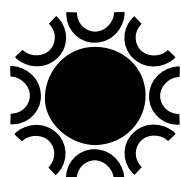


Hemelkalender 2023

ASTRONOMISCH JAARBOEK, UITGEGEVEN DOOR DE VERENIGING VOOR STERRENKUNDE



49^{STE} JAARGANG

Inhoud

| | |
|-----------------|----|
| Zon, schemering | 4 |
| Maan | 12 |
| Mercurius | 20 |
| Venus | 28 |
| Mars | 36 |
| Jupiter | 44 |
| Saturnus | 52 |
| Uranus | 60 |
| Neptunus | 68 |

Zon, schemering

| 2023 | 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 | 5:44 | 6:24 | 7:06 | 7:45 | 127 | 11:46 | 16 | 15:48 | 233 | 16:27 | 17:09 | 17:49 | 0.983337 | 32.5 |
| 2 januari | 5:44 | 6:24 | 7:06 | 7:45 | 127 | 11:47 | 16 | 15:49 | 233 | 16:28 | 17:10 | 17:50 | 0.983318 | 32.5 |
| 3 januari | 5:44 | 6:24 | 7:06 | 7:45 | 127 | 11:47 | 16 | 15:50 | 234 | 16:29 | 17:11 | 17:51 | 0.983304 | 32.5 |
| 4 januari | 5:44 | 6:23 | 7:05 | 7:44 | 126 | 11:47 | 17 | 15:51 | 234 | 16:30 | 17:12 | 17:52 | 0.983297 | 32.5 |
| 5 januari | 5:44 | 6:23 | 7:05 | 7:44 | 126 | 11:48 | 17 | 15:52 | 234 | 16:31 | 17:13 | 17:53 | 0.983296 | 32.5 |
| 6 januari | 5:43 | 6:23 | 7:05 | 7:44 | 126 | 11:48 | 17 | 15:53 | 234 | 16:32 | 17:14 | 17:54 | 0.983301 | 32.5 |
| 7 januari | 5:43 | 6:23 | 7:05 | 7:43 | 126 | 11:49 | 17 | 15:55 | 234 | 16:33 | 17:15 | 17:55 | 0.983312 | 32.5 |
| 8 januari | 5:43 | 6:23 | 7:04 | 7:43 | 126 | 11:49 | 17 | 15:56 | 235 | 16:34 | 17:16 | 17:56 | 0.983330 | 32.5 |
| 9 januari | 5:43 | 6:22 | 7:04 | 7:42 | 125 | 11:50 | 17 | 15:57 | 235 | 16:36 | 17:17 | 17:57 | 0.983354 | 32.5 |
| 10 januari | 5:42 | 6:22 | 7:04 | 7:42 | 125 | 11:50 | 17 | 15:59 | 235 | 16:37 | 17:18 | 17:58 | 0.983385 | 32.5 |
| 11 januari | 5:42 | 6:22 | 7:03 | 7:41 | 125 | 11:50 | 17 | 16:00 | 235 | 16:38 | 17:20 | 17:59 | 0.983421 | 32.5 |
| 12 januari | 5:42 | 6:21 | 7:03 | 7:41 | 124 | 11:51 | 18 | 16:01 | 236 | 16:39 | 17:21 | 18:00 | 0.983463 | 32.5 |
| 13 januari | 5:41 | 6:21 | 7:02 | 7:40 | 124 | 11:51 | 18 | 16:03 | 236 | 16:41 | 17:22 | 18:02 | 0.983511 | 32.5 |
| 14 januari | 5:41 | 6:20 | 7:01 | 7:39 | 124 | 11:52 | 18 | 16:04 | 236 | 16:42 | 17:23 | 18:03 | 0.983565 | 32.5 |
| 15 januari | 5:40 | 6:20 | 7:01 | 7:39 | 124 | 11:52 | 18 | 16:06 | 237 | 16:44 | 17:25 | 18:04 | 0.983624 | 32.5 |
| 16 januari | 5:40 | 6:19 | 7:00 | 7:38 | 123 | 11:52 | 18 | 16:07 | 237 | 16:45 | 17:26 | 18:05 | 0.983688 | 32.5 |
| 17 januari | 5:39 | 6:18 | 6:59 | 7:37 | 123 | 11:53 | 19 | 16:09 | 237 | 16:46 | 17:27 | 18:07 | 0.983757 | 32.5 |
| 18 januari | 5:39 | 6:18 | 6:59 | 7:36 | 122 | 11:53 | 19 | 16:10 | 238 | 16:48 | 17:29 | 18:08 | 0.983830 | 32.5 |
| 19 januari | 5:38 | 6:17 | 6:58 | 7:35 | 122 | 11:53 | 19 | 16:12 | 238 | 16:49 | 17:30 | 18:09 | 0.983907 | 32.5 |
| 20 januari | 5:37 | 6:16 | 6:57 | 7:34 | 122 | 11:54 | 19 | 16:14 | 238 | 16:51 | 17:31 | 18:11 | 0.983988 | 32.5 |
| 21 januari | 5:36 | 6:15 | 6:56 | 7:33 | 121 | 11:54 | 19 | 16:15 | 239 | 16:52 | 17:33 | 18:12 | 0.984072 | 32.5 |
| 22 januari | 5:36 | 6:14 | 6:55 | 7:32 | 121 | 11:54 | 20 | 16:17 | 239 | 16:54 | 17:34 | 18:13 | 0.984160 | 32.5 |
| 23 januari | 5:35 | 6:14 | 6:54 | 7:31 | 121 | 11:54 | 20 | 16:19 | 240 | 16:55 | 17:36 | 18:15 | 0.984251 | 32.5 |
| 24 januari | 5:34 | 6:13 | 6:53 | 7:29 | 120 | 11:55 | 20 | 16:20 | 240 | 16:57 | 17:37 | 18:16 | 0.984345 | 32.5 |
| 25 januari | 5:33 | 6:12 | 6:52 | 7:28 | 120 | 11:55 | 20 | 16:22 | 240 | 16:58 | 17:39 | 18:17 | 0.984443 | 32.5 |
| 26 januari | 5:32 | 6:11 | 6:51 | 7:27 | 119 | 11:55 | 21 | 16:24 | 241 | 17:00 | 17:40 | 18:19 | 0.984544 | 32.5 |
| 27 januari | 5:31 | 6:10 | 6:50 | 7:26 | 119 | 11:55 | 21 | 16:25 | 241 | 17:02 | 17:42 | 18:20 | 0.984649 | 32.5 |
| 28 januari | 5:30 | 6:08 | 6:48 | 7:24 | 118 | 11:55 | 21 | 16:27 | 242 | 17:03 | 17:43 | 18:22 | 0.984758 | 32.5 |
| 29 januari | 5:29 | 6:07 | 6:47 | 7:23 | 118 | 11:56 | 21 | 16:29 | 242 | 17:05 | 17:45 | 18:23 | 0.984872 | 32.5 |
| 30 januari | 5:28 | 6:06 | 6:46 | 7:22 | 117 | 11:56 | 22 | 16:31 | 243 | 17:06 | 17:46 | 18:25 | 0.984991 | 32.5 |
| 31 januari | 5:26 | 6:05 | 6:45 | 7:20 | 117 | 11:56 | 22 | 16:32 | 243 | 17:08 | 17:48 | 18:26 | 0.985114 | 32.5 |
| 1 februari | 5:25 | 6:04 | 6:43 | 7:19 | 117 | 11:56 | 22 | 16:34 | 244 | 17:10 | 17:49 | 18:28 | 0.985243 | 32.5 |
| 2 februari | 5:24 | 6:02 | 6:42 | 7:17 | 116 | 11:56 | 22 | 16:36 | 244 | 17:11 | 17:51 | 18:29 | 0.985376 | 32.5 |
| 3 februari | 5:23 | 6:01 | 6:40 | 7:16 | 116 | 11:56 | 23 | 16:38 | 245 | 17:13 | 17:52 | 18:31 | 0.985516 | 32.5 |
| 4 februari | 5:21 | 6:00 | 6:39 | 7:14 | 115 | 11:56 | 23 | 16:40 | 245 | 17:15 | 17:54 | 18:32 | 0.985660 | 32.5 |
| 5 februari | 5:20 | 5:58 | 6:37 | 7:12 | 115 | 11:57 | 23 | 16:41 | 246 | 17:16 | 17:56 | 18:34 | 0.985810 | 32.4 |
| 6 februari | 5:19 | 5:57 | 6:36 | 7:11 | 114 | 11:57 | 24 | 16:43 | 246 | 17:18 | 17:57 | 18:35 | 0.985966 | 32.4 |
| 7 februari | 5:17 | 5:55 | 6:34 | 7:09 | 114 | 11:57 | 24 | 16:45 | 247 | 17:20 | 17:59 | 18:37 | 0.986127 | 32.4 |
| 8 februari | 5:16 | 5:54 | 6:33 | 7:07 | 113 | 11:57 | 24 | 16:47 | 247 | 17:21 | 18:00 | 18:39 | 0.986293 | 32.4 |
| 9 februari | 5:14 | 5:52 | 6:31 | 7:06 | 112 | 11:57 | 25 | 16:48 | 248 | 17:23 | 18:02 | 18:40 | 0.986465 | 32.4 |
| 10 februari | 5:13 | 5:51 | 6:30 | 7:04 | 112 | 11:57 | 25 | 16:50 | 248 | 17:25 | 18:03 | 18:42 | 0.986642 | 32.4 |
| 11 februari | 5:11 | 5:49 | 6:28 | 7:02 | 111 | 11:57 | 25 | 16:52 | 249 | 17:26 | 18:05 | 18:43 | 0.986824 | 32.4 |
| 12 februari | 5:10 | 5:48 | 6:26 | 7:01 | 111 | 11:57 | 26 | 16:54 | 249 | 17:28 | 18:07 | 18:45 | 0.987010 | 32.4 |
| 13 februari | 5:08 | 5:46 | 6:25 | 6:59 | 110 | 11:57 | 26 | 16:56 | 250 | 17:30 | 18:08 | 18:46 | 0.987201 | 32.4 |
| 14 februari | 5:06 | 5:44 | 6:23 | 6:57 | 110 | 11:57 | 26 | 16:57 | 250 | 17:31 | 18:10 | 18:48 | 0.987396 | 32.4 |
| 15 februari | 5:05 | 5:43 | 6:21 | 6:55 | 109 | 11:57 | 27 | 16:59 | 251 | 17:33 | 18:12 | 18:50 | 0.987594 | 32.4 |
| 16 februari | 5:03 | 5:41 | 6:19 | 6:53 | 109 | 11:57 | 27 | 17:01 | 252 | 17:35 | 18:13 | 18:51 | 0.987796 | 32.4 |
| 17 februari | 5:01 | 5:39 | 6:17 | 6:51 | 108 | 11:57 | 27 | 17:03 | 252 | 17:36 | 18:15 | 18:53 | 0.988001 | 32.4 |
| 18 februari | 4:59 | 5:37 | 6:16 | 6:49 | 108 | 11:56 | 28 | 17:04 | 253 | 17:38 | 18:16 | 18:55 | 0.988208 | 32.4 |
| 19 februari | 4:58 | 5:36 | 6:14 | 6:47 | 107 | 11:56 | 28 | 17:06 | 253 | 17:40 | 18:18 | 18:56 | 0.988418 | 32.4 |
| 20 februari | 4:56 | 5:34 | 6:12 | 6:45 | 106 | 11:56 | 28 | 17:08 | 254 | 17:41 | 18:20 | 18:58 | 0.988629 | 32.4 |
| 21 februari | 4:54 | 5:32 | 6:10 | 6:43 | 106 | 11:56 | 29 | 17:10 | 254 | 17:43 | 18:21 | 18:59 | 0.988842 | 32.3 |

Maan

| 2023 | UT | Verschijsel | Afstand (km) |
|-------------|-------|------------------|--------------|
| 1 januari | 15:25 | Klimmende knoop | |
| 6 januari | 23:08 | Volle Maan | |
| 8 januari | 09:19 | Apogeum | 406458 |
| 15 januari | 02:10 | Laatste Kwartier | |
| 16 januari | 06:32 | Dalende knoop | |
| 21 januari | 20:53 | Nieuwe Maan | |
| 21 januari | 20:57 | Perigeum | 356569 |
| 28 januari | 15:19 | Eerste Kwartier | |
| 28 januari | 16:05 | Klimmende knoop | |
| 4 februari | 08:55 | Apogeum | 406476 |
| 5 februari | 18:29 | Volle Maan | |
| 12 februari | 07:31 | Dalende knoop | |
| 13 februari | 16:01 | Laatste Kwartier | |
| 19 februari | 09:06 | Perigeum | 358267 |
| 20 februari | 07:06 | Nieuwe Maan | |
| 24 februari | 18:56 | Klimmende knoop | |
| 27 februari | 08:06 | Eerste Kwartier | |
| 3 maart | 18:00 | Apogeum | 405889 |
| 7 maart | 12:40 | Volle Maan | |
| 11 maart | 08:53 | Dalende knoop | |
| 15 maart | 02:08 | Laatste Kwartier | |
| 19 maart | 15:12 | Perigeum | 362696 |
| 21 maart | 17:23 | Nieuwe Maan | |
| 24 maart | 02:08 | Klimmende knoop | |
| 29 maart | 02:32 | Eerste Kwartier | |
| 31 maart | 11:17 | Apogeum | 404919 |
| 6 april | 04:34 | Volle Maan | |
| 7 april | 13:51 | Dalende knoop | |
| 13 april | 09:11 | Laatste Kwartier | |
| 16 april | 02:24 | Perigeum | 367968 |
| 20 april | 04:12 | Nieuwe Maan | |
| 20 april | 11:32 | Klimmende knoop | |
| 27 april | 21:20 | Eerste Kwartier | |
| 28 april | 06:43 | Apogeum | 404299 |
| 4 mei | 21:57 | Dalende knoop | |
| 5 mei | 17:34 | Volle Maan | |
| 11 mei | 05:05 | Perigeum | 369343 |
| 12 mei | 14:28 | Laatste Kwartier | |
| 17 mei | 19:36 | Klimmende knoop | |
| 19 mei | 15:53 | Nieuwe Maan | |
| 26 mei | 01:39 | Apogeum | 404509 |
| 27 mei | 15:22 | Eerste Kwartier | |
| 1 juni | 06:23 | Dalende knoop | |
| 4 juni | 03:42 | Volle Maan | |
| 6 juni | 23:06 | Perigeum | 364861 |
| 10 juni | 19:31 | Laatste Kwartier | |
| 14 juni | 00:05 | Klimmende knoop | |
| 18 juni | 04:37 | Nieuwe Maan | |
| 22 juni | 18:30 | Apogeum | 405385 |
| 26 juni | 07:50 | Eerste Kwartier | |
| 28 juni | 12:22 | Dalende knoop | |
| 3 juli | 11:39 | Volle Maan | |

| 2023 | UT | Verschijsel | Afstand (km) |
|--------------|-------|------------------|--------------|
| 4 juli | 22:25 | Perigeum | 360149 |
| 10 juli | 01:48 | Laatste Kwartier | |
| 11 juli | 01:23 | Klimmende knoop | |
| 17 juli | 18:32 | Nieuwe Maan | |
| 20 juli | 06:57 | Apogeum | 406289 |
| 25 juli | 15:05 | Dalende knoop | |
| 25 juli | 22:07 | Eerste Kwartier | |
| 1 augustus | 18:32 | Volle Maan | |
| 2 augustus | 05:52 | Perigeum | 357311 |
| 7 augustus | 02:46 | Klimmende knoop | |
| 8 augustus | 10:28 | Laatste Kwartier | |
| 16 augustus | 11:54 | Apogeum | 406634 |
| 16 augustus | 09:38 | Nieuwe Maan | |
| 21 augustus | 16:23 | Dalende knoop | |
| 24 augustus | 09:57 | Eerste Kwartier | |
| 30 augustus | 15:54 | Perigeum | 357181 |
| 31 augustus | 01:36 | Volle Maan | |
| 3 september | 07:44 | Klimmende knoop | |
| 6 september | 22:21 | Laatste Kwartier | |
| 12 september | 15:43 | Apogeum | 406291 |
| 15 september | 01:40 | Nieuwe Maan | |
| 17 september | 19:18 | Dalende knoop | |
| 22 september | 19:32 | Eerste Kwartier | |
| 28 september | 00:59 | Perigeum | 359911 |
| 29 september | 09:57 | Volle Maan | |
| 30 september | 16:49 | Klimmende knoop | |
| 6 oktober | 13:48 | Laatste Kwartier | |
| 10 oktober | 03:42 | Apogeum | 405425 |
| 14 oktober | 17:55 | Nieuwe Maan | |
| 15 oktober | 01:11 | Dalende knoop | |
| 22 oktober | 03:29 | Eerste Kwartier | |
| 26 oktober | 03:02 | Perigeum | 364872 |
| 28 oktober | 03:14 | Klimmende knoop | |
| 28 oktober | 20:24 | Volle Maan | |
| 5 november | 08:37 | Laatste Kwartier | |
| 6 november | 21:49 | Apogeum | 404569 |
| 11 november | 08:49 | Dalende knoop | |
| 13 november | 09:27 | Nieuwe Maan | |
| 20 november | 10:50 | Eerste Kwartier | |
| 21 november | 21:01 | Perigeum | 369818 |
| 24 november | 11:02 | Klimmende knoop | |
| 27 november | 09:16 | Volle Maan | |
| 4 december | 18:42 | Apogeum | 404346 |
| 5 december | 05:49 | Laatste Kwartier | |
| 8 december | 15:24 | Dalende knoop | |
| 12 december | 23:32 | Nieuwe Maan | |
| 16 december | 18:53 | Perigeum | 367901 |
| 19 december | 18:39 | Eerste Kwartier | |
| 21 december | 13:54 | Klimmende knoop | |
| 27 december | 0:33 | Volle Maan | |
| 30 december | 1:21 | Eerste Kwartier | |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Fase | Diameter (°) | Afstand (km) | Libratie | |
|-------------|----------|------------|------------|------------|-----------|------------|------|--------------|--------------|----------|-------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | l (°) | b (°) |
| 1 januari | 12:15 | 66 | 19:44 | 55 | 02:14 | 290 | 0.70 | 30.7 | 389584 | 0.9 | 7.0 |
| 2 januari | 12:34 | 58 | 20:30 | 59 | 03:30 | 299 | 0.79 | 30.3 | 393848 | -0.6 | 6.4 |
| 3 januari | 12:57 | 52 | 21:19 | 63 | 04:44 | 306 | 0.86 | 30.1 | 397483 | -2.0 | 5.6 |
| 4 januari | 13:27 | 47 | 22:10 | 65 | 05:56 | 312 | 0.92 | 29.8 | 400480 | -3.3 | 4.6 |
| 5 januari | 14:07 | 44 | 23:01 | 66 | 07:01 | 316 | 0.96 | 29.7 | 402857 | -4.4 | 3.4 |
| 6 januari | 14:58 | 44 | 23:52 | 66 | 07:57 | 317 | 0.99 | 29.5 | 404636 | -5.4 | 2.3 |
| 7 januari | 15:59 | 46 | - | - | 08:40 | 315 | 1.00 | 29.4 | 405823 | -6.0 | 1.0 |
| 8 januari | 17:07 | 51 | 00:42 | 64 | 09:13 | 310 | 0.99 | 29.4 | 406399 | -6.5 | -0.2 |
| 9 januari | 18:18 | 58 | 01:30 | 61 | 09:37 | 304 | 0.96 | 29.4 | 406311 | -6.6 | -1.5 |
| 10 januari | 19:29 | 66 | 02:15 | 57 | 09:56 | 297 | 0.92 | 29.5 | 405482 | -6.5 | -2.8 |
| 11 januari | 20:40 | 74 | 02:58 | 52 | 10:11 | 289 | 0.86 | 29.6 | 403824 | -6.0 | -4.0 |
| 12 januari | 21:50 | 83 | 03:40 | 47 | 10:24 | 281 | 0.79 | 29.8 | 401259 | -5.3 | -5.2 |
| 13 januari | 23:01 | 93 | 04:21 | 41 | 10:36 | 272 | 0.70 | 30.0 | 397743 | -4.4 | -6.2 |
| 14 januari | - | - | 05:02 | 35 | 10:48 | 263 | 0.61 | 30.4 | 393290 | -3.2 | -7.0 |
| 15 januari | 00:15 | 103 | 05:45 | 29 | 11:02 | 253 | 0.51 | 30.8 | 388003 | -1.9 | -7.6 |
| 16 januari | 01:32 | 112 | 06:31 | 24 | 11:18 | 244 | 0.41 | 31.3 | 382089 | -0.4 | -7.8 |
| 17 januari | 02:54 | 121 | 07:22 | 18 | 11:39 | 236 | 0.30 | 31.8 | 375869 | 1.1 | -7.6 |
| 18 januari | 04:20 | 129 | 08:19 | 14 | 12:10 | 228 | 0.21 | 32.3 | 369775 | 2.6 | -6.9 |
| 19 januari | 05:44 | 135 | 09:21 | 11 | 12:54 | 224 | 0.12 | 32.8 | 364314 | 4.0 | -5.7 |
| 20 januari | 06:58 | 137 | 10:27 | 11 | 13:58 | 223 | 0.05 | 33.2 | 360013 | 5.2 | -4.1 |
| 21 januari | 07:55 | 135 | 11:34 | 12 | 15:20 | 227 | 0.01 | 33.4 | 357334 | 6.1 | -2.0 |
| 22 januari | 08:34 | 128 | 12:38 | 16 | 16:53 | 235 | 0.00 | 33.5 | 356587 | 6.5 | 0.2 |
| 23 januari | 09:01 | 119 | 13:38 | 21 | 18:27 | 245 | 0.02 | 33.4 | 357860 | 6.4 | 2.4 |
| 24 januari | 09:22 | 109 | 14:32 | 28 | 19:57 | 255 | 0.07 | 33.1 | 361003 | 5.9 | 4.4 |
| 25 januari | 09:38 | 99 | 15:22 | 35 | 21:21 | 266 | 0.14 | 32.7 | 365658 | 5.0 | 6.0 |
| 26 januari | 09:52 | 88 | 16:09 | 41 | 22:43 | 277 | 0.23 | 32.2 | 371337 | 3.8 | 7.1 |
| 27 januari | 10:06 | 78 | 16:55 | 48 | - | - | 0.33 | 31.6 | 377511 | 2.4 | 7.7 |
| 28 januari | 10:21 | 69 | 17:41 | 53 | 00:01 | 287 | 0.43 | 31.1 | 383690 | 1.0 | 7.8 |
| 29 januari | 10:38 | 61 | 18:27 | 58 | 01:19 | 296 | 0.54 | 30.7 | 389469 | -0.5 | 7.4 |
| 30 januari | 11:00 | 53 | 19:16 | 62 | 02:35 | 304 | 0.64 | 30.3 | 394556 | -1.9 | 6.8 |
| 31 januari | 11:27 | 48 | 20:06 | 65 | 03:48 | 311 | 0.73 | 30.0 | 398774 | -3.2 | 5.8 |
| 1 februari | 12:04 | 44 | 20:57 | 66 | 04:55 | 315 | 0.81 | 29.7 | 402046 | -4.4 | 4.7 |
| 2 februari | 12:52 | 43 | 21:48 | 66 | 05:53 | 317 | 0.88 | 29.5 | 404374 | -5.3 | 3.5 |
| 3 februari | 13:50 | 45 | 22:39 | 65 | 06:40 | 316 | 0.93 | 29.4 | 405811 | -6.0 | 2.2 |
| 4 februari | 14:57 | 49 | 23:27 | 62 | 07:15 | 312 | 0.97 | 29.4 | 406441 | -6.4 | 1.0 |
| 5 februari | 16:07 | 56 | - | - | 07:42 | 307 | 0.99 | 29.4 | 406348 | -6.6 | -0.3 |
| 6 februari | 17:19 | 63 | 00:13 | 58 | 08:02 | 300 | 1.00 | 29.5 | 405603 | -6.4 | -1.6 |
| 7 februari | 18:30 | 72 | 00:57 | 54 | 08:18 | 292 | 0.98 | 29.6 | 404248 | -6.0 | -2.8 |
| 8 februari | 19:41 | 81 | 01:39 | 48 | 08:31 | 283 | 0.95 | 29.7 | 402297 | -5.3 | -3.9 |
| 9 februari | 20:52 | 90 | 02:20 | 43 | 08:44 | 274 | 0.91 | 29.9 | 399737 | -4.4 | -4.9 |
| 10 februari | 22:04 | 100 | 03:01 | 37 | 08:55 | 265 | 0.84 | 30.1 | 396548 | -3.3 | -5.9 |
| 11 februari | 23:18 | 109 | 03:43 | 31 | 09:08 | 256 | 0.76 | 30.4 | 392719 | -2.0 | -6.6 |
| 12 februari | - | - | 04:27 | 25 | 09:23 | 247 | 0.67 | 30.8 | 388274 | -0.5 | -7.2 |
| 13 februari | 00:37 | 119 | 05:14 | 20 | 09:41 | 238 | 0.57 | 31.2 | 383304 | 1.0 | -7.4 |
| 14 februari | 01:59 | 127 | 06:07 | 15 | 10:06 | 231 | 0.47 | 31.6 | 377986 | 2.4 | -7.3 |
| 15 februari | 03:21 | 134 | 07:04 | 12 | 10:42 | 225 | 0.36 | 32.1 | 372595 | 3.8 | -6.8 |
| 16 februari | 04:38 | 137 | 08:07 | 11 | 11:34 | 223 | 0.25 | 32.5 | 367502 | 5.0 | -5.9 |
| 17 februari | 05:41 | 137 | 09:12 | 11 | 12:46 | 224 | 0.16 | 32.9 | 363145 | 5.9 | -4.4 |
| 18 februari | 06:27 | 132 | 10:16 | 14 | 14:14 | 230 | 0.08 | 33.2 | 359978 | 6.4 | -2.7 |
| 19 februari | 06:59 | 124 | 11:17 | 18 | 15:47 | 239 | 0.03 | 33.3 | 358391 | 6.5 | -0.6 |
| 20 februari | 07:23 | 115 | 12:14 | 24 | 17:21 | 250 | 0.00 | 33.3 | 358630 | 6.1 | 1.4 |
| 21 februari | 07:41 | 104 | 13:07 | 31 | 18:50 | 261 | 0.01 | 33.1 | 360742 | 5.3 | 3.4 |

Mercurius

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (^{''}) | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|------|-------------------------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | |
| 1 januari | 08:25 | 123 | 12:39 | 19 | 16:54 | 237 | 1.1 | 0.16 | 9.0 | 13.4 O |
| 2 januari | 08:17 | 122 | 12:32 | 19 | 16:48 | 238 | 1.6 | 0.12 | 9.2 | 11.9 O |
| 3 januari | 08:08 | 122 | 12:24 | 19 | 16:41 | 238 | 2.2 | 0.09 | 9.4 | 10.1 O |
| 4 januari | 07:58 | 122 | 12:16 | 19 | 16:33 | 238 | 2.9 | 0.05 | 9.6 | 8.2 O |
| 5 januari | 07:49 | 122 | 12:07 | 19 | 16:25 | 239 | 3.8 | 0.03 | 9.8 | 6.2 O |
| 6 januari | 07:39 | 121 | 11:57 | 20 | 16:16 | 239 | 4.7 | 0.01 | 9.9 | 4.3 O |
| 7 januari | 07:29 | 121 | 11:48 | 20 | 16:07 | 239 | 5.4 | 0.01 | 10.0 | 3.0 O |
| 8 januari | 07:19 | 121 | 11:38 | 20 | 15:57 | 239 | 5.4 | 0.01 | 10.0 | 3.1 W |
| 9 januari | 07:09 | 121 | 11:28 | 20 | 15:48 | 239 | 4.7 | 0.02 | 10.0 | 4.6 W |
| 10 januari | 07:00 | 121 | 11:19 | 20 | 15:39 | 239 | 3.8 | 0.03 | 10.0 | 6.6 W |
| 11 januari | 06:51 | 121 | 11:11 | 20 | 15:30 | 239 | 3.0 | 0.05 | 9.9 | 8.6 W |
| 12 januari | 06:43 | 121 | 11:02 | 20 | 15:21 | 239 | 2.4 | 0.08 | 9.8 | 10.6 W |
| 13 januari | 06:36 | 121 | 10:55 | 20 | 15:13 | 239 | 1.9 | 0.11 | 9.6 | 12.5 W |
| 14 januari | 06:29 | 122 | 10:48 | 19 | 15:06 | 238 | 1.4 | 0.15 | 9.5 | 14.2 W |
| 15 januari | 06:24 | 122 | 10:42 | 19 | 14:59 | 238 | 1.1 | 0.18 | 9.3 | 15.8 W |
| 16 januari | 06:19 | 122 | 10:36 | 19 | 14:53 | 238 | 0.9 | 0.22 | 9.1 | 17.2 W |
| 17 januari | 06:14 | 122 | 10:31 | 19 | 14:48 | 238 | 0.7 | 0.26 | 8.9 | 18.5 W |
| 18 januari | 06:11 | 122 | 10:27 | 19 | 14:43 | 238 | 0.5 | 0.29 | 8.7 | 19.7 W |
| 19 januari | 06:08 | 123 | 10:23 | 19 | 14:38 | 237 | 0.4 | 0.33 | 8.5 | 20.7 W |
| 20 januari | 06:05 | 123 | 10:20 | 19 | 14:34 | 237 | 0.3 | 0.36 | 8.3 | 21.5 W |
| 21 januari | 06:04 | 123 | 10:17 | 19 | 14:31 | 237 | 0.2 | 0.39 | 8.1 | 22.3 W |
| 22 januari | 06:02 | 123 | 10:15 | 18 | 14:28 | 237 | 0.1 | 0.43 | 7.9 | 22.9 W |
| 23 januari | 06:01 | 124 | 10:14 | 18 | 14:26 | 236 | 0.1 | 0.45 | 7.8 | 23.4 W |
| 24 januari | 06:01 | 124 | 10:12 | 18 | 14:23 | 236 | 0.1 | 0.48 | 7.6 | 23.9 W |
| 25 januari | 06:01 | 124 | 10:11 | 18 | 14:22 | 236 | 0.0 | 0.51 | 7.4 | 24.2 W |
| 26 januari | 06:01 | 124 | 10:11 | 18 | 14:21 | 236 | 0.0 | 0.53 | 7.3 | 24.5 W |
| 27 januari | 06:01 | 124 | 10:10 | 18 | 14:20 | 236 | 0.0 | 0.56 | 7.1 | 24.7 W |
| 28 januari | 06:01 | 125 | 10:10 | 18 | 14:19 | 235 | 0.0 | 0.58 | 7.0 | 24.8 W |
| 29 januari | 06:02 | 125 | 10:10 | 18 | 14:19 | 235 | 0.0 | 0.60 | 6.9 | 24.9 W |
| 30 januari | 06:03 | 125 | 10:11 | 18 | 14:19 | 235 | -0.1 | 0.62 | 6.8 | 25.0 W |
| 31 januari | 06:03 | 125 | 10:11 | 18 | 14:19 | 235 | -0.1 | 0.64 | 6.6 | 25.0 W |
| 1 februari | 06:04 | 125 | 10:12 | 18 | 14:20 | 235 | -0.1 | 0.66 | 6.5 | 24.9 W |
| 2 februari | 06:05 | 125 | 10:13 | 18 | 14:21 | 235 | -0.1 | 0.67 | 6.4 | 24.8 W |
| 3 februari | 06:06 | 125 | 10:14 | 18 | 14:22 | 235 | -0.1 | 0.69 | 6.3 | 24.7 W |
| 4 februari | 06:07 | 125 | 10:15 | 18 | 14:23 | 235 | -0.1 | 0.70 | 6.2 | 24.5 W |
| 5 februari | 06:09 | 125 | 10:17 | 18 | 14:25 | 235 | -0.1 | 0.72 | 6.2 | 24.3 W |
| 6 februari | 06:10 | 125 | 10:18 | 18 | 14:27 | 235 | -0.1 | 0.73 | 6.1 | 24.1 W |
| 7 februari | 06:11 | 125 | 10:20 | 18 | 14:29 | 235 | -0.1 | 0.74 | 6.0 | 23.9 W |
| 8 februari | 06:12 | 124 | 10:21 | 18 | 14:31 | 236 | -0.1 | 0.75 | 5.9 | 23.6 W |
| 9 februari | 06:13 | 124 | 10:23 | 18 | 14:34 | 236 | -0.1 | 0.77 | 5.8 | 23.3 W |
| 10 februari | 06:13 | 124 | 10:25 | 18 | 14:37 | 236 | -0.2 | 0.78 | 5.8 | 23.0 W |
| 11 februari | 06:14 | 124 | 10:27 | 18 | 14:40 | 236 | -0.2 | 0.79 | 5.7 | 22.6 W |
| 12 februari | 06:15 | 123 | 10:29 | 18 | 14:43 | 237 | -0.2 | 0.80 | 5.7 | 22.3 W |
| 13 februari | 06:16 | 123 | 10:31 | 19 | 14:46 | 237 | -0.2 | 0.81 | 5.6 | 21.9 W |
| 14 februari | 06:17 | 123 | 10:33 | 19 | 14:50 | 238 | -0.2 | 0.82 | 5.5 | 21.5 W |
| 15 februari | 06:17 | 122 | 10:35 | 19 | 14:53 | 238 | -0.2 | 0.82 | 5.5 | 21.1 W |
| 16 februari | 06:18 | 122 | 10:37 | 19 | 14:57 | 238 | -0.2 | 0.83 | 5.4 | 20.7 W |
| 17 februari | 06:18 | 121 | 10:39 | 20 | 15:01 | 239 | -0.3 | 0.84 | 5.4 | 20.2 W |
| 18 februari | 06:18 | 121 | 10:41 | 20 | 15:05 | 240 | -0.3 | 0.85 | 5.4 | 19.8 W |
| 19 februari | 06:19 | 120 | 10:44 | 20 | 15:09 | 240 | -0.3 | 0.86 | 5.3 | 19.3 W |
| 20 februari | 06:19 | 120 | 10:46 | 21 | 15:14 | 241 | -0.3 | 0.86 | 5.3 | 18.8 W |
| 21 februari | 06:19 | 119 | 10:48 | 21 | 15:19 | 241 | -0.3 | 0.87 | 5.2 | 18.3 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|--------------|----------|-------------|------------|------------|-----------|-------------|-----------|------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | | |
| 18 september | 03:51 | 76 | 10:34 | 47 | 17:18 | 284 | 0.4 | 0.28 | 8.2 | 16.5 W |
| 19 september | 03:48 | 76 | 10:33 | 47 | 17:17 | 284 | 0.2 | 0.32 | 7.9 | 17.0 W |
| 20 september | 03:47 | 76 | 10:32 | 47 | 17:16 | 284 | 0.0 | 0.37 | 7.7 | 17.4 W |
| 21 september | 03:46 | 76 | 10:31 | 47 | 17:15 | 284 | -0.2 | 0.42 | 7.4 | 17.7 W |
| 22 september | 03:47 | 76 | 10:31 | 47 | 17:14 | 283 | -0.3 | 0.46 | 7.2 | 17.8 W |
| 23 september | 03:48 | 77 | 10:31 | 47 | 17:13 | 283 | -0.4 | 0.51 | 7.0 | 17.8 W |
| 24 september | 03:50 | 77 | 10:32 | 47 | 17:13 | 283 | -0.5 | 0.55 | 6.8 | 17.7 W |
| 25 september | 03:52 | 78 | 10:32 | 46 | 17:12 | 282 | -0.6 | 0.60 | 6.6 | 17.5 W |
| 26 september | 03:55 | 78 | 10:34 | 46 | 17:11 | 281 | -0.7 | 0.64 | 6.4 | 17.2 W |
| 27 september | 03:59 | 79 | 10:35 | 46 | 17:10 | 281 | -0.8 | 0.68 | 6.3 | 16.8 W |
| 28 september | 04:03 | 80 | 10:37 | 45 | 17:10 | 280 | -0.9 | 0.72 | 6.1 | 16.3 W |
| 29 september | 04:08 | 81 | 10:39 | 45 | 17:09 | 279 | -1.0 | 0.75 | 6.0 | 15.8 W |
| 30 september | 04:13 | 81 | 10:41 | 44 | 17:08 | 278 | -1.0 | 0.78 | 5.9 | 15.2 W |
| 1 oktober | 04:18 | 82 | 10:43 | 43 | 17:07 | 277 | -1.1 | 0.81 | 5.7 | 14.5 W |
| 2 oktober | 04:23 | 83 | 10:46 | 43 | 17:06 | 276 | -1.1 | 0.84 | 5.6 | 13.9 W |
| 3 oktober | 04:29 | 85 | 10:48 | 42 | 17:05 | 275 | -1.1 | 0.86 | 5.5 | 13.2 W |
| 4 oktober | 04:35 | 86 | 10:50 | 41 | 17:04 | 274 | -1.2 | 0.88 | 5.4 | 12.4 W |
| 5 oktober | 04:41 | 87 | 10:53 | 41 | 17:03 | 273 | -1.2 | 0.90 | 5.4 | 11.7 W |
| 6 oktober | 04:47 | 88 | 10:55 | 40 | 17:02 | 271 | -1.2 | 0.92 | 5.3 | 10.9 W |
| 7 oktober | 04:53 | 89 | 10:58 | 39 | 17:01 | 270 | -1.2 | 0.93 | 5.2 | 10.1 W |
| 8 oktober | 04:59 | 90 | 11:00 | 38 | 17:00 | 269 | -1.2 | 0.95 | 5.1 | 9.3 W |
| 9 oktober | 05:05 | 91 | 11:03 | 38 | 16:59 | 268 | -1.3 | 0.96 | 5.1 | 8.6 W |
| 10 oktober | 05:12 | 93 | 11:05 | 37 | 16:57 | 267 | -1.3 | 0.97 | 5.0 | 7.8 W |
| 11 oktober | 05:18 | 94 | 11:08 | 36 | 16:56 | 266 | -1.3 | 0.97 | 5.0 | 7.0 W |
| 12 oktober | 05:24 | 95 | 11:10 | 35 | 16:55 | 264 | -1.3 | 0.98 | 5.0 | 6.2 W |
| 13 oktober | 05:30 | 96 | 11:13 | 35 | 16:54 | 263 | -1.3 | 0.98 | 4.9 | 5.5 W |
| 14 oktober | 05:36 | 97 | 11:15 | 34 | 16:52 | 262 | -1.4 | 0.99 | 4.9 | 4.7 W |
| 15 oktober | 05:42 | 99 | 11:17 | 33 | 16:51 | 261 | -1.4 | 0.99 | 4.8 | 4.0 W |
| 16 oktober | 05:48 | 100 | 11:20 | 32 | 16:50 | 260 | -1.4 | 1.00 | 4.8 | 3.3 W |
| 17 oktober | 05:55 | 101 | 11:22 | 32 | 16:48 | 258 | -1.5 | 1.00 | 4.8 | 2.5 W |
| 18 oktober | 06:00 | 102 | 11:24 | 31 | 16:47 | 257 | -1.5 | 1.00 | 4.8 | 1.9 W |
| 19 oktober | 06:06 | 103 | 11:27 | 30 | 16:46 | 256 | -1.6 | 1.00 | 4.8 | 1.3 W |
| 20 oktober | 06:12 | 104 | 11:29 | 30 | 16:44 | 255 | -1.6 | 1.00 | 4.7 | 0.8 O |
| 21 oktober | 06:18 | 106 | 11:31 | 29 | 16:43 | 254 | -1.6 | 1.00 | 4.7 | 0.9 O |
| 22 oktober | 06:24 | 107 | 11:34 | 28 | 16:41 | 253 | -1.5 | 1.00 | 4.7 | 1.3 O |
| 23 oktober | 06:30 | 108 | 11:36 | 27 | 16:40 | 252 | -1.4 | 1.00 | 4.7 | 1.9 O |
| 24 oktober | 06:36 | 109 | 11:38 | 27 | 16:39 | 251 | -1.3 | 1.00 | 4.7 | 2.5 O |
| 25 oktober | 06:42 | 110 | 11:40 | 26 | 16:38 | 250 | -1.2 | 1.00 | 4.7 | 3.2 O |
| 26 oktober | 06:47 | 111 | 11:42 | 25 | 16:36 | 248 | -1.1 | 0.99 | 4.7 | 3.8 O |
| 27 oktober | 06:53 | 112 | 11:45 | 25 | 16:35 | 247 | -1.1 | 0.99 | 4.7 | 4.4 O |
| 28 oktober | 06:59 | 113 | 11:47 | 24 | 16:34 | 246 | -1.0 | 0.99 | 4.7 | 5.0 O |
| 29 oktober | 07:04 | 114 | 11:49 | 24 | 16:33 | 245 | -0.9 | 0.99 | 4.7 | 5.6 O |
| 30 oktober | 07:10 | 115 | 11:51 | 23 | 16:32 | 244 | -0.9 | 0.99 | 4.7 | 6.2 O |
| 31 oktober | 07:15 | 116 | 11:54 | 22 | 16:31 | 243 | -0.8 | 0.98 | 4.7 | 6.8 O |
| 1 november | 07:21 | 117 | 11:56 | 22 | 16:30 | 242 | -0.8 | 0.98 | 4.7 | 7.4 O |
| 2 november | 07:26 | 118 | 11:58 | 21 | 16:29 | 242 | -0.8 | 0.98 | 4.7 | 8.0 O |
| 3 november | 07:32 | 119 | 12:00 | 21 | 16:28 | 241 | -0.7 | 0.97 | 4.7 | 8.6 O |
| 4 november | 07:37 | 120 | 12:03 | 20 | 16:27 | 240 | -0.7 | 0.97 | 4.7 | 9.1 O |
| 5 november | 07:42 | 121 | 12:05 | 20 | 16:26 | 239 | -0.7 | 0.97 | 4.8 | 9.7 O |
| 6 november | 07:47 | 122 | 12:07 | 19 | 16:26 | 238 | -0.6 | 0.96 | 4.8 | 10.2 O |
| 7 november | 07:53 | 122 | 12:09 | 19 | 16:25 | 237 | -0.6 | 0.96 | 4.8 | 10.8 O |
| 8 november | 07:58 | 123 | 12:12 | 18 | 16:25 | 236 | -0.6 | 0.95 | 4.8 | 11.3 O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | | |
| 9 november | 08:03 | 124 | 12:14 | 18 | 16:24 | 236 | -0.6 | 0.95 | 4.8 | 11.8 O |
| 10 november | 08:08 | 125 | 12:16 | 18 | 16:24 | 235 | -0.5 | 0.95 | 4.9 | 12.4 O |
| 11 november | 08:13 | 126 | 12:19 | 17 | 16:24 | 234 | -0.5 | 0.94 | 4.9 | 12.9 O |
| 12 november | 08:18 | 126 | 12:21 | 17 | 16:23 | 234 | -0.5 | 0.93 | 4.9 | 13.4 O |
| 13 november | 08:23 | 127 | 12:23 | 16 | 16:23 | 233 | -0.5 | 0.93 | 5.0 | 13.9 O |
| 14 november | 08:27 | 128 | 12:26 | 16 | 16:23 | 232 | -0.5 | 0.92 | 5.0 | 14.4 O |
| 15 november | 08:32 | 128 | 12:28 | 16 | 16:24 | 232 | -0.5 | 0.92 | 5.0 | 14.9 O |
| 16 november | 08:36 | 129 | 12:30 | 15 | 16:24 | 231 | -0.5 | 0.91 | 5.1 | 15.3 O |
| 17 november | 08:41 | 129 | 12:33 | 15 | 16:24 | 231 | -0.5 | 0.90 | 5.1 | 15.8 O |
| 18 november | 08:45 | 130 | 12:35 | 15 | 16:25 | 230 | -0.5 | 0.89 | 5.2 | 16.3 O |
| 19 november | 08:49 | 130 | 12:38 | 15 | 16:25 | 230 | -0.5 | 0.89 | 5.2 | 16.7 O |
| 20 november | 08:53 | 131 | 12:40 | 14 | 16:26 | 229 | -0.5 | 0.88 | 5.3 | 17.2 O |
| 21 november | 08:57 | 131 | 12:42 | 14 | 16:27 | 229 | -0.5 | 0.87 | 5.3 | 17.6 O |
| 22 november | 09:00 | 131 | 12:44 | 14 | 16:28 | 228 | -0.5 | 0.86 | 5.4 | 18.0 O |
| 23 november | 09:04 | 132 | 12:47 | 14 | 16:29 | 228 | -0.5 | 0.85 | 5.5 | 18.4 O |
| 24 november | 09:07 | 132 | 12:49 | 14 | 16:30 | 228 | -0.5 | 0.83 | 5.5 | 18.8 O |
| 25 november | 09:10 | 132 | 12:51 | 14 | 16:32 | 228 | -0.5 | 0.82 | 5.6 | 19.2 O |
| 26 november | 09:13 | 132 | 12:53 | 14 | 16:33 | 228 | -0.5 | 0.81 | 5.7 | 19.5 O |
| 27 november | 09:15 | 133 | 12:55 | 13 | 16:35 | 227 | -0.5 | 0.79 | 5.8 | 19.9 O |
| 28 november | 09:17 | 133 | 12:57 | 13 | 16:36 | 227 | -0.4 | 0.77 | 5.9 | 20.2 O |
| 29 november | 09:19 | 133 | 12:59 | 13 | 16:38 | 227 | -0.4 | 0.76 | 5.9 | 20.4 O |
| 30 november | 09:21 | 133 | 13:00 | 13 | 16:39 | 227 | -0.4 | 0.74 | 6.1 | 20.7 O |
| 1 december | 09:22 | 133 | 13:02 | 13 | 16:41 | 227 | -0.4 | 0.72 | 6.2 | 20.9 O |
| 2 december | 09:23 | 133 | 13:03 | 13 | 16:43 | 227 | -0.4 | 0.69 | 6.3 | 21.1 O |
| 3 december | 09:24 | 132 | 13:04 | 14 | 16:44 | 228 | -0.4 | 0.67 | 6.4 | 21.2 O |
| 4 december | 09:24 | 132 | 13:05 | 14 | 16:46 | 228 | -0.4 | 0.64 | 6.6 | 21.3 O |
| 5 december | 09:23 | 132 | 13:05 | 14 | 16:47 | 228 | -0.4 | 0.62 | 6.7 | 21.3 O |
| 6 december | 09:23 | 132 | 13:05 | 14 | 16:48 | 228 | -0.3 | 0.59 | 6.9 | 21.2 O |
| 7 december | 09:21 | 131 | 13:05 | 14 | 16:49 | 229 | -0.3 | 0.55 | 7.0 | 21.1 O |
| 8 december | 09:19 | 131 | 13:04 | 14 | 16:49 | 229 | -0.2 | 0.52 | 7.2 | 20.8 O |
| 9 december | 09:17 | 131 | 13:03 | 14 | 16:49 | 229 | -0.2 | 0.48 | 7.4 | 20.5 O |
| 10 december | 09:14 | 130 | 13:01 | 15 | 16:49 | 230 | -0.1 | 0.44 | 7.6 | 20.0 O |
| 11 december | 09:10 | 130 | 12:59 | 15 | 16:48 | 230 | 0.0 | 0.40 | 7.8 | 19.4 O |
| 12 december | 09:05 | 130 | 12:56 | 15 | 16:47 | 231 | 0.1 | 0.36 | 8.0 | 18.7 O |
| 13 december | 09:00 | 129 | 12:52 | 15 | 16:44 | 231 | 0.2 | 0.31 | 8.3 | 17.8 O |
| 14 december | 08:54 | 129 | 12:47 | 16 | 16:41 | 232 | 0.4 | 0.27 | 8.5 | 16.7 O |
| 15 december | 08:46 | 128 | 12:42 | 16 | 16:38 | 232 | 0.7 | 0.22 | 8.7 | 15.5 O |
| 16 december | 08:39 | 128 | 12:36 | 16 | 16:33 | 233 | 1.0 | 0.18 | 9.0 | 14.1 O |
| 17 december | 08:30 | 127 | 12:29 | 16 | 16:28 | 233 | 1.5 | 0.13 | 9.2 | 12.4 O |
| 18 december | 08:20 | 127 | 12:21 | 17 | 16:22 | 234 | 2.0 | 0.10 | 9.4 | 10.7 O |
| 19 december | 08:10 | 126 | 12:12 | 17 | 16:15 | 234 | 2.7 | 0.06 | 9.6 | 8.7 O |
| 20 december | 07:59 | 125 | 12:03 | 17 | 16:08 | 235 | 3.6 | 0.04 | 9.7 | 6.6 O |
| 21 december | 07:48 | 125 | 11:54 | 18 | 16:00 | 235 | 4.6 | 0.02 | 9.8 | 4.5 O |
| 22 december | 07:36 | 124 | 11:44 | 18 | 15:52 | 236 | 5.5 | 0.01 | 9.9 | 2.7 O |
| 23 december | 07:25 | 124 | 11:34 | 18 | 15:44 | 236 | 5.7 | 0.00 | 9.9 | 2.3 W |
| 24 december | 07:14 | 124 | 11:25 | 18 | 15:36 | 237 | 5.0 | 0.01 | 9.9 | 3.8 W |
| 25 december | 07:03 | 123 | 11:15 | 19 | 15:28 | 237 | 4.0 | 0.03 | 9.9 | 5.9 W |
| 26 december | 06:53 | 123 | 11:06 | 19 | 15:20 | 237 | 3.1 | 0.05 | 9.8 | 8.0 W |
| 27 december | 06:43 | 123 | 10:58 | 19 | 15:13 | 237 | 2.4 | 0.08 | 9.6 | 10.1 W |
| 28 december | 06:35 | 122 | 10:50 | 19 | 15:06 | 238 | 1.8 | 0.11 | 9.5 | 12.0 W |
| 29 december | 06:27 | 122 | 10:43 | 19 | 15:00 | 238 | 1.4 | 0.15 | 9.3 | 13.7 W |
| 30 december | 06:21 | 122 | 10:37 | 19 | 14:54 | 238 | 1.0 | 0.19 | 9.1 | 15.3 W |
| 31 december | 06:15 | 122 | 10:32 | 19 | 14:48 | 238 | 0.7 | 0.23 | 8.9 | 16.8 W |

Venus

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|-------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | |
| 1 januari | 08:54 | 125 | 13:01 | 17 | 17:07 | 235 | -3.9 | 0.959 | 10.4 | 17.2 O |
| 2 januari | 08:54 | 125 | 13:02 | 18 | 17:10 | 235 | -3.9 | 0.958 | 10.4 | 17.4 O |
| 3 januari | 08:54 | 125 | 13:03 | 18 | 17:13 | 236 | -3.9 | 0.956 | 10.4 | 17.6 O |
| 4 januari | 08:54 | 124 | 13:05 | 18 | 17:16 | 236 | -3.9 | 0.955 | 10.4 | 17.9 O |
| 5 januari | 08:53 | 124 | 13:06 | 18 | 17:19 | 237 | -3.9 | 0.954 | 10.5 | 18.1 O |
| 6 januari | 08:53 | 123 | 13:07 | 19 | 17:22 | 237 | -3.9 | 0.953 | 10.5 | 18.3 O |
| 7 januari | 08:52 | 123 | 13:08 | 19 | 17:25 | 238 | -3.9 | 0.951 | 10.5 | 18.6 O |
| 8 januari | 08:52 | 122 | 13:10 | 19 | 17:28 | 238 | -3.9 | 0.950 | 10.5 | 18.8 O |
| 9 januari | 08:51 | 122 | 13:11 | 20 | 17:31 | 239 | -3.9 | 0.949 | 10.5 | 19.0 O |
| 10 januari | 08:50 | 121 | 13:12 | 20 | 17:34 | 239 | -3.9 | 0.948 | 10.6 | 19.3 O |
| 11 januari | 08:50 | 120 | 13:13 | 20 | 17:38 | 240 | -3.9 | 0.946 | 10.6 | 19.5 O |
| 12 januari | 08:49 | 120 | 13:14 | 20 | 17:41 | 240 | -3.9 | 0.945 | 10.6 | 19.7 O |
| 13 januari | 08:48 | 119 | 13:16 | 21 | 17:44 | 241 | -3.9 | 0.944 | 10.6 | 19.9 O |
| 14 januari | 08:47 | 119 | 13:17 | 21 | 17:47 | 242 | -3.9 | 0.942 | 10.7 | 20.2 O |
| 15 januari | 08:46 | 118 | 13:18 | 22 | 17:50 | 242 | -3.9 | 0.941 | 10.7 | 20.4 O |
| 16 januari | 08:45 | 117 | 13:19 | 22 | 17:54 | 243 | -3.9 | 0.940 | 10.7 | 20.6 O |
| 17 januari | 08:44 | 117 | 13:20 | 22 | 17:57 | 243 | -3.9 | 0.938 | 10.7 | 20.9 O |
| 18 januari | 08:42 | 116 | 13:21 | 23 | 18:00 | 244 | -3.9 | 0.937 | 10.7 | 21.1 O |
| 19 januari | 08:41 | 115 | 13:22 | 23 | 18:03 | 245 | -3.9 | 0.935 | 10.8 | 21.3 O |
| 20 januari | 08:40 | 115 | 13:23 | 23 | 18:06 | 245 | -3.9 | 0.934 | 10.8 | 21.6 O |
| 21 januari | 08:39 | 114 | 13:24 | 24 | 18:10 | 246 | -3.9 | 0.932 | 10.8 | 21.8 O |
| 22 januari | 08:37 | 113 | 13:25 | 24 | 18:13 | 247 | -3.9 | 0.931 | 10.8 | 22.0 O |
| 23 januari | 08:36 | 113 | 13:26 | 25 | 18:16 | 248 | -3.9 | 0.929 | 10.9 | 22.2 O |
| 24 januari | 08:34 | 112 | 13:26 | 25 | 18:19 | 248 | -3.9 | 0.928 | 10.9 | 22.5 O |
| 25 januari | 08:33 | 111 | 13:27 | 26 | 18:23 | 249 | -3.9 | 0.926 | 10.9 | 22.7 O |
| 26 januari | 08:31 | 111 | 13:28 | 26 | 18:26 | 250 | -3.9 | 0.925 | 11.0 | 22.9 O |
| 27 januari | 08:30 | 110 | 13:29 | 26 | 18:29 | 250 | -3.9 | 0.923 | 11.0 | 23.2 O |
| 28 januari | 08:28 | 109 | 13:30 | 27 | 18:32 | 251 | -3.9 | 0.921 | 11.0 | 23.4 O |
| 29 januari | 08:27 | 108 | 13:31 | 27 | 18:36 | 252 | -3.9 | 0.920 | 11.0 | 23.6 O |
| 30 januari | 08:25 | 108 | 13:31 | 28 | 18:39 | 253 | -3.9 | 0.918 | 11.1 | 23.8 O |
| 31 januari | 08:23 | 107 | 13:32 | 28 | 18:42 | 254 | -3.9 | 0.917 | 11.1 | 24.1 O |
| 1 februari | 08:22 | 106 | 13:33 | 29 | 18:45 | 254 | -3.9 | 0.915 | 11.1 | 24.3 O |
| 2 februari | 08:20 | 105 | 13:34 | 29 | 18:48 | 255 | -3.9 | 0.913 | 11.2 | 24.5 O |
| 3 februari | 08:18 | 105 | 13:34 | 30 | 18:52 | 256 | -3.9 | 0.911 | 11.2 | 24.7 O |
| 4 februari | 08:16 | 104 | 13:35 | 30 | 18:55 | 257 | -3.9 | 0.910 | 11.2 | 25.0 O |
| 5 februari | 08:14 | 103 | 13:36 | 31 | 18:58 | 257 | -3.9 | 0.908 | 11.2 | 25.2 O |
| 6 februari | 08:13 | 102 | 13:36 | 31 | 19:01 | 258 | -3.9 | 0.906 | 11.3 | 25.4 O |
| 7 februari | 08:11 | 101 | 13:37 | 32 | 19:04 | 259 | -3.9 | 0.904 | 11.3 | 25.6 O |
| 8 februari | 08:09 | 101 | 13:38 | 32 | 19:07 | 260 | -3.9 | 0.902 | 11.3 | 25.9 O |
| 9 februari | 08:07 | 100 | 13:38 | 33 | 19:10 | 261 | -3.9 | 0.901 | 11.4 | 26.1 O |
| 10 februari | 08:05 | 99 | 13:39 | 33 | 19:14 | 261 | -3.9 | 0.899 | 11.4 | 26.3 O |
| 11 februari | 08:03 | 98 | 13:39 | 34 | 19:17 | 262 | -3.9 | 0.897 | 11.4 | 26.5 O |
| 12 februari | 08:01 | 97 | 13:40 | 34 | 19:20 | 263 | -3.9 | 0.895 | 11.5 | 26.8 O |
| 13 februari | 07:59 | 97 | 13:40 | 35 | 19:23 | 264 | -3.9 | 0.893 | 11.5 | 27.0 O |
| 14 februari | 07:57 | 96 | 13:41 | 35 | 19:26 | 265 | -3.9 | 0.891 | 11.6 | 27.2 O |
| 15 februari | 07:55 | 95 | 13:42 | 36 | 19:29 | 265 | -3.9 | 0.889 | 11.6 | 27.4 O |
| 16 februari | 07:53 | 94 | 13:42 | 36 | 19:32 | 266 | -3.9 | 0.887 | 11.6 | 27.7 O |
| 17 februari | 07:51 | 93 | 13:43 | 37 | 19:35 | 267 | -3.9 | 0.885 | 11.7 | 27.9 O |
| 18 februari | 07:49 | 92 | 13:43 | 37 | 19:38 | 268 | -3.9 | 0.883 | 11.7 | 28.1 O |
| 19 februari | 07:47 | 92 | 13:44 | 38 | 19:42 | 269 | -3.9 | 0.881 | 11.7 | 28.3 O |
| 20 februari | 07:45 | 91 | 13:44 | 38 | 19:45 | 270 | -3.9 | 0.879 | 11.8 | 28.5 O |
| 21 februari | 07:43 | 90 | 13:45 | 39 | 19:48 | 270 | -3.9 | 0.877 | 11.8 | 28.8 O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|-------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | |
| 22 februari | 07:41 | 89 | 13:45 | 39 | 19:51 | 271 | -3.9 | 0.874 | 11.9 | 29.0 O |
| 23 februari | 07:39 | 88 | 13:46 | 40 | 19:54 | 272 | -3.9 | 0.872 | 11.9 | 29.2 O |
| 24 februari | 07:37 | 87 | 13:46 | 40 | 19:57 | 273 | -3.9 | 0.870 | 11.9 | 29.4 O |
| 25 februari | 07:35 | 87 | 13:47 | 41 | 20:00 | 274 | -3.9 | 0.868 | 12.0 | 29.6 O |
| 26 februari | 07:33 | 86 | 13:47 | 42 | 20:03 | 275 | -3.9 | 0.866 | 12.0 | 29.9 O |
| 27 februari | 07:31 | 85 | 13:48 | 42 | 20:06 | 275 | -3.9 | 0.863 | 12.1 | 30.1 O |
| 28 februari | 07:29 | 84 | 13:48 | 43 | 20:09 | 276 | -3.9 | 0.861 | 12.1 | 30.3 O |
| 1 maart | 07:27 | 83 | 13:49 | 43 | 20:12 | 277 | -3.9 | 0.859 | 12.2 | 30.5 O |
| 2 maart | 07:24 | 83 | 13:49 | 44 | 20:15 | 278 | -3.9 | 0.856 | 12.2 | 30.7 O |
| 3 maart | 07:22 | 82 | 13:50 | 44 | 20:18 | 279 | -3.9 | 0.854 | 12.3 | 31.0 O |
| 4 maart | 07:20 | 81 | 13:50 | 45 | 20:22 | 280 | -3.9 | 0.852 | 12.3 | 31.2 O |
| 5 maart | 07:18 | 80 | 13:51 | 45 | 20:25 | 280 | -3.9 | 0.849 | 12.4 | 31.4 O |
| 6 maart | 07:16 | 79 | 13:51 | 46 | 20:28 | 281 | -3.9 | 0.847 | 12.4 | 31.6 O |
| 7 maart | 07:14 | 78 | 13:52 | 46 | 20:31 | 282 | -4.0 | 0.844 | 12.5 | 31.8 O |
| 8 maart | 07:12 | 78 | 13:52 | 47 | 20:34 | 283 | -4.0 | 0.842 | 12.5 | 32.0 O |
| 9 maart | 07:10 | 77 | 13:53 | 47 | 20:37 | 284 | -4.0 | 0.839 | 12.6 | 32.2 O |
| 10 maart | 07:08 | 76 | 13:53 | 48 | 20:40 | 284 | -4.0 | 0.837 | 12.6 | 32.5 O |
| 11 maart | 07:06 | 75 | 13:54 | 48 | 20:43 | 285 | -4.0 | 0.834 | 12.7 | 32.7 O |
| 12 maart | 07:04 | 74 | 13:54 | 49 | 20:46 | 286 | -4.0 | 0.832 | 12.7 | 32.9 O |
| 13 maart | 07:02 | 74 | 13:55 | 49 | 20:49 | 287 | -4.0 | 0.829 | 12.8 | 33.1 O |
| 14 maart | 07:00 | 73 | 13:56 | 50 | 20:53 | 288 | -4.0 | 0.826 | 12.8 | 33.3 O |
| 15 maart | 06:58 | 72 | 13:56 | 50 | 20:56 | 288 | -4.0 | 0.824 | 12.9 | 33.5 O |
| 16 maart | 06:56 | 71 | 13:57 | 51 | 20:59 | 289 | -4.0 | 0.821 | 12.9 | 33.7 O |
| 17 maart | 06:54 | 70 | 13:57 | 51 | 21:02 | 290 | -4.0 | 0.818 | 13.0 | 33.9 O |
| 18 maart | 06:52 | 70 | 13:58 | 52 | 21:05 | 291 | -4.0 | 0.816 | 13.1 | 34.2 O |
| 19 maart | 06:50 | 69 | 13:59 | 52 | 21:08 | 292 | -4.0 | 0.813 | 13.1 | 34.4 O |
| 20 maart | 06:49 | 68 | 13:59 | 52 | 21:11 | 292 | -4.0 | 0.810 | 13.2 | 34.6 O |
| 21 maart | 06:47 | 67 | 14:00 | 53 | 21:14 | 293 | -4.0 | 0.807 | 13.2 | 34.8 O |
| 22 maart | 06:45 | 67 | 14:00 | 53 | 21:18 | 294 | -4.0 | 0.804 | 13.3 | 35.0 O |
| 23 maart | 06:43 | 66 | 14:01 | 54 | 21:21 | 295 | -4.0 | 0.801 | 13.4 | 35.2 O |
| 24 maart | 06:41 | 65 | 14:02 | 54 | 21:24 | 295 | -4.0 | 0.798 | 13.4 | 35.4 O |
| 25 maart | 06:39 | 64 | 14:02 | 55 | 21:27 | 296 | -4.0 | 0.796 | 13.5 | 35.6 O |
| 26 maart | 06:38 | 64 | 14:03 | 55 | 21:30 | 297 | -4.0 | 0.793 | 13.6 | 35.8 O |
| 27 maart | 06:36 | 63 | 14:04 | 56 | 21:33 | 297 | -4.0 | 0.790 | 13.6 | 36.0 O |
| 28 maart | 06:34 | 62 | 14:05 | 56 | 21:36 | 298 | -4.0 | 0.787 | 13.7 | 36.2 O |
| 29 maart | 06:33 | 62 | 14:05 | 56 | 21:39 | 299 | -4.0 | 0.783 | 13.8 | 36.4 O |
| 30 maart | 06:31 | 61 | 14:06 | 57 | 21:43 | 300 | -4.0 | 0.780 | 13.9 | 36.6 O |
| 31 maart | 06:29 | 60 | 14:07 | 57 | 21:46 | 300 | -4.0 | 0.777 | 13.9 | 36.8 O |
| 1 april | 06:28 | 60 | 14:08 | 58 | 21:49 | 301 | -4.0 | 0.774 | 14.0 | 37.0 O |
| 2 april | 06:26 | 59 | 14:08 | 58 | 21:52 | 302 | -4.0 | 0.771 | 14.1 | 37.2 O |
| 3 april | 06:25 | 58 | 14:09 | 58 | 21:55 | 302 | -4.0 | 0.768 | 14.2 | 37.4 O |
| 4 april | 06:24 | 58 | 14:10 | 59 | 21:58 | 303 | -4.0 | 0.764 | 14.2 | 37.6 O |
| 5 april | 06:22 | 57 | 14:11 | 59 | 22:01 | 303 | -4.0 | 0.761 | 14.3 | 37.8 O |
| 6 april | 06:21 | 56 | 14:12 | 59 | 22:04 | 304 | -4.0 | 0.758 | 14.4 | 38.0 O |
| 7 april | 06:19 | 56 | 14:13 | 60 | 22:07 | 305 | -4.0 | 0.755 | 14.5 | 38.2 O |
| 8 april | 06:18 | 55 | 14:13 | 60 | 22:10 | 305 | -4.0 | 0.751 | 14.6 | 38.4 O |
| 9 april | 06:17 | 55 | 14:14 | 60 | 22:13 | 306 | -4.0 | 0.748 | 14.7 | 38.6 O |
| 10 april | 06:16 | 54 | 14:15 | 61 | 22:16 | 306 | -4.0 | 0.744 | 14.7 | 38.8 O |
| 11 april | 06:15 | 53 | 14:16 | 61 | 22:19 | 307 | -4.0 | 0.741 | 14.8 | 38.9 O |
| 12 april | 06:14 | 53 | 14:17 | 61 | 22:22 | 307 | -4.1 | 0.737 | 14.9 | 39.1 O |
| 13 april | 06:13 | 52 | 14:18 | 62 | 22:24 | 308 | -4.1 | 0.734 | 15.0 | 39.3 O |
| 14 april | 06:12 | 52 | 14:19 | 62 | 22:27 | 309 | -4.1 | 0.730 | 15.1 | 39.5 O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|----------|----------|------------|------------|------------|-----------|------------|-----------|-------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | |
| 15 april | 06:11 | 51 | 14:20 | 62 | 22:30 | 309 | -4.1 | 0.727 | 15.2 | 39.7 O |
| 16 april | 06:10 | 51 | 14:21 | 62 | 22:33 | 309 | -4.1 | 0.723 | 15.3 | 39.9 O |
| 17 april | 06:09 | 50 | 14:22 | 63 | 22:35 | 310 | -4.1 | 0.719 | 15.4 | 40.0 O |
| 18 april | 06:09 | 50 | 14:23 | 63 | 22:38 | 310 | -4.1 | 0.716 | 15.5 | 40.2 O |
| 19 april | 06:08 | 49 | 14:24 | 63 | 22:41 | 311 | -4.1 | 0.712 | 15.6 | 40.4 O |
| 20 april | 06:07 | 49 | 14:25 | 63 | 22:43 | 311 | -4.1 | 0.708 | 15.7 | 40.6 O |
| 21 april | 06:07 | 49 | 14:26 | 63 | 22:46 | 312 | -4.1 | 0.705 | 15.8 | 40.7 O |
| 22 april | 06:07 | 48 | 14:27 | 64 | 22:48 | 312 | -4.1 | 0.701 | 15.9 | 40.9 O |
| 23 april | 06:06 | 48 | 14:28 | 64 | 22:50 | 312 | -4.1 | 0.697 | 16.0 | 41.1 O |
| 24 april | 06:06 | 48 | 14:29 | 64 | 22:53 | 313 | -4.1 | 0.693 | 16.1 | 41.2 O |
| 25 april | 06:06 | 47 | 14:30 | 64 | 22:55 | 313 | -4.1 | 0.689 | 16.3 | 41.4 O |
| 26 april | 06:06 | 47 | 14:31 | 64 | 22:57 | 313 | -4.1 | 0.685 | 16.4 | 41.6 O |
| 27 april | 06:06 | 47 | 14:32 | 64 | 22:59 | 314 | -4.1 | 0.681 | 16.5 | 41.7 O |
| 28 april | 06:06 | 46 | 14:33 | 65 | 23:01 | 314 | -4.1 | 0.677 | 16.6 | 41.9 O |
| 29 april | 06:06 | 46 | 14:34 | 65 | 23:03 | 314 | -4.1 | 0.673 | 16.7 | 42.0 O |
| 30 april | 06:06 | 46 | 14:35 | 65 | 23:05 | 314 | -4.1 | 0.669 | 16.9 | 42.2 O |
| 1 mei | 06:06 | 46 | 14:36 | 65 | 23:06 | 314 | -4.1 | 0.665 | 17.0 | 42.3 O |
| 2 mei | 06:06 | 46 | 14:37 | 65 | 23:08 | 315 | -4.1 | 0.661 | 17.1 | 42.5 O |
| 3 mei | 06:07 | 45 | 14:38 | 65 | 23:09 | 315 | -4.2 | 0.657 | 17.3 | 42.6 O |
| 4 mei | 06:07 | 45 | 14:39 | 65 | 23:11 | 315 | -4.2 | 0.652 | 17.4 | 42.8 O |
| 5 mei | 06:08 | 45 | 14:40 | 65 | 23:12 | 315 | -4.2 | 0.648 | 17.5 | 42.9 O |
| 6 mei | 06:08 | 45 | 14:41 | 65 | 23:13 | 315 | -4.2 | 0.644 | 17.7 | 43.1 O |
| 7 mei | 06:09 | 45 | 14:42 | 65 | 23:15 | 315 | -4.2 | 0.640 | 17.8 | 43.2 O |
| 8 mei | 06:10 | 45 | 14:43 | 65 | 23:16 | 315 | -4.2 | 0.635 | 18.0 | 43.3 O |
| 9 mei | 06:11 | 45 | 14:44 | 65 | 23:17 | 315 | -4.2 | 0.631 | 18.1 | 43.5 O |
| 10 mei | 06:12 | 45 | 14:45 | 65 | 23:18 | 315 | -4.2 | 0.626 | 18.3 | 43.6 O |
| 11 mei | 06:13 | 45 | 14:45 | 65 | 23:18 | 315 | -4.2 | 0.622 | 18.4 | 43.7 O |
| 12 mei | 06:14 | 45 | 14:46 | 65 | 23:19 | 315 | -4.2 | 0.617 | 18.6 | 43.8 O |
| 13 mei | 06:15 | 45 | 14:47 | 65 | 23:19 | 315 | -4.2 | 0.613 | 18.8 | 44.0 O |
| 14 mei | 06:16 | 45 | 14:48 | 65 | 23:20 | 315 | -4.2 | 0.608 | 18.9 | 44.1 O |
| 15 mei | 06:17 | 45 | 14:49 | 65 | 23:20 | 315 | -4.2 | 0.603 | 19.1 | 44.2 O |
| 16 mei | 06:18 | 45 | 14:50 | 65 | 23:21 | 315 | -4.2 | 0.599 | 19.3 | 44.3 O |
| 17 mei | 06:20 | 45 | 14:50 | 65 | 23:21 | 314 | -4.2 | 0.594 | 19.5 | 44.4 O |
| 18 mei | 06:21 | 46 | 14:51 | 65 | 23:21 | 314 | -4.3 | 0.589 | 19.6 | 44.5 O |
| 19 mei | 06:22 | 46 | 14:52 | 65 | 23:21 | 314 | -4.3 | 0.584 | 19.8 | 44.6 O |
| 20 mei | 06:24 | 46 | 14:53 | 65 | 23:21 | 314 | -4.3 | 0.580 | 20.0 | 44.7 O |
| 21 mei | 06:25 | 46 | 14:53 | 65 | 23:20 | 314 | -4.3 | 0.575 | 20.2 | 44.7 O |
| 22 mei | 06:27 | 47 | 14:54 | 64 | 23:20 | 313 | -4.3 | 0.570 | 20.4 | 44.8 O |
| 23 mei | 06:29 | 47 | 14:54 | 64 | 23:19 | 313 | -4.3 | 0.565 | 20.6 | 44.9 O |
| 24 mei | 06:30 | 47 | 14:55 | 64 | 23:19 | 313 | -4.3 | 0.560 | 20.8 | 45.0 O |
| 25 mei | 06:32 | 47 | 14:55 | 64 | 23:18 | 312 | -4.3 | 0.555 | 21.0 | 45.0 O |
| 26 mei | 06:34 | 48 | 14:56 | 64 | 23:18 | 312 | -4.3 | 0.549 | 21.2 | 45.1 O |
| 27 mei | 06:35 | 48 | 14:56 | 64 | 23:17 | 312 | -4.3 | 0.544 | 21.4 | 45.2 O |
| 28 mei | 06:37 | 48 | 14:57 | 63 | 23:16 | 311 | -4.3 | 0.539 | 21.7 | 45.2 O |
| 29 mei | 06:39 | 49 | 14:57 | 63 | 23:15 | 311 | -4.3 | 0.534 | 21.9 | 45.3 O |
| 30 mei | 06:40 | 49 | 14:58 | 63 | 23:14 | 311 | -4.4 | 0.528 | 22.1 | 45.3 O |
| 31 mei | 06:42 | 49 | 14:58 | 63 | 23:13 | 310 | -4.4 | 0.523 | 22.4 | 45.3 O |
| 1 juni | 06:44 | 50 | 14:58 | 63 | 23:11 | 310 | -4.4 | 0.517 | 22.6 | 45.4 O |
| 2 juni | 06:46 | 50 | 14:58 | 62 | 23:10 | 309 | -4.4 | 0.512 | 22.9 | 45.4 O |
| 3 juni | 06:47 | 51 | 14:58 | 62 | 23:08 | 309 | -4.4 | 0.506 | 23.1 | 45.4 O |
| 4 juni | 06:49 | 51 | 14:59 | 62 | 23:07 | 309 | -4.4 | 0.501 | 23.4 | 45.4 O |
| 5 juni | 06:51 | 52 | 14:59 | 62 | 23:05 | 308 | -4.4 | 0.495 | 23.7 | 45.4 O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) | |
|---------|----------|------------|------------|------------|-----------|------------|-----------|-------|--------------|---------------|---|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | | |
| 6 juni | 06:52 | 52 | 14:59 | 62 | 23:04 | 308 | -4.4 | 0.489 | 23.9 | 45.4 | O |
| 7 juni | 06:54 | 52 | 14:59 | 61 | 23:02 | 307 | -4.4 | 0.484 | 24.2 | 45.4 | O |
| 8 juni | 06:56 | 53 | 14:58 | 61 | 23:00 | 307 | -4.4 | 0.478 | 24.5 | 45.4 | O |
| 9 juni | 06:57 | 53 | 14:58 | 61 | 22:58 | 306 | -4.4 | 0.472 | 24.8 | 45.3 | O |
| 10 juni | 06:59 | 54 | 14:58 | 60 | 22:56 | 306 | -4.5 | 0.466 | 25.1 | 45.3 | O |
| 11 juni | 07:00 | 54 | 14:58 | 60 | 22:54 | 305 | -4.5 | 0.460 | 25.4 | 45.2 | O |
| 12 juni | 07:02 | 55 | 14:58 | 60 | 22:52 | 305 | -4.5 | 0.454 | 25.7 | 45.2 | O |
| 13 juni | 07:03 | 55 | 14:57 | 60 | 22:50 | 304 | -4.5 | 0.447 | 26.1 | 45.1 | O |
| 14 juni | 07:05 | 56 | 14:57 | 59 | 22:48 | 304 | -4.5 | 0.441 | 26.4 | 45.0 | O |
| 15 juni | 07:06 | 56 | 14:56 | 59 | 22:45 | 303 | -4.5 | 0.435 | 26.7 | 44.9 | O |
| 16 juni | 07:08 | 57 | 14:56 | 59 | 22:43 | 303 | -4.5 | 0.428 | 27.1 | 44.8 | O |
| 17 juni | 07:09 | 58 | 14:55 | 58 | 22:40 | 302 | -4.5 | 0.422 | 27.4 | 44.7 | O |
| 18 juni | 07:10 | 58 | 14:55 | 58 | 22:38 | 302 | -4.5 | 0.415 | 27.8 | 44.6 | O |
| 19 juni | 07:11 | 59 | 14:54 | 58 | 22:35 | 301 | -4.5 | 0.409 | 28.2 | 44.5 | O |
| 20 juni | 07:13 | 59 | 14:53 | 58 | 22:32 | 301 | -4.6 | 0.402 | 28.6 | 44.3 | O |
| 21 juni | 07:14 | 60 | 14:52 | 57 | 22:30 | 300 | -4.6 | 0.395 | 29.0 | 44.2 | O |
| 22 juni | 07:15 | 60 | 14:51 | 57 | 22:27 | 299 | -4.6 | 0.388 | 29.4 | 44.0 | O |
| 23 juni | 07:16 | 61 | 14:50 | 57 | 22:24 | 299 | -4.6 | 0.381 | 29.8 | 43.8 | O |
| 24 juni | 07:16 | 61 | 14:49 | 56 | 22:21 | 298 | -4.6 | 0.374 | 30.2 | 43.6 | O |
| 25 juni | 07:17 | 62 | 14:48 | 56 | 22:18 | 298 | -4.6 | 0.367 | 30.6 | 43.4 | O |
| 26 juni | 07:18 | 62 | 14:47 | 56 | 22:15 | 297 | -4.6 | 0.360 | 31.1 | 43.2 | O |
| 27 juni | 07:18 | 63 | 14:46 | 55 | 22:11 | 297 | -4.6 | 0.352 | 31.5 | 43.0 | O |
| 28 juni | 07:19 | 64 | 14:44 | 55 | 22:08 | 296 | -4.6 | 0.345 | 32.0 | 42.7 | O |
| 29 juni | 07:19 | 64 | 14:43 | 55 | 22:05 | 296 | -4.6 | 0.337 | 32.5 | 42.4 | O |
| 30 juni | 07:20 | 65 | 14:41 | 54 | 22:02 | 295 | -4.7 | 0.330 | 33.0 | 42.1 | O |
| 1 juli | 07:20 | 65 | 14:40 | 54 | 21:58 | 294 | -4.7 | 0.322 | 33.5 | 41.8 | O |
| 2 juli | 07:20 | 66 | 14:38 | 54 | 21:55 | 294 | -4.7 | 0.314 | 34.0 | 41.5 | O |
| 3 juli | 07:20 | 66 | 14:36 | 53 | 21:51 | 293 | -4.7 | 0.306 | 34.5 | 41.2 | O |
| 4 juli | 07:20 | 67 | 14:34 | 53 | 21:47 | 293 | -4.7 | 0.298 | 35.0 | 40.8 | O |
| 5 juli | 07:20 | 67 | 14:32 | 53 | 21:43 | 292 | -4.7 | 0.290 | 35.6 | 40.4 | O |
| 6 juli | 07:19 | 68 | 14:30 | 52 | 21:40 | 292 | -4.7 | 0.282 | 36.1 | 40.0 | O |
| 7 juli | 07:19 | 68 | 14:28 | 52 | 21:36 | 291 | -4.7 | 0.273 | 36.7 | 39.6 | O |
| 8 juli | 07:18 | 69 | 14:26 | 52 | 21:32 | 291 | -4.7 | 0.265 | 37.3 | 39.1 | O |
| 9 juli | 07:18 | 69 | 14:23 | 51 | 21:28 | 290 | -4.7 | 0.256 | 37.9 | 38.6 | O |
| 10 juli | 07:17 | 70 | 14:21 | 51 | 21:23 | 290 | -4.7 | 0.248 | 38.5 | 38.1 | O |
| 11 juli | 07:16 | 70 | 14:18 | 51 | 21:19 | 289 | -4.7 | 0.239 | 39.1 | 37.6 | O |
| 12 juli | 07:15 | 71 | 14:15 | 51 | 21:15 | 289 | -4.7 | 0.230 | 39.8 | 37.0 | O |
| 13 juli | 07:13 | 71 | 14:12 | 50 | 21:10 | 288 | -4.7 | 0.221 | 40.4 | 36.4 | O |
| 14 juli | 07:12 | 72 | 14:09 | 50 | 21:06 | 288 | -4.7 | 0.212 | 41.1 | 35.8 | O |
| 15 juli | 07:10 | 72 | 14:06 | 50 | 21:01 | 287 | -4.7 | 0.203 | 41.8 | 35.2 | O |
| 16 juli | 07:08 | 73 | 14:03 | 49 | 20:57 | 287 | -4.7 | 0.194 | 42.4 | 34.5 | O |
| 17 juli | 07:07 | 73 | 14:00 | 49 | 20:52 | 287 | -4.7 | 0.185 | 43.1 | 33.8 | O |
| 18 juli | 07:04 | 74 | 13:56 | 49 | 20:47 | 286 | -4.7 | 0.176 | 43.8 | 33.0 | O |
| 19 juli | 07:02 | 74 | 13:52 | 49 | 20:42 | 286 | -4.7 | 0.167 | 44.5 | 32.3 | O |
| 20 juli | 07:00 | 74 | 13:49 | 48 | 20:37 | 285 | -4.7 | 0.158 | 45.2 | 31.5 | O |
| 21 juli | 06:57 | 75 | 13:45 | 48 | 20:32 | 285 | -4.7 | 0.149 | 45.9 | 30.6 | O |
| 22 juli | 06:54 | 75 | 13:41 | 48 | 20:26 | 285 | -4.6 | 0.140 | 46.7 | 29.8 | O |
| 23 juli | 06:51 | 76 | 13:36 | 48 | 20:21 | 284 | -4.6 | 0.131 | 47.4 | 28.9 | O |
| 24 juli | 06:48 | 76 | 13:32 | 48 | 20:16 | 284 | -4.6 | 0.122 | 48.1 | 27.9 | O |
| 25 juli | 06:44 | 76 | 13:27 | 47 | 20:10 | 284 | -4.6 | 0.113 | 48.8 | 27.0 | O |
| 26 juli | 06:40 | 76 | 13:23 | 47 | 20:05 | 283 | -4.6 | 0.104 | 49.5 | 26.0 | O |
| 27 juli | 06:36 | 77 | 13:18 | 47 | 19:59 | 283 | -4.5 | 0.096 | 50.2 | 24.9 | O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) | |
|--------------|----------|------------|------------|------------|-----------|------------|-----------|-------|--------------|---------------|---|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | | | |
| 28 juli | 06:32 | 77 | 13:13 | 47 | 19:53 | 283 | -4.5 | 0.087 | 50.9 | 23.8 | O |
| 29 juli | 06:28 | 77 | 13:08 | 47 | 19:47 | 283 | -4.5 | 0.079 | 51.6 | 22.7 | O |
| 30 juli | 06:23 | 77 | 13:02 | 47 | 19:41 | 283 | -4.4 | 0.071 | 52.3 | 21.6 | O |
| 31 juli | 06:18 | 78 | 12:57 | 47 | 19:36 | 282 | -4.4 | 0.063 | 52.9 | 20.5 | O |
| 1 augustus | 06:13 | 78 | 12:51 | 46 | 19:29 | 282 | -4.3 | 0.056 | 53.5 | 19.3 | O |
| 2 augustus | 06:08 | 78 | 12:46 | 46 | 19:23 | 282 | -4.3 | 0.049 | 54.1 | 18.1 | O |
| 3 augustus | 06:02 | 78 | 12:40 | 46 | 19:17 | 282 | -4.2 | 0.043 | 54.7 | 16.9 | O |
| 4 augustus | 05:57 | 78 | 12:34 | 46 | 19:11 | 282 | -4.2 | 0.037 | 55.2 | 15.6 | O |
| 5 augustus | 05:51 | 78 | 12:28 | 46 | 19:05 | 282 | -4.1 | 0.031 | 55.7 | 14.4 | O |
| 6 augustus | 05:45 | 78 | 12:22 | 46 | 18:59 | 282 | -4.0 | 0.026 | 56.1 | 13.2 | O |
| 7 augustus | 05:39 | 78 | 12:16 | 46 | 18:53 | 282 | -4.0 | 0.022 | 56.5 | 12.1 | O |
| 8 augustus | 05:33 | 78 | 12:09 | 46 | 18:46 | 282 | -4.0 | 0.018 | 56.9 | 11.0 | O |
| 9 augustus | 05:26 | 78 | 12:03 | 46 | 18:40 | 282 | -4.1 | 0.015 | 57.2 | 9.9 | O |
| 10 augustus | 05:19 | 78 | 11:57 | 46 | 18:34 | 282 | -4.1 | 0.012 | 57.4 | 9.1 | O |
| 11 augustus | 05:13 | 78 | 11:50 | 46 | 18:28 | 282 | -4.1 | 0.010 | 57.6 | 8.3 | O |
| 12 augustus | 05:06 | 78 | 11:44 | 46 | 18:22 | 282 | -4.1 | 0.009 | 57.7 | 7.9 | W |
| 13 augustus | 04:59 | 78 | 11:38 | 47 | 18:16 | 282 | -4.1 | 0.009 | 57.8 | 7.7 | W |
| 14 augustus | 04:52 | 77 | 11:31 | 47 | 18:10 | 283 | -4.1 | 0.009 | 57.8 | 7.8 | W |
| 15 augustus | 04:46 | 77 | 11:25 | 47 | 18:04 | 283 | -4.1 | 0.010 | 57.7 | 8.2 | W |
| 16 augustus | 04:39 | 77 | 11:18 | 47 | 17:59 | 283 | -4.1 | 0.012 | 57.6 | 8.9 | W |
| 17 augustus | 04:32 | 77 | 11:12 | 47 | 17:53 | 283 | -4.1 | 0.014 | 57.5 | 9.7 | W |
| 18 augustus | 04:25 | 77 | 11:06 | 47 | 17:47 | 283 | -4.0 | 0.017 | 57.2 | 10.7 | W |
| 19 augustus | 04:18 | 77 | 11:00 | 47 | 17:42 | 284 | -4.0 | 0.021 | 57.0 | 11.8 | W |
| 20 augustus | 04:11 | 76 | 10:54 | 47 | 17:37 | 284 | -4.0 | 0.025 | 56.6 | 13.0 | W |
| 21 augustus | 04:05 | 76 | 10:48 | 48 | 17:32 | 284 | -4.1 | 0.030 | 56.3 | 14.2 | W |
| 22 augustus | 03:58 | 76 | 10:42 | 48 | 17:27 | 284 | -4.2 | 0.035 | 55.9 | 15.4 | W |
| 23 augustus | 03:51 | 76 | 10:36 | 48 | 17:22 | 285 | -4.2 | 0.041 | 55.4 | 16.6 | W |
| 24 augustus | 03:45 | 75 | 10:31 | 48 | 17:17 | 285 | -4.3 | 0.047 | 54.9 | 17.8 | W |
| 25 augustus | 03:39 | 75 | 10:26 | 48 | 17:13 | 285 | -4.3 | 0.054 | 54.4 | 19.0 | W |
| 26 augustus | 03:33 | 75 | 10:20 | 48 | 17:08 | 285 | -4.4 | 0.062 | 53.8 | 20.2 | W |
| 27 augustus | 03:27 | 75 | 10:15 | 48 | 17:04 | 286 | -4.4 | 0.069 | 53.2 | 21.4 | W |
| 28 augustus | 03:21 | 74 | 10:10 | 49 | 17:00 | 286 | -4.5 | 0.077 | 52.6 | 22.6 | W |
| 29 augustus | 03:15 | 74 | 10:05 | 49 | 16:56 | 286 | -4.5 | 0.085 | 51.9 | 23.7 | W |
| 30 augustus | 03:10 | 74 | 10:01 | 49 | 16:52 | 286 | -4.6 | 0.094 | 51.3 | 24.8 | W |
| 31 augustus | 03:05 | 74 | 09:56 | 49 | 16:49 | 287 | -4.6 | 0.102 | 50.6 | 25.9 | W |
| 1 september | 03:00 | 73 | 09:52 | 49 | 16:45 | 287 | -4.6 | 0.111 | 49.9 | 26.9 | W |
| 2 september | 02:55 | 73 | 09:48 | 49 | 16:42 | 287 | -4.7 | 0.120 | 49.2 | 27.9 | W |
| 3 september | 02:50 | 73 | 09:44 | 50 | 16:38 | 287 | -4.7 | 0.129 | 48.5 | 28.9 | W |
| 4 september | 02:46 | 73 | 09:40 | 50 | 16:35 | 287 | -4.7 | 0.138 | 47.8 | 29.8 | W |
| 5 september | 02:41 | 72 | 09:37 | 50 | 16:32 | 288 | -4.7 | 0.147 | 47.1 | 30.7 | W |
| 6 september | 02:37 | 72 | 09:33 | 50 | 16:29 | 288 | -4.7 | 0.156 | 46.4 | 31.5 | W |
| 7 september | 02:33 | 72 | 09:30 | 50 | 16:27 | 288 | -4.7 | 0.165 | 45.8 | 32.4 | W |
| 8 september | 02:29 | 72 | 09:26 | 50 | 16:24 | 288 | -4.7 | 0.174 | 45.1 | 33.2 | W |
| 9 september | 02:26 | 72 | 09:23 | 50 | 16:21 | 288 | -4.8 | 0.183 | 44.4 | 33.9 | W |
| 10 september | 02:22 | 72 | 09:21 | 50 | 16:19 | 288 | -4.8 | 0.193 | 43.7 | 34.7 | W |
| 11 september | 02:19 | 72 | 09:18 | 50 | 16:17 | 289 | -4.8 | 0.202 | 43.0 | 35.4 | W |
| 12 september | 02:16 | 71 | 09:15 | 50 | 16:14 | 289 | -4.8 | 0.211 | 42.4 | 36.0 | W |
| 13 september | 02:13 | 71 | 09:13 | 50 | 16:12 | 289 | -4.8 | 0.219 | 41.7 | 36.7 | W |
| 14 september | 02:10 | 71 | 09:10 | 51 | 16:10 | 289 | -4.8 | 0.228 | 41.1 | 37.3 | W |
| 15 september | 02:08 | 71 | 09:08 | 51 | 16:08 | 289 | -4.8 | 0.237 | 40.4 | 37.9 | W |
| 16 september | 02:05 | 71 | 09:06 | 51 | 16:06 | 289 | -4.8 | 0.246 | 39.8 | 38.4 | W |
| 17 september | 02:03 | 71 | 09:04 | 51 | 16:04 | 289 | -4.8 | 0.254 | 39.2 | 38.9 | W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|--------------|-----------|-------------|------------|------------|-----------|-------------|-----------|-------|--------------|---------------|
| | UT (hr:m) | Azimuth (°) | UT (hr:m) | Hoogte (°) | UT (hr:m) | Azimuth (°) | | | | |
| 18 september | 02:01 | 71 | 09:02 | 51 | 16:02 | 289 | -4.8 | 0.263 | 38.6 | 39.4 W |
| 19 september | 01:59 | 71 | 09:00 | 51 | 16:00 | 289 | -4.8 | 0.271 | 38.0 | 39.9 W |
| 20 september | 01:57 | 71 | 08:58 | 51 | 15:59 | 289 | -4.8 | 0.280 | 37.5 | 40.4 W |
| 21 september | 01:56 | 71 | 08:56 | 51 | 15:57 | 289 | -4.8 | 0.288 | 36.9 | 40.8 W |
| 22 september | 01:54 | 71 | 08:55 | 51 | 15:55 | 289 | -4.8 | 0.296 | 36.4 | 41.2 W |
| 23 september | 01:53 | 71 | 08:53 | 51 | 15:54 | 289 | -4.8 | 0.304 | 35.8 | 41.6 W |
| 24 september | 01:51 | 71 | 08:52 | 51 | 15:52 | 289 | -4.7 | 0.312 | 35.3 | 42.0 W |
| 25 september | 01:50 | 71 | 08:50 | 50 | 15:50 | 289 | -4.7 | 0.319 | 34.8 | 42.3 W |
| 26 september | 01:49 | 71 | 08:49 | 50 | 15:49 | 289 | -4.7 | 0.327 | 34.3 | 42.7 W |
| 27 september | 01:48 | 71 | 08:48 | 50 | 15:47 | 289 | -4.7 | 0.335 | 33.8 | 43.0 W |
| 28 september | 01:48 | 72 | 08:47 | 50 | 15:46 | 288 | -4.7 | 0.342 | 33.3 | 43.3 W |
| 29 september | 01:47 | 72 | 08:46 | 50 | 15:44 | 288 | -4.7 | 0.350 | 32.8 | 43.6 W |
| 30 september | 01:46 | 72 | 08:45 | 50 | 15:43 | 288 | -4.7 | 0.357 | 32.4 | 43.8 W |
| 1 oktober | 01:46 | 72 | 08:44 | 50 | 15:41 | 288 | -4.7 | 0.364 | 31.9 | 44.1 W |
| 2 oktober | 01:46 | 72 | 08:43 | 50 | 15:40 | 288 | -4.7 | 0.371 | 31.5 | 44.3 W |
| 3 oktober | 01:46 | 72 | 08:42 | 50 | 15:39 | 288 | -4.7 | 0.378 | 31.1 | 44.5 W |
| 4 oktober | 01:45 | 73 | 08:41 | 50 | 15:37 | 287 | -4.7 | 0.385 | 30.6 | 44.7 W |
| 5 oktober | 01:45 | 73 | 08:41 | 50 | 15:36 | 287 | -4.7 | 0.392 | 30.2 | 44.9 W |
| 6 oktober | 01:46 | 73 | 08:40 | 49 | 15:34 | 287 | -4.6 | 0.398 | 29.8 | 45.1 W |
| 7 oktober | 01:46 | 73 | 08:39 | 49 | 15:33 | 287 | -4.6 | 0.405 | 29.4 | 45.2 W |
| 8 oktober | 01:46 | 74 | 08:39 | 49 | 15:31 | 286 | -4.6 | 0.412 | 29.1 | 45.4 W |
| 9 oktober | 01:46 | 74 | 08:38 | 49 | 15:30 | 286 | -4.6 | 0.418 | 28.7 | 45.5 W |
| 10 oktober | 01:47 | 74 | 08:38 | 49 | 15:28 | 286 | -4.6 | 0.424 | 28.3 | 45.6 W |
| 11 oktober | 01:47 | 74 | 08:37 | 48 | 15:27 | 285 | -4.6 | 0.431 | 28.0 | 45.8 W |
| 12 oktober | 01:48 | 75 | 08:37 | 48 | 15:26 | 285 | -4.6 | 0.437 | 27.6 | 45.9 W |
| 13 oktober | 01:49 | 75 | 08:37 | 48 | 15:24 | 285 | -4.6 | 0.443 | 27.3 | 46.0 W |
| 14 oktober | 01:49 | 75 | 08:36 | 48 | 15:23 | 284 | -4.6 | 0.449 | 27.0 | 46.0 W |
| 15 oktober | 01:50 | 76 | 08:36 | 48 | 15:21 | 284 | -4.6 | 0.455 | 26.6 | 46.1 W |
| 16 oktober | 01:51 | 76 | 08:36 | 47 | 15:20 | 284 | -4.6 | 0.461 | 26.3 | 46.2 W |
| 17 oktober | 01:52 | 76 | 08:35 | 47 | 15:18 | 283 | -4.5 | 0.467 | 26.0 | 46.2 W |
| 18 oktober | 01:53 | 77 | 08:35 | 47 | 15:17 | 283 | -4.5 | 0.473 | 25.7 | 46.3 W |
| 19 oktober | 01:54 | 77 | 08:35 | 47 | 15:15 | 282 | -4.5 | 0.478 | 25.4 | 46.3 W |
| 20 oktober | 01:55 | 78 | 08:35 | 46 | 15:14 | 282 | -4.5 | 0.484 | 25.1 | 46.4 W |
| 21 oktober | 01:56 | 78 | 08:35 | 46 | 15:12 | 282 | -4.5 | 0.489 | 24.8 | 46.4 W |
| 22 oktober | 01:58 | 79 | 08:35 | 46 | 15:11 | 281 | -4.5 | 0.495 | 24.6 | 46.4 W |
| 23 oktober | 01:59 | 79 | 08:34 | 46 | 15:09 | 281 | -4.5 | 0.500 | 24.3 | 46.4 W |
| 24 oktober | 02:00 | 79 | 08:34 | 45 | 15:08 | 280 | -4.5 | 0.506 | 24.0 | 46.4 W |
| 25 oktober | 02:02 | 80 | 08:34 | 45 | 15:06 | 280 | -4.5 | 0.511 | 23.8 | 46.4 W |
| 26 oktober | 02:03 | 80 | 08:34 | 45 | 15:05 | 279 | -4.5 | 0.516 | 23.5 | 46.4 W |
| 27 oktober | 02:05 | 81 | 08:34 | 44 | 15:03 | 279 | -4.4 | 0.522 | 23.3 | 46.4 W |
| 28 oktober | 02:06 | 81 | 08:34 | 44 | 15:01 | 278 | -4.4 | 0.527 | 23.0 | 46.4 W |
| 29 oktober | 02:08 | 82 | 08:34 | 44 | 15:00 | 278 | -4.4 | 0.532 | 22.8 | 46.3 W |
| 30 oktober | 02:09 | 82 | 08:34 | 43 | 14:58 | 277 | -4.4 | 0.537 | 22.6 | 46.3 W |
| 31 oktober | 02:11 | 83 | 08:34 | 43 | 14:57 | 277 | -4.4 | 0.542 | 22.3 | 46.3 W |
| 1 november | 02:13 | 84 | 08:34 | 43 | 14:55 | 276 | -4.4 | 0.547 | 22.1 | 46.2 W |
| 2 november | 02:14 | 84 | 08:34 | 42 | 14:53 | 276 | -4.4 | 0.552 | 21.9 | 46.2 W |
| 3 november | 02:16 | 85 | 08:34 | 42 | 14:52 | 275 | -4.4 | 0.557 | 21.7 | 46.1 W |
| 4 november | 02:18 | 85 | 08:35 | 42 | 14:50 | 275 | -4.4 | 0.562 | 21.5 | 46.0 W |
| 5 november | 02:20 | 86 | 08:35 | 41 | 14:48 | 274 | -4.4 | 0.566 | 21.3 | 46.0 W |
| 6 november | 02:22 | 86 | 08:35 | 41 | 14:47 | 273 | -4.4 | 0.571 | 21.1 | 45.9 W |
| 7 november | 02:24 | 87 | 08:35 | 41 | 14:45 | 273 | -4.4 | 0.576 | 20.9 | 45.8 W |
| 8 november | 02:26 | 87 | 08:35 | 40 | 14:44 | 272 | -4.3 | 0.580 | 20.7 | 45.8 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|-------------|-----------|-------------|------------|------------|-----------|-------------|-----------|-------|--------------|---------------|
| | UT (hr:m) | Azimuth (°) | UT (hr:m) | Hoogte (°) | UT (hr:m) | Azimuth (°) | | | | |
| 9 november | 02:28 | 88 | 08:35 | 40 | 14:42 | 272 | -4.3 | 0.585 | 20.5 | 45.7 W |
| 10 november | 02:30 | 89 | 08:35 | 40 | 14:40 | 271 | -4.3 | 0.589 | 20.3 | 45.6 W |
| 11 november | 02:32 | 89 | 08:36 | 39 | 14:39 | 270 | -4.3 | 0.594 | 20.1 | 45.5 W |
| 12 november | 02:34 | 90 | 08:36 | 39 | 14:37 | 270 | -4.3 | 0.598 | 19.9 | 45.4 W |
| 13 november | 02:36 | 90 | 08:36 | 38 | 14:35 | 269 | -4.3 | 0.603 | 19.8 | 45.3 W |
| 14 november | 02:38 | 91 | 08:36 | 38 | 14:33 | 269 | -4.3 | 0.607 | 19.6 | 45.2 W |
| 15 november | 02:40 | 92 | 08:36 | 38 | 14:32 | 268 | -4.3 | 0.612 | 19.4 | 45.1 W |
| 16 november | 02:42 | 92 | 08:37 | 37 | 14:30 | 267 | -4.3 | 0.616 | 19.3 | 45.0 W |
| 17 november | 02:45 | 93 | 08:37 | 37 | 14:28 | 267 | -4.3 | 0.620 | 19.1 | 44.9 W |
| 18 november | 02:47 | 94 | 08:37 | 36 | 14:27 | 266 | -4.3 | 0.624 | 18.9 | 44.7 W |
| 19 november | 02:49 | 94 | 08:38 | 36 | 14:25 | 266 | -4.3 | 0.629 | 18.8 | 44.6 W |
| 20 november | 02:51 | 95 | 08:38 | 36 | 14:23 | 265 | -4.3 | 0.633 | 18.6 | 44.5 W |
| 21 november | 02:54 | 95 | 08:38 | 35 | 14:22 | 264 | -4.3 | 0.637 | 18.5 | 44.4 W |
| 22 november | 02:56 | 96 | 08:39 | 35 | 14:20 | 264 | -4.2 | 0.641 | 18.3 | 44.3 W |
| 23 november | 02:58 | 97 | 08:39 | 34 | 14:19 | 263 | -4.2 | 0.645 | 18.2 | 44.1 W |
| 24 november | 03:01 | 97 | 08:39 | 34 | 14:17 | 262 | -4.2 | 0.649 | 18.1 | 44.0 W |
| 25 november | 03:03 | 98 | 08:40 | 34 | 14:15 | 262 | -4.2 | 0.653 | 17.9 | 43.9 W |
| 26 november | 03:05 | 99 | 08:40 | 33 | 14:14 | 261 | -4.2 | 0.657 | 17.8 | 43.7 W |
| 27 november | 03:08 | 99 | 08:40 | 33 | 14:12 | 260 | -4.2 | 0.661 | 17.6 | 43.6 W |
| 28 november | 03:10 | 100 | 08:41 | 32 | 14:10 | 260 | -4.2 | 0.665 | 17.5 | 43.4 W |
| 29 november | 03:13 | 101 | 08:41 | 32 | 14:09 | 259 | -4.2 | 0.668 | 17.4 | 43.3 W |
| 30 november | 03:15 | 101 | 08:42 | 32 | 14:07 | 258 | -4.2 | 0.672 | 17.3 | 43.1 W |
| 1 december | 03:18 | 102 | 08:42 | 31 | 14:06 | 258 | -4.2 | 0.676 | 17.1 | 43.0 W |
| 2 december | 03:20 | 103 | 08:43 | 31 | 14:04 | 257 | -4.2 | 0.680 | 17.0 | 42.8 W |
| 3 december | 03:23 | 103 | 08:43 | 30 | 14:03 | 257 | -4.2 | 0.684 | 16.9 | 42.7 W |
| 4 december | 03:25 | 104 | 08:44 | 30 | 14:01 | 256 | -4.2 | 0.687 | 16.8 | 42.5 W |
| 5 december | 03:28 | 104 | 08:44 | 30 | 14:00 | 255 | -4.2 | 0.691 | 16.6 | 42.4 W |
| 6 december | 03:31 | 105 | 08:45 | 29 | 13:58 | 255 | -4.2 | 0.694 | 16.5 | 42.2 W |
| 7 december | 03:33 | 106 | 08:45 | 29 | 13:57 | 254 | -4.2 | 0.698 | 16.4 | 42.0 W |
| 8 december | 03:36 | 106 | 08:46 | 28 | 13:55 | 253 | -4.1 | 0.702 | 16.3 | 41.9 W |
| 9 december | 03:39 | 107 | 08:47 | 28 | 13:54 | 253 | -4.1 | 0.705 | 16.2 | 41.7 W |
| 10 december | 03:41 | 108 | 08:47 | 28 | 13:53 | 252 | -4.1 | 0.709 | 16.1 | 41.5 W |
| 11 december | 03:44 | 108 | 08:48 | 27 | 13:51 | 251 | -4.1 | 0.712 | 16.0 | 41.4 W |
| 12 december | 03:46 | 109 | 08:49 | 27 | 13:50 | 251 | -4.1 | 0.716 | 15.9 | 41.2 W |
| 13 december | 03:49 | 110 | 08:49 | 27 | 13:49 | 250 | -4.1 | 0.719 | 15.8 | 41.0 W |
| 14 december | 03:52 | 110 | 08:50 | 26 | 13:47 | 250 | -4.1 | 0.722 | 15.7 | 40.8 W |
| 15 december | 03:55 | 111 | 08:51 | 26 | 13:46 | 249 | -4.1 | 0.726 | 15.6 | 40.7 W |
| 16 december | 03:57 | 111 | 08:51 | 25 | 13:45 | 248 | -4.1 | 0.729 | 15.5 | 40.5 W |
| 17 december | 04:00 | 112 | 08:52 | 25 | 13:44 | 248 | -4.1 | 0.732 | 15.4 | 40.3 W |
| 18 december | 04:03 | 113 | 08:53 | 25 | 13:43 | 247 | -4.1 | 0.736 | 15.3 | 40.1 W |
| 19 december | 04:05 | 113 | 08:54 | 24 | 13:41 | 247 | -4.1 | 0.739 | 15.2 | 40.0 W |
| 20 december | 04:08 | 114 | 08:55 | 24 | 13:40 | 246 | -4.1 | 0.742 | 15.1 | 39.8 W |
| 21 december | 04:11 | 114 | 08:55 | 24 | 13:39 | 246 | -4.1 | 0.745 | 15.0 | 39.6 W |
| 22 december | 04:14 | 115 | 08:56 | 23 | 13:38 | 245 | -4.1 | 0.748 | 14.9 | 39.4 W |
| 23 december | 04:16 | 115 | 08:57 | 23 | 13:37 | 244 | -4.1 | 0.752 | 14.8 | 39.2 W |
| 24 december | 04:19 | 116 | 08:58 | 23 | 13:36 | 244 | -4.1 | 0.755 | 14.8 | 39.0 W |
| 25 december | 04:22 | 116 | 08:59 | 22 | 13:36 | 243 | -4.1 | 0.758 | 14.7 | 38.8 W |
| 26 december | 04:24 | 117 | 09:00 | 22 | 13:35 | 243 | -4.1 | 0.761 | 14.6 | 38.6 W |
| 27 december | 04:27 | 117 | 09:01 | 22 | 13:34 | 242 | -4.1 | 0.764 | 14.5 | 38.4 W |
| 28 december | 04:30 | 118 | 09:02 | 21 | 13:33 | 242 | -4.1 | 0.767 | 14.4 | 38.3 W |
| 29 december | 04:33 | 118 | 09:03 | 21 | 13:33 | 241 | -4.1 | 0.770 | 14.4 | 38.1 W |
| 30 december | 04:35 | 119 | 09:04 | 21 | 13:32 | 241 | -4.0 | 0.773 | 14.3 | 37.9 W |
| 31 december | 04:38 | 119 | 09:05 | 21 | 13:32 | 240 | -4.0 | 0.776 | 14.2 | 37.7 W |

Mars

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Fase | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|-------------|-----------|-------------|-----------|------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Azimuth (°) | UT (h:m) | Azimuth (°) | | | | |
| 1 januari | 13:05 | 48 | 21:24 | 64 | 05:49 | 312 | -1.2 | 0.97 | 14.7 | 148.7 O |
| 2 januari | 13:00 | 48 | 21:20 | 64 | 05:44 | 312 | -1.2 | 0.97 | 14.5 | 147.5 O |
| 3 januari | 12:56 | 48 | 21:15 | 64 | 05:39 | 312 | -1.2 | 0.97 | 14.4 | 146.3 O |
| 4 januari | 12:52 | 48 | 21:11 | 64 | 05:35 | 312 | -1.1 | 0.97 | 14.3 | 145.2 O |
| 5 januari | 12:47 | 48 | 21:07 | 64 | 05:30 | 312 | -1.1 | 0.96 | 14.1 | 144.1 O |
| 6 januari | 12:43 | 48 | 21:02 | 64 | 05:26 | 312 | -1.0 | 0.96 | 14.0 | 143.0 O |
| 7 januari | 12:39 | 48 | 20:58 | 64 | 05:21 | 312 | -1.0 | 0.96 | 13.9 | 141.9 O |
| 8 januari | 12:35 | 48 | 20:54 | 64 | 05:17 | 312 | -1.0 | 0.96 | 13.7 | 140.8 O |
| 9 januari | 12:31 | 48 | 20:50 | 64 | 05:13 | 312 | -1.0 | 0.96 | 13.6 | 139.7 O |
| 10 januari | 12:26 | 48 | 20:46 | 64 | 05:09 | 312 | -0.9 | 0.96 | 13.4 | 138.6 O |
| 11 januari | 12:22 | 48 | 20:42 | 64 | 05:05 | 312 | -0.9 | 0.95 | 13.3 | 137.6 O |
| 12 januari | 12:19 | 48 | 20:38 | 64 | 05:01 | 312 | -0.9 | 0.95 | 13.2 | 136.6 O |
| 13 januari | 12:15 | 48 | 20:34 | 64 | 04:57 | 312 | -0.9 | 0.95 | 13.0 | 135.5 O |
| 14 januari | 12:11 | 48 | 20:30 | 64 | 04:53 | 312 | -0.8 | 0.95 | 12.9 | 134.5 O |
| 15 januari | 12:07 | 48 | 20:26 | 64 | 04:49 | 312 | -0.8 | 0.95 | 12.8 | 133.5 O |
| 16 januari | 12:03 | 48 | 20:22 | 64 | 04:45 | 312 | -0.8 | 0.94 | 12.6 | 132.6 O |
| 17 januari | 11:59 | 48 | 20:19 | 64 | 04:42 | 312 | -0.8 | 0.94 | 12.5 | 131.6 O |
| 18 januari | 11:56 | 48 | 20:15 | 64 | 04:38 | 312 | -0.7 | 0.94 | 12.4 | 130.6 O |
| 19 januari | 11:52 | 48 | 20:11 | 64 | 04:34 | 312 | -0.7 | 0.94 | 12.2 | 129.7 O |
| 20 januari | 11:49 | 48 | 20:08 | 64 | 04:31 | 312 | -0.7 | 0.94 | 12.1 | 128.8 O |
| 21 januari | 11:45 | 48 | 20:04 | 64 | 04:27 | 312 | -0.7 | 0.94 | 12.0 | 127.8 O |
| 22 januari | 11:41 | 48 | 20:01 | 64 | 04:24 | 312 | -0.6 | 0.93 | 11.9 | 126.9 O |
| 23 januari | 11:38 | 48 | 19:58 | 64 | 04:21 | 312 | -0.6 | 0.93 | 11.7 | 126.0 O |
| 24 januari | 11:34 | 48 | 19:54 | 64 | 04:17 | 312 | -0.5 | 0.93 | 11.6 | 125.1 O |
| 25 januari | 11:31 | 48 | 19:51 | 64 | 04:14 | 312 | -0.5 | 0.93 | 11.5 | 124.3 O |
| 26 januari | 11:28 | 48 | 19:48 | 64 | 04:11 | 312 | -0.5 | 0.93 | 11.4 | 123.4 O |
| 27 januari | 11:24 | 48 | 19:45 | 64 | 04:08 | 312 | -0.4 | 0.93 | 11.3 | 122.5 O |
| 28 januari | 11:21 | 48 | 19:41 | 64 | 04:05 | 312 | -0.4 | 0.93 | 11.1 | 121.7 O |
| 29 januari | 11:18 | 48 | 19:38 | 64 | 04:02 | 312 | -0.3 | 0.92 | 11.0 | 120.8 O |
| 30 januari | 11:14 | 48 | 19:35 | 64 | 03:59 | 312 | -0.3 | 0.92 | 10.9 | 120.0 O |
| 31 januari | 11:11 | 48 | 19:32 | 64 | 03:56 | 312 | -0.3 | 0.92 | 10.8 | 119.2 O |
| 1 februari | 11:08 | 48 | 19:29 | 64 | 03:53 | 312 | -0.2 | 0.92 | 10.7 | 118.4 O |
| 2 februari | 11:05 | 48 | 19:26 | 64 | 03:50 | 312 | -0.2 | 0.92 | 10.6 | 117.6 O |
| 3 februari | 11:02 | 48 | 19:23 | 64 | 03:48 | 312 | -0.2 | 0.92 | 10.5 | 116.8 O |
| 4 februari | 10:59 | 48 | 19:20 | 64 | 03:45 | 312 | -0.2 | 0.92 | 10.4 | 116.0 O |
| 5 februari | 10:56 | 48 | 19:18 | 64 | 03:42 | 312 | -0.1 | 0.92 | 10.3 | 115.3 O |
| 6 februari | 10:53 | 47 | 19:15 | 64 | 03:40 | 313 | -0.1 | 0.91 | 10.2 | 114.5 O |
| 7 februari | 10:50 | 47 | 19:12 | 64 | 03:37 | 313 | -0.1 | 0.91 | 10.1 | 113.8 O |
| 8 februari | 10:47 | 47 | 19:09 | 64 | 03:34 | 313 | 0.0 | 0.91 | 10.0 | 113.0 O |
| 9 februari | 10:44 | 47 | 19:07 | 64 | 03:32 | 313 | 0.0 | 0.91 | 9.9 | 112.3 O |
| 10 februari | 10:41 | 47 | 19:04 | 64 | 03:29 | 313 | 0.0 | 0.91 | 9.8 | 111.5 O |
| 11 februari | 10:38 | 47 | 19:01 | 64 | 03:27 | 313 | 0.0 | 0.91 | 9.7 | 110.8 O |
| 12 februari | 10:35 | 47 | 18:59 | 64 | 03:24 | 313 | 0.1 | 0.91 | 9.6 | 110.1 O |
| 13 februari | 10:33 | 47 | 18:56 | 64 | 03:22 | 313 | 0.1 | 0.91 | 9.5 | 109.4 O |
| 14 februari | 10:30 | 47 | 18:53 | 64 | 03:20 | 313 | 0.1 | 0.91 | 9.4 | 108.7 O |
| 15 februari | 10:27 | 47 | 18:51 | 64 | 03:17 | 313 | 0.1 | 0.91 | 9.3 | 108.0 O |
| 16 februari | 10:24 | 47 | 18:48 | 64 | 03:15 | 313 | 0.1 | 0.91 | 9.2 | 107.3 O |
| 17 februari | 10:22 | 47 | 18:46 | 64 | 03:13 | 313 | 0.1 | 0.91 | 9.1 | 106.6 O |
| 18 februari | 10:19 | 47 | 18:44 | 64 | 03:10 | 313 | 0.2 | 0.90 | 9.0 | 106.0 O |
| 19 februari | 10:16 | 47 | 18:41 | 64 | 03:08 | 313 | 0.2 | 0.90 | 9.0 | 105.3 O |
| 20 februari | 10:14 | 47 | 18:39 | 64 | 03:06 | 313 | 0.2 | 0.90 | 8.9 | 104.6 O |
| 21 februari | 10:11 | 47 | 18:36 | 64 | 03:04 | 313 | 0.2 | 0.90 | 8.8 | 104.0 O |

Jupiter

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 1 januari | 11:05 | 90 | 17:05 | 39 | 23:04 | 270 | -2.3 | 39.3 | 80.9 O |
| 2 januari | 11:02 | 90 | 17:01 | 39 | 23:01 | 270 | -2.3 | 39.2 | 80.0 O |
| 3 januari | 10:58 | 90 | 16:58 | 39 | 22:58 | 270 | -2.3 | 39.1 | 79.1 O |
| 4 januari | 10:54 | 90 | 16:54 | 39 | 22:55 | 270 | -2.3 | 39.0 | 78.2 O |
| 5 januari | 10:51 | 90 | 16:51 | 39 | 22:52 | 270 | -2.3 | 38.9 | 77.3 O |
| 6 januari | 10:47 | 90 | 16:48 | 39 | 22:48 | 270 | -2.3 | 38.7 | 76.5 O |
| 7 januari | 10:43 | 90 | 16:44 | 39 | 22:45 | 270 | -2.3 | 38.6 | 75.6 O |
| 8 januari | 10:39 | 90 | 16:41 | 39 | 22:42 | 270 | -2.3 | 38.5 | 74.7 O |
| 9 januari | 10:36 | 90 | 16:37 | 39 | 22:39 | 270 | -2.3 | 38.4 | 73.8 O |
| 10 januari | 10:32 | 90 | 16:34 | 39 | 22:36 | 270 | -2.3 | 38.3 | 72.9 O |
| 11 januari | 10:28 | 89 | 16:30 | 39 | 22:33 | 271 | -2.3 | 38.2 | 72.1 O |
| 12 januari | 10:24 | 89 | 16:27 | 39 | 22:30 | 271 | -2.3 | 38.1 | 71.2 O |
| 13 januari | 10:21 | 89 | 16:24 | 39 | 22:27 | 271 | -2.3 | 37.9 | 70.3 O |
| 14 januari | 10:17 | 89 | 16:20 | 39 | 22:24 | 271 | -2.3 | 37.8 | 69.5 O |
| 15 januari | 10:13 | 89 | 16:17 | 39 | 22:20 | 271 | -2.3 | 37.7 | 68.6 O |
| 16 januari | 10:10 | 89 | 16:14 | 39 | 22:17 | 271 | -2.3 | 37.6 | 67.7 O |
| 17 januari | 10:06 | 89 | 16:10 | 39 | 22:14 | 271 | -2.3 | 37.5 | 66.9 O |
| 18 januari | 10:02 | 89 | 16:07 | 40 | 22:11 | 271 | -2.2 | 37.4 | 66.0 O |
| 19 januari | 09:59 | 89 | 16:03 | 40 | 22:08 | 271 | -2.2 | 37.3 | 65.1 O |
| 20 januari | 09:55 | 89 | 16:00 | 40 | 22:05 | 272 | -2.2 | 37.2 | 64.3 O |
| 21 januari | 09:51 | 88 | 15:57 | 40 | 22:02 | 272 | -2.2 | 37.1 | 63.4 O |
| 22 januari | 09:48 | 88 | 15:53 | 40 | 21:59 | 272 | -2.2 | 37.0 | 62.6 O |
| 23 januari | 09:44 | 88 | 15:50 | 40 | 21:57 | 272 | -2.2 | 36.9 | 61.7 O |
| 24 januari | 09:40 | 88 | 15:47 | 40 | 21:54 | 272 | -2.2 | 36.8 | 60.9 O |
| 25 januari | 09:37 | 88 | 15:44 | 40 | 21:51 | 272 | -2.2 | 36.7 | 60.1 O |
| 26 januari | 09:33 | 88 | 15:40 | 40 | 21:48 | 272 | -2.2 | 36.6 | 59.2 O |
| 27 januari | 09:29 | 88 | 15:37 | 40 | 21:45 | 272 | -2.2 | 36.5 | 58.4 O |
| 28 januari | 09:26 | 88 | 15:34 | 40 | 21:42 | 272 | -2.2 | 36.4 | 57.5 O |
| 29 januari | 09:22 | 88 | 15:30 | 40 | 21:39 | 273 | -2.2 | 36.4 | 56.7 O |
| 30 januari | 09:19 | 87 | 15:27 | 40 | 21:36 | 273 | -2.2 | 36.3 | 55.9 O |
| 31 januari | 09:15 | 87 | 15:24 | 41 | 21:33 | 273 | -2.2 | 36.2 | 55.0 O |
| 1 februari | 09:11 | 87 | 15:21 | 41 | 21:30 | 273 | -2.2 | 36.1 | 54.2 O |
| 2 februari | 09:08 | 87 | 15:17 | 41 | 21:27 | 273 | -2.2 | 36.0 | 53.4 O |
| 3 februari | 09:04 | 87 | 15:14 | 41 | 21:25 | 273 | -2.2 | 35.9 | 52.6 O |
| 4 februari | 09:00 | 87 | 15:11 | 41 | 21:22 | 273 | -2.2 | 35.8 | 51.7 O |
| 5 februari | 08:57 | 87 | 15:08 | 41 | 21:19 | 273 | -2.2 | 35.8 | 50.9 O |
| 6 februari | 08:53 | 87 | 15:05 | 41 | 21:16 | 274 | -2.2 | 35.7 | 50.1 O |
| 7 februari | 08:50 | 86 | 15:01 | 41 | 21:13 | 274 | -2.2 | 35.6 | 49.3 O |
| 8 februari | 08:46 | 86 | 14:58 | 41 | 21:10 | 274 | -2.2 | 35.5 | 48.5 O |
| 9 februari | 08:42 | 86 | 14:55 | 41 | 21:08 | 274 | -2.2 | 35.4 | 47.7 O |
| 10 februari | 08:39 | 86 | 14:52 | 41 | 21:05 | 274 | -2.2 | 35.4 | 46.9 O |
| 11 februari | 08:35 | 86 | 14:49 | 41 | 21:02 | 274 | -2.1 | 35.3 | 46.0 O |
| 12 februari | 08:32 | 86 | 14:45 | 41 | 20:59 | 274 | -2.1 | 35.2 | 45.2 O |
| 13 februari | 08:28 | 86 | 14:42 | 42 | 20:57 | 274 | -2.1 | 35.2 | 44.4 O |
| 14 februari | 08:24 | 85 | 14:39 | 42 | 20:54 | 275 | -2.1 | 35.1 | 43.6 O |
| 15 februari | 08:21 | 85 | 14:36 | 42 | 20:51 | 275 | -2.1 | 35.0 | 42.8 O |
| 16 februari | 08:17 | 85 | 14:33 | 42 | 20:48 | 275 | -2.1 | 35.0 | 42.0 O |
| 17 februari | 08:14 | 85 | 14:30 | 42 | 20:46 | 275 | -2.1 | 34.9 | 41.2 O |
| 18 februari | 08:10 | 85 | 14:26 | 42 | 20:43 | 275 | -2.1 | 34.8 | 40.4 O |
| 19 februari | 08:06 | 85 | 14:23 | 42 | 20:40 | 275 | -2.1 | 34.8 | 39.6 O |
| 20 februari | 08:03 | 85 | 14:20 | 42 | 20:37 | 275 | -2.1 | 34.7 | 38.8 O |
| 21 februari | 07:59 | 85 | 14:17 | 42 | 20:35 | 276 | -2.1 | 34.6 | 38.0 O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 22 februari | 07:56 | 84 | 14:14 | 42 | 20:32 | 276 | -2.1 | 34.6 | 37.3 O |
| 23 februari | 07:52 | 84 | 14:11 | 42 | 20:29 | 276 | -2.1 | 34.5 | 36.5 O |
| 24 februari | 07:49 | 84 | 14:07 | 42 | 20:27 | 276 | -2.1 | 34.5 | 35.7 O |
| 25 februari | 07:45 | 84 | 14:04 | 43 | 20:24 | 276 | -2.1 | 34.4 | 34.9 O |
| 26 februari | 07:42 | 84 | 14:01 | 43 | 20:21 | 276 | -2.1 | 34.3 | 34.1 O |
| 27 februari | 07:38 | 84 | 13:58 | 43 | 20:18 | 276 | -2.1 | 34.3 | 33.3 O |
| 28 februari | 07:34 | 84 | 13:55 | 43 | 20:16 | 276 | -2.1 | 34.2 | 32.5 O |
| 1 maart | 07:31 | 83 | 13:52 | 43 | 20:13 | 277 | -2.1 | 34.2 | 31.8 O |
| 2 maart | 07:27 | 83 | 13:49 | 43 | 20:10 | 277 | -2.1 | 34.1 | 31.0 O |
| 3 maart | 07:24 | 83 | 13:46 | 43 | 20:08 | 277 | -2.1 | 34.1 | 30.2 O |
| 4 maart | 07:20 | 83 | 13:43 | 43 | 20:05 | 277 | -2.1 | 34.0 | 29.4 O |
| 5 maart | 07:17 | 83 | 13:39 | 43 | 20:02 | 277 | -2.1 | 34.0 | 28.7 O |
| 6 maart | 07:13 | 83 | 13:36 | 43 | 20:00 | 277 | -2.1 | 34.0 | 27.9 O |
| 7 maart | 07:10 | 83 | 13:33 | 43 | 19:57 | 277 | -2.1 | 33.9 | 27.1 O |
| 8 maart | 07:06 | 82 | 13:30 | 44 | 19:55 | 278 | -2.1 | 33.9 | 26.3 O |
| 9 maart | 07:03 | 82 | 13:27 | 44 | 19:52 | 278 | -2.1 | 33.8 | 25.6 O |
| 10 maart | 06:59 | 82 | 13:24 | 44 | 19:49 | 278 | -2.1 | 33.8 | 24.8 O |
| 11 maart | 06:55 | 82 | 13:21 | 44 | 19:47 | 278 | -2.1 | 33.7 | 24.0 O |
| 12 maart | 06:52 | 82 | 13:18 | 44 | 19:44 | 278 | -2.1 | 33.7 | 23.3 O |
| 13 maart | 06:48 | 82 | 13:15 | 44 | 19:41 | 278 | -2.1 | 33.7 | 22.5 O |
| 14 maart | 06:45 | 82 | 13:12 | 44 | 19:39 | 279 | -2.1 | 33.6 | 21.7 O |
| 15 maart | 06:41 | 81 | 13:09 | 44 | 19:36 | 279 | -2.1 | 33.6 | 21.0 O |
| 16 maart | 06:38 | 81 | 13:06 | 44 | 19:34 | 279 | -2.1 | 33.6 | 20.2 O |
| 17 maart | 06:34 | 81 | 13:03 | 44 | 19:31 | 279 | -2.1 | 33.5 | 19.4 O |
| 18 maart | 06:31 | 81 | 12:59 | 44 | 19:28 | 279 | -2.1 | 33.5 | 18.7 O |
| 19 maart | 06:27 | 81 | 12:56 | 45 | 19:26 | 279 | -2.1 | 33.5 | 17.9 O |
| 20 maart | 06:24 | 81 | 12:53 | 45 | 19:23 | 279 | -2.1 | 33.4 | 17.2 O |
| 21 maart | 06:20 | 81 | 12:50 | 45 | 19:21 | 280 | -2.1 | 33.4 | 16.4 O |
| 22 maart | 06:17 | 80 | 12:47 | 45 | 19:18 | 280 | -2.1 | 33.4 | 15.7 O |
| 23 maart | 06:13 | 80 | 12:44 | 45 | 19:15 | 280 | -2.1 | 33.4 | 14.9 O |
| 24 maart | 06:10 | 80 | 12:41 | 45 | 19:13 | 280 | -2.1 | 33.3 | 14.2 O |
| 25 maart | 06:06 | 80 | 12:38 | 45 | 19:10 | 280 | -2.1 | 33.3 | 13.4 O |
| 26 maart | 06:03 | 80 | 12:35 | 45 | 19:08 | 280 | -2.1 | 33.3 | 12.7 O |
| 27 maart | 05:59 | 80 | 12:32 | 45 | 19:05 | 280 | -2.1 | 33.3 | 11.9 O |
| 28 maart | 05:56 | 80 | 12:29 | 45 | 19:02 | 281 | -2.1 | 33.3 | 11.2 O |
| 29 maart | 05:52 | 79 | 12:26 | 45 | 19:00 | 281 | -2.1 | 33.2 | 10.4 O |
| 30 maart | 05:49 | 79 | 12:23 | 46 | 18:57 | 281 | -2.1 | 33.2 | 9.7 O |
| 31 maart | 05:45 | 79 | 12:20 | 46 | 18:55 | 281 | -2.1 | 33.2 | 8.9 O |
| 1 april | 05:42 | 79 | 12:17 | 46 | 18:52 | 281 | -2.1 | 33.2 | 8.2 O |
| 2 april | 05:38 | 79 | 12:14 | 46 | 18:50 | 281 | -2.1 | 33.2 | 7.4 O |
| 3 april | 05:35 | 79 | 12:11 | 46 | 18:47 | 281 | -2.1 | 33.2 | 6.7 O |
| 4 april | 05:31 | 78 | 12:08 | 46 | 18:44 | 282 | -2.0 | 33.2 | 6.0 O |
| 5 april | 05:28 | 78 | 12:05 | 46 | 18:42 | 282 | -2.0 | 33.1 | 5.2 O |
| 6 april | 05:24 | 78 | 12:02 | 46 | 18:39 | 282 | -2.0 | 33.1 | 4.5 O |
| 7 april | 05:21 | 78 | 11:59 | 46 | 18:37 | 282 | -2.0 | 33.1 | 3.8 O |
| 8 april | 05:17 | 78 | 11:55 | 46 | 18:34 | 282 | -2.0 | 33.1 | 3.1 O |
| 9 april | 05:14 | 78 | 11:52 | 46 | 18:31 | 282 | -2.0 | 33.1 | 2.4 O |
| 10 april | 05:10 | 78 | 11:49 | 47 | 18:29 | 282 | -2.0 | 33.1 | 1.8 O |
| 11 april | 05:07 | 77 | 11:46 | 47 | 18:26 | 283 | -2.0 | 33.1 | 1.3 O |
| 12 april | 05:03 | 77 | 11:43 | 47 | 18:24 | 283 | -2.0 | 33.1 | 1.1 O |
| 13 april | 05:00 | 77 | 11:40 | 47 | 18:21 | 283 | -2.0 | 33.1 | 1.3 W |
| 14 april | 04:56 | 77 | 11:37 | 47 | 18:19 | 283 | -2.0 | 33.1 | 1.9 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|----------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 15 april | 04:53 | 77 | 11:34 | 47 | 18:16 | 283 | -2.0 | 33.1 | 2.5 W |
| 16 april | 04:49 | 77 | 11:31 | 47 | 18:13 | 283 | -2.0 | 33.1 | 3.2 W |
| 17 april | 04:46 | 77 | 11:28 | 47 | 18:11 | 283 | -2.0 | 33.1 | 3.9 W |
| 18 april | 04:42 | 76 | 11:25 | 47 | 18:08 | 284 | -2.0 | 33.1 | 4.6 W |
| 19 april | 04:39 | 76 | 11:22 | 47 | 18:06 | 284 | -2.0 | 33.1 | 5.3 W |
| 20 april | 04:35 | 76 | 11:19 | 47 | 18:03 | 284 | -2.0 | 33.1 | 6.1 W |
| 21 april | 04:32 | 76 | 11:16 | 48 | 18:00 | 284 | -2.0 | 33.1 | 6.8 W |
| 22 april | 04:28 | 76 | 11:13 | 48 | 17:58 | 284 | -2.0 | 33.1 | 7.5 W |
| 23 april | 04:25 | 76 | 11:10 | 48 | 17:55 | 284 | -2.0 | 33.2 | 8.2 W |
| 24 april | 04:21 | 76 | 11:07 | 48 | 17:53 | 284 | -2.0 | 33.2 | 9.0 W |
| 25 april | 04:18 | 75 | 11:04 | 48 | 17:50 | 285 | -2.0 | 33.2 | 9.7 W |
| 26 april | 04:14 | 75 | 11:01 | 48 | 17:48 | 285 | -2.1 | 33.2 | 10.4 W |
| 27 april | 04:11 | 75 | 10:58 | 48 | 17:45 | 285 | -2.1 | 33.2 | 11.2 W |
| 28 april | 04:07 | 75 | 10:55 | 48 | 17:42 | 285 | -2.1 | 33.2 | 11.9 W |
| 29 april | 04:04 | 75 | 10:52 | 48 | 17:40 | 285 | -2.1 | 33.2 | 12.6 W |
| 30 april | 04:01 | 75 | 10:49 | 48 | 17:37 | 285 | -2.1 | 33.3 | 13.4 W |
| 1 mei | 03:57 | 75 | 10:46 | 48 | 17:35 | 285 | -2.1 | 33.3 | 14.1 W |
| 2 mei | 03:54 | 75 | 10:43 | 48 | 17:32 | 286 | -2.1 | 33.3 | 14.8 W |
| 3 mei | 03:50 | 74 | 10:40 | 49 | 17:29 | 286 | -2.1 | 33.3 | 15.6 W |
| 4 mei | 03:47 | 74 | 10:37 | 49 | 17:27 | 286 | -2.1 | 33.3 | 16.3 W |
| 5 mei | 03:43 | 74 | 10:34 | 49 | 17:24 | 286 | -2.1 | 33.4 | 17.0 W |
| 6 mei | 03:40 | 74 | 10:30 | 49 | 17:22 | 286 | -2.1 | 33.4 | 17.7 W |
| 7 mei | 03:36 | 74 | 10:27 | 49 | 17:19 | 286 | -2.1 | 33.4 | 18.5 W |
| 8 mei | 03:33 | 74 | 10:24 | 49 | 17:16 | 286 | -2.1 | 33.4 | 19.2 W |
| 9 mei | 03:29 | 74 | 10:21 | 49 | 17:14 | 287 | -2.1 | 33.5 | 19.9 W |
| 10 mei | 03:26 | 73 | 10:18 | 49 | 17:11 | 287 | -2.1 | 33.5 | 20.7 W |
| 11 mei | 03:22 | 73 | 10:15 | 49 | 17:08 | 287 | -2.1 | 33.5 | 21.4 W |
| 12 mei | 03:19 | 73 | 10:12 | 49 | 17:06 | 287 | -2.1 | 33.6 | 22.1 W |
| 13 mei | 03:15 | 73 | 10:09 | 49 | 17:03 | 287 | -2.1 | 33.6 | 22.9 W |
| 14 mei | 03:12 | 73 | 10:06 | 49 | 17:01 | 287 | -2.1 | 33.6 | 23.6 W |
| 15 mei | 03:08 | 73 | 10:03 | 50 | 16:58 | 287 | -2.1 | 33.7 | 24.3 W |
| 16 mei | 03:05 | 73 | 10:00 | 50 | 16:55 | 287 | -2.1 | 33.7 | 25.1 W |
| 17 mei | 03:01 | 72 | 09:57 | 50 | 16:53 | 288 | -2.1 | 33.7 | 25.8 W |
| 18 mei | 02:58 | 72 | 09:54 | 50 | 16:50 | 288 | -2.1 | 33.8 | 26.6 W |
| 19 mei | 02:54 | 72 | 09:51 | 50 | 16:47 | 288 | -2.1 | 33.8 | 27.3 W |
| 20 mei | 02:51 | 72 | 09:48 | 50 | 16:45 | 288 | -2.1 | 33.8 | 28.0 W |
| 21 mei | 02:48 | 72 | 09:45 | 50 | 16:42 | 288 | -2.1 | 33.9 | 28.8 W |
| 22 mei | 02:44 | 72 | 09:42 | 50 | 16:39 | 288 | -2.1 | 33.9 | 29.5 W |
| 23 mei | 02:41 | 72 | 09:38 | 50 | 16:37 | 288 | -2.1 | 34.0 | 30.2 W |
| 24 mei | 02:37 | 72 | 09:35 | 50 | 16:34 | 288 | -2.1 | 34.0 | 31.0 W |
| 25 mei | 02:34 | 71 | 09:32 | 50 | 16:31 | 289 | -2.1 | 34.1 | 31.7 W |
| 26 mei | 02:30 | 71 | 09:29 | 50 | 16:29 | 289 | -2.1 | 34.1 | 32.5 W |
| 27 mei | 02:27 | 71 | 09:26 | 50 | 16:26 | 289 | -2.1 | 34.2 | 33.2 W |
| 28 mei | 02:23 | 71 | 09:23 | 51 | 16:23 | 289 | -2.1 | 34.2 | 33.9 W |
| 29 mei | 02:20 | 71 | 09:20 | 51 | 16:20 | 289 | -2.1 | 34.3 | 34.7 W |
| 30 mei | 02:16 | 71 | 09:17 | 51 | 16:18 | 289 | -2.1 | 34.3 | 35.4 W |
| 31 mei | 02:13 | 71 | 09:14 | 51 | 16:15 | 289 | -2.1 | 34.4 | 36.2 W |
| 1 juni | 02:09 | 71 | 09:11 | 51 | 16:12 | 289 | -2.1 | 34.4 | 36.9 W |
| 2 juni | 02:06 | 71 | 09:07 | 51 | 16:09 | 290 | -2.1 | 34.5 | 37.6 W |
| 3 juni | 02:02 | 70 | 09:04 | 51 | 16:07 | 290 | -2.1 | 34.5 | 38.4 W |
| 4 juni | 01:59 | 70 | 09:01 | 51 | 16:04 | 290 | -2.1 | 34.6 | 39.1 W |
| 5 juni | 01:55 | 70 | 08:58 | 51 | 16:01 | 290 | -2.1 | 34.6 | 39.9 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|---------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 6 juni | 01:52 | 70 | 08:55 | 51 | 15:58 | 290 | -2.1 | 34.7 | 40.6 W |
| 7 juni | 01:48 | 70 | 08:52 | 51 | 15:56 | 290 | -2.1 | 34.8 | 41.4 W |
| 8 juni | 01:45 | 70 | 08:49 | 51 | 15:53 | 290 | -2.1 | 34.8 | 42.1 W |
| 9 juni | 01:41 | 70 | 08:46 | 51 | 15:50 | 290 | -2.1 | 34.9 | 42.9 W |
| 10 juni | 01:38 | 70 | 08:42 | 51 | 15:47 | 290 | -2.1 | 34.9 | 43.6 W |
| 11 juni | 01:34 | 70 | 08:39 | 52 | 15:45 | 291 | -2.1 | 35.0 | 44.4 W |
| 12 juni | 01:31 | 69 | 08:36 | 52 | 15:42 | 291 | -2.1 | 35.1 | 45.1 W |
| 13 juni | 01:27 | 69 | 08:33 | 52 | 15:39 | 291 | -2.1 | 35.1 | 45.9 W |
| 14 juni | 01:24 | 69 | 08:30 | 52 | 15:36 | 291 | -2.1 | 35.2 | 46.6 W |
| 15 juni | 01:20 | 69 | 08:27 | 52 | 15:33 | 291 | -2.1 | 35.3 | 47.4 W |
| 16 juni | 01:17 | 69 | 08:24 | 52 | 15:31 | 291 | -2.1 | 35.4 | 48.1 W |
| 17 juni | 01:13 | 69 | 08:20 | 52 | 15:28 | 291 | -2.1 | 35.4 | 48.9 W |
| 18 juni | 01:10 | 69 | 08:17 | 52 | 15:25 | 291 | -2.1 | 35.5 | 49.7 W |
| 19 juni | 01:06 | 69 | 08:14 | 52 | 15:22 | 291 | -2.2 | 35.6 | 50.4 W |
| 20 juni | 01:03 | 69 | 08:11 | 52 | 15:19 | 291 | -2.2 | 35.6 | 51.2 W |
| 21 juni | 00:59 | 68 | 08:08 | 52 | 15:16 | 292 | -2.2 | 35.7 | 52.0 W |
| 22 juni | 00:56 | 68 | 08:04 | 52 | 15:13 | 292 | -2.2 | 35.8 | 52.7 W |
| 23 juni | 00:52 | 68 | 08:01 | 52 | 15:10 | 292 | -2.2 | 35.9 | 53.5 W |
| 24 juni | 00:49 | 68 | 07:58 | 52 | 15:08 | 292 | -2.2 | 36.0 | 54.3 W |
| 25 juni | 00:45 | 68 | 07:55 | 52 | 15:05 | 292 | -2.2 | 36.0 | 55.0 W |
| 26 juni | 00:42 | 68 | 07:52 | 52 | 15:02 | 292 | -2.2 | 36.1 | 55.8 W |
| 27 juni | 00:38 | 68 | 07:48 | 53 | 14:59 | 292 | -2.2 | 36.2 | 56.6 W |
| 28 juni | 00:34 | 68 | 07:45 | 53 | 14:56 | 292 | -2.2 | 36.3 | 57.3 W |
| 29 juni | 00:31 | 68 | 07:42 | 53 | 14:53 | 292 | -2.2 | 36.4 | 58.1 W |
| 30 juni | 00:27 | 68 | 07:39 | 53 | 14:50 | 292 | -2.2 | 36.5 | 58.9 W |
| 1 juli | 00:24 | 68 | 07:35 | 53 | 14:47 | 293 | -2.2 | 36.6 | 59.7 W |
| 2 juli | 00:20 | 67 | 07:32 | 53 | 14:44 | 293 | -2.2 | 36.6 | 60.4 W |
| 3 juli | 00:17 | 67 | 07:29 | 53 | 14:41 | 293 | -2.2 | 36.7 | 61.2 W |
| 4 juli | 00:13 | 67 | 07:26 | 53 | 14:38 | 293 | -2.2 | 36.8 | 62.0 W |
| 5 juli | 00:10 | 67 | 07:22 | 53 | 14:35 | 293 | -2.2 | 36.9 | 62.8 W |
| 6 juli | 00:06 | 67 | 07:19 | 53 | 14:32 | 293 | -2.2 | 37.0 | 63.6 W |
| 7 juli | 00:03 | 67 | 07:16 | 53 | 14:29 | 293 | -2.2 | 37.1 | 64.4 W |
| 8 juli | 23:55 | 67 | 07:12 | 53 | 14:26 | 293 | -2.2 | 37.2 | 65.2 W |
| 9 juli | 23:52 | 67 | 07:09 | 53 | 14:23 | 293 | -2.2 | 37.3 | 66.0 W |
| 10 juli | 23:48 | 67 | 07:06 | 53 | 14:20 | 293 | -2.2 | 37.4 | 66.8 W |
| 11 juli | 23:45 | 67 | 07:02 | 53 | 14:17 | 293 | -2.2 | 37.5 | 67.6 W |
| 12 juli | 23:41 | 67 | 06:59 | 53 | 14:14 | 293 | -2.2 | 37.6 | 68.4 W |
| 13 juli | 23:38 | 67 | 06:56 | 53 | 14:11 | 293 | -2.3 | 37.7 | 69.2 W |
| 14 juli | 23:34 | 66 | 06:52 | 53 | 14:07 | 294 | -2.3 | 37.8 | 70.0 W |
| 15 juli | 23:30 | 66 | 06:49 | 53 | 14:04 | 294 | -2.3 | 37.9 | 70.8 W |
| 16 juli | 23:27 | 66 | 06:46 | 53 | 14:01 | 294 | -2.3 | 38.0 | 71.6 W |
| 17 juli | 23:23 | 66 | 06:42 | 53 | 13:58 | 294 | -2.3 | 38.1 | 72.4 W |
| 18 juli | 23:19 | 66 | 06:39 | 54 | 13:55 | 294 | -2.3 | 38.2 | 73.2 W |
| 19 juli | 23:16 | 66 | 06:36 | 54 | 13:52 | 294 | -2.3 | 38.3 | 74.0 W |
| 20 juli | 23:12 | 66 | 06:32 | 54 | 13:49 | 294 | -2.3 | 38.4 | 74.8 W |
| 21 juli | 23:09 | 66 | 06:29 | 54 | 13:45 | 294 | -2.3 | 38.6 | 75.7 W |
| 22 juli | 23:05 | 66 | 06:25 | 54 | 13:42 | 294 | -2.3 | 38.7 | 76.5 W |
| 23 juli | 23:01 | 66 | 06:22 | 54 | 13:39 | 294 | -2.3 | 38.8 | 77.3 W |
| 24 juli | 22:58 | 66 | 06:18 | 54 | 13:36 | 294 | -2.3 | 38.9 | 78.1 W |
| 25 juli | 22:54 | 66 | 06:15 | 54 | 13:32 | 294 | -2.3 | 39.0 | 79.0 W |
| 26 juli | 22:51 | 66 | 06:12 | 54 | 13:29 | 294 | -2.3 | 39.1 | 79.8 W |
| 27 juli | 22:47 | 66 | 06:08 | 54 | 13:26 | 294 | -2.3 | 39.2 | 80.6 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|--------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 28 juli | 22:43 | 66 | 06:05 | 54 | 13:22 | 294 | -2.3 | 39.4 | 81.5 W |
| 29 juli | 22:40 | 66 | 06:01 | 54 | 13:19 | 294 | -2.3 | 39.5 | 82.3 W |
| 30 juli | 22:36 | 65 | 05:58 | 54 | 13:16 | 295 | -2.4 | 39.6 | 83.1 W |
| 31 juli | 22:32 | 65 | 05:54 | 54 | 13:13 | 295 | -2.4 | 39.7 | 84.0 W |
| 1 augustus | 22:29 | 65 | 05:51 | 54 | 13:09 | 295 | -2.4 | 39.8 | 84.8 W |
| 2 augustus | 22:25 | 65 | 05:47 | 54 | 13:06 | 295 | -2.4 | 40.0 | 85.7 W |
| 3 augustus | 22:21 | 65 | 05:44 | 54 | 13:02 | 295 | -2.4 | 40.1 | 86.6 W |
| 4 augustus | 22:17 | 65 | 05:40 | 54 | 12:59 | 295 | -2.4 | 40.2 | 87.4 W |
| 5 augustus | 22:14 | 65 | 05:36 | 54 | 12:56 | 295 | -2.4 | 40.3 | 88.3 W |
| 6 augustus | 22:10 | 65 | 05:33 | 54 | 12:52 | 295 | -2.4 | 40.5 | 89.1 W |
| 7 augustus | 22:06 | 65 | 05:29 | 54 | 12:49 | 295 | -2.4 | 40.6 | 90.0 W |
| 8 augustus | 22:03 | 65 | 05:26 | 54 | 12:45 | 295 | -2.4 | 40.7 | 90.9 W |
| 9 augustus | 21:59 | 65 | 05:22 | 54 | 12:42 | 295 | -2.4 | 40.8 | 91.7 W |
| 10 augustus | 21:55 | 65 | 05:19 | 54 | 12:38 | 295 | -2.4 | 41.0 | 92.6 W |
| 11 augustus | 21:51 | 65 | 05:15 | 54 | 12:35 | 295 | -2.4 | 41.1 | 93.5 W |
| 12 augustus | 21:48 | 65 | 05:11 | 54 | 12:31 | 295 | -2.4 | 41.2 | 94.4 W |
| 13 augustus | 21:44 | 65 | 05:08 | 54 | 12:28 | 295 | -2.4 | 41.4 | 95.3 W |
| 14 augustus | 21:40 | 65 | 05:04 | 54 | 12:24 | 295 | -2.5 | 41.5 | 96.2 W |
| 15 augustus | 21:36 | 65 | 05:00 | 54 | 12:21 | 295 | -2.5 | 41.6 | 97.0 W |
| 16 augustus | 21:33 | 65 | 04:57 | 54 | 12:17 | 295 | -2.5 | 41.8 | 97.9 W |
| 17 augustus | 21:29 | 65 | 04:53 | 54 | 12:13 | 295 | -2.5 | 41.9 | 98.8 W |
| 18 augustus | 21:25 | 65 | 04:49 | 54 | 12:10 | 295 | -2.5 | 42.0 | 99.7 W |
| 19 augustus | 21:21 | 65 | 04:46 | 54 | 12:06 | 295 | -2.5 | 42.2 | 100.7 W |
| 20 augustus | 21:18 | 65 | 04:42 | 54 | 12:02 | 295 | -2.5 | 42.3 | 101.6 W |
| 21 augustus | 21:14 | 65 | 04:38 | 54 | 11:59 | 295 | -2.5 | 42.4 | 102.5 W |
| 22 augustus | 21:10 | 65 | 04:34 | 54 | 11:55 | 295 | -2.5 | 42.6 | 103.4 W |
| 23 augustus | 21:06 | 65 | 04:31 | 54 | 11:51 | 295 | -2.5 | 42.7 | 104.3 W |
| 24 augustus | 21:02 | 65 | 04:27 | 54 | 11:48 | 295 | -2.5 | 42.8 | 105.2 W |
| 25 augustus | 20:58 | 65 | 04:23 | 54 | 11:44 | 295 | -2.5 | 43.0 | 106.2 W |
| 26 augustus | 20:55 | 65 | 04:19 | 54 | 11:40 | 295 | -2.5 | 43.1 | 107.1 W |
| 27 augustus | 20:51 | 65 | 04:15 | 54 | 11:36 | 295 | -2.5 | 43.3 | 108.0 W |
| 28 augustus | 20:47 | 65 | 04:12 | 54 | 11:32 | 295 | -2.6 | 43.4 | 109.0 W |
| 29 augustus | 20:43 | 65 | 04:08 | 54 | 11:29 | 295 | -2.6 | 43.5 | 109.9 W |
| 30 augustus | 20:39 | 65 | 04:04 | 54 | 11:25 | 295 | -2.6 | 43.7 | 110.9 W |
| 31 augustus | 20:35 | 65 | 04:00 | 54 | 11:21 | 295 | -2.6 | 43.8 | 111.8 W |
| 1 september | 20:31 | 65 | 03:56 | 54 | 11:17 | 295 | -2.6 | 43.9 | 112.8 W |
| 2 september | 20:28 | 65 | 03:52 | 54 | 11:13 | 295 | -2.6 | 44.1 | 113.7 W |
| 3 september | 20:24 | 65 | 03:48 | 54 | 11:09 | 295 | -2.6 | 44.2 | 114.7 W |
| 4 september | 20:20 | 65 | 03:44 | 54 | 11:05 | 295 | -2.6 | 44.3 | 115.6 W |
| 5 september | 20:16 | 65 | 03:41 | 54 | 11:01 | 295 | -2.6 | 44.5 | 116.6 W |
| 6 september | 20:12 | 65 | 03:37 | 54 | 10:57 | 295 | -2.6 | 44.6 | 117.6 W |
| 7 september | 20:08 | 65 | 03:33 | 54 | 10:53 | 295 | -2.6 | 44.8 | 118.6 W |
| 8 september | 20:04 | 65 | 03:29 | 54 | 10:49 | 295 | -2.6 | 44.9 | 119.5 W |
| 9 september | 20:00 | 65 | 03:25 | 54 | 10:45 | 295 | -2.7 | 45.0 | 120.5 W |
| 10 september | 19:56 | 65 | 03:21 | 54 | 10:41 | 295 | -2.7 | 45.2 | 121.5 W |
| 11 september | 19:52 | 65 | 03:17 | 54 | 10:37 | 295 | -2.7 | 45.3 | 122.5 W |
| 12 september | 19:48 | 65 | 03:13 | 54 | 10:33 | 295 | -2.7 | 45.4 | 123.5 W |
| 13 september | 19:44 | 65 | 03:09 | 54 | 10:29 | 295 | -2.7 | 45.6 | 124.5 W |
| 14 september | 19:40 | 65 | 03:05 | 54 | 10:25 | 295 | -2.7 | 45.7 | 125.5 W |
| 15 september | 19:36 | 65 | 03:01 | 54 | 10:21 | 295 | -2.7 | 45.8 | 126.5 W |
| 16 september | 19:32 | 65 | 02:56 | 54 | 10:17 | 295 | -2.7 | 45.9 | 127.5 W |
| 17 september | 19:28 | 65 | 02:52 | 54 | 10:13 | 295 | -2.7 | 46.1 | 128.5 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|--------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 18 september | 19:24 | 65 | 02:48 | 54 | 10:08 | 295 | -2.7 | 46.2 | 129.5 W |
| 19 september | 19:20 | 65 | 02:44 | 54 | 10:04 | 295 | -2.7 | 46.3 | 130.6 W |
| 20 september | 19:16 | 65 | 02:40 | 54 | 10:00 | 295 | -2.7 | 46.5 | 131.6 W |
| 21 september | 19:12 | 65 | 02:36 | 54 | 09:56 | 295 | -2.7 | 46.6 | 132.6 W |
| 22 september | 19:08 | 65 | 02:32 | 54 | 09:51 | 295 | -2.7 | 46.7 | 133.7 W |
| 23 september | 19:04 | 65 | 02:28 | 54 | 09:47 | 295 | -2.8 | 46.8 | 134.7 W |
| 24 september | 19:00 | 65 | 02:23 | 54 | 09:43 | 295 | -2.8 | 46.9 | 135.7 W |
| 25 september | 18:56 | 65 | 02:19 | 54 | 09:39 | 295 | -2.8 | 47.1 | 136.8 W |
| 26 september | 18:52 | 65 | 02:15 | 54 | 09:34 | 295 | -2.8 | 47.2 | 137.8 W |
| 27 september | 18:48 | 65 | 02:11 | 54 | 09:30 | 295 | -2.8 | 47.3 | 138.9 W |
| 28 september | 18:44 | 65 | 02:07 | 54 | 09:25 | 295 | -2.8 | 47.4 | 139.9 W |
| 29 september | 18:39 | 65 | 02:02 | 54 | 09:21 | 295 | -2.8 | 47.5 | 141.0 W |
| 30 september | 18:35 | 65 | 01:58 | 54 | 09:17 | 295 | -2.8 | 47.6 | 142.0 W |
| 1 oktober | 18:31 | 65 | 01:54 | 54 | 09:12 | 295 | -2.8 | 47.7 | 143.1 W |
| 2 oktober | 18:27 | 65 | 01:50 | 54 | 09:08 | 295 | -2.8 | 47.8 | 144.2 W |
| 3 oktober | 18:23 | 65 | 01:45 | 54 | 09:03 | 295 | -2.8 | 47.9 | 145.2 W |
| 4 oktober | 18:19 | 66 | 01:41 | 54 | 08:59 | 295 | -2.8 | 48.0 | 146.3 W |
| 5 oktober | 18:15 | 66 | 01:37 | 54 | 08:55 | 294 | -2.8 | 48.1 | 147.4 W |
| 6 oktober | 18:11 | 66 | 01:32 | 54 | 08:50 | 294 | -2.8 | 48.2 | 148.5 W |
| 7 oktober | 18:06 | 66 | 01:28 | 54 | 08:46 | 294 | -2.8 | 48.3 | 149.6 W |
| 8 oktober | 18:02 | 66 | 01:24 | 54 | 08:41 | 294 | -2.8 | 48.4 | 150.6 W |
| 9 oktober | 17:58 | 66 | 01:19 | 54 | 08:37 | 294 | -2.9 | 48.5 | 151.7 W |
| 10 oktober | 17:54 | 66 | 01:15 | 54 | 08:32 | 294 | -2.9 | 48.5 | 152.8 W |
| 11 oktober | 17:50 | 66 | 01:11 | 54 | 08:27 | 294 | -2.9 | 48.6 | 153.9 W |
| 12 oktober | 17:46 | 66 | 01:06 | 54 | 08:23 | 294 | -2.9 | 48.7 | 155.0 W |
| 13 oktober | 17:41 | 66 | 01:02 | 54 | 08:18 | 294 | -2.9 | 48.8 | 156.1 W |
| 14 oktober | 17:37 | 66 | 00:58 | 54 | 08:14 | 294 | -2.9 | 48.8 | 157.2 W |
| 15 oktober | 17:33 | 66 | 00:53 | 54 | 08:09 | 294 | -2.9 | 48.9 | 158.3 W |
| 16 oktober | 17:29 | 66 | 00:49 | 54 | 08:05 | 294 | -2.9 | 49.0 | 159.4 W |
| 17 oktober | 17:25 | 66 | 00:44 | 54 | 08:00 | 294 | -2.9 | 49.0 | 160.5 W |
| 18 oktober | 17:20 | 66 | 00:40 | 53 | 07:55 | 294 | -2.9 | 49.1 | 161.7 W |
| 19 oktober | 17:16 | 66 | 00:36 | 53 | 07:51 | 294 | -2.9 | 49.1 | 162.8 W |
| 20 oktober | 17:12 | 66 | 00:31 | 53 | 07:46 | 294 | -2.9 | 49.2 | 163.9 W |
| 21 oktober | 17:08 | 66 | 00:27 | 53 | 07:41 | 294 | -2.9 | 49.2 | 165.0 W |
| 22 oktober | 17:03 | 67 | 00:22 | 53 | 07:37 | 293 | -2.9 | 49.3 | 166.1 W |
| 23 oktober | 16:59 | 67 | 00:18 | 53 | 07:32 | 293 | -2.9 | 49.3 | 167.2 W |
| 24 oktober | 16:55 | 67 | 00:13 | 53 | 07:27 | 293 | -2.9 | 49.4 | 168.4 W |
| 25 oktober | 16:51 | 67 | 00:09 | 53 | 07:23 | 293 | -2.9 | 49.4 | 169.5 W |
| 26 oktober | 16:47 | 67 | 00:05 | 53 | 07:18 | 293 | -2.9 | 49.4 | 170.6 W |
| 27 oktober | 16:42 | 67 | 00:00 | 53 | 07:13 | 293 | -2.9 | 49.4 | 171.7 W |
| 28 oktober | 16:38 | 67 | 23:51 | 53 | 07:09 | 293 | -2.9 | 49.5 | 172.8 W |
| 29 oktober | 16:34 | 67 | 23:47 | 53 | 07:04 | 293 | -2.9 | 49.5 | 173.9 W |
| 30 oktober | 16:30 | 67 | 23:42 | 53 | 06:59 | 293 | -2.9 | 49.5 | 175.0 W |
| 31 oktober | 16:25 | 67 | 23:38 | 53 | 06:55 | 293 | -2.9 | 49.5 | 176.1 W |
| 1 november | 16:21 | 67 | 23:33 | 53 | 06:50 | 293 | -2.9 | 49.5 | 177.1 W |
| 2 november | 16:17 | 67 | 23:29 | 53 | 06:45 | 293 | -2.9 | 49.5 | 178.0 W |
| 3 november | 16:13 | 67 | 23:24 | 53 | 06:41 | 293 | -2.9 | 49.5 | 178.6 W |
| 4 november | 16:08 | 67 | 23:20 | 53 | 06:36 | 293 | -2.9 | 49.5 | 178.3 O |
| 5 november | 16:04 | 68 | 23:15 | 53 | 06:31 | 293 | -2.9 | 49.5 | 177.5 O |
| 6 november | 16:00 | 68 | 23:11 | 53 | 06:27 | 292 | -2.9 | 49.5 | 176.5 O |
| 7 november | 15:56 | 68 | 23:07 | 53 | 06:22 | 292 | -2.9 | 49.5 | 175.5 O |
| 8 november | 15:52 | 68 | 23:02 | 53 | 06:17 | 292 | -2.9 | 49.4 | 174.4 O |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 9 november | 15:47 | 68 | 22:58 | 53 | 06:13 | 292 | -2.9 | 49.4 | 173.3 O |
| 10 november | 15:43 | 68 | 22:53 | 53 | 06:08 | 292 | -2.9 | 49.4 | 172.1 O |
| 11 november | 15:39 | 68 | 22:49 | 52 | 06:03 | 292 | -2.9 | 49.3 | 171.0 O |
| 12 november | 15:35 | 68 | 22:44 | 52 | 05:59 | 292 | -2.9 | 49.3 | 169.9 O |
| 13 november | 15:30 | 68 | 22:40 | 52 | 05:54 | 292 | -2.9 | 49.3 | 168.8 O |
| 14 november | 15:26 | 68 | 22:35 | 52 | 05:49 | 292 | -2.9 | 49.2 | 167.6 O |
| 15 november | 15:22 | 68 | 22:31 | 52 | 05:45 | 292 | -2.9 | 49.2 | 166.5 O |
| 16 november | 15:18 | 68 | 22:27 | 52 | 05:40 | 292 | -2.9 | 49.1 | 165.4 O |
| 17 november | 15:13 | 68 | 22:22 | 52 | 05:35 | 292 | -2.9 | 49.1 | 164.3 O |
| 18 november | 15:09 | 68 | 22:18 | 52 | 05:31 | 292 | -2.9 | 49.0 | 163.1 O |
| 19 november | 15:05 | 68 | 22:13 | 52 | 05:26 | 292 | -2.9 | 48.9 | 162.0 O |
| 20 november | 15:01 | 68 | 22:09 | 52 | 05:22 | 292 | -2.9 | 48.9 | 160.9 O |
| 21 november | 14:57 | 69 | 22:05 | 52 | 05:17 | 291 | -2.9 | 48.8 | 159.7 O |
| 22 november | 14:52 | 69 | 22:00 | 52 | 05:12 | 291 | -2.9 | 48.7 | 158.6 O |
| 23 november | 14:48 | 69 | 21:56 | 52 | 05:08 | 291 | -2.9 | 48.7 | 157.5 O |
| 24 november | 14:44 | 69 | 21:51 | 52 | 05:03 | 291 | -2.9 | 48.6 | 156.4 O |
| 25 november | 14:40 | 69 | 21:47 | 52 | 04:59 | 291 | -2.9 | 48.5 | 155.3 O |
| 26 november | 14:36 | 69 | 21:43 | 52 | 04:54 | 291 | -2.8 | 48.4 | 154.1 O |
| 27 november | 14:31 | 69 | 21:38 | 52 | 04:50 | 291 | -2.8 | 48.3 | 153.0 O |
| 28 november | 14:27 | 69 | 21:34 | 52 | 04:45 | 291 | -2.8 | 48.2 | 151.9 O |
| 29 november | 14:23 | 69 | 21:30 | 52 | 04:41 | 291 | -2.8 | 48.1 | 150.8 O |
| 30 november | 14:19 | 69 | 21:25 | 52 | 04:36 | 291 | -2.8 | 48.1 | 149.7 O |
| 1 december | 14:15 | 69 | 21:21 | 52 | 04:32 | 291 | -2.8 | 48.0 | 148.6 O |
| 2 december | 14:11 | 69 | 21:17 | 52 | 04:27 | 291 | -2.8 | 47.9 | 147.5 O |
| 3 december | 14:06 | 69 | 21:12 | 52 | 04:23 | 291 | -2.8 | 47.7 | 146.4 O |
| 4 december | 14:02 | 69 | 21:08 | 52 | 04:18 | 291 | -2.8 | 47.6 | 145.3 O |
| 5 december | 13:58 | 69 | 21:04 | 52 | 04:14 | 291 | -2.8 | 47.5 | 144.2 O |
| 6 december | 13:54 | 69 | 21:00 | 52 | 04:10 | 291 | -2.8 | 47.4 | 143.1 O |
| 7 december | 13:50 | 69 | 20:55 | 52 | 04:05 | 291 | -2.8 | 47.3 | 142.0 O |
| 8 december | 13:46 | 69 | 20:51 | 52 | 04:01 | 291 | -2.8 | 47.2 | 140.9 O |
| 9 december | 13:42 | 69 | 20:47 | 52 | 03:57 | 291 | -2.8 | 47.1 | 139.8 O |
| 10 december | 13:38 | 69 | 20:43 | 52 | 03:52 | 291 | -2.8 | 47.0 | 138.7 O |
| 11 december | 13:33 | 69 | 20:39 | 52 | 03:48 | 291 | -2.8 | 46.8 | 137.6 O |
| 12 december | 13:29 | 69 | 20:34 | 52 | 03:44 | 291 | -2.7 | 46.7 | 136.5 O |
| 13 december | 13:25 | 69 | 20:30 | 52 | 03:39 | 291 | -2.7 | 46.6 | 135.4 O |
| 14 december | 13:21 | 69 | 20:26 | 52 | 03:35 | 291 | -2.7 | 46.5 | 134.4 O |
| 15 december | 13:17 | 70 | 20:22 | 52 | 03:31 | 291 | -2.7 | 46.3 | 133.3 O |
| 16 december | 13:13 | 70 | 20:18 | 52 | 03:27 | 290 | -2.7 | 46.2 | 132.2 O |
| 17 december | 13:09 | 70 | 20:14 | 51 | 03:23 | 290 | -2.7 | 46.1 | 131.1 O |
| 18 december | 13:05 | 70 | 20:10 | 51 | 03:18 | 290 | -2.7 | 45.9 | 130.1 O |
| 19 december | 13:01 | 70 | 20:05 | 51 | 03:14 | 290 | -2.7 | 45.8 | 129.0 O |
| 20 december | 12:57 | 70 | 20:01 | 51 | 03:10 | 290 | -2.7 | 45.7 | 128.0 O |
| 21 december | 12:53 | 70 | 19:57 | 51 | 03:06 | 290 | -2.7 | 45.5 | 126.9 O |
| 22 december | 12:49 | 70 | 19:53 | 51 | 03:02 | 290 | -2.7 | 45.4 | 125.9 O |
| 23 december | 12:45 | 70 | 19:49 | 51 | 02:58 | 290 | -2.7 | 45.3 | 124.8 O |
| 24 december | 12:41 | 70 | 19:45 | 51 | 02:54 | 290 | -2.7 | 45.1 | 123.8 O |
| 25 december | 12:37 | 70 | 19:41 | 51 | 02:50 | 290 | -2.6 | 45.0 | 122.7 O |
| 26 december | 12:33 | 70 | 19:37 | 51 | 02:46 | 290 | -2.6 | 44.8 | 121.7 O |
| 27 december | 12:29 | 70 | 19:33 | 51 | 02:42 | 290 | -2.6 | 44.7 | 120.7 O |
| 28 december | 12:25 | 70 | 19:29 | 51 | 02:38 | 290 | -2.6 | 44.6 | 119.6 O |
| 29 december | 12:21 | 70 | 19:25 | 51 | 02:34 | 290 | -2.6 | 44.4 | 118.6 O |
| 30 december | 12:17 | 70 | 19:21 | 51 | 02:30 | 290 | -2.6 | 44.3 | 117.6 O |
| 31 december | 12:13 | 70 | 19:17 | 51 | 02:26 | 290 | -2.6 | 44.1 | 116.6 O |

Saturnus

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (h:m) | Azimut (°) | Culminatie | Hoogte (°) | Ondergang | Azimut (°) | | | | | |
| 1 januari | 09:54 | 114 | 14:40 | 24 | 19:25 | 246 | 0.9 | 15.8 | 35.6 | 10.2 | 42.1 O |
| 2 januari | 09:50 | 114 | 14:36 | 24 | 19:22 | 246 | 0.9 | 15.7 | 35.6 | 10.1 | 41.2 O |
| 3 januari | 09:47 | 114 | 14:32 | 24 | 19:18 | 246 | 0.9 | 15.7 | 35.5 | 10.1 | 40.3 O |
| 4 januari | 09:43 | 114 | 14:29 | 24 | 19:15 | 246 | 0.9 | 15.7 | 35.5 | 10.0 | 39.4 O |
| 5 januari | 09:39 | 114 | 14:25 | 24 | 19:12 | 246 | 0.9 | 15.7 | 35.5 | 10.0 | 38.5 O |
| 6 januari | 09:36 | 113 | 14:22 | 24 | 19:08 | 247 | 0.9 | 15.7 | 35.4 | 10.0 | 37.6 O |
| 7 januari | 09:32 | 113 | 14:18 | 24 | 19:05 | 247 | 0.9 | 15.7 | 35.4 | 9.9 | 36.7 O |
| 8 januari | 09:28 | 113 | 14:15 | 24 | 19:02 | 247 | 0.9 | 15.7 | 35.4 | 9.9 | 35.7 O |
| 9 januari | 09:24 | 113 | 14:11 | 24 | 18:58 | 247 | 0.9 | 15.6 | 35.3 | 9.8 | 34.8 O |
| 10 januari | 09:21 | 113 | 14:08 | 24 | 18:55 | 247 | 0.9 | 15.6 | 35.3 | 9.8 | 33.9 O |
| 11 januari | 09:17 | 113 | 14:04 | 24 | 18:52 | 247 | 0.9 | 15.6 | 35.3 | 9.8 | 33.0 O |
| 12 januari | 09:13 | 113 | 14:01 | 24 | 18:48 | 247 | 0.9 | 15.6 | 35.2 | 9.7 | 32.1 O |
| 13 januari | 09:10 | 113 | 13:57 | 24 | 18:45 | 247 | 0.9 | 15.6 | 35.2 | 9.7 | 31.2 O |
| 14 januari | 09:06 | 113 | 13:54 | 24 | 18:42 | 247 | 0.9 | 15.6 | 35.2 | 9.6 | 30.3 O |
| 15 januari | 09:02 | 113 | 13:50 | 25 | 18:38 | 247 | 0.9 | 15.6 | 35.2 | 9.6 | 29.4 O |
| 16 januari | 08:58 | 113 | 13:47 | 25 | 18:35 | 247 | 0.9 | 15.6 | 35.1 | 9.5 | 28.5 O |
| 17 januari | 08:55 | 113 | 13:43 | 25 | 18:32 | 247 | 0.9 | 15.5 | 35.1 | 9.5 | 27.6 O |
| 18 januari | 08:51 | 113 | 13:40 | 25 | 18:28 | 247 | 0.9 | 15.5 | 35.1 | 9.5 | 26.7 O |
| 19 januari | 08:47 | 113 | 13:36 | 25 | 18:25 | 247 | 0.9 | 15.5 | 35.1 | 9.4 | 25.7 O |
| 20 januari | 08:44 | 113 | 13:33 | 25 | 18:22 | 247 | 0.9 | 15.5 | 35.0 | 9.4 | 24.8 O |
| 21 januari | 08:40 | 113 | 13:29 | 25 | 18:19 | 247 | 0.9 | 15.5 | 35.0 | 9.3 | 23.9 O |
| 22 januari | 08:36 | 113 | 13:26 | 25 | 18:15 | 248 | 0.9 | 15.5 | 35.0 | 9.3 | 23.0 O |
| 23 januari | 08:33 | 112 | 13:22 | 25 | 18:12 | 248 | 0.9 | 15.5 | 35.0 | 9.3 | 22.1 O |
| 24 januari | 08:29 | 112 | 13:19 | 25 | 18:09 | 248 | 0.9 | 15.5 | 34.9 | 9.2 | 21.2 O |
| 25 januari | 08:25 | 112 | 13:15 | 25 | 18:06 | 248 | 0.9 | 15.5 | 34.9 | 9.2 | 20.3 O |
| 26 januari | 08:22 | 112 | 13:12 | 25 | 18:02 | 248 | 0.9 | 15.5 | 34.9 | 9.1 | 19.4 O |
| 27 januari | 08:18 | 112 | 13:08 | 25 | 17:59 | 248 | 0.9 | 15.4 | 34.9 | 9.1 | 18.5 O |
| 28 januari | 08:14 | 112 | 13:05 | 25 | 17:56 | 248 | 0.9 | 15.4 | 34.9 | 9.1 | 17.6 O |
| 29 januari | 08:10 | 112 | 13:01 | 25 | 17:52 | 248 | 0.9 | 15.4 | 34.9 | 9.0 | 16.7 O |
| 30 januari | 08:07 | 112 | 12:58 | 25 | 17:49 | 248 | 0.9 | 15.4 | 34.8 | 9.0 | 15.9 O |
| 31 januari | 08:03 | 112 | 12:54 | 25 | 17:46 | 248 | 0.9 | 15.4 | 34.8 | 8.9 | 15.0 O |
| 1 februari | 07:59 | 112 | 12:51 | 25 | 17:43 | 248 | 0.9 | 15.4 | 34.8 | 8.9 | 14.1 O |
| 2 februari | 07:56 | 112 | 12:48 | 25 | 17:39 | 248 | 0.9 | 15.4 | 34.8 | 8.9 | 13.2 O |
| 3 februari | 07:52 | 112 | 12:44 | 25 | 17:36 | 248 | 0.9 | 15.4 | 34.8 | 8.8 | 12.3 O |
| 4 februari | 07:48 | 112 | 12:41 | 25 | 17:33 | 248 | 0.9 | 15.4 | 34.8 | 8.8 | 11.4 O |
| 5 februari | 07:45 | 112 | 12:37 | 25 | 17:30 | 248 | 0.9 | 15.4 | 34.8 | 8.7 | 10.5 O |
| 6 februari | 07:41 | 112 | 12:34 | 25 | 17:26 | 248 | 0.9 | 15.4 | 34.8 | 8.7 | 9.6 O |
| 7 februari | 07:37 | 111 | 12:30 | 25 | 17:23 | 249 | 0.9 | 15.4 | 34.8 | 8.7 | 8.7 O |
| 8 februari | 07:34 | 111 | 12:27 | 25 | 17:20 | 249 | 0.9 | 15.4 | 34.7 | 8.6 | 7.8 O |
| 9 februari | 07:30 | 111 | 12:23 | 25 | 17:17 | 249 | 0.9 | 15.4 | 34.7 | 8.6 | 7.0 O |
| 10 februari | 07:26 | 111 | 12:20 | 26 | 17:13 | 249 | 0.8 | 15.4 | 34.7 | 8.5 | 6.1 O |
| 11 februari | 07:23 | 111 | 12:16 | 26 | 17:10 | 249 | 0.8 | 15.4 | 34.7 | 8.5 | 5.2 O |
| 12 februari | 07:19 | 111 | 12:13 | 26 | 17:07 | 249 | 0.8 | 15.4 | 34.7 | 8.5 | 4.4 O |
| 13 februari | 07:15 | 111 | 12:09 | 26 | 17:04 | 249 | 0.8 | 15.4 | 34.7 | 8.4 | 3.5 O |
| 14 februari | 07:11 | 111 | 12:06 | 26 | 17:00 | 249 | 0.8 | 15.4 | 34.7 | 8.4 | 2.7 O |
| 15 februari | 07:08 | 111 | 12:02 | 26 | 16:57 | 249 | 0.8 | 15.4 | 34.7 | 8.4 | 2.0 O |
| 16 februari | 07:04 | 111 | 11:59 | 26 | 16:54 | 249 | 0.8 | 15.4 | 34.7 | 8.3 | 1.4 O |
| 17 februari | 07:00 | 111 | 11:56 | 26 | 16:51 | 249 | 0.8 | 15.4 | 34.7 | 8.3 | 1.3 O |
| 18 februari | 06:57 | 111 | 11:52 | 26 | 16:47 | 249 | 0.8 | 15.4 | 34.7 | 8.2 | 1.7 W |
| 19 februari | 06:53 | 111 | 11:49 | 26 | 16:44 | 249 | 0.8 | 15.4 | 34.7 | 8.2 | 2.4 W |
| 20 februari | 06:49 | 111 | 11:45 | 26 | 16:41 | 249 | 0.8 | 15.4 | 34.7 | 8.2 | 3.2 W |
| 21 februari | 06:46 | 111 | 11:42 | 26 | 16:38 | 250 | 0.8 | 15.4 | 34.7 | 8.1 | 4.0 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|-------------|-----------|------------|------------|------------|-----------|------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (hr:m) | Azimut (°) | Culminatie | Hoogte (°) | Ondergang | Azimut (°) | | | | | |
| 2023 | | | | | | | | | | | |
| 22 februari | 06:42 | 110 | 11:38 | 26 | 16:34 | 250 | 0.9 | 15.4 | 34.7 | 8.1 | 4.9 W |
| 23 februari | 06:38 | 110 | 11:35 | 26 | 16:31 | 250 | 0.9 | 15.4 | 34.7 | 8.1 | 5.7 W |
| 24 februari | 06:35 | 110 | 11:31 | 26 | 16:28 | 250 | 0.9 | 15.4 | 34.7 | 8.0 | 6.6 W |
| 25 februari | 06:31 | 110 | 11:28 | 26 | 16:25 | 250 | 0.9 | 15.4 | 34.7 | 8.0 | 7.5 W |
| 26 februari | 06:27 | 110 | 11:24 | 26 | 16:21 | 250 | 0.9 | 15.4 | 34.8 | 8.0 | 8.3 W |
| 27 februari | 06:24 | 110 | 11:21 | 26 | 16:18 | 250 | 0.9 | 15.4 | 34.8 | 7.9 | 9.2 W |
| 28 februari | 06:20 | 110 | 11:17 | 26 | 16:15 | 250 | 0.9 | 15.4 | 34.8 | 7.9 | 10.1 W |
| 1 maart | 06:16 | 110 | 11:14 | 26 | 16:12 | 250 | 0.9 | 15.4 | 34.8 | 7.8 | 11.0 W |
| 2 maart | 06:12 | 110 | 11:10 | 26 | 16:08 | 250 | 0.9 | 15.4 | 34.8 | 7.8 | 11.9 W |
| 3 maart | 06:09 | 110 | 11:07 | 26 | 16:05 | 250 | 0.9 | 15.4 | 34.8 | 7.8 | 12.7 W |
| 4 maart | 06:05 | 110 | 11:03 | 26 | 16:02 | 250 | 0.9 | 15.4 | 34.8 | 7.7 | 13.6 W |
| 5 maart | 06:01 | 110 | 11:00 | 26 | 15:59 | 250 | 0.9 | 15.4 | 34.8 | 7.7 | 14.5 W |
| 6 maart | 05:58 | 110 | 10:56 | 27 | 15:55 | 250 | 0.9 | 15.4 | 34.8 | 7.7 | 15.4 W |
| 7 maart | 05:54 | 110 | 10:53 | 27 | 15:52 | 250 | 0.9 | 15.4 | 34.9 | 7.6 | 16.3 W |
| 8 maart | 05:50 | 110 | 10:50 | 27 | 15:49 | 251 | 0.9 | 15.4 | 34.9 | 7.6 | 17.1 W |
| 9 maart | 05:47 | 109 | 10:46 | 27 | 15:46 | 251 | 0.9 | 15.4 | 34.9 | 7.6 | 18.0 W |
| 10 maart | 05:43 | 109 | 10:43 | 27 | 15:42 | 251 | 0.9 | 15.5 | 34.9 | 7.5 | 18.9 W |
| 11 maart | 05:39 | 109 | 10:39 | 27 | 15:39 | 251 | 0.9 | 15.5 | 34.9 | 7.5 | 19.8 W |
| 12 maart | 05:36 | 109 | 10:36 | 27 | 15:36 | 251 | 0.9 | 15.5 | 34.9 | 7.5 | 20.7 W |
| 13 maart | 05:32 | 109 | 10:32 | 27 | 15:32 | 251 | 0.9 | 15.5 | 35.0 | 7.4 | 21.5 W |
| 14 maart | 05:28 | 109 | 10:29 | 27 | 15:29 | 251 | 0.9 | 15.5 | 35.0 | 7.4 | 22.4 W |
| 15 maart | 05:24 | 109 | 10:25 | 27 | 15:26 | 251 | 0.9 | 15.5 | 35.0 | 7.4 | 23.3 W |
| 16 maart | 05:21 | 109 | 10:22 | 27 | 15:23 | 251 | 0.9 | 15.5 | 35.0 | 7.3 | 24.2 W |
| 17 maart | 05:17 | 109 | 10:18 | 27 | 15:19 | 251 | 0.9 | 15.5 | 35.1 | 7.3 | 25.1 W |
| 18 maart | 05:13 | 109 | 10:15 | 27 | 15:16 | 251 | 0.9 | 15.5 | 35.1 | 7.3 | 25.9 W |
| 19 maart | 05:10 | 109 | 10:11 | 27 | 15:13 | 251 | 0.9 | 15.5 | 35.1 | 7.3 | 26.8 W |
| 20 maart | 05:06 | 109 | 10:08 | 27 | 15:09 | 251 | 0.9 | 15.6 | 35.1 | 7.2 | 27.7 W |
| 21 maart | 05:02 | 109 | 10:04 | 27 | 15:06 | 251 | 0.9 | 15.6 | 35.2 | 7.2 | 28.6 W |
| 22 maart | 04:59 | 109 | 10:01 | 27 | 15:03 | 251 | 0.9 | 15.6 | 35.2 | 7.2 | 29.5 W |
| 23 maart | 04:55 | 109 | 09:57 | 27 | 14:59 | 251 | 0.9 | 15.6 | 35.2 | 7.1 | 30.4 W |
| 24 maart | 04:51 | 109 | 09:54 | 27 | 14:56 | 252 | 0.9 | 15.6 | 35.2 | 7.1 | 31.2 W |
| 25 maart | 04:47 | 108 | 09:50 | 27 | 14:53 | 252 | 0.9 | 15.6 | 35.3 | 7.1 | 32.1 W |
| 26 maart | 04:44 | 108 | 09:47 | 27 | 14:50 | 252 | 0.9 | 15.6 | 35.3 | 7.0 | 33.0 W |
| 27 maart | 04:40 | 108 | 09:43 | 27 | 14:46 | 252 | 0.9 | 15.6 | 35.3 | 7.0 | 33.9 W |
| 28 maart | 04:36 | 108 | 09:40 | 27 | 14:43 | 252 | 0.9 | 15.7 | 35.4 | 7.0 | 34.8 W |
| 29 maart | 04:33 | 108 | 09:36 | 27 | 14:40 | 252 | 0.9 | 15.7 | 35.4 | 7.0 | 35.7 W |
| 30 maart | 04:29 | 108 | 09:32 | 27 | 14:36 | 252 | 0.9 | 15.7 | 35.4 | 6.9 | 36.5 W |
| 31 maart | 04:25 | 108 | 09:29 | 27 | 14:33 | 252 | 0.9 | 15.7 | 35.5 | 6.9 | 37.4 W |
| 1 april | 04:21 | 108 | 09:25 | 27 | 14:29 | 252 | 0.9 | 15.7 | 35.5 | 6.9 | 38.3 W |
| 2 april | 04:18 | 108 | 09:22 | 28 | 14:26 | 252 | 0.9 | 15.7 | 35.5 | 6.9 | 39.2 W |
| 3 april | 04:14 | 108 | 09:18 | 28 | 14:23 | 252 | 0.9 | 15.7 | 35.6 | 6.8 | 40.1 W |
| 4 april | 04:10 | 108 | 09:15 | 28 | 14:19 | 252 | 0.9 | 15.8 | 35.6 | 6.8 | 40.9 W |
| 5 april | 04:06 | 108 | 09:11 | 28 | 14:16 | 252 | 0.9 | 15.8 | 35.6 | 6.8 | 41.8 W |
| 6 april | 04:03 | 108 | 09:08 | 28 | 14:13 | 252 | 0.9 | 15.8 | 35.7 | 6.8 | 42.7 W |
| 7 april | 03:59 | 108 | 09:04 | 28 | 14:09 | 252 | 0.9 | 15.8 | 35.7 | 6.7 | 43.6 W |
| 8 april | 03:55 | 108 | 09:01 | 28 | 14:06 | 252 | 0.9 | 15.8 | 35.7 | 6.7 | 44.5 W |
| 9 april | 03:52 | 108 | 08:57 | 28 | 14:02 | 252 | 0.9 | 15.8 | 35.8 | 6.7 | 45.4 W |
| 10 april | 03:48 | 108 | 08:53 | 28 | 13:59 | 252 | 0.9 | 15.9 | 35.8 | 6.7 | 46.3 W |
| 11 april | 03:44 | 108 | 08:50 | 28 | 13:56 | 253 | 0.9 | 15.9 | 35.9 | 6.6 | 47.1 W |
| 12 april | 03:40 | 107 | 08:46 | 28 | 13:52 | 253 | 0.9 | 15.9 | 35.9 | 6.6 | 48.0 W |
| 13 april | 03:37 | 107 | 08:43 | 28 | 13:49 | 253 | 0.9 | 15.9 | 36.0 | 6.6 | 48.9 W |
| 14 april | 03:33 | 107 | 08:39 | 28 | 13:45 | 253 | 0.9 | 15.9 | 36.0 | 6.6 | 49.8 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|-------------|-----------|------------|------------|------------|-----------|------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (hr:m) | Azimut (°) | Culminatie | Hoogte (°) | Ondergang | Azimut (°) | | | | | |
| 2023 | | | | | | | | | | | |
| 15 april | 03:29 | 107 | 08:36 | 28 | 13:42 | 253 | 0.9 | 16.0 | 36.0 | 6.5 | 50.7 W |
| 16 april | 03:25 | 107 | 08:32 | 28 | 13:39 | 253 | 0.9 | 16.0 | 36.1 | 6.5 | 51.6 W |
| 17 april | 03:22 | 107 | 08:28 | 28 | 13:35 | 253 | 0.9 | 16.0 | 36.1 | 6.5 | 52.5 W |
| 18 april | 03:18 | 107 | 08:25 | 28 | 13:32 | 253 | 0.9 | 16.0 | 36.2 | 6.5 | 53.4 W |
| 19 april | 03:14 | 107 | 08:21 | 28 | 13:28 | 253 | 0.9 | 16.0 | 36.2 | 6.5 | 54.3 W |
| 20 april | 03:10 | 107 | 08:18 | 28 | 13:25 | 253 | 0.9 | 16.1 | 36.3 | 6.4 | 55.1 W |
| 21 april | 03:07 | 107 | 08:14 | 28 | 13:21 | 253 | 0.9 | 16.1 | 36.3 | 6.4 | 56.0 W |
| 22 april | 03:03 | 107 | 08:10 | 28 | 13:18 | 253 | 0.9 | 16.1 | 36.4 | 6.4 | 56.9 W |
| 23 april | 02:59 | 107 | 08:07 | 28 | 13:14 | 253 | 0.9 | 16.1 | 36.4 | 6.4 | 57.8 W |
| 24 april | 02:55 | 107 | 08:03 | 28 | 13:11 | 253 | 0.9 | 16.1 | 36.5 | 6.4 | 58.7 W |
| 25 april | 02:52 | 107 | 07:59 | 28 | 13:07 | 253 | 0.9 | 16.2 | 36.5 | 6.4 | 59.6 W |
| 26 april | 02:48 | 107 | 07:56 | 28 | 13:04 | 253 | 0.9 | 16.2 | 36.6 | 6.3 | 60.5 W |
| 27 april | 02:44 | 107 | 07:52 | 28 | 13:00 | 253 | 0.9 | 16.2 | 36.6 | 6.3 | 61.4 W |
| 28 april | 02:40 | 107 | 07:49 | 28 | 12:57 | 253 | 0.9 | 16.2 | 36.7 | 6.3 | 62.3 W |
| 29 april | 02:37 | 107 | 07:45 | 28 | 12:53 | 253 | 0.9 | 16.3 | 36.7 | 6.3 | 63.2 W |
| 30 april | 02:33 | 107 | 07:41 | 28 | 12:50 | 253 | 0.9 | 16.3 | 36.8 | 6.3 | 64.1 W |
| 1 mei | 02:29 | 107 | 07:38 | 28 | 12:46 | 253 | 0.9 | 16.3 | 36.8 | 6.3 | 65.0 W |
| 2 mei | 02:25 | 107 | 07:34 | 28 | 12:43 | 253 | 0.9 | 16.3 | 36.9 | 6.2 | 65.9 W |
| 3 mei | 02:21 | 107 | 07:30 | 28 | 12:39 | 254 | 0.9 | 16.4 | 37.0 | 6.2 | 66.8 W |
| 4 mei | 02:18 | 106 | 07:27 | 28 | 12:36 | 254 | 0.9 | 16.4 | 37.0 | 6.2 | 67.7 W |
| 5 mei | 02:14 | 106 | 07:23 | 28 | 12:32 | 254 | 0.9 | 16.4 | 37.1 | 6.2 | 68.6 W |
| 6 mei | 02:10 | 106 | 07:19 | 28 | 12:29 | 254 | 0.9 | 16.4 | 37.1 | 6.2 | 69.5 W |
| 7 mei | 02:06 | 106 | 07:16 | 29 | 12:25 | 254 | 0.9 | 16.5 | 37.2 | 6.2 | 70.4 W |
| 8 mei | 02:02 | 106 | 07:12 | 29 | 12:21 | 254 | 0.9 | 16.5 | 37.2 | 6.2 | 71.3 W |
| 9 mei | 01:59 | 106 | 07:08 | 29 | 12:18 | 254 | 0.9 | 16.5 | 37.3 | 6.2 | 72.2 W |
| 10 mei | 01:55 | 106 | 07:05 | 29 | 12:14 | 254 | 0.9 | 16.5 | 37.4 | 6.2 | 73.1 W |
| 11 mei | 01:51 | 106 | 07:01 | 29 | 12:11 | 254 | 0.9 | 16.6 | 37.4 | 6.1 | 74.0 W |
| 12 mei | 01:47 | 106 | 06:57 | 29 | 12:07 | 254 | 0.9 | 16.6 | 37.5 | 6.1 | 74.9 W |
| 13 mei | 01:44 | 106 | 06:53 | 29 | 12:03 | 254 | 0.9 | 16.6 | 37.5 | 6.1 | 75.8 W |
| 14 mei | 01:40 | 106 | 06:50 | 29 | 12:00 | 254 | 0.9 | 16.6 | 37.6 | 6.1 | 76.7 W |
| 15 mei | 01:36 | 106 | 06:46 | 29 | 11:56 | 254 | 0.9 | 16.7 | 37.7 | 6.1 | 77.6 W |
| 16 mei | 01:32 | 106 | 06:42 | 29 | 11:52 | 254 | 0.9 | 16.7 | 37.7 | 6.1 | 78.6 W |
| 17 mei | 01:28 | 106 | 06:38 | 29 | 11:49 | 254 | 0.9 | 16.7 | 37.8 | 6.1 | 79.5 W |
| 18 mei | 01:24 | 106 | 06:35 | 29 | 11:45 | 254 | 0.9 | 16.8 | 37.8 | 6.1 | 80.4 W |
| 19 mei | 01:21 | 106 | 06:31 | 29 | 11:41 | 254 | 0.9 | 16.8 | 37.9 | 6.1 | 81.3 W |
| 20 mei | 01:17 | 106 | 06:27 | 29 | 11:38 | 254 | 0.9 | 16.8 | 38.0 | 6.1 | 82.2 W |
| 21 mei | 01:13 | 106 | 06:24 | 29 | 11:34 | 254 | 0.9 | 16.8 | 38.0 | 6.1 | 83.1 W |
| 22 mei | 01:09 | 106 | 06:20 | 29 | 11:30 | 254 | 0.9 | 16.9 | 38.1 | 6.1 | 84.0 W |
| 23 mei | 01:05 | 106 | 06:16 | 29 | 11:27 | 254 | 0.9 | 16.9 | 38.2 | 6.1 | 85.0 W |
| 24 mei | 01:01 | 106 | 06:12 | 29 | 11:23 | 254 | 0.9 | 16.9 | 38.2 | 6.1 | 85.9 W |
| 25 mei | 00:58 | 106 | 06:08 | 29 | 11:19 | 254 | 0.9 | 17.0 | 38.3 | 6.1 | 86.8 W |
| 26 mei | 00:54 | 106 | 06:05 | 29 | 11:15 | 254 | 0.9 | 17.0 | 38.4 | 6.1 | 87.7 W |
| 27 mei | 00:50 | 106 | 06:01 | 29 | 11:12 | 254 | 0.9 | 17.0 | 38.4 | 6.1 | 88.7 W |
| 28 mei | 00:46 | 106 | 05:57 | 29 | 11:08 | 254 | 0.9 | 17.0 | 38.5 | 6.1 | 89.6 W |
| 29 mei | 00:42 | 106 | 05:53 | 29 | 11:04 | 254 | 0.9 | 17.1 | 38.6 | 6.1 | 90.5 W |
| 30 mei | 00:38 | 106 | 05:49 | 29 | 11:00 | 254 | 0.9 | 17.1 | 38.6 | 6.1 | 91.4 W |
| 31 mei | 00:35 | 106 | 05:46 | 29 | 10:57 | 254 | 0.9 | 17.1 | 38.7 | 6.1 | 92.4 W |
| 1 juni | 00:31 | 106 | 05:42 | 29 | 10:53 | 254 | 0.9 | 17.2 | 38.8 | 6.1 | 93.3 W |
| 2 juni | 00:27 | 106 | 05:38 | 29 | 10:49 | 254 | 0.9 | 17.2 | 38.8 | 6.1 | 94.2 W |
| 3 juni | 00:23 | 106 | 05:34 | 29 | 10:45 | 254 | 0.8 | 17.2 | 38.9 | 6.1 | 95.2 W |
| 4 juni | 00:19 | 106 | 05:30 | 29 | 10:41 | 254 | 0.8 | 17.2 | 39.0 | 6.1 | 96.1 W |
| 5 juni | 00:15 | 106 | 05:26 | 29 | 10:38 | 254 | 0.8 | 17.3 | 39.0 | 6.1 | 97.0 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|-------------|-----------|-------------|------------|------------|-----------|-------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (hr:m) | Azimuth (°) | Culminatie | Hoogte (°) | Ondergang | Azimuth (°) | | | | | |
| 2023 | | | | | | | | | | | |
| 6 juni | 00:11 | 106 | 05:23 | 29 | 10:34 | 254 | 0.8 | 17.3 | 39.1 | 6.1 | 98.0 W |
| 7 juni | 00:07 | 106 | 05:19 | 29 | 10:30 | 254 | 0.8 | 17.3 | 39.2 | 6.1 | 98.9 W |
| 8 juni | 00:04 | 106 | 05:15 | 29 | 10:26 | 254 | 0.8 | 17.4 | 39.2 | 6.1 | 99.8 W |
| 9 juni | 23:56 | 106 | 05:11 | 29 | 10:22 | 254 | 0.8 | 17.4 | 39.3 | 6.1 | 100.8 W |
| 10 juni | 23:52 | 106 | 05:07 | 29 | 10:18 | 254 | 0.8 | 17.4 | 39.4 | 6.1 | 101.7 W |
| 11 juni | 23:48 | 106 | 05:03 | 29 | 10:14 | 254 | 0.8 | 17.5 | 39.4 | 6.1 | 102.7 W |
| 12 juni | 23:44 | 106 | 04:59 | 29 | 10:11 | 254 | 0.8 | 17.5 | 39.5 | 6.1 | 103.6 W |
| 13 juni | 23:40 | 106 | 04:55 | 29 | 10:07 | 254 | 0.8 | 17.5 | 39.6 | 6.2 | 104.6 W |
| 14 juni | 23:36 | 106 | 04:52 | 29 | 10:03 | 254 | 0.8 | 17.5 | 39.6 | 6.2 | 105.5 W |
| 15 juni | 23:32 | 106 | 04:48 | 29 | 09:59 | 254 | 0.8 | 17.6 | 39.7 | 6.2 | 106.5 W |
| 16 juni | 23:29 | 106 | 04:44 | 29 | 09:55 | 254 | 0.8 | 17.6 | 39.8 | 6.2 | 107.4 W |
| 17 juni | 23:25 | 106 | 04:40 | 29 | 09:51 | 254 | 0.8 | 17.6 | 39.8 | 6.2 | 108.4 W |
| 18 juni | 23:21 | 106 | 04:36 | 29 | 09:47 | 254 | 0.8 | 17.7 | 39.9 | 6.2 | 109.3 W |
| 19 juni | 23:17 | 106 | 04:32 | 29 | 09:43 | 254 | 0.8 | 17.7 | 40.0 | 6.2 | 110.3 W |
| 20 juni | 23:13 | 106 | 04:28 | 29 | 09:39 | 254 | 0.8 | 17.7 | 40.0 | 6.2 | 111.2 W |
| 21 juni | 23:09 | 106 | 04:24 | 29 | 09:35 | 254 | 0.8 | 17.8 | 40.1 | 6.3 | 112.2 W |
| 22 juni | 23:05 | 106 | 04:20 | 29 | 09:31 | 254 | 0.8 | 17.8 | 40.2 | 6.3 | 113.2 W |
| 23 juni | 23:01 | 106 | 04:16 | 29 | 09:27 | 254 | 0.8 | 17.8 | 40.2 | 6.3 | 114.1 W |
| 24 juni | 22:57 | 106 | 04:12 | 29 | 09:23 | 254 | 0.8 | 17.8 | 40.3 | 6.3 | 115.1 W |
| 25 juni | 22:53 | 106 | 04:08 | 29 | 09:19 | 254 | 0.8 | 17.9 | 40.4 | 6.3 | 116.0 W |
| 26 juni | 22:49 | 106 | 04:04 | 29 | 09:15 | 254 | 0.7 | 17.9 | 40.4 | 6.3 | 117.0 W |
| 27 juni | 22:45 | 106 | 04:00 | 29 | 09:11 | 254 | 0.7 | 17.9 | 40.5 | 6.4 | 118.0 W |
| 28 juni | 22:42 | 106 | 03:56 | 29 | 09:07 | 254 | 0.7 | 18.0 | 40.5 | 6.4 | 118.9 W |
| 29 juni | 22:38 | 106 | 03:52 | 29 | 09:03 | 254 | 0.7 | 18.0 | 40.6 | 6.4 | 119.9 W |
| 30 juni | 22:34 | 106 | 03:48 | 29 | 08:59 | 254 | 0.7 | 18.0 | 40.7 | 6.4 | 120.9 W |
| 1 juli | 22:30 | 106 | 03:44 | 29 | 08:55 | 254 | 0.7 | 18.0 | 40.7 | 6.4 | 121.9 W |
| 2 juli | 22:26 | 106 | 03:40 | 29 | 08:51 | 254 | 0.7 | 18.1 | 40.8 | 6.5 | 122.8 W |
| 3 juli | 22:22 | 106 | 03:36 | 29 | 08:47 | 254 | 0.7 | 18.1 | 40.9 | 6.5 | 123.8 W |
| 4 juli | 22:18 | 106 | 03:32 | 29 | 08:43 | 254 | 0.7 | 18.1 | 40.9 | 6.5 | 124.8 W |
| 5 juli | 22:14 | 106 | 03:28 | 29 | 08:39 | 254 | 0.7 | 18.1 | 41.0 | 6.5 | 125.8 W |
| 6 juli | 22:10 | 106 | 03:24 | 29 | 08:34 | 254 | 0.7 | 18.2 | 41.0 | 6.6 | 126.8 W |
| 7 juli | 22:06 | 106 | 03:20 | 29 | 08:30 | 254 | 0.7 | 18.2 | 41.1 | 6.6 | 127.7 W |
| 8 juli | 22:02 | 106 | 03:16 | 29 | 08:26 | 254 | 0.7 | 18.2 | 41.2 | 6.6 | 128.7 W |
| 9 juli | 21:58 | 106 | 03:12 | 29 | 08:22 | 254 | 0.7 | 18.3 | 41.2 | 6.6 | 129.7 W |
| 10 juli | 21:54 | 106 | 03:08 | 29 | 08:18 | 254 | 0.7 | 18.3 | 41.3 | 6.7 | 130.7 W |
| 11 juli | 21:50 | 106 | 03:04 | 29 | 08:14 | 254 | 0.7 | 18.3 | 41.3 | 6.7 | 131.7 W |
| 12 juli | 21:46 | 106 | 03:00 | 29 | 08:10 | 254 | 0.7 | 18.3 | 41.4 | 6.7 | 132.7 W |
| 13 juli | 21:42 | 106 | 02:56 | 29 | 08:05 | 254 | 0.7 | 18.4 | 41.4 | 6.7 | 133.7 W |
| 14 juli | 21:38 | 106 | 02:52 | 29 | 08:01 | 254 | 0.7 | 18.4 | 41.5 | 6.8 | 134.7 W |
| 15 juli | 21:34 | 106 | 02:48 | 29 | 07:57 | 254 | 0.7 | 18.4 | 41.6 | 6.8 | 135.6 W |
| 16 juli | 21:30 | 106 | 02:44 | 29 | 07:53 | 254 | 0.7 | 18.4 | 41.6 | 6.8 | 136.6 W |
| 17 juli | 21:26 | 106 | 02:39 | 29 | 07:49 | 254 | 0.6 | 18.4 | 41.7 | 6.8 | 137.6 W |
| 18 juli | 21:22 | 106 | 02:35 | 29 | 07:45 | 254 | 0.6 | 18.5 | 41.7 | 6.9 | 138.6 W |
| 19 juli | 21:18 | 106 | 02:31 | 28 | 07:40 | 254 | 0.6 | 18.5 | 41.8 | 6.9 | 139.6 W |
| 20 juli | 21:14 | 106 | 02:27 | 28 | 07:36 | 254 | 0.6 | 18.5 | 41.8 | 6.9 | 140.6 W |
| 21 juli | 21:10 | 106 | 02:23 | 28 | 07:32 | 254 | 0.6 | 18.5 | 41.9 | 7.0 | 141.6 W |
| 22 juli | 21:06 | 107 | 02:19 | 28 | 07:28 | 253 | 0.6 | 18.6 | 41.9 | 7.0 | 142.7 W |
| 23 juli | 21:02 | 107 | 02:15 | 28 | 07:23 | 253 | 0.6 | 18.6 | 42.0 | 7.0 | 143.7 W |
| 24 juli | 20:58 | 107 | 02:11 | 28 | 07:19 | 253 | 0.6 | 18.6 | 42.0 | 7.1 | 144.7 W |
| 25 juli | 20:54 | 107 | 02:06 | 28 | 07:15 | 253 | 0.6 | 18.6 | 42.0 | 7.1 | 145.7 W |
| 26 juli | 20:50 | 107 | 02:02 | 28 | 07:11 | 253 | 0.6 | 18.6 | 42.1 | 7.1 | 146.7 W |
| 27 juli | 20:46 | 107 | 01:58 | 28 | 07:06 | 253 | 0.6 | 18.7 | 42.1 | 7.2 | 147.7 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|--------------|-----------|-------------|------------|------------|-----------|-------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (hr:m) | Azimuth (°) | Culminatie | Hoogte (°) | Ondergang | Azimuth (°) | | | | | |
| 2023 | | | | | | | | | | | |
| 28 juli | 20:42 | 107 | 01:54 | 28 | 07:02 | 253 | 0.6 | 18.7 | 42.2 | 7.2 | 148.7 W |
| 29 juli | 20:38 | 107 | 01:50 | 28 | 06:58 | 253 | 0.6 | 18.7 | 42.2 | 7.2 | 149.7 W |
| 30 juli | 20:34 | 107 | 01:46 | 28 | 06:54 | 253 | 0.6 | 18.7 | 42.3 | 7.3 | 150.7 W |
| 31 juli | 20:30 | 107 | 01:42 | 28 | 06:49 | 253 | 0.6 | 18.7 | 42.3 | 7.3 | 151.7 W |
| 1 augustus | 20:26 | 107 | 01:37 | 28 | 06:45 | 253 | 0.6 | 18.7 | 42.3 | 7.3 | 152.8 W |
| 2 augustus | 20:22 | 107 | 01:33 | 28 | 06:41 | 253 | 0.6 | 18.8 | 42.4 | 7.4 | 153.8 W |
| 3 augustus | 20:18 | 107 | 01:29 | 28 | 06:36 | 253 | 0.6 | 18.8 | 42.4 | 7.4 | 154.8 W |
| 4 augustus | 20:14 | 107 | 01:25 | 28 | 06:32 | 253 | 0.6 | 18.8 | 42.4 | 7.4 | 155.8 W |
| 5 augustus | 20:10 | 107 | 01:21 | 28 | 06:28 | 253 | 0.6 | 18.8 | 42.5 | 7.5 | 156.8 W |
| 6 augustus | 20:06 | 107 | 01:17 | 28 | 06:23 | 253 | 0.5 | 18.8 | 42.5 | 7.5 | 157.9 W |
| 7 augustus | 20:02 | 107 | 01:12 | 28 | 06:19 | 253 | 0.5 | 18.8 | 42.5 | 7.5 | 158.9 W |
| 8 augustus | 19:58 | 107 | 01:08 | 28 | 06:15 | 253 | 0.5 | 18.8 | 42.6 | 7.6 | 159.9 W |
| 9 augustus | 19:54 | 107 | 01:04 | 28 | 06:10 | 253 | 0.5 | 18.9 | 42.6 | 7.6 | 160.9 W |
| 10 augustus | 19:49 | 107 | 01:00 | 28 | 06:06 | 253 | 0.5 | 18.9 | 42.6 | 7.6 | 161.9 W |
| 11 augustus | 19:45 | 107 | 00:56 | 28 | 06:02 | 253 | 0.5 | 18.9 | 42.6 | 7.7 | 163.0 W |
| 12 augustus | 19:41 | 107 | 00:51 | 28 | 05:57 | 253 | 0.5 | 18.9 | 42.7 | 7.7 | 164.0 W |
| 13 augustus | 19:37 | 107 | 00:47 | 28 | 05:53 | 253 | 0.5 | 18.9 | 42.7 | 7.7 | 165.0 W |
| 14 augustus | 19:33 | 107 | 00:43 | 28 | 05:49 | 253 | 0.5 | 18.9 | 42.7 | 7.8 | 166.0 W |
| 15 augustus | 19:29 | 108 | 00:39 | 28 | 05:44 | 252 | 0.5 | 18.9 | 42.7 | 7.8 | 167.1 W |
| 16 augustus | 19:25 | 108 | 00:35 | 28 | 05:40 | 252 | 0.5 | 18.9 | 42.7 | 7.8 | 168.1 W |
| 17 augustus | 19:21 | 108 | 00:30 | 28 | 05:36 | 252 | 0.5 | 18.9 | 42.8 | 7.9 | 169.1 W |
| 18 augustus | 19:17 | 108 | 00:26 | 28 | 05:31 | 252 | 0.5 | 18.9 | 42.8 | 7.9 | 170.1 W |
| 19 augustus | 19:13 | 108 | 00:22 | 28 | 05:27 | 252 | 0.5 | 18.9 | 42.8 | 7.9 | 171.1 W |
| 20 augustus | 19:09 | 108 | 00:18 | 28 | 05:23 | 252 | 0.5 | 18.9 | 42.8 | 8.0 | 172.2 W |
| 21 augustus | 19:05 | 108 | 00:14 | 28 | 05:18 | 252 | 0.5 | 19.0 | 42.8 | 8.0 | 173.2 W |
| 22 augustus | 19:01 | 108 | 00:09 | 28 | 05:14 | 252 | 0.5 | 19.0 | 42.8 | 8.0 | 174.2 W |
| 23 augustus | 18:57 | 108 | 00:05 | 28 | 05:09 | 252 | 0.5 | 19.0 | 42.8 | 8.1 | 175.1 W |
| 24 augustus | 18:53 | 108 | 00:01 | 28 | 05:05 | 252 | 0.5 | 19.0 | 42.8 | 8.1 | 176.1 W |
| 25 augustus | 18:49 | 108 | 23:53 | 27 | 05:01 | 252 | 0.4 | 19.0 | 42.8 | 8.1 | 177.0 W |
| 26 augustus | 18:45 | 108 | 23:48 | 27 | 04:56 | 252 | 0.4 | 19.0 | 42.8 | 8.2 | 177.7 W |
| 27 augustus | 18:40 | 108 | 23:44 | 27 | 04:52 | 252 | 0.4 | 19.0 | 42.8 | 8.2 | 178.2 W |
| 28 augustus | 18:36 | 108 | 23:40 | 27 | 04:48 | 252 | 0.4 | 19.0 | 42.8 | 8.2 | 178.1 W |
| 29 augustus | 18:32 | 108 | 23:36 | 27 | 04:43 | 252 | 0.4 | 19.0 | 42.8 | 8.3 | 177.5 O |
| 30 augustus | 18:28 | 108 | 23:31 | 27 | 04:39 | 252 | 0.4 | 19.0 | 42.8 | 8.3 | 176.7 O |
| 31 augustus | 18:24 | 108 | 23:27 | 27 | 04:35 | 252 | 0.5 | 19.0 | 42.8 | 8.3 | 175.8 O |
| 1 september | 18:20 | 108 | 23:23 | 27 | 04:30 | 252 | 0.5 | 19.0 | 42.8 | 8.4 | 174.8 O |
| 2 september | 18:16 | 108 | 23:19 | 27 | 04:26 | 252 | 0.5 | 19.0 | 42.8 | 8.4 | 173.9 O |
| 3 september | 18:12 | 108 | 23:15 | 27 | 04:21 | 252 | 0.5 | 19.0 | 42.8 | 8.4 | 172.9 O |
| 4 september | 18:08 | 108 | 23:10 | 27 | 04:17 | 252 | 0.5 | 18.9 | 42.8 | 8.5 | 171.8 O |
| 5 september | 18:04 | 109 | 23:06 | 27 | 04:13 | 252 | 0.5 | 18.9 | 42.8 | 8.5 | 170.8 O |
| 6 september | 18:00 | 109 | 23:02 | 27 | 04:08 | 251 | 0.5 | 18.9 | 42.8 | 8.5 | 169.8 O |
| 7 september | 17:56 | 109 | 22:58 | 27 | 04:04 | 251 | 0.5 | 18.9 | 42.8 | 8.5 | 168.8 O |
| 8 september | 17:52 | 109 | 22:54 | 27 | 04:00 | 251 | 0.5 | 18.9 | 42.7 | 8.6 | 167.7 O |
| 9 september | 17:48 | 109 | 22:49 | 27 | 03:55 | 251 | 0.5 | 18.9 | 42.7 | 8.6 | 166.7 O |
| 10 september | 17:44 | 109 | 22:45 | 27 | 03:51 | 251 | 0.5 | 18.9 | 42.7 | 8.6 | 165.7 O |
| 11 september | 17:39 | 109 | 22:41 | 27 | 03:47 | 251 | 0.5 | 18.9 | 42.7 | 8.6 | 164.6 O |
| 12 september | 17:35 | 109 | 22:37 | 27 | 03:42 | 251 | 0.5 | 18.9 | 42.7 | 8.7 | 163.6 O |
| 13 september | 17:31 | 109 | 22:33 | 27 | 03:38 | 251 | 0.5 | 18.9 | 42.6 | 8.7 | 162.6 O |
| 14 september | 17:27 | 109 | 22:28 | 27 | 03:34 | 251 | 0.5 | 18.9 | 42.6 | 8.7 | 161.5 O |
| 15 september | 17:23 | 109 | 22:24 | 27 | 03:29 | 251 | 0.5 | 18.9 | 42.6 | 8.7 | 160.5 O |
| 16 september | 17:19 | 109 | 22:20 | 27 | 03:25 | 251 | 0.5 | 18.8 | 42.6 | 8.8 | 159.4 O |
| 17 september | 17:15 | 109 | 22:16 | 27 | 03:21 | 251 | 0.5 | 18.8 | 42.5 | 8.8 | 158.4 O |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|--------------|-----------|------------|------------|------------|-----------|------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (hr:m) | Azimut (°) | Culminatie | Hoogte (°) | Ondergang | Azimut (°) | | | | | |
| 2023 | | | | | | | | | | | |
| 18 september | 17:11 | 109 | 22:12 | 27 | 03:16 | 251 | 0.5 | 18.8 | 42.5 | 8.8 | 157.4 O |
| 19 september | 17:07 | 109 | 22:07 | 27 | 03:12 | 251 | 0.5 | 18.8 | 42.5 | 8.8 | 156.3 O |
| 20 september | 17:03 | 109 | 22:03 | 27 | 03:08 | 251 | 0.5 | 18.8 | 42.4 | 8.8 | 155.3 O |
| 21 september | 16:59 | 109 | 21:59 | 27 | 03:03 | 251 | 0.5 | 18.8 | 42.4 | 8.9 | 154.2 O |
| 22 september | 16:55 | 109 | 21:55 | 27 | 02:59 | 251 | 0.5 | 18.8 | 42.4 | 8.9 | 153.2 O |
| 23 september | 16:51 | 109 | 21:51 | 27 | 02:55 | 251 | 0.6 | 18.7 | 42.3 | 8.9 | 152.2 O |
| 24 september | 16:47 | 109 | 21:47 | 27 | 02:51 | 251 | 0.6 | 18.7 | 42.3 | 8.9 | 151.1 O |
| 25 september | 16:43 | 109 | 21:42 | 27 | 02:46 | 251 | 0.6 | 18.7 | 42.3 | 8.9 | 150.1 O |
| 26 september | 16:39 | 109 | 21:38 | 27 | 02:42 | 251 | 0.6 | 18.7 | 42.2 | 8.9 | 149.1 O |
| 27 september | 16:35 | 109 | 21:34 | 27 | 02:38 | 251 | 0.6 | 18.7 | 42.2 | 9.0 | 148.0 O |
| 28 september | 16:30 | 109 | 21:30 | 27 | 02:34 | 251 | 0.6 | 18.7 | 42.1 | 9.0 | 147.0 O |
| 29 september | 16:26 | 109 | 21:26 | 27 | 02:29 | 251 | 0.6 | 18.6 | 42.1 | 9.0 | 145.9 O |
| 30 september | 16:22 | 109 | 21:22 | 27 | 02:25 | 251 | 0.6 | 18.6 | 42.0 | 9.0 | 144.9 O |
| 1 oktober | 16:18 | 109 | 21:18 | 27 | 02:21 | 251 | 0.6 | 18.6 | 42.0 | 9.0 | 143.9 O |
| 2 oktober | 16:14 | 110 | 21:13 | 27 | 02:17 | 250 | 0.6 | 18.6 | 42.0 | 9.0 | 142.8 O |
| 3 oktober | 16:10 | 110 | 21:09 | 27 | 02:12 | 250 | 0.6 | 18.6 | 41.9 | 9.0 | 141.8 O |
| 4 oktober | 16:06 | 110 | 21:05 | 27 | 02:08 | 250 | 0.6 | 18.5 | 41.9 | 9.0 | 140.8 O |
| 5 oktober | 16:02 | 110 | 21:01 | 27 | 02:04 | 250 | 0.6 | 18.5 | 41.8 | 9.0 | 139.7 O |
| 6 oktober | 15:58 | 110 | 20:57 | 27 | 02:00 | 250 | 0.6 | 18.5 | 41.8 | 9.0 | 138.7 O |
| 7 oktober | 15:54 | 110 | 20:53 | 26 | 01:56 | 250 | 0.6 | 18.5 | 41.7 | 9.0 | 137.7 O |
| 8 oktober | 15:50 | 110 | 20:49 | 26 | 01:51 | 250 | 0.6 | 18.4 | 41.7 | 9.1 | 136.7 O |
| 9 oktober | 15:46 | 110 | 20:45 | 26 | 01:47 | 250 | 0.6 | 18.4 | 41.6 | 9.1 | 135.6 O |
| 10 oktober | 15:42 | 110 | 20:41 | 26 | 01:43 | 250 | 0.6 | 18.4 | 41.5 | 9.1 | 134.6 O |
| 11 oktober | 15:38 | 110 | 20:36 | 26 | 01:39 | 250 | 0.6 | 18.4 | 41.5 | 9.1 | 133.6 O |
| 12 oktober | 15:34 | 110 | 20:32 | 26 | 01:35 | 250 | 0.6 | 18.3 | 41.4 | 9.1 | 132.5 O |
| 13 oktober | 15:30 | 110 | 20:28 | 26 | 01:31 | 250 | 0.6 | 18.3 | 41.4 | 9.1 | 131.5 O |
| 14 oktober | 15:26 | 110 | 20:24 | 26 | 01:26 | 250 | 0.6 | 18.3 | 41.3 | 9.1 | 130.5 O |
| 15 oktober | 15:22 | 110 | 20:20 | 26 | 01:22 | 250 | 0.7 | 18.3 | 41.3 | 9.1 | 129.5 O |
| 16 oktober | 15:18 | 110 | 20:16 | 26 | 01:18 | 250 | 0.7 | 18.2 | 41.2 | 9.1 | 128.4 O |
| 17 oktober | 15:14 | 110 | 20:12 | 26 | 01:14 | 250 | 0.7 | 18.2 | 41.2 | 9.1 | 127.4 O |
| 18 oktober | 15:10 | 110 | 20:08 | 26 | 01:10 | 250 | 0.7 | 18.2 | 41.1 | 9.1 | 126.4 O |
| 19 oktober | 15:06 | 110 | 20:04 | 26 | 01:06 | 250 | 0.7 | 18.2 | 41.0 | 9.1 | 125.4 O |
| 20 oktober | 15:02 | 110 | 20:00 | 26 | 01:02 | 250 | 0.7 | 18.1 | 41.0 | 9.1 | 124.4 O |
| 21 oktober | 14:58 | 110 | 19:56 | 26 | 00:58 | 250 | 0.7 | 18.1 | 40.9 | 9.0 | 123.3 O |
| 22 oktober | 14:54 | 110 | 19:52 | 26 | 00:54 | 250 | 0.7 | 18.1 | 40.8 | 9.0 | 122.3 O |
| 23 oktober | 14:50 | 110 | 19:48 | 26 | 00:50 | 250 | 0.7 | 18.1 | 40.8 | 9.0 | 121.3 O |
| 24 oktober | 14:46 | 110 | 19:44 | 26 | 00:46 | 250 | 0.7 | 18.0 | 40.7 | 9.0 | 120.3 O |
| 25 oktober | 14:42 | 110 | 19:40 | 26 | 00:42 | 250 | 0.7 | 18.0 | 40.7 | 9.0 | 119.3 O |
| 26 oktober | 14:38 | 110 | 19:36 | 26 | 00:38 | 250 | 0.7 | 18.0 | 40.6 | 9.0 | 118.3 O |
| 27 oktober | 14:34 | 110 | 19:32 | 26 | 00:34 | 250 | 0.7 | 17.9 | 40.5 | 9.0 | 117.3 O |
| 28 oktober | 14:30 | 110 | 19:28 | 26 | 00:30 | 250 | 0.7 | 17.9 | 40.5 | 9.0 | 116.2 O |
| 29 oktober | 14:26 | 110 | 19:24 | 26 | 00:26 | 250 | 0.7 | 17.9 | 40.4 | 9.0 | 115.2 O |
| 30 oktober | 14:22 | 110 | 19:20 | 26 | 00:22 | 250 | 0.7 | 17.9 | 40.3 | 9.0 | 114.2 O |
| 31 oktober | 14:18 | 110 | 19:16 | 26 | 00:18 | 250 | 0.7 | 17.8 | 40.3 | 9.0 | 113.2 O |
| 1 november | 14:14 | 110 | 19:12 | 26 | 00:14 | 250 | 0.7 | 17.8 | 40.2 | 8.9 | 112.2 O |
| 2 november | 14:10 | 110 | 19:08 | 26 | 00:10 | 250 | 0.7 | 17.8 | 40.1 | 8.9 | 111.2 O |
| 3 november | 14:06 | 110 | 19:04 | 26 | 00:06 | 250 | 0.7 | 17.7 | 40.1 | 8.9 | 110.2 O |
| 4 november | 14:03 | 110 | 19:00 | 26 | 00:02 | 250 | 0.7 | 17.7 | 40.0 | 8.9 | 109.2 O |
| 5 november | 13:59 | 110 | 18:56 | 26 | 23:54 | 250 | 0.8 | 17.7 | 39.9 | 8.9 | 108.2 O |
| 6 november | 13:55 | 110 | 18:52 | 26 | 23:50 | 250 | 0.8 | 17.7 | 39.9 | 8.9 | 107.2 O |
| 7 november | 13:51 | 110 | 18:48 | 26 | 23:46 | 250 | 0.8 | 17.6 | 39.8 | 8.8 | 106.2 O |
| 8 november | 13:47 | 110 | 18:45 | 26 | 23:42 | 250 | 0.8 | 17.6 | 39.7 | 8.8 | 105.2 O |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Equatoriale Diameter (") | Ring grote as (") | Ring kleine as (") | Elongatie (°) |
|-------------|-----------|------------|------------|------------|-----------|------------|-----------|--------------------------|-------------------|--------------------|---------------|
| | UT (hr:m) | Azimut (°) | Culminatie | Hoogte (°) | Ondergang | Azimut (°) | | | | | |
| 2023 | | | | | | | | | | | |
| 9 november | 13:43 | 110 | 18:41 | 26 | 23:38 | 250 | 0.8 | 17.6 | 39.7 | 8.8 | 104.2 O |
| 10 november | 13:39 | 110 | 18:37 | 26 | 23:35 | 250 | 0.8 | 17.5 | 39.6 | 8.8 | 103.2 O |
| 11 november | 13:35 | 110 | 18:33 | 26 | 23:31 | 250 | 0.8 | 17.5 | 39.5 | 8.8 | 102.2 O |
| 12 november | 13:31 | 110 | 18:29 | 26 | 23:27 | 250 | 0.8 | 17.5 | 39.5 | 8.7 | 101.2 O |
| 13 november | 13:27 | 110 | 18:25 | 26 | 23:23 | 250 | 0.8 | 17.4 | 39.4 | 8.7 | 100.2 O |
| 14 november | 13:23 | 110 | 18:21 | 26 | 23:19 | 250 | 0.8 | 17.4 | 39.3 | 8.7 | 99.2 O |
| 15 november | 13:19 | 110 | 18:17 | 26 | 23:15 | 250 | 0.8 | 17.4 | 39.3 | 8.7 | 98.3 O |
| 16 november | 13:15 | 110 | 18:14 | 26 | 23:12 | 250 | 0.8 | 17.4 | 39.2 | 8.7 | 97.3 O |
| 17 november | 13:12 | 110 | 18:10 | 26 | 23:08 | 250 | 0.8 | 17.3 | 39.1 | 8.6 | 96.3 O |
| 18 november | 13:08 | 110 | 18:06 | 26 | 23:04 | 250 | 0.8 | 17.3 | 39.1 | 8.6 | 95.3 O |
| 19 november | 13:04 | 110 | 18:02 | 26 | 23:00 | 250 | 0.8 | 17.3 | 39.0 | 8.6 | 94.3 O |
| 20 november | 13:00 | 110 | 17:58 | 26 | 22:57 | 250 | 0.8 | 17.2 | 38.9 | 8.6 | 93.3 O |
| 21 november | 12:56 | 110 | 17:54 | 26 | 22:53 | 250 | 0.8 | 17.2 | 38.9 | 8.5 | 92.4 O |
| 22 november | 12:52 | 110 | 17:51 | 26 | 22:49 | 250 | 0.8 | 17.2 | 38.8 | 8.5 | 91.4 O |
| 23 november | 12:48 | 110 | 17:47 | 26 | 22:45 | 250 | 0.8 | 17.1 | 38.7 | 8.5 | 90.4 O |
| 24 november | 12:44 | 110 | 17:43 | 26 | 22:42 | 250 | 0.8 | 17.1 | 38.7 | 8.4 | 89.4 O |
| 25 november | 12:40 | 110 | 17:39 | 26 | 22:38 | 250 | 0.8 | 17.1 | 38.6 | 8.4 | 88.4 O |
| 26 november | 12:37 | 110 | 17:35 | 27 | 22:34 | 250 | 0.8 | 17.1 | 38.5 | 8.4 | 87.5 O |
| 27 november | 12:33 | 110 | 17:32 | 27 | 22:30 | 250 | 0.8 | 17.0 | 38.5 | 8.4 | 86.5 O |
| 28 november | 12:29 | 110 | 17:28 | 27 | 22:27 | 250 | 0.9 | 17.0 | 38.4 | 8.3 | 85.5 O |
| 29 november | 12:25 | 110 | 17:24 | 27 | 22:23 | 250 | 0.9 | 17.0 | 38.3 | 8.3 | 84.6 O |
| 30 november | 12:21 | 110 | 17:20 | 27 | 22:19 | 250 | 0.9 | 16.9 | 38.3 | 8.3 | 83.6 O |
| 1 december | 12:17 | 110 | 17:16 | 27 | 22:16 | 250 | 0.9 | 16.9 | 38.2 | 8.2 | 82.6 O |
| 2 december | 12:13 | 109 | 17:13 | 27 | 22:12 | 251 | 0.9 | 16.9 | 38.1 | 8.2 | 81.7 O |
| 3 december | 12:10 | 109 | 17:09 | 27 | 22:08 | 251 | 0.9 | 16.9 | 38.1 | 8.2 | 80.7 O |
| 4 december | 12:06 | 109 | 17:05 | 27 | 22:05 | 251 | 0.9 | 16.8 | 38.0 | 8.1 | 79.7 O |
| 5 december | 12:02 | 109 | 17:02 | 27 | 22:01 | 251 | 0.9 | 16.8 | 38.0 | 8.1 | 78.8 O |
| 6 december | 11:58 | 109 | 16:58 | 27 | 21:58 | 251 | 0.9 | 16.8 | 37.9 | 8.1 | 77.8 O |
| 7 december | 11:54 | 109 | 16:54 | 27 | 21:54 | 251 | 0.9 | 16.8 | 37.8 | 8.0 | 76.8 O |
| 8 december | 11:50 | 109 | 16:50 | 27 | 21:50 | 251 | 0.9 | 16.7 | 37.8 | 8.0 | 75.9 O |
| 9 december | 11:47 | 109 | 16:47 | 27 | 21:47 | 251 | 0.9 | 16.7 | 37.7 | 8.0 | 74.9 O |
| 10 december | 11:43 | 109 | 16:43 | 27 | 21:43 | 251 | 0.9 | 16.7 | 37.6 | 7.9 | 74.0 O |
| 11 december | 11:39 | 109 | 16:39 | 27 | 21:40 | 251 | 0.9 | 16.6 | 37.6 | 7.9 | 73.0 O |
| 12 december | 11:35 | 109 | 16:36 | 27 | 21:36 | 251 | 0.9 | 16.6 | 37.5 | 7.9 | 72.1 O |
| 13 december | 11:31 | 109 | 16:32 | 27 | 21:32 | 251 | 0.9 | 16.6 | 37.5 | 7.8 | 71.1 O |
| 14 december | 11:27 | 109 | 16:28 | 27 | 21:29 | 251 | 0.9 | 16.6 | 37.4 | 7.8 | 70.1 O |
| 15 december | 11:24 | 109 | 16:24 | 27 | 21:25 | 251 | 0.9 | 16.5 | 37.4 | 7.8 | 69.2 O |
| 16 december | 11:20 | 109 | 16:21 | 27 | 21:22 | 251 | 0.9 | 16.5 | 37.3 | 7.7 | 68.2 O |
| 17 december | 11:16 | 109 | 16:17 | 27 | 21:18 | 251 | 0.9 | 16.5 | 37.2 | 7.7 | 67.3 O |
| 18 december | 11:12 | 109 | 16:13 | 27 | 21:15 | 251 | 0.9 | 16.5 | 37.2 | 7.6 | 66.4 O |
| 19 december | 11:08 | 109 | 16:10 | 27 | 21:11 | 251 | 0.9 | 16.4 | 37.1 | 7.6 | 65.4 O |
| 20 december | 11:05 | 109 | 16:06 | 27 | 21:08 | 251 | 0.9 | 16.4 | 37.1 | 7.6 | 64.5 O |
| 21 december | 11:01 | 109 | 16:02 | 27 | 21:04 | 251 | 0.9 | 16.4 | 37.0 | 7.5 | 63.5 O |
| 22 december | 10:57 | 109 | 15:59 | 27 | 21:01 | 251 | 0.9 | 16.4 | 37.0 | 7.5 | 62.6 O |
| 23 december | 10:53 | 109 | 15:55 | 27 | 20:57 | 251 | 0.9 | 16.3 | 36.9 | 7.5 | 61.6 O |
| 24 december | 10:49 | 109 | 15:52 | 27 | 20:54 | 251 | 0.9 | 16.3 | 36.9 | 7.4 | 60.7 O |
| 25 december | 10:46 | 109 | 15:48 | 27 | 20:50 | 251 | 0.9 | 16.3 | 36.8 | 7.4 | 59.8 O |
| 26 december | 10:42 | 109 | 15:44 | 27 | 20:47 | 252 | 0.9 | 16.3 | 36.8 | 7.3 | 58.8 O |
| 27 december | 10:38 | 108 | 15:41 | 27 | 20:43 | 252 | 0.9 | 16.3 | 36.7 | 7.3 | 57.9 O |
| 28 december | 10:34 | 108 | 15:37 | 27 | 20:40 | 252 | 0.9 | 16.2 | 36.7 | 7.3 | 57.0 O |
| 29 december | 10:30 | 108 | 15:33 | 27 | 20:37 | 252 | 0.9 | 16.2 | 36.6 | 7.2 | 56.0 O |
| 30 december | 10:27 | 108 | 15:30 | 27 | 20:33 | 252 | 1.0 | 16.2 | 36.6 | 7.2 | 55.1 O |
| 31 december | 10:23 | 108 | 15:26 | 27 | 20:30 | 252 | 1.0 | 16.2 | 36.5 | 7.1 | 54.2 O |

Uranus

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 1 januari | 12:23 | 63 | 19:49 | 55 | 03:18 | 297 | 5.7 | 3.7 | 124.9 O |
| 2 januari | 12:19 | 63 | 19:45 | 55 | 03:14 | 297 | 5.7 | 3.7 | 123.8 O |
| 3 januari | 12:15 | 63 | 19:41 | 55 | 03:10 | 297 | 5.7 | 3.7 | 122.8 O |
| 4 januari | 12:11 | 63 | 19:37 | 55 | 03:06 | 297 | 5.7 | 3.7 | 121.8 O |
| 5 januari | 12:08 | 63 | 19:33 | 55 | 03:02 | 297 | 5.7 | 3.7 | 120.7 O |
| 6 januari | 12:04 | 63 | 19:29 | 55 | 02:58 | 297 | 5.7 | 3.7 | 119.7 O |
| 7 januari | 12:00 | 63 | 19:25 | 55 | 02:54 | 297 | 5.7 | 3.7 | 118.7 O |
| 8 januari | 11:56 | 63 | 19:21 | 55 | 02:50 | 297 | 5.7 | 3.7 | 117.6 O |
| 9 januari | 11:52 | 63 | 19:17 | 55 | 02:46 | 297 | 5.7 | 3.7 | 116.6 O |
| 10 januari | 11:48 | 63 | 19:13 | 55 | 02:42 | 297 | 5.7 | 3.7 | 115.6 O |
| 11 januari | 11:44 | 63 | 19:09 | 55 | 02:38 | 297 | 5.7 | 3.7 | 114.5 O |
| 12 januari | 11:40 | 63 | 19:05 | 55 | 02:34 | 297 | 5.7 | 3.7 | 113.5 O |
| 13 januari | 11:36 | 63 | 19:01 | 55 | 02:30 | 297 | 5.7 | 3.7 | 112.5 O |
| 14 januari | 11:32 | 63 | 18:57 | 55 | 02:26 | 297 | 5.7 | 3.7 | 111.4 O |
| 15 januari | 11:28 | 63 | 18:53 | 55 | 02:22 | 297 | 5.7 | 3.7 | 110.4 O |
| 16 januari | 11:24 | 63 | 18:49 | 55 | 02:18 | 297 | 5.7 | 3.6 | 109.4 O |
| 17 januari | 11:20 | 63 | 18:45 | 55 | 02:14 | 297 | 5.7 | 3.6 | 108.4 O |
| 18 januari | 11:16 | 63 | 18:41 | 55 | 02:10 | 297 | 5.7 | 3.6 | 107.3 O |
| 19 januari | 11:12 | 63 | 18:37 | 55 | 02:06 | 297 | 5.7 | 3.6 | 106.3 O |
| 20 januari | 11:08 | 63 | 18:33 | 55 | 02:02 | 297 | 5.7 | 3.6 | 105.3 O |
| 21 januari | 11:04 | 63 | 18:29 | 55 | 01:58 | 297 | 5.7 | 3.6 | 104.3 O |
| 22 januari | 11:00 | 63 | 18:25 | 55 | 01:54 | 297 | 5.8 | 3.6 | 103.3 O |
| 23 januari | 10:56 | 63 | 18:21 | 55 | 01:51 | 297 | 5.8 | 3.6 | 102.2 O |
| 24 januari | 10:53 | 63 | 18:18 | 55 | 01:47 | 297 | 5.8 | 3.6 | 101.2 O |
| 25 januari | 10:49 | 63 | 18:14 | 55 | 01:43 | 297 | 5.8 | 3.6 | 100.2 O |
| 26 januari | 10:45 | 63 | 18:10 | 55 | 01:39 | 297 | 5.8 | 3.6 | 99.2 O |
| 27 januari | 10:41 | 63 | 18:06 | 55 | 01:35 | 297 | 5.8 | 3.6 | 98.2 O |
| 28 januari | 10:37 | 63 | 18:02 | 55 | 01:31 | 297 | 5.8 | 3.6 | 97.2 O |
| 29 januari | 10:33 | 63 | 17:58 | 55 | 01:27 | 297 | 5.8 | 3.6 | 96.2 O |
| 30 januari | 10:29 | 63 | 17:54 | 55 | 01:23 | 297 | 5.8 | 3.6 | 95.2 O |
| 31 januari | 10:25 | 63 | 17:50 | 55 | 01:19 | 297 | 5.8 | 3.6 | 94.1 O |
| 1 februari | 10:21 | 63 | 17:46 | 55 | 01:15 | 297 | 5.8 | 3.6 | 93.1 O |
| 2 februari | 10:17 | 63 | 17:42 | 55 | 01:11 | 297 | 5.8 | 3.6 | 92.1 O |
| 3 februari | 10:13 | 63 | 17:38 | 55 | 01:08 | 297 | 5.8 | 3.6 | 91.1 O |
| 4 februari | 10:09 | 63 | 17:35 | 55 | 01:04 | 297 | 5.8 | 3.6 | 90.1 O |
| 5 februari | 10:05 | 63 | 17:31 | 55 | 01:00 | 297 | 5.8 | 3.6 | 89.1 O |
| 6 februari | 10:02 | 63 | 17:27 | 55 | 00:56 | 297 | 5.8 | 3.6 | 88.1 O |
| 7 februari | 09:58 | 63 | 17:23 | 55 | 00:52 | 297 | 5.8 | 3.6 | 87.1 O |
| 8 februari | 09:54 | 63 | 17:19 | 55 | 00:48 | 297 | 5.8 | 3.6 | 86.1 O |
| 9 februari | 09:50 | 63 | 17:15 | 55 | 00:44 | 297 | 5.8 | 3.6 | 85.1 O |
| 10 februari | 09:46 | 63 | 17:11 | 55 | 00:41 | 297 | 5.8 | 3.6 | 84.1 O |
| 11 februari | 09:42 | 63 | 17:07 | 55 | 00:37 | 297 | 5.8 | 3.6 | 83.1 O |
| 12 februari | 09:38 | 63 | 17:04 | 55 | 00:33 | 297 | 5.8 | 3.6 | 82.1 O |
| 13 februari | 09:34 | 63 | 17:00 | 55 | 00:29 | 297 | 5.8 | 3.6 | 81.1 O |
| 14 februari | 09:30 | 63 | 16:56 | 55 | 00:25 | 297 | 5.8 | 3.6 | 80.1 O |
| 15 februari | 09:26 | 63 | 16:52 | 55 | 00:21 | 297 | 5.8 | 3.6 | 79.2 O |
| 16 februari | 09:23 | 63 | 16:48 | 55 | 00:18 | 297 | 5.8 | 3.6 | 78.2 O |
| 17 februari | 09:19 | 63 | 16:44 | 55 | 00:14 | 297 | 5.8 | 3.5 | 77.2 O |
| 18 februari | 09:15 | 63 | 16:40 | 55 | 00:10 | 297 | 5.8 | 3.5 | 76.2 O |
| 19 februari | 09:11 | 63 | 16:37 | 55 | 00:06 | 297 | 5.8 | 3.5 | 75.2 O |
| 20 februari | 09:07 | 63 | 16:33 | 55 | 00:02 | 297 | 5.8 | 3.5 | 74.2 O |
| 21 februari | 09:03 | 63 | 16:29 | 55 | 23:55 | 297 | 5.8 | 3.5 | 73.2 O |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 2023 | | | | | | | | | |
| 22 februari | 08:59 | 63 | 16:25 | 55 | 23:51 | 297 | 5.8 | 3.5 | 72.2 O |
| 23 februari | 08:55 | 63 | 16:21 | 55 | 23:47 | 297 | 5.8 | 3.5 | 71.3 O |
| 24 februari | 08:52 | 63 | 16:17 | 55 | 23:44 | 297 | 5.8 | 3.5 | 70.3 O |
| 25 februari | 08:48 | 63 | 16:14 | 55 | 23:40 | 297 | 5.8 | 3.5 | 69.3 O |
| 26 februari | 08:44 | 63 | 16:10 | 55 | 23:36 | 297 | 5.8 | 3.5 | 68.3 O |
| 27 februari | 08:40 | 63 | 16:06 | 55 | 23:32 | 297 | 5.8 | 3.5 | 67.4 O |
| 28 februari | 08:36 | 63 | 16:02 | 55 | 23:28 | 297 | 5.8 | 3.5 | 66.4 O |
| 1 maart | 08:32 | 63 | 15:58 | 55 | 23:25 | 297 | 5.8 | 3.5 | 65.4 O |
| 2 maart | 08:28 | 63 | 15:55 | 55 | 23:21 | 297 | 5.8 | 3.5 | 64.4 O |
| 3 maart | 08:24 | 63 | 15:51 | 55 | 23:17 | 297 | 5.8 | 3.5 | 63.5 O |
| 4 maart | 08:21 | 63 | 15:47 | 55 | 23:13 | 297 | 5.8 | 3.5 | 62.5 O |
| 5 maart | 08:17 | 63 | 15:43 | 55 | 23:10 | 297 | 5.8 | 3.5 | 61.5 O |
| 6 maart | 08:13 | 63 | 15:39 | 55 | 23:06 | 297 | 5.8 | 3.5 | 60.6 O |
| 7 maart | 08:09 | 63 | 15:36 | 55 | 23:02 | 297 | 5.8 | 3.5 | 59.6 O |
| 8 maart | 08:05 | 63 | 15:32 | 55 | 22:59 | 297 | 5.8 | 3.5 | 58.6 O |
| 9 maart | 08:01 | 63 | 15:28 | 55 | 22:55 | 297 | 5.8 | 3.5 | 57.7 O |
| 10 maart | 07:58 | 63 | 15:24 | 55 | 22:51 | 297 | 5.8 | 3.5 | 56.7 O |
| 11 maart | 07:54 | 63 | 15:20 | 55 | 22:47 | 297 | 5.8 | 3.5 | 55.7 O |
| 12 maart | 07:50 | 63 | 15:17 | 55 | 22:44 | 297 | 5.8 | 3.5 | 54.8 O |
| 13 maart | 07:46 | 63 | 15:13 | 56 | 22:40 | 297 | 5.8 | 3.5 | 53.8 O |
| 14 maart | 07:42 | 63 | 15:09 | 56 | 22:36 | 297 | 5.8 | 3.5 | 52.9 O |
| 15 maart | 07:38 | 63 | 15:05 | 56 | 22:33 | 297 | 5.8 | 3.5 | 51.9 O |
| 16 maart | 07:34 | 63 | 15:02 | 56 | 22:29 | 297 | 5.8 | 3.5 | 50.9 O |
| 17 maart | 07:31 | 63 | 14:58 | 56 | 22:25 | 297 | 5.8 | 3.5 | 50.0 O |
| 18 maart | 07:27 | 63 | 14:54 | 56 | 22:21 | 297 | 5.8 | 3.5 | 49.0 O |
| 19 maart | 07:23 | 63 | 14:50 | 56 | 22:18 | 297 | 5.8 | 3.5 | 48.1 O |
| 20 maart | 07:19 | 63 | 14:47 | 56 | 22:14 | 297 | 5.8 | 3.5 | 47.1 O |
| 21 maart | 07:15 | 63 | 14:43 | 56 | 22:10 | 297 | 5.8 | 3.5 | 46.2 O |
| 22 maart | 07:11 | 63 | 14:39 | 56 | 22:07 | 297 | 5.9 | 3.5 | 45.2 O |
| 23 maart | 07:08 | 63 | 14:35 | 56 | 22:03 | 297 | 5.9 | 3.5 | 44.3 O |
| 24 maart | 07:04 | 63 | 14:32 | 56 | 21:59 | 297 | 5.9 | 3.5 | 43.3 O |
| 25 maart | 07:00 | 63 | 14:28 | 56 | 21:56 | 297 | 5.9 | 3.5 | 42.4 O |
| 26 maart | 06:56 | 63 | 14:24 | 56 | 21:52 | 297 | 5.9 | 3.5 | 41.4 O |
| 27 maart | 06:52 | 63 | 14:20 | 56 | 21:48 | 297 | 5.9 | 3.5 | 40.5 O |
| 28 maart | 06:49 | 63 | 14:17 | 56 | 21:45 | 298 | 5.9 | 3.5 | 39.6 O |
| 29 maart | 06:45 | 62 | 14:13 | 56 | 21:41 | 298 | 5.9 | 3.5 | 38.6 O |
| 30 maart | 06:41 | 62 | 14:09 | 56 | 21:37 | 298 | 5.9 | 3.4 | 37.7 O |
| 31 maart | 06:37 | 62 | 14:05 | 56 | 21:34 | 298 | 5.9 | 3.4 | 36.7 O |
| 1 april | 06:33 | 62 | 14:02 | 56 | 21:30 | 298 | 5.9 | 3.4 | 35.8 O |
| 2 april | 06:29 | 62 | 13:58 | 56 | 21:26 | 298 | 5.9 | 3.4 | 34.9 O |
| 3 april | 06:26 | 62 | 13:54 | 56 | 21:23 | 298 | 5.9 | 3.4 | 33.9 O |
| 4 april | 06:22 | 62 | 13:50 | 56 | 21:19 | 298 | 5.9 | 3.4 | 33.0 O |
| 5 april | 06:18 | 62 | 13:47 | 56 | 21:15 | 298 | 5.9 | 3.4 | 32.0 O |
| 6 april | 06:14 | 62 | 13:43 | 56 | 21:12 | 298 | 5.9 | 3.4 | 31.1 O |
| 7 april | 06:10 | 62 | 13:39 | 56 | 21:08 | 298 | 5.9 | 3.4 | 30.2 O |
| 8 april | 06:06 | 62 | 13:36 | 56 | 21:05 | 298 | 5.9 | 3.4 | 29.3 O |
| 9 april | 06:03 | 62 | 13:32 | 56 | 21:01 | 298 | 5.9 | 3.4 | 28.3 O |
| 10 april | 05:59 | 62 | 13:28 | 56 | 20:57 | 298 | 5.9 | 3.4 | 27.4 O |
| 11 april | 05:55 | 62 | 13:24 | 56 | 20:54 | 298 | 5.9 | 3.4 | 26.5 O |
| 12 april | 05:51 | 62 | 13:21 | 56 | 20:50 | 298 | 5.9 | 3.4 | 25.5 O |
| 13 april | 05:47 | 62 | 13:17 | 56 | 20:46 | 298 | 5.9 | 3.4 | 24.6 O |
| 14 april | 05:44 | 62 | 13:13 | 56 | 20:43 | 298 | 5.9 | 3.4 | 23.7 O |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 2023 | | | | | | | | | |
| 15 april | 05:40 | 62 | 13:09 | 56 | 20:39 | 298 | 5.9 | 3.4 | 22.8 O |
| 16 april | 05:36 | 62 | 13:06 | 56 | 20:36 | 298 | 5.9 | 3.4 | 21.8 O |
| 17 april | 05:32 | 62 | 13:02 | 56 | 20:32 | 298 | 5.9 | 3.4 | 20.9 O |
| 18 april | 05:28 | 62 | 12:58 | 56 | 20:28 | 298 | 5.9 | 3.4 | 20.0 O |
| 19 april | 05:25 | 62 | 12:55 | 56 | 20:25 | 298 | 5.9 | 3.4 | 19.1 O |
| 20 april | 05:21 | 62 | 12:51 | 56 | 20:21 | 298 | 5.9 | 3.4 | 18.1 O |
| 21 april | 05:17 | 62 | 12:47 | 56 | 20:17 | 298 | 5.9 | 3.4 | 17.2 O |
| 22 april | 05:13 | 62 | 12:43 | 56 | 20:14 | 298 | 5.9 | 3.4 | 16.3 O |
| 23 april | 05:09 | 62 | 12:40 | 56 | 20:10 | 298 | 5.9 | 3.4 | 15.4 O |
| 24 april | 05:06 | 62 | 12:36 | 56 | 20:07 | 298 | 5.9 | 3.4 | 14.5 O |
| 25 april | 05:02 | 62 | 12:32 | 56 | 20:03 | 298 | 5.9 | 3.4 | 13.5 O |
| 26 april | 04:58 | 62 | 12:29 | 56 | 19:59 | 298 | 5.9 | 3.4 | 12.6 O |
| 27 april | 04:54 | 62 | 12:25 | 56 | 19:56 | 298 | 5.9 | 3.4 | 11.7 O |
| 28 april | 04:50 | 62 | 12:21 | 56 | 19:52 | 298 | 5.9 | 3.4 | 10.8 O |
| 29 april | 04:47 | 62 | 12:18 | 56 | 19:49 | 298 | 5.9 | 3.4 | 9.9 O |
| 30 april | 04:43 | 62 | 12:14 | 56 | 19:45 | 298 | 5.9 | 3.4 | 9.0 O |
| 1 mei | 04:39 | 62 | 12:10 | 56 | 19:41 | 298 | 5.9 | 3.4 | 8.1 O |
| 2 mei | 04:35 | 62 | 12:06 | 56 | 19:38 | 298 | 5.9 | 3.4 | 7.1 O |
| 3 mei | 04:31 | 62 | 12:03 | 56 | 19:34 | 298 | 5.9 | 3.4 | 6.2 O |
| 4 mei | 04:28 | 62 | 11:59 | 56 | 19:30 | 298 | 5.9 | 3.4 | 5.3 O |
| 5 mei | 04:24 | 62 | 11:55 | 56 | 19:27 | 299 | 5.9 | 3.4 | 4.4 O |
| 6 mei | 04:20 | 61 | 11:52 | 56 | 19:23 | 299 | 5.9 | 3.4 | 3.5 O |
| 7 mei | 04:16 | 61 | 11:48 | 56 | 19:20 | 299 | 5.9 | 3.4 | 2.6 O |
| 8 mei | 04:12 | 61 | 11:44 | 56 | 19:16 | 299 | 5.9 | 3.4 | 1.7 O |
| 9 mei | 04:09 | 61 | 11:41 | 56 | 19:12 | 299 | 5.9 | 3.4 | 0.8 O |
| 10 mei | 04:05 | 61 | 11:37 | 56 | 19:09 | 299 | 5.9 | 3.4 | 0.3 W |
| 11 mei | 04:01 | 61 | 11:33 | 56 | 19:05 | 299 | 5.9 | 3.4 | 1.1 W |
| 12 mei | 03:57 | 61 | 11:29 | 56 | 19:02 | 299 | 5.9 | 3.4 | 2.0 W |
| 13 mei | 03:54 | 61 | 11:26 | 56 | 18:58 | 299 | 5.9 | 3.4 | 2.9 W |
| 14 mei | 03:50 | 61 | 11:22 | 56 | 18:54 | 299 | 5.9 | 3.4 | 3.8 W |
| 15 mei | 03:46 | 61 | 11:18 | 56 | 18:51 | 299 | 5.9 | 3.4 | 4.7 W |
| 16 mei | 03:42 | 61 | 11:15 | 56 | 18:47 | 299 | 5.9 | 3.4 | 5.6 W |
| 17 mei | 03:38 | 61 | 11:11 | 56 | 18:44 | 299 | 5.9 | 3.4 | 6.5 W |
| 18 mei | 03:35 | 61 | 11:07 | 56 | 18:40 | 299 | 5.9 | 3.4 | 7.4 W |
| 19 mei | 03:31 | 61 | 11:04 | 57 | 18:36 | 299 | 5.9 | 3.4 | 8.3 W |
| 20 mei | 03:27 | 61 | 11:00 | 57 | 18:33 | 299 | 5.9 | 3.4 | 9.2 W |
| 21 mei | 03:23 | 61 | 10:56 | 57 | 18:29 | 299 | 5.9 | 3.4 | 10.1 W |
| 22 mei | 03:19 | 61 | 10:52 | 57 | 18:26 | 299 | 5.9 | 3.4 | 11.0 W |
| 23 mei | 03:16 | 61 | 10:49 | 57 | 18:22 | 299 | 5.9 | 3.4 | 11.9 W |
| 24 mei | 03:12 | 61 | 10:45 | 57 | 18:18 | 299 | 5.9 | 3.4 | 12.9 W |
| 25 mei | 03:08 | 61 | 10:41 | 57 | 18:15 | 299 | 5.9 | 3.4 | 13.8 W |
| 26 mei | 03:04 | 61 | 10:38 | 57 | 18:11 | 299 | 5.9 | 3.4 | 14.7 W |
| 27 mei | 03:00 | 61 | 10:34 | 57 | 18:07 | 299 | 5.9 | 3.4 | 15.6 W |
| 28 mei | 02:57 | 61 | 10:30 | 57 | 18:04 | 299 | 5.9 | 3.4 | 16.5 W |
| 29 mei | 02:53 | 61 | 10:27 | 57 | 18:00 | 299 | 5.9 | 3.4 | 17.4 W |
| 30 mei | 02:49 | 61 | 10:23 | 57 | 17:57 | 299 | 5.9 | 3.4 | 18.3 W |
| 31 mei | 02:45 | 61 | 10:19 | 57 | 17:53 | 299 | 5.9 | 3.4 | 19.2 W |
| 1 juni | 02:41 | 61 | 10:15 | 57 | 17:49 | 299 | 5.9 | 3.4 | 20.1 W |
| 2 juni | 02:38 | 61 | 10:12 | 57 | 17:46 | 299 | 5.9 | 3.4 | 21.0 W |
| 3 juni | 02:34 | 61 | 10:08 | 57 | 17:42 | 299 | 5.9 | 3.4 | 21.9 W |
| 4 juni | 02:30 | 61 | 10:04 | 57 | 17:38 | 299 | 5.9 | 3.4 | 22.8 W |
| 5 juni | 02:26 | 61 | 10:01 | 57 | 17:35 | 299 | 5.9 | 3.4 | 23.7 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|---------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 6 juni | 02:22 | 61 | 09:57 | 57 | 17:31 | 299 | 5.9 | 3.4 | 24.6 W |
| 7 juni | 02:19 | 61 | 09:53 | 57 | 17:28 | 299 | 5.9 | 3.4 | 25.5 W |
| 8 juni | 02:15 | 61 | 09:49 | 57 | 17:24 | 299 | 5.9 | 3.4 | 26.4 W |
| 9 juni | 02:11 | 61 | 09:46 | 57 | 17:20 | 299 | 5.9 | 3.4 | 27.3 W |
| 10 juni | 02:07 | 61 | 09:42 | 57 | 17:17 | 299 | 5.9 | 3.4 | 28.2 W |
| 11 juni | 02:03 | 61 | 09:38 | 57 | 17:13 | 299 | 5.9 | 3.4 | 29.1 W |
| 12 juni | 02:00 | 61 | 09:35 | 57 | 17:09 | 299 | 5.9 | 3.4 | 30.0 W |
| 13 juni | 01:56 | 60 | 09:31 | 57 | 17:06 | 300 | 5.9 | 3.4 | 30.9 W |
| 14 juni | 01:52 | 60 | 09:27 | 57 | 17:02 | 300 | 5.9 | 3.4 | 31.8 W |
| 15 juni | 01:48 | 60 | 09:23 | 57 | 16:58 | 300 | 5.9 | 3.4 | 32.7 W |
| 16 juni | 01:44 | 60 | 09:20 | 57 | 16:55 | 300 | 5.9 | 3.4 | 33.6 W |
| 17 juni | 01:41 | 60 | 09:16 | 57 | 16:51 | 300 | 5.9 | 3.4 | 34.5 W |
| 18 juni | 01:37 | 60 | 09:12 | 57 | 16:48 | 300 | 5.9 | 3.4 | 35.4 W |
| 19 juni | 01:33 | 60 | 09:08 | 57 | 16:44 | 300 | 5.9 | 3.4 | 36.4 W |
| 20 juni | 01:29 | 60 | 09:05 | 57 | 16:40 | 300 | 5.9 | 3.4 | 37.3 W |
| 21 juni | 01:25 | 60 | 09:01 | 57 | 16:37 | 300 | 5.9 | 3.4 | 38.2 W |
| 22 juni | 01:22 | 60 | 08:57 | 57 | 16:33 | 300 | 5.9 | 3.5 | 39.1 W |
| 23 juni | 01:18 | 60 | 08:53 | 57 | 16:29 | 300 | 5.9 | 3.5 | 40.0 W |
| 24 juni | 01:14 | 60 | 08:50 | 57 | 16:26 | 300 | 5.9 | 3.5 | 40.9 W |
| 25 juni | 01:10 | 60 | 08:46 | 57 | 16:22 | 300 | 5.9 | 3.5 | 41.8 W |
| 26 juni | 01:06 | 60 | 08:42 | 57 | 16:18 | 300 | 5.8 | 3.5 | 42.7 W |
| 27 juni | 01:02 | 60 | 08:38 | 57 | 16:14 | 300 | 5.8 | 3.5 | 43.6 W |
| 28 juni | 00:59 | 60 | 08:35 | 57 | 16:11 | 300 | 5.8 | 3.5 | 44.5 W |
| 29 juni | 00:55 | 60 | 08:31 | 57 | 16:07 | 300 | 5.8 | 3.5 | 45.4 W |
| 30 juni | 00:51 | 60 | 08:27 | 57 | 16:03 | 300 | 5.8 | 3.5 | 46.3 W |
| 1 juli | 00:47 | 60 | 08:23 | 57 | 16:00 | 300 | 5.8 | 3.5 | 47.2 W |
| 2 juli | 00:43 | 60 | 08:20 | 57 | 15:56 | 300 | 5.8 | 3.5 | 48.2 W |
| 3 juli | 00:40 | 60 | 08:16 | 57 | 15:52 | 300 | 5.8 | 3.5 | 49.1 W |
| 4 juli | 00:36 | 60 | 08:12 | 57 | 15:49 | 300 | 5.8 | 3.5 | 50.0 W |
| 5 juli | 00:32 | 60 | 08:08 | 57 | 15:45 | 300 | 5.8 | 3.5 | 50.9 W |
| 6 juli | 00:28 | 60 | 08:05 | 57 | 15:41 | 300 | 5.8 | 3.5 | 51.8 W |
| 7 juli | 00:24 | 60 | 08:01 | 57 | 15:38 | 300 | 5.8 | 3.5 | 52.7 W |
| 8 juli | 00:20 | 60 | 07:57 | 57 | 15:34 | 300 | 5.8 | 3.5 | 53.6 W |
| 9 juli | 00:17 | 60 | 07:53 | 57 | 15:30 | 300 | 5.8 | 3.5 | 54.5 W |
| 10 juli | 00:13 | 60 | 07:50 | 57 | 15:26 | 300 | 5.8 | 3.5 | 55.5 W |
| 11 juli | 00:09 | 60 | 07:46 | 57 | 15:23 | 300 | 5.8 | 3.5 | 56.4 W |
| 12 juli | 00:05 | 60 | 07:42 | 57 | 15:19 | 300 | 5.8 | 3.5 | 57.3 W |
| 13 juli | 00:01 | 60 | 07:38 | 57 | 15:15 | 300 | 5.8 | 3.5 | 58.2 W |
| 14 juli | 23:54 | 60 | 07:34 | 57 | 15:11 | 300 | 5.8 | 3.5 | 59.1 W |
| 15 juli | 23:50 | 60 | 07:31 | 57 | 15:08 | 300 | 5.8 | 3.5 | 60.0 W |
| 16 juli | 23:46 | 60 | 07:27 | 57 | 15:04 | 300 | 5.8 | 3.5 | 61.0 W |
| 17 juli | 23:42 | 60 | 07:23 | 57 | 15:00 | 300 | 5.8 | 3.5 | 61.9 W |
| 18 juli | 23:38 | 60 | 07:19 | 57 | 14:57 | 300 | 5.8 | 3.5 | 62.8 W |
| 19 juli | 23:34 | 60 | 07:15 | 57 | 14:53 | 300 | 5.8 | 3.5 | 63.7 W |
| 20 juli | 23:30 | 60 | 07:12 | 57 | 14:49 | 300 | 5.8 | 3.5 | 64.6 W |
| 21 juli | 23:27 | 60 | 07:08 | 57 | 14:45 | 300 | 5.8 | 3.5 | 65.6 W |
| 22 juli | 23:23 | 60 | 07:04 | 57 | 14:41 | 300 | 5.8 | 3.5 | 66.5 W |
| 23 juli | 23:19 | 60 | 07:00 | 57 | 14:38 | 300 | 5.8 | 3.5 | 67.4 W |
| 24 juli | 23:15 | 60 | 06:56 | 57 | 14:34 | 300 | 5.8 | 3.5 | 68.3 W |
| 25 juli | 23:11 | 60 | 06:53 | 57 | 14:30 | 300 | 5.8 | 3.5 | 69.3 W |
| 26 juli | 23:07 | 60 | 06:49 | 57 | 14:26 | 300 | 5.8 | 3.5 | 70.2 W |
| 27 juli | 23:03 | 60 | 06:45 | 57 | 14:23 | 300 | 5.8 | 3.5 | 71.1 W |

| 2023 | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|--------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 28 juli | 23:00 | 60 | 06:41 | 57 | 14:19 | 300 | 5.8 | 3.5 | 72.1 W |
| 29 juli | 22:56 | 60 | 06:37 | 57 | 14:15 | 300 | 5.8 | 3.5 | 73.0 W |
| 30 juli | 22:52 | 60 | 06:33 | 57 | 14:11 | 300 | 5.8 | 3.5 | 73.9 W |
| 31 juli | 22:48 | 60 | 06:30 | 57 | 14:07 | 300 | 5.8 | 3.5 | 74.8 W |
| 1 augustus | 22:44 | 60 | 06:26 | 57 | 14:04 | 300 | 5.8 | 3.5 | 75.8 W |
| 2 augustus | 22:40 | 60 | 06:22 | 57 | 14:00 | 300 | 5.8 | 3.6 | 76.7 W |
| 3 augustus | 22:36 | 60 | 06:18 | 57 | 13:56 | 300 | 5.8 | 3.6 | 77.6 W |
| 4 augustus | 22:32 | 60 | 06:14 | 57 | 13:52 | 300 | 5.8 | 3.6 | 78.6 W |
| 5 augustus | 22:29 | 60 | 06:10 | 57 | 13:48 | 300 | 5.8 | 3.6 | 79.5 W |
| 6 augustus | 22:25 | 60 | 06:07 | 57 | 13:45 | 300 | 5.8 | 3.6 | 80.5 W |
| 7 augustus | 22:21 | 60 | 06:03 | 57 | 13:41 | 300 | 5.8 | 3.6 | 81.4 W |
| 8 augustus | 22:17 | 60 | 05:59 | 57 | 13:37 | 300 | 5.8 | 3.6 | 82.3 W |
| 9 augustus | 22:13 | 60 | 05:55 | 57 | 13:33 | 300 | 5.8 | 3.6 | 83.3 W |
| 10 augustus | 22:09 | 60 | 05:51 | 57 | 13:29 | 300 | 5.8 | 3.6 | 84.2 W |
| 11 augustus | 22:05 | 60 | 05:47 | 57 | 13:25 | 300 | 5.8 | 3.6 | 85.2 W |
| 12 augustus | 22:01 | 60 | 05:43 | 57 | 13:21 | 300 | 5.8 | 3.6 | 86.1 W |
| 13 augustus | 21:57 | 60 | 05:39 | 57 | 13:18 | 300 | 5.8 | 3.6 | 87.1 W |
| 14 augustus | 21:54 | 60 | 05:36 | 57 | 13:14 | 300 | 5.8 | 3.6 | 88.0 W |
| 15 augustus | 21:50 | 60 | 05:32 | 57 | 13:10 | 300 | 5.8 | 3.6 | 88.9 W |
| 16 augustus | 21:46 | 60 | 05:28 | 57 | 13:06 | 300 | 5.8 | 3.6 | 89.9 W |
| 17 augustus | 21:42 | 60 | 05:24 | 57 | 13:02 | 300 | 5.8 | 3.6 | 90.8 W |
| 18 augustus | 21:38 | 60 | 05:20 | 57 | 12:58 | 300 | 5.8 | 3.6 | 91.8 W |
| 19 augustus | 21:34 | 60 | 05:16 | 57 | 12:54 | 300 | 5.8 | 3.6 | 92.8 W |
| 20 augustus | 21:30 | 60 | 05:12 | 57 | 12:50 | 300 | 5.8 | 3.6 | 93.7 W |
| 21 augustus | 21:26 | 60 | 05:08 | 57 | 12:47 | 300 | 5.8 | 3.6 | 94.7 W |
| 22 augustus | 21:22 | 60 | 05:04 | 57 | 12:43 | 300 | 5.8 | 3.6 | 95.6 W |
| 23 augustus | 21:18 | 60 | 05:01 | 57 | 12:39 | 300 | 5.8 | 3.6 | 96.6 W |
| 24 augustus | 21:14 | 60 | 04:57 | 57 | 12:35 | 300 | 5.7 | 3.6 | 97.5 W |
| 25 augustus | 21:11 | 60 | 04:53 | 57 | 12:31 | 300 | 5.7 | 3.6 | 98.5 W |
| 26 augustus | 21:07 | 60 | 04:49 | 57 | 12:27 | 300 | 5.7 | 3.6 | 99.5 W |
| 27 augustus | 21:03 | 60 | 04:45 | 57 | 12:23 | 300 | 5.7 | 3.6 | 100.4 W |
| 28 augustus | 20:59 | 60 | 04:41 | 57 | 12:19 | 300 | 5.7 | 3.6 | 101.4 W |
| 29 augustus | 20:55 | 60 | 04:37 | 57 | 12:15 | 300 | 5.7 | 3.6 | 102.3 W |
| 30 augustus | 20:51 | 60 | 04:33 | 57 | 12:11 | 300 | 5.7 | 3.6 | 103.3 W |
| 31 augustus | 20:47 | 60 | 04:29 | 57 | 12:07 | 300 | 5.7 | 3.6 | 104.3 W |
| 1 september | 20:43 | 60 | 04:25 | 57 | 12:03 | 300 | 5.7 | 3.6 | 105.3 W |
| 2 september | 20:39 | 60 | 04:21 | 57 | 11:59 | 300 | 5.7 | 3.6 | 106.2 W |
| 3 september | 20:35 | 60 | 04:17 | 57 | 11:56 | 300 | 5.7 | 3.6 | 107.2 W |
| 4 september | 20:31 | 60 | 04:13 | 57 | 11:52 | 300 | 5.7 | 3.7 | 108.2 W |
| 5 september | 20:27 | 60 | 04:09 | 57 | 11:48 | 300 | 5.7 | 3.7 | 109.1 W |
| 6 september | 20:23 | 60 | 04:05 | 57 | 11:44 | 300 | 5.7 | 3.7 | 110.1 W |
| 7 september | 20:19 | 60 | 04:01 | 57 | 11:40 | 300 | 5.7 | 3.7 | 111.1 W |
| 8 september | 20:15 | 60 | 03:58 | 57 | 11:36 | 300 | 5.7 | 3.7 | 112.1 W |
| 9 september | 20:11 | 60 | 03:54 | 57 | 11:32 | 300 | 5.7 | 3.7 | 113.0 W |
| 10 september | 20:07 | 60 | 03:50 | 57 | 11:28 | 300 | 5.7 | 3.7 | 114.0 W |
| 11 september | 20:04 | 60 | 03:46 | 57 | 11:24 | 300 | 5.7 | 3.7 | 115.0 W |
| 12 september | 20:00 | 60 | 03:42 | 57 | 11:20 | 300 | 5.7 | 3.7 | 116.0 W |
| 13 september | 19:56 | 60 | 03:38 | 57 | 11:16 | 300 | 5.7 | 3.7 | 117.0 W |
| 14 september | 19:52 | 60 | 03:34 | 57 | 11:12 | 300 | 5.7 | 3.7 | 118.0 W |
| 15 september | 19:48 | 60 | 03:30 | 57 | 11:08 | 300 | 5.7 | 3.7 | 119.0 W |
| 16 september | 19:44 | 60 | 03:26 | 57 | 11:04 | 300 | 5.7 | 3.7 | 119.9 W |
| 17 september | 19:40 | 60 | 03:22 | 57 | 11:00 | 300 | 5.7 | 3.7 | 120.9 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|--------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 2023 | | | | | | | | | |
| 18 september | 19:36 | 60 | 03:18 | 57 | 10:56 | 300 | 5.7 | 3.7 | 121.9 W |
| 19 september | 19:32 | 60 | 03:14 | 57 | 10:52 | 300 | 5.7 | 3.7 | 122.9 W |
| 20 september | 19:28 | 60 | 03:10 | 57 | 10:48 | 300 | 5.7 | 3.7 | 123.9 W |
| 21 september | 19:24 | 60 | 03:06 | 57 | 10:44 | 300 | 5.7 | 3.7 | 124.9 W |
| 22 september | 19:20 | 60 | 03:02 | 57 | 10:40 | 300 | 5.7 | 3.7 | 125.9 W |
| 23 september | 19:16 | 60 | 02:58 | 57 | 10:35 | 300 | 5.7 | 3.7 | 126.9 W |
| 24 september | 19:12 | 60 | 02:54 | 57 | 10:31 | 300 | 5.7 | 3.7 | 127.9 W |
| 25 september | 19:08 | 60 | 02:50 | 57 | 10:27 | 300 | 5.7 | 3.7 | 128.9 W |
| 26 september | 19:04 | 60 | 02:46 | 57 | 10:23 | 300 | 5.7 | 3.7 | 129.9 W |
| 27 september | 19:00 | 60 | 02:42 | 57 | 10:19 | 300 | 5.7 | 3.7 | 130.9 W |
| 28 september | 18:56 | 60 | 02:38 | 57 | 10:15 | 300 | 5.7 | 3.7 | 131.9 W |
| 29 september | 18:52 | 60 | 02:34 | 57 | 10:11 | 300 | 5.7 | 3.7 | 132.9 W |
| 30 september | 18:48 | 60 | 02:29 | 57 | 10:07 | 300 | 5.7 | 3.7 | 133.9 W |
| 1 oktober | 18:44 | 60 | 02:25 | 57 | 10:03 | 300 | 5.7 | 3.7 | 134.9 W |
| 2 oktober | 18:40 | 60 | 02:21 | 57 | 09:59 | 300 | 5.7 | 3.7 | 135.9 W |
| 3 oktober | 18:36 | 60 | 02:17 | 57 | 09:55 | 300 | 5.7 | 3.7 | 136.9 W |
| 4 oktober | 18:32 | 60 | 02:13 | 57 | 09:51 | 300 | 5.7 | 3.7 | 138.0 W |
| 5 oktober | 18:28 | 60 | 02:09 | 57 | 09:47 | 300 | 5.7 | 3.7 | 139.0 W |
| 6 oktober | 18:24 | 60 | 02:05 | 57 | 09:43 | 300 | 5.7 | 3.7 | 140.0 W |
| 7 oktober | 18:20 | 60 | 02:01 | 57 | 09:38 | 300 | 5.7 | 3.7 | 141.0 W |
| 8 oktober | 18:16 | 60 | 01:57 | 57 | 09:34 | 300 | 5.7 | 3.7 | 142.0 W |
| 9 oktober | 18:12 | 60 | 01:53 | 57 | 09:30 | 300 | 5.7 | 3.7 | 143.0 W |
| 10 oktober | 18:08 | 60 | 01:49 | 57 | 09:26 | 300 | 5.7 | 3.7 | 144.0 W |
| 11 oktober | 18:04 | 60 | 01:45 | 57 | 09:22 | 300 | 5.7 | 3.7 | 145.1 W |
| 12 oktober | 18:00 | 60 | 01:41 | 57 | 09:18 | 300 | 5.7 | 3.8 | 146.1 W |
| 13 oktober | 17:56 | 60 | 01:37 | 57 | 09:14 | 300 | 5.7 | 3.8 | 147.1 W |
| 14 oktober | 17:52 | 60 | 01:33 | 57 | 09:10 | 300 | 5.7 | 3.8 | 148.1 W |
| 15 oktober | 17:48 | 60 | 01:29 | 57 | 09:06 | 300 | 5.7 | 3.8 | 149.2 W |
| 16 oktober | 17:44 | 60 | 01:25 | 57 | 09:01 | 300 | 5.7 | 3.8 | 150.2 W |
| 17 oktober | 17:40 | 60 | 01:21 | 57 | 08:57 | 300 | 5.7 | 3.8 | 151.2 W |
| 18 oktober | 17:36 | 60 | 01:17 | 57 | 08:53 | 300 | 5.7 | 3.8 | 152.2 W |
| 19 oktober | 17:32 | 60 | 01:12 | 57 | 08:49 | 300 | 5.7 | 3.8 | 153.3 W |
| 20 oktober | 17:28 | 60 | 01:08 | 57 | 08:45 | 300 | 5.7 | 3.8 | 154.3 W |
| 21 oktober | 17:24 | 60 | 01:04 | 57 | 08:41 | 300 | 5.7 | 3.8 | 155.3 W |
| 22 oktober | 17:20 | 60 | 01:00 | 57 | 08:37 | 300 | 5.7 | 3.8 | 156.4 W |
| 23 oktober | 17:16 | 60 | 00:56 | 57 | 08:33 | 300 | 5.7 | 3.8 | 157.4 W |
| 24 oktober | 17:12 | 60 | 00:52 | 57 | 08:28 | 300 | 5.7 | 3.8 | 158.4 W |
| 25 oktober | 17:08 | 60 | 00:48 | 57 | 08:24 | 300 | 5.7 | 3.8 | 159.5 W |
| 26 oktober | 17:04 | 60 | 00:44 | 57 | 08:20 | 300 | 5.7 | 3.8 | 160.5 W |
| 27 oktober | 17:00 | 60 | 00:40 | 57 | 08:16 | 300 | 5.7 | 3.8 | 161.5 W |
| 28 oktober | 16:56 | 60 | 00:36 | 57 | 08:12 | 300 | 5.7 | 3.8 | 162.6 W |
| 29 oktober | 16:51 | 60 | 00:32 | 57 | 08:08 | 300 | 5.7 | 3.8 | 163.6 W |
| 30 oktober | 16:47 | 60 | 00:28 | 57 | 08:03 | 300 | 5.7 | 3.8 | 164.6 W |
| 31 oktober | 16:43 | 60 | 00:23 | 57 | 07:59 | 300 | 5.7 | 3.8 | 165.7 W |
| 1 november | 16:39 | 60 | 00:19 | 57 | 07:55 | 300 | 5.7 | 3.8 | 166.7 W |
| 2 november | 16:35 | 60 | 00:15 | 57 | 07:51 | 300 | 5.7 | 3.8 | 167.7 W |
| 3 november | 16:31 | 60 | 00:11 | 57 | 07:47 | 300 | 5.7 | 3.8 | 168.8 W |
| 4 november | 16:27 | 60 | 00:07 | 57 | 07:43 | 300 | 5.7 | 3.8 | 169.8 W |
| 5 november | 16:23 | 60 | 00:03 | 57 | 07:39 | 300 | 5.7 | 3.8 | 170.9 W |
| 6 november | 16:19 | 60 | 23:55 | 57 | 07:34 | 300 | 5.7 | 3.8 | 171.9 W |
| 7 november | 16:15 | 60 | 23:51 | 57 | 07:30 | 300 | 5.7 | 3.8 | 173.0 W |
| 8 november | 16:11 | 60 | 23:47 | 57 | 07:26 | 300 | 5.7 | 3.8 | 174.0 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|-------------|------------|------------|-----------|-------------|-----------|--------------|---------------|
| | UT (h:m) | Azimuth (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimuth (°) | | | |
| 2023 | | | | | | | | | |
| 9 november | 16:07 | 60 | 23:42 | 57 | 07:22 | 300 | 5.7 | 3.8 | 175.0 W |
| 10 november | 16:03 | 60 | 23:38 | 57 | 07:18 | 300 | 5.7 | 3.8 | 176.1 W |
| 11 november | 15:59 | 60 | 23:34 | 57 | 07:14 | 300 | 5.7 | 3.8 | 177.1 W |
| 12 november | 15:55 | 60 | 23:30 | 57 | 07:09 | 300 | 5.7 | 3.8 | 178.2 W |
| 13 november | 15:51 | 60 | 23:26 | 57 | 07:05 | 300 | 5.7 | 3.8 | 179.2 W |
| 14 november | 15:47 | 60 | 23:22 | 57 | 07:01 | 300 | 5.7 | 3.8 | 179.6 O |
| 15 november | 15:43 | 60 | 23:18 | 57 | 06:57 | 300 | 5.7 | 3.8 | 178.6 O |
| 16 november | 15:39 | 60 | 23:14 | 57 | 06:53 | 300 | 5.7 | 3.8 | 177.6 O |
| 17 november | 15:35 | 60 | 23:10 | 57 | 06:49 | 300 | 5.7 | 3.8 | 176.5 O |
| 18 november | 15:31 | 61 | 23:06 | 57 | 06:44 | 300 | 5.7 | 3.8 | 175.5 O |
| 19 november | 15:27 | 61 | 23:01 | 57 | 06:40 | 299 | 5.7 | 3.8 | 174.5 O |
| 20 november | 15:23 | 61 | 22:57 | 57 | 06:36 | 299 | 5.7 | 3.8 | 173.4 O |
| 21 november | 15:19 | 61 | 22:53 | 57 | 06:32 | 299 | 5.7 | 3.8 | 172.4 O |
| 22 november | 15:15 | 61 | 22:49 | 57 | 06:28 | 299 | 5.7 | 3.8 | 171.3 O |
| 23 november | 15:11 | 61 | 22:45 | 57 | 06:24 | 299 | 5.7 | 3.8 | 170.3 O |
| 24 november | 15:07 | 61 | 22:41 | 57 | 06:19 | 299 | 5.7 | 3.8 | 169.2 O |
| 25 november | 15:03 | 61 | 22:37 | 57 | 06:15 | 299 | 5.7 | 3.8 | 168.2 O |
| 26 november | 14:59 | 61 | 22:33 | 57 | 06:11 | 299 | 5.7 | 3.8 | 167.1 O |
| 27 november | 14:54 | 61 | 22:29 | 57 | 06:07 | 299 | 5.7 | 3.8 | 166.1 O |
| 28 november | 14:50 | 61 | 22:25 | 57 | 06:03 | 299 | 5.7 | 3.8 | 165.0 O |
| 29 november | 14:46 | 61 | 22:21 | 57 | 05:59 | 299 | 5.7 | 3.8 | 163.9 O |
| 30 november | 14:42 | 61 | 22:16 | 57 | 05:55 | 299 | 5.7 | 3.8 | 162.9 O |
| 1 december | 14:38 | 61 | 22:12 | 57 | 05:50 | 299 | 5.7 | 3.8 | 161.8 O |
| 2 december | 14:34 | 61 | 22:08 | 57 | 05:46 | 299 | 5.7 | 3.8 | 160.8 O |
| 3 december | 14:30 | 61 | 22:04 | 57 | 05:42 | 299 | 5.7 | 3.8 | 159.7 O |
| 4 december | 14:26 | 61 | 22:00 | 57 | 05:38 | 299 | 5.7 | 3.8 | 158.7 O |
| 5 december | 14:22 | 61 | 21:56 | 57 | 05:34 | 299 | 5.7 | 3.8 | 157.6 O |
| 6 december | 14:18 | 61 | 21:52 | 57 | 05:30 | 299 | 5.7 | 3.8 | 156.6 O |
| 7 december | 14:14 | 61 | 21:48 | 57 | 05:26 | 299 | 5.7 | 3.8 | 155.5 O |
| 8 december | 14:10 | 61 | 21:44 | 57 | 05:21 | 299 | 5.7 | 3.8 | 154.5 O |
| 9 december | 14:06 | 61 | 21:40 | 57 | 05:17 | 299 | 5.7 | 3.8 | 153.4 O |
| 10 december | 14:02 | 61 | 21:36 | 57 | 05:13 | 299 | 5.7 | 3.8 | 152.4 O |
| 11 december | 13:58 | 61 | 21:32 | 57 | 05:09 | 299 | 5.7 | 3.8 | 151.3 O |
| 12 december | 13:54 | 61 | 21:27 | 57 | 05:05 | 299 | 5.7 | 3.8 | 150.3 O |
| 13 december | 13:50 | 61 | 21:23 | 57 | 05:01 | 299 | 5.7 | 3.8 | 149.2 O |
| 14 december | 13:46 | 61 | 21:19 | 57 | 04:57 | 299 | 5.7 | 3.8 | 148.2 O |
| 15 december | 13:42 | 61 | 21:15 | 57 | 04:53 | 299 | 5.7 | 3.8 | 147.1 O |
| 16 december | 13:38 | 61 | 21:11 | 57 | 04:48 | 299 | 5.7 | 3.8 | 146.1 O |
| 17 december | 13:34 | 61 | 21:07 | 57 | 04:44 | 299 | 5.7 | 3.7 | 145.0 O |
| 18 december | 13:30 | 61 | 21:03 | 57 | 04:40 | 299 | 5.7 | 3.7 | 144.0 O |
| 19 december | 13:26 | 61 | 20:59 | 57 | 04:36 | 299 | 5.7 | 3.7 | 142.9 O |
| 20 december | 13:22 | 61 | 20:55 | 57 | 04:32 | 299 | 5.7 | 3.7 | 141.9 O |
| 21 december | 13:18 | 61 | 20:51 | 57 | 04:28 | 299 | 5.7 | 3.7 | 140.8 O |
| 22 december | 13:14 | 61 | 20:47 | 57 | 04:24 | 299 | 5.7 | 3.7 | 139.8 O |
| 23 december | 13:10 | 61 | 20:43 | 57 | 04:20 | 299 | 5.7 | 3.7 | 138.7 O |
| 24 december | 13:06 | 61 | 20:39 | 57 | 04:16 | 299 | 5.7 | 3.7 | 137.7 O |
| 25 december | 13:02 | 61 | 20:35 | 57 | 04:12 | 299 | 5.7 | 3.7 | 136.6 O |
| 26 december | 12:58 | 61 | 20:31 | 57 | 04:07 | 299 | 5.7 | 3.7 | 135.6 O |
| 27 december | 12:54 | 61 | 20:27 | 57 | 04:03 | 299 | 5.7 | 3.7 | 134.6 O |
| 28 december | 12:50 | 61 | 20:23 | 56 | 03:59 | 299 | 5.7 | 3.7 | 133.5 O |
| 29 december | 12:46 | 61 | 20:19 | 56 | 03:55 | 299 | 5.7 | 3.7 | 132.5 O |
| 30 december | 12:42 | 61 | 20:15 | 56 | 03:51 | 299 | 5.7 | 3.7 | 131.4 O |
| 31 december | 12:38 | 61 | 20:11 | 56 | 03:47 | 299 | 5.7 | 3.7 | 130.4 O |

Neptunus

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 1 januari | 10:51 | 96 | 16:34 | 35 | 22:17 | 264 | 7.8 | 2.3 | 72.6 O |
| 2 januari | 10:47 | 95 | 16:30 | 35 | 22:14 | 265 | 7.8 | 2.3 | 71.6 O |
| 3 januari | 10:43 | 95 | 16:26 | 35 | 22:10 | 265 | 7.8 | 2.3 | 70.6 O |
| 4 januari | 10:39 | 95 | 16:22 | 35 | 22:06 | 265 | 7.8 | 2.3 | 69.6 O |
| 5 januari | 10:35 | 95 | 16:18 | 35 | 22:02 | 265 | 7.8 | 2.3 | 68.6 O |
| 6 januari | 10:31 | 95 | 16:15 | 35 | 21:58 | 265 | 7.8 | 2.3 | 67.6 O |
| 7 januari | 10:27 | 95 | 16:11 | 35 | 21:54 | 265 | 7.8 | 2.3 | 66.6 O |
| 8 januari | 10:23 | 95 | 16:07 | 35 | 21:51 | 265 | 7.8 | 2.3 | 65.6 O |
| 9 januari | 10:19 | 95 | 16:03 | 35 | 21:47 | 265 | 7.8 | 2.3 | 64.6 O |
| 10 januari | 10:15 | 95 | 15:59 | 35 | 21:43 | 265 | 7.8 | 2.3 | 63.6 O |
| 11 januari | 10:11 | 95 | 15:55 | 35 | 21:39 | 265 | 7.8 | 2.2 | 62.6 O |
| 12 januari | 10:08 | 95 | 15:51 | 35 | 21:35 | 265 | 7.8 | 2.2 | 61.6 O |
| 13 januari | 10:04 | 95 | 15:48 | 35 | 21:32 | 265 | 7.8 | 2.2 | 60.6 O |
| 14 januari | 10:00 | 95 | 15:44 | 35 | 21:28 | 265 | 7.8 | 2.2 | 59.6 O |
| 15 januari | 09:56 | 95 | 15:40 | 35 | 21:24 | 265 | 7.8 | 2.2 | 58.6 O |
| 16 januari | 09:52 | 95 | 15:36 | 35 | 21:20 | 265 | 7.8 | 2.2 | 57.6 O |
| 17 januari | 09:48 | 95 | 15:32 | 35 | 21:16 | 265 | 7.8 | 2.2 | 56.6 O |
| 18 januari | 09:44 | 95 | 15:28 | 35 | 21:12 | 265 | 7.8 | 2.2 | 55.6 O |
| 19 januari | 09:40 | 95 | 15:25 | 35 | 21:09 | 265 | 7.8 | 2.2 | 54.6 O |
| 20 januari | 09:36 | 95 | 15:21 | 35 | 21:05 | 265 | 7.8 | 2.2 | 53.6 O |
| 21 januari | 09:33 | 95 | 15:17 | 35 | 21:01 | 265 | 7.8 | 2.2 | 52.6 O |
| 22 januari | 09:29 | 95 | 15:13 | 35 | 20:57 | 265 | 7.8 | 2.2 | 51.7 O |
| 23 januari | 09:25 | 95 | 15:09 | 35 | 20:54 | 265 | 7.8 | 2.2 | 50.7 O |
| 24 januari | 09:21 | 95 | 15:05 | 36 | 20:50 | 265 | 7.8 | 2.2 | 49.7 O |
| 25 januari | 09:17 | 95 | 15:02 | 36 | 20:46 | 265 | 7.8 | 2.2 | 48.7 O |
| 26 januari | 09:13 | 95 | 14:58 | 36 | 20:42 | 265 | 7.8 | 2.2 | 47.7 O |
| 27 januari | 09:09 | 95 | 14:54 | 36 | 20:39 | 265 | 7.8 | 2.2 | 46.7 O |
| 28 januari | 09:05 | 95 | 14:50 | 36 | 20:35 | 265 | 7.8 | 2.2 | 45.7 O |
| 29 januari | 09:01 | 95 | 14:46 | 36 | 20:31 | 265 | 7.8 | 2.2 | 44.7 O |
| 30 januari | 08:58 | 95 | 14:42 | 36 | 20:27 | 265 | 7.8 | 2.2 | 43.7 O |
| 31 januari | 08:54 | 95 | 14:39 | 36 | 20:23 | 265 | 7.8 | 2.2 | 42.8 O |
| 1 februari | 08:50 | 95 | 14:35 | 36 | 20:20 | 265 | 7.8 | 2.2 | 41.8 O |
| 2 februari | 08:46 | 95 | 14:31 | 36 | 20:16 | 265 | 7.8 | 2.2 | 40.8 O |
| 3 februari | 08:42 | 95 | 14:27 | 36 | 20:12 | 265 | 7.8 | 2.2 | 39.8 O |
| 4 februari | 08:38 | 95 | 14:23 | 36 | 20:08 | 265 | 7.8 | 2.2 | 38.8 O |
| 5 februari | 08:34 | 95 | 14:19 | 36 | 20:05 | 265 | 7.8 | 2.2 | 37.8 O |
| 6 februari | 08:30 | 95 | 14:16 | 36 | 20:01 | 265 | 7.8 | 2.2 | 36.9 O |
| 7 februari | 08:27 | 95 | 14:12 | 36 | 19:57 | 265 | 7.8 | 2.2 | 35.9 O |
| 8 februari | 08:23 | 95 | 14:08 | 36 | 19:53 | 265 | 7.8 | 2.2 | 34.9 O |
| 9 februari | 08:19 | 95 | 14:04 | 36 | 19:50 | 265 | 7.8 | 2.2 | 33.9 O |
| 10 februari | 08:15 | 95 | 14:00 | 36 | 19:46 | 265 | 7.8 | 2.2 | 32.9 O |
| 11 februari | 08:11 | 95 | 13:57 | 36 | 19:42 | 265 | 7.8 | 2.2 | 32.0 O |
| 12 februari | 08:07 | 95 | 13:53 | 36 | 19:38 | 265 | 7.8 | 2.2 | 31.0 O |
| 13 februari | 08:03 | 95 | 13:49 | 36 | 19:35 | 265 | 7.8 | 2.2 | 30.0 O |
| 14 februari | 07:59 | 95 | 13:45 | 36 | 19:31 | 265 | 7.8 | 2.2 | 29.0 O |
| 15 februari | 07:56 | 95 | 13:41 | 36 | 19:27 | 265 | 7.8 | 2.2 | 28.1 O |
| 16 februari | 07:52 | 95 | 13:38 | 36 | 19:23 | 265 | 7.8 | 2.2 | 27.1 O |
| 17 februari | 07:48 | 95 | 13:34 | 36 | 19:20 | 265 | 7.8 | 2.2 | 26.1 O |
| 18 februari | 07:44 | 95 | 13:30 | 36 | 19:16 | 265 | 7.8 | 2.2 | 25.1 O |
| 19 februari | 07:40 | 95 | 13:26 | 36 | 19:12 | 265 | 7.8 | 2.2 | 24.2 O |
| 20 februari | 07:36 | 95 | 13:22 | 36 | 19:08 | 265 | 7.8 | 2.2 | 23.2 O |
| 21 februari | 07:32 | 95 | 13:19 | 36 | 19:05 | 265 | 7.8 | 2.2 | 22.2 O |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 22 februari | 07:28 | 95 | 13:15 | 36 | 19:01 | 265 | 7.8 | 2.2 | 21.2 O |
| 23 februari | 07:25 | 95 | 13:11 | 36 | 18:57 | 265 | 7.8 | 2.2 | 20.3 O |
| 24 februari | 07:21 | 95 | 13:07 | 36 | 18:54 | 265 | 7.8 | 2.2 | 19.3 O |
| 25 februari | 07:17 | 95 | 13:03 | 36 | 18:50 | 266 | 7.8 | 2.2 | 18.3 O |
| 26 februari | 07:13 | 94 | 13:00 | 36 | 18:46 | 266 | 7.8 | 2.2 | 17.4 O |
| 27 februari | 07:09 | 94 | 12:56 | 36 | 18:42 | 266 | 7.8 | 2.2 | 16.4 O |
| 28 februari | 07:05 | 94 | 12:52 | 36 | 18:39 | 266 | 7.8 | 2.2 | 15.4 O |
| 1 maart | 07:01 | 94 | 12:48 | 36 | 18:35 | 266 | 7.8 | 2.2 | 14.5 O |
| 2 maart | 06:57 | 94 | 12:44 | 36 | 18:31 | 266 | 7.8 | 2.2 | 13.5 O |
| 3 maart | 06:54 | 94 | 12:41 | 36 | 18:28 | 266 | 7.8 | 2.2 | 12.5 O |
| 4 maart | 06:50 | 94 | 12:37 | 36 | 18:24 | 266 | 7.8 | 2.2 | 11.6 O |
| 5 maart | 06:46 | 94 | 12:33 | 36 | 18:20 | 266 | 7.8 | 2.2 | 10.6 O |
| 6 maart | 06:42 | 94 | 12:29 | 36 | 18:16 | 266 | 7.8 | 2.2 | 9.7 O |
| 7 maart | 06:38 | 94 | 12:25 | 36 | 18:13 | 266 | 7.8 | 2.2 | 8.7 O |
| 8 maart | 06:34 | 94 | 12:22 | 36 | 18:09 | 266 | 7.8 | 2.2 | 7.8 O |
| 9 maart | 06:30 | 94 | 12:18 | 36 | 18:05 | 266 | 7.8 | 2.2 | 6.8 O |
| 10 maart | 06:27 | 94 | 12:14 | 36 | 18:01 | 266 | 7.8 | 2.2 | 5.9 O |
| 11 maart | 06:23 | 94 | 12:10 | 36 | 17:58 | 266 | 7.8 | 2.2 | 4.9 O |
| 12 maart | 06:19 | 94 | 12:06 | 36 | 17:54 | 266 | 7.8 | 2.2 | 4.0 O |
| 13 maart | 06:15 | 94 | 12:03 | 36 | 17:50 | 266 | 7.8 | 2.2 | 3.1 O |
| 14 maart | 06:11 | 94 | 11:59 | 36 | 17:47 | 266 | 7.8 | 2.2 | 2.2 O |
| 15 maart | 06:07 | 94 | 11:55 | 36 | 17:43 | 266 | 7.8 | 2.2 | 1.5 O |
| 16 maart | 06:03 | 94 | 11:51 | 36 | 17:39 | 266 | 7.8 | 2.2 | 1.2 O |
| 17 maart | 05:59 | 94 | 11:47 | 36 | 17:35 | 266 | 7.8 | 2.2 | 1.5 W |
| 18 maart | 05:56 | 94 | 11:44 | 36 | 17:32 | 266 | 7.8 | 2.2 | 2.3 W |
| 19 maart | 05:52 | 94 | 11:40 | 36 | 17:28 | 266 | 7.8 | 2.2 | 3.1 W |
| 20 maart | 05:48 | 94 | 11:36 | 36 | 17:24 | 266 | 7.8 | 2.2 | 4.0 W |
| 21 maart | 05:44 | 94 | 11:32 | 36 | 17:21 | 266 | 7.8 | 2.2 | 4.9 W |
| 22 maart | 05:40 | 94 | 11:28 | 36 | 17:17 | 266 | 7.8 | 2.2 | 5.9 W |
| 23 maart | 05:36 | 94 | 11:25 | 36 | 17:13 | 266 | 7.8 | 2.2 | 6.8 W |
| 24 maart | 05:32 | 94 | 11:21 | 36 | 17:09 | 266 | 7.8 | 2.2 | 7.8 W |
| 25 maart | 05:29 | 94 | 11:17 | 36 | 17:06 | 266 | 7.8 | 2.2 | 8.7 W |
| 26 maart | 05:25 | 94 | 11:13 | 36 | 17:02 | 266 | 7.8 | 2.2 | 9.6 W |
| 27 maart | 05:21 | 94 | 11:09 | 36 | 16:58 | 266 | 7.8 | 2.2 | 10.6 W |
| 28 maart | 05:17 | 94 | 11:06 | 36 | 16:55 | 266 | 7.8 | 2.2 | 11.5 W |
| 29 maart | 05:13 | 94 | 11:02 | 36 | 16:51 | 266 | 7.8 | 2.2 | 12.5 W |
| 30 maart | 05:09 | 94 | 10:58 | 36 | 16:47 | 266 | 7.8 | 2.2 | 13.4 W |
| 31 maart | 05:05 | 94 | 10:54 | 36 | 16:43 | 266 | 7.8 | 2.2 | 14.4 W |
| 1 april | 05:01 | 94 | 10:51 | 36 | 16:40 | 266 | 7.8 | 2.2 | 15.3 W |
| 2 april | 04:58 | 94 | 10:47 | 36 | 16:36 | 266 | 7.8 | 2.2 | 16.3 W |
| 3 april | 04:54 | 94 | 10:43 | 36 | 16:32 | 266 | 7.8 | 2.2 | 17.2 W |
| 4 april | 04:50 | 94 | 10:39 | 36 | 16:28 | 266 | 7.8 | 2.2 | 18.2 W |
| 5 april | 04:46 | 94 | 10:35 | 36 | 16:25 | 266 | 7.8 | 2.2 | 19.1 W |
| 6 april | 04:42 | 94 | 10:32 | 37 | 16:21 | 266 | 7.8 | 2.2 | 20.1 W |
| 7 april | 04:38 | 94 | 10:28 | 37 | 16:17 | 266 | 7.8 | 2.2 | 21.0 W |
| 8 april | 04:34 | 94 | 10:24 | 37 | 16:13 | 266 | 7.8 | 2.2 | 22.0 W |
| 9 april | 04:31 | 94 | 10:20 | 37 | 16:10 | 266 | 7.8 | 2.2 | 22.9 W |
| 10 april | 04:27 | 93 | 10:16 | 37 | 16:06 | 267 | 7.8 | 2.2 | 23.9 W |
| 11 april | 04:23 | 93 | 10:13 | 37 | 16:02 | 267 | 7.8 | 2.2 | 24.8 W |
| 12 april | 04:19 | 93 | 10:09 | 37 | 15:59 | 267 | 7.8 | 2.2 | 25.7 W |
| 13 april | 04:15 | 93 | 10:05 | 37 | 15:55 | 267 | 7.8 | 2.2 | 26.7 W |
| 14 april | 04:11 | 93 | 10:01 | 37 | 15:51 | 267 | 7.8 | 2.2 | 27.6 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 15 april | 04:07 | 93 | 09:57 | 37 | 15:47 | 267 | 7.8 | 2.2 | 28.6 W |
| 16 april | 04:03 | 93 | 09:53 | 37 | 15:44 | 267 | 7.8 | 2.2 | 29.5 W |
| 17 april | 04:00 | 93 | 09:50 | 37 | 15:40 | 267 | 7.8 | 2.2 | 30.5 W |
| 18 april | 03:56 | 93 | 09:46 | 37 | 15:36 | 267 | 7.8 | 2.2 | 31.4 W |
| 19 april | 03:52 | 93 | 09:42 | 37 | 15:32 | 267 | 7.8 | 2.2 | 32.4 W |
| 20 april | 03:48 | 93 | 09:38 | 37 | 15:29 | 267 | 7.8 | 2.2 | 33.3 W |
| 21 april | 03:44 | 93 | 09:34 | 37 | 15:25 | 267 | 7.8 | 2.2 | 34.2 W |
| 22 april | 03:40 | 93 | 09:31 | 37 | 15:21 | 267 | 7.8 | 2.2 | 35.2 W |
| 23 april | 03:36 | 93 | 09:27 | 37 | 15:17 | 267 | 7.8 | 2.2 | 36.1 W |
| 24 april | 03:32 | 93 | 09:23 | 37 | 15:14 | 267 | 7.8 | 2.2 | 37.1 W |
| 25 april | 03:29 | 93 | 09:19 | 37 | 15:10 | 267 | 7.8 | 2.2 | 38.0 W |
| 26 april | 03:25 | 93 | 09:15 | 37 | 15:06 | 267 | 7.8 | 2.2 | 39.0 W |
| 27 april | 03:21 | 93 | 09:12 | 37 | 15:02 | 267 | 7.8 | 2.2 | 39.9 W |
| 28 april | 03:17 | 93 | 09:08 | 37 | 14:59 | 267 | 7.8 | 2.2 | 40.8 W |
| 29 april | 03:13 | 93 | 09:04 | 37 | 14:55 | 267 | 7.8 | 2.2 | 41.8 W |
| 30 april | 03:09 | 93 | 09:00 | 37 | 14:51 | 267 | 7.8 | 2.2 | 42.7 W |
| 1 mei | 03:05 | 93 | 08:56 | 37 | 14:47 | 267 | 7.8 | 2.2 | 43.7 W |
| 2 mei | 03:01 | 93 | 08:52 | 37 | 14:43 | 267 | 7.8 | 2.2 | 44.6 W |
| 3 mei | 02:58 | 93 | 08:49 | 37 | 14:40 | 267 | 7.8 | 2.2 | 45.5 W |
| 4 mei | 02:54 | 93 | 08:45 | 37 | 14:36 | 267 | 7.8 | 2.2 | 46.5 W |
| 5 mei | 02:50 | 93 | 08:41 | 37 | 14:32 | 267 | 7.8 | 2.2 | 47.4 W |
| 6 mei | 02:46 | 93 | 08:37 | 37 | 14:28 | 267 | 7.8 | 2.2 | 48.4 W |
| 7 mei | 02:42 | 93 | 08:33 | 37 | 14:25 | 267 | 7.8 | 2.2 | 49.3 W |
| 8 mei | 02:38 | 93 | 08:29 | 37 | 14:21 | 267 | 7.8 | 2.2 | 50.2 W |
| 9 mei | 02:34 | 93 | 08:26 | 37 | 14:17 | 267 | 7.8 | 2.2 | 51.2 W |
| 10 mei | 02:30 | 93 | 08:22 | 37 | 14:13 | 267 | 7.8 | 2.2 | 52.1 W |
| 11 mei | 02:27 | 93 | 08:18 | 37 | 14:09 | 267 | 7.8 | 2.2 | 53.1 W |
| 12 mei | 02:23 | 93 | 08:14 | 37 | 14:06 | 267 | 7.8 | 2.2 | 54.0 W |
| 13 mei | 02:19 | 93 | 08:10 | 37 | 14:02 | 267 | 7.8 | 2.2 | 55.0 W |
| 14 mei | 02:15 | 93 | 08:06 | 37 | 13:58 | 267 | 7.8 | 2.2 | 55.9 W |
| 15 mei | 02:11 | 93 | 08:03 | 37 | 13:54 | 267 | 7.8 | 2.2 | 56.8 W |
| 16 mei | 02:07 | 93 | 07:59 | 37 | 13:50 | 267 | 7.8 | 2.2 | 57.8 W |
| 17 mei | 02:03 | 93 | 07:55 | 37 | 13:47 | 267 | 7.8 | 2.2 | 58.7 W |
| 18 mei | 01:59 | 93 | 07:51 | 37 | 13:43 | 267 | 7.8 | 2.2 | 59.7 W |
| 19 mei | 01:55 | 93 | 07:47 | 37 | 13:39 | 267 | 7.8 | 2.2 | 60.6 W |
| 20 mei | 01:52 | 93 | 07:43 | 37 | 13:35 | 267 | 7.8 | 2.2 | 61.5 W |
| 21 mei | 01:48 | 93 | 07:40 | 37 | 13:31 | 267 | 7.8 | 2.2 | 62.5 W |
| 22 mei | 01:44 | 93 | 07:36 | 37 | 13:28 | 267 | 7.8 | 2.3 | 63.4 W |
| 23 mei | 01:40 | 93 | 07:32 | 37 | 13:24 | 267 | 7.8 | 2.3 | 64.4 W |
| 24 mei | 01:36 | 93 | 07:28 | 37 | 13:20 | 267 | 7.8 | 2.3 | 65.3 W |
| 25 mei | 01:32 | 93 | 07:24 | 37 | 13:16 | 267 | 7.8 | 2.3 | 66.2 W |
| 26 mei | 01:28 | 93 | 07:20 | 37 | 13:12 | 267 | 7.8 | 2.3 | 67.2 W |
| 27 mei | 01:24 | 93 | 07:16 | 37 | 13:08 | 267 | 7.8 | 2.3 | 68.1 W |
| 28 mei | 01:20 | 93 | 07:12 | 37 | 13:05 | 267 | 7.8 | 2.3 | 69.1 W |
| 29 mei | 01:16 | 93 | 07:09 | 37 | 13:01 | 267 | 7.8 | 2.3 | 70.0 W |
| 30 mei | 01:13 | 93 | 07:05 | 37 | 12:57 | 267 | 7.8 | 2.3 | 71.0 W |
| 31 mei | 01:09 | 93 | 07:01 | 37 | 12:53 | 267 | 7.8 | 2.3 | 71.9 W |
| 1 juni | 01:05 | 93 | 06:57 | 37 | 12:49 | 267 | 7.8 | 2.3 | 72.8 W |
| 2 juni | 01:01 | 93 | 06:53 | 37 | 12:45 | 267 | 7.8 | 2.3 | 73.8 W |
| 3 juni | 00:57 | 93 | 06:49 | 37 | 12:42 | 267 | 7.8 | 2.3 | 74.7 W |
| 4 juni | 00:53 | 93 | 06:45 | 37 | 12:38 | 267 | 7.8 | 2.3 | 75.7 W |
| 5 juni | 00:49 | 93 | 06:42 | 37 | 12:34 | 267 | 7.8 | 2.3 | 76.6 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 6 juni | 00:45 | 93 | 06:38 | 37 | 12:30 | 267 | 7.8 | 2.3 | 77.6 W |
| 7 juni | 00:41 | 93 | 06:34 | 37 | 12:26 | 267 | 7.8 | 2.3 | 78.5 W |
| 8 juni | 00:37 | 93 | 06:30 | 37 | 12:22 | 267 | 7.8 | 2.3 | 79.4 W |
| 9 juni | 00:34 | 93 | 06:26 | 37 | 12:18 | 267 | 7.8 | 2.3 | 80.4 W |
| 10 juni | 00:30 | 93 | 06:22 | 37 | 12:14 | 267 | 7.8 | 2.3 | 81.3 W |
| 11 juni | 00:26 | 93 | 06:18 | 37 | 12:11 | 267 | 7.8 | 2.3 | 82.3 W |
| 12 juni | 00:22 | 93 | 06:14 | 37 | 12:07 | 267 | 7.8 | 2.3 | 83.2 W |
| 13 juni | 00:18 | 93 | 06:10 | 37 | 12:03 | 267 | 7.8 | 2.3 | 84.2 W |
| 14 juni | 00:14 | 93 | 06:07 | 37 | 11:59 | 267 | 7.8 | 2.3 | 85.1 W |
| 15 juni | 00:10 | 93 | 06:03 | 37 | 11:55 | 267 | 7.8 | 2.3 | 86.1 W |
| 16 juni | 00:06 | 93 | 05:59 | 37 | 11:51 | 267 | 7.8 | 2.3 | 87.0 W |
| 17 juni | 00:02 | 93 | 05:55 | 37 | 11:47 | 267 | 7.8 | 2.3 | 88.0 W |
| 18 juni | 23:54 | 93 | 05:51 | 37 | 11:43 | 267 | 7.8 | 2.3 | 88.9 W |
| 19 juni | 23:51 | 93 | 05:47 | 37 | 11:40 | 267 | 7.8 | 2.3 | 89.8 W |
| 20 juni | 23:47 | 93 | 05:43 | 37 | 11:36 | 267 | 7.8 | 2.3 | 90.8 W |
| 21 juni | 23:43 | 93 | 05:39 | 37 | 11:32 | 267 | 7.8 | 2.3 | 91.7 W |
| 22 juni | 23:39 | 93 | 05:35 | 37 | 11:28 | 267 | 7.8 | 2.3 | 92.7 W |
| 23 juni | 23:35 | 93 | 05:31 | 37 | 11:24 | 267 | 7.8 | 2.3 | 93.6 W |
| 24 juni | 23:31 | 93 | 05:27 | 37 | 11:20 | 267 | 7.8 | 2.3 | 94.6 W |
| 25 juni | 23:27 | 93 | 05:24 | 37 | 11:16 | 267 | 7.8 | 2.3 | 95.5 W |
| 26 juni | 23:23 | 93 | 05:20 | 37 | 11:12 | 267 | 7.8 | 2.3 | 96.5 W |
| 27 juni | 23:19 | 93 | 05:16 | 37 | 11:08 | 267 | 7.8 | 2.3 | 97.4 W |
| 28 juni | 23:15 | 93 | 05:12 | 37 | 11:04 | 267 | 7.8 | 2.3 | 98.4 W |
| 29 juni | 23:11 | 93 | 05:08 | 37 | 11:00 | 267 | 7.8 | 2.3 | 99.3 W |
| 30 juni | 23:07 | 93 | 05:04 | 37 | 10:56 | 267 | 7.8 | 2.3 | 100.3 W |
| 1 juli | 23:03 | 93 | 05:00 | 37 | 10:53 | 267 | 7.8 | 2.3 | 101.3 W |
| 2 juli | 23:00 | 93 | 04:56 | 37 | 10:49 | 267 | 7.8 | 2.3 | 102.2 W |
| 3 juli | 22:56 | 93 | 04:52 | 37 | 10:45 | 267 | 7.7 | 2.3 | 103.2 W |
| 4 juli | 22:52 | 93 | 04:48 | 37 | 10:41 | 267 | 7.7 | 2.3 | 104.1 W |
| 5 juli | 22:48 | 93 | 04:44 | 37 | 10:37 | 267 | 7.7 | 2.3 | 105.1 W |
| 6 juli | 22:44 | 93 | 04:40 | 37 | 10:33 | 267 | 7.7 | 2.3 | 106.0 W |
| 7 juli | 22:40 | 93 | 04:36 | 37 | 10:29 | 267 | 7.7 | 2.3 | 107.0 W |
| 8 juli | 22:36 | 93 | 04:32 | 37 | 10:25 | 267 | 7.7 | 2.3 | 107.9 W |
| 9 juli | 22:32 | 93 | 04:28 | 37 | 10:21 | 267 | 7.7 | 2.3 | 108.9 W |
| 10 juli | 22:28 | 93 | 04:24 | 37 | 10:17 | 267 | 7.7 | 2.3 | 109.9 W |
| 11 juli | 22:24 | 93 | 04:21 | 37 | 10:13 | 267 | 7.7 | 2.3 | 110.8 W |
| 12 juli | 22:20 | 93 | 04:17 | 37 | 10:09 | 267 | 7.7 | 2.3 | 111.8 W |
| 13 juli | 22:16 | 93 | 04:13 | 37 | 10:05 | 267 | 7.7 | 2.3 | 112.7 W |
| 14 juli | 22:12 | 93 | 04:09 | 37 | 10:01 | 267 | 7.7 | 2.3 | 113.7 W |
| 15 juli | 22:08 | 93 | 04:05 | 37 | 09:57 | 267 | 7.7 | 2.3 | 114.7 W |
| 16 juli | 22:04 | 93 | 04:01 | 37 | 09:53 | 267 | 7.7 | 2.3 | 115.6 W |
| 17 juli | 22:00 | 93 | 03:57 | 37 | 09:49 | 267 | 7.7 | 2.3 | 116.6 W |
| 18 juli | 21:57 | 93 | 03:53 | 37 | 09:45 | 267 | 7.7 | 2.3 | 117.5 W |
| 19 juli | 21:53 | 93 | 03:49 | 37 | 09:41 | 267 | 7.7 | 2.3 | 118.5 W |
| 20 juli | 21:49 | 93 | 03:45 | 37 | 09:37 | 267 | 7.7 | 2.3 | 119.5 W |
| 21 juli | 21:45 | 93 | 03:41 | 37 | 09:33 | 267 | 7.7 | 2.3 | 120.4 W |
| 22 juli | 21:41 | 93 | 03:37 | 37 | 09:29 | 267 | 7.7 | 2.3 | 121.4 W |
| 23 juli | 21:37 | 93 | 03:33 | 37 | 09:25 | 267 | 7.7 | 2.3 | 122.4 W |
| 24 juli | 21:33 | 93 | 03:29 | 37 | 09:21 | 267 | 7.7 | 2.3 | 123.3 W |
| 25 juli | 21:29 | 93 | 03:25 | 37 | 09:17 | 267 | 7.7 | 2.3 | 124.3 W |
| 26 juli | 21:25 | 93 | 03:21 | 37 | 09:13 | 267 | 7.7 | 2.3 | 125.3 W |
| 27 juli | 21:21 | 93 | 03:17 | 37 | 09:09 | 267 | 7.7 | 2.3 | 126.2 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|--------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 28 juli | 21:17 | 93 | 03:13 | 37 | 09:05 | 267 | 7.7 | 2.3 | 127.2 W |
| 29 juli | 21:13 | 93 | 03:09 | 37 | 09:01 | 267 | 7.7 | 2.3 | 128.2 W |
| 30 juli | 21:09 | 93 | 03:05 | 37 | 08:57 | 267 | 7.7 | 2.3 | 129.1 W |
| 31 juli | 21:05 | 93 | 03:01 | 37 | 08:53 | 267 | 7.7 | 2.3 | 130.1 W |
| 1 augustus | 21:01 | 93 | 02:57 | 37 | 08:49 | 267 | 7.7 | 2.3 | 131.1 W |
| 2 augustus | 20:57 | 93 | 02:53 | 37 | 08:45 | 267 | 7.7 | 2.3 | 132.1 W |
| 3 augustus | 20:53 | 93 | 02:49 | 37 | 08:41 | 267 | 7.7 | 2.3 | 133.0 W |
| 4 augustus | 20:49 | 93 | 02:45 | 37 | 08:37 | 267 | 7.7 | 2.3 | 134.0 W |
| 5 augustus | 20:45 | 93 | 02:41 | 37 | 08:33 | 267 | 7.7 | 2.3 | 135.0 W |
| 6 augustus | 20:41 | 93 | 02:37 | 37 | 08:29 | 267 | 7.7 | 2.3 | 135.9 W |
| 7 augustus | 20:38 | 93 | 02:33 | 37 | 08:25 | 267 | 7.7 | 2.3 | 136.9 W |
| 8 augustus | 20:34 | 93 | 02:29 | 37 | 08:21 | 267 | 7.7 | 2.3 | 137.9 W |
| 9 augustus | 20:30 | 93 | 02:25 | 37 | 08:17 | 267 | 7.7 | 2.3 | 138.9 W |
| 10 augustus | 20:26 | 93 | 02:21 | 37 | 08:13 | 267 | 7.7 | 2.3 | 139.8 W |
| 11 augustus | 20:22 | 93 | 02:17 | 37 | 08:09 | 267 | 7.7 | 2.3 | 140.8 W |
| 12 augustus | 20:18 | 93 | 02:13 | 37 | 08:05 | 267 | 7.7 | 2.3 | 141.8 W |
| 13 augustus | 20:14 | 93 | 02:09 | 37 | 08:01 | 267 | 7.7 | 2.3 | 142.8 W |
| 14 augustus | 20:10 | 93 | 02:05 | 37 | 07:57 | 267 | 7.7 | 2.3 | 143.8 W |
| 15 augustus | 20:06 | 93 | 02:01 | 37 | 07:53 | 267 | 7.7 | 2.3 | 144.7 W |
| 16 augustus | 20:02 | 93 | 01:57 | 37 | 07:49 | 267 | 7.7 | 2.3 | 145.7 W |
| 17 augustus | 19:58 | 93 | 01:53 | 37 | 07:44 | 267 | 7.7 | 2.4 | 146.7 W |
| 18 augustus | 19:54 | 93 | 01:49 | 37 | 07:40 | 267 | 7.7 | 2.4 | 147.7 W |
| 19 augustus | 19:50 | 93 | 01:45 | 37 | 07:36 | 267 | 7.7 | 2.4 | 148.7 W |
| 20 augustus | 19:46 | 93 | 01:41 | 37 | 07:32 | 267 | 7.7 | 2.4 | 149.7 W |
| 21 augustus | 19:42 | 93 | 01:37 | 37 | 07:28 | 267 | 7.7 | 2.4 | 150.6 W |
| 22 augustus | 19:38 | 93 | 01:33 | 37 | 07:24 | 267 | 7.7 | 2.4 | 151.6 W |
| 23 augustus | 19:34 | 93 | 01:29 | 37 | 07:20 | 267 | 7.7 | 2.4 | 152.6 W |
| 24 augustus | 19:30 | 93 | 01:25 | 37 | 07:16 | 267 | 7.7 | 2.4 | 153.6 W |
| 25 augustus | 19:26 | 93 | 01:21 | 37 | 07:12 | 267 | 7.7 | 2.4 | 154.6 W |
| 26 augustus | 19:22 | 93 | 01:17 | 37 | 07:08 | 267 | 7.7 | 2.4 | 155.6 W |
| 27 augustus | 19:18 | 93 | 01:13 | 37 | 07:04 | 267 | 7.7 | 2.4 | 156.6 W |
| 28 augustus | 19:14 | 93 | 01:09 | 37 | 07:00 | 267 | 7.7 | 2.4 | 157.6 W |
| 29 augustus | 19:10 | 93 | 01:05 | 37 | 06:56 | 267 | 7.7 | 2.4 | 158.5 W |
| 30 augustus | 19:06 | 93 | 01:01 | 37 | 06:52 | 267 | 7.7 | 2.4 | 159.5 W |
| 31 augustus | 19:02 | 93 | 00:57 | 37 | 06:48 | 267 | 7.7 | 2.4 | 160.5 W |
| 1 september | 18:58 | 93 | 00:53 | 37 | 06:43 | 267 | 7.7 | 2.4 | 161.5 W |
| 2 september | 18:54 | 93 | 00:49 | 37 | 06:39 | 267 | 7.7 | 2.4 | 162.5 W |
| 3 september | 18:50 | 93 | 00:45 | 37 | 06:35 | 267 | 7.7 | 2.4 | 163.5 W |
| 4 september | 18:46 | 93 | 00:41 | 37 | 06:31 | 267 | 7.7 | 2.4 | 164.5 W |
| 5 september | 18:42 | 93 | 00:37 | 37 | 06:27 | 267 | 7.7 | 2.4 | 165.5 W |
| 6 september | 18:38 | 93 | 00:33 | 37 | 06:23 | 267 | 7.7 | 2.4 | 166.5 W |
| 7 september | 18:34 | 93 | 00:29 | 37 | 06:19 | 267 | 7.7 | 2.4 | 167.5 W |
| 8 september | 18:31 | 93 | 00:25 | 37 | 06:15 | 267 | 7.7 | 2.4 | 168.4 W |
| 9 september | 18:27 | 93 | 00:21 | 37 | 06:11 | 267 | 7.7 | 2.4 | 169.4 W |
| 10 september | 18:23 | 93 | 00:17 | 37 | 06:07 | 267 | 7.7 | 2.4 | 170.4 W |
| 11 september | 18:19 | 93 | 00:13 | 37 | 06:03 | 267 | 7.7 | 2.4 | 171.4 W |
| 12 september | 18:15 | 93 | 00:09 | 37 | 05:59 | 267 | 7.7 | 2.4 | 172.4 W |
| 13 september | 18:11 | 93 | 00:05 | 37 | 05:54 | 267 | 7.7 | 2.4 | 173.4 W |
| 14 september | 18:07 | 93 | 00:01 | 37 | 05:50 | 267 | 7.7 | 2.4 | 174.4 W |
| 15 september | 18:03 | 93 | 23:52 | 37 | 05:46 | 267 | 7.7 | 2.4 | 175.3 W |
| 16 september | 17:59 | 93 | 23:48 | 37 | 05:42 | 267 | 7.7 | 2.4 | 176.3 W |
| 17 september | 17:55 | 93 | 23:44 | 37 | 05:38 | 267 | 7.7 | 2.4 | 177.2 W |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|--------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 18 september | 17:51 | 93 | 23:40 | 37 | 05:34 | 267 | 7.7 | 2.4 | 178.0 W |
| 19 september | 17:47 | 94 | 23:36 | 37 | 05:30 | 266 | 7.7 | 2.4 | 178.6 W |
| 20 september | 17:43 | 94 | 23:32 | 37 | 05:26 | 266 | 7.7 | 2.4 | 178.6 W |
| 21 september | 17:39 | 94 | 23:28 | 37 | 05:22 | 266 | 7.7 | 2.4 | 178.0 O |
| 22 september | 17:35 | 94 | 23:24 | 37 | 05:18 | 266 | 7.7 | 2.4 | 177.2 O |
| 23 september | 17:31 | 94 | 23:20 | 37 | 05:14 | 266 | 7.7 | 2.4 | 176.2 O |
| 24 september | 17:27 | 94 | 23:16 | 36 | 05:09 | 266 | 7.7 | 2.4 | 175.3 O |
| 25 september | 17:23 | 94 | 23:12 | 36 | 05:05 | 266 | 7.7 | 2.4 | 174.3 O |
| 26 september | 17:19 | 94 | 23:08 | 36 | 05:01 | 266 | 7.7 | 2.4 | 173.3 O |
| 27 september | 17:15 | 94 | 23:04 | 36 | 04:57 | 266 | 7.7 | 2.4 | 172.3 O |
| 28 september | 17:11 | 94 | 23:00 | 36 | 04:53 | 266 | 7.7 | 2.4 | 171.3 O |
| 29 september | 17:07 | 94 | 22:56 | 36 | 04:49 | 266 | 7.7 | 2.4 | 170.3 O |
| 30 september | 17:03 | 94 | 22:52 | 36 | 04:45 | 266 | 7.7 | 2.4 | 169.3 O |
| 1 oktober | 16:59 | 94 | 22:48 | 36 | 04:41 | 266 | 7.7 | 2.4 | 168.3 O |
| 2 oktober | 16:55 | 94 | 22:44 | 36 | 04:37 | 266 | 7.7 | 2.4 | 167.3 O |
| 3 oktober | 16:51 | 94 | 22:40 | 36 | 04:33 | 266 | 7.7 | 2.4 | 166.3 O |
| 4 oktober | 16:47 | 94 | 22:36 | 36 | 04:29 | 266 | 7.7 | 2.4 | 165.3 O |
| 5 oktober | 16:43 | 94 | 22:32 | 36 | 04:25 | 266 | 7.7 | 2.4 | 164.3 O |
| 6 oktober | 16:39 | 94 | 22:28 | 36 | 04:21 | 266 | 7.7 | 2.4 | 163.3 O |
| 7 oktober | 16:35 | 94 | 22:24 | 36 | 04:16 | 266 | 7.7 | 2.4 | 162.3 O |
| 8 oktober | 16:31 | 94 | 22:20 | 36 | 04:12 | 266 | 7.7 | 2.4 | 161.3 O |
| 9 oktober | 16:27 | 94 | 22:16 | 36 | 04:08 | 266 | 7.7 | 2.4 | 160.3 O |
| 10 oktober | 16:23 | 94 | 22:12 | 36 | 04:04 | 266 | 7.7 | 2.4 | 159.3 O |
| 11 oktober | 16:19 | 94 | 22:08 | 36 | 04:00 | 266 | 7.7 | 2.4 | 158.2 O |
| 12 oktober | 16:15 | 94 | 22:04 | 36 | 03:56 | 266 | 7.7 | 2.4 | 157.2 O |
| 13 oktober | 16:11 | 94 | 22:00 | 36 | 03:52 | 266 | 7.7 | 2.4 | 156.2 O |
| 14 oktober | 16:07 | 94 | 21:56 | 36 | 03:48 | 266 | 7.7 | 2.4 | 155.2 O |
| 15 oktober | 16:03 | 94 | 21:52 | 36 | 03:44 | 266 | 7.7 | 2.4 | 154.2 O |
| 16 oktober | 15:59 | 94 | 21:48 | 36 | 03:40 | 266 | 7.7 | 2.4 | 153.2 O |
| 17 oktober | 15:55 | 94 | 21:44 | 36 | 03:36 | 266 | 7.7 | 2.4 | 152.2 O |
| 18 oktober | 15:51 | 94 | 21:40 | 36 | 03:32 | 266 | 7.7 | 2.4 | 151.1 O |
| 19 oktober | 15:47 | 94 | 21:36 | 36 | 03:28 | 266 | 7.7 | 2.4 | 150.1 O |
| 20 oktober | 15:43 | 94 | 21:31 | 36 | 03:24 | 266 | 7.7 | 2.4 | 149.1 O |
| 21 oktober | 15:40 | 94 | 21:27 | 36 | 03:19 | 266 | 7.7 | 2.4 | 148.1 O |
| 22 oktober | 15:36 | 94 | 21:23 | 36 | 03:15 | 266 | 7.7 | 2.3 | 147.1 O |
| 23 oktober | 15:32 | 94 | 21:19 | 36 | 03:11 | 266 | 7.7 | 2.3 | 146.1 O |
| 24 oktober | 15:28 | 94 | 21:15 | 36 | 03:07 | 266 | 7.7 | 2.3 | 145.1 O |
| 25 oktober | 15:24 | 94 | 21:11 | 36 | 03:03 | 266 | 7.7 | 2.3 | 144.0 O |
| 26 oktober | 15:20 | 94 | 21:07 | 36 | 02:59 | 266 | 7.7 | 2.3 | 143.0 O |
| 27 oktober | 15:16 | 94 | 21:03 | 36 | 02:55 | 266 | 7.7 | 2.3 | 142.0 O |
| 28 oktober | 15:12 | 94 | 20:59 | 36 | 02:51 | 266 | 7.7 | 2.3 | 141.0 O |
| 29 oktober | 15:08 | 94 | 20:55 | 36 | 02:47 | 266 | 7.7 | 2.3 | 140.0 O |
| 30 oktober | 15:04 | 94 | 20:51 | 36 | 02:43 | 266 | 7.7 | 2.3 | 139.0 O |
| 31 oktober | 15:00 | 94 | 20:47 | 36 | 02:39 | 266 | 7.7 | 2.3 | 137.9 O |
| 1 november | 14:56 | 94 | 20:43 | 36 | 02:35 | 266 | 7.7 | 2.3 | 136.9 O |
| 2 november | 14:52 | 94 | 20:39 | 36 | 02:31 | 266 | 7.7 | 2.3 | 135.9 O |
| 3 november | 14:48 | 94 | 20:35 | 36 | 02:27 | 266 | 7.7 | 2.3 | 134.9 O |
| 4 november | 14:44 | 94 | 20:31 | 36 | 02:23 | 266 | 7.7 | 2.3 | 133.9 O |
| 5 november | 14:40 | 94 | 20:27 | 36 | 02:19 | 266 | 7.7 | 2.3 | 132.8 O |
| 6 november | 14:36 | 94 | 20:23 | 36 | 02:15 | 266 | 7.7 | 2.3 | 131.8 O |
| 7 november | 14:32 | 94 | 20:19 | 36 | 02:11 | 266 | 7.7 | 2.3 | 130.8 O |
| 8 november | 14:28 | 94 | 20:15 | 36 | 02:07 | 266 | 7.7 | 2.3 | 129.8 O |

| | Opkomst | | Culminatie | | Ondergang | | Magnitude | Diameter (") | Elongatie (°) |
|-------------|----------|------------|------------|------------|-----------|------------|-----------|--------------|---------------|
| | UT (h:m) | Azimut (°) | UT (h:m) | Hoogte (°) | UT (h:m) | Azimut (°) | | | |
| 2023 | | | | | | | | | |
| 9 november | 14:24 | 94 | 20:11 | 36 | 02:03 | 266 | 7.7 | 2.3 | 128.8 O |
| 10 november | 14:20 | 94 | 20:07 | 36 | 01:59 | 266 | 7.7 | 2.3 | 127.8 O |
| 11 november | 14:16 | 94 | 20:04 | 36 | 01:55 | 266 | 7.7 | 2.3 | 126.7 O |
| 12 november | 14:12 | 94 | 20:00 | 36 | 01:51 | 266 | 7.7 | 2.3 | 125.7 O |
| 13 november | 14:08 | 94 | 19:56 | 36 | 01:47 | 266 | 7.7 | 2.3 | 124.7 O |
| 14 november | 14:04 | 94 | 19:52 | 36 | 01:43 | 266 | 7.7 | 2.3 | 123.7 O |
| 15 november | 14:00 | 94 | 19:48 | 36 | 01:39 | 266 | 7.7 | 2.3 | 122.7 O |
| 16 november | 13:56 | 94 | 19:44 | 36 | 01:35 | 266 | 7.7 | 2.3 | 121.6 O |
| 17 november | 13:53 | 94 | 19:40 | 36 | 01:31 | 266 | 7.7 | 2.3 | 120.6 O |
| 18 november | 13:49 | 94 | 19:36 | 36 | 01:27 | 266 | 7.7 | 2.3 | 119.6 O |
| 19 november | 13:45 | 94 | 19:32 | 36 | 01:23 | 266 | 7.7 | 2.3 | 118.6 O |
| 20 november | 13:41 | 94 | 19:28 | 36 | 01:19 | 266 | 7.7 | 2.3 | 117.6 O |
| 21 november | 13:37 | 94 | 19:24 | 36 | 01:15 | 266 | 7.7 | 2.3 | 116.5 O |
| 22 november | 13:33 | 94 | 19:20 | 36 | 01:11 | 266 | 7.7 | 2.3 | 115.5 O |
| 23 november | 13:29 | 94 | 19:16 | 36 | 01:07 | 266 | 7.7 | 2.3 | 114.5 O |
| 24 november | 13:25 | 94 | 19:12 | 36 | 01:03 | 266 | 7.7 | 2.3 | 113.5 O |
| 25 november | 13:21 | 94 | 19:08 | 36 | 00:59 | 266 | 7.7 | 2.3 | 112.5 O |
| 26 november | 13:17 | 94 | 19:04 | 36 | 00:55 | 266 | 7.7 | 2.3 | 111.5 O |
| 27 november | 13:13 | 94 | 19:00 | 36 | 00:51 | 266 | 7.7 | 2.3 | 110.4 O |
| 28 november | 13:09 | 94 | 18:56 | 36 | 00:47 | 266 | 7.7 | 2.3 | 109.4 O |
| 29 november | 13:05 | 94 | 18:52 | 36 | 00:43 | 266 | 7.7 | 2.3 | 108.4 O |
| 30 november | 13:01 | 94 | 18:48 | 36 | 00:39 | 266 | 7.7 | 2.3 | 107.4 O |
| 1 december | 12:57 | 94 | 18:44 | 36 | 00:35 | 266 | 7.7 | 2.3 | 106.4 O |
| 2 december | 12:53 | 94 | 18:40 | 36 | 00:31 | 266 | 7.7 | 2.3 | 105.4 O |
| 3 december | 12:49 | 94 | 18:36 | 36 | 00:27 | 266 | 7.7 | 2.3 | 104.4 O |
| 4 december | 12:45 | 94 | 18:32 | 36 | 00:23 | 266 | 7.7 | 2.3 | 103.3 O |
| 5 december | 12:42 | 94 | 18:29 | 36 | 00:19 | 266 | 7.7 | 2.3 | 102.3 O |
| 6 december | 12:38 | 94 | 18:25 | 36 | 00:16 | 266 | 7.7 | 2.3 | 101.3 O |
| 7 december | 12:34 | 94 | 18:21 | 36 | 00:12 | 266 | 7.7 | 2.3 | 100.3 O |
| 8 december | 12:30 | 94 | 18:17 | 36 | 00:08 | 266 | 7.7 | 2.3 | 99.3 O |
| 9 december | 12:26 | 94 | 18:13 | 36 | 00:04 | 266 | 7.7 | 2.3 | 98.3 O |
| 10 december | 12:22 | 94 | 18:09 | 36 | 23:56 | 266 | 7.7 | 2.3 | 97.2 O |
| 11 december | 12:18 | 94 | 18:05 | 36 | 23:52 | 266 | 7.7 | 2.3 | 96.2 O |
| 12 december | 12:14 | 94 | 18:01 | 36 | 23:48 | 266 | 7.8 | 2.3 | 95.2 O |
| 13 december | 12:10 | 94 | 17:57 | 36 | 23:44 | 266 | 7.8 | 2.3 | 94.2 O |
| 14 december | 12:06 | 94 | 17:53 | 36 | 23:40 | 266 | 7.8 | 2.3 | 93.2 O |
| 15 december | 12:02 | 94 | 17:49 | 36 | 23:36 | 266 | 7.8 | 2.3 | 92.2 O |
| 16 december | 11:58 | 94 | 17:45 | 36 | 23:32 | 266 | 7.8 | 2.3 | 91.2 O |
| 17 december | 11:54 | 94 | 17:41 | 36 | 23:29 | 266 | 7.8 | 2.3 | 90.2 O |
| 18 december | 11:50 | 94 | 17:38 | 36 | 23:25 | 266 | 7.8 | 2.3 | 89.1 O |
| 19 december | 11:46 | 94 | 17:34 | 36 | 23:21 | 266 | 7.8 | 2.3 | 88.1 O |
| 20 december | 11:43 | 94 | 17:30 | 36 | 23:17 | 266 | 7.8 | 2.3 | 87.1 O |
| 21 december | 11:39 | 94 | 17:26 | 36 | 23:13 | 266 | 7.8 | 2.3 | 86.1 O |
| 22 december | 11:35 | 94 | 17:22 | 36 | 23:09 | 266 | 7.8 | 2.3 | 85.1 O |
| 23 december | 11:31 | 94 | 17:18 | 36 | 23:05 | 266 | 7.8 | 2.3 | 84.1 O |
| 24 december | 11:27 | 94 | 17:14 | 36 | 23:01 | 266 | 7.8 | 2.3 | 83.1 O |
| 25 december | 11:23 | 94 | 17:10 | 36 | 22:58 | 266 | 7.8 | 2.3 | 82.1 O |
| 26 december | 11:19 | 94 | 17:06 | 36 | 22:54 | 266 | 7.8 | 2.3 | 81.1 O |
| 27 december | 11:15 | 94 | 17:02 | 36 | 22:50 | 266 | 7.8 | 2.3 | 80.1 O |
| 28 december | 11:11 | 94 | 16:59 | 36 | 22:46 | 266 | 7.8 | 2.3 | 79.1 O |
| 29 december | 11:07 | 94 | 16:55 | 36 | 22:42 | 266 | 7.8 | 2.3 | 78.1 O |
| 30 december | 11:03 | 94 | 16:51 | 36 | 22:38 | 266 | 7.8 | 2.3 | 77.1 O |
| 31 december | 10:59 | 94 | 16:47 | 36 | 22:34 | 266 | 7.8 | 2.3 | 76.0 O |