04	257	0.8	18.2	41.0	4.6	119.7 O
6 november	14:17	103	19:36	30S	01:00	257	0.8	18.2	40.9	4.6	118.7 O
7 november	14:13	103	19:32	30S	00:56	257	0.8	18.2	40.9	4.6	117.7 O
8 november	14:09	103	19:28	30S	00:52	257	0.8	18.1	40.8	4.6	116.7 O

	Opkomst		Culminatie		Ondergang		Magnitude	Equatoriale Diameter (")	Ring grote as (")	Ring kleine as (")	Elongatie (°)
	UT (hr:m)	Azimut (°)	Culminatie	Hoogte (°)	Ondergang	Azimut (°)					
2024											
9 november	14:05	103	19:24	30S	00:48	257	0.8	18.1	40.7	4.6	115.6 O
10 november	14:01	103	19:20	30S	00:44	257	0.8	18.1	40.7	4.6	114.6 O
11 november	13:57	103	19:16	30S	00:40	257	0.9	18.1	40.6	4.6	113.6 O
12 november	13:53	103	19:12	30S	00:36	257	0.9	18.0	40.5	4.5	112.6 O
13 november	13:49	103	19:08	30S	00:32	257	0.9	18.0	40.5	4.5	111.6 O
14 november	13:45	103	19:05	30S	00:28	257	0.9	18.0	40.4	4.5	110.6 O
15 november	13:41	103	19:01	30S	00:24	257	0.9	17.9	40.3	4.5	109.6 O
16 november	13:37	103	18:57	30S	00:20	257	0.9	17.9	40.3	4.5	108.6 O
17 november	13:33	103	18:53	30S	00:16	257	0.9	17.9	40.2	4.5	107.6 O
18 november	13:29	103	18:49	31S	00:12	257	0.9	17.8	40.1	4.5	106.6 O
19 november	13:25	103	18:45	31S	00:08	257	0.9	17.8	40.1	4.5	105.5 O
20 november	13:21	103	18:41	31S	00:04	257	0.9	17.8	40.0	4.5	104.5 O
21 november	13:18	103	18:37	31S	00:01	257	0.9	17.7	39.9	4.5	103.5 O
22 november	13:14	103	18:33	31S	23:53	257	0.9	17.7	39.9	4.4	102.5 O
23 november	13:10	103	18:29	31S	23:49	257	0.9	17.7	39.8	4.4	101.6 O
24 november	13:06	103	18:25	31S	23:45	257	0.9	17.7	39.7	4.4	100.6 O
25 november	13:02	103	18:22	31S	23:41	257	0.9	17.6	39.7	4.4	99.6 O
26 november	12:58	103	18:18	31S	23:37	257	0.9	17.6	39.6	4.4	98.6 O
27 november	12:54	103	18:14	31S	23:34	257	0.9	17.6	39.5	4.4	97.6 O
28 november	12:50	103	18:10	31S	23:30	257	0.9	17.5	39.5	4.3	96.6 O
29 november	12:46	103	18:06	31S	23:26	257	0.9	17.5	39.4	4.3	95.6 O
30 november	12:42	103	18:02	31S	23:22	257	0.9	17.5	39.3	4.3	94.6 O
1 december	12:38	103	17:58	31S	23:19	257	0.9	17.4	39.2	4.3	93.6 O
2 december	12:35	103	17:55	31S	23:15	257	0.9	17.4	39.2	4.3	92.6 O
3 december	12:31	103	17:51	31S	23:11	257	1.0	17.4	39.1	4.2	91.6 O
4 december	12:27	103	17:47	31S	23:07	257	1.0	17.4	39.0	4.2	90.7 O
5 december	12:23	103	17:43	31S	23:04	257	1.0	17.3	39.0	4.2	89.7 O
6 december	12:19	103	17:39	31S	23:00	257	1.0	17.3	38.9	4.2	88.7 O
7 december	12:15	103	17:36	31S	22:56	257	1.0	17.3	38.8	4.2	87.7 O
8 december	12:11	103	17:32	31S	22:52	257	1.0	17.2	38.8	4.1	86.8 O
9 december	12:07	103	17:28	31S	22:49	257	1.0	17.2	38.7	4.1	85.8 O
10 december	12:03	103	17:24	31S	22:45	257	1.0	17.2	38.6	4.1	84.8 O
11 december	12:00	103	17:20	31S	22:41	257	1.0	17.1	38.6	4.1	83.8 O
12 december	11:56	103	17:17	31S	22:38	257	1.0	17.1	38.5	4.0	82.9 O
13 december	11:52	103	17:13	31S	22:34	257	1.0	17.1	38.4	4.0	81.9 O
14 december	11:48	103	17:09	31S	22:30	257	1.0	17.1	38.4	4.0	80.9 O
15 december	11:44	103	17:05	31S	22:27	257	1.0	17.0	38.3	3.9	80.0 O
16 december	11:40	103	17:02	31S	22:23	257	1.0	17.0	38.3	3.9	79.0 O
17 december	11:36	103	16:58	31S	22:20	258	1.0	17.0	38.2	3.9	78.0 O
18 december	11:33	102	16:54	31S	22:16	258	1.0	16.9	38.1	3.9	77.1 O
19 december	11:29	102	16:51	31S	22:12	258	1.0	16.9	38.1	3.8	76.1 O
20 december	11:25	102	16:47	31S	22:09	258	1.0	16.9	38.0	3.8	75.1 O
21 december	11:21	102	16:43	31S	22:05	258	1.0	16.9	37.9	3.8	74.2 O
22 december	11:17	102	16:39	31S	22:02	258	1.0	16.8	37.9	3.7	73.2 O
23 december	11:13	102	16:36	31S	21:58	258	1.0	16.8	37.8	3.7	72.3 O
24 december	11:09	102	16:32	31S	21:55	258	1.0	16.8	37.8	3.7	71.3 O
25 december	11:06	102	16:28	31S	21:51	258	1.0	16.8	37.7	3.6	70.4 O
26 december	11:02	102	16:25	31S	21:47	258	1.0	16.7	37.6	3.6	69.4 O
27 december	10:58	102	16:21	31S	21:44	258	1.0	16.7	37.6	3.6	68.5 O
28 december	10:54	102	16:17	31S	21:40	258	1.0	16.7	37.5	3.5	67.5 O
29 december	10:50	102	16:14	31S	21:37	258	1.0	16.7	37.5	3.5	66.6 O
30 december	10:47	102	16:10	31S	21:33	258	1.1	16.6	37.4	3.5	

Uranus

2024	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
1 januari	12:34	61	20:07	56S	03:43	299	5.7	3.7	129.3 O
2 januari	12:30	61	20:03	56S	03:39	299	5.7	3.7	128.3 O
3 januari	12:26	61	19:59	56S	03:35	299	5.7	3.7	127.3 O
4 januari	12:22	61	19:55	56S	03:31	299	5.7	3.7	126.2 O
5 januari	12:18	61	19:51	56S	03:27	299	5.7	3.7	125.2 O
6 januari	12:14	61	19:47	56S	03:23	299	5.7	3.7	124.1 O
7 januari	12:10	61	19:43	56S	03:19	299	5.7	3.7	123.1 O
8 januari	12:06	61	19:39	56S	03:15	299	5.7	3.7	122.1 O
9 januari	12:02	61	19:35	56S	03:11	299	5.7	3.7	121.0 O
10 januari	11:58	61	19:31	56S	03:07	299	5.7	3.7	120.0 O
11 januari	11:54	61	19:27	56S	03:03	299	5.7	3.7	119.0 O
12 januari	11:50	61	19:23	56S	02:59	299	5.7	3.7	117.9 O
13 januari	11:47	61	19:19	56S	02:55	299	5.7	3.7	116.9 O
14 januari	11:43	61	19:15	56S	02:51	299	5.7	3.7	115.9 O
15 januari	11:39	61	19:11	56S	02:47	299	5.7	3.7	114.8 O
16 januari	11:35	61	19:07	56S	02:43	299	5.7	3.7	113.8 O
17 januari	11:31	61	19:03	56S	02:39	299	5.7	3.7	112.8 O
18 januari	11:27	61	18:59	56S	02:35	299	5.7	3.7	111.8 O
19 januari	11:23	61	18:55	56S	02:31	299	5.7	3.7	110.7 O
20 januari	11:19	61	18:51	56S	02:27	299	5.7	3.7	109.7 O
21 januari	11:15	61	18:47	56S	02:23	299	5.7	3.7	108.7 O
22 januari	11:11	61	18:43	56S	02:19	299	5.7	3.7	107.7 O
23 januari	11:07	61	18:39	56S	02:15	299	5.7	3.7	106.6 O
24 januari	11:03	61	18:35	56S	02:11	299	5.7	3.6	105.6 O
25 januari	10:59	61	18:31	56S	02:07	299	5.7	3.6	104.6 O
26 januari	10:55	61	18:27	56S	02:03	299	5.7	3.6	103.6 O
27 januari	10:51	61	18:23	56S	01:59	299	5.7	3.6	102.6 O
28 januari	10:47	61	18:19	56S	01:55	299	5.7	3.6	101.6 O
29 januari	10:43	61	18:15	56S	01:52	299	5.7	3.6	100.5 O
30 januari	10:39	61	18:12	56S	01:48	299	5.7	3.6	99.5 O
31 januari	10:35	61	18:08	56S	01:44	299	5.7	3.6	98.5 O
1 februari	10:32	61	18:04	56S	01:40	299	5.7	3.6	97.5 O
2 februari	10:28	61	18:00	56S	01:36	299	5.7	3.6	96.5 O
3 februari	10:24	61	17:56	56S	01:32	299	5.7	3.6	95.5 O
4 februari	10:20	61	17:52	56S	01:28	299	5.8	3.6	94.5 O
5 februari	10:16	61	17:48	56S	01:24	299	5.8	3.6	93.5 O
6 februari	10:12	61	17:44	56S	01:20	299	5.8	3.6	92.5 O
7 februari	10:08	61	17:40	56S	01:16	299	5.8	3.6	91.5 O
8 februari	10:04	61	17:36	56S	01:13	299	5.8	3.6	90.4 O
9 februari	10:00	61	17:33	56S	01:09	299	5.8	3.6	89.4 O
10 februari	09:56	61	17:29	56S	01:05	299	5.8	3.6	88.4 O
11 februari	09:52	61	17:25	56S	01:01	299	5.8	3.6	87.4 O
12 februari	09:49	61	17:21	56S	00:57	299	5.8	3.6	86.4 O
13 februari	09:45	61	17:17	56S	00:53	299	5.8	3.6	85.4 O
14 februari	09:41	61	17:13	56S	00:49	299	5.8	3.6	84.5 O
15 februari	09:37	61	17:09	56S	00:46	299	5.8	3.6	83.5 O
16 februari	09:33	61	17:05	56S	00:42	299	5.8	3.6	82.5 O
17 februari	09:29	61	17:02	56S	00:38	299	5.8	3.6	81.5 O
18 februari	09:25	61	16:58	56S	00:34	299	5.8	3.6	80.5 O
19 februari	09:21	61	16:54	56S	00:30	299	5.8	3.6	79.5 O
20 februari	09:17	61	16:50	57S	00:26	299	5.8	3.6	78.5 O
21 februari	09:13	61	16:46	57S	00:23	299	5.8	3.6	77.5 O

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
22 februari	09:10	61	16:42	57S	00:19	299	5.8	3.6	76.5 O
23 februari	09:06	61	16:38	57S	00:15	299	5.8	3.6	75.5 O
24 februari	09:02	61	16:35	57S	00:11	299	5.8	3.6	74.6 O
25 februari	08:58	61	16:31	57S	00:07	299	5.8	3.5	73.6 O
26 februari	08:54	61	16:27	57S	00:04	299	5.8	3.5	72.6 O
27 februari	08:50	61	16:23	57S	23:56	299	5.8	3.5	71.6 O
28 februari	08:46	61	16:19	57S	23:52	299	5.8	3.5	70.6 O
29 februari	08:43	61	16:15	57S	23:49	299	5.8	3.5	69.7 O
1 maart	08:39	61	16:12	57S	23:45	299	5.8	3.5	68.7 O
2 maart	08:35	61	16:08	57S	23:41	299	5.8	3.5	67.7 O
3 maart	08:31	61	16:04	57S	23:37	299	5.8	3.5	66.7 O
4 maart	08:27	61	16:00	57S	23:33	299	5.8	3.5	65.8 O
5 maart	08:23	61	15:56	57S	23:30	299	5.8	3.5	64.8 O
6 maart	08:19	61	15:53	57S	23:26	299	5.8	3.5	63.8 O
7 maart	08:15	61	15:49	57S	23:22	299	5.8	3.5	62.9 O
8 maart	08:12	61	15:45	57S	23:18	299	5.8	3.5	61.9 O
9 maart	08:08	61	15:41	57S	23:15	299	5.8	3.5	60.9 O
10 maart	08:04	61	15:37	57S	23:11	299	5.8	3.5	60.0 O
11 maart	08:00	61	15:34	57S	23:07	299	5.8	3.5	59.0 O
12 maart	07:56	61	15:30	57S	23:04	299	5.8	3.5	58.0 O
13 maart	07:52	61	15:26	57S	23:00	299	5.8	3.5	57.1 O
14 maart	07:49	61	15:22	57S	22:56	299	5.8	3.5	56.1 O
15 maart	07:45	61	15:19	57S	22:52	299	5.8	3.5	55.2 O
16 maart	07:41	61	15:15	57S	22:49	299	5.8	3.5	54.2 O
17 maart	07:37	61	15:11	57S	22:45	299	5.8	3.5	53.2 O
18 maart	07:33	61	15:07	57S	22:41	299	5.8	3.5	52.3 O
19 maart	07:29	61	15:03	57S	22:38	299	5.8	3.5	51.3 O
20 maart	07:26	61	15:00	57S	22:34	299	5.8	3.5	50.4 O
21 maart	07:22	61	14:56	57S	22:30	299	5.8	3.5	49.4 O
22 maart	07:18	61	14:52	57S	22:26	299	5.8	3.5	48.5 O
23 maart	07:14	61	14:48	57S	22:23	299	5.8	3.5	47.5 O
24 maart	07:10	61	14:45	57S	22:19	299	5.8	3.5	46.6 O
25 maart	07:06	61	14:41	57S	22:15	299	5.8	3.5	45.6 O
26 maart	07:03	61	14:37	57S	22:12	299	5.8	3.5	44.7 O
27 maart	06:59	61	14:33	57S	22:08	299	5.8	3.5	43.7 O
28 maart	06:55	61	14:30	57S	22:04	299	5.8	3.5	42.8 O
29 maart	06:51	61	14:26	57S	22:01	299	5.8	3.5	41.9 O
30 maart	06:47	61	14:22	57S	21:57	300	5.8	3.5	40.9 O
31 maart	06:44	60	14:18	57S	21:53	300	5.8	3.5	40.0 O
1 april	06:40	60	14:15	57S	21:50	300	5.8	3.5	39.0 O
2 april	06:36	60	14:11	57S	21:46	300	5.8	3.5	38.1 O
3 april	06:32	60	14:07	57S	21:42	300	5.8	3.5	37.2 O
4 april	06:28	60	14:03	57S	21:39	300	5.8	3.5	36.2 O
5 april	06:24	60	14:00	57S	21:35	300	5.8	3.5	35.3 O
6 april	06:21	60	13:56	57S	21:31	300	5.8	3.5	34.4 O
7 april	06:17	60	13:52	57S	21:28	300	5.8	3.5	33.4 O
8 april	06:13	60	13:49	57S	21:24	300	5.8	3.4	32.5 O
9 april	06:09	60	13:45	57S	21:21	300	5.9	3.4	31.6 O
10 april	06:05	60	13:41	57S	21:17	300	5.9	3.4	30.6 O
11 april	06:02	60	13:37	57S	21:13	300	5.9	3.4	29.7 O
12 april	05:58	60	13:34	57S	21:10	300	5.9	3.4	28.8 O
13 april	05:54	60	13:30	57S	21:06	300	5.9	3.4	27.8 O

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
14 april	05:50	60	13:26	57S	21:02	300	5.9	3.4	26.9 O
15 april	05:46	60	13:23	57S	20:59	300	5.9	3.4	26.0 O
16 april	05:43	60	13:19	57S	20:55	300	5.9	3.4	25.1 O
17 april	05:39	60	13:15	57S	20:51	300	5.9	3.4	24.1 O
18 april	05:35	60	13:11	57S	20:48	300	5.9	3.4	23.2 O
19 april	05:31	60	13:08	57S	20:44	300	5.9	3.4	22.3 O
20 april	05:27	60	13:04	57S	20:41	300	5.9	3.4	21.4 O
21 april	05:24	60	13:00	57S	20:37	300	5.9	3.4	20.4 O
22 april	05:20	60	12:57	57S	20:33	300	5.9	3.4	19.5 O
23 april	05:16	60	12:53	57S	20:30	300	5.9	3.4	18.6 O
24 april	05:12	60	12:49	57S	20:26	300	5.9	3.4	17.7 O
25 april	05:08	60	12:45	57S	20:22	300	5.9	3.4	16.8 O
26 april	05:05	60	12:42	57S	20:19	300	5.9	3.4	15.9 O
27 april	05:01	60	12:38	57S	20:15	300	5.9	3.4	14.9 O
28 april	04:57	60	12:34	57S	20:12	300	5.9	3.4	14.0 O
29 april	04:53	60	12:31	57S	20:08	300	5.9	3.4	13.1 O
30 april	04:49	60	12:27	57S	20:04	300	5.9	3.4	12.2 O
1 mei	04:46	60	12:23	57S	20:01	300	5.9	3.4	11.3 O
2 mei	04:42	60	12:20	57S	19:57	300	5.9	3.4	10.4 O
3 mei	04:38	60	12:16	57S	19:54	300	5.9	3.4	9.5 O
4 mei	04:34	60	12:12	57S	19:50	300	5.9	3.4	8.5 O
5 mei	04:31	60	12:08	57S	19:46	300	5.9	3.4	7.6 O
6 mei	04:27	60	12:05	57S	19:43	300	5.9	3.4	6.7 O
7 mei	04:23	60	12:01	57S	19:39	300	5.9	3.4	5.8 O
8 mei	04:19	60	11:57	57S	19:36	300	5.9	3.4	4.9 O
9 mei	04:15	60	11:54	57S	19:32	300	5.9	3.4	4.0 O
10 mei	04:12	59	11:50	57S	19:28	301	5.9	3.4	3.1 O
11 mei	04:08	59	11:46	57S	19:25	301	5.9	3.4	2.2 O
12 mei	04:04	59	11:43	57S	19:21	301	5.9	3.4	1.3 O
13 mei	04:00	59	11:39	58S	19:17	301	5.9	3.4	0.4 O
14 mei	03:56	59	11:35	58S	19:14	301	5.9	3.4	0.6 W
15 mei	03:53	59	11:31	58S	19:10	301	5.9	3.4	1.5 W
16 mei	03:49	59	11:28	58S	19:07	301	5.9	3.4	2.4 W
17 mei	03:45	59	11:24	58S	19:03	301	5.9	3.4	3.3 W
18 mei	03:41	59	11:20	58S	18:59	301	5.9	3.4	4.2 W
19 mei	03:38	59	11:17	58S	18:56	301	5.9	3.4	5.1 W
20 mei	03:34	59	11:13	58S	18:52	301	5.9	3.4	6.0 W
21 mei	03:30	59	11:09	58S	18:49	301	5.9	3.4	6.9 W
22 mei	03:26	59	11:06	58S	18:45	301	5.9	3.4	7.8 W
23 mei	03:22	59	11:02	58S	18:41	301	5.9	3.4	8.7 W
24 mei	03:19	59	10:58	58S	18:38	301	5.9	3.4	9.6 W
25 mei	03:15	59	10:54	58S	18:34	301	5.9	3.4	10.5 W
26 mei	03:11	59	10:51	58S	18:31	301	5.9	3.4	11.4 W
27 mei	03:07	59	10:47	58S	18:27	301	5.9	3.4	12.3 W
28 mei	03:03	59	10:43	58S	18:23	301	5.9	3.4	13.2 W
29 mei	03:00	59	10:40	58S	18:20	301	5.9	3.4	14.1 W
30 mei	02:56	59	10:36	58S	18:16	301	5.9	3.4	15.0 W
31 mei	02:52	59	10:32	58S	18:12	301	5.9	3.4	15.9 W
1 juni	02:48	59	10:29	58S	18:09	301	5.9	3.4	16.8 W
2 juni	02:45	59	10:25	58S	18:05	301	5.9	3.4	17.7 W
3 juni	02:41	59	10:21	58S	18:02	301	5.9	3.4	18.6 W
4 juni	02:37	59	10:17	58S	17:58	301	5.9	3.4	19.5 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
5 juni	02:33	59	10:14	58S	17:54	301	5.9	3.4	20.4 W
6 juni	02:29	59	10:10	58S	17:51	301	5.9	3.4	21.3 W
7 juni	02:26	59	10:06	58S	17:47	301	5.9	3.4	22.2 W
8 juni	02:22	59	10:03	58S	17:43	301	5.9	3.4	23.1 W
9 juni	02:18	59	09:59	58S	17:40	301	5.9	3.4	24.0 W
10 juni	02:14	59	09:55	58S	17:36	301	5.9	3.4	25.0 W
11 juni	02:10	59	09:51	58S	17:33	301	5.9	3.4	25.9 W
12 juni	02:07	59	09:48	58S	17:29	301	5.9	3.4	26.8 W
13 juni	02:03	59	09:44	58S	17:25	301	5.9	3.4	27.7 W
14 juni	01:59	59	09:40	58S	17:22	301	5.9	3.4	28.6 W
15 juni	01:55	59	09:37	58S	17:18	301	5.8	3.4	29.5 W
16 juni	01:51	59	09:33	58S	17:14	301	5.8	3.4	30.4 W
17 juni	01:48	59	09:29	58S	17:11	301	5.8	3.4	31.3 W
18 juni	01:44	59	09:25	58S	17:07	301	5.8	3.4	32.2 W
19 juni	01:40	59	09:22	58S	17:03	301	5.8	3.4	33.1 W
20 juni	01:36	59	09:18	58S	17:00	301	5.8	3.5	34.0 W
21 juni	01:32	58	09:14	58S	16:56	302	5.8	3.5	34.9 W
22 juni	01:29	58	09:11	58S	16:52	302	5.8	3.5	35.8 W
23 juni	01:25	58	09:07	58S	16:49	302	5.8	3.5	36.7 W
24 juni	01:21	58	09:03	58S	16:45	302	5.8	3.5	37.6 W
25 juni	01:17	58	08:59	58S	16:41	302	5.8	3.5	38.5 W
26 juni	01:13	58	08:56	58S	16:38	302	5.8	3.5	39.4 W
27 juni	01:10	58	08:52	58S	16:34	302	5.8	3.5	40.3 W
28 juni	01:06	58	08:48	58S	16:30	302	5.8	3.5	41.2 W
29 juni	01:02	58	08:44	58S	16:27	302	5.8	3.5	42.1 W
30 juni	00:58	58	08:41	58S	16:23	302	5.8	3.5	43.0 W
1 juli	00:54	58	08:37	58S	16:19	302	5.8	3.5	43.9 W
2 juli	00:51	58	08:33	58S	16:16	302	5.8	3.5	44.9 W
3 juli	00:47	58	08:29	58S	16:12	302	5.8	3.5	45.8 W
4 juli	00:43	58	08:26	58S	16:08	302	5.8	3.5	46.7 W
5 juli	00:39	58	08:22	58S	16:05	302	5.8	3.5	47.6 W
6 juli	00:35	58	08:18	58S	16:01	302	5.8	3.5	48.5 W
7 juli	00:32	58	08:14	58S	15:57	302	5.8	3.5	49.4 W
8 juli	00:28	58	08:11	58S	15:54	302	5.8	3.5	50.3 W
9 juli	00:24	58	08:07	58S	15:50	302	5.8	3.5	51.2 W
10 juli	00:20	58	08:03	58S	15:46	302	5.8	3.5	52.1 W
11 juli	00:16	58	07:59	58S	15:42	302	5.8	3.5	53.1 W
12 juli	00:12	58	07:56	58S	15:39	302	5.8	3.5	54.0 W
13 juli	00:09	58	07:52	58S	15:35	302	5.8	3.5	54.9 W
14 juli	00:05	58	07:48	58S	15:31	302	5.8	3.5	55.8 W
15 juli	00:01	58	07:44	58S	15:28	302	5.8	3.5	56.7 W
16 juli	23:53	58	07:40	58S	15:24	302	5.8	3.5	57.6 W
17 juli	23:49	58	07:37	58S	15:20	302	5.8	3.5	58.5 W
18 juli	23:46	58	07:33	58S	15:16	302	5.8	3.5	59.5 W
19 juli	23:42	58	07:29	58S	15:13	302	5.8	3.5	60.4 W
20 juli	23:38	58	07:25	58S	15:09	302	5.8	3.5	61.3 W
21 juli	23:34	58	07:21	58S	15:05	302	5.8	3.5	62.2 W
22 juli	23:30	58	07:18	58S	15:01	302	5.8	3.5	63.1 W
23 juli	23:26	58	07:14	58S	14:58	302	5.8	3.5	64.1 W
24 juli	23:22	58	07:10	58S	14:54	302	5.8	3.5	65.0 W
25 juli	23:19	58	07:06	58S	14:50	302	5.8	3.5	65.9 W
26 juli	23:15	58	07:02	58S	14:46	302	5.8	3.5	66.8 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
27 juli	23:11	58	06:59	58S	14:43	302	5.8	3.5	67.8 W
28 juli	23:07	58	06:55	58S	14:39	302	5.8	3.5	68.7 W
29 juli	23:03	58	06:51	58S	14:35	302	5.8	3.5	69.6 W
30 juli	22:59	58	06:47	58S	14:31	302	5.8	3.5	70.5 W
31 juli	22:56	58	06:43	58S	14:27	302	5.8	3.5	71.5 W
1 augustus	22:52	58	06:40	58S	14:24	302	5.8	3.5	72.4 W
2 augustus	22:48	58	06:36	58S	14:20	302	5.8	3.6	73.3 W
3 augustus	22:44	58	06:32	58S	14:16	302	5.8	3.6	74.3 W
4 augustus	22:40	58	06:28	58S	14:12	302	5.8	3.6	75.2 W
5 augustus	22:36	58	06:24	58S	14:08	302	5.8	3.6	76.1 W
6 augustus	22:32	58	06:20	58S	14:05	302	5.8	3.6	77.1 W
7 augustus	22:28	58	06:17	58S	14:01	302	5.8	3.6	78.0 W
8 augustus	22:25	58	06:13	58S	13:57	302	5.8	3.6	78.9 W
9 augustus	22:21	58	06:09	58S	13:53	302	5.8	3.6	79.9 W
10 augustus	22:17	58	06:05	58S	13:49	302	5.8	3.6	80.8 W
11 augustus	22:13	58	06:01	58S	13:46	302	5.8	3.6	81.8 W
12 augustus	22:09	58	05:57	58S	13:42	302	5.8	3.6	82.7 W
13 augustus	22:05	58	05:53	58S	13:38	302	5.8	3.6	83.7 W
14 augustus	22:01	58	05:50	58S	13:34	302	5.8	3.6	84.6 W
15 augustus	21:57	58	05:46	58S	13:30	302	5.8	3.6	85.5 W
16 augustus	21:53	58	05:42	58S	13:26	302	5.8	3.6	86.5 W
17 augustus	21:50	58	05:38	58S	13:22	302	5.8	3.6	87.4 W
18 augustus	21:46	58	05:34	58S	13:19	302	5.8	3.6	88.4 W
19 augustus	21:42	58	05:30	58S	13:15	302	5.7	3.6	89.3 W
20 augustus	21:38	58	05:26	58S	13:11	302	5.7	3.6	90.3 W
21 augustus	21:34	58	05:22	58S	13:07	302	5.7	3.6	91.2 W
22 augustus	21:30	58	05:18	58S	13:03	302	5.7	3.6	92.2 W
23 augustus	21:26	58	05:15	58S	12:59	302	5.7	3.6	93.1 W
24 augustus	21:22	58	05:11	58S	12:55	302	5.7	3.6	94.1 W
25 augustus	21:18	58	05:07	58S	12:51	302	5.7	3.6	95.1 W
26 augustus	21:14	58	05:03	58S	12:47	302	5.7	3.6	96.0 W
27 augustus	21:10	58	04:59	58S	12:44	302	5.7	3.6	97.0 W
28 augustus	21:07	58	04:55	58S	12:40	302	5.7	3.6	97.9 W
29 augustus	21:03	58	04:51	58S	12:36	302	5.7	3.6	98.9 W
30 augustus	20:59	58	04:47	58S	12:32	302	5.7	3.6	99.9 W
31 augustus	20:55	58	04:43	58S	12:28	302	5.7	3.6	100.8 W
1 september	20:51	58	04:39	58S	12:24	302	5.7	3.6	101.8 W
2 september	20:47	58	04:35	58S	12:20	302	5.7	3.6	102.8 W
3 september	20:43	58	04:31	58S	12:16	302	5.7	3.7	103.7 W
4 september	20:39	58	04:28	58S	12:12	302	5.7	3.7	104.7 W
5 september	20:35	58	04:24	58S	12:08	302	5.7	3.7	105.7 W
6 september	20:31	58	04:20	58S	12:04	302	5.7	3.7	106.7 W
7 september	20:27	58	04:16	58S	12:00	302	5.7	3.7	107.6 W
8 september	20:23	58	04:12	58S	11:56	302	5.7	3.7	108.6 W
9 september	20:19	58	04:08	58S	11:52	302	5.7	3.7	109.6 W
10 september	20:15	58	04:04	58S	11:48	302	5.7	3.7	110.6 W
11 september	20:11	58	04:00	58S	11:44	302	5.7	3.7	111.5 W
12 september	20:07	58	03:56	58S	11:40	302	5.7	3.7	112.5 W
13 september	20:03	58	03:52	58S	11:36	302	5.7	3.7	113.5 W
14 september	20:00	58	03:48	58S	11:32	302	5.7	3.7	114.5 W
15 september	19:56	58	03:44	58S	11:28	302	5.7	3.7	115.5 W
16 september	19:52	58	03:40	58S	11:24	302	5.7	3.7	116.5 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
17 september	19:48	58	03:36	58S	11:20	302	5.7	3.7	117.4 W
18 september	19:44	58	03:32	58S	11:16	302	5.7	3.7	118.4 W
19 september	19:40	58	03:28	58S	11:12	302	5.7	3.7	119.4 W
20 september	19:36	58	03:24	58S	11:08	302	5.7	3.7	120.4 W
21 september	19:32	58	03:20	58S	11:04	302	5.7	3.7	121.4 W
22 september	19:28	58	03:16	58S	11:00	302	5.7	3.7	122.4 W
23 september	19:24	58	03:12	58S	10:56	302	5.7	3.7	123.4 W
24 september	19:20	58	03:08	58S	10:52	302	5.7	3.7	124.4 W
25 september	19:16	58	03:04	58S	10:48	302	5.7	3.7	125.4 W
26 september	19:12	58	03:00	58S	10:44	302	5.7	3.7	126.4 W
27 september	19:08	58	02:56	58S	10:40	302	5.7	3.7	127.4 W
28 september	19:04	58	02:52	58S	10:36	302	5.7	3.7	128.4 W
29 september	19:00	58	02:48	58S	10:32	302	5.7	3.7	129.4 W
30 september	18:56	58	02:44	58S	10:28	302	5.7	3.7	130.4 W
1 oktober	18:52	58	02:40	58S	10:24	302	5.7	3.7	131.4 W
2 oktober	18:48	58	02:36	58S	10:20	302	5.7	3.7	132.4 W
3 oktober	18:44	58	02:32	58S	10:16	302	5.7	3.7	133.4 W
4 oktober	18:40	58	02:28	58S	10:12	302	5.7	3.7	134.4 W
5 oktober	18:36	58	02:24	58S	10:08	302	5.7	3.7	135.4 W
6 oktober	18:32	58	02:20	58S	10:04	302	5.7	3.7	136.5 W
7 oktober	18:28	58	02:16	58S	10:00	302	5.7	3.7	137.5 W
8 oktober	18:24	58	02:12	58S	09:55	302	5.7	3.7	138.5 W
9 oktober	18:20	58	02:08	58S	09:51	302	5.7	3.7	139.5 W
10 oktober	18:16	58	02:04	58S	09:47	302	5.7	3.8	140.5 W
11 oktober	18:12	58	02:00	58S	09:43	302	5.7	3.8	141.5 W
12 oktober	18:08	58	01:55	58S	09:39	302	5.7	3.8	142.6 W
13 oktober	18:04	58	01:51	58S	09:35	302	5.7	3.8	143.6 W
14 oktober	18:00	58	01:47	58S	09:31	302	5.7	3.8	144.6 W
15 oktober	17:56	58	01:43	58S	09:27	302	5.7	3.8	145.6 W
16 oktober	17:52	58	01:39	58S	09:23	302	5.7	3.8	146.6 W
17 oktober	17:48	58	01:35	58S	09:19	302	5.7	3.8	147.7 W
18 oktober	17:44	58	01:31	58S	09:14	302	5.7	3.8	148.7 W
19 oktober	17:40	58	01:27	58S	09:10	302	5.7	3.8	149.7 W
20 oktober	17:36	58	01:23	58S	09:06	302	5.6	3.8	150.7 W
21 oktober	17:32	58	01:19	58S	09:02	302	5.6	3.8	151.8 W
22 oktober	17:28	58	01:15	58S	08:58	302	5.6	3.8	152.8 W
23 oktober	17:24	58	01:11	58S	08:54	302	5.6	3.8	153.8 W
24 oktober	17:20	58	01:07	58S	08:50	302	5.6	3.8	154.9 W
25 oktober	17:16	58	01:03	58S	08:46	302	5.6	3.8	155.9 W
26 oktober	17:11	58	00:58	58S	08:41	302	5.6	3.8	156.9 W
27 oktober	17:07	58	00:54	58S	08:37	302	5.6	3.8	158.0 W
28 oktober	17:03	58	00:50	58S	08:33	302	5.6	3.8	159.0 W
29 oktober	16:59	58	00:46	58S	08:29	302	5.6	3.8	160.0 W
30 oktober	16:55	58	00:42	58S	08:25	302	5.6	3.8	161.1 W
31 oktober	16:51	58	00:38	58S	08:21	302	5.6	3.8	162.1 W
1 november	16:47	58	00:34	58S	08:17	302	5.6	3.8	163.2 W
2 november	16:43	58	00:30	58S	08:12	302	5.6	3.8	164.2 W
3 november	16:39	58	00:26	58S	08:08	302	5.6	3.8	165.2 W
4 november	16:35	58	00:22	58S	08:04	302	5.6	3.8	166.3 W
5 november	16:31	58	00:18	58S	08:00	302	5.6	3.8	167.3 W
6 november	16:27	58	00:13	58S	07:56	302	5.6	3.8	168.4 W
7 november	16:23	58	00:09	58S	07:52	302	5.6	3.8	169.4 W
8 november	16:19	58	00:05	58S	07:47	302	5.6	3.8	170.5 W
9 november	16:15	58	00:01	58S	07:43	302	5.6	3.8	171.5 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
10 november	16:11	58	23:53	58S	07:39	302	5.6	3.8	172.5 W
11 november	16:07	58	23:49	58S	07:35	302	5.6	3.8	173.6 W
12 november	16:03	58	23:45	58S	07:31	302	5.6	3.8	174.6 W
13 november	15:59	58	23:41	58S	07:27	302	5.6	3.8	175.7 W
14 november	15:55	58	23:37	58S	07:22	302	5.6	3.8	176.7 W
15 november	15:51	58	23:32	58S	07:18	302	5.6	3.8	177.8 W
16 november	15:47	58	23:28	58S	07:14	302	5.6	3.8	178.8 W
17 november	15:43	59	23:24	58S	07:10	301	5.6	3.8	179.7 W
18 november	15:39	59	23:20	58S	07:06	301	5.6	3.8	179.0 O
19 november	15:35	59	23:16	58S	07:02	301	5.6	3.8	178.0 O
20 november	15:31	59	23:12	58S	06:58	301	5.6	3.8	177.0 O
21 november	15:26	59	23:08	58S	06:53	301	5.6	3.8	175.9 O
22 november	15:22	59	23:04	58S	06:49	301	5.6	3.8	174.9 O
23 november	15:18	59	23:00	58S	06:45	301	5.6	3.8	173.8 O
24 november	15:14	59	22:56	58S	06:41	301	5.6	3.8	172.8 O
25 november	15:10	59	22:51	58S	06:37	301	5.6	3.8	171.7 O
26 november	15:06	59	22:47	58S	06:33	301	5.6	3.8	170.7 O
27 november	15:02	59	22:43	58S	06:28	301	5.6	3.8	169.6 O
28 november	14:58	59	22:39	58S	06:24	301	5.6	3.8	168.5 O
29 november	14:54	59	22:35	58S	06:20	301	5.6	3.8	167.5 O
30 november	14:50	59	22:31	58S	06:16	301	5.6	3.8	166.4 O
1 december	14:46	59	22:27	58S	06:12	301	5.6	3.8	165.4 O
2 december	14:42	59	22:23	58S	06:08	301	5.6	3.8	164.3 O
3 december	14:38	59	22:19	58S	06:03	301	5.6	3.8	163.3 O
4 december	14:34	59	22:15	58S	05:59	301	5.6	3.8	162.2 O
5 december	14:30	59	22:11	58S	05:55	301	5.6	3.8	161.2 O
6 december	14:26	59	22:06	58S	05:51	301	5.6	3.8	160.1 O
7 december	14:22	59	22:02	58S	05:47	301	5.6	3.8	159.1 O
8 december	14:18	59	21:58	58S	05:43	301	5.6	3.8	158.0 O
9 december	14:14	59	21:54	58S	05:39	301	5.6	3.8	157.0 O
10 december	14:10	59	21:50	58S	05:35	301	5.6	3.8	155.9 O
11 december	14:06	59	21:46	58S	05:30	301	5.6	3.8	154.9 O
12 december	14:02	59	21:42	58S	05:26	301	5.6	3.8	153.8 O
13 december	13:58	59	21:38	58S	05:22	301	5.6	3.8	152.7 O
14 december	13:54	59	21:34	58S	05:18	301	5.6	3.8	151.7 O
15 december	13:50	59	21:30	58S	05:14	301	5.6	3.8	150.6 O
16 december	13:46	59	21:26	58S	05:10	301	5.7	3.8	149.6 O
17 december	13:42	59	21:22	58S	05:06	301	5.7	3.8	148.5 O
18 december	13:38	59	21:17	58S	05:01	301	5.7	3.8	147.5 O
19 december	13:34	59	21:13	58S	04:57	301	5.7	3.8	146.4 O
20 december	13:30	59	21:09	58S	04:53	301	5.7	3.8	145.4 O
21 december	13:26	59	21:05	58S	04:49	301	5.7	3.8	144.3 O
22 december	13:21	59	21:01	58S	04:45	301	5.7	3.8	143.3 O
23 december	13:17	59	20:57	58S	04:41	301	5.7	3.8	142.2 O
24 december	13:13	59	20:53	58S	04:37	301	5.7	3.8	141.2 O
25 december	13:09	59	20:49	58S	04:33	301	5.7	3.8	140.1 O
26 december	13:05	59	20:45	58S	04:29	301	5.7	3.7	139.1 O
27 december	13:01	59	20:41	58S	04:25	301	5.7	3.7	138.0 O
28 december	12:57	59	20:37	58S	04:20	301	5.7	3.7	137.0 O
29 december	12:53	59	20:33	58S	04:16	301	5.7	3.7	136.0 O
30 december	12:49	59	20:29	58S	04:12	301	5.7	3.7	134.9 O
31 december	12:45	59	20:25	58S	04:08	301	5.7	3.7	133.9 O

Neptunus

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
1 januari	10:56	94	16:43	36S	22:31	266	7.8	2.3	75.0 O
2 januari	10:52	94	16:39	36S	22:27	266	7.8	2.3	74.0 O
3 januari	10:48	94	16:35	36S	22:23	266	7.8	2.3	73.0 O
4 januari	10:44	94	16:32	36S	22:19	266	7.8	2.3	72.0 O
5 januari	10:40	94	16:28	36S	22:15	266	7.8	2.3	71.0 O
6 januari	10:36	94	16:24	36S	22:11	266	7.8	2.3	70.0 O
7 januari	10:32	94	16:20	36S	22:08	266	7.8	2.3	69.0 O
8 januari	10:28	94	16:16	36S	22:04	266	7.8	2.3	68.0 O
9 januari	10:24	94	16:12	36S	22:00	266	7.8	2.3	67.0 O
10 januari	10:20	94	16:08	36S	21:56	266	7.8	2.3	66.0 O
11 januari	10:17	94	16:04	36S	21:52	266	7.8	2.3	65.0 O
12 januari	10:13	94	16:01	36S	21:49	266	7.8	2.3	64.0 O
13 januari	10:09	94	15:57	36S	21:45	266	7.8	2.3	63.0 O
14 januari	10:05	94	15:53	36S	21:41	266	7.8	2.2	62.0 O
15 januari	10:01	94	15:49	36S	21:37	266	7.8	2.2	61.0 O
16 januari	09:57	94	15:45	36S	21:33	266	7.8	2.2	60.0 O
17 januari	09:53	94	15:41	36S	21:29	266	7.8	2.2	59.0 O
18 januari	09:49	94	15:37	36S	21:26	266	7.8	2.2	58.0 O
19 januari	09:45	94	15:34	36S	21:22	266	7.8	2.2	57.0 O
20 januari	09:42	94	15:30	36S	21:18	266	7.8	2.2	56.1 O
21 januari	09:38	94	15:26	36S	21:14	266	7.8	2.2	55.1 O
22 januari	09:34	94	15:22	36S	21:10	266	7.8	2.2	54.1 O
23 januari	09:30	94	15:18	36S	21:07	266	7.8	2.2	53.1 O
24 januari	09:26	94	15:14	36S	21:03	266	7.8	2.2	52.1 O
25 januari	09:22	94	15:11	36S	20:59	266	7.8	2.2	51.1 O
26 januari	09:18	94	15:07	36S	20:55	266	7.8	2.2	50.1 O
27 januari	09:14	94	15:03	36S	20:52	266	7.8	2.2	49.1 O
28 januari	09:10	94	14:59	36S	20:48	266	7.8	2.2	48.1 O
29 januari	09:07	94	14:55	36S	20:44	266	7.8	2.2	47.1 O
30 januari	09:03	94	14:51	36S	20:40	266	7.8	2.2	46.2 O
31 januari	08:59	94	14:48	36S	20:37	266	7.8	2.2	45.2 O
1 februari	08:55	94	14:44	36S	20:33	266	7.8	2.2	44.2 O
2 februari	08:51	94	14:40	36S	20:29	266	7.8	2.2	43.2 O
3 februari	08:47	94	14:36	36S	20:25	266	7.8	2.2	42.2 O
4 februari	08:43	94	14:32	36S	20:21	266	7.8	2.2	41.2 O
5 februari	08:39	94	14:29	36S	20:18	266	7.8	2.2	40.2 O
6 februari	08:35	94	14:25	36S	20:14	266	7.8	2.2	39.3 O
7 februari	08:32	94	14:21	37S	20:10	266	7.8	2.2	38.3 O
8 februari	08:28	94	14:17	37S	20:06	266	7.8	2.2	37.3 O
9 februari	08:24	94	14:13	37S	20:03	266	7.8	2.2	36.3 O
10 februari	08:20	94	14:09	37S	19:59	266	7.8	2.2	35.3 O
11 februari	08:16	94	14:06	37S	19:55	266	7.8	2.2	34.4 O
12 februari	08:12	94	14:02	37S	19:51	266	7.8	2.2	33.4 O
13 februari	08:08	93	13:58	37S	19:48	267	7.8	2.2	32.4 O
14 februari	08:04	93	13:54	37S	19:44	267	7.8	2.2	31.4 O
15 februari	08:01	93	13:50	37S	19:40	267	7.8	2.2	30.4 O
16 februari	07:57	93	13:47	37S	19:36	267	7.8	2.2	29.5 O
17 februari	07:53	93	13:43	37S	19:33	267	7.8	2.2	28.5 O
18 februari	07:49	93	13:39	37S	19:29	267	7.8	2.2	27.5 O
19 februari	07:45	93	13:35	37S	19:25	267	7.8	2.2	26.6 O
20 februari	07:41	93	13:31	37S	19:22	267	7.8	2.2	25.6 O
21 februari	07:37	93	13:28	37S	19:18	267	7.8	2.2	24.6 O

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
22 februari	07:33	93	13:24	37S	19:14	267	7.8	2.2	23.6 O
23 februari	07:30	93	13:20	37S	19:10	267	7.8	2.2	22.7 O
24 februari	07:26	93	13:16	37S	19:07	267	7.8	2.2	21.7 O
25 februari	07:22	93	13:12	37S	19:03	267	7.8	2.2	20.7 O
26 februari	07:18	93	13:09	37S	18:59	267	7.8	2.2	19.8 O
27 februari	07:14	93	13:05	37S	18:55	267	7.8	2.2	18.8 O
28 februari	07:10	93	13:01	37S	18:52	267	7.8	2.2	17.8 O
29 februari	07:06	93	12:57	37S	18:48	267	7.8	2.2	16.9 O
1 maart	07:02	93	12:53	37S	18:44	267	7.8	2.2	15.9 O
2 maart	06:59	93	12:50	37S	18:41	267	7.8	2.2	14.9 O
3 maart	06:55	93	12:46	37S	18:37	267	7.8	2.2	14.0 O
4 maart	06:51	93	12:42	37S	18:33	267	7.8	2.2	13.0 O
5 maart	06:47	93	12:38	37S	18:29	267	7.8	2.2	12.0 O
6 maart	06:43	93	12:34	37S	18:26	267	7.8	2.2	11.1 O
7 maart	06:39	93	12:31	37S	18:22	267	7.8	2.2	10.1 O
8 maart	06:35	93	12:27	37S	18:18	267	7.8	2.2	9.2 O
9 maart	06:32	93	12:23	37S	18:14	267	7.8	2.2	8.2 O
10 maart	06:28	93	12:19	37S	18:11	267	7.8	2.2	7.3 O
11 maart	06:24	93	12:15	37S	18:07	267	7.8	2.2	6.3 O
12 maart	06:20	93	12:12	37S	18:03	267	7.8	2.2	5.4 O
13 maart	06:16	93	12:08	37S	18:00	267	7.8	2.2	4.5 O
14 maart	06:12	93	12:04	37S	17:56	267	7.8	2.2	3.5 O
15 maart	06:08	93	12:00	37S	17:52	267	7.8	2.2	2.7 O
16 maart	06:04	93	11:56	37S	17:48	267	7.8	2.2	1.9 O
17 maart	06:01	93	11:53	37S	17:45	267	7.8	2.2	1.3 O
18 maart	05:57	93	11:49	37S	17:41	267	7.8	2.2	1.3 O
19 maart	05:53	93	11:45	37S	17:37	267	7.8	2.2	1.9 W
20 maart	05:49	93	11:41	37S	17:34	267	7.8	2.2	2.7 W
21 maart	05:45	93	11:37	37S	17:30	267	7.8	2.2	3.6 W
22 maart	05:41	93	11:34	37S	17:26	267	7.8	2.2	4.5 W
23 maart	05:37	93	11:30	37S	17:22	267	7.8	2.2	5.4 W
24 maart	05:34	93	11:26	37S	17:19	267	7.8	2.2	6.4 W
25 maart	05:30	93	11:22	37S	17:15	267	7.8	2.2	7.3 W
26 maart	05:26	93	11:18	37S	17:11	267	7.8	2.2	8.2 W
27 maart	05:22	93	11:15	37S	17:07	268	7.8	2.2	9.2 W
28 maart	05:18	92	11:11	37S	17:04	268	7.8	2.2	10.1 W
29 maart	05:14	92	11:07	37S	17:00	268	7.8	2.2	11.1 W
30 maart	05:10	92	11:03	37S	16:56	268	7.8	2.2	12.0 W
31 maart	05:06	92	11:00	37S	16:53	268	7.8	2.2	13.0 W
1 april	05:03	92	10:56	37S	16:49	268	7.8	2.2	13.9 W
2 april	04:59	92	10:52	37S	16:45	268	7.8	2.2	14.8 W
3 april	04:55	92	10:48	37S	16:41	268	7.8	2.2	15.8 W
4 april	04:51	92	10:44	37S	16:38	268	7.8	2.2	16.7 W
5 april	04:47	92	10:41	37S	16:34	268	7.8	2.2	17.7 W
6 april	04:43	92	10:37	37S	16:30	268	7.8	2.2	18.6 W
7 april	04:39	92	10:33	37S	16:26	268	7.8	2.2	19.6 W
8 april	04:36	92	10:29	37S	16:23	268	7.8	2.2	20.5 W
9 april	04:32	92	10:25	37S	16:19	268	7.8	2.2	21.5 W
10 april	04:28	92	10:22	37S	16:15	268	7.8	2.2	22.4 W
11 april	04:24	92	10:18	37S	16:12	268	7.8	2.2	23.4 W
12 april	04:20	92	10:14	37S	16:08	268	7.8	2.2	24.3 W
13 april	04:16	92	10:10	37S	16:04	268	7.8	2.2	25.2 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
14 april	04:12	92	10:06	37S	16:00	268	7.8	2.2	26.2 W
15 april	04:08	92	10:03	37S	15:57	268	7.8	2.2	27.1 W
16 april	04:05	92	09:59	37S	15:53	268	7.8	2.2	28.1 W
17 april	04:01	92	09:55	37S	15:49	268	7.8	2.2	29.0 W
18 april	03:57	92	09:51	38S	15:45	268	7.8	2.2	30.0 W
19 april	03:53	92	09:47	38S	15:42	268	7.8	2.2	30.9 W
20 april	03:49	92	09:43	38S	15:38	268	7.8	2.2	31.8 W
21 april	03:45	92	09:40	38S	15:34	268	7.8	2.2	32.8 W
22 april	03:41	92	09:36	38S	15:30	268	7.8	2.2	33.7 W
23 april	03:38	92	09:32	38S	15:27	268	7.8	2.2	34.7 W
24 april	03:34	92	09:28	38S	15:23	268	7.8	2.2	35.6 W
25 april	03:30	92	09:24	38S	15:19	268	7.8	2.2	36.6 W
26 april	03:26	92	09:21	38S	15:15	268	7.8	2.2	37.5 W
27 april	03:22	92	09:17	38S	15:12	268	7.8	2.2	38.4 W
28 april	03:18	92	09:13	38S	15:08	268	7.8	2.2	39.4 W
29 april	03:14	92	09:09	38S	15:04	268	7.8	2.2	40.3 W
30 april	03:10	92	09:05	38S	15:00	268	7.8	2.2	41.3 W
1 mei	03:06	92	09:02	38S	14:57	268	7.8	2.2	42.2 W
2 mei	03:03	92	08:58	38S	14:53	268	7.8	2.2	43.1 W
3 mei	02:59	92	08:54	38S	14:49	268	7.8	2.2	44.1 W
4 mei	02:55	92	08:50	38S	14:45	268	7.8	2.2	45.0 W
5 mei	02:51	92	08:46	38S	14:41	268	7.8	2.2	46.0 W
6 mei	02:47	92	08:42	38S	14:38	268	7.8	2.2	46.9 W
7 mei	02:43	92	08:39	38S	14:34	268	7.8	2.2	47.8 W
8 mei	02:39	92	08:35	38S	14:30	268	7.8	2.2	48.8 W
9 mei	02:35	92	08:31	38S	14:26	268	7.8	2.2	49.7 W
10 mei	02:32	92	08:27	38S	14:23	268	7.8	2.2	50.7 W
11 mei	02:28	92	08:23	38S	14:19	268	7.8	2.2	51.6 W
12 mei	02:24	92	08:19	38S	14:15	268	7.8	2.2	52.5 W
13 mei	02:20	92	08:16	38S	14:11	268	7.8	2.2	53.5 W
14 mei	02:16	92	08:12	38S	14:07	268	7.8	2.2	54.4 W
15 mei	02:12	92	08:08	38S	14:04	268	7.8	2.2	55.4 W
16 mei	02:08	92	08:04	38S	14:00	268	7.8	2.2	56.3 W
17 mei	02:04	92	08:00	38S	13:56	268	7.8	2.2	57.2 W
18 mei	02:00	91	07:56	38S	13:52	269	7.8	2.2	58.2 W
19 mei	01:57	91	07:52	38S	13:48	269	7.8	2.2	59.1 W
20 mei	01:53	91	07:49	38S	13:45	269	7.8	2.2	60.1 W
21 mei	01:49	91	07:45	38S	13:41	269	7.8	2.2	61.0 W
22 mei	01:45	91	07:41	38S	13:37	269	7.8	2.2	61.9 W
23 mei	01:41	91	07:37	38S	13:33	269	7.8	2.3	62.9 W
24 mei	01:37	91	07:33	38S	13:29	269	7.8	2.3	63.8 W
25 mei	01:33	91	07:29	38S	13:25	269	7.8	2.3	64.8 W
26 mei	01:29	91	07:26	38S	13:22	269	7.8	2.3	65.7 W
27 mei	01:25	91	07:22	38S	13:18	269	7.8	2.3	66.6 W
28 mei	01:22	91	07:18	38S	13:14	269	7.8	2.3	67.6 W
29 mei	01:18	91	07:14	38S	13:10	269	7.8	2.3	68.5 W
30 mei	01:14	91	07:10	38S	13:06	269	7.8	2.3	69.5 W
31 mei	01:10	91	07:06	38S	13:03	269	7.8	2.3	70.4 W
1 juni	01:06	91	07:02	38S	12:59	269	7.8	2.3	71.3 W
2 juni	01:02	91	06:58	38S	12:55	269	7.8	2.3	72.3 W
3 juni	00:58	91	06:55	38S	12:51	269	7.8	2.3	73.2 W
4 juni	00:54	91	06:51	38S	12:47	269	7.8	2.3	74.2 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
5 juni	00:50	91	06:47	385	12:43	269	7.8	2.3	75.1 W
6 juni	00:47	91	06:43	385	12:39	269	7.8	2.3	76.1 W
7 juni	00:43	91	06:39	385	12:36	269	7.8	2.3	77.0 W
8 juni	00:39	91	06:35	385	12:32	269	7.8	2.3	77.9 W
9 juni	00:35	91	06:31	385	12:28	269	7.8	2.3	78.9 W
10 juni	00:31	91	06:27	385	12:24	269	7.8	2.3	79.8 W
11 juni	00:27	91	06:24	385	12:20	269	7.8	2.3	80.8 W
12 juni	00:23	91	06:20	385	12:16	269	7.8	2.3	81.7 W
13 juni	00:19	91	06:16	385	12:12	269	7.8	2.3	82.7 W
14 juni	00:15	91	06:12	385	12:08	269	7.8	2.3	83.6 W
15 juni	00:11	91	06:08	385	12:05	269	7.8	2.3	84.6 W
16 juni	00:07	91	06:04	385	12:01	269	7.8	2.3	85.5 W
17 juni	00:03	91	06:00	385	11:57	269	7.8	2.3	86.4 W
18 juni	23:56	91	05:56	385	11:53	269	7.8	2.3	87.4 W
19 juni	23:52	91	05:52	385	11:49	269	7.8	2.3	88.3 W
20 juni	23:48	91	05:48	385	11:45	269	7.8	2.3	89.3 W
21 juni	23:44	91	05:45	385	11:41	269	7.8	2.3	90.2 W
22 juni	23:40	91	05:41	385	11:37	269	7.8	2.3	91.2 W
23 juni	23:36	91	05:37	385	11:33	269	7.8	2.3	92.1 W
24 juni	23:32	91	05:33	385	11:30	269	7.8	2.3	93.1 W
25 juni	23:28	91	05:29	385	11:26	269	7.8	2.3	94.0 W
26 juni	23:24	91	05:25	385	11:22	269	7.8	2.3	95.0 W
27 juni	23:20	91	05:21	385	11:18	269	7.8	2.3	95.9 W
28 juni	23:16	91	05:17	385	11:14	269	7.8	2.3	96.9 W
29 juni	23:13	91	05:13	385	11:10	269	7.8	2.3	97.8 W
30 juni	23:09	91	05:09	385	11:06	269	7.8	2.3	98.8 W
1 juli	23:05	91	05:05	385	11:02	269	7.8	2.3	99.7 W
2 juli	23:01	91	05:01	385	10:58	269	7.8	2.3	100.7 W
3 juli	22:57	91	04:58	385	10:54	269	7.8	2.3	101.6 W
4 juli	22:53	91	04:54	385	10:50	269	7.8	2.3	102.6 W
5 juli	22:49	91	04:50	385	10:46	269	7.7	2.3	103.5 W
6 juli	22:45	91	04:46	385	10:42	269	7.7	2.3	104.5 W
7 juli	22:41	91	04:42	385	10:38	269	7.7	2.3	105.5 W
8 juli	22:37	91	04:38	385	10:35	269	7.7	2.3	106.4 W
9 juli	22:33	91	04:34	385	10:31	269	7.7	2.3	107.4 W
10 juli	22:29	91	04:30	385	10:27	269	7.7	2.3	108.3 W
11 juli	22:25	91	04:26	385	10:23	269	7.7	2.3	109.3 W
12 juli	22:21	91	04:22	385	10:19	269	7.7	2.3	110.2 W
13 juli	22:18	91	04:18	385	10:15	269	7.7	2.3	111.2 W
14 juli	22:14	91	04:14	385	10:11	269	7.7	2.3	112.2 W
15 juli	22:10	91	04:10	385	10:07	269	7.7	2.3	113.1 W
16 juli	22:06	91	04:06	385	10:03	269	7.7	2.3	114.1 W
17 juli	22:02	91	04:02	385	09:59	269	7.7	2.3	115.0 W
18 juli	21:58	91	03:58	385	09:55	269	7.7	2.3	116.0 W
19 juli	21:54	91	03:54	385	09:51	269	7.7	2.3	117.0 W
20 juli	21:50	91	03:50	385	09:47	269	7.7	2.3	117.9 W
21 juli	21:46	91	03:46	385	09:43	269	7.7	2.3	118.9 W
22 juli	21:42	91	03:42	385	09:39	269	7.7	2.3	119.9 W
23 juli	21:38	91	03:38	385	09:35	269	7.7	2.3	120.8 W
24 juli	21:34	91	03:35	385	09:31	269	7.7	2.3	121.8 W
25 juli	21:30	91	03:31	385	09:27	269	7.7	2.3	122.8 W
26 juli	21:26	91	03:27	385	09:23	269	7.7	2.3	123.7 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimuth (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimuth (°)			
2024									
27 juli	21:22	91	03:23	385	09:19	269	7.7	2.3	124.7 W
28 juli	21:18	91	03:19	385	09:15	269	7.7	2.3	125.7 W
29 juli	21:14	91	03:15	385	09:11	269	7.7	2.3	126.6 W
30 juli	21:10	91	03:11	385	09:07	269	7.7	2.3	127.6 W
31 juli	21:06	91	03:07	385	09:03	269	7.7	2.3	128.6 W
1 augustus	21:03	91	03:03	385	08:59	269	7.7	2.3	129.5 W
2 augustus	20:59	91	02:59	385	08:55	269	7.7	2.3	130.5 W
3 augustus	20:55	91	02:55	385	08:51	269	7.7	2.3	131.5 W
4 augustus	20:51	91	02:51	385	08:47	269	7.7	2.3	132.5 W
5 augustus	20:47	91	02:47	385	08:43	269	7.7	2.3	133.4 W
6 augustus	20:43	91	02:43	385	08:39	269	7.7	2.3	134.4 W
7 augustus	20:39	91	02:39	385	08:35	269	7.7	2.3	135.4 W
8 augustus	20:35	91	02:35	385	08:31	269	7.7	2.3	136.3 W
9 augustus	20:31	91	02:31	385	08:27	269	7.7	2.3	137.3 W
10 augustus	20:27	91	02:27	385	08:23	269	7.7	2.3	138.3 W
11 augustus	20:23	92	02:23	385	08:18	268	7.7	2.3	139.3 W
12 augustus	20:19	92	02:19	385	08:14	268	7.7	2.3	140.3 W
13 augustus	20:15	92	02:15	385	08:10	268	7.7	2.3	141.2 W
14 augustus	20:11	92	02:11	385	08:06	268	7.7	2.3	142.2 W
15 augustus	20:07	92	02:07	385	08:02	268	7.7	2.3	143.2 W
16 augustus	20:03	92	02:03	385	07:58	268	7.7	2.3	144.2 W
17 augustus	19:59	92	01:59	385	07:54	268	7.7	2.3	145.2 W
18 augustus	19:55	92	01:55	385	07:50	268	7.7	2.4	146.1 W
19 augustus	19:51	92	01:51	385	07:46	268	7.7	2.4	147.1 W
20 augustus	19:47	92	01:47	385	07:42	268	7.7	2.4	148.1 W
21 augustus	19:43	92	01:43	385	07:38	268	7.7	2.4	149.1 W
22 augustus	19:39	92	01:39	385	07:34	268	7.7	2.4	150.1 W
23 augustus	19:35	92	01:35	385	07:30	268	7.7	2.4	151.1 W
24 augustus	19:31	92	01:31	385	07:26	268	7.7	2.4	152.0 W
25 augustus	19:27	92	01:27	385	07:22	268	7.7	2.4	153.0 W
26 augustus	19:23	92	01:23	385	07:18	268	7.7	2.4	154.0 W
27 augustus	19:19	92	01:19	385	07:14	268	7.7	2.4	155.0 W
28 augustus	19:16	92	01:15	385	07:10	268	7.7	2.4	156.0 W
29 augustus	19:12	92	01:11	385	07:05	268	7.7	2.4	157.0 W
30 augustus	19:08	92	01:06	385	07:01	268	7.7	2.4	158.0 W
31 augustus	19:04	92	01:02	385	06:57	268	7.7	2.4	159.0 W
1 september	19:00	92	00:58	385	06:53	268	7.7	2.4	160.0 W
2 september	18:56	92	00:54	385	06:49	268	7.7	2.4	161.0 W
3 september	18:52	92	00:50	385	06:45	268	7.7	2.4	161.9 W
4 september	18:48	92	00:46	385	06:41	268	7.7	2.4	162.9 W
5 september	18:44	92	00:42	385	06:37	268	7.7	2.4	163.9 W
6 september	18:40	92	00:38	385	06:33	268	7.7	2.4	164.9 W
7 september	18:36	92	00:34	385	06:29	268	7.7	2.4	165.9 W
8 september	18:32	92	00:30	385	06:25	268	7.7	2.4	166.9 W
9 september	18:28	92	00:26	385	06:21	268	7.7	2.4	167.9 W
10 september	18:24	92	00:22	385	06:16	268	7.7	2.4	168.9 W
11 september	18:20	92	00:18	385	06:12	268	7.7	2.4	169.9 W
12 september	18:16	92	00:14	385	06:08	268	7.7	2.4	170.9 W
13 september	18:12	92	00:10	385	06:04	268	7.7	2.4	171.9 W
14 september	18:08	92	00:06	375	06:00	268	7.7	2.4	172.8 W
15 september	18:04	92	00:02	375	05:56	268	7.7	2.4	173.8 W
16 september	18:00	92	23:54	375	05:52	268	7.7	2.4	174.8 W

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
17 september	17:56	92	23:50	375	05:48	268	7.7	2.4	175.8 W
18 september	17:52	92	23:46	375	05:44	268	7.7	2.4	176.7 W
19 september	17:48	92	23:42	375	05:40	268	7.7	2.4	177.6 W
20 september	17:44	92	23:38	375	05:36	268	7.7	2.4	178.3 W
21 september	17:40	92	23:34	375	05:32	268	7.7	2.4	178.7 W
22 september	17:36	92	23:30	375	05:27	268	7.7	2.4	178.3 O
23 september	17:32	92	23:26	375	05:23	268	7.7	2.4	177.6 O
24 september	17:28	92	23:22	375	05:19	268	7.7	2.4	176.7 O
25 september	17:24	92	23:18	375	05:15	268	7.7	2.4	175.8 O
26 september	17:20	92	23:14	375	05:11	268	7.7	2.4	174.8 O
27 september	17:16	92	23:10	375	05:07	268	7.7	2.4	173.8 O
28 september	17:12	92	23:06	375	05:03	268	7.7	2.4	172.8 O
29 september	17:08	92	23:02	375	04:59	268	7.7	2.4	171.8 O
30 september	17:04	92	22:58	375	04:55	268	7.7	2.4	170.8 O
1 oktober	17:00	92	22:53	375	04:51	268	7.7	2.4	169.8 O
2 oktober	16:56	92	22:49	375	04:47	268	7.7	2.4	168.8 O
3 oktober	16:52	92	22:45	375	04:43	268	7.7	2.4	167.8 O
4 oktober	16:48	92	22:41	375	04:38	268	7.7	2.4	166.8 O
5 oktober	16:44	92	22:37	375	04:34	268	7.7	2.4	165.8 O
6 oktober	16:40	92	22:33	375	04:30	268	7.7	2.4	164.8 O
7 oktober	16:36	92	22:29	375	04:26	268	7.7	2.4	163.8 O
8 oktober	16:32	92	22:25	375	04:22	268	7.7	2.4	162.8 O
9 oktober	16:29	92	22:21	375	04:18	268	7.7	2.4	161.8 O
10 oktober	16:25	92	22:17	375	04:14	268	7.7	2.4	160.8 O
11 oktober	16:21	93	22:13	375	04:10	267	7.7	2.4	159.8 O
12 oktober	16:17	93	22:09	375	04:06	267	7.7	2.4	158.8 O
13 oktober	16:13	93	22:05	375	04:02	267	7.7	2.4	157.7 O
14 oktober	16:09	93	22:01	375	03:58	267	7.7	2.4	156.7 O
15 oktober	16:05	93	21:57	375	03:54	267	7.7	2.4	155.7 O
16 oktober	16:01	93	21:53	375	03:50	267	7.7	2.4	154.7 O
17 oktober	15:57	93	21:49	375	03:46	267	7.7	2.4	153.7 O
18 oktober	15:53	93	21:45	375	03:41	267	7.7	2.4	152.7 O
19 oktober	15:49	93	21:41	375	03:37	267	7.7	2.4	151.7 O
20 oktober	15:45	93	21:37	375	03:33	267	7.7	2.4	150.6 O
21 oktober	15:41	93	21:33	375	03:29	267	7.7	2.4	149.6 O
22 oktober	15:37	93	21:29	375	03:25	267	7.7	2.4	148.6 O
23 oktober	15:33	93	21:25	375	03:21	267	7.7	2.4	147.6 O
24 oktober	15:29	93	21:21	375	03:17	267	7.7	2.3	146.6 O
25 oktober	15:25	93	21:17	375	03:13	267	7.7	2.3	145.6 O
26 oktober	15:21	93	21:13	375	03:09	267	7.7	2.3	144.5 O
27 oktober	15:17	93	21:09	375	03:05	267	7.7	2.3	143.5 O
28 oktober	15:13	93	21:05	375	03:01	267	7.7	2.3	142.5 O
29 oktober	15:09	93	21:01	375	02:57	267	7.7	2.3	141.5 O
30 oktober	15:05	93	20:57	375	02:53	267	7.7	2.3	140.5 O
31 oktober	15:01	93	20:53	375	02:49	267	7.7	2.3	139.4 O
1 november	14:57	93	20:49	375	02:45	267	7.7	2.3	138.4 O
2 november	14:53	93	20:45	375	02:41	267	7.7	2.3	137.4 O
3 november	14:49	93	20:41	375	02:37	267	7.7	2.3	136.4 O
4 november	14:45	93	20:37	375	02:33	267	7.7	2.3	135.4 O
5 november	14:41	93	20:33	375	02:29	267	7.7	2.3	134.4 O
6 november	14:37	93	20:29	375	02:25	267	7.7	2.3	133.3 O
7 november	14:33	93	20:25	375	02:21	267	7.7	2.3	132.3 O
8 november	14:29	93	20:21	375	02:17	267	7.7	2.3	131.3 O

	Opkomst		Culminatie		Ondergang		Magnitude	Diameter (")	Elongatie (°)
	UT (h:m)	Azimut (°)	UT (h:m)	Hoogte (°)	UT (h:m)	Azimut (°)			
2024									
9 november	14:25	93	20:17	375	02:12	267	7.7	2.3	130.3 O
10 november	14:21	93	20:13	375	02:08	267	7.7	2.3	129.3 O
11 november	14:18	93	20:09	375	02:04	267	7.7	2.3	128.2 O
12 november	14:14	93	20:05	375	02:00	267	7.7	2.3	127.2 O
13 november	14:10	93	20:01	375	01:56	267	7.7	2.3	126.2 O
14 november	14:06	93	19:57	375	01:52	267	7.7	2.3	125.2 O
15 november	14:02	93	19:53	375	01:48	267	7.7	2.3	124.2 O
16 november	13:58	93	19:49	375	01:44	267	7.7	2.3	123.1 O
17 november	13:54	93	19:45	375	01:40	267	7.7	2.3	122.1 O
18 november	13:50	93	19:41	375	01:36	267	7.7	2.3	121.1 O
19 november	13:46	93	19:37	375	01:32	267	7.7	2.3	120.1 O
20 november	13:42	93	19:33	375	01:28	267	7.7	2.3	119.1 O
21 november	13:38	93	19:29	375	01:24	267	7.7	2.3	118.0 O
22 november	13:34	93	19:25	375	01:21	267	7.7	2.3	117.0 O
23 november	13:30	93	19:21	375	01:17	267	7.7	2.3	116.0 O
24 november	13:26	93	19:17	375	01:13	267	7.7	2.3	115.0 O
25 november	13:22	93	19:13	375	01:09	267	7.7	2.3	114.0 O
26 november	13:18	93	19:09	375	01:05	267	7.7	2.3	113.0 O
27 november	13:14	93	19:05	375	01:01	267	7.7	2.3	111.9 O
28 november	13:10	93	19:02	375	00:57	267	7.7	2.3	110.9 O
29 november	13:06	93	18:58	375	00:53	267	7.7	2.3	109.9 O
30 november	13:02	93	18:54	375	00:49	267	7.7	2.3	108.9 O
1 december	12:59	93	18:50	375	00:45	267	7.7	2.3	107.9 O
2 december	12:55	93	18:46	375	00:41	267	7.7	2.3	106.8 O
3 december	12:51	93	18:42	375	00:37	267	7.7	2.3	105.8 O
4 december	12:47	93	18:38	375	00:33	267	7.7	2.3	104.8 O
5 december	12:43	93	18:34	375	00:29	267	7.7	2.3	103.8 O
6 december	12:39	93	18:30	375	00:25	267	7.7	2.3	102.8 O
7 december	12:35	93	18:26	375	00:21	267	7.7	2.3	101.8 O
8 december	12:31	93	18:22	375	00:17	267	7.7	2.3	100.7 O
9 december	12:27	93	18:18	375	00:13	267	7.7	2.3	99.7 O
10 december	12:23	93	18:14	375	00:09	267	7.7	2.3	98.7 O
11 december	12:19	93	18:10	375	00:05	267	7.7	2.3	97.7 O
12 december	12:15	93	18:06	375	00:02	267	7.7	2.3	96.7 O
13 december	12:11	93	18:02	375	23:54	267	7.7	2.3	95.7 O
14 december	12:07	93	17:59	375	23:50	267	7.7	2.3	94.7 O
15 december	12:03	93	17:55	375	23:46	267	7.8	2.3	93.6 O
16 december	11:59	93	17:51	375	23:42	267	7.8	2.3	92.6 O
17 december	11:56	93	17:47	375	23:38	267	7.8	2.3	91.6 O
18 december	11:52	93	17:43	375	23:34	267	7.8	2.3	90.6 O
19 december	11:48	93	17:39	375	23:30	267	7.8	2.3	89.6 O
20 december	11:44	93	17:35	375	23:26	267	7.8	2.3	88.6 O
21 december	11:40	93	17:31	375	23:23	267	7.8	2.3	87.6 O
22 december	11:36	93	17:27	375	23:19	267	7.8	2.3	86.6 O
23 december	11:32	93	17:23	375	23:15	267	7.8	2.3	85.6 O
24 december	11:28	93	17:19	375	23:11	267	7.8	2.3	84.5 O
25 december	11:24	93	17:16	375	23:07	267	7.8	2.3	83.5 O
26 december	11:20	93	17:12	375	23:03	267	7.8	2.3	82.5 O
27 december	11:16	93	17:08	375	22:59	267	7.8	2.3	81.5 O
28 december	11:12	93	17:04	375	22:55	267	7.8	2.3	80.5 O
29 december	11:09	93	17:00	375	22:52	267	7.8	2.3	79.5 O
30 december	11:05	93	16:56	375	22:48	267	7.8	2.3	78.5 O
31 december	11:01	93	16:52	375	22:44	267	7.8	2.3	77.5 O