

Sun - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 12/31/2023 | 18:39:15.649 | -23:07:53.15 | 0.9833325 | 1951.80 |
| 01/01/2024 | 18:43:40.819 | -23:03:30.70 | 0.9833183 | 1951.83 |
| 01/02/2024 | 18:48:05.710 | -22:58:40.63 | 0.9833098 | 1951.85 |
| 01/03/2024 | 18:52:30.293 | -22:53:23.05 | 0.9833070 | 1951.85 |
| 01/04/2024 | 18:56:54.538 | -22:47:38.11 | 0.9833095 | 1951.85 |
| 01/05/2024 | 19:01:18.419 | -22:41:25.97 | 0.9833171 | 1951.83 |
| 01/06/2024 | 19:05:41.908 | -22:34:46.78 | 0.9833297 | 1951.81 |
| 01/07/2024 | 19:10:04.975 | -22:27:40.74 | 0.9833469 | 1951.77 |
| 01/08/2024 | 19:14:27.594 | -22:20:08.06 | 0.9833685 | 1951.73 |
| 01/09/2024 | 19:18:49.735 | -22:12:08.96 | 0.9833942 | 1951.68 |
| 01/10/2024 | 19:23:11.368 | -22:03:43.67 | 0.9834238 | 1951.62 |
| 01/11/2024 | 19:27:32.462 | -21:54:52.46 | 0.9834570 | 1951.55 |
| 01/12/2024 | 19:31:52.985 | -21:45:35.58 | 0.9834939 | 1951.48 |
| 01/13/2024 | 19:36:12.907 | -21:35:53.32 | 0.9835342 | 1951.40 |
| 01/14/2024 | 19:40:32.199 | -21:25:45.95 | 0.9835781 | 1951.31 |
| 01/15/2024 | 19:44:50.835 | -21:15:13.77 | 0.9836258 | 1951.22 |
| 01/16/2024 | 19:49:08.793 | -21:04:17.09 | 0.9836774 | 1951.12 |
| 01/17/2024 | 19:53:26.054 | -20:52:56.21 | 0.9837333 | 1951.00 |
| 01/18/2024 | 19:57:42.603 | -20:41:11.48 | 0.9837938 | 1950.88 |
| 01/19/2024 | 20:01:58.425 | -20:29:03.23 | 0.9838592 | 1950.76 |
| 01/20/2024 | 20:06:13.505 | -20:16:31.81 | 0.9839297 | 1950.62 |
| 01/21/2024 | 20:10:27.834 | -20:03:37.58 | 0.9840058 | 1950.46 |
| 01/22/2024 | 20:14:41.398 | -19:50:20.91 | 0.9840875 | 1950.30 |
| 01/23/2024 | 20:18:54.190 | -19:36:42.13 | 0.9841750 | 1950.13 |
| 01/24/2024 | 20:23:06.200 | -19:22:41.63 | 0.9842685 | 1949.94 |
| 01/25/2024 | 20:27:17.422 | -19:08:19.75 | 0.9843679 | 1949.75 |
| 01/26/2024 | 20:31:27.850 | -18:53:36.85 | 0.9844734 | 1949.54 |
| 01/27/2024 | 20:35:37.480 | -18:38:33.29 | 0.9845848 | 1949.32 |
| 01/28/2024 | 20:39:46.310 | -18:23:09.44 | 0.9847021 | 1949.09 |
| 01/29/2024 | 20:43:54.338 | -18:07:25.64 | 0.9848252 | 1948.84 |
| 01/30/2024 | 20:48:01.563 | -17:51:22.28 | 0.9849538 | 1948.59 |
| 01/31/2024 | 20:52:07.988 | -17:34:59.72 | 0.9850879 | 1948.32 |
| 02/01/2024 | 20:56:13.612 | -17:18:18.34 | 0.9852272 | 1948.05 |
| 02/02/2024 | 21:00:18.438 | -17:01:18.52 | 0.9853714 | 1947.76 |
| 02/03/2024 | 21:04:22.468 | -16:44:00.65 | 0.9855203 | 1947.47 |
| 02/04/2024 | 21:08:25.705 | -16:26:25.13 | 0.9856736 | 1947.16 |
| 02/05/2024 | 21:12:28.151 | -16:08:32.36 | 0.9858310 | 1946.85 |
| 02/06/2024 | 21:16:29.808 | -15:50:22.75 | 0.9859921 | 1946.54 |
| 02/07/2024 | 21:20:30.678 | -15:31:56.72 | 0.9861566 | 1946.21 |
| 02/08/2024 | 21:24:30.760 | -15:13:14.70 | 0.9863242 | 1945.88 |
| 02/09/2024 | 21:28:30.055 | -14:54:17.14 | 0.9864945 | 1945.54 |
| 02/10/2024 | 21:32:28.561 | -14:35:04.47 | 0.9866674 | 1945.20 |
| 02/11/2024 | 21:36:26.280 | -14:15:37.14 | 0.9868427 | 1944.86 |
| 02/12/2024 | 21:40:23.216 | -13:55:55.56 | 0.9870204 | 1944.51 |
| 02/13/2024 | 21:44:19.375 | -13:36:00.20 | 0.9872007 | 1944.15 |
| 02/14/2024 | 21:48:14.766 | -13:15:51.47 | 0.9873836 | 1943.79 |
| 02/15/2024 | 21:52:09.399 | -12:55:29.83 | 0.9875695 | 1943.43 |
| 02/16/2024 | 21:56:03.284 | -12:34:55.70 | 0.9877586 | 1943.05 |
| 02/17/2024 | 21:59:56.434 | -12:14:09.53 | 0.9879511 | 1942.68 |
| 02/18/2024 | 22:03:48.860 | -11:53:11.74 | 0.9881475 | 1942.29 |

Sun - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 02/19/2024 | 22:07:40.576 | -11:32:02.76 | 0.9883477 | 1941.90 |
| 02/20/2024 | 22:11:31.595 | -11:10:43.00 | 0.9885521 | 1941.49 |
| 02/21/2024 | 22:15:21.935 | -10:49:12.87 | 0.9887607 | 1941.09 |
| 02/22/2024 | 22:19:11.610 | -10:27:32.76 | 0.9889736 | 1940.67 |
| 02/23/2024 | 22:23:00.638 | -10:05:43.07 | 0.9891910 | 1940.24 |
| 02/24/2024 | 22:26:49.038 | -9:43:44.19 | 0.9894127 | 1939.81 |
| 02/25/2024 | 22:30:36.829 | -9:21:36.49 | 0.9896388 | 1939.36 |
| 02/26/2024 | 22:34:24.030 | -8:59:20.36 | 0.9898692 | 1938.91 |
| 02/27/2024 | 22:38:10.664 | -8:36:56.16 | 0.9901037 | 1938.45 |
| 02/28/2024 | 22:41:56.749 | -8:14:24.28 | 0.9903423 | 1937.99 |
| 02/29/2024 | 22:45:42.309 | -7:51:45.08 | 0.9905847 | 1937.51 |
| 03/01/2024 | 22:49:27.362 | -7:28:58.93 | 0.9908307 | 1937.03 |
| 03/02/2024 | 22:53:11.931 | -7:06:06.22 | 0.9910801 | 1936.54 |
| 03/03/2024 | 22:56:56.035 | -6:43:07.32 | 0.9913325 | 1936.05 |
| 03/04/2024 | 23:00:39.695 | -6:20:02.61 | 0.9915877 | 1935.55 |
| 03/05/2024 | 23:04:22.927 | -5:56:52.48 | 0.9918453 | 1935.05 |
| 03/06/2024 | 23:08:05.750 | -5:33:37.33 | 0.9921048 | 1934.54 |
| 03/07/2024 | 23:11:48.181 | -5:10:17.56 | 0.9923660 | 1934.03 |
| 03/08/2024 | 23:15:30.234 | -4:46:53.58 | 0.9926283 | 1933.52 |
| 03/09/2024 | 23:19:11.924 | -4:23:25.79 | 0.9928915 | 1933.01 |
| 03/10/2024 | 23:22:53.267 | -3:59:54.61 | 0.9931552 | 1932.50 |
| 03/11/2024 | 23:26:34.280 | -3:36:20.45 | 0.9934193 | 1931.98 |
| 03/12/2024 | 23:30:14.981 | -3:12:43.72 | 0.9936837 | 1931.47 |
| 03/13/2024 | 23:33:55.386 | -2:49:04.81 | 0.9939485 | 1930.95 |
| 03/14/2024 | 23:37:35.514 | -2:25:24.14 | 0.9942137 | 1930.44 |
| 03/15/2024 | 23:41:15.384 | -2:01:42.09 | 0.9944797 | 1929.92 |
| 03/16/2024 | 23:44:55.012 | -1:37:59.08 | 0.9947466 | 1929.40 |
| 03/17/2024 | 23:48:34.418 | -1:14:15.48 | 0.9950146 | 1928.88 |
| 03/18/2024 | 23:52:13.621 | -0:50:31.69 | 0.9952840 | 1928.36 |
| 03/19/2024 | 23:55:52.639 | -0:26:48.05 | 0.9955550 | 1927.84 |
| 03/20/2024 | 23:59:31.495 | -0:03:04.95 | 0.9958277 | 1927.31 |
| 03/21/2024 | 0:03:10.211 | 0:20:37.27 | 0.9961023 | 1926.78 |
| 03/22/2024 | 0:06:48.807 | 0:44:18.27 | 0.9963788 | 1926.24 |
| 03/23/2024 | 0:10:27.307 | 1:07:57.69 | 0.9966573 | 1925.71 |
| 03/24/2024 | 0:14:05.736 | 1:31:35.22 | 0.9969378 | 1925.16 |
| 03/25/2024 | 0:17:44.115 | 1:55:10.51 | 0.9972203 | 1924.62 |
| 03/26/2024 | 0:21:22.470 | 2:18:43.24 | 0.9975048 | 1924.07 |
| 03/27/2024 | 0:25:00.825 | 2:42:13.09 | 0.9977912 | 1923.52 |
| 03/28/2024 | 0:28:39.202 | 3:05:39.73 | 0.9980794 | 1922.96 |
| 03/29/2024 | 0:32:17.626 | 3:29:02.84 | 0.9983691 | 1922.40 |
| 03/30/2024 | 0:35:56.120 | 3:52:22.09 | 0.9986603 | 1921.84 |
| 03/31/2024 | 0:39:34.704 | 4:15:37.16 | 0.9989525 | 1921.28 |
| 04/01/2024 | 0:43:13.399 | 4:38:47.70 | 0.9992456 | 1920.72 |
| 04/02/2024 | 0:46:52.226 | 5:01:53.38 | 0.9995391 | 1920.15 |
| 04/03/2024 | 0:50:31.202 | 5:24:53.85 | 0.9998328 | 1919.59 |
| 04/04/2024 | 0:54:10.346 | 5:47:48.74 | 1.0001262 | 1919.03 |
| 04/05/2024 | 0:57:49.673 | 6:10:37.71 | 1.0004189 | 1918.47 |
| 04/06/2024 | 1:01:29.201 | 6:33:20.37 | 1.0007104 | 1917.91 |
| 04/07/2024 | 1:05:08.945 | 6:55:56.37 | 1.0010004 | 1917.35 |
| 04/08/2024 | 1:08:48.921 | 7:18:25.32 | 1.0012886 | 1916.80 |

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| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 04/09/2024 | 1:12:29.144 | 7:40:46.86 | 1.0015747 | 1916.25 |
| 04/10/2024 | 1:16:09.630 | 8:03:00.63 | 1.0018587 | 1915.71 |
| 04/11/2024 | 1:19:50.392 | 8:25:06.25 | 1.0021405 | 1915.17 |
| 04/12/2024 | 1:23:31.441 | 8:47:03.36 | 1.0024204 | 1914.63 |
| 04/13/2024 | 1:27:12.790 | 9:08:51.58 | 1.0026984 | 1914.10 |
| 04/14/2024 | 1:30:54.450 | 9:30:30.56 | 1.0029748 | 1913.58 |
| 04/15/2024 | 1:34:36.435 | 9:51:59.95 | 1.0032497 | 1913.05 |
| 04/16/2024 | 1:38:18.757 | 10:13:19.40 | 1.0035235 | 1912.53 |
| 04/17/2024 | 1:42:01.432 | 10:34:28.57 | 1.0037961 | 1912.01 |
| 04/18/2024 | 1:45:44.474 | 10:55:27.13 | 1.0040679 | 1911.49 |
| 04/19/2024 | 1:49:27.900 | 11:16:14.77 | 1.0043389 | 1910.98 |
| 04/20/2024 | 1:53:11.724 | 11:36:51.16 | 1.0046093 | 1910.46 |
| 04/21/2024 | 1:56:55.963 | 11:57:15.98 | 1.0048792 | 1909.95 |
| 04/22/2024 | 2:00:40.633 | 12:17:28.95 | 1.0051486 | 1909.44 |
| 04/23/2024 | 2:04:25.750 | 12:37:29.74 | 1.0054176 | 1908.93 |
| 04/24/2024 | 2:08:11.329 | 12:57:18.07 | 1.0056861 | 1908.42 |
| 04/25/2024 | 2:11:57.386 | 13:16:53.63 | 1.0059542 | 1907.91 |
| 04/26/2024 | 2:15:43.934 | 13:36:16.12 | 1.0062218 | 1907.40 |
| 04/27/2024 | 2:19:30.989 | 13:55:25.25 | 1.0064887 | 1906.90 |
| 04/28/2024 | 2:23:18.560 | 14:14:20.72 | 1.0067547 | 1906.39 |
| 04/29/2024 | 2:27:06.661 | 14:33:02.22 | 1.0070197 | 1905.89 |
| 04/30/2024 | 2:30:55.299 | 14:51:29.43 | 1.0072832 | 1905.39 |
| 05/01/2024 | 2:34:44.484 | 15:09:42.04 | 1.0075451 | 1904.90 |
| 05/02/2024 | 2:38:34.224 | 15:27:39.72 | 1.0078048 | 1904.41 |
| 05/03/2024 | 2:42:24.524 | 15:45:22.14 | 1.0080621 | 1903.92 |
| 05/04/2024 | 2:46:15.392 | 16:02:48.97 | 1.0083164 | 1903.44 |
| 05/05/2024 | 2:50:06.832 | 16:19:59.87 | 1.0085674 | 1902.97 |
| 05/06/2024 | 2:53:58.849 | 16:36:54.53 | 1.0088148 | 1902.50 |
| 05/07/2024 | 2:57:51.444 | 16:53:32.60 | 1.0090581 | 1902.04 |
| 05/08/2024 | 3:01:44.618 | 17:09:53.78 | 1.0092972 | 1901.59 |
| 05/09/2024 | 3:05:38.368 | 17:25:57.75 | 1.0095321 | 1901.15 |
| 05/10/2024 | 3:09:32.690 | 17:41:44.18 | 1.0097626 | 1900.71 |
| 05/11/2024 | 3:13:27.579 | 17:57:12.76 | 1.0099889 | 1900.29 |
| 05/12/2024 | 3:17:23.028 | 18:12:23.17 | 1.0102112 | 1899.87 |
| 05/13/2024 | 3:21:19.033 | 18:27:15.12 | 1.0104296 | 1899.46 |
| 05/14/2024 | 3:25:15.590 | 18:41:48.30 | 1.0106443 | 1899.06 |
| 05/15/2024 | 3:29:12.694 | 18:56:02.43 | 1.0108555 | 1898.66 |
| 05/16/2024 | 3:33:10.343 | 19:09:57.23 | 1.0110634 | 1898.27 |
| 05/17/2024 | 3:37:08.533 | 19:23:32.45 | 1.0112682 | 1897.88 |
| 05/18/2024 | 3:41:07.261 | 19:36:47.81 | 1.0114701 | 1897.50 |
| 05/19/2024 | 3:45:06.524 | 19:49:43.07 | 1.0116692 | 1897.13 |
| 05/20/2024 | 3:49:06.319 | 20:02:17.99 | 1.0118656 | 1896.76 |
| 05/21/2024 | 3:53:06.642 | 20:14:32.34 | 1.0120595 | 1896.40 |
| 05/22/2024 | 3:57:07.487 | 20:26:25.90 | 1.0122510 | 1896.04 |
| 05/23/2024 | 4:01:08.851 | 20:37:58.43 | 1.0124402 | 1895.69 |
| 05/24/2024 | 4:05:10.728 | 20:49:09.74 | 1.0126271 | 1895.34 |
| 05/25/2024 | 4:09:13.110 | 20:59:59.61 | 1.0128116 | 1894.99 |
| 05/26/2024 | 4:13:15.989 | 21:10:27.83 | 1.0129937 | 1894.65 |
| 05/27/2024 | 4:17:19.356 | 21:20:34.20 | 1.0131733 | 1894.31 |
| 05/28/2024 | 4:21:23.200 | 21:30:18.49 | 1.0133502 | 1893.98 |

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| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 05/29/2024 | 4:25:27.510 | 21:39:40.51 | 1.0135240 | 1893.66 |
| 05/30/2024 | 4:29:32.275 | 21:48:40.04 | 1.0136944 | 1893.34 |
| 05/31/2024 | 4:33:37.481 | 21:57:16.87 | 1.0138612 | 1893.03 |
| 06/01/2024 | 4:37:43.115 | 22:05:30.79 | 1.0140238 | 1892.73 |
| 06/02/2024 | 4:41:49.162 | 22:13:21.61 | 1.0141819 | 1892.43 |
| 06/03/2024 | 4:45:55.606 | 22:20:49.15 | 1.0143352 | 1892.15 |
| 06/04/2024 | 4:50:02.429 | 22:27:53.25 | 1.0144833 | 1891.87 |
| 06/05/2024 | 4:54:09.608 | 22:34:33.74 | 1.0146259 | 1891.60 |
| 06/06/2024 | 4:58:17.120 | 22:40:50.47 | 1.0147629 | 1891.35 |
| 06/07/2024 | 5:02:24.938 | 22:46:43.31 | 1.0148942 | 1891.10 |
| 06/08/2024 | 5:06:33.035 | 22:52:12.11 | 1.0150197 | 1890.87 |
| 06/09/2024 | 5:10:41.385 | 22:57:16.75 | 1.0151396 | 1890.65 |
| 06/10/2024 | 5:14:49.961 | 23:01:57.12 | 1.0152540 | 1890.43 |
| 06/11/2024 | 5:18:58.738 | 23:06:13.09 | 1.0153630 | 1890.23 |
| 06/12/2024 | 5:23:07.692 | 23:10:04.59 | 1.0154669 | 1890.04 |
| 06/13/2024 | 5:27:16.799 | 23:13:31.53 | 1.0155658 | 1889.85 |
| 06/14/2024 | 5:31:26.037 | 23:16:33.84 | 1.0156600 | 1889.68 |
| 06/15/2024 | 5:35:35.384 | 23:19:11.46 | 1.0157496 | 1889.51 |
| 06/16/2024 | 5:39:44.818 | 23:21:24.37 | 1.0158348 | 1889.35 |
| 06/17/2024 | 5:43:54.317 | 23:23:12.52 | 1.0159159 | 1889.20 |
| 06/18/2024 | 5:48:03.861 | 23:24:35.90 | 1.0159931 | 1889.06 |
| 06/19/2024 | 5:52:13.429 | 23:25:34.50 | 1.0160666 | 1888.92 |
| 06/20/2024 | 5:56:23.000 | 23:26:08.32 | 1.0161365 | 1888.79 |
| 06/21/2024 | 6:00:32.553 | 23:26:17.39 | 1.0162030 | 1888.67 |
| 06/22/2024 | 6:04:42.067 | 23:26:01.72 | 1.0162662 | 1888.55 |
| 06/23/2024 | 6:08:51.523 | 23:25:21.34 | 1.0163262 | 1888.44 |
| 06/24/2024 | 6:13:00.898 | 23:24:16.26 | 1.0163829 | 1888.33 |
| 06/25/2024 | 6:17:10.173 | 23:22:46.52 | 1.0164362 | 1888.23 |
| 06/26/2024 | 6:21:19.327 | 23:20:52.14 | 1.0164861 | 1888.14 |
| 06/27/2024 | 6:25:28.342 | 23:18:33.15 | 1.0165321 | 1888.06 |
| 06/28/2024 | 6:29:37.198 | 23:15:49.59 | 1.0165741 | 1887.98 |
| 06/29/2024 | 6:33:45.877 | 23:12:41.52 | 1.0166116 | 1887.91 |
| 06/30/2024 | 6:37:54.359 | 23:09:08.99 | 1.0166444 | 1887.85 |
| 07/01/2024 | 6:42:02.623 | 23:05:12.10 | 1.0166720 | 1887.80 |
| 07/02/2024 | 6:46:10.647 | 23:00:50.95 | 1.0166941 | 1887.75 |
| 07/03/2024 | 6:50:18.406 | 22:56:05.64 | 1.0167105 | 1887.72 |
| 07/04/2024 | 6:54:25.874 | 22:50:56.32 | 1.0167210 | 1887.71 |
| 07/05/2024 | 6:58:33.025 | 22:45:23.10 | 1.0167254 | 1887.70 |
| 07/06/2024 | 7:02:39.834 | 22:39:26.15 | 1.0167236 | 1887.70 |
| 07/07/2024 | 7:06:46.274 | 22:33:05.59 | 1.0167157 | 1887.71 |
| 07/08/2024 | 7:10:52.322 | 22:26:21.60 | 1.0167017 | 1887.74 |
| 07/09/2024 | 7:14:57.956 | 22:19:14.34 | 1.0166817 | 1887.78 |
| 07/10/2024 | 7:19:03.156 | 22:11:43.98 | 1.0166559 | 1887.83 |
| 07/11/2024 | 7:23:07.903 | 22:03:50.70 | 1.0166245 | 1887.88 |
| 07/12/2024 | 7:27:12.180 | 21:55:34.70 | 1.0165877 | 1887.95 |
| 07/13/2024 | 7:31:15.973 | 21:46:56.18 | 1.0165456 | 1888.03 |
| 07/14/2024 | 7:35:19.267 | 21:37:55.34 | 1.0164986 | 1888.12 |
| 07/15/2024 | 7:39:22.050 | 21:28:32.40 | 1.0164469 | 1888.21 |
| 07/16/2024 | 7:43:24.309 | 21:18:47.60 | 1.0163907 | 1888.32 |
| 07/17/2024 | 7:47:26.033 | 21:08:41.16 | 1.0163303 | 1888.43 |

Sun - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 07/18/2024 | 7:51:27.214 | 20:58:13.31 | 1.0162659 | 1888.55 |
| 07/19/2024 | 7:55:27.841 | 20:47:24.30 | 1.0161979 | 1888.68 |
| 07/20/2024 | 7:59:27.908 | 20:36:14.37 | 1.0161264 | 1888.81 |
| 07/21/2024 | 8:03:27.407 | 20:24:43.76 | 1.0160517 | 1888.95 |
| 07/22/2024 | 8:07:26.332 | 20:12:52.71 | 1.0159738 | 1889.09 |
| 07/23/2024 | 8:11:24.680 | 20:00:41.44 | 1.0158929 | 1889.24 |
| 07/24/2024 | 8:15:22.448 | 19:48:10.18 | 1.0158089 | 1889.40 |
| 07/25/2024 | 8:19:19.636 | 19:35:19.14 | 1.0157216 | 1889.56 |
| 07/26/2024 | 8:23:16.244 | 19:22:08.56 | 1.0156308 | 1889.73 |
| 07/27/2024 | 8:27:12.273 | 19:08:38.68 | 1.0155362 | 1889.91 |
| 07/28/2024 | 8:31:07.723 | 18:54:49.73 | 1.0154375 | 1890.09 |
| 07/29/2024 | 8:35:02.593 | 18:40:42.01 | 1.0153345 | 1890.28 |
| 07/30/2024 | 8:38:56.880 | 18:26:15.78 | 1.0152267 | 1890.48 |
| 07/31/2024 | 8:42:50.580 | 18:11:31.33 | 1.0151139 | 1890.69 |
| 08/01/2024 | 8:46:43.688 | 17:56:28.98 | 1.0149959 | 1890.91 |
| 08/02/2024 | 8:50:36.200 | 17:41:09.01 | 1.0148726 | 1891.14 |
| 08/03/2024 | 8:54:28.111 | 17:25:31.74 | 1.0147438 | 1891.38 |
| 08/04/2024 | 8:58:19.419 | 17:09:37.47 | 1.0146094 | 1891.63 |
| 08/05/2024 | 9:02:10.122 | 16:53:26.52 | 1.0144696 | 1891.89 |
| 08/06/2024 | 9:06:00.220 | 16:36:59.19 | 1.0143242 | 1892.17 |
| 08/07/2024 | 9:09:49.713 | 16:20:15.80 | 1.0141736 | 1892.45 |
| 08/08/2024 | 9:13:38.606 | 16:03:16.67 | 1.0140177 | 1892.74 |
| 08/09/2024 | 9:17:26.901 | 15:46:02.11 | 1.0138568 | 1893.04 |
| 08/10/2024 | 9:21:14.603 | 15:28:32.44 | 1.0136910 | 1893.35 |
| 08/11/2024 | 9:25:01.720 | 15:10:47.98 | 1.0135207 | 1893.67 |
| 08/12/2024 | 9:28:48.259 | 14:52:49.05 | 1.0133461 | 1893.99 |
| 08/13/2024 | 9:32:34.226 | 14:34:35.99 | 1.0131675 | 1894.33 |
| 08/14/2024 | 9:36:19.630 | 14:16:09.10 | 1.0129850 | 1894.67 |
| 08/15/2024 | 9:40:04.482 | 13:57:28.73 | 1.0127992 | 1895.01 |
| 08/16/2024 | 9:43:48.790 | 13:38:35.19 | 1.0126102 | 1895.37 |
| 08/17/2024 | 9:47:32.566 | 13:19:28.79 | 1.0124185 | 1895.73 |
| 08/18/2024 | 9:51:15.821 | 13:00:09.86 | 1.0122243 | 1896.09 |
| 08/19/2024 | 9:54:58.568 | 12:40:38.69 | 1.0120279 | 1896.46 |
| 08/20/2024 | 9:58:40.823 | 12:20:55.56 | 1.0118295 | 1896.83 |
| 08/21/2024 | 10:02:22.601 | 12:01:00.76 | 1.0116293 | 1897.21 |
| 08/22/2024 | 10:06:03.924 | 11:40:54.56 | 1.0114272 | 1897.59 |
| 08/23/2024 | 10:09:44.810 | 11:20:37.20 | 1.0112230 | 1897.97 |
| 08/24/2024 | 10:13:25.280 | 11:00:08.99 | 1.0110167 | 1898.36 |
| 08/25/2024 | 10:17:05.351 | 10:39:30.20 | 1.0108080 | 1898.75 |
| 08/26/2024 | 10:20:45.040 | 10:18:41.15 | 1.0105965 | 1899.14 |
| 08/27/2024 | 10:24:24.360 | 9:57:42.15 | 1.0103820 | 1899.55 |
| 08/28/2024 | 10:28:03.326 | 9:36:33.54 | 1.0101643 | 1899.96 |
| 08/29/2024 | 10:31:41.948 | 9:15:15.64 | 1.0099431 | 1900.37 |
| 08/30/2024 | 10:35:20.240 | 8:53:48.80 | 1.0097182 | 1900.80 |
| 08/31/2024 | 10:38:58.214 | 8:32:13.36 | 1.0094895 | 1901.23 |
| 09/01/2024 | 10:42:35.883 | 8:10:29.65 | 1.0092569 | 1901.67 |
| 09/02/2024 | 10:46:13.261 | 7:48:38.01 | 1.0090204 | 1902.11 |
| 09/03/2024 | 10:49:50.362 | 7:26:38.80 | 1.0087799 | 1902.56 |
| 09/04/2024 | 10:53:27.202 | 7:04:32.35 | 1.0085356 | 1903.03 |
| 09/05/2024 | 10:57:03.797 | 6:42:18.99 | 1.0082876 | 1903.49 |

Sun - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 09/06/2024 | 11:00:40.162 | 6:19:59.08 | 1.0080359 | 1903.97 |
| 09/07/2024 | 11:04:16.315 | 5:57:32.95 | 1.0077807 | 1904.45 |
| 09/08/2024 | 11:07:52.273 | 5:35:00.95 | 1.0075223 | 1904.94 |
| 09/09/2024 | 11:11:28.053 | 5:12:23.43 | 1.0072609 | 1905.43 |
| 09/10/2024 | 11:15:03.672 | 4:49:40.71 | 1.0069968 | 1905.93 |
| 09/11/2024 | 11:18:39.148 | 4:26:53.16 | 1.0067302 | 1906.44 |
| 09/12/2024 | 11:22:14.500 | 4:04:01.10 | 1.0064615 | 1906.95 |
| 09/13/2024 | 11:25:49.744 | 3:41:04.89 | 1.0061910 | 1907.46 |
| 09/14/2024 | 11:29:24.900 | 3:18:04.86 | 1.0059191 | 1907.98 |
| 09/15/2024 | 11:32:59.986 | 2:55:01.34 | 1.0056462 | 1908.49 |
| 09/16/2024 | 11:36:35.024 | 2:31:54.64 | 1.0053727 | 1909.01 |
| 09/17/2024 | 11:40:10.036 | 2:08:45.09 | 1.0050989 | 1909.53 |
| 09/18/2024 | 11:43:45.047 | 1:45:32.97 | 1.0048251 | 1910.05 |
| 09/19/2024 | 11:47:20.084 | 1:22:18.55 | 1.0045514 | 1910.57 |
| 09/20/2024 | 11:50:55.176 | 0:59:02.12 | 1.0042779 | 1911.09 |
| 09/21/2024 | 11:54:30.348 | 0:35:43.96 | 1.0040044 | 1911.61 |
| 09/22/2024 | 11:58:05.627 | 0:12:24.37 | 1.0037309 | 1912.13 |
| 09/23/2024 | 12:01:41.033 | -0:10:56.32 | 1.0034571 | 1912.66 |
| 09/24/2024 | 12:05:16.588 | -0:34:17.79 | 1.0031828 | 1913.18 |
| 09/25/2024 | 12:08:52.312 | -0:57:39.70 | 1.0029077 | 1913.70 |
| 09/26/2024 | 12:12:28.221 | -1:21:01.67 | 1.0026315 | 1914.23 |
| 09/27/2024 | 12:16:04.336 | -1:44:23.37 | 1.0023541 | 1914.76 |
| 09/28/2024 | 12:19:40.673 | -2:07:44.41 | 1.0020754 | 1915.29 |
| 09/29/2024 | 12:23:17.253 | -2:31:04.44 | 1.0017952 | 1915.83 |
| 09/30/2024 | 12:26:54.093 | -2:54:23.09 | 1.0015134 | 1916.37 |
| 10/01/2024 | 12:30:31.212 | -3:17:39.99 | 1.0012301 | 1916.91 |
| 10/02/2024 | 12:34:08.628 | -3:40:54.77 | 1.0009451 | 1917.46 |
| 10/03/2024 | 12:37:46.361 | -4:04:07.05 | 1.0006585 | 1918.01 |
| 10/04/2024 | 12:41:24.429 | -4:27:16.47 | 1.0003704 | 1918.56 |
| 10/05/2024 | 12:45:02.849 | -4:50:22.63 | 1.0000810 | 1919.11 |
| 10/06/2024 | 12:48:41.640 | -5:13:25.17 | 0.9997903 | 1919.67 |
| 10/07/2024 | 12:52:20.820 | -5:36:23.70 | 0.9994985 | 1920.23 |
| 10/08/2024 | 12:56:00.404 | -5:59:17.84 | 0.9992060 | 1920.79 |
| 10/09/2024 | 12:59:40.410 | -6:22:07.20 | 0.9989129 | 1921.36 |
| 10/10/2024 | 13:03:20.854 | -6:44:51.40 | 0.9986195 | 1921.92 |
| 10/11/2024 | 13:07:01.753 | -7:07:30.06 | 0.9983262 | 1922.49 |
| 10/12/2024 | 13:10:43.122 | -7:30:02.78 | 0.9980334 | 1923.05 |
| 10/13/2024 | 13:14:24.980 | -7:52:29.19 | 0.9977414 | 1923.61 |
| 10/14/2024 | 13:18:07.344 | -8:14:48.92 | 0.9974508 | 1924.17 |
| 10/15/2024 | 13:21:50.235 | -8:37:01.60 | 0.9971618 | 1924.73 |
| 10/16/2024 | 13:25:33.676 | -8:59:06.88 | 0.9968749 | 1925.29 |
| 10/17/2024 | 13:29:17.690 | -9:21:04.44 | 0.9965903 | 1925.84 |
| 10/18/2024 | 13:33:02.302 | -9:42:53.93 | 0.9963083 | 1926.38 |
| 10/19/2024 | 13:36:47.536 | -10:04:35.03 | 0.9960289 | 1926.92 |
| 10/20/2024 | 13:40:33.413 | -10:26:07.40 | 0.9957521 | 1927.46 |
| 10/21/2024 | 13:44:19.951 | -10:47:30.66 | 0.9954777 | 1927.99 |
| 10/22/2024 | 13:48:07.168 | -11:08:44.45 | 0.9952056 | 1928.51 |
| 10/23/2024 | 13:51:55.078 | -11:29:48.36 | 0.9949355 | 1929.04 |
| 10/24/2024 | 13:55:43.696 | -11:50:42.00 | 0.9946672 | 1929.56 |
| 10/25/2024 | 13:59:33.036 | -12:11:24.94 | 0.9944005 | 1930.08 |

Sun - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 10/26/2024 | 14:03:23.111 | -12:31:56.79 | 0.9941353 | 1930.59 |
| 10/27/2024 | 14:07:13.933 | -12:52:17.13 | 0.9938712 | 1931.10 |
| 10/28/2024 | 14:11:05.516 | -13:12:25.54 | 0.9936084 | 1931.61 |
| 10/29/2024 | 14:14:57.869 | -13:32:21.59 | 0.9933465 | 1932.12 |
| 10/30/2024 | 14:18:51.004 | -13:52:04.88 | 0.9930856 | 1932.63 |
| 10/31/2024 | 14:22:44.929 | -14:11:34.99 | 0.9928257 | 1933.14 |
| 11/01/2024 | 14:26:39.654 | -14:30:51.48 | 0.9925667 | 1933.64 |
| 11/02/2024 | 14:30:35.185 | -14:49:53.95 | 0.9923086 | 1934.15 |
| 11/03/2024 | 14:34:31.528 | -15:08:41.97 | 0.9920515 | 1934.65 |
| 11/04/2024 | 14:38:28.687 | -15:27:15.12 | 0.9917955 | 1935.15 |
| 11/05/2024 | 14:42:26.666 | -15:45:32.97 | 0.9915409 | 1935.64 |
| 11/06/2024 | 14:46:25.466 | -16:03:35.12 | 0.9912877 | 1936.14 |
| 11/07/2024 | 14:50:25.088 | -16:21:21.12 | 0.9910362 | 1936.63 |
| 11/08/2024 | 14:54:25.534 | -16:38:50.57 | 0.9907867 | 1937.12 |
| 11/09/2024 | 14:58:26.803 | -16:56:03.05 | 0.9905396 | 1937.60 |
| 11/10/2024 | 15:02:28.895 | -17:12:58.15 | 0.9902952 | 1938.08 |
| 11/11/2024 | 15:06:31.813 | -17:29:35.47 | 0.9900539 | 1938.55 |
| 11/12/2024 | 15:10:35.558 | -17:45:54.61 | 0.9898161 | 1939.02 |
| 11/13/2024 | 15:14:40.134 | -18:01:55.21 | 0.9895823 | 1939.47 |
| 11/14/2024 | 15:18:45.545 | -18:17:36.90 | 0.9893528 | 1939.92 |
| 11/15/2024 | 15:22:51.797 | -18:32:59.34 | 0.9891278 | 1940.36 |
| 11/16/2024 | 15:26:58.891 | -18:48:02.18 | 0.9889077 | 1940.80 |
| 11/17/2024 | 15:31:06.829 | -19:02:45.08 | 0.9886924 | 1941.22 |
| 11/18/2024 | 15:35:15.607 | -19:17:07.69 | 0.9884820 | 1941.63 |
| 11/19/2024 | 15:39:25.223 | -19:31:09.63 | 0.9882764 | 1942.04 |
| 11/20/2024 | 15:43:35.669 | -19:44:50.54 | 0.9880753 | 1942.43 |
| 11/21/2024 | 15:47:46.939 | -19:58:10.05 | 0.9878787 | 1942.82 |
| 11/22/2024 | 15:51:59.025 | -20:11:07.77 | 0.9876862 | 1943.20 |
| 11/23/2024 | 15:56:11.917 | -20:23:43.34 | 0.9874977 | 1943.57 |
| 11/24/2024 | 16:00:25.603 | -20:35:56.40 | 0.9873129 | 1943.93 |
| 11/25/2024 | 16:04:40.072 | -20:47:46.59 | 0.9871317 | 1944.29 |
| 11/26/2024 | 16:08:55.310 | -20:59:13.56 | 0.9869540 | 1944.64 |
| 11/27/2024 | 16:13:11.300 | -21:10:16.97 | 0.9867795 | 1944.98 |
| 11/28/2024 | 16:17:28.025 | -21:20:56.49 | 0.9866083 | 1945.32 |
| 11/29/2024 | 16:21:45.466 | -21:31:11.80 | 0.9864400 | 1945.65 |
| 11/30/2024 | 16:26:03.601 | -21:41:02.58 | 0.9862748 | 1945.98 |
| 12/01/2024 | 16:30:22.408 | -21:50:28.54 | 0.9861125 | 1946.30 |
| 12/02/2024 | 16:34:41.861 | -21:59:29.39 | 0.9859532 | 1946.61 |
| 12/03/2024 | 16:39:01.932 | -22:08:04.83 | 0.9857968 | 1946.92 |
| 12/04/2024 | 16:43:22.594 | -22:16:14.60 | 0.9856435 | 1947.22 |
| 12/05/2024 | 16:47:43.817 | -22:23:58.43 | 0.9854934 | 1947.52 |
| 12/06/2024 | 16:52:05.569 | -22:31:16.07 | 0.9853467 | 1947.81 |
| 12/07/2024 | 16:56:27.820 | -22:38:07.29 | 0.9852037 | 1948.09 |
| 12/08/2024 | 17:00:50.541 | -22:44:31.86 | 0.9850647 | 1948.37 |
| 12/09/2024 | 17:05:13.704 | -22:50:29.57 | 0.9849301 | 1948.63 |
| 12/10/2024 | 17:09:37.279 | -22:56:00.23 | 0.9848001 | 1948.89 |
| 12/11/2024 | 17:14:01.242 | -23:01:03.69 | 0.9846752 | 1949.14 |
| 12/12/2024 | 17:18:25.565 | -23:05:39.79 | 0.9845558 | 1949.37 |
| 12/13/2024 | 17:22:50.223 | -23:09:48.41 | 0.9844422 | 1949.60 |
| 12/14/2024 | 17:27:15.188 | -23:13:29.44 | 0.9843346 | 1949.81 |

Sun - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec |
|----------------|------------------------|--------------------|----------------|---------------------|
| 12/15/2024 | 17:31:40.434 | -23:16:42.78 | 0.9842332 | 1950.01 |
| 12/16/2024 | 17:36:05.930 | -23:19:28.32 | 0.9841382 | 1950.20 |
| 12/17/2024 | 17:40:31.646 | -23:21:45.98 | 0.9840494 | 1950.38 |
| 12/18/2024 | 17:44:57.552 | -23:23:35.66 | 0.9839669 | 1950.54 |
| 12/19/2024 | 17:49:23.618 | -23:24:57.27 | 0.9838904 | 1950.69 |
| 12/20/2024 | 17:53:49.812 | -23:25:50.74 | 0.9838198 | 1950.83 |
| 12/21/2024 | 17:58:16.104 | -23:26:16.02 | 0.9837548 | 1950.96 |
| 12/22/2024 | 18:02:42.461 | -23:26:13.06 | 0.9836952 | 1951.08 |
| 12/23/2024 | 18:07:08.852 | -23:25:41.84 | 0.9836408 | 1951.19 |
| 12/24/2024 | 18:11:35.244 | -23:24:42.35 | 0.9835915 | 1951.29 |
| 12/25/2024 | 18:16:01.602 | -23:23:14.61 | 0.9835469 | 1951.37 |
| 12/26/2024 | 18:20:27.892 | -23:21:18.63 | 0.9835069 | 1951.45 |
| 12/27/2024 | 18:24:54.080 | -23:18:54.47 | 0.9834712 | 1951.52 |
| 12/28/2024 | 18:29:20.131 | -23:16:02.20 | 0.9834398 | 1951.59 |
| 12/29/2024 | 18:33:46.007 | -23:12:41.89 | 0.9834124 | 1951.64 |
| 12/30/2024 | 18:38:11.671 | -23:08:53.63 | 0.9833889 | 1951.69 |
| 12/31/2024 | 18:42:37.086 | -23:04:37.56 | 0.9833692 | 1951.73 |
| 01/01/2025 | 18:47:02.214 | -22:59:53.79 | 0.9833532 | 1951.76 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 12/31/2023 | 9:51:25.240 | 17:28:22.14 | 403380.916 | 54.35887 | 1777.51 | 85.3 |
| 01/01/2024 | 10:36:26.317 | 12:37:53.65 | 404633.750 | 54.19055 | 1772.01 | 78.0 |
| 01/02/2024 | 11:19:28.084 | 7:21:58.61 | 404796.305 | 54.16879 | 1771.29 | 69.8 |
| 01/03/2024 | 12:01:29.126 | 1:50:46.86 | 403740.118 | 54.31051 | 1775.93 | 60.9 |
| 01/04/2024 | 12:43:33.134 | -3:46:38.30 | 401419.273 | 54.62454 | 1786.20 | 51.5 |
| 01/05/2024 | 13:26:47.445 | -9:21:04.85 | 397886.222 | 55.10962 | 1802.06 | 42.0 |
| 01/06/2024 | 14:12:22.054 | -14:41:43.23 | 393301.448 | 55.75209 | 1823.06 | 32.4 |
| 01/07/2024 | 15:01:25.834 | -19:34:33.89 | 387934.806 | 56.52343 | 1848.28 | 23.4 |
| 01/08/2024 | 15:54:55.742 | -23:41:17.44 | 382155.377 | 57.37833 | 1876.23 | 15.1 |
| 01/09/2024 | 16:53:15.396 | -26:39:27.83 | 376406.295 | 58.25479 | 1904.89 | 8.3 |
| 01/10/2024 | 17:55:47.277 | -28:05:37.34 | 371162.267 | 59.07793 | 1931.80 | 3.2 |
| 01/11/2024 | 19:00:39.845 | -27:41:49.13 | 366871.574 | 59.76893 | 1954.40 | 0.5 |
| 01/12/2024 | 20:05:16.797 | -25:22:59.67 | 363891.134 | 60.25852 | 1970.40 | 0.5 |
| 01/13/2024 | 21:07:20.939 | -21:19:57.77 | 362430.120 | 60.50146 | 1978.35 | 3.4 |
| 01/14/2024 | 22:05:43.591 | -15:55:41.35 | 362519.763 | 60.48650 | 1977.86 | 9.0 |
| 01/15/2024 | 23:00:28.664 | -9:38:14.82 | 364020.481 | 60.23711 | 1969.70 | 16.8 |
| 01/16/2024 | 23:52:27.716 | -2:55:05.25 | 366664.236 | 59.80274 | 1955.50 | 26.5 |
| 01/17/2024 | 0:42:53.257 | 3:49:37.49 | 370117.355 | 59.24473 | 1937.26 | 37.2 |
| 01/18/2024 | 1:33:01.030 | 10:15:16.04 | 374044.198 | 58.62270 | 1916.92 | 48.3 |
| 01/19/2024 | 2:23:59.018 | 16:03:52.19 | 378155.929 | 57.98523 | 1896.08 | 59.3 |
| 01/20/2024 | 3:16:37.887 | 20:59:09.83 | 382236.984 | 57.36608 | 1875.83 | 69.6 |
| 01/21/2024 | 4:11:19.897 | 24:46:22.15 | 386149.512 | 56.78478 | 1856.83 | 78.7 |
| 01/22/2024 | 5:07:48.345 | 27:13:12.41 | 389820.755 | 56.24995 | 1839.34 | 86.5 |
| 01/23/2024 | 6:05:05.455 | 28:11:58.90 | 393220.100 | 55.76363 | 1823.44 | 92.6 |
| 01/24/2024 | 7:01:46.848 | 27:41:39.21 | 396332.518 | 55.32568 | 1809.12 | 96.9 |
| 01/25/2024 | 7:56:29.755 | 25:48:22.84 | 399134.133 | 54.93730 | 1796.42 | 99.3 |
| 01/26/2024 | 8:48:19.278 | 22:43:55.06 | 401574.273 | 54.60345 | 1785.51 | 99.8 |
| 01/27/2024 | 9:36:58.851 | 18:42:46.78 | 403566.610 | 54.33386 | 1776.69 | 98.4 |
| 01/28/2024 | 10:22:45.204 | 13:59:38.53 | 404990.225 | 54.14285 | 1770.45 | 95.3 |
| 01/29/2024 | 11:06:17.107 | 8:47:48.94 | 405699.806 | 54.04814 | 1767.35 | 90.6 |
| 01/30/2024 | 11:48:25.555 | 3:18:49.14 | 405543.080 | 54.06903 | 1768.03 | 84.5 |
| 01/31/2024 | 12:30:08.021 | -2:17:16.55 | 404383.053 | 54.22415 | 1773.10 | 77.2 |
| 02/01/2024 | 13:12:26.064 | -7:51:01.52 | 402122.597 | 54.52899 | 1783.07 | 68.8 |
| 02/02/2024 | 13:56:24.438 | -13:12:29.70 | 398729.146 | 54.99310 | 1798.25 | 59.6 |
| 02/03/2024 | 14:43:09.254 | -18:09:56.94 | 394257.345 | 55.61691 | 1818.64 | 49.9 |
| 02/04/2024 | 15:33:41.970 | -22:28:33.57 | 388867.127 | 56.38790 | 1843.85 | 39.8 |
| 02/05/2024 | 16:28:45.455 | -25:49:41.26 | 382833.750 | 57.27665 | 1872.91 | 29.9 |
| 02/06/2024 | 17:28:21.124 | -27:51:49.45 | 376544.983 | 58.23333 | 1904.19 | 20.6 |
| 02/07/2024 | 18:31:26.830 | -28:14:25.57 | 370479.655 | 59.18679 | 1935.36 | 12.3 |
| 02/08/2024 | 19:35:58.982 | -26:44:26.10 | 365162.785 | 60.04865 | 1963.54 | 5.8 |
| 02/09/2024 | 20:39:34.322 | -23:22:15.16 | 361097.435 | 60.72477 | 1985.65 | 1.6 |
| 02/10/2024 | 21:40:27.595 | -18:22:58.30 | 358683.007 | 61.13357 | 1999.01 | 0.1 |
| 02/11/2024 | 22:38:01.932 | -12:12:14.44 | 358140.567 | 61.22618 | 2002.04 | 1.7 |
| 02/12/2024 | 23:32:40.708 | -5:20:04.84 | 359470.431 | 60.99965 | 1994.63 | 6.3 |
| 02/13/2024 | 0:25:22.248 | 1:44:04.20 | 362458.757 | 60.49668 | 1978.19 | 13.3 |
| 02/14/2024 | 1:17:17.023 | 8:33:59.82 | 366730.807 | 59.79188 | 1955.15 | 22.3 |
| 02/15/2024 | 2:09:32.049 | 14:47:26.47 | 371830.590 | 58.97173 | 1928.33 | 32.6 |
| 02/16/2024 | 3:02:59.218 | 20:05:49.17 | 377300.760 | 58.11667 | 1900.37 | 43.3 |
| 02/17/2024 | 3:58:04.251 | 24:13:53.26 | 382743.398 | 57.29017 | 1873.35 | 54.1 |
| 02/18/2024 | 4:54:37.103 | 27:00:03.76 | 387854.036 | 56.53520 | 1848.67 | 64.4 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 02/19/2024 | 5:51:49.826 | 28:17:33.25 | 392430.755 | 55.87580 | 1827.11 | 73.8 |
| 02/20/2024 | 6:48:28.515 | 28:05:37.58 | 396364.663 | 55.32119 | 1808.97 | 82.0 |
| 02/21/2024 | 7:43:17.629 | 26:29:51.72 | 399618.944 | 54.87065 | 1794.24 | 88.9 |
| 02/22/2024 | 8:35:24.006 | 23:40:52.55 | 402202.651 | 54.51813 | 1782.72 | 94.2 |
| 02/23/2024 | 9:24:28.185 | 19:52:02.86 | 404144.203 | 54.25620 | 1774.15 | 97.8 |
| 02/24/2024 | 10:10:41.714 | 15:17:22.41 | 405468.332 | 54.07900 | 1768.36 | 99.6 |
| 02/25/2024 | 10:54:37.705 | 10:10:06.82 | 406179.340 | 53.98433 | 1765.26 | 99.7 |
| 02/26/2024 | 11:37:01.669 | 4:42:17.86 | 406252.484 | 53.97461 | 1764.95 | 98.0 |
| 02/27/2024 | 12:18:45.578 | -0:55:09.47 | 405634.325 | 54.05687 | 1767.63 | 94.7 |
| 02/28/2024 | 13:00:45.003 | -6:31:57.61 | 404251.790 | 54.24176 | 1773.68 | 89.7 |
| 02/29/2024 | 13:43:57.896 | -11:57:42.94 | 402028.769 | 54.54171 | 1783.49 | 83.2 |
| 03/01/2024 | 14:29:23.130 | -17:01:02.66 | 398908.374 | 54.96839 | 1797.44 | 75.4 |
| 03/02/2024 | 15:17:56.474 | -21:28:39.37 | 394878.481 | 55.52942 | 1815.78 | 66.5 |
| 03/03/2024 | 16:10:21.294 | -25:04:41.80 | 389997.766 | 56.22441 | 1838.51 | 56.7 |
| 03/04/2024 | 17:06:52.594 | -27:31:00.14 | 384418.772 | 57.04046 | 1865.19 | 46.4 |
| 03/05/2024 | 18:06:58.769 | -28:29:08.21 | 378403.429 | 57.94730 | 1894.84 | 35.9 |
| 03/06/2024 | 19:09:15.229 | -27:44:32.74 | 372325.038 | 58.89341 | 1925.77 | 25.6 |
| 03/07/2024 | 20:11:45.484 | -25:11:30.75 | 366649.722 | 59.80510 | 1955.58 | 16.3 |
| 03/08/2024 | 21:12:44.519 | -20:56:09.69 | 361891.567 | 60.59150 | 1981.29 | 8.5 |
| 03/09/2024 | 22:11:15.325 | -15:15:48.20 | 358541.381 | 61.15772 | 1999.80 | 3.0 |
| 03/10/2024 | 23:07:17.027 | -8:35:35.18 | 356979.902 | 61.42527 | 2008.55 | 0.3 |
| 03/11/2024 | 0:01:30.260 | -1:24:32.31 | 357398.535 | 61.35331 | 2006.20 | 0.6 |
| 03/12/2024 | 0:54:56.394 | 5:47:44.81 | 359755.363 | 60.95133 | 1993.05 | 4.0 |
| 03/13/2024 | 1:48:39.673 | 12:33:29.49 | 363784.077 | 60.27626 | 1970.98 | 10.0 |
| 03/14/2024 | 2:43:32.517 | 18:28:16.82 | 369052.065 | 59.41576 | 1942.85 | 18.1 |
| 03/15/2024 | 3:40:01.825 | 23:12:06.12 | 375045.060 | 58.46624 | 1911.80 | 27.6 |
| 03/16/2024 | 4:37:57.393 | 26:30:21.17 | 381250.823 | 57.51448 | 1880.69 | 37.9 |
| 03/17/2024 | 5:36:28.879 | 28:15:00.72 | 387222.535 | 56.62741 | 1851.68 | 48.3 |
| 03/18/2024 | 6:34:18.559 | 28:25:28.70 | 392615.190 | 55.84955 | 1826.25 | 58.5 |
| 03/19/2024 | 7:30:07.642 | 27:08:09.13 | 397197.460 | 55.20519 | 1805.18 | 68.1 |
| 03/20/2024 | 8:23:01.830 | 24:34:28.09 | 400845.535 | 54.70273 | 1788.75 | 76.8 |
| 03/21/2024 | 9:12:42.592 | 20:58:13.11 | 403525.567 | 54.33939 | 1776.87 | 84.3 |
| 03/22/2024 | 9:59:23.369 | 16:33:20.90 | 405270.104 | 54.10546 | 1769.22 | 90.6 |
| 03/23/2024 | 10:43:39.007 | 11:32:48.05 | 406152.440 | 53.98791 | 1765.38 | 95.3 |
| 03/24/2024 | 11:26:15.930 | 6:08:17.78 | 406261.953 | 53.97335 | 1764.90 | 98.5 |
| 03/25/2024 | 12:08:05.916 | 0:30:39.77 | 405682.946 | 54.05039 | 1767.42 | 99.9 |
| 03/26/2024 | 12:50:03.088 | -5:09:35.27 | 404479.217 | 54.21126 | 1772.68 | 99.6 |
| 03/27/2024 | 13:33:02.576 | -10:41:36.28 | 402686.182 | 54.45266 | 1780.58 | 97.4 |
| 03/28/2024 | 14:17:59.032 | -15:53:32.23 | 400311.670 | 54.77569 | 1791.14 | 93.4 |
| 03/29/2024 | 15:05:43.016 | -20:31:57.16 | 397345.575 | 55.18461 | 1804.51 | 87.8 |
| 03/30/2024 | 15:56:53.179 | -24:21:32.83 | 393777.442 | 55.68470 | 1820.86 | 80.5 |
| 03/31/2024 | 16:51:43.419 | -27:05:34.65 | 389619.907 | 56.27895 | 1840.29 | 71.9 |
| 04/01/2024 | 17:49:48.588 | -28:27:33.16 | 384934.826 | 56.96399 | 1862.69 | 62.2 |
| 04/02/2024 | 18:49:59.286 | -28:14:19.73 | 379857.819 | 57.72541 | 1887.58 | 51.6 |
| 04/03/2024 | 19:50:37.434 | -26:19:39.63 | 374615.748 | 58.53325 | 1913.99 | 40.7 |
| 04/04/2024 | 20:50:10.267 | -22:46:23.62 | 369530.526 | 59.33883 | 1940.33 | 29.8 |
| 04/05/2024 | 21:47:42.200 | -17:46:12.88 | 365002.425 | 60.07504 | 1964.40 | 19.8 |
| 04/06/2024 | 22:43:06.200 | -11:37:41.15 | 361468.134 | 60.66249 | 1983.61 | 11.1 |
| 04/07/2024 | 23:36:55.476 | -4:44:03.14 | 359335.056 | 61.02263 | 1995.39 | 4.7 |
| 04/08/2024 | 0:30:07.271 | 2:28:27.87 | 358903.464 | 61.09602 | 1997.79 | 0.9 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 04/09/2024 | 1:23:46.939 | 9:32:05.97 | 360298.045 | 60.85951 | 1990.05 | 0.1 |
| 04/10/2024 | 2:18:53.170 | 15:59:08.46 | 363432.573 | 60.33456 | 1972.89 | 2.3 |
| 04/11/2024 | 3:16:02.170 | 21:23:57.25 | 368021.168 | 59.58221 | 1948.29 | 7.1 |
| 04/12/2024 | 4:15:11.236 | 25:25:30.12 | 373631.338 | 58.68749 | 1919.04 | 14.1 |
| 04/13/2024 | 5:15:29.306 | 27:50:07.99 | 379759.163 | 57.74041 | 1888.07 | 22.6 |
| 04/14/2024 | 6:15:26.436 | 28:33:43.20 | 385903.749 | 56.82095 | 1858.01 | 32.2 |
| 04/15/2024 | 7:13:24.432 | 27:41:43.40 | 391625.060 | 55.99077 | 1830.87 | 42.1 |
| 04/16/2024 | 8:08:11.533 | 25:26:38.44 | 396579.370 | 55.29124 | 1807.99 | 52.1 |
| 04/17/2024 | 8:59:19.843 | 22:04:06.97 | 400534.011 | 54.74528 | 1790.14 | 61.7 |
| 04/18/2024 | 9:47:01.504 | 17:49:40.67 | 403366.335 | 54.36084 | 1777.57 | 70.8 |
| 04/19/2024 | 10:31:54.782 | 12:57:05.50 | 405052.007 | 54.13459 | 1770.18 | 79.0 |
| 04/20/2024 | 11:14:51.045 | 7:38:08.85 | 405646.668 | 54.05523 | 1767.58 | 86.1 |
| 04/21/2024 | 11:56:46.740 | 2:03:15.31 | 405263.845 | 54.10629 | 1769.25 | 92.0 |
| 04/22/2024 | 12:38:39.718 | -3:37:38.95 | 404051.295 | 54.26868 | 1774.56 | 96.4 |
| 04/23/2024 | 13:21:27.834 | -9:14:09.44 | 402167.791 | 54.52286 | 1782.87 | 99.1 |
| 04/24/2024 | 14:06:07.617 | -14:34:32.28 | 399762.548 | 54.85093 | 1793.60 | 100.0 |
| 04/25/2024 | 14:53:30.826 | -19:25:05.99 | 396959.695 | 55.23826 | 1806.26 | 99.0 |
| 04/26/2024 | 15:44:16.740 | -23:30:00.10 | 393850.133 | 55.67442 | 1820.52 | 96.0 |
| 04/27/2024 | 16:38:39.347 | -26:31:55.23 | 390492.466 | 56.15318 | 1836.18 | 91.1 |
| 04/28/2024 | 17:36:13.010 | -28:14:02.14 | 386923.437 | 56.67119 | 1853.11 | 84.3 |
| 04/29/2024 | 18:35:47.280 | -28:23:18.31 | 383176.593 | 57.22539 | 1871.23 | 75.9 |
| 04/30/2024 | 19:35:42.656 | -26:53:53.29 | 379306.023 | 57.80940 | 1890.33 | 66.2 |
| 05/01/2024 | 20:34:24.861 | -23:48:49.14 | 375410.286 | 58.40936 | 1909.94 | 55.5 |
| 05/02/2024 | 21:30:56.909 | -19:19:01.71 | 371650.411 | 59.00032 | 1929.27 | 44.2 |
| 05/03/2024 | 22:25:10.630 | -13:40:48.84 | 368255.306 | 59.54433 | 1947.05 | 33.1 |
| 05/04/2024 | 23:17:38.704 | -7:13:35.41 | 365508.841 | 59.99179 | 1961.68 | 22.6 |
| 05/05/2024 | 0:09:19.353 | -0:18:48.54 | 363715.907 | 60.28755 | 1971.35 | 13.5 |
| 05/06/2024 | 1:01:22.057 | 6:40:14.02 | 363150.638 | 60.38141 | 1974.42 | 6.4 |
| 05/07/2024 | 1:54:55.024 | 13:18:30.09 | 363997.471 | 60.24092 | 1969.83 | 1.9 |
| 05/08/2024 | 2:50:50.997 | 19:10:00.97 | 366301.585 | 59.86195 | 1957.44 | 0.1 |
| 05/09/2024 | 3:49:28.983 | 23:49:56.95 | 369944.962 | 59.27234 | 1938.16 | 1.1 |
| 05/10/2024 | 4:50:16.334 | 26:58:10.54 | 374656.243 | 58.52692 | 1913.79 | 4.7 |
| 05/11/2024 | 5:51:45.647 | 28:23:26.40 | 380050.489 | 57.69614 | 1886.62 | 10.5 |
| 05/12/2024 | 6:51:59.907 | 28:05:56.75 | 385685.613 | 56.85309 | 1859.06 | 17.9 |
| 05/13/2024 | 7:49:16.498 | 26:16:16.85 | 391120.112 | 56.06306 | 1833.23 | 26.5 |
| 05/14/2024 | 8:42:40.271 | 23:11:05.58 | 395960.813 | 55.37762 | 1810.82 | 35.8 |
| 05/15/2024 | 9:32:08.146 | 19:08:14.75 | 399895.622 | 54.83268 | 1793.00 | 45.4 |
| 05/16/2024 | 10:18:14.209 | 14:23:43.85 | 402711.307 | 54.44927 | 1780.46 | 55.0 |
| 05/17/2024 | 11:01:52.027 | 9:10:42.96 | 404298.843 | 54.23545 | 1773.47 | 64.3 |
| 05/18/2024 | 11:44:02.745 | 3:39:59.83 | 404649.336 | 54.18847 | 1771.94 | 73.0 |
| 05/19/2024 | 12:25:49.420 | -1:58:55.52 | 403842.961 | 54.29668 | 1775.48 | 81.0 |
| 05/20/2024 | 13:08:15.107 | -7:36:35.71 | 402032.538 | 54.54120 | 1783.47 | 87.9 |
| 05/21/2024 | 13:52:21.885 | -13:02:22.82 | 399422.891 | 54.89758 | 1795.12 | 93.4 |
| 05/22/2024 | 14:39:08.217 | -18:03:25.84 | 396247.126 | 55.33760 | 1809.51 | 97.4 |
| 05/23/2024 | 15:29:21.922 | -22:24:04.72 | 392741.572 | 55.83158 | 1825.66 | 99.6 |
| 05/24/2024 | 16:23:26.851 | -25:46:10.96 | 389122.010 | 56.35096 | 1842.64 | 99.7 |
| 05/25/2024 | 17:21:05.555 | -27:51:04.58 | 385564.633 | 56.87093 | 1859.64 | 97.6 |
| 05/26/2024 | 18:21:08.810 | -28:23:20.81 | 382195.355 | 57.37233 | 1876.04 | 93.4 |
| 05/27/2024 | 19:21:47.906 | -27:15:15.64 | 379090.091 | 57.84233 | 1891.40 | 87.1 |
| 05/28/2024 | 20:21:12.001 | -24:29:18.54 | 376286.464 | 58.27334 | 1905.50 | 78.9 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 05/29/2024 | 21:18:07.972 | -20:17:11.65 | 373804.490 | 58.66030 | 1918.15 | 69.1 |
| 05/30/2024 | 22:12:17.382 | -14:56:20.11 | 371671.054 | 58.99705 | 1929.16 | 58.3 |
| 05/31/2024 | 23:04:08.790 | -8:46:26.14 | 369941.307 | 59.27293 | 1938.18 | 46.9 |
| 06/01/2024 | 23:54:40.281 | -2:07:39.83 | 368710.077 | 59.47088 | 1944.65 | 35.6 |
| 06/02/2024 | 0:45:03.870 | 4:39:34.78 | 368108.214 | 59.56812 | 1947.83 | 24.9 |
| 06/03/2024 | 1:36:33.880 | 11:14:05.41 | 368282.325 | 59.53996 | 1946.91 | 15.6 |
| 06/04/2024 | 2:30:15.690 | 17:13:22.73 | 369361.197 | 59.36603 | 1941.22 | 8.2 |
| 06/05/2024 | 3:26:50.412 | 22:14:09.10 | 371416.973 | 59.03741 | 1930.48 | 3.1 |
| 06/06/2024 | 4:26:15.184 | 25:54:30.49 | 374432.016 | 58.56198 | 1914.93 | 0.5 |
| 06/07/2024 | 5:27:28.705 | 27:57:58.43 | 378281.516 | 57.96598 | 1895.45 | 0.5 |
| 06/08/2024 | 6:28:39.987 | 28:17:53.86 | 382737.071 | 57.29111 | 1873.38 | 2.8 |
| 06/09/2024 | 7:27:46.860 | 26:59:19.41 | 387489.819 | 56.58835 | 1850.40 | 7.3 |
| 06/10/2024 | 8:23:21.474 | 24:16:35.57 | 392186.399 | 55.91062 | 1828.25 | 13.5 |
| 06/11/2024 | 9:14:51.981 | 20:28:16.06 | 396469.030 | 55.30663 | 1808.50 | 21.0 |
| 06/12/2024 | 10:02:35.420 | 15:52:32.59 | 400012.407 | 54.81667 | 1792.48 | 29.5 |
| 06/13/2024 | 10:47:18.621 | 10:44:52.65 | 402553.087 | 54.47067 | 1781.16 | 38.6 |
| 06/14/2024 | 11:30:01.989 | 5:17:38.57 | 403909.910 | 54.28767 | 1775.18 | 48.0 |
| 06/15/2024 | 12:11:50.485 | -0:19:04.77 | 403995.797 | 54.27613 | 1774.80 | 57.5 |
| 06/16/2024 | 12:53:50.141 | -5:56:14.13 | 402821.899 | 54.43432 | 1779.98 | 66.7 |
| 06/17/2024 | 13:37:07.056 | -11:24:24.15 | 400494.894 | 54.75062 | 1790.32 | 75.3 |
| 06/18/2024 | 14:22:45.942 | -16:32:25.33 | 397207.636 | 55.20377 | 1805.13 | 83.2 |
| 06/19/2024 | 15:11:45.174 | -21:06:15.54 | 393222.953 | 55.76323 | 1823.43 | 89.9 |
| 06/20/2024 | 16:04:45.261 | -24:48:32.64 | 388850.391 | 56.39033 | 1843.93 | 95.2 |
| 06/21/2024 | 17:01:50.124 | -27:19:36.93 | 384416.546 | 57.04079 | 1865.20 | 98.6 |
| 06/22/2024 | 18:02:08.728 | -28:20:51.51 | 380231.342 | 57.66870 | 1885.73 | 99.8 |
| 06/23/2024 | 19:03:55.314 | -27:39:57.54 | 376554.872 | 58.23180 | 1904.14 | 98.7 |
| 06/24/2024 | 20:05:01.783 | -25:15:30.04 | 373571.183 | 58.69694 | 1919.35 | 95.1 |
| 06/25/2024 | 21:03:46.748 | -21:17:45.31 | 371375.422 | 59.04402 | 1930.69 | 89.2 |
| 06/26/2024 | 21:59:26.722 | -16:05:18.93 | 369978.128 | 59.26703 | 1937.99 | 81.2 |
| 06/27/2024 | 22:52:15.259 | -10:00:20.89 | 369325.755 | 59.37173 | 1941.41 | 71.4 |
| 06/28/2024 | 23:43:04.131 | -3:25:11.17 | 369331.467 | 59.37081 | 1941.38 | 60.5 |
| 06/29/2024 | 0:33:04.007 | 3:18:58.79 | 369907.219 | 59.27839 | 1938.36 | 49.1 |
| 06/30/2024 | 1:23:30.753 | 9:51:54.40 | 370988.161 | 59.10566 | 1932.71 | 37.8 |
| 07/01/2024 | 2:15:34.963 | 15:53:31.26 | 372543.203 | 58.85892 | 1924.64 | 27.2 |
| 07/02/2024 | 3:10:09.811 | 21:03:27.25 | 374569.910 | 58.54042 | 1914.23 | 17.8 |
| 07/03/2024 | 4:07:34.449 | 25:01:44.88 | 377076.272 | 58.15127 | 1901.51 | 10.2 |
| 07/04/2024 | 5:07:17.155 | 27:31:21.37 | 380055.319 | 57.69541 | 1886.60 | 4.6 |
| 07/05/2024 | 6:07:52.182 | 28:22:02.26 | 383460.199 | 57.18307 | 1869.85 | 1.2 |
| 07/06/2024 | 7:07:23.635 | 27:33:35.13 | 387186.779 | 56.63264 | 1851.85 | 0.2 |
| 07/07/2024 | 8:04:08.279 | 25:15:52.72 | 391068.339 | 56.07048 | 1833.47 | 1.4 |
| 07/08/2024 | 8:57:08.745 | 21:45:25.99 | 394883.383 | 55.52873 | 1815.76 | 4.6 |
| 07/09/2024 | 9:46:19.299 | 17:20:45.67 | 398374.295 | 55.04209 | 1799.85 | 9.5 |
| 07/10/2024 | 10:32:11.971 | 12:18:58.13 | 401272.655 | 54.64450 | 1786.85 | 15.9 |
| 07/11/2024 | 11:15:39.303 | 6:54:20.61 | 403326.702 | 54.36618 | 1777.75 | 23.5 |
| 07/12/2024 | 11:57:42.503 | 1:18:26.40 | 404327.358 | 54.23162 | 1773.35 | 32.0 |
| 07/13/2024 | 12:39:25.791 | -4:19:01.94 | 404130.537 | 54.25804 | 1774.21 | 41.1 |
| 07/14/2024 | 13:21:54.540 | -9:48:58.73 | 402674.590 | 54.45423 | 1780.63 | 50.6 |
| 07/15/2024 | 14:06:14.418 | -15:01:33.58 | 399992.259 | 54.81943 | 1792.57 | 60.1 |
| 07/16/2024 | 14:53:28.661 | -19:44:50.92 | 396216.446 | 55.34189 | 1809.65 | 69.4 |
| 07/17/2024 | 15:44:30.261 | -23:43:47.73 | 391578.557 | 55.99742 | 1831.08 | 78.2 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 07/18/2024 | 16:39:46.470 | -26:40:07.88 | 386397.554 | 56.74833 | 1855.64 | 86.0 |
| 07/19/2024 | 17:38:57.877 | -28:14:12.42 | 381057.625 | 57.54364 | 1881.64 | 92.5 |
| 07/20/2024 | 18:40:45.380 | -28:09:22.93 | 375973.333 | 58.32188 | 1907.08 | 97.2 |
| 07/21/2024 | 19:43:05.186 | -26:17:44.42 | 371543.833 | 59.01725 | 1929.82 | 99.6 |
| 07/22/2024 | 20:43:54.083 | -22:43:47.49 | 368102.163 | 59.56910 | 1947.86 | 99.4 |
| 07/23/2024 | 21:41:55.245 | -17:43:35.40 | 365870.199 | 59.93254 | 1959.75 | 96.5 |
| 07/24/2024 | 22:36:54.134 | -11:40:19.13 | 364931.653 | 60.08669 | 1964.79 | 91.0 |
| 07/25/2024 | 23:29:25.814 | -4:59:29.90 | 365231.958 | 60.03728 | 1963.17 | 83.2 |
| 07/26/2024 | 0:20:33.294 | 1:54:06.36 | 366605.488 | 59.81232 | 1955.81 | 73.6 |
| 07/27/2024 | 1:11:29.789 | 8:37:38.69 | 368821.246 | 59.45295 | 1944.06 | 62.8 |
| 07/28/2024 | 2:03:26.092 | 14:50:05.37 | 371632.924 | 59.00310 | 1929.36 | 51.5 |
| 07/29/2024 | 2:57:18.991 | 20:11:45.62 | 374820.092 | 58.50134 | 1912.95 | 40.3 |
| 07/30/2024 | 3:53:37.197 | 24:24:21.86 | 378212.422 | 57.97657 | 1895.79 | 29.7 |
| 07/31/2024 | 4:52:06.360 | 27:12:17.26 | 381695.120 | 57.44752 | 1878.50 | 20.4 |
| 08/01/2024 | 5:51:42.746 | 28:25:13.24 | 385198.602 | 56.92497 | 1861.41 | 12.5 |
| 08/02/2024 | 6:50:47.741 | 28:00:55.85 | 388678.197 | 56.41531 | 1844.75 | 6.5 |
| 08/03/2024 | 7:47:42.102 | 26:06:09.12 | 392090.512 | 55.92430 | 1828.69 | 2.4 |
| 08/04/2024 | 8:41:19.502 | 22:54:36.83 | 395372.519 | 55.46002 | 1813.51 | 0.4 |
| 08/05/2024 | 9:31:19.655 | 18:43:23.26 | 398427.875 | 55.03469 | 1799.61 | 0.4 |
| 08/06/2024 | 10:18:01.089 | 13:49:34.37 | 401122.876 | 54.66490 | 1787.52 | 2.3 |
| 08/07/2024 | 11:02:06.346 | 8:28:24.82 | 403292.240 | 54.37083 | 1777.90 | 6.1 |
| 08/08/2024 | 11:44:29.646 | 2:52:47.49 | 404753.186 | 54.17456 | 1771.48 | 11.4 |
| 08/09/2024 | 12:26:09.903 | -2:46:24.19 | 405325.235 | 54.09810 | 1768.98 | 18.1 |
| 08/10/2024 | 13:08:07.871 | -8:19:26.29 | 404852.977 | 54.16121 | 1771.05 | 25.9 |
| 08/11/2024 | 13:51:25.118 | -13:36:40.73 | 403229.343 | 54.37931 | 1778.18 | 34.6 |
| 08/12/2024 | 14:37:02.450 | -18:27:25.66 | 400417.411 | 54.76122 | 1790.66 | 43.9 |
| 08/13/2024 | 15:25:55.154 | -22:38:50.20 | 396469.021 | 55.30663 | 1808.50 | 53.7 |
| 08/14/2024 | 16:18:42.374 | -25:55:16.81 | 391538.272 | 56.00318 | 1831.27 | 63.5 |
| 08/15/2024 | 17:15:30.117 | -27:58:54.72 | 385887.250 | 56.82338 | 1858.09 | 73.1 |
| 08/16/2024 | 18:15:34.400 | -28:32:14.43 | 379880.347 | 57.72199 | 1887.47 | 81.9 |
| 08/17/2024 | 19:17:20.441 | -27:22:43.64 | 373962.883 | 58.63545 | 1917.34 | 89.6 |
| 08/18/2024 | 20:18:50.491 | -24:27:33.53 | 368620.743 | 59.48529 | 1945.12 | 95.5 |
| 08/19/2024 | 21:18:28.402 | -19:55:43.76 | 364321.647 | 60.18731 | 1968.07 | 99.0 |
| 08/20/2024 | 22:15:30.451 | -14:06:19.77 | 361445.972 | 60.66621 | 1983.73 | 99.9 |
| 08/21/2024 | 23:10:07.158 | -7:24:37.92 | 360223.234 | 60.87215 | 1990.47 | 97.7 |
| 08/22/2024 | 0:03:06.528 | -0:18:12.89 | 360694.067 | 60.79269 | 1987.87 | 92.8 |
| 08/23/2024 | 0:55:34.508 | 6:45:45.34 | 362711.770 | 60.45447 | 1976.81 | 85.4 |
| 08/24/2024 | 1:48:39.129 | 13:21:59.96 | 365983.232 | 59.91403 | 1959.14 | 76.1 |
| 08/25/2024 | 2:43:16.922 | 19:07:46.09 | 370134.451 | 59.24200 | 1937.17 | 65.6 |
| 08/26/2024 | 3:39:58.574 | 23:43:19.26 | 374779.499 | 58.50767 | 1913.16 | 54.5 |
| 08/27/2024 | 4:38:34.755 | 26:52:57.41 | 379575.394 | 57.76837 | 1888.99 | 43.5 |
| 08/28/2024 | 5:38:09.955 | 28:26:52.08 | 384254.364 | 57.06487 | 1865.98 | 33.1 |
| 08/29/2024 | 6:37:14.824 | 28:23:02.72 | 388633.348 | 56.42183 | 1844.96 | 23.7 |
| 08/30/2024 | 7:34:16.617 | 26:47:42.96 | 392605.558 | 55.85092 | 1826.29 | 15.5 |
| 08/31/2024 | 8:28:10.492 | 23:53:31.89 | 396120.673 | 55.35527 | 1810.09 | 9.0 |
| 09/01/2024 | 9:18:33.491 | 19:56:24.59 | 399160.005 | 54.93374 | 1796.31 | 4.2 |
| 09/02/2024 | 10:05:39.618 | 15:12:39.66 | 401712.060 | 54.58472 | 1784.89 | 1.2 |
| 09/03/2024 | 10:50:06.695 | 9:57:18.38 | 403752.639 | 54.30882 | 1775.87 | 0.0 |
| 09/04/2024 | 11:32:44.539 | 4:23:32.98 | 405232.350 | 54.11050 | 1769.39 | 0.8 |
| 09/05/2024 | 12:14:27.759 | -1:17:01.65 | 406072.960 | 53.99847 | 1765.73 | 3.3 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 09/06/2024 | 12:56:12.477 | -6:53:54.42 | 406172.668 | 53.98522 | 1765.29 | 7.5 |
| 09/07/2024 | 13:38:55.044 | -12:16:54.11 | 405419.258 | 54.08555 | 1768.57 | 13.2 |
| 09/08/2024 | 14:23:30.753 | -17:15:20.39 | 403709.290 | 54.31465 | 1776.06 | 20.3 |
| 09/09/2024 | 15:10:50.489 | -21:37:15.99 | 400971.129 | 54.68559 | 1788.19 | 28.5 |
| 09/10/2024 | 16:01:33.296 | -25:08:53.84 | 397189.485 | 55.20630 | 1805.22 | 37.7 |
| 09/11/2024 | 16:55:54.060 | -27:34:46.14 | 392428.974 | 55.87606 | 1827.12 | 47.5 |
| 09/12/2024 | 17:53:29.683 | -28:39:10.78 | 386853.747 | 56.68140 | 1853.45 | 57.8 |
| 09/13/2024 | 18:53:13.828 | -28:09:09.76 | 380739.264 | 57.59176 | 1883.21 | 68.0 |
| 09/14/2024 | 19:53:31.616 | -25:58:11.27 | 374470.937 | 58.55589 | 1914.73 | 77.7 |
| 09/15/2024 | 20:52:52.463 | -22:08:48.54 | 368523.518 | 59.50099 | 1945.64 | 86.4 |
| 09/16/2024 | 21:50:21.563 | -16:52:57.49 | 363416.187 | 60.33728 | 1972.98 | 93.4 |
| 09/17/2024 | 22:45:51.836 | -10:30:15.71 | 359643.607 | 60.97027 | 1993.67 | 98.1 |
| 09/18/2024 | 23:39:56.369 | -3:25:39.61 | 357593.133 | 61.31992 | 2005.11 | 100.0 |
| 09/19/2024 | 0:33:32.506 | 3:52:51.95 | 357469.567 | 61.34112 | 2005.80 | 98.8 |
| 09/20/2024 | 1:27:45.615 | 10:56:20.90 | 359253.201 | 61.03653 | 1995.84 | 94.6 |
| 09/21/2024 | 2:23:33.552 | 17:16:46.65 | 362707.803 | 60.45513 | 1976.83 | 87.9 |
| 09/22/2024 | 3:21:29.802 | 22:29:04.19 | 367435.467 | 59.67720 | 1951.40 | 79.2 |
| 09/23/2024 | 4:21:26.414 | 26:13:17.50 | 372957.408 | 58.79354 | 1922.51 | 69.2 |
| 09/24/2024 | 5:22:25.427 | 28:17:09.17 | 378794.470 | 57.88747 | 1892.88 | 58.5 |
| 09/25/2024 | 6:22:51.177 | 28:37:57.05 | 384528.365 | 57.02420 | 1864.66 | 47.9 |
| 09/26/2024 | 7:21:03.784 | 27:22:29.45 | 389836.485 | 56.24768 | 1839.27 | 37.6 |
| 09/27/2024 | 8:15:54.033 | 24:44:26.86 | 394502.280 | 55.58238 | 1817.51 | 28.1 |
| 09/28/2024 | 9:06:58.442 | 21:00:30.43 | 398407.412 | 55.03752 | 1799.70 | 19.6 |
| 09/29/2024 | 9:54:32.975 | 16:27:12.97 | 401512.478 | 54.61185 | 1785.78 | 12.5 |
| 09/30/2024 | 10:39:18.025 | 11:19:24.92 | 403832.076 | 54.29814 | 1775.52 | 6.9 |
| 10/01/2024 | 11:22:05.374 | 5:49:59.51 | 405408.727 | 54.08695 | 1768.62 | 2.8 |
| 10/02/2024 | 12:03:50.470 | 0:10:20.10 | 406289.190 | 53.96973 | 1764.79 | 0.6 |
| 10/03/2024 | 12:45:28.984 | -5:28:58.11 | 406505.968 | 53.94095 | 1763.84 | 0.0 |
| 10/04/2024 | 13:27:55.483 | -10:57:25.11 | 406066.120 | 53.99938 | 1765.76 | 1.3 |
| 10/05/2024 | 14:12:02.202 | -16:03:57.01 | 404948.648 | 54.14841 | 1770.63 | 4.4 |
| 10/06/2024 | 14:58:36.056 | -20:36:24.67 | 403110.776 | 54.39530 | 1778.70 | 9.1 |
| 10/07/2024 | 15:48:12.333 | -24:21:19.13 | 400502.408 | 54.74960 | 1790.28 | 15.4 |
| 10/08/2024 | 16:41:04.618 | -27:04:11.56 | 397087.150 | 55.22053 | 1805.68 | 23.1 |
| 10/09/2024 | 17:36:53.854 | -28:30:49.50 | 392867.500 | 55.81368 | 1825.08 | 32.0 |
| 10/10/2024 | 18:34:44.292 | -28:29:33.99 | 387911.164 | 56.52688 | 1848.39 | 41.9 |
| 10/11/2024 | 19:33:15.009 | -26:53:59.50 | 382374.579 | 57.34543 | 1875.16 | 52.4 |
| 10/12/2024 | 20:31:06.207 | -23:44:42.53 | 376518.633 | 58.23740 | 1904.32 | 63.1 |
| 10/13/2024 | 21:27:26.241 | -19:09:31.02 | 370710.220 | 59.14998 | 1934.16 | 73.5 |
| 10/14/2024 | 22:22:04.574 | -13:22:20.30 | 365402.629 | 60.00923 | 1962.25 | 83.0 |
| 10/15/2024 | 23:15:28.594 | -6:42:00.80 | 361089.496 | 60.72611 | 1985.69 | 91.0 |
| 10/16/2024 | 0:08:31.964 | 0:28:26.99 | 358233.329 | 61.21032 | 2001.52 | 96.7 |
| 10/17/2024 | 1:02:21.218 | 7:42:25.68 | 357180.619 | 61.39074 | 2007.42 | 99.6 |
| 10/18/2024 | 1:58:01.570 | 14:30:41.60 | 358086.936 | 61.23535 | 2002.34 | 99.5 |
| 10/19/2024 | 2:56:19.239 | 20:23:27.66 | 360878.501 | 60.76161 | 1986.85 | 96.5 |
| 10/20/2024 | 3:57:19.477 | 24:53:46.25 | 365265.441 | 60.03178 | 1962.99 | 90.8 |
| 10/21/2024 | 5:00:08.710 | 27:41:57.62 | 370801.132 | 59.13547 | 1933.68 | 83.0 |
| 10/22/2024 | 6:02:59.186 | 28:39:50.30 | 376965.104 | 58.16842 | 1902.07 | 73.8 |
| 10/23/2024 | 7:03:45.793 | 27:52:02.99 | 383243.579 | 57.21539 | 1870.91 | 63.8 |
| 10/24/2024 | 8:00:54.178 | 25:33:11.39 | 389190.197 | 56.34109 | 1842.32 | 53.6 |
| 10/25/2024 | 8:53:46.438 | 22:02:22.10 | 394461.176 | 55.58817 | 1817.70 | 43.5 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 10/26/2024 | 9:42:35.730 | 17:38:27.06 | 398827.512 | 54.97954 | 1797.80 | 33.9 |
| 10/27/2024 | 10:28:06.510 | 12:37:40.66 | 402170.159 | 54.52254 | 1782.86 | 25.1 |
| 10/28/2024 | 11:11:16.852 | 7:13:20.66 | 404464.172 | 54.21327 | 1772.75 | 17.3 |
| 10/29/2024 | 11:53:08.197 | 1:36:33.73 | 405756.555 | 54.04058 | 1767.10 | 10.8 |
| 10/30/2024 | 12:34:41.043 | -4:02:39.43 | 406141.257 | 53.98939 | 1765.43 | 5.7 |
| 10/31/2024 | 13:16:53.560 | -9:34:20.72 | 405734.066 | 54.04358 | 1767.20 | 2.1 |
| 11/01/2024 | 14:00:40.562 | -14:47:41.81 | 404649.861 | 54.18840 | 1771.94 | 0.3 |
| 11/02/2024 | 14:46:50.726 | -19:30:27.34 | 402984.646 | 54.41233 | 1779.26 | 0.3 |
| 11/03/2024 | 15:36:00.353 | -23:28:44.04 | 400804.603 | 54.70831 | 1788.93 | 2.1 |
| 11/04/2024 | 16:28:23.205 | -26:27:32.80 | 398143.908 | 55.07395 | 1800.89 | 5.8 |
| 11/05/2024 | 17:23:39.408 | -28:12:22.03 | 395012.042 | 55.51064 | 1815.17 | 11.3 |
| 11/06/2024 | 18:20:51.423 | -28:31:38.98 | 391410.039 | 56.02153 | 1831.87 | 18.4 |
| 11/07/2024 | 19:18:35.969 | -27:19:29.37 | 387353.639 | 56.60824 | 1851.06 | 27.0 |
| 11/08/2024 | 20:15:30.963 | -24:37:03.49 | 382899.886 | 57.26675 | 1872.59 | 36.8 |
| 11/09/2024 | 21:10:42.932 | -20:32:04.55 | 378172.441 | 57.98270 | 1895.99 | 47.4 |
| 11/10/2024 | 22:03:59.936 | -15:17:01.21 | 373379.652 | 58.72705 | 1920.33 | 58.4 |
| 11/11/2024 | 22:55:48.365 | -9:07:29.11 | 368818.640 | 59.45337 | 1944.08 | 69.3 |
| 11/12/2024 | 23:47:01.917 | -2:21:33.80 | 364858.805 | 60.09869 | 1965.18 | 79.5 |
| 11/13/2024 | 0:38:49.950 | 4:39:48.84 | 361900.845 | 60.58995 | 1981.24 | 88.2 |
| 11/14/2024 | 1:32:26.424 | 11:32:16.16 | 360313.657 | 60.85688 | 1989.97 | 94.8 |
| 11/15/2024 | 2:28:55.893 | 17:48:03.00 | 360361.072 | 60.84887 | 1989.70 | 98.8 |
| 11/16/2024 | 3:28:52.177 | 22:57:48.97 | 362138.890 | 60.55012 | 1979.94 | 99.9 |
| 11/17/2024 | 4:31:51.838 | 26:34:54.79 | 365543.697 | 59.98607 | 1961.50 | 98.1 |
| 11/18/2024 | 5:36:19.743 | 28:21:37.00 | 370284.889 | 59.21793 | 1936.38 | 93.7 |
| 11/19/2024 | 6:39:51.725 | 28:14:23.01 | 375934.806 | 58.32785 | 1907.28 | 87.3 |
| 11/20/2024 | 7:40:11.972 | 26:24:06.53 | 381999.019 | 57.40182 | 1877.00 | 79.2 |
| 11/21/2024 | 8:36:03.025 | 23:10:47.49 | 387986.249 | 56.51594 | 1848.04 | 70.1 |
| 11/22/2024 | 9:27:15.467 | 18:56:33.48 | 393463.641 | 55.72911 | 1822.31 | 60.5 |
| 11/23/2024 | 10:14:27.469 | 14:01:00.67 | 398092.025 | 55.08113 | 1801.12 | 50.7 |
| 11/24/2024 | 10:58:40.018 | 8:39:44.41 | 401642.329 | 54.59420 | 1785.20 | 41.2 |
| 11/25/2024 | 11:41:00.827 | 3:04:50.54 | 403997.255 | 54.27594 | 1774.80 | 32.0 |
| 11/26/2024 | 12:22:37.135 | -2:33:45.77 | 405142.487 | 54.12250 | 1769.78 | 23.6 |
| 11/27/2024 | 13:04:33.527 | -8:06:54.04 | 405150.795 | 54.12139 | 1769.74 | 16.1 |
| 11/28/2024 | 13:47:51.215 | -13:24:50.50 | 404161.316 | 54.25390 | 1774.08 | 9.8 |
| 11/29/2024 | 14:33:26.013 | -18:16:15.88 | 402355.744 | 54.49739 | 1782.04 | 4.9 |
| 11/30/2024 | 15:22:02.711 | -22:27:39.96 | 399933.165 | 54.82753 | 1792.83 | 1.7 |
| 12/01/2024 | 16:14:04.493 | -25:43:34.48 | 397085.776 | 55.22072 | 1805.69 | 0.2 |
| 12/02/2024 | 17:09:19.328 | -27:48:02.50 | 393978.360 | 55.65630 | 1819.93 | 0.7 |
| 12/03/2024 | 18:06:51.539 | -28:27:33.30 | 390734.700 | 56.11836 | 1835.04 | 3.3 |
| 12/04/2024 | 19:05:10.509 | -27:34:32.99 | 387433.736 | 56.59654 | 1850.67 | 7.9 |
| 12/05/2024 | 20:02:39.497 | -25:09:40.75 | 384116.858 | 57.08530 | 1866.65 | 14.4 |
| 12/06/2024 | 20:58:09.292 | -21:21:26.25 | 380805.587 | 57.58173 | 1882.88 | 22.6 |
| 12/07/2024 | 21:51:16.392 | -16:23:39.50 | 377526.397 | 58.08193 | 1899.24 | 32.3 |
| 12/08/2024 | 22:42:20.879 | -10:32:44.64 | 374337.265 | 58.57680 | 1915.42 | 42.9 |
| 12/09/2024 | 23:32:13.806 | -4:06:04.14 | 371349.177 | 59.04819 | 1930.83 | 54.1 |
| 12/10/2024 | 0:22:04.283 | 2:38:10.21 | 368735.574 | 59.46677 | 1944.52 | 65.3 |
| 12/11/2024 | 1:13:09.332 | 9:20:08.45 | 366724.069 | 59.79298 | 1955.18 | 75.8 |
| 12/12/2024 | 2:06:43.771 | 15:37:22.06 | 365567.972 | 59.98209 | 1961.37 | 85.0 |
| 12/13/2024 | 3:03:44.777 | 21:04:30.25 | 365500.638 | 59.99314 | 1961.73 | 92.3 |
| 12/14/2024 | 4:04:27.733 | 25:15:05.15 | 366682.139 | 59.79982 | 1955.41 | 97.3 |

Moon - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance km | Parallax arc min | Diameter arc sec | %Illum. |
|----------------|------------------------|--------------------|----------------|---------------------|---------------------|---------|
| 12/15/2024 | 5:08:00.566 | 27:46:10.72 | 369152.796 | 59.39955 | 1942.32 | 99.6 |
| 12/16/2024 | 6:12:20.428 | 28:24:58.14 | 372808.022 | 58.81710 | 1923.28 | 99.3 |
| 12/17/2024 | 7:14:53.538 | 27:13:23.01 | 377402.506 | 58.10100 | 1899.86 | 96.5 |
| 12/18/2024 | 8:13:38.105 | 24:26:46.50 | 382581.755 | 57.31438 | 1874.14 | 91.6 |
| 12/19/2024 | 9:07:41.910 | 20:27:31.18 | 387930.681 | 56.52403 | 1848.30 | 84.9 |
| 12/20/2024 | 9:57:17.098 | 15:38:16.53 | 393026.204 | 55.79114 | 1824.34 | 77.0 |
| 12/21/2024 | 10:43:14.405 | 10:18:11.27 | 397483.446 | 55.16547 | 1803.88 | 68.2 |
| 12/22/2024 | 11:26:40.415 | 4:42:05.29 | 400990.094 | 54.68300 | 1788.11 | 58.9 |
| 12/23/2024 | 12:08:45.059 | -0:58:38.27 | 403327.910 | 54.36602 | 1777.74 | 49.5 |
| 12/24/2024 | 12:50:36.865 | -6:34:35.48 | 404382.868 | 54.22418 | 1773.11 | 40.1 |
| 12/25/2024 | 13:33:21.762 | -11:56:50.07 | 404146.054 | 54.25595 | 1774.14 | 31.1 |
| 12/26/2024 | 14:18:01.983 | -16:55:29.96 | 402707.064 | 54.44984 | 1780.48 | 22.8 |
| 12/27/2024 | 15:05:32.249 | -21:18:41.24 | 400240.848 | 54.78538 | 1791.45 | 15.3 |
| 12/28/2024 | 15:56:30.860 | -24:51:58.35 | 396988.423 | 55.23426 | 1806.13 | 9.0 |
| 12/29/2024 | 16:51:05.361 | -27:19:03.94 | 393231.876 | 55.76196 | 1823.38 | 4.2 |
| 12/30/2024 | 17:48:38.258 | -28:24:12.57 | 389264.869 | 56.33028 | 1841.97 | 1.2 |
| 12/31/2024 | 18:47:45.757 | -27:56:06.87 | 385361.380 | 56.90093 | 1860.62 | 0.2 |
| 01/01/2025 | 19:46:40.476 | -25:51:45.94 | 381747.112 | 57.43970 | 1878.24 | 1.5 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 17:28:16.837 | -20:07:35.00 | 0.7588988 | 8.87 | 0.7 | 121.6 |
| 01/01/2024 | 17:27:08.864 | -20:09:13.00 | 0.7775301 | 8.66 | 0.5 | 116.3 |
| 01/02/2024 | 17:26:42.556 | -20:12:47.81 | 0.7970423 | 8.44 | 0.3 | 111.4 |
| 01/03/2024 | 17:26:55.422 | -20:18:05.50 | 0.8171978 | 8.24 | 0.2 | 106.8 |
| 01/04/2024 | 17:27:44.651 | -20:24:51.18 | 0.8377881 | 8.03 | 0.0 | 102.4 |
| 01/05/2024 | 17:29:07.310 | -20:32:49.70 | 0.8586336 | 7.84 | -0.0 | 98.3 |
| 01/06/2024 | 17:31:00.481 | -20:41:46.26 | 0.8795816 | 7.65 | -0.1 | 94.5 |
| 01/07/2024 | 17:33:21.358 | -20:51:26.74 | 0.9005036 | 7.47 | -0.2 | 90.9 |
| 01/08/2024 | 17:36:07.303 | -21:01:37.99 | 0.9212932 | 7.30 | -0.2 | 87.6 |
| 01/09/2024 | 17:39:15.870 | -21:12:07.88 | 0.9418627 | 7.15 | -0.2 | 84.4 |
| 01/10/2024 | 17:42:44.827 | -21:22:45.41 | 0.9621412 | 6.99 | -0.2 | 81.4 |
| 01/11/2024 | 17:46:32.145 | -21:33:20.63 | 0.9820715 | 6.85 | -0.2 | 78.6 |
| 01/12/2024 | 17:50:35.998 | -21:43:44.63 | 1.0016084 | 6.72 | -0.2 | 75.9 |
| 01/13/2024 | 17:54:54.747 | -21:53:49.46 | 1.0207167 | 6.59 | -0.2 | 73.3 |
| 01/14/2024 | 17:59:26.926 | -22:03:28.03 | 1.0393695 | 6.48 | -0.2 | 70.9 |
| 01/15/2024 | 18:04:11.231 | -22:12:34.06 | 1.0575470 | 6.36 | -0.2 | 68.6 |
| 01/16/2024 | 18:09:06.499 | -22:21:01.96 | 1.0752348 | 6.26 | -0.2 | 66.4 |
| 01/17/2024 | 18:14:11.693 | -22:28:46.80 | 1.0924232 | 6.16 | -0.2 | 64.3 |
| 01/18/2024 | 18:19:25.889 | -22:35:44.23 | 1.1091062 | 6.07 | -0.2 | 62.3 |
| 01/19/2024 | 18:24:48.263 | -22:41:50.36 | 1.1252808 | 5.98 | -0.2 | 60.4 |
| 01/20/2024 | 18:30:18.075 | -22:47:01.77 | 1.1409464 | 5.90 | -0.2 | 58.6 |
| 01/21/2024 | 18:35:54.661 | -22:51:15.39 | 1.1561041 | 5.82 | -0.2 | 56.8 |
| 01/22/2024 | 18:41:37.425 | -22:54:28.51 | 1.1707564 | 5.75 | -0.2 | 55.1 |
| 01/23/2024 | 18:47:25.829 | -22:56:38.68 | 1.1849069 | 5.68 | -0.2 | 53.5 |
| 01/24/2024 | 18:53:19.386 | -22:57:43.73 | 1.1985599 | 5.62 | -0.2 | 52.0 |
| 01/25/2024 | 18:59:17.658 | -22:57:41.71 | 1.2117202 | 5.55 | -0.2 | 50.5 |
| 01/26/2024 | 19:05:20.247 | -22:56:30.85 | 1.2243930 | 5.50 | -0.2 | 49.0 |
| 01/27/2024 | 19:11:26.791 | -22:54:09.57 | 1.2365834 | 5.44 | -0.2 | 47.6 |
| 01/28/2024 | 19:17:36.961 | -22:50:36.44 | 1.2482967 | 5.39 | -0.2 | 46.3 |
| 01/29/2024 | 19:23:50.459 | -22:45:50.19 | 1.2595379 | 5.34 | -0.2 | 45.0 |
| 01/30/2024 | 19:30:07.011 | -22:39:49.64 | 1.2703117 | 5.30 | -0.2 | 43.7 |
| 01/31/2024 | 19:36:26.368 | -22:32:33.75 | 1.2806226 | 5.26 | -0.2 | 42.5 |
| 02/01/2024 | 19:42:48.303 | -22:24:01.56 | 1.2904744 | 5.22 | -0.2 | 41.3 |
| 02/02/2024 | 19:49:12.608 | -22:14:12.24 | 1.2998707 | 5.18 | -0.3 | 40.1 |
| 02/03/2024 | 19:55:39.094 | -22:03:04.99 | 1.3088141 | 5.14 | -0.3 | 38.9 |
| 02/04/2024 | 20:02:07.585 | -21:50:39.12 | 1.3173070 | 5.11 | -0.3 | 37.8 |
| 02/05/2024 | 20:08:37.925 | -21:36:54.00 | 1.3253506 | 5.08 | -0.3 | 36.6 |
| 02/06/2024 | 20:15:09.968 | -21:21:49.06 | 1.3329457 | 5.05 | -0.3 | 35.5 |
| 02/07/2024 | 20:21:43.582 | -21:05:23.81 | 1.3400919 | 5.02 | -0.4 | 34.4 |
| 02/08/2024 | 20:28:18.646 | -20:47:37.77 | 1.3467882 | 5.00 | -0.4 | 33.2 |
| 02/09/2024 | 20:34:55.053 | -20:28:30.55 | 1.3530324 | 4.97 | -0.4 | 32.1 |
| 02/10/2024 | 20:41:32.706 | -20:08:01.77 | 1.3588215 | 4.95 | -0.5 | 30.9 |
| 02/11/2024 | 20:48:11.521 | -19:46:11.09 | 1.3641514 | 4.93 | -0.5 | 29.8 |
| 02/12/2024 | 20:54:51.427 | -19:22:58.23 | 1.3690167 | 4.92 | -0.5 | 28.6 |
| 02/13/2024 | 21:01:32.366 | -18:58:22.92 | 1.3734110 | 4.90 | -0.6 | 27.3 |
| 02/14/2024 | 21:08:14.290 | -18:32:24.95 | 1.3773264 | 4.89 | -0.6 | 26.1 |
| 02/15/2024 | 21:14:57.163 | -18:05:04.14 | 1.3807537 | 4.87 | -0.7 | 24.8 |
| 02/16/2024 | 21:21:40.954 | -17:36:20.36 | 1.3836819 | 4.86 | -0.7 | 23.4 |
| 02/17/2024 | 21:28:25.644 | -17:06:13.54 | 1.3860984 | 4.86 | -0.8 | 22.1 |
| 02/18/2024 | 21:35:11.217 | -16:34:43.64 | 1.3879886 | 4.85 | -0.8 | 20.6 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 21:41:57.666 | -16:01:50.68 | 1.3893360 | 4.84 | -0.9 | 19.1 |
| 02/20/2024 | 21:48:44.986 | -15:27:34.76 | 1.3901221 | 4.84 | -1.0 | 17.6 |
| 02/21/2024 | 21:55:33.179 | -14:51:56.03 | 1.3903259 | 4.84 | -1.1 | 16.0 |
| 02/22/2024 | 22:02:22.249 | -14:14:54.76 | 1.3899244 | 4.84 | -1.2 | 14.4 |
| 02/23/2024 | 22:09:12.201 | -13:36:31.31 | 1.3888917 | 4.85 | -1.3 | 12.8 |
| 02/24/2024 | 22:16:03.037 | -12:56:46.20 | 1.3871999 | 4.85 | -1.4 | 11.1 |
| 02/25/2024 | 22:22:54.757 | -12:15:40.09 | 1.3848180 | 4.86 | -1.5 | 9.3 |
| 02/26/2024 | 22:29:47.353 | -11:33:13.86 | 1.3817126 | 4.87 | -1.6 | 7.7 |
| 02/27/2024 | 22:36:40.806 | -10:49:28.61 | 1.3778476 | 4.88 | -1.7 | 6.1 |
| 02/28/2024 | 22:43:35.083 | -10:04:25.72 | 1.3731842 | 4.90 | -1.8 | 5.0 |
| 02/29/2024 | 22:50:30.127 | -9:18:06.94 | 1.3676812 | 4.92 | -1.8 | 4.8 |
| 03/01/2024 | 22:57:25.857 | -8:30:34.40 | 1.3612952 | 4.94 | -1.8 | 5.7 |
| 03/02/2024 | 23:04:22.158 | -7:41:50.69 | 1.3539810 | 4.97 | -1.8 | 7.4 |
| 03/03/2024 | 23:11:18.873 | -6:51:58.96 | 1.3456920 | 5.00 | -1.8 | 9.6 |
| 03/04/2024 | 23:18:15.792 | -6:01:03.02 | 1.3363809 | 5.04 | -1.7 | 12.2 |
| 03/05/2024 | 23:25:12.648 | -5:09:07.38 | 1.3260009 | 5.08 | -1.7 | 15.0 |
| 03/06/2024 | 23:32:09.100 | -4:16:17.40 | 1.3145065 | 5.12 | -1.6 | 18.0 |
| 03/07/2024 | 23:39:04.726 | -3:22:39.36 | 1.3018555 | 5.17 | -1.6 | 21.1 |
| 03/08/2024 | 23:45:59.011 | -2:28:20.57 | 1.2880101 | 5.23 | -1.5 | 24.5 |
| 03/09/2024 | 23:52:51.333 | -1:33:29.45 | 1.2729397 | 5.29 | -1.5 | 28.1 |
| 03/10/2024 | 23:59:40.962 | -0:38:15.57 | 1.2566223 | 5.36 | -1.4 | 31.8 |
| 03/11/2024 | 0:06:27.044 | 0:17:10.28 | 1.2390479 | 5.43 | -1.4 | 35.6 |
| 03/12/2024 | 0:13:08.597 | 1:12:36.12 | 1.2202201 | 5.52 | -1.3 | 39.7 |
| 03/13/2024 | 0:19:44.516 | 2:07:48.78 | 1.2001587 | 5.61 | -1.3 | 43.9 |
| 03/14/2024 | 0:26:13.566 | 3:02:34.06 | 1.1789020 | 5.71 | -1.2 | 48.2 |
| 03/15/2024 | 0:32:34.397 | 3:56:36.86 | 1.1565076 | 5.82 | -1.2 | 52.6 |
| 03/16/2024 | 0:38:45.558 | 4:49:41.34 | 1.1330535 | 5.94 | -1.1 | 57.2 |
| 03/17/2024 | 0:44:45.517 | 5:41:31.28 | 1.1086376 | 6.07 | -1.1 | 61.8 |
| 03/18/2024 | 0:50:32.685 | 6:31:50.26 | 1.0833768 | 6.21 | -1.0 | 66.5 |
| 03/19/2024 | 0:56:05.447 | 7:20:22.01 | 1.0574048 | 6.36 | -0.9 | 71.3 |
| 03/20/2024 | 1:01:22.188 | 8:06:50.69 | 1.0308688 | 6.53 | -0.8 | 76.0 |
| 03/21/2024 | 1:06:21.328 | 8:51:01.12 | 1.0039267 | 6.70 | -0.7 | 80.8 |
| 03/22/2024 | 1:11:01.343 | 9:32:38.96 | 0.9767427 | 6.89 | -0.6 | 85.6 |
| 03/23/2024 | 1:15:20.798 | 10:11:30.91 | 0.9494839 | 7.09 | -0.5 | 90.4 |
| 03/24/2024 | 1:19:18.367 | 10:47:24.71 | 0.9223164 | 7.30 | -0.3 | 95.1 |
| 03/25/2024 | 1:22:52.851 | 11:20:09.26 | 0.8954023 | 7.52 | -0.2 | 99.8 |
| 03/26/2024 | 1:26:03.204 | 11:49:34.55 | 0.8688971 | 7.75 | -0.0 | 104.4 |
| 03/27/2024 | 1:28:48.543 | 12:15:31.67 | 0.8429480 | 7.98 | 0.2 | 109.0 |
| 03/28/2024 | 1:31:08.174 | 12:37:52.80 | 0.8176925 | 8.23 | 0.4 | 113.6 |
| 03/29/2024 | 1:33:01.605 | 12:56:31.16 | 0.7932576 | 8.48 | 0.6 | 118.2 |
| 03/30/2024 | 1:34:28.570 | 13:11:21.13 | 0.7697597 | 8.74 | 0.9 | 122.7 |
| 03/31/2024 | 1:35:29.051 | 13:22:18.27 | 0.7473044 | 9.01 | 1.2 | 127.1 |
| 04/01/2024 | 1:36:03.302 | 13:29:19.53 | 0.7259867 | 9.27 | 1.5 | 131.6 |
| 04/02/2024 | 1:36:11.872 | 13:32:23.44 | 0.7058913 | 9.53 | 1.8 | 136.0 |
| 04/03/2024 | 1:35:55.625 | 13:31:30.42 | 0.6870929 | 9.79 | 2.2 | 140.4 |
| 04/04/2024 | 1:35:15.756 | 13:26:43.06 | 0.6696560 | 10.05 | 2.6 | 144.8 |
| 04/05/2024 | 1:34:13.803 | 13:18:06.49 | 0.6536354 | 10.30 | 3.0 | 149.1 |
| 04/06/2024 | 1:32:51.639 | 13:05:48.70 | 0.6390760 | 10.53 | 3.5 | 153.4 |
| 04/07/2024 | 1:31:11.464 | 12:50:00.78 | 0.6260122 | 10.75 | 4.0 | 157.7 |
| 04/08/2024 | 1:29:15.773 | 12:30:57.14 | 0.6144687 | 10.95 | 4.5 | 161.9 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 1:27:07.312 | 12:08:55.49 | 0.6044591 | 11.13 | 5.0 | 166.0 |
| 04/10/2024 | 1:24:49.022 | 11:44:16.76 | 0.5959870 | 11.29 | 5.6 | 169.8 |
| 04/11/2024 | 1:22:23.972 | 11:17:24.72 | 0.5890449 | 11.43 | 6.1 | 173.1 |
| 04/12/2024 | 1:19:55.278 | 10:48:45.54 | 0.5836152 | 11.53 | 6.3 | 174.8 |
| 04/13/2024 | 1:17:26.030 | 10:18:47.12 | 0.5796701 | 11.61 | 6.1 | 173.5 |
| 04/14/2024 | 1:14:59.214 | 9:47:58.28 | 0.5771724 | 11.66 | 5.7 | 170.6 |
| 04/15/2024 | 1:12:37.638 | 9:16:48.01 | 0.5760764 | 11.68 | 5.2 | 167.1 |
| 04/16/2024 | 1:10:23.878 | 8:45:44.58 | 0.5763291 | 11.68 | 4.7 | 163.5 |
| 04/17/2024 | 1:08:20.230 | 8:15:14.85 | 0.5778712 | 11.65 | 4.3 | 159.9 |
| 04/18/2024 | 1:06:28.675 | 7:45:43.56 | 0.5806387 | 11.59 | 3.9 | 156.4 |
| 04/19/2024 | 1:04:50.874 | 7:17:32.92 | 0.5845646 | 11.51 | 3.5 | 153.0 |
| 04/20/2024 | 1:03:28.159 | 6:51:02.24 | 0.5895799 | 11.41 | 3.2 | 149.6 |
| 04/21/2024 | 1:02:21.549 | 6:26:27.79 | 0.5956148 | 11.30 | 2.9 | 146.4 |
| 04/22/2024 | 1:01:31.771 | 6:04:02.80 | 0.6026003 | 11.17 | 2.6 | 143.2 |
| 04/23/2024 | 1:00:59.289 | 5:43:57.57 | 0.6104691 | 11.02 | 2.4 | 140.2 |
| 04/24/2024 | 1:00:44.334 | 5:26:19.65 | 0.6191559 | 10.87 | 2.1 | 137.3 |
| 04/25/2024 | 1:00:46.938 | 5:11:14.15 | 0.6285985 | 10.71 | 1.9 | 134.4 |
| 04/26/2024 | 1:01:06.970 | 4:58:43.98 | 0.6387383 | 10.54 | 1.8 | 131.7 |
| 04/27/2024 | 1:01:44.166 | 4:48:50.21 | 0.6495201 | 10.36 | 1.6 | 129.1 |
| 04/28/2024 | 1:02:38.159 | 4:41:32.33 | 0.6608927 | 10.18 | 1.5 | 126.5 |
| 04/29/2024 | 1:03:48.504 | 4:36:48.56 | 0.6728085 | 10.00 | 1.3 | 124.1 |
| 04/30/2024 | 1:05:14.704 | 4:34:36.10 | 0.6852242 | 9.82 | 1.2 | 121.7 |
| 05/01/2024 | 1:06:56.228 | 4:34:51.36 | 0.6980997 | 9.64 | 1.1 | 119.4 |
| 05/02/2024 | 1:08:52.530 | 4:37:30.12 | 0.7113986 | 9.46 | 1.0 | 117.2 |
| 05/03/2024 | 1:11:03.059 | 4:42:27.78 | 0.7250881 | 9.28 | 0.9 | 115.0 |
| 05/04/2024 | 1:13:27.275 | 4:49:39.41 | 0.7391379 | 9.11 | 0.8 | 112.8 |
| 05/05/2024 | 1:16:04.657 | 4:58:59.91 | 0.7535212 | 8.93 | 0.8 | 110.7 |
| 05/06/2024 | 1:18:54.708 | 5:10:24.09 | 0.7682133 | 8.76 | 0.7 | 108.7 |
| 05/07/2024 | 1:21:56.962 | 5:23:46.76 | 0.7831921 | 8.59 | 0.6 | 106.6 |
| 05/08/2024 | 1:25:10.985 | 5:39:02.74 | 0.7984373 | 8.43 | 0.6 | 104.6 |
| 05/09/2024 | 1:28:36.382 | 5:56:06.89 | 0.8139307 | 8.27 | 0.5 | 102.6 |
| 05/10/2024 | 1:32:12.794 | 6:14:54.21 | 0.8296554 | 8.11 | 0.5 | 100.6 |
| 05/11/2024 | 1:35:59.905 | 6:35:19.76 | 0.8455956 | 7.96 | 0.4 | 98.7 |
| 05/12/2024 | 1:39:57.439 | 6:57:18.72 | 0.8617364 | 7.81 | 0.3 | 96.7 |
| 05/13/2024 | 1:44:05.163 | 7:20:46.40 | 0.8780635 | 7.66 | 0.3 | 94.8 |
| 05/14/2024 | 1:48:22.886 | 7:45:38.18 | 0.8945628 | 7.52 | 0.2 | 92.8 |
| 05/15/2024 | 1:52:50.458 | 8:11:49.55 | 0.9112202 | 7.39 | 0.2 | 90.9 |
| 05/16/2024 | 1:57:27.768 | 8:39:16.09 | 0.9280214 | 7.25 | 0.1 | 88.9 |
| 05/17/2024 | 2:02:14.748 | 9:07:53.39 | 0.9449512 | 7.12 | 0.1 | 86.9 |
| 05/18/2024 | 2:07:11.366 | 9:37:37.11 | 0.9619936 | 7.00 | 0.0 | 84.9 |
| 05/19/2024 | 2:12:17.627 | 10:08:22.89 | 0.9791316 | 6.87 | -0.0 | 82.9 |
| 05/20/2024 | 2:17:33.574 | 10:40:06.36 | 0.9963461 | 6.75 | -0.1 | 80.9 |
| 05/21/2024 | 2:22:59.281 | 11:12:43.07 | 1.0136164 | 6.64 | -0.1 | 78.8 |
| 05/22/2024 | 2:28:34.856 | 11:46:08.52 | 1.0309193 | 6.53 | -0.2 | 76.6 |
| 05/23/2024 | 2:34:20.440 | 12:20:18.03 | 1.0482289 | 6.42 | -0.3 | 74.5 |
| 05/24/2024 | 2:40:16.196 | 12:55:06.78 | 1.0655161 | 6.32 | -0.3 | 72.2 |
| 05/25/2024 | 2:46:22.314 | 13:30:29.70 | 1.0827479 | 6.22 | -0.4 | 69.9 |
| 05/26/2024 | 2:52:39.004 | 14:06:21.48 | 1.0998874 | 6.12 | -0.4 | 67.5 |
| 05/27/2024 | 2:59:06.491 | 14:42:36.45 | 1.1168931 | 6.03 | -0.5 | 65.1 |
| 05/28/2024 | 3:05:45.009 | 15:19:08.57 | 1.1337184 | 5.94 | -0.6 | 62.5 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 3:12:34.795 | 15:55:51.38 | 1.1503112 | 5.85 | -0.6 | 59.9 |
| 05/30/2024 | 3:19:36.081 | 16:32:37.92 | 1.1666137 | 5.77 | -0.7 | 57.2 |
| 05/31/2024 | 3:26:49.081 | 17:09:20.68 | 1.1825618 | 5.69 | -0.8 | 54.3 |
| 06/01/2024 | 3:34:13.981 | 17:45:51.57 | 1.1980853 | 5.62 | -0.9 | 51.4 |
| 06/02/2024 | 3:41:50.926 | 18:22:01.90 | 1.2131079 | 5.55 | -1.0 | 48.3 |
| 06/03/2024 | 3:49:39.997 | 18:57:42.29 | 1.2275473 | 5.48 | -1.0 | 45.0 |
| 06/04/2024 | 3:57:41.199 | 19:32:42.76 | 1.2413159 | 5.42 | -1.1 | 41.7 |
| 06/05/2024 | 4:05:54.437 | 20:06:52.65 | 1.2543220 | 5.37 | -1.2 | 38.2 |
| 06/06/2024 | 4:14:19.499 | 20:40:00.77 | 1.2664708 | 5.31 | -1.3 | 34.6 |
| 06/07/2024 | 4:22:56.035 | 21:11:55.43 | 1.2776663 | 5.27 | -1.4 | 30.8 |
| 06/08/2024 | 4:31:43.541 | 21:42:24.62 | 1.2878137 | 5.23 | -1.6 | 26.9 |
| 06/09/2024 | 4:40:41.349 | 22:11:16.19 | 1.2968220 | 5.19 | -1.7 | 23.0 |
| 06/10/2024 | 4:49:48.615 | 22:38:18.07 | 1.3046066 | 5.16 | -1.8 | 18.9 |
| 06/11/2024 | 4:59:04.323 | 23:03:18.61 | 1.3110930 | 5.13 | -2.0 | 14.9 |
| 06/12/2024 | 5:08:27.288 | 23:26:06.79 | 1.3162189 | 5.11 | -2.1 | 10.8 |
| 06/13/2024 | 5:17:56.177 | 23:46:32.61 | 1.3199375 | 5.10 | -2.3 | 6.8 |
| 06/14/2024 | 5:27:29.533 | 24:04:27.32 | 1.3222191 | 5.09 | -2.4 | 3.6 |
| 06/15/2024 | 5:37:05.806 | 24:19:43.69 | 1.3230527 | 5.09 | -2.4 | 3.9 |
| 06/16/2024 | 5:46:43.393 | 24:32:16.20 | 1.3224462 | 5.09 | -2.2 | 7.3 |
| 06/17/2024 | 5:56:20.680 | 24:42:01.16 | 1.3204258 | 5.10 | -2.0 | 11.2 |
| 06/18/2024 | 6:05:56.081 | 24:48:56.74 | 1.3170346 | 5.11 | -1.9 | 15.1 |
| 06/19/2024 | 6:15:28.073 | 24:53:02.92 | 1.3123306 | 5.13 | -1.7 | 18.9 |
| 06/20/2024 | 6:24:55.231 | 24:54:21.39 | 1.3063838 | 5.15 | -1.6 | 22.7 |
| 06/21/2024 | 6:34:16.250 | 24:52:55.38 | 1.2992735 | 5.18 | -1.4 | 26.4 |
| 06/22/2024 | 6:43:29.960 | 24:48:49.45 | 1.2910850 | 5.21 | -1.3 | 30.0 |
| 06/23/2024 | 6:52:35.337 | 24:42:09.24 | 1.2819075 | 5.25 | -1.2 | 33.4 |
| 06/24/2024 | 7:01:31.506 | 24:33:01.27 | 1.2718307 | 5.29 | -1.1 | 36.7 |
| 06/25/2024 | 7:10:17.732 | 24:21:32.74 | 1.2609434 | 5.34 | -1.0 | 39.8 |
| 06/26/2024 | 7:18:53.420 | 24:07:51.26 | 1.2493315 | 5.39 | -0.9 | 42.9 |
| 06/27/2024 | 7:27:18.098 | 23:52:04.75 | 1.2370768 | 5.44 | -0.8 | 45.8 |
| 06/28/2024 | 7:35:31.407 | 23:34:21.25 | 1.2242562 | 5.50 | -0.7 | 48.6 |
| 06/29/2024 | 7:43:33.084 | 23:14:48.84 | 1.2109411 | 5.56 | -0.6 | 51.3 |
| 06/30/2024 | 7:51:22.951 | 22:53:35.53 | 1.1971970 | 5.62 | -0.6 | 53.8 |
| 07/01/2024 | 7:59:00.898 | 22:30:49.18 | 1.1830839 | 5.69 | -0.5 | 56.3 |
| 07/02/2024 | 8:06:26.870 | 22:06:37.47 | 1.1686558 | 5.76 | -0.5 | 58.6 |
| 07/03/2024 | 8:13:40.856 | 21:41:07.86 | 1.1539616 | 5.83 | -0.4 | 60.9 |
| 07/04/2024 | 8:20:42.880 | 21:14:27.57 | 1.1390449 | 5.91 | -0.3 | 63.0 |
| 07/05/2024 | 8:27:32.988 | 20:46:43.57 | 1.1239448 | 5.99 | -0.3 | 65.1 |
| 07/06/2024 | 8:34:11.245 | 20:18:02.57 | 1.1086959 | 6.07 | -0.2 | 67.1 |
| 07/07/2024 | 8:40:37.724 | 19:48:31.04 | 1.0933292 | 6.16 | -0.2 | 69.1 |
| 07/08/2024 | 8:46:52.504 | 19:18:15.21 | 1.0778721 | 6.24 | -0.2 | 70.9 |
| 07/09/2024 | 8:52:55.663 | 18:47:21.11 | 1.0623487 | 6.34 | -0.1 | 72.8 |
| 07/10/2024 | 8:58:47.271 | 18:15:54.55 | 1.0467807 | 6.43 | -0.1 | 74.5 |
| 07/11/2024 | 9:04:27.390 | 17:44:01.18 | 1.0311873 | 6.53 | -0.0 | 76.3 |
| 07/12/2024 | 9:09:56.067 | 17:11:46.51 | 1.0155857 | 6.63 | -0.0 | 78.0 |
| 07/13/2024 | 9:15:13.333 | 16:39:15.93 | 0.9999915 | 6.73 | 0.0 | 79.7 |
| 07/14/2024 | 9:20:19.195 | 16:06:34.71 | 0.9844187 | 6.84 | 0.1 | 81.3 |
| 07/15/2024 | 9:25:13.641 | 15:33:48.07 | 0.9688803 | 6.95 | 0.1 | 83.0 |
| 07/16/2024 | 9:29:56.631 | 15:01:01.18 | 0.9533887 | 7.06 | 0.1 | 84.6 |
| 07/17/2024 | 9:34:28.096 | 14:28:19.21 | 0.9379554 | 7.18 | 0.2 | 86.2 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 9:38:47.940 | 13:55:47.32 | 0.9225917 | 7.29 | 0.2 | 87.9 |
| 07/19/2024 | 9:42:56.033 | 13:23:30.73 | 0.9073090 | 7.42 | 0.2 | 89.5 |
| 07/20/2024 | 9:46:52.213 | 12:51:34.70 | 0.8921187 | 7.54 | 0.3 | 91.2 |
| 07/21/2024 | 9:50:36.282 | 12:20:04.62 | 0.8770328 | 7.67 | 0.3 | 92.9 |
| 07/22/2024 | 9:54:08.011 | 11:49:05.96 | 0.8620637 | 7.81 | 0.3 | 94.7 |
| 07/23/2024 | 9:57:27.131 | 11:18:44.37 | 0.8472248 | 7.94 | 0.4 | 96.4 |
| 07/24/2024 | 10:00:33.340 | 10:49:05.65 | 0.8325307 | 8.08 | 0.4 | 98.3 |
| 07/25/2024 | 10:03:26.303 | 10:20:15.81 | 0.8179972 | 8.23 | 0.5 | 100.1 |
| 07/26/2024 | 10:06:05.645 | 9:52:21.10 | 0.8036418 | 8.37 | 0.5 | 102.1 |
| 07/27/2024 | 10:08:30.960 | 9:25:28.03 | 0.7894839 | 8.52 | 0.6 | 104.1 |
| 07/28/2024 | 10:10:41.806 | 8:59:43.42 | 0.7755452 | 8.68 | 0.6 | 106.1 |
| 07/29/2024 | 10:12:37.711 | 8:35:14.40 | 0.7618499 | 8.83 | 0.7 | 108.2 |
| 07/30/2024 | 10:14:18.176 | 8:12:08.43 | 0.7484252 | 8.99 | 0.8 | 110.4 |
| 07/31/2024 | 10:15:42.684 | 7:50:33.29 | 0.7353017 | 9.15 | 0.8 | 112.7 |
| 08/01/2024 | 10:16:50.712 | 7:30:37.08 | 0.7225135 | 9.31 | 0.9 | 115.1 |
| 08/02/2024 | 10:17:41.736 | 7:12:28.15 | 0.7100990 | 9.48 | 1.0 | 117.5 |
| 08/03/2024 | 10:18:15.255 | 6:56:15.08 | 0.6981006 | 9.64 | 1.1 | 120.1 |
| 08/04/2024 | 10:18:30.810 | 6:42:06.58 | 0.6865658 | 9.80 | 1.3 | 122.7 |
| 08/05/2024 | 10:18:28.002 | 6:30:11.34 | 0.6755468 | 9.96 | 1.4 | 125.4 |
| 08/06/2024 | 10:18:06.526 | 6:20:37.95 | 0.6651012 | 10.12 | 1.6 | 128.2 |
| 08/07/2024 | 10:17:26.202 | 6:13:34.60 | 0.6552918 | 10.27 | 1.7 | 131.2 |
| 08/08/2024 | 10:16:27.007 | 6:09:08.90 | 0.6461868 | 10.41 | 1.9 | 134.2 |
| 08/09/2024 | 10:15:09.122 | 6:07:27.56 | 0.6378594 | 10.55 | 2.1 | 137.3 |
| 08/10/2024 | 10:13:32.970 | 6:08:36.00 | 0.6303879 | 10.68 | 2.4 | 140.6 |
| 08/11/2024 | 10:11:39.259 | 6:12:38.03 | 0.6238547 | 10.79 | 2.6 | 143.9 |
| 08/12/2024 | 10:09:29.021 | 6:19:35.38 | 0.6183457 | 10.88 | 2.9 | 147.3 |
| 08/13/2024 | 10:07:03.651 | 6:29:27.32 | 0.6139493 | 10.96 | 3.3 | 150.8 |
| 08/14/2024 | 10:04:24.930 | 6:42:10.22 | 0.6107548 | 11.02 | 3.6 | 154.3 |
| 08/15/2024 | 10:01:35.037 | 6:57:37.33 | 0.6088508 | 11.05 | 4.0 | 157.8 |
| 08/16/2024 | 9:58:36.548 | 7:15:38.44 | 0.6083236 | 11.06 | 4.4 | 161.2 |
| 08/17/2024 | 9:55:32.410 | 7:35:59.91 | 0.6092549 | 11.05 | 4.8 | 164.4 |
| 08/18/2024 | 9:52:25.899 | 7:58:24.70 | 0.6117196 | 11.00 | 5.1 | 166.9 |
| 08/19/2024 | 9:49:20.550 | 8:22:32.66 | 0.6157838 | 10.93 | 5.3 | 168.4 |
| 08/20/2024 | 9:46:20.081 | 8:48:01.00 | 0.6215028 | 10.83 | 5.3 | 168.3 |
| 08/21/2024 | 9:43:28.288 | 9:14:24.84 | 0.6289191 | 10.70 | 5.0 | 166.5 |
| 08/22/2024 | 9:40:48.946 | 9:41:18.00 | 0.6380611 | 10.55 | 4.6 | 163.5 |
| 08/23/2024 | 9:38:25.697 | 10:08:13.67 | 0.6489422 | 10.37 | 4.1 | 159.8 |
| 08/24/2024 | 9:36:21.959 | 10:34:45.19 | 0.6615595 | 10.17 | 3.6 | 155.6 |
| 08/25/2024 | 9:34:40.833 | 11:00:26.70 | 0.6758941 | 9.96 | 3.1 | 151.2 |
| 08/26/2024 | 9:33:25.040 | 11:24:53.65 | 0.6919106 | 9.73 | 2.7 | 146.6 |
| 08/27/2024 | 9:32:36.873 | 11:47:43.18 | 0.7095575 | 9.48 | 2.2 | 141.9 |
| 08/28/2024 | 9:32:18.167 | 12:08:34.41 | 0.7287669 | 9.23 | 1.8 | 137.0 |
| 08/29/2024 | 9:32:30.287 | 12:27:08.55 | 0.7494555 | 8.98 | 1.4 | 132.1 |
| 08/30/2024 | 9:33:14.135 | 12:43:08.95 | 0.7715244 | 8.72 | 1.1 | 127.1 |
| 08/31/2024 | 9:34:30.158 | 12:56:21.12 | 0.7948597 | 8.47 | 0.8 | 122.0 |
| 09/01/2024 | 9:36:18.373 | 13:06:32.64 | 0.8193330 | 8.21 | 0.5 | 116.9 |
| 09/02/2024 | 9:38:38.389 | 13:13:33.19 | 0.8448018 | 7.97 | 0.2 | 111.7 |
| 09/03/2024 | 9:41:29.441 | 13:17:14.45 | 0.8711110 | 7.73 | 0.0 | 106.5 |
| 09/04/2024 | 9:44:50.420 | 13:17:30.20 | 0.8980935 | 7.49 | -0.2 | 101.3 |
| 09/05/2024 | 9:48:39.907 | 13:14:16.25 | 0.9255731 | 7.27 | -0.4 | 96.0 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 9:52:56.211 | 13:07:30.58 | 0.9533660 | 7.06 | -0.5 | 90.8 |
| 09/07/2024 | 9:57:37.410 | 12:57:13.30 | 0.9812848 | 6.86 | -0.6 | 85.5 |
| 09/08/2024 | 10:02:41.396 | 12:43:26.70 | 1.0091416 | 6.67 | -0.7 | 80.3 |
| 09/09/2024 | 10:08:05.926 | 12:26:15.24 | 1.0367523 | 6.49 | -0.8 | 75.2 |
| 09/10/2024 | 10:13:48.675 | 12:05:45.43 | 1.0639407 | 6.33 | -0.9 | 70.1 |
| 09/11/2024 | 10:19:47.285 | 11:42:05.73 | 1.0905425 | 6.17 | -1.0 | 65.2 |
| 09/12/2024 | 10:25:59.424 | 11:15:26.24 | 1.1164089 | 6.03 | -1.0 | 60.3 |
| 09/13/2024 | 10:32:22.832 | 10:45:58.52 | 1.1414094 | 5.90 | -1.1 | 55.6 |
| 09/14/2024 | 10:38:55.366 | 10:13:55.17 | 1.1654339 | 5.77 | -1.1 | 51.1 |
| 09/15/2024 | 10:45:35.036 | 9:39:29.55 | 1.1883932 | 5.66 | -1.2 | 46.7 |
| 09/16/2024 | 10:52:20.027 | 9:02:55.41 | 1.2102195 | 5.56 | -1.2 | 42.5 |
| 09/17/2024 | 10:59:08.723 | 8:24:26.54 | 1.2308653 | 5.47 | -1.2 | 38.5 |
| 09/18/2024 | 11:05:59.708 | 7:44:16.54 | 1.2503013 | 5.38 | -1.3 | 34.6 |
| 09/19/2024 | 11:12:51.768 | 7:02:38.53 | 1.2685151 | 5.31 | -1.3 | 31.0 |
| 09/20/2024 | 11:19:43.882 | 6:19:45.04 | 1.2855082 | 5.24 | -1.3 | 27.6 |
| 09/21/2024 | 11:26:35.205 | 5:35:47.84 | 1.3012939 | 5.17 | -1.4 | 24.3 |
| 09/22/2024 | 11:33:25.058 | 4:50:57.86 | 1.3158949 | 5.11 | -1.4 | 21.2 |
| 09/23/2024 | 11:40:12.902 | 4:05:25.22 | 1.3293410 | 5.06 | -1.4 | 18.3 |
| 09/24/2024 | 11:46:58.328 | 3:19:19.14 | 1.3416671 | 5.02 | -1.5 | 15.6 |
| 09/25/2024 | 11:53:41.037 | 2:32:47.99 | 1.3529120 | 4.97 | -1.5 | 13.0 |
| 09/26/2024 | 12:00:20.824 | 1:45:59.35 | 1.3631160 | 4.94 | -1.6 | 10.7 |
| 09/27/2024 | 12:06:57.564 | 0:59:00.00 | 1.3723209 | 4.90 | -1.6 | 8.5 |
| 09/28/2024 | 12:13:31.198 | 0:11:56.06 | 1.3805681 | 4.87 | -1.7 | 6.5 |
| 09/29/2024 | 12:20:01.721 | -0:35:07.05 | 1.3878983 | 4.85 | -1.7 | 4.8 |
| 09/30/2024 | 12:26:29.175 | -1:22:04.44 | 1.3943511 | 4.83 | -1.7 | 3.6 |
| 10/01/2024 | 12:32:53.633 | -2:08:51.77 | 1.3999641 | 4.81 | -1.7 | 3.3 |
| 10/02/2024 | 12:39:15.197 | -2:55:25.17 | 1.4047733 | 4.79 | -1.6 | 4.0 |
| 10/03/2024 | 12:45:33.991 | -3:41:41.16 | 1.4088122 | 4.78 | -1.5 | 5.2 |
| 10/04/2024 | 12:51:50.154 | -4:27:36.64 | 1.4121124 | 4.77 | -1.4 | 6.5 |
| 10/05/2024 | 12:58:03.836 | -5:13:08.81 | 1.4147031 | 4.76 | -1.3 | 7.9 |
| 10/06/2024 | 13:04:15.191 | -5:58:15.14 | 1.4166112 | 4.75 | -1.3 | 9.4 |
| 10/07/2024 | 13:10:24.383 | -6:42:53.36 | 1.4178614 | 4.75 | -1.2 | 10.8 |
| 10/08/2024 | 13:16:31.572 | -7:27:01.37 | 1.4184765 | 4.74 | -1.1 | 12.1 |
| 10/09/2024 | 13:22:36.921 | -8:10:37.28 | 1.4184769 | 4.74 | -1.0 | 13.5 |
| 10/10/2024 | 13:28:40.588 | -8:53:39.31 | 1.4178811 | 4.75 | -0.9 | 14.8 |
| 10/11/2024 | 13:34:42.729 | -9:36:05.84 | 1.4167060 | 4.75 | -0.9 | 16.1 |
| 10/12/2024 | 13:40:43.497 | -10:17:55.34 | 1.4149665 | 4.76 | -0.8 | 17.4 |
| 10/13/2024 | 13:46:43.036 | -10:59:06.36 | 1.4126757 | 4.76 | -0.8 | 18.7 |
| 10/14/2024 | 13:52:41.487 | -11:39:37.55 | 1.4098454 | 4.77 | -0.7 | 20.0 |
| 10/15/2024 | 13:58:38.986 | -12:19:27.59 | 1.4064857 | 4.78 | -0.7 | 21.2 |
| 10/16/2024 | 14:04:35.660 | -12:58:35.24 | 1.4026053 | 4.80 | -0.6 | 22.5 |
| 10/17/2024 | 14:10:31.631 | -13:36:59.31 | 1.3982115 | 4.81 | -0.6 | 23.7 |
| 10/18/2024 | 14:16:27.010 | -14:14:38.61 | 1.3933101 | 4.83 | -0.5 | 25.0 |
| 10/19/2024 | 14:22:21.899 | -14:51:32.00 | 1.3879057 | 4.85 | -0.5 | 26.2 |
| 10/20/2024 | 14:28:16.384 | -15:27:38.31 | 1.3820017 | 4.87 | -0.5 | 27.5 |
| 10/21/2024 | 14:34:10.540 | -16:02:56.38 | 1.3756003 | 4.89 | -0.4 | 28.7 |
| 10/22/2024 | 14:40:04.425 | -16:37:25.00 | 1.3687026 | 4.92 | -0.4 | 30.0 |
| 10/23/2024 | 14:45:58.083 | -17:11:02.98 | 1.3613087 | 4.94 | -0.4 | 31.2 |
| 10/24/2024 | 14:51:51.542 | -17:43:49.06 | 1.3534177 | 4.97 | -0.4 | 32.5 |
| 10/25/2024 | 14:57:44.813 | -18:15:41.98 | 1.3450280 | 5.00 | -0.3 | 33.8 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 15:03:37.889 | -18:46:40.45 | 1.3361372 | 5.04 | -0.3 | 35.0 |
| 10/27/2024 | 15:09:30.741 | -19:16:43.14 | 1.3267420 | 5.07 | -0.3 | 36.3 |
| 10/28/2024 | 15:15:23.319 | -19:45:48.70 | 1.3168388 | 5.11 | -0.3 | 37.6 |
| 10/29/2024 | 15:21:15.548 | -20:13:55.73 | 1.3064229 | 5.15 | -0.3 | 39.0 |
| 10/30/2024 | 15:27:07.325 | -20:41:02.81 | 1.2954895 | 5.19 | -0.3 | 40.3 |
| 10/31/2024 | 15:32:58.515 | -21:07:08.47 | 1.2840332 | 5.24 | -0.3 | 41.7 |
| 11/01/2024 | 15:38:48.952 | -21:32:11.20 | 1.2720482 | 5.29 | -0.3 | 43.1 |
| 11/02/2024 | 15:44:38.428 | -21:56:09.45 | 1.2595284 | 5.34 | -0.3 | 44.5 |
| 11/03/2024 | 15:50:26.696 | -22:19:01.63 | 1.2464677 | 5.40 | -0.3 | 46.0 |
| 11/04/2024 | 15:56:13.460 | -22:40:46.12 | 1.2328598 | 5.46 | -0.3 | 47.5 |
| 11/05/2024 | 16:01:58.371 | -23:01:21.24 | 1.2186987 | 5.52 | -0.3 | 49.0 |
| 11/06/2024 | 16:07:41.022 | -23:20:45.30 | 1.2039787 | 5.59 | -0.3 | 50.7 |
| 11/07/2024 | 16:13:20.939 | -23:38:56.55 | 1.1886947 | 5.66 | -0.3 | 52.4 |
| 11/08/2024 | 16:18:57.576 | -23:55:53.20 | 1.1728424 | 5.74 | -0.3 | 54.1 |
| 11/09/2024 | 16:24:30.303 | -24:11:33.46 | 1.1564188 | 5.82 | -0.3 | 56.0 |
| 11/10/2024 | 16:29:58.399 | -24:25:55.49 | 1.1394223 | 5.91 | -0.3 | 57.9 |
| 11/11/2024 | 16:35:21.041 | -24:38:57.42 | 1.1218535 | 6.00 | -0.4 | 60.0 |
| 11/12/2024 | 16:40:37.289 | -24:50:37.39 | 1.1037158 | 6.10 | -0.4 | 62.1 |
| 11/13/2024 | 16:45:46.076 | -25:00:53.52 | 1.0850156 | 6.20 | -0.4 | 64.4 |
| 11/14/2024 | 16:50:46.187 | -25:09:43.91 | 1.0657636 | 6.31 | -0.4 | 66.8 |
| 11/15/2024 | 16:55:36.248 | -25:17:06.65 | 1.0459755 | 6.43 | -0.4 | 69.4 |
| 11/16/2024 | 17:00:14.702 | -25:22:59.83 | 1.0256733 | 6.56 | -0.4 | 72.1 |
| 11/17/2024 | 17:04:39.791 | -25:27:21.49 | 1.0048864 | 6.70 | -0.4 | 75.0 |
| 11/18/2024 | 17:08:49.542 | -25:30:09.59 | 0.9836535 | 6.84 | -0.4 | 78.1 |
| 11/19/2024 | 17:12:41.745 | -25:31:22.02 | 0.9620245 | 7.00 | -0.4 | 81.4 |
| 11/20/2024 | 17:16:13.947 | -25:30:56.55 | 0.9400622 | 7.16 | -0.3 | 85.0 |
| 11/21/2024 | 17:19:23.446 | -25:28:50.78 | 0.9178454 | 7.33 | -0.3 | 88.7 |
| 11/22/2024 | 17:22:07.297 | -25:25:02.07 | 0.8954712 | 7.52 | -0.2 | 92.7 |
| 11/23/2024 | 17:24:22.336 | -25:19:27.55 | 0.8730580 | 7.71 | -0.2 | 97.0 |
| 11/24/2024 | 17:26:05.231 | -25:12:03.99 | 0.8507486 | 7.91 | -0.1 | 101.6 |
| 11/25/2024 | 17:27:12.566 | -25:02:47.82 | 0.8287127 | 8.12 | 0.1 | 106.5 |
| 11/26/2024 | 17:27:40.974 | -24:51:35.13 | 0.8071494 | 8.34 | 0.2 | 111.7 |
| 11/27/2024 | 17:27:27.323 | -24:38:21.86 | 0.7862889 | 8.56 | 0.5 | 117.2 |
| 11/28/2024 | 17:26:28.970 | -24:23:04.08 | 0.7663917 | 8.78 | 0.7 | 123.1 |
| 11/29/2024 | 17:24:44.084 | -24:05:38.61 | 0.7477470 | 9.00 | 1.1 | 129.3 |
| 11/30/2024 | 17:22:12.018 | -23:46:03.97 | 0.7306671 | 9.21 | 1.5 | 135.9 |
| 12/01/2024 | 17:18:53.705 | -23:24:21.73 | 0.7154781 | 9.41 | 2.1 | 142.7 |
| 12/02/2024 | 17:14:52.027 | -23:00:38.18 | 0.7025073 | 9.58 | 2.8 | 149.9 |
| 12/03/2024 | 17:10:12.061 | -22:35:06.16 | 0.6920655 | 9.72 | 3.5 | 157.2 |
| 12/04/2024 | 17:05:01.136 | -22:08:06.62 | 0.6844278 | 9.83 | 4.5 | 164.7 |
| 12/05/2024 | 16:59:28.612 | -21:40:09.46 | 0.6798126 | 9.90 | 5.4 | 171.9 |
| 12/06/2024 | 16:53:45.367 | -21:11:53.04 | 0.6783631 | 9.92 | 6.0 | 175.5 |
| 12/07/2024 | 16:48:03.032 | -20:44:02.14 | 0.6801342 | 9.90 | 5.2 | 170.0 |
| 12/08/2024 | 16:42:33.096 | -20:17:24.56 | 0.6850870 | 9.82 | 4.2 | 162.7 |
| 12/09/2024 | 16:37:26.043 | -19:52:46.82 | 0.6930918 | 9.71 | 3.3 | 155.2 |
| 12/10/2024 | 16:32:50.658 | -19:30:50.02 | 0.7039400 | 9.56 | 2.5 | 147.9 |
| 12/11/2024 | 16:28:53.615 | -19:12:06.52 | 0.7173611 | 9.38 | 1.9 | 140.7 |
| 12/12/2024 | 16:25:39.352 | -18:56:58.10 | 0.7330437 | 9.18 | 1.4 | 133.9 |
| 12/13/2024 | 16:23:10.201 | -18:45:35.58 | 0.7506552 | 8.97 | 1.0 | 127.4 |
| 12/14/2024 | 16:21:26.690 | -18:37:59.72 | 0.7698607 | 8.74 | 0.6 | 121.3 |

Mercury - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 16:20:27.922 | -18:34:02.99 | 0.7903366 | 8.52 | 0.4 | 115.4 |
| 12/16/2024 | 16:20:11.968 | -18:33:31.52 | 0.8117815 | 8.29 | 0.1 | 110.0 |
| 12/17/2024 | 16:20:36.228 | -18:36:07.23 | 0.8339223 | 8.07 | -0.0 | 104.9 |
| 12/18/2024 | 16:21:37.721 | -18:41:29.56 | 0.8565173 | 7.86 | -0.1 | 100.1 |
| 12/19/2024 | 16:23:13.314 | -18:49:16.93 | 0.8793567 | 7.65 | -0.2 | 95.6 |
| 12/20/2024 | 16:25:19.888 | -18:59:07.84 | 0.9022618 | 7.46 | -0.3 | 91.4 |
| 12/21/2024 | 16:27:54.442 | -19:10:41.57 | 0.9250828 | 7.28 | -0.3 | 87.4 |
| 12/22/2024 | 16:30:54.164 | -19:23:38.67 | 0.9476955 | 7.10 | -0.4 | 83.8 |
| 12/23/2024 | 16:34:16.467 | -19:37:41.21 | 0.9699987 | 6.94 | -0.4 | 80.3 |
| 12/24/2024 | 16:37:59.000 | -19:52:32.85 | 0.9919111 | 6.78 | -0.4 | 77.1 |
| 12/25/2024 | 16:41:59.649 | -20:07:58.92 | 1.0133683 | 6.64 | -0.4 | 74.0 |
| 12/26/2024 | 16:46:16.526 | -20:23:46.26 | 1.0343202 | 6.51 | -0.4 | 71.1 |
| 12/27/2024 | 16:50:47.952 | -20:39:43.20 | 1.0547287 | 6.38 | -0.4 | 68.4 |
| 12/28/2024 | 16:55:32.440 | -20:55:39.38 | 1.0745654 | 6.26 | -0.4 | 65.9 |
| 12/29/2024 | 17:00:28.678 | -21:11:25.63 | 1.0938105 | 6.15 | -0.4 | 63.5 |
| 12/30/2024 | 17:05:35.502 | -21:26:53.85 | 1.1124505 | 6.05 | -0.4 | 61.2 |
| 12/31/2024 | 17:10:51.889 | -21:41:56.90 | 1.1304774 | 5.95 | -0.3 | 59.0 |
| 01/01/2025 | 17:16:16.932 | -21:56:28.45 | 1.1478875 | 5.86 | -0.3 | 56.9 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 15:58:47.696 | -18:30:04.61 | 1.1756015 | 14.20 | -4.0 | 56.2 |
| 01/01/2024 | 16:03:47.896 | -18:46:08.63 | 1.1819023 | 14.12 | -4.0 | 55.9 |
| 01/02/2024 | 16:08:49.281 | -19:01:44.38 | 1.1881745 | 14.05 | -4.0 | 55.5 |
| 01/03/2024 | 16:13:51.835 | -19:16:51.15 | 1.1944177 | 13.97 | -4.0 | 55.2 |
| 01/04/2024 | 16:18:55.541 | -19:31:28.23 | 1.2006315 | 13.90 | -4.0 | 54.8 |
| 01/05/2024 | 16:24:00.379 | -19:45:34.92 | 1.2068157 | 13.83 | -4.0 | 54.5 |
| 01/06/2024 | 16:29:06.324 | -19:59:10.55 | 1.2129700 | 13.76 | -4.0 | 54.2 |
| 01/07/2024 | 16:34:13.351 | -20:12:14.45 | 1.2190939 | 13.69 | -4.0 | 53.8 |
| 01/08/2024 | 16:39:21.431 | -20:24:46.00 | 1.2251873 | 13.62 | -4.0 | 53.5 |
| 01/09/2024 | 16:44:30.531 | -20:36:44.57 | 1.2312499 | 13.55 | -4.0 | 53.1 |
| 01/10/2024 | 16:49:40.617 | -20:48:09.57 | 1.2372815 | 13.49 | -4.0 | 52.8 |
| 01/11/2024 | 16:54:51.649 | -20:59:00.40 | 1.2432821 | 13.42 | -4.0 | 52.4 |
| 01/12/2024 | 17:00:03.585 | -21:09:16.50 | 1.2492515 | 13.36 | -4.0 | 52.1 |
| 01/13/2024 | 17:05:16.381 | -21:18:57.34 | 1.2551900 | 13.30 | -4.0 | 51.7 |
| 01/14/2024 | 17:10:29.996 | -21:28:02.38 | 1.2610976 | 13.23 | -3.9 | 51.3 |
| 01/15/2024 | 17:15:44.384 | -21:36:31.14 | 1.2669746 | 13.17 | -3.9 | 50.9 |
| 01/16/2024 | 17:20:59.506 | -21:44:23.15 | 1.2728212 | 13.11 | -3.9 | 50.5 |
| 01/17/2024 | 17:26:15.318 | -21:51:37.98 | 1.2786378 | 13.05 | -3.9 | 50.1 |
| 01/18/2024 | 17:31:31.778 | -21:58:15.26 | 1.2844244 | 12.99 | -3.9 | 49.7 |
| 01/19/2024 | 17:36:48.843 | -22:04:14.60 | 1.2901814 | 12.93 | -3.9 | 49.3 |
| 01/20/2024 | 17:42:06.464 | -22:09:35.69 | 1.2959088 | 12.88 | -3.9 | 48.9 |
| 01/21/2024 | 17:47:24.596 | -22:14:18.21 | 1.3016068 | 12.82 | -3.9 | 48.5 |
| 01/22/2024 | 17:52:43.188 | -22:18:21.87 | 1.3072752 | 12.77 | -3.9 | 48.2 |
| 01/23/2024 | 17:58:02.189 | -22:21:46.42 | 1.3129142 | 12.71 | -3.9 | 47.8 |
| 01/24/2024 | 18:03:21.546 | -22:24:31.61 | 1.3185235 | 12.66 | -3.9 | 47.4 |
| 01/25/2024 | 18:08:41.207 | -22:26:37.23 | 1.3241031 | 12.60 | -3.9 | 47.0 |
| 01/26/2024 | 18:14:01.118 | -22:28:03.10 | 1.3296528 | 12.55 | -3.9 | 46.7 |
| 01/27/2024 | 18:19:21.225 | -22:28:49.05 | 1.3351724 | 12.50 | -3.9 | 46.3 |
| 01/28/2024 | 18:24:41.473 | -22:28:54.95 | 1.3406617 | 12.45 | -3.9 | 46.0 |
| 01/29/2024 | 18:30:01.809 | -22:28:20.70 | 1.3461203 | 12.40 | -3.9 | 45.6 |
| 01/30/2024 | 18:35:22.176 | -22:27:06.23 | 1.3515481 | 12.35 | -3.9 | 45.3 |
| 01/31/2024 | 18:40:42.522 | -22:25:11.51 | 1.3569448 | 12.30 | -3.9 | 45.0 |
| 02/01/2024 | 18:46:02.791 | -22:22:36.53 | 1.3623100 | 12.25 | -3.9 | 44.7 |
| 02/02/2024 | 18:51:22.928 | -22:19:21.33 | 1.3676436 | 12.20 | -3.9 | 44.3 |
| 02/03/2024 | 18:56:42.879 | -22:15:25.97 | 1.3729451 | 12.16 | -3.9 | 44.0 |
| 02/04/2024 | 19:02:02.590 | -22:10:50.56 | 1.3782143 | 12.11 | -3.9 | 43.7 |
| 02/05/2024 | 19:07:22.005 | -22:05:35.22 | 1.3834509 | 12.06 | -3.9 | 43.4 |
| 02/06/2024 | 19:12:41.070 | -21:59:40.12 | 1.3886547 | 12.02 | -3.9 | 43.1 |
| 02/07/2024 | 19:17:59.729 | -21:53:05.47 | 1.3938253 | 11.97 | -3.9 | 42.8 |
| 02/08/2024 | 19:23:17.927 | -21:45:51.50 | 1.3989625 | 11.93 | -3.9 | 42.5 |
| 02/09/2024 | 19:28:35.608 | -21:37:58.47 | 1.4040663 | 11.89 | -3.9 | 42.2 |
| 02/10/2024 | 19:33:52.721 | -21:29:26.65 | 1.4091365 | 11.84 | -3.9 | 41.9 |
| 02/11/2024 | 19:39:09.215 | -21:20:16.36 | 1.4141732 | 11.80 | -3.9 | 41.5 |
| 02/12/2024 | 19:44:25.043 | -21:10:27.93 | 1.4191766 | 11.76 | -3.9 | 41.2 |
| 02/13/2024 | 19:49:40.165 | -21:00:01.71 | 1.4241468 | 11.72 | -3.9 | 40.8 |
| 02/14/2024 | 19:54:54.542 | -20:48:58.10 | 1.4290841 | 11.68 | -3.9 | 40.5 |
| 02/15/2024 | 20:00:08.137 | -20:37:17.51 | 1.4339889 | 11.64 | -3.8 | 40.1 |
| 02/16/2024 | 20:05:20.917 | -20:25:00.41 | 1.4388614 | 11.60 | -3.8 | 39.7 |
| 02/17/2024 | 20:10:32.850 | -20:12:07.24 | 1.4437017 | 11.56 | -3.8 | 39.4 |
| 02/18/2024 | 20:15:43.904 | -19:58:38.50 | 1.4485100 | 11.52 | -3.8 | 39.0 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 20:20:54.053 | -19:44:34.69 | 1.4532864 | 11.48 | -3.8 | 38.6 |
| 02/20/2024 | 20:26:03.269 | -19:29:56.31 | 1.4580310 | 11.45 | -3.8 | 38.2 |
| 02/21/2024 | 20:31:11.529 | -19:14:43.89 | 1.4627438 | 11.41 | -3.8 | 37.9 |
| 02/22/2024 | 20:36:18.812 | -18:58:57.97 | 1.4674246 | 11.37 | -3.8 | 37.5 |
| 02/23/2024 | 20:41:25.099 | -18:42:39.11 | 1.4720735 | 11.34 | -3.8 | 37.1 |
| 02/24/2024 | 20:46:30.375 | -18:25:47.85 | 1.4766902 | 11.30 | -3.8 | 36.7 |
| 02/25/2024 | 20:51:34.626 | -18:08:24.78 | 1.4812747 | 11.27 | -3.8 | 36.4 |
| 02/26/2024 | 20:56:37.843 | -17:50:30.48 | 1.4858266 | 11.23 | -3.8 | 36.0 |
| 02/27/2024 | 21:01:40.016 | -17:32:05.56 | 1.4903458 | 11.20 | -3.8 | 35.7 |
| 02/28/2024 | 21:06:41.140 | -17:13:10.63 | 1.4948320 | 11.16 | -3.8 | 35.4 |
| 02/29/2024 | 21:11:41.210 | -16:53:46.31 | 1.4992848 | 11.13 | -3.8 | 35.0 |
| 03/01/2024 | 21:16:40.224 | -16:33:53.25 | 1.5037040 | 11.10 | -3.8 | 34.7 |
| 03/02/2024 | 21:21:38.181 | -16:13:32.10 | 1.5080891 | 11.07 | -3.8 | 34.4 |
| 03/03/2024 | 21:26:35.083 | -15:52:43.52 | 1.5124399 | 11.03 | -3.8 | 34.1 |
| 03/04/2024 | 21:31:30.931 | -15:31:28.19 | 1.5167560 | 11.00 | -3.8 | 33.8 |
| 03/05/2024 | 21:36:25.729 | -15:09:46.79 | 1.5210368 | 10.97 | -3.8 | 33.5 |
| 03/06/2024 | 21:41:19.479 | -14:47:40.04 | 1.5252821 | 10.94 | -3.8 | 33.2 |
| 03/07/2024 | 21:46:12.187 | -14:25:08.63 | 1.5294914 | 10.91 | -3.8 | 32.9 |
| 03/08/2024 | 21:51:03.859 | -14:02:13.29 | 1.5336643 | 10.88 | -3.8 | 32.6 |
| 03/09/2024 | 21:55:54.502 | -13:38:54.72 | 1.5378006 | 10.85 | -3.8 | 32.3 |
| 03/10/2024 | 22:00:44.127 | -13:15:13.65 | 1.5419000 | 10.82 | -3.8 | 32.0 |
| 03/11/2024 | 22:05:32.748 | -12:51:10.80 | 1.5459624 | 10.79 | -3.8 | 31.6 |
| 03/12/2024 | 22:10:20.382 | -12:26:46.88 | 1.5499878 | 10.77 | -3.8 | 31.3 |
| 03/13/2024 | 22:15:07.049 | -12:02:02.63 | 1.5539763 | 10.74 | -3.8 | 31.0 |
| 03/14/2024 | 22:19:52.769 | -11:36:58.76 | 1.5579279 | 10.71 | -3.8 | 30.6 |
| 03/15/2024 | 22:24:37.564 | -11:11:36.02 | 1.5618430 | 10.69 | -3.8 | 30.3 |
| 03/16/2024 | 22:29:21.456 | -10:45:55.12 | 1.5657215 | 10.66 | -3.8 | 29.9 |
| 03/17/2024 | 22:34:04.470 | -10:19:56.81 | 1.5695635 | 10.63 | -3.8 | 29.5 |
| 03/18/2024 | 22:38:46.631 | -9:53:41.81 | 1.5733693 | 10.61 | -3.8 | 29.2 |
| 03/19/2024 | 22:43:27.966 | -9:27:10.82 | 1.5771386 | 10.58 | -3.8 | 28.8 |
| 03/20/2024 | 22:48:08.503 | -9:00:24.57 | 1.5808716 | 10.56 | -3.8 | 28.4 |
| 03/21/2024 | 22:52:48.273 | -8:33:23.76 | 1.5845682 | 10.53 | -3.8 | 28.0 |
| 03/22/2024 | 22:57:27.309 | -8:06:09.10 | 1.5882282 | 10.51 | -3.8 | 27.6 |
| 03/23/2024 | 23:02:05.642 | -7:38:41.27 | 1.5918514 | 10.48 | -3.8 | 27.2 |
| 03/24/2024 | 23:06:43.308 | -7:11:00.99 | 1.5954378 | 10.46 | -3.8 | 26.9 |
| 03/25/2024 | 23:11:20.342 | -6:43:08.94 | 1.5989869 | 10.44 | -3.8 | 26.5 |
| 03/26/2024 | 23:15:56.781 | -6:15:05.82 | 1.6024987 | 10.41 | -3.8 | 26.1 |
| 03/27/2024 | 23:20:32.662 | -5:46:52.31 | 1.6059727 | 10.39 | -3.8 | 25.7 |
| 03/28/2024 | 23:25:08.023 | -5:18:29.12 | 1.6094086 | 10.37 | -3.8 | 25.4 |
| 03/29/2024 | 23:29:42.901 | -4:49:56.94 | 1.6128060 | 10.35 | -3.8 | 25.0 |
| 03/30/2024 | 23:34:17.335 | -4:21:16.46 | 1.6161645 | 10.33 | -3.8 | 24.6 |
| 03/31/2024 | 23:38:51.362 | -3:52:28.39 | 1.6194836 | 10.30 | -3.8 | 24.3 |
| 04/01/2024 | 23:43:25.020 | -3:23:33.43 | 1.6227629 | 10.28 | -3.8 | 24.0 |
| 04/02/2024 | 23:47:58.347 | -2:54:32.29 | 1.6260017 | 10.26 | -3.8 | 23.6 |
| 04/03/2024 | 23:52:31.378 | -2:25:25.68 | 1.6291995 | 10.24 | -3.8 | 23.3 |
| 04/04/2024 | 23:57:04.151 | -1:56:14.32 | 1.6323558 | 10.22 | -3.9 | 23.0 |
| 04/05/2024 | 0:01:36.702 | -1:26:58.93 | 1.6354700 | 10.20 | -3.9 | 22.7 |
| 04/06/2024 | 0:06:09.069 | -0:57:40.24 | 1.6385415 | 10.18 | -3.9 | 22.3 |
| 04/07/2024 | 0:10:41.289 | -0:28:18.95 | 1.6415699 | 10.17 | -3.9 | 22.0 |
| 04/08/2024 | 0:15:13.402 | 0:01:04.20 | 1.6445547 | 10.15 | -3.9 | 21.7 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 0:19:45.448 | 0:30:28.52 | 1.6474956 | 10.13 | -3.9 | 21.4 |
| 04/10/2024 | 0:24:17.467 | 0:59:53.29 | 1.6503925 | 10.11 | -3.9 | 21.1 |
| 04/11/2024 | 0:28:49.496 | 1:29:17.79 | 1.6532451 | 10.09 | -3.9 | 20.7 |
| 04/12/2024 | 0:33:21.575 | 1:58:41.30 | 1.6560535 | 10.08 | -3.9 | 20.4 |
| 04/13/2024 | 0:37:53.740 | 2:28:03.11 | 1.6588177 | 10.06 | -3.9 | 20.0 |
| 04/14/2024 | 0:42:26.030 | 2:57:22.49 | 1.6615376 | 10.04 | -3.9 | 19.6 |
| 04/15/2024 | 0:46:58.482 | 3:26:38.74 | 1.6642133 | 10.03 | -3.9 | 19.3 |
| 04/16/2024 | 0:51:31.137 | 3:55:51.14 | 1.6668446 | 10.01 | -3.9 | 18.9 |
| 04/17/2024 | 0:56:04.033 | 4:24:59.00 | 1.6694315 | 10.00 | -3.9 | 18.5 |
| 04/18/2024 | 1:00:37.210 | 4:54:01.62 | 1.6719740 | 9.98 | -3.9 | 18.1 |
| 04/19/2024 | 1:05:10.710 | 5:22:58.29 | 1.6744718 | 9.97 | -3.9 | 17.7 |
| 04/20/2024 | 1:09:44.572 | 5:51:48.32 | 1.6769248 | 9.95 | -3.9 | 17.3 |
| 04/21/2024 | 1:14:18.838 | 6:20:31.01 | 1.6793328 | 9.94 | -3.9 | 16.9 |
| 04/22/2024 | 1:18:53.548 | 6:49:05.67 | 1.6816955 | 9.92 | -3.9 | 16.5 |
| 04/23/2024 | 1:23:28.742 | 7:17:31.62 | 1.6840129 | 9.91 | -3.9 | 16.1 |
| 04/24/2024 | 1:28:04.460 | 7:45:48.14 | 1.6862844 | 9.90 | -3.9 | 15.6 |
| 04/25/2024 | 1:32:40.742 | 8:13:54.56 | 1.6885099 | 9.88 | -3.9 | 15.2 |
| 04/26/2024 | 1:37:17.625 | 8:41:50.16 | 1.6906889 | 9.87 | -3.9 | 14.8 |
| 04/27/2024 | 1:41:55.147 | 9:09:34.24 | 1.6928211 | 9.86 | -3.9 | 14.4 |
| 04/28/2024 | 1:46:33.343 | 9:37:06.10 | 1.6949060 | 9.85 | -3.9 | 14.0 |
| 04/29/2024 | 1:51:12.246 | 10:04:25.01 | 1.6969430 | 9.83 | -3.9 | 13.7 |
| 04/30/2024 | 1:55:51.891 | 10:31:30.26 | 1.6989316 | 9.82 | -3.9 | 13.3 |
| 05/01/2024 | 2:00:32.308 | 10:58:21.10 | 1.7008712 | 9.81 | -3.9 | 12.9 |
| 05/02/2024 | 2:05:13.528 | 11:24:56.80 | 1.7027613 | 9.80 | -3.9 | 12.5 |
| 05/03/2024 | 2:09:55.580 | 11:51:16.61 | 1.7046011 | 9.79 | -3.9 | 12.2 |
| 05/04/2024 | 2:14:38.495 | 12:17:19.80 | 1.7063901 | 9.78 | -3.9 | 11.8 |
| 05/05/2024 | 2:19:22.299 | 12:43:05.61 | 1.7081276 | 9.77 | -3.9 | 11.5 |
| 05/06/2024 | 2:24:07.021 | 13:08:33.30 | 1.7098131 | 9.76 | -3.9 | 11.2 |
| 05/07/2024 | 2:28:52.686 | 13:33:42.14 | 1.7114462 | 9.75 | -3.9 | 10.8 |
| 05/08/2024 | 2:33:39.318 | 13:58:31.39 | 1.7130263 | 9.74 | -3.9 | 10.5 |
| 05/09/2024 | 2:38:26.935 | 14:23:00.30 | 1.7145533 | 9.73 | -3.9 | 10.1 |
| 05/10/2024 | 2:43:15.557 | 14:47:08.13 | 1.7160269 | 9.73 | -3.9 | 9.8 |
| 05/11/2024 | 2:48:05.198 | 15:10:54.14 | 1.7174471 | 9.72 | -3.9 | 9.4 |
| 05/12/2024 | 2:52:55.873 | 15:34:17.58 | 1.7188137 | 9.71 | -3.9 | 9.1 |
| 05/13/2024 | 2:57:47.595 | 15:57:17.71 | 1.7201268 | 9.70 | -3.9 | 8.7 |
| 05/14/2024 | 3:02:40.377 | 16:19:53.79 | 1.7213862 | 9.69 | -3.9 | 8.3 |
| 05/15/2024 | 3:07:34.232 | 16:42:05.10 | 1.7225920 | 9.69 | -3.9 | 7.9 |
| 05/16/2024 | 3:12:29.171 | 17:03:50.91 | 1.7237440 | 9.68 | -3.9 | 7.5 |
| 05/17/2024 | 3:17:25.203 | 17:25:10.51 | 1.7248424 | 9.68 | -3.9 | 7.1 |
| 05/18/2024 | 3:22:22.336 | 17:46:03.20 | 1.7258869 | 9.67 | -3.9 | 6.7 |
| 05/19/2024 | 3:27:20.578 | 18:06:28.26 | 1.7268775 | 9.66 | -3.9 | 6.3 |
| 05/20/2024 | 3:32:19.933 | 18:26:25.02 | 1.7278142 | 9.66 | -3.9 | 5.9 |
| 05/21/2024 | 3:37:20.404 | 18:45:52.79 | 1.7286968 | 9.65 | -3.9 | 5.4 |
| 05/22/2024 | 3:42:21.991 | 19:04:50.89 | 1.7295253 | 9.65 | -3.9 | 5.0 |
| 05/23/2024 | 3:47:24.693 | 19:23:18.67 | 1.7302994 | 9.64 | -4.0 | 4.6 |
| 05/24/2024 | 3:52:28.505 | 19:41:15.46 | 1.7310191 | 9.64 | -4.0 | 4.1 |
| 05/25/2024 | 3:57:33.420 | 19:58:40.61 | 1.7316840 | 9.64 | -4.0 | 3.7 |
| 05/26/2024 | 4:02:39.427 | 20:15:33.48 | 1.7322940 | 9.63 | -4.0 | 3.3 |
| 05/27/2024 | 4:07:46.514 | 20:31:53.43 | 1.7328488 | 9.63 | -4.0 | 2.8 |
| 05/28/2024 | 4:12:54.665 | 20:47:39.83 | 1.7333478 | 9.63 | -4.0 | 2.4 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 4:18:03.860 | 21:02:52.05 | 1.7337909 | 9.63 | 99.0 | 2.0 |
| 05/30/2024 | 4:23:14.081 | 21:17:29.47 | 1.7341773 | 9.62 | 99.0 | 1.6 |
| 05/31/2024 | 4:28:25.305 | 21:31:31.49 | 1.7345068 | 9.62 | 99.0 | 1.2 |
| 06/01/2024 | 4:33:37.507 | 21:44:57.53 | 1.7347788 | 9.62 | 99.0 | 0.8 |
| 06/02/2024 | 4:38:50.661 | 21:57:47.01 | 1.7349927 | 9.62 | 99.0 | 0.5 |
| 06/03/2024 | 4:44:04.737 | 22:09:59.41 | 1.7351481 | 9.62 | 99.0 | 0.2 |
| 06/04/2024 | 4:49:19.702 | 22:21:34.19 | 1.7352446 | 9.62 | 99.0 | 0.3 |
| 06/05/2024 | 4:54:35.518 | 22:32:30.87 | 1.7352819 | 9.62 | 99.0 | 0.7 |
| 06/06/2024 | 4:59:52.145 | 22:42:48.97 | 1.7352596 | 9.62 | 99.0 | 1.0 |
| 06/07/2024 | 5:05:09.536 | 22:52:28.04 | 1.7351776 | 9.62 | 99.0 | 1.4 |
| 06/08/2024 | 5:10:27.647 | 23:01:27.64 | 1.7350357 | 9.62 | 99.0 | 1.7 |
| 06/09/2024 | 5:15:46.426 | 23:09:47.37 | 1.7348341 | 9.62 | 99.0 | 2.1 |
| 06/10/2024 | 5:21:05.825 | 23:17:26.83 | 1.7345726 | 9.62 | -4.0 | 2.5 |
| 06/11/2024 | 5:26:25.793 | 23:24:25.67 | 1.7342515 | 9.62 | -4.0 | 2.8 |
| 06/12/2024 | 5:31:46.277 | 23:30:43.55 | 1.7338707 | 9.62 | -4.0 | 3.2 |
| 06/13/2024 | 5:37:07.227 | 23:36:20.17 | 1.7334305 | 9.63 | -4.0 | 3.6 |
| 06/14/2024 | 5:42:28.589 | 23:41:15.26 | 1.7329310 | 9.63 | -4.0 | 4.0 |
| 06/15/2024 | 5:47:50.309 | 23:45:28.57 | 1.7323723 | 9.63 | -4.0 | 4.4 |
| 06/16/2024 | 5:53:12.333 | 23:48:59.91 | 1.7317547 | 9.64 | -4.0 | 4.8 |
| 06/17/2024 | 5:58:34.606 | 23:51:49.10 | 1.7310782 | 9.64 | -3.9 | 5.2 |
| 06/18/2024 | 6:03:57.072 | 23:53:55.99 | 1.7303431 | 9.64 | -3.9 | 5.6 |
| 06/19/2024 | 6:09:19.674 | 23:55:20.46 | 1.7295496 | 9.65 | -3.9 | 6.0 |
| 06/20/2024 | 6:14:42.356 | 23:56:02.45 | 1.7286979 | 9.65 | -3.9 | 6.5 |
| 06/21/2024 | 6:20:05.059 | 23:56:01.89 | 1.7277880 | 9.66 | -3.9 | 6.9 |
| 06/22/2024 | 6:25:27.726 | 23:55:18.78 | 1.7268203 | 9.66 | -3.9 | 7.3 |
| 06/23/2024 | 6:30:50.298 | 23:53:53.12 | 1.7257947 | 9.67 | -3.9 | 7.8 |
| 06/24/2024 | 6:36:12.716 | 23:51:44.93 | 1.7247114 | 9.68 | -3.9 | 8.2 |
| 06/25/2024 | 6:41:34.922 | 23:48:54.28 | 1.7235703 | 9.68 | -3.9 | 8.7 |
| 06/26/2024 | 6:46:56.860 | 23:45:21.24 | 1.7223714 | 9.69 | -3.9 | 9.1 |
| 06/27/2024 | 6:52:18.473 | 23:41:05.92 | 1.7211145 | 9.70 | -3.9 | 9.5 |
| 06/28/2024 | 6:57:39.709 | 23:36:08.45 | 1.7197994 | 9.70 | -3.9 | 9.9 |
| 06/29/2024 | 7:03:00.515 | 23:30:28.99 | 1.7184260 | 9.71 | -3.9 | 10.3 |
| 06/30/2024 | 7:08:20.839 | 23:24:07.76 | 1.7169939 | 9.72 | -3.9 | 10.8 |
| 07/01/2024 | 7:13:40.629 | 23:17:04.98 | 1.7155030 | 9.73 | -3.9 | 11.1 |
| 07/02/2024 | 7:18:59.833 | 23:09:20.95 | 1.7139530 | 9.74 | -3.9 | 11.5 |
| 07/03/2024 | 7:24:18.400 | 23:00:55.95 | 1.7123438 | 9.75 | -3.9 | 11.9 |
| 07/04/2024 | 7:29:36.279 | 22:51:50.35 | 1.7106754 | 9.76 | -3.9 | 12.3 |
| 07/05/2024 | 7:34:53.417 | 22:42:04.49 | 1.7089476 | 9.77 | -3.9 | 12.6 |
| 07/06/2024 | 7:40:09.767 | 22:31:38.76 | 1.7071605 | 9.78 | -3.9 | 13.0 |
| 07/07/2024 | 7:45:25.280 | 22:20:33.58 | 1.7053142 | 9.79 | -3.9 | 13.4 |
| 07/08/2024 | 7:50:39.914 | 22:08:49.37 | 1.7034090 | 9.80 | -3.9 | 13.7 |
| 07/09/2024 | 7:55:53.626 | 21:56:26.60 | 1.7014450 | 9.81 | -3.9 | 14.1 |
| 07/10/2024 | 8:01:06.380 | 21:43:25.72 | 1.6994225 | 9.82 | -3.9 | 14.4 |
| 07/11/2024 | 8:06:18.140 | 21:29:47.25 | 1.6973420 | 9.83 | -3.9 | 14.8 |
| 07/12/2024 | 8:11:28.874 | 21:15:31.70 | 1.6952037 | 9.84 | -3.9 | 15.1 |
| 07/13/2024 | 8:16:38.554 | 21:00:39.60 | 1.6930080 | 9.86 | -3.9 | 15.5 |
| 07/14/2024 | 8:21:47.154 | 20:45:11.51 | 1.6907554 | 9.87 | -3.9 | 15.9 |
| 07/15/2024 | 8:26:54.650 | 20:29:08.02 | 1.6884462 | 9.88 | -3.9 | 16.3 |
| 07/16/2024 | 8:32:01.021 | 20:12:29.71 | 1.6860810 | 9.90 | -3.9 | 16.6 |
| 07/17/2024 | 8:37:06.249 | 19:55:17.20 | 1.6836603 | 9.91 | -3.9 | 17.0 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 8:42:10.318 | 19:37:31.10 | 1.6811844 | 9.93 | -3.9 | 17.4 |
| 07/19/2024 | 8:47:13.214 | 19:19:12.05 | 1.6786540 | 9.94 | -3.8 | 17.8 |
| 07/20/2024 | 8:52:14.926 | 19:00:20.71 | 1.6760695 | 9.96 | -3.8 | 18.3 |
| 07/21/2024 | 8:57:15.444 | 18:40:57.72 | 1.6734315 | 9.97 | -3.8 | 18.7 |
| 07/22/2024 | 9:02:14.762 | 18:21:03.73 | 1.6707404 | 9.99 | -3.8 | 19.1 |
| 07/23/2024 | 9:07:12.877 | 18:00:39.41 | 1.6679966 | 10.01 | -3.8 | 19.5 |
| 07/24/2024 | 9:12:09.789 | 17:39:45.41 | 1.6652004 | 10.02 | -3.8 | 20.0 |
| 07/25/2024 | 9:17:05.501 | 17:18:22.38 | 1.6623520 | 10.04 | -3.8 | 20.4 |
| 07/26/2024 | 9:22:00.020 | 16:56:30.99 | 1.6594516 | 10.06 | -3.8 | 20.8 |
| 07/27/2024 | 9:26:53.356 | 16:34:11.91 | 1.6564992 | 10.07 | -3.8 | 21.2 |
| 07/28/2024 | 9:31:45.518 | 16:11:25.82 | 1.6534950 | 10.09 | -3.8 | 21.6 |
| 07/29/2024 | 9:36:36.518 | 15:48:13.43 | 1.6504388 | 10.11 | -3.8 | 22.0 |
| 07/30/2024 | 9:41:26.366 | 15:24:35.46 | 1.6473308 | 10.13 | -3.8 | 22.4 |
| 07/31/2024 | 9:46:15.074 | 15:00:32.62 | 1.6441710 | 10.15 | -3.8 | 22.8 |
| 08/01/2024 | 9:51:02.655 | 14:36:05.65 | 1.6409594 | 10.17 | -3.8 | 23.2 |
| 08/02/2024 | 9:55:49.121 | 14:11:15.28 | 1.6376961 | 10.19 | -3.8 | 23.6 |
| 08/03/2024 | 10:00:34.487 | 13:46:02.25 | 1.6343814 | 10.21 | -3.8 | 23.9 |
| 08/04/2024 | 10:05:18.772 | 13:20:27.30 | 1.6310153 | 10.23 | -3.8 | 24.3 |
| 08/05/2024 | 10:10:01.993 | 12:54:31.16 | 1.6275983 | 10.25 | -3.8 | 24.6 |
| 08/06/2024 | 10:14:44.171 | 12:28:14.58 | 1.6241306 | 10.28 | -3.8 | 25.0 |
| 08/07/2024 | 10:19:25.330 | 12:01:38.28 | 1.6206125 | 10.30 | -3.8 | 25.3 |
| 08/08/2024 | 10:24:05.494 | 11:34:43.01 | 1.6170446 | 10.32 | -3.8 | 25.7 |
| 08/09/2024 | 10:28:44.690 | 11:07:29.50 | 1.6134272 | 10.34 | -3.8 | 26.0 |
| 08/10/2024 | 10:33:22.947 | 10:39:58.48 | 1.6097608 | 10.37 | -3.8 | 26.3 |
| 08/11/2024 | 10:38:00.293 | 10:12:10.70 | 1.6060460 | 10.39 | -3.8 | 26.7 |
| 08/12/2024 | 10:42:36.758 | 9:44:06.88 | 1.6022833 | 10.42 | -3.8 | 27.0 |
| 08/13/2024 | 10:47:12.375 | 9:15:47.76 | 1.5984732 | 10.44 | -3.8 | 27.4 |
| 08/14/2024 | 10:51:47.174 | 8:47:14.08 | 1.5946163 | 10.47 | -3.8 | 27.7 |
| 08/15/2024 | 10:56:21.190 | 8:18:26.57 | 1.5907134 | 10.49 | -3.8 | 28.1 |
| 08/16/2024 | 11:00:54.456 | 7:49:25.97 | 1.5867650 | 10.52 | -3.8 | 28.4 |
| 08/17/2024 | 11:05:27.006 | 7:20:13.00 | 1.5827718 | 10.54 | -3.8 | 28.8 |
| 08/18/2024 | 11:09:58.874 | 6:50:48.38 | 1.5787346 | 10.57 | -3.8 | 29.2 |
| 08/19/2024 | 11:14:30.098 | 6:21:12.85 | 1.5746540 | 10.60 | -3.8 | 29.6 |
| 08/20/2024 | 11:19:00.716 | 5:51:27.09 | 1.5705306 | 10.63 | -3.8 | 30.0 |
| 08/21/2024 | 11:23:30.768 | 5:21:31.81 | 1.5663651 | 10.65 | -3.8 | 30.4 |
| 08/22/2024 | 11:28:00.298 | 4:51:27.68 | 1.5621579 | 10.68 | -3.8 | 30.8 |
| 08/23/2024 | 11:32:29.350 | 4:21:15.37 | 1.5579095 | 10.71 | -3.8 | 31.2 |
| 08/24/2024 | 11:36:57.969 | 3:50:55.56 | 1.5536200 | 10.74 | -3.8 | 31.6 |
| 08/25/2024 | 11:41:26.200 | 3:20:28.94 | 1.5492897 | 10.77 | -3.8 | 32.0 |
| 08/26/2024 | 11:45:54.085 | 2:49:56.20 | 1.5449188 | 10.80 | -3.8 | 32.4 |
| 08/27/2024 | 11:50:21.665 | 2:19:18.04 | 1.5405073 | 10.83 | -3.8 | 32.8 |
| 08/28/2024 | 11:54:48.981 | 1:48:35.17 | 1.5360553 | 10.86 | -3.8 | 33.2 |
| 08/29/2024 | 11:59:16.072 | 1:17:48.31 | 1.5315630 | 10.90 | -3.8 | 33.6 |
| 08/30/2024 | 12:03:42.980 | 0:46:58.18 | 1.5270304 | 10.93 | -3.8 | 34.0 |
| 08/31/2024 | 12:08:09.743 | 0:16:05.50 | 1.5224578 | 10.96 | -3.8 | 34.3 |
| 09/01/2024 | 12:12:36.404 | -0:14:49.01 | 1.5178453 | 10.99 | -3.8 | 34.7 |
| 09/02/2024 | 12:17:03.002 | -0:45:44.64 | 1.5131931 | 11.03 | -3.8 | 35.1 |
| 09/03/2024 | 12:21:29.579 | -1:16:40.66 | 1.5085015 | 11.06 | -3.8 | 35.4 |
| 09/04/2024 | 12:25:56.177 | -1:47:36.35 | 1.5037708 | 11.10 | -3.8 | 35.7 |
| 09/05/2024 | 12:30:22.838 | -2:18:31.00 | 1.4990012 | 11.13 | -3.8 | 36.1 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 12:34:49.602 | -2:49:23.89 | 1.4941931 | 11.17 | -3.8 | 36.4 |
| 09/07/2024 | 12:39:16.513 | -3:20:14.29 | 1.4893470 | 11.21 | -3.8 | 36.7 |
| 09/08/2024 | 12:43:43.610 | -3:51:01.48 | 1.4844631 | 11.24 | -3.8 | 37.1 |
| 09/09/2024 | 12:48:10.934 | -4:21:44.74 | 1.4795421 | 11.28 | -3.8 | 37.4 |
| 09/10/2024 | 12:52:38.526 | -4:52:23.34 | 1.4745842 | 11.32 | -3.8 | 37.7 |
| 09/11/2024 | 12:57:06.425 | -5:22:56.54 | 1.4695901 | 11.36 | -3.8 | 38.0 |
| 09/12/2024 | 13:01:34.671 | -5:53:23.63 | 1.4645604 | 11.39 | -3.8 | 38.3 |
| 09/13/2024 | 13:06:03.301 | -6:23:43.86 | 1.4594954 | 11.43 | -3.8 | 38.7 |
| 09/14/2024 | 13:10:32.353 | -6:53:56.49 | 1.4543960 | 11.47 | -3.8 | 39.0 |
| 09/15/2024 | 13:15:01.864 | -7:24:00.80 | 1.4492627 | 11.52 | -3.8 | 39.3 |
| 09/16/2024 | 13:19:31.874 | -7:53:56.04 | 1.4440963 | 11.56 | -3.8 | 39.7 |
| 09/17/2024 | 13:24:02.420 | -8:23:41.48 | 1.4388974 | 11.60 | -3.8 | 40.1 |
| 09/18/2024 | 13:28:33.544 | -8:53:16.42 | 1.4336666 | 11.64 | -3.8 | 40.4 |
| 09/19/2024 | 13:33:05.289 | -9:22:40.13 | 1.4284046 | 11.68 | -3.8 | 40.8 |
| 09/20/2024 | 13:37:37.697 | -9:51:51.94 | 1.4231119 | 11.73 | -3.8 | 41.2 |
| 09/21/2024 | 13:42:10.809 | -10:20:51.13 | 1.4177888 | 11.77 | -3.8 | 41.6 |
| 09/22/2024 | 13:46:44.665 | -10:49:37.00 | 1.4124356 | 11.82 | -3.8 | 42.0 |
| 09/23/2024 | 13:51:19.302 | -11:18:08.83 | 1.4070524 | 11.86 | -3.8 | 42.4 |
| 09/24/2024 | 13:55:54.754 | -11:46:25.88 | 1.4016393 | 11.91 | -3.9 | 42.8 |
| 09/25/2024 | 14:00:31.053 | -12:14:27.40 | 1.3961965 | 11.95 | -3.9 | 43.2 |
| 09/26/2024 | 14:05:08.230 | -12:42:12.64 | 1.3907240 | 12.00 | -3.9 | 43.6 |
| 09/27/2024 | 14:09:46.317 | -13:09:40.84 | 1.3852217 | 12.05 | -3.9 | 44.0 |
| 09/28/2024 | 14:14:25.341 | -13:36:51.22 | 1.3796899 | 12.10 | -3.9 | 44.3 |
| 09/29/2024 | 14:19:05.330 | -14:03:43.03 | 1.3741284 | 12.14 | -3.9 | 44.7 |
| 09/30/2024 | 14:23:46.311 | -14:30:15.49 | 1.3685373 | 12.19 | -3.9 | 45.1 |
| 10/01/2024 | 14:28:28.309 | -14:56:27.82 | 1.3629169 | 12.24 | -3.9 | 45.5 |
| 10/02/2024 | 14:33:11.347 | -15:22:19.27 | 1.3572671 | 12.30 | -3.9 | 45.8 |
| 10/03/2024 | 14:37:55.447 | -15:47:49.04 | 1.3515881 | 12.35 | -3.9 | 46.2 |
| 10/04/2024 | 14:42:40.628 | -16:12:56.39 | 1.3458800 | 12.40 | -3.9 | 46.5 |
| 10/05/2024 | 14:47:26.908 | -16:37:40.52 | 1.3401431 | 12.45 | -3.9 | 46.9 |
| 10/06/2024 | 14:52:14.302 | -17:02:00.68 | 1.3343775 | 12.51 | -3.9 | 47.2 |
| 10/07/2024 | 14:57:02.821 | -17:25:56.09 | 1.3285834 | 12.56 | -3.9 | 47.5 |
| 10/08/2024 | 15:01:52.477 | -17:49:25.98 | 1.3227611 | 12.62 | -3.9 | 47.8 |
| 10/09/2024 | 15:06:43.275 | -18:12:29.59 | 1.3169110 | 12.67 | -3.9 | 48.2 |
| 10/10/2024 | 15:11:35.221 | -18:35:06.16 | 1.3110334 | 12.73 | -3.9 | 48.5 |
| 10/11/2024 | 15:16:28.316 | -18:57:14.92 | 1.3051286 | 12.79 | -3.9 | 48.8 |
| 10/12/2024 | 15:21:22.559 | -19:18:55.12 | 1.2991970 | 12.85 | -3.9 | 49.1 |
| 10/13/2024 | 15:26:17.948 | -19:40:05.99 | 1.2932393 | 12.90 | -3.9 | 49.5 |
| 10/14/2024 | 15:31:14.479 | -20:00:46.80 | 1.2872558 | 12.96 | -3.9 | 49.8 |
| 10/15/2024 | 15:36:12.148 | -20:20:56.82 | 1.2812473 | 13.03 | -3.9 | 50.1 |
| 10/16/2024 | 15:41:10.948 | -20:40:35.33 | 1.2752141 | 13.09 | -3.9 | 50.5 |
| 10/17/2024 | 15:46:10.875 | -20:59:41.64 | 1.2691570 | 13.15 | -3.9 | 50.8 |
| 10/18/2024 | 15:51:11.921 | -21:18:15.07 | 1.2630765 | 13.21 | -4.0 | 51.2 |
| 10/19/2024 | 15:56:14.077 | -21:36:14.99 | 1.2569730 | 13.28 | -4.0 | 51.6 |
| 10/20/2024 | 16:01:17.329 | -21:53:40.75 | 1.2508467 | 13.34 | -4.0 | 52.0 |
| 10/21/2024 | 16:06:21.658 | -22:10:31.70 | 1.2446980 | 13.41 | -4.0 | 52.4 |
| 10/22/2024 | 16:11:27.042 | -22:26:47.22 | 1.2385269 | 13.47 | -4.0 | 52.8 |
| 10/23/2024 | 16:16:33.456 | -22:42:26.67 | 1.2323335 | 13.54 | -4.0 | 53.2 |
| 10/24/2024 | 16:21:40.873 | -22:57:29.43 | 1.2261178 | 13.61 | -4.0 | 53.6 |
| 10/25/2024 | 16:26:49.260 | -23:11:54.89 | 1.2198798 | 13.68 | -4.0 | 54.0 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 16:31:58.585 | -23:25:42.45 | 1.2136193 | 13.75 | -4.0 | 54.4 |
| 10/27/2024 | 16:37:08.811 | -23:38:51.56 | 1.2073365 | 13.82 | -4.0 | 54.8 |
| 10/28/2024 | 16:42:19.899 | -23:51:21.65 | 1.2010312 | 13.90 | -4.0 | 55.2 |
| 10/29/2024 | 16:47:31.805 | -24:03:12.20 | 1.1947034 | 13.97 | -4.0 | 55.6 |
| 10/30/2024 | 16:52:44.485 | -24:14:22.70 | 1.1883530 | 14.04 | -4.0 | 56.0 |
| 10/31/2024 | 16:57:57.889 | -24:24:52.68 | 1.1819801 | 14.12 | -4.0 | 56.4 |
| 11/01/2024 | 17:03:11.966 | -24:34:41.68 | 1.1755846 | 14.20 | -4.0 | 56.8 |
| 11/02/2024 | 17:08:26.661 | -24:43:49.29 | 1.1691665 | 14.27 | -4.0 | 57.2 |
| 11/03/2024 | 17:13:41.916 | -24:52:15.11 | 1.1627259 | 14.35 | -4.0 | 57.6 |
| 11/04/2024 | 17:18:57.668 | -24:59:58.78 | 1.1562627 | 14.43 | -4.0 | 58.0 |
| 11/05/2024 | 17:24:13.854 | -25:06:59.97 | 1.1497772 | 14.51 | -4.0 | 58.3 |
| 11/06/2024 | 17:29:30.405 | -25:13:18.37 | 1.1432693 | 14.60 | -4.1 | 58.7 |
| 11/07/2024 | 17:34:47.251 | -25:18:53.71 | 1.1367392 | 14.68 | -4.1 | 59.0 |
| 11/08/2024 | 17:40:04.322 | -25:23:45.76 | 1.1301873 | 14.77 | -4.1 | 59.4 |
| 11/09/2024 | 17:45:21.542 | -25:27:54.29 | 1.1236137 | 14.85 | -4.1 | 59.7 |
| 11/10/2024 | 17:50:38.839 | -25:31:19.15 | 1.1170187 | 14.94 | -4.1 | 60.1 |
| 11/11/2024 | 17:55:56.138 | -25:34:00.18 | 1.1104028 | 15.03 | -4.1 | 60.4 |
| 11/12/2024 | 18:01:13.365 | -25:35:57.29 | 1.1037663 | 15.12 | -4.1 | 60.8 |
| 11/13/2024 | 18:06:30.449 | -25:37:10.40 | 1.0971099 | 15.21 | -4.1 | 61.2 |
| 11/14/2024 | 18:11:47.318 | -25:37:39.51 | 1.0904340 | 15.30 | -4.1 | 61.5 |
| 11/15/2024 | 18:17:03.901 | -25:37:24.63 | 1.0837391 | 15.40 | -4.1 | 61.9 |
| 11/16/2024 | 18:22:20.129 | -25:36:25.83 | 1.0770258 | 15.49 | -4.1 | 62.3 |
| 11/17/2024 | 18:27:35.931 | -25:34:43.20 | 1.0702945 | 15.59 | -4.1 | 62.7 |
| 11/18/2024 | 18:32:51.236 | -25:32:16.87 | 1.0635454 | 15.69 | -4.1 | 63.1 |
| 11/19/2024 | 18:38:05.972 | -25:29:07.00 | 1.0567790 | 15.79 | -4.1 | 63.5 |
| 11/20/2024 | 18:43:20.069 | -25:25:13.74 | 1.0499952 | 15.89 | -4.1 | 63.9 |
| 11/21/2024 | 18:48:33.458 | -25:20:37.31 | 1.0431943 | 16.00 | -4.1 | 64.4 |
| 11/22/2024 | 18:53:46.071 | -25:15:17.93 | 1.0363762 | 16.10 | -4.1 | 64.8 |
| 11/23/2024 | 18:58:57.842 | -25:09:15.85 | 1.0295409 | 16.21 | -4.2 | 65.3 |
| 11/24/2024 | 19:04:08.704 | -25:02:31.37 | 1.0226885 | 16.32 | -4.2 | 65.7 |
| 11/25/2024 | 19:09:18.593 | -24:55:04.82 | 1.0158188 | 16.43 | -4.2 | 66.2 |
| 11/26/2024 | 19:14:27.447 | -24:46:56.56 | 1.0089320 | 16.54 | -4.2 | 66.7 |
| 11/27/2024 | 19:19:35.202 | -24:38:06.97 | 1.0020279 | 16.65 | -4.2 | 67.1 |
| 11/28/2024 | 19:24:41.798 | -24:28:36.49 | 0.9951065 | 16.77 | -4.2 | 67.6 |
| 11/29/2024 | 19:29:47.175 | -24:18:25.55 | 0.9881677 | 16.89 | -4.2 | 68.0 |
| 11/30/2024 | 19:34:51.274 | -24:07:34.65 | 0.9812116 | 17.01 | -4.2 | 68.5 |
| 12/01/2024 | 19:39:54.038 | -23:56:04.31 | 0.9742381 | 17.13 | -4.2 | 68.9 |
| 12/02/2024 | 19:44:55.410 | -23:43:55.07 | 0.9672471 | 17.25 | -4.2 | 69.4 |
| 12/03/2024 | 19:49:55.333 | -23:31:07.49 | 0.9602388 | 17.38 | -4.2 | 69.8 |
| 12/04/2024 | 19:54:53.753 | -23:17:42.18 | 0.9532131 | 17.51 | -4.2 | 70.3 |
| 12/05/2024 | 19:59:50.616 | -23:03:39.76 | 0.9461702 | 17.64 | -4.2 | 70.7 |
| 12/06/2024 | 20:04:45.871 | -22:49:00.87 | 0.9391102 | 17.77 | -4.3 | 71.1 |
| 12/07/2024 | 20:09:39.468 | -22:33:46.17 | 0.9320333 | 17.91 | -4.3 | 71.6 |
| 12/08/2024 | 20:14:31.363 | -22:17:56.34 | 0.9249398 | 18.04 | -4.3 | 72.0 |
| 12/09/2024 | 20:19:21.512 | -22:01:32.08 | 0.9178300 | 18.18 | -4.3 | 72.4 |
| 12/10/2024 | 20:24:09.876 | -21:44:34.09 | 0.9107045 | 18.32 | -4.3 | 72.8 |
| 12/11/2024 | 20:28:56.419 | -21:27:03.12 | 0.9035637 | 18.47 | -4.3 | 73.2 |
| 12/12/2024 | 20:33:41.108 | -21:08:59.91 | 0.8964081 | 18.62 | -4.3 | 73.7 |
| 12/13/2024 | 20:38:23.915 | -20:50:25.23 | 0.8892385 | 18.77 | -4.3 | 74.1 |
| 12/14/2024 | 20:43:04.812 | -20:31:19.86 | 0.8820553 | 18.92 | -4.3 | 74.5 |

Venus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 20:47:43.773 | -20:11:44.57 | 0.8748593 | 19.08 | -4.3 | 75.0 |
| 12/16/2024 | 20:52:20.775 | -19:51:40.16 | 0.8676509 | 19.23 | -4.3 | 75.4 |
| 12/17/2024 | 20:56:55.797 | -19:31:07.40 | 0.8604307 | 19.40 | -4.4 | 75.9 |
| 12/18/2024 | 21:01:28.821 | -19:10:07.08 | 0.8531991 | 19.56 | -4.4 | 76.4 |
| 12/19/2024 | 21:05:59.830 | -18:48:39.98 | 0.8459565 | 19.73 | -4.4 | 76.9 |
| 12/20/2024 | 21:10:28.810 | -18:26:46.86 | 0.8387031 | 19.90 | -4.4 | 77.4 |
| 12/21/2024 | 21:14:55.751 | -18:04:28.52 | 0.8314393 | 20.07 | -4.4 | 77.9 |
| 12/22/2024 | 21:19:20.640 | -17:41:45.74 | 0.8241653 | 20.25 | -4.4 | 78.4 |
| 12/23/2024 | 21:23:43.467 | -17:18:39.32 | 0.8168812 | 20.43 | -4.4 | 78.9 |
| 12/24/2024 | 21:28:04.224 | -16:55:10.06 | 0.8095873 | 20.61 | -4.4 | 79.5 |
| 12/25/2024 | 21:32:22.901 | -16:31:18.77 | 0.8022838 | 20.80 | -4.4 | 80.0 |
| 12/26/2024 | 21:36:39.489 | -16:07:06.27 | 0.7949708 | 20.99 | -4.4 | 80.6 |
| 12/27/2024 | 21:40:53.978 | -15:42:33.37 | 0.7876486 | 21.19 | -4.4 | 81.2 |
| 12/28/2024 | 21:45:06.359 | -15:17:40.90 | 0.7803173 | 21.39 | -4.4 | 81.7 |
| 12/29/2024 | 21:49:16.621 | -14:52:29.71 | 0.7729771 | 21.59 | -4.4 | 82.3 |
| 12/30/2024 | 21:53:24.752 | -14:27:00.64 | 0.7656282 | 21.80 | -4.5 | 82.9 |
| 12/31/2024 | 21:57:30.740 | -14:01:14.53 | 0.7582708 | 22.01 | -4.5 | 83.4 |
| 01/01/2025 | 22:01:34.569 | -13:35:12.27 | 0.7509052 | 22.22 | -4.5 | 84.0 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 17:44:58.429 | -23:56:03.76 | 2.4268358 | 3.86 | 1.4 | 8.4 |
| 01/01/2024 | 17:48:12.910 | -23:57:40.93 | 2.4238092 | 3.86 | 1.4 | 8.6 |
| 01/02/2024 | 17:51:27.663 | -23:59:03.07 | 2.4207569 | 3.87 | 1.4 | 8.8 |
| 01/03/2024 | 17:54:42.678 | -24:00:10.13 | 2.4176792 | 3.87 | 1.4 | 9.0 |
| 01/04/2024 | 17:57:57.942 | -24:01:02.03 | 2.4145763 | 3.88 | 1.4 | 9.2 |
| 01/05/2024 | 18:01:13.442 | -24:01:38.71 | 2.4114484 | 3.88 | 1.4 | 9.4 |
| 01/06/2024 | 18:04:29.166 | -24:02:00.12 | 2.4082957 | 3.89 | 1.4 | 9.6 |
| 01/07/2024 | 18:07:45.100 | -24:02:06.22 | 2.4051183 | 3.89 | 1.4 | 9.8 |
| 01/08/2024 | 18:11:01.229 | -24:01:56.96 | 2.4019165 | 3.90 | 1.4 | 10.0 |
| 01/09/2024 | 18:14:17.538 | -24:01:32.32 | 2.3986905 | 3.90 | 1.4 | 10.2 |
| 01/10/2024 | 18:17:34.010 | -24:00:52.28 | 2.3954406 | 3.91 | 1.4 | 10.4 |
| 01/11/2024 | 18:20:50.626 | -23:59:56.80 | 2.3921671 | 3.91 | 1.4 | 10.6 |
| 01/12/2024 | 18:24:07.368 | -23:58:45.87 | 2.3888704 | 3.92 | 1.4 | 10.8 |
| 01/13/2024 | 18:27:24.214 | -23:57:19.45 | 2.3855511 | 3.93 | 1.4 | 11.0 |
| 01/14/2024 | 18:30:41.148 | -23:55:37.54 | 2.3822098 | 3.93 | 1.4 | 11.2 |
| 01/15/2024 | 18:33:58.153 | -23:53:40.10 | 2.3788472 | 3.94 | 1.4 | 11.4 |
| 01/16/2024 | 18:37:15.214 | -23:51:27.11 | 2.3754641 | 3.94 | 1.4 | 11.6 |
| 01/17/2024 | 18:40:32.321 | -23:48:58.59 | 2.3720613 | 3.95 | 1.4 | 11.8 |
| 01/18/2024 | 18:43:49.459 | -23:46:14.53 | 2.3686397 | 3.95 | 1.4 | 12.0 |
| 01/19/2024 | 18:47:06.617 | -23:43:14.96 | 2.3652000 | 3.96 | 1.4 | 12.2 |
| 01/20/2024 | 18:50:23.783 | -23:39:59.91 | 2.3617431 | 3.97 | 1.4 | 12.3 |
| 01/21/2024 | 18:53:40.944 | -23:36:29.41 | 2.3582694 | 3.97 | 1.4 | 12.5 |
| 01/22/2024 | 18:56:58.086 | -23:32:43.49 | 2.3547798 | 3.98 | 1.4 | 12.7 |
| 01/23/2024 | 19:00:15.194 | -23:28:42.19 | 2.3512748 | 3.98 | 1.4 | 12.8 |
| 01/24/2024 | 19:03:32.257 | -23:24:25.53 | 2.3477548 | 3.99 | 1.4 | 13.0 |
| 01/25/2024 | 19:06:49.261 | -23:19:53.56 | 2.3442203 | 4.00 | 1.4 | 13.2 |
| 01/26/2024 | 19:10:06.192 | -23:15:06.31 | 2.3406716 | 4.00 | 1.4 | 13.3 |
| 01/27/2024 | 19:13:23.039 | -23:10:03.81 | 2.3371092 | 4.01 | 1.4 | 13.5 |
| 01/28/2024 | 19:16:39.790 | -23:04:46.10 | 2.3335332 | 4.01 | 1.3 | 13.7 |
| 01/29/2024 | 19:19:56.433 | -22:59:13.23 | 2.3299441 | 4.02 | 1.3 | 13.8 |
| 01/30/2024 | 19:23:12.958 | -22:53:25.24 | 2.3263418 | 4.03 | 1.3 | 14.0 |
| 01/31/2024 | 19:26:29.354 | -22:47:22.20 | 2.3227268 | 4.03 | 1.3 | 14.2 |
| 02/01/2024 | 19:29:45.610 | -22:41:04.15 | 2.3190991 | 4.04 | 1.3 | 14.4 |
| 02/02/2024 | 19:33:01.715 | -22:34:31.18 | 2.3154589 | 4.04 | 1.3 | 14.6 |
| 02/03/2024 | 19:36:17.660 | -22:27:43.34 | 2.3118064 | 4.05 | 1.3 | 14.8 |
| 02/04/2024 | 19:39:33.432 | -22:20:40.73 | 2.3081416 | 4.06 | 1.3 | 14.9 |
| 02/05/2024 | 19:42:49.021 | -22:13:23.44 | 2.3044648 | 4.06 | 1.3 | 15.1 |
| 02/06/2024 | 19:46:04.413 | -22:05:51.57 | 2.3007761 | 4.07 | 1.3 | 15.3 |
| 02/07/2024 | 19:49:19.596 | -21:58:05.21 | 2.2970755 | 4.08 | 1.3 | 15.6 |
| 02/08/2024 | 19:52:34.554 | -21:50:04.48 | 2.2933633 | 4.08 | 1.3 | 15.8 |
| 02/09/2024 | 19:55:49.273 | -21:41:49.49 | 2.2896398 | 4.09 | 1.3 | 16.0 |
| 02/10/2024 | 19:59:03.738 | -21:33:20.34 | 2.2859054 | 4.10 | 1.3 | 16.2 |
| 02/11/2024 | 20:02:17.936 | -21:24:37.15 | 2.2821604 | 4.10 | 1.3 | 16.3 |
| 02/12/2024 | 20:05:31.857 | -21:15:40.02 | 2.2784055 | 4.11 | 1.3 | 16.5 |
| 02/13/2024 | 20:08:45.491 | -21:06:29.06 | 2.2746413 | 4.12 | 1.3 | 16.7 |
| 02/14/2024 | 20:11:58.833 | -20:57:04.39 | 2.2708686 | 4.12 | 1.3 | 16.9 |
| 02/15/2024 | 20:15:11.875 | -20:47:26.14 | 2.2670882 | 4.13 | 1.3 | 17.1 |
| 02/16/2024 | 20:18:24.611 | -20:37:34.46 | 2.2633007 | 4.14 | 1.3 | 17.2 |
| 02/17/2024 | 20:21:37.035 | -20:27:29.49 | 2.2595069 | 4.14 | 1.3 | 17.4 |
| 02/18/2024 | 20:24:49.139 | -20:17:11.36 | 2.2557074 | 4.15 | 1.3 | 17.5 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 20:28:00.916 | -20:06:40.24 | 2.2519027 | 4.16 | 1.3 | 17.7 |
| 02/20/2024 | 20:31:12.361 | -19:55:56.25 | 2.2480933 | 4.17 | 1.3 | 17.9 |
| 02/21/2024 | 20:34:23.467 | -19:44:59.54 | 2.2442796 | 4.17 | 1.3 | 18.0 |
| 02/22/2024 | 20:37:34.229 | -19:33:50.25 | 2.2404622 | 4.18 | 1.3 | 18.2 |
| 02/23/2024 | 20:40:44.643 | -19:22:28.50 | 2.2366412 | 4.19 | 1.3 | 18.3 |
| 02/24/2024 | 20:43:54.705 | -19:10:54.45 | 2.2328170 | 4.19 | 1.3 | 18.5 |
| 02/25/2024 | 20:47:04.413 | -18:59:08.24 | 2.2289898 | 4.20 | 1.3 | 18.6 |
| 02/26/2024 | 20:50:13.764 | -18:47:09.99 | 2.2251597 | 4.21 | 1.3 | 18.8 |
| 02/27/2024 | 20:53:22.756 | -18:34:59.86 | 2.2213270 | 4.22 | 1.3 | 18.9 |
| 02/28/2024 | 20:56:31.388 | -18:22:37.99 | 2.2174917 | 4.22 | 1.3 | 19.1 |
| 02/29/2024 | 20:59:39.659 | -18:10:04.54 | 2.2136539 | 4.23 | 1.3 | 19.3 |
| 03/01/2024 | 21:02:47.566 | -17:57:19.67 | 2.2098136 | 4.24 | 1.3 | 19.4 |
| 03/02/2024 | 21:05:55.109 | -17:44:23.54 | 2.2059709 | 4.25 | 1.3 | 19.6 |
| 03/03/2024 | 21:09:02.285 | -17:31:16.31 | 2.2021258 | 4.25 | 1.3 | 19.8 |
| 03/04/2024 | 21:12:09.093 | -17:17:58.16 | 2.1982782 | 4.26 | 1.3 | 20.0 |
| 03/05/2024 | 21:15:15.529 | -17:04:29.28 | 2.1944280 | 4.27 | 1.3 | 20.2 |
| 03/06/2024 | 21:18:21.589 | -16:50:49.85 | 2.1905754 | 4.28 | 1.2 | 20.4 |
| 03/07/2024 | 21:21:27.268 | -16:37:00.05 | 2.1867201 | 4.28 | 1.2 | 20.5 |
| 03/08/2024 | 21:24:32.563 | -16:23:00.09 | 2.1828624 | 4.29 | 1.2 | 20.7 |
| 03/09/2024 | 21:27:37.468 | -16:08:50.15 | 2.1790022 | 4.30 | 1.2 | 20.9 |
| 03/10/2024 | 21:30:41.982 | -15:54:30.40 | 2.1751399 | 4.31 | 1.2 | 21.1 |
| 03/11/2024 | 21:33:46.102 | -15:40:01.05 | 2.1712756 | 4.31 | 1.2 | 21.3 |
| 03/12/2024 | 21:36:49.829 | -15:25:22.26 | 2.1674099 | 4.32 | 1.2 | 21.5 |
| 03/13/2024 | 21:39:53.167 | -15:10:34.22 | 2.1635433 | 4.33 | 1.2 | 21.6 |
| 03/14/2024 | 21:42:56.116 | -14:55:37.14 | 2.1596763 | 4.34 | 1.2 | 21.8 |
| 03/15/2024 | 21:45:58.677 | -14:40:31.21 | 2.1558095 | 4.34 | 1.2 | 21.9 |
| 03/16/2024 | 21:49:00.853 | -14:25:16.64 | 2.1519435 | 4.35 | 1.2 | 22.1 |
| 03/17/2024 | 21:52:02.644 | -14:09:53.62 | 2.1480787 | 4.36 | 1.2 | 22.2 |
| 03/18/2024 | 21:55:04.052 | -13:54:22.35 | 2.1442156 | 4.37 | 1.2 | 22.4 |
| 03/19/2024 | 21:58:05.079 | -13:38:43.01 | 2.1403545 | 4.38 | 1.2 | 22.5 |
| 03/20/2024 | 22:01:05.728 | -13:22:55.80 | 2.1364958 | 4.38 | 1.2 | 22.6 |
| 03/21/2024 | 22:04:06.003 | -13:07:00.90 | 2.1326396 | 4.39 | 1.2 | 22.8 |
| 03/22/2024 | 22:07:05.909 | -12:50:58.47 | 2.1287862 | 4.40 | 1.2 | 22.9 |
| 03/23/2024 | 22:10:05.450 | -12:34:48.71 | 2.1249358 | 4.41 | 1.2 | 23.1 |
| 03/24/2024 | 22:13:04.631 | -12:18:31.79 | 2.1210884 | 4.42 | 1.2 | 23.2 |
| 03/25/2024 | 22:16:03.460 | -12:02:07.89 | 2.1172441 | 4.42 | 1.2 | 23.3 |
| 03/26/2024 | 22:19:01.942 | -11:45:37.18 | 2.1134029 | 4.43 | 1.2 | 23.5 |
| 03/27/2024 | 22:22:00.083 | -11:28:59.84 | 2.1095647 | 4.44 | 1.2 | 23.6 |
| 03/28/2024 | 22:24:57.891 | -11:12:16.05 | 2.1057295 | 4.45 | 1.2 | 23.8 |
| 03/29/2024 | 22:27:55.371 | -10:55:26.01 | 2.1018972 | 4.46 | 1.2 | 23.9 |
| 03/30/2024 | 22:30:52.529 | -10:38:29.89 | 2.0980675 | 4.46 | 1.2 | 24.1 |
| 03/31/2024 | 22:33:49.371 | -10:21:27.89 | 2.0942402 | 4.47 | 1.2 | 24.3 |
| 04/01/2024 | 22:36:45.899 | -10:04:20.21 | 2.0904152 | 4.48 | 1.2 | 24.4 |
| 04/02/2024 | 22:39:42.120 | -9:47:07.06 | 2.0865921 | 4.49 | 1.2 | 24.6 |
| 04/03/2024 | 22:42:38.034 | -9:29:48.64 | 2.0827708 | 4.50 | 1.2 | 24.8 |
| 04/04/2024 | 22:45:33.645 | -9:12:25.15 | 2.0789510 | 4.50 | 1.2 | 24.9 |
| 04/05/2024 | 22:48:28.956 | -8:54:56.82 | 2.0751324 | 4.51 | 1.2 | 25.1 |
| 04/06/2024 | 22:51:23.970 | -8:37:23.85 | 2.0713148 | 4.52 | 1.2 | 25.3 |
| 04/07/2024 | 22:54:18.689 | -8:19:46.44 | 2.0674983 | 4.53 | 1.2 | 25.5 |
| 04/08/2024 | 22:57:13.121 | -8:02:04.79 | 2.0636828 | 4.54 | 1.2 | 25.6 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 23:00:07.271 | -7:44:19.10 | 2.0598684 | 4.55 | 1.2 | 25.8 |
| 04/10/2024 | 23:03:01.146 | -7:26:29.58 | 2.0560553 | 4.55 | 1.2 | 25.9 |
| 04/11/2024 | 23:05:54.750 | -7:08:36.44 | 2.0522440 | 4.56 | 1.2 | 26.1 |
| 04/12/2024 | 23:08:48.090 | -6:50:39.88 | 2.0484347 | 4.57 | 1.2 | 26.2 |
| 04/13/2024 | 23:11:41.170 | -6:32:40.11 | 2.0446277 | 4.58 | 1.2 | 26.4 |
| 04/14/2024 | 23:14:33.995 | -6:14:37.34 | 2.0408233 | 4.59 | 1.2 | 26.5 |
| 04/15/2024 | 23:17:26.571 | -5:56:31.77 | 2.0370219 | 4.60 | 1.2 | 26.6 |
| 04/16/2024 | 23:20:18.903 | -5:38:23.60 | 2.0332236 | 4.61 | 1.2 | 26.7 |
| 04/17/2024 | 23:23:11.000 | -5:20:13.00 | 2.0294285 | 4.61 | 1.2 | 26.9 |
| 04/18/2024 | 23:26:02.868 | -5:02:00.16 | 2.0256369 | 4.62 | 1.1 | 27.0 |
| 04/19/2024 | 23:28:54.516 | -4:43:45.26 | 2.0218486 | 4.63 | 1.1 | 27.1 |
| 04/20/2024 | 23:31:45.953 | -4:25:28.48 | 2.0180637 | 4.64 | 1.1 | 27.2 |
| 04/21/2024 | 23:34:37.188 | -4:07:09.99 | 2.0142822 | 4.65 | 1.1 | 27.3 |
| 04/22/2024 | 23:37:28.230 | -3:48:49.96 | 2.0105040 | 4.66 | 1.1 | 27.5 |
| 04/23/2024 | 23:40:19.089 | -3:30:28.57 | 2.0067288 | 4.67 | 1.1 | 27.6 |
| 04/24/2024 | 23:43:09.774 | -3:12:05.98 | 2.0029566 | 4.68 | 1.1 | 27.7 |
| 04/25/2024 | 23:46:00.294 | -2:53:42.37 | 1.9991870 | 4.68 | 1.1 | 27.8 |
| 04/26/2024 | 23:48:50.659 | -2:35:17.91 | 1.9954198 | 4.69 | 1.1 | 28.0 |
| 04/27/2024 | 23:51:40.875 | -2:16:52.78 | 1.9916546 | 4.70 | 1.1 | 28.1 |
| 04/28/2024 | 23:54:30.950 | -1:58:27.17 | 1.9878911 | 4.71 | 1.1 | 28.3 |
| 04/29/2024 | 23:57:20.890 | -1:40:01.27 | 1.9841287 | 4.72 | 1.1 | 28.4 |
| 04/30/2024 | 0:00:10.701 | -1:21:35.27 | 1.9803670 | 4.73 | 1.1 | 28.6 |
| 05/01/2024 | 0:03:00.388 | -1:03:09.36 | 1.9766056 | 4.74 | 1.1 | 28.7 |
| 05/02/2024 | 0:05:49.956 | -0:44:43.75 | 1.9728439 | 4.75 | 1.1 | 28.9 |
| 05/03/2024 | 0:08:39.409 | -0:26:18.63 | 1.9690815 | 4.76 | 1.1 | 29.0 |
| 05/04/2024 | 0:11:28.754 | -0:07:54.20 | 1.9653181 | 4.77 | 1.1 | 29.2 |
| 05/05/2024 | 0:14:17.996 | 0:10:29.35 | 1.9615532 | 4.77 | 1.1 | 29.3 |
| 05/06/2024 | 0:17:07.142 | 0:28:51.82 | 1.9577865 | 4.78 | 1.1 | 29.5 |
| 05/07/2024 | 0:19:56.199 | 0:47:13.03 | 1.9540181 | 4.79 | 1.1 | 29.6 |
| 05/08/2024 | 0:22:45.172 | 1:05:32.79 | 1.9502477 | 4.80 | 1.1 | 29.8 |
| 05/09/2024 | 0:25:34.066 | 1:23:50.91 | 1.9464754 | 4.81 | 1.1 | 29.9 |
| 05/10/2024 | 0:28:22.886 | 1:42:07.18 | 1.9427013 | 4.82 | 1.1 | 30.1 |
| 05/11/2024 | 0:31:11.634 | 2:00:21.41 | 1.9389256 | 4.83 | 1.1 | 30.2 |
| 05/12/2024 | 0:34:00.316 | 2:18:33.42 | 1.9351484 | 4.84 | 1.1 | 30.3 |
| 05/13/2024 | 0:36:48.936 | 2:36:43.02 | 1.9313697 | 4.85 | 1.1 | 30.4 |
| 05/14/2024 | 0:39:37.499 | 2:54:50.03 | 1.9275896 | 4.86 | 1.1 | 30.5 |
| 05/15/2024 | 0:42:26.013 | 3:12:54.27 | 1.9238081 | 4.87 | 1.1 | 30.6 |
| 05/16/2024 | 0:45:14.485 | 3:30:55.59 | 1.9200253 | 4.88 | 1.1 | 30.7 |
| 05/17/2024 | 0:48:02.922 | 3:48:53.82 | 1.9162410 | 4.89 | 1.1 | 30.8 |
| 05/18/2024 | 0:50:51.333 | 4:06:48.81 | 1.9124550 | 4.90 | 1.1 | 30.9 |
| 05/19/2024 | 0:53:39.725 | 4:24:40.40 | 1.9086673 | 4.91 | 1.1 | 31.0 |
| 05/20/2024 | 0:56:28.106 | 4:42:28.44 | 1.9048777 | 4.92 | 1.1 | 31.1 |
| 05/21/2024 | 0:59:16.486 | 5:00:12.78 | 1.9010858 | 4.93 | 1.1 | 31.3 |
| 05/22/2024 | 1:02:04.872 | 5:17:53.27 | 1.8972914 | 4.94 | 1.1 | 31.4 |
| 05/23/2024 | 1:04:53.272 | 5:35:29.77 | 1.8934942 | 4.95 | 1.1 | 31.5 |
| 05/24/2024 | 1:07:41.692 | 5:53:02.12 | 1.8896937 | 4.96 | 1.1 | 31.6 |
| 05/25/2024 | 1:10:30.139 | 6:10:30.17 | 1.8858894 | 4.97 | 1.1 | 31.7 |
| 05/26/2024 | 1:13:18.618 | 6:27:53.76 | 1.8820809 | 4.98 | 1.1 | 31.8 |
| 05/27/2024 | 1:16:07.132 | 6:45:12.73 | 1.8782675 | 4.99 | 1.1 | 32.0 |
| 05/28/2024 | 1:18:55.687 | 7:02:26.90 | 1.8744486 | 5.00 | 1.1 | 32.1 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 1:21:44.284 | 7:19:36.11 | 1.8706235 | 5.01 | 1.0 | 32.2 |
| 05/30/2024 | 1:24:32.927 | 7:36:40.17 | 1.8667917 | 5.02 | 1.0 | 32.4 |
| 05/31/2024 | 1:27:21.621 | 7:53:38.93 | 1.8629525 | 5.03 | 1.0 | 32.5 |
| 06/01/2024 | 1:30:10.369 | 8:10:32.20 | 1.8591054 | 5.04 | 1.0 | 32.7 |
| 06/02/2024 | 1:32:59.174 | 8:27:19.83 | 1.8552497 | 5.05 | 1.0 | 32.8 |
| 06/03/2024 | 1:35:48.041 | 8:44:01.65 | 1.8513851 | 5.06 | 1.0 | 32.9 |
| 06/04/2024 | 1:38:36.972 | 9:00:37.50 | 1.8475112 | 5.07 | 1.0 | 33.1 |
| 06/05/2024 | 1:41:25.968 | 9:17:07.22 | 1.8436277 | 5.08 | 1.0 | 33.2 |
| 06/06/2024 | 1:44:15.030 | 9:33:30.65 | 1.8397345 | 5.09 | 1.0 | 33.3 |
| 06/07/2024 | 1:47:04.158 | 9:49:47.62 | 1.8358315 | 5.10 | 1.0 | 33.4 |
| 06/08/2024 | 1:49:53.351 | 10:05:57.96 | 1.8319186 | 5.11 | 1.0 | 33.6 |
| 06/09/2024 | 1:52:42.608 | 10:22:01.52 | 1.8279958 | 5.12 | 1.0 | 33.7 |
| 06/10/2024 | 1:55:31.930 | 10:37:58.14 | 1.8240631 | 5.13 | 1.0 | 33.8 |
| 06/11/2024 | 1:58:21.320 | 10:53:47.67 | 1.8201205 | 5.15 | 1.0 | 33.9 |
| 06/12/2024 | 2:01:10.778 | 11:09:29.97 | 1.8161679 | 5.16 | 1.0 | 34.0 |
| 06/13/2024 | 2:04:00.309 | 11:25:04.91 | 1.8122051 | 5.17 | 1.0 | 34.0 |
| 06/14/2024 | 2:06:49.915 | 11:40:32.36 | 1.8082321 | 5.18 | 1.0 | 34.1 |
| 06/15/2024 | 2:09:39.601 | 11:55:52.18 | 1.8042488 | 5.19 | 1.0 | 34.2 |
| 06/16/2024 | 2:12:29.369 | 12:11:04.28 | 1.8002548 | 5.20 | 1.0 | 34.3 |
| 06/17/2024 | 2:15:19.224 | 12:26:08.52 | 1.7962500 | 5.21 | 1.0 | 34.4 |
| 06/18/2024 | 2:18:09.168 | 12:41:04.79 | 1.7922340 | 5.23 | 1.0 | 34.5 |
| 06/19/2024 | 2:20:59.205 | 12:55:52.99 | 1.7882067 | 5.24 | 1.0 | 34.6 |
| 06/20/2024 | 2:23:49.338 | 13:10:33.01 | 1.7841676 | 5.25 | 1.0 | 34.7 |
| 06/21/2024 | 2:26:39.568 | 13:25:04.74 | 1.7801162 | 5.26 | 1.0 | 34.8 |
| 06/22/2024 | 2:29:29.895 | 13:39:28.06 | 1.7760522 | 5.27 | 1.0 | 34.9 |
| 06/23/2024 | 2:32:20.321 | 13:53:42.85 | 1.7719749 | 5.29 | 1.0 | 35.0 |
| 06/24/2024 | 2:35:10.844 | 14:07:49.01 | 1.7678837 | 5.30 | 1.0 | 35.1 |
| 06/25/2024 | 2:38:01.462 | 14:21:46.38 | 1.7637779 | 5.31 | 1.0 | 35.2 |
| 06/26/2024 | 2:40:52.175 | 14:35:34.86 | 1.7596568 | 5.32 | 1.0 | 35.3 |
| 06/27/2024 | 2:43:42.981 | 14:49:14.31 | 1.7555197 | 5.33 | 1.0 | 35.4 |
| 06/28/2024 | 2:46:33.880 | 15:02:44.59 | 1.7513659 | 5.35 | 1.0 | 35.6 |
| 06/29/2024 | 2:49:24.869 | 15:16:05.61 | 1.7471946 | 5.36 | 1.0 | 35.7 |
| 06/30/2024 | 2:52:15.948 | 15:29:17.23 | 1.7430054 | 5.37 | 1.0 | 35.8 |
| 07/01/2024 | 2:55:07.112 | 15:42:19.35 | 1.7387976 | 5.39 | 1.0 | 35.9 |
| 07/02/2024 | 2:57:58.358 | 15:55:11.86 | 1.7345709 | 5.40 | 1.0 | 36.1 |
| 07/03/2024 | 3:00:49.679 | 16:07:54.66 | 1.7303248 | 5.41 | 1.0 | 36.2 |
| 07/04/2024 | 3:03:41.069 | 16:20:27.63 | 1.7260592 | 5.43 | 1.0 | 36.3 |
| 07/05/2024 | 3:06:32.519 | 16:32:50.66 | 1.7217738 | 5.44 | 1.0 | 36.4 |
| 07/06/2024 | 3:09:24.022 | 16:45:03.65 | 1.7174685 | 5.45 | 1.0 | 36.5 |
| 07/07/2024 | 3:12:15.570 | 16:57:06.49 | 1.7131433 | 5.47 | 1.0 | 36.6 |
| 07/08/2024 | 3:15:07.158 | 17:08:59.08 | 1.7087980 | 5.48 | 1.0 | 36.7 |
| 07/09/2024 | 3:17:58.780 | 17:20:41.33 | 1.7044325 | 5.49 | 1.0 | 36.8 |
| 07/10/2024 | 3:20:50.431 | 17:32:13.16 | 1.7000470 | 5.51 | 1.0 | 36.8 |
| 07/11/2024 | 3:23:42.107 | 17:43:34.49 | 1.6956411 | 5.52 | 1.0 | 36.9 |
| 07/12/2024 | 3:26:33.804 | 17:54:45.25 | 1.6912149 | 5.54 | 1.0 | 37.0 |
| 07/13/2024 | 3:29:25.519 | 18:05:45.37 | 1.6867682 | 5.55 | 0.9 | 37.1 |
| 07/14/2024 | 3:32:17.247 | 18:16:34.81 | 1.6823010 | 5.57 | 0.9 | 37.1 |
| 07/15/2024 | 3:35:08.987 | 18:27:13.50 | 1.6778129 | 5.58 | 0.9 | 37.2 |
| 07/16/2024 | 3:38:00.732 | 18:37:41.39 | 1.6733038 | 5.60 | 0.9 | 37.3 |
| 07/17/2024 | 3:40:52.480 | 18:47:58.45 | 1.6687735 | 5.61 | 0.9 | 37.4 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 3:43:44.225 | 18:58:04.63 | 1.6642216 | 5.63 | 0.9 | 37.4 |
| 07/19/2024 | 3:46:35.962 | 19:07:59.90 | 1.6596480 | 5.64 | 0.9 | 37.5 |
| 07/20/2024 | 3:49:27.684 | 19:17:44.20 | 1.6550521 | 5.66 | 0.9 | 37.6 |
| 07/21/2024 | 3:52:19.385 | 19:27:17.49 | 1.6504335 | 5.67 | 0.9 | 37.7 |
| 07/22/2024 | 3:55:11.058 | 19:36:39.72 | 1.6457916 | 5.69 | 0.9 | 37.8 |
| 07/23/2024 | 3:58:02.694 | 19:45:50.84 | 1.6411258 | 5.71 | 0.9 | 37.9 |
| 07/24/2024 | 4:00:54.286 | 19:54:50.79 | 1.6364354 | 5.72 | 0.9 | 38.0 |
| 07/25/2024 | 4:03:45.827 | 20:03:39.51 | 1.6317197 | 5.74 | 0.9 | 38.1 |
| 07/26/2024 | 4:06:37.310 | 20:12:16.96 | 1.6269781 | 5.76 | 0.9 | 38.2 |
| 07/27/2024 | 4:09:28.727 | 20:20:43.11 | 1.6222098 | 5.77 | 0.9 | 38.3 |
| 07/28/2024 | 4:12:20.069 | 20:28:57.92 | 1.6174143 | 5.79 | 0.9 | 38.4 |
| 07/29/2024 | 4:15:11.323 | 20:37:01.37 | 1.6125911 | 5.81 | 0.9 | 38.5 |
| 07/30/2024 | 4:18:02.477 | 20:44:53.44 | 1.6077398 | 5.83 | 0.9 | 38.6 |
| 07/31/2024 | 4:20:53.517 | 20:52:34.11 | 1.6028600 | 5.84 | 0.9 | 38.7 |
| 08/01/2024 | 4:23:44.428 | 21:00:03.35 | 1.5979515 | 5.86 | 0.9 | 38.8 |
| 08/02/2024 | 4:26:35.194 | 21:07:21.16 | 1.5930142 | 5.88 | 0.9 | 38.9 |
| 08/03/2024 | 4:29:25.801 | 21:14:27.51 | 1.5880479 | 5.90 | 0.9 | 39.0 |
| 08/04/2024 | 4:32:16.234 | 21:21:22.40 | 1.5830527 | 5.92 | 0.9 | 39.0 |
| 08/05/2024 | 4:35:06.479 | 21:28:05.81 | 1.5780285 | 5.93 | 0.9 | 39.1 |
| 08/06/2024 | 4:37:56.525 | 21:34:37.74 | 1.5729752 | 5.95 | 0.9 | 39.2 |
| 08/07/2024 | 4:40:46.359 | 21:40:58.21 | 1.5678930 | 5.97 | 0.9 | 39.2 |
| 08/08/2024 | 4:43:35.970 | 21:47:07.22 | 1.5627818 | 5.99 | 0.9 | 39.3 |
| 08/09/2024 | 4:46:25.348 | 21:53:04.81 | 1.5576417 | 6.01 | 0.9 | 39.4 |
| 08/10/2024 | 4:49:14.483 | 21:58:51.00 | 1.5524727 | 6.03 | 0.8 | 39.4 |
| 08/11/2024 | 4:52:03.363 | 22:04:25.83 | 1.5472748 | 6.05 | 0.8 | 39.5 |
| 08/12/2024 | 4:54:51.979 | 22:09:49.34 | 1.5420480 | 6.07 | 0.8 | 39.5 |
| 08/13/2024 | 4:57:40.320 | 22:15:01.57 | 1.5367922 | 6.09 | 0.8 | 39.6 |
| 08/14/2024 | 5:00:28.375 | 22:20:02.59 | 1.5315074 | 6.12 | 0.8 | 39.6 |
| 08/15/2024 | 5:03:16.134 | 22:24:52.43 | 1.5261934 | 6.14 | 0.8 | 39.7 |
| 08/16/2024 | 5:06:03.586 | 22:29:31.17 | 1.5208503 | 6.16 | 0.8 | 39.7 |
| 08/17/2024 | 5:08:50.717 | 22:33:58.85 | 1.5154777 | 6.18 | 0.8 | 39.8 |
| 08/18/2024 | 5:11:37.517 | 22:38:15.53 | 1.5100754 | 6.20 | 0.8 | 39.8 |
| 08/19/2024 | 5:14:23.974 | 22:42:21.24 | 1.5046431 | 6.22 | 0.8 | 39.9 |
| 08/20/2024 | 5:17:10.074 | 22:46:16.05 | 1.4991803 | 6.25 | 0.8 | 40.0 |
| 08/21/2024 | 5:19:55.808 | 22:49:59.97 | 1.4936865 | 6.27 | 0.8 | 40.0 |
| 08/22/2024 | 5:22:41.165 | 22:53:33.08 | 1.4881612 | 6.29 | 0.8 | 40.1 |
| 08/23/2024 | 5:25:26.133 | 22:56:55.42 | 1.4826037 | 6.32 | 0.8 | 40.2 |
| 08/24/2024 | 5:28:10.700 | 23:00:07.06 | 1.4770137 | 6.34 | 0.8 | 40.3 |
| 08/25/2024 | 5:30:54.850 | 23:03:08.09 | 1.4713905 | 6.36 | 0.8 | 40.3 |
| 08/26/2024 | 5:33:38.568 | 23:05:58.60 | 1.4657338 | 6.39 | 0.8 | 40.4 |
| 08/27/2024 | 5:36:21.833 | 23:08:38.68 | 1.4600435 | 6.41 | 0.8 | 40.5 |
| 08/28/2024 | 5:39:04.627 | 23:11:08.41 | 1.4543193 | 6.44 | 0.7 | 40.6 |
| 08/29/2024 | 5:41:46.930 | 23:13:27.89 | 1.4485611 | 6.47 | 0.7 | 40.6 |
| 08/30/2024 | 5:44:28.722 | 23:15:37.21 | 1.4427689 | 6.49 | 0.7 | 40.7 |
| 08/31/2024 | 5:47:09.983 | 23:17:36.47 | 1.4369428 | 6.52 | 0.7 | 40.8 |
| 09/01/2024 | 5:49:50.696 | 23:19:25.77 | 1.4310830 | 6.54 | 0.7 | 40.8 |
| 09/02/2024 | 5:52:30.844 | 23:21:05.21 | 1.4251896 | 6.57 | 0.7 | 40.9 |
| 09/03/2024 | 5:55:10.410 | 23:22:34.90 | 1.4192627 | 6.60 | 0.7 | 40.9 |
| 09/04/2024 | 5:57:49.378 | 23:23:54.97 | 1.4133027 | 6.63 | 0.7 | 40.9 |
| 09/05/2024 | 6:00:27.735 | 23:25:05.53 | 1.4073098 | 6.65 | 0.7 | 41.0 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 6:03:05.465 | 23:26:06.71 | 1.4012842 | 6.68 | 0.7 | 41.0 |
| 09/07/2024 | 6:05:42.554 | 23:26:58.65 | 1.3952262 | 6.71 | 0.7 | 41.0 |
| 09/08/2024 | 6:08:18.990 | 23:27:41.50 | 1.3891362 | 6.74 | 0.7 | 41.0 |
| 09/09/2024 | 6:10:54.757 | 23:28:15.39 | 1.3830142 | 6.77 | 0.7 | 41.0 |
| 09/10/2024 | 6:13:29.842 | 23:28:40.49 | 1.3768607 | 6.80 | 0.7 | 41.0 |
| 09/11/2024 | 6:16:04.233 | 23:28:56.95 | 1.3706759 | 6.83 | 0.7 | 41.1 |
| 09/12/2024 | 6:18:37.914 | 23:29:04.91 | 1.3644599 | 6.86 | 0.7 | 41.1 |
| 09/13/2024 | 6:21:10.871 | 23:29:04.54 | 1.3582130 | 6.90 | 0.6 | 41.1 |
| 09/14/2024 | 6:23:43.091 | 23:28:56.00 | 1.3519354 | 6.93 | 0.6 | 41.1 |
| 09/15/2024 | 6:26:14.560 | 23:28:39.43 | 1.3456271 | 6.96 | 0.6 | 41.1 |
| 09/16/2024 | 6:28:45.264 | 23:28:14.98 | 1.3392881 | 6.99 | 0.6 | 41.1 |
| 09/17/2024 | 6:31:15.191 | 23:27:42.78 | 1.3329184 | 7.03 | 0.6 | 41.2 |
| 09/18/2024 | 6:33:44.327 | 23:27:02.98 | 1.3265177 | 7.06 | 0.6 | 41.2 |
| 09/19/2024 | 6:36:12.663 | 23:26:15.73 | 1.3200859 | 7.09 | 0.6 | 41.2 |
| 09/20/2024 | 6:38:40.184 | 23:25:21.19 | 1.3136227 | 7.13 | 0.6 | 41.3 |
| 09/21/2024 | 6:41:06.877 | 23:24:19.53 | 1.3071278 | 7.16 | 0.6 | 41.3 |
| 09/22/2024 | 6:43:32.723 | 23:23:10.95 | 1.3006012 | 7.20 | 0.6 | 41.3 |
| 09/23/2024 | 6:45:57.702 | 23:21:55.64 | 1.2940426 | 7.24 | 0.6 | 41.3 |
| 09/24/2024 | 6:48:21.791 | 23:20:33.79 | 1.2874523 | 7.27 | 0.5 | 41.4 |
| 09/25/2024 | 6:50:44.969 | 23:19:05.61 | 1.2808303 | 7.31 | 0.5 | 41.4 |
| 09/26/2024 | 6:53:07.211 | 23:17:31.30 | 1.2741769 | 7.35 | 0.5 | 41.4 |
| 09/27/2024 | 6:55:28.495 | 23:15:51.05 | 1.2674924 | 7.39 | 0.5 | 41.4 |
| 09/28/2024 | 6:57:48.799 | 23:14:05.07 | 1.2607773 | 7.43 | 0.5 | 41.4 |
| 09/29/2024 | 7:00:08.104 | 23:12:13.56 | 1.2540321 | 7.47 | 0.5 | 41.4 |
| 09/30/2024 | 7:02:26.387 | 23:10:16.73 | 1.2472573 | 7.51 | 0.5 | 41.4 |
| 10/01/2024 | 7:04:43.631 | 23:08:14.79 | 1.2404535 | 7.55 | 0.5 | 41.4 |
| 10/02/2024 | 7:06:59.816 | 23:06:07.96 | 1.2336213 | 7.59 | 0.5 | 41.4 |
| 10/03/2024 | 7:09:14.922 | 23:03:56.47 | 1.2267615 | 7.63 | 0.5 | 41.4 |
| 10/04/2024 | 7:11:28.933 | 23:01:40.54 | 1.2198748 | 7.68 | 0.5 | 41.3 |
| 10/05/2024 | 7:13:41.830 | 22:59:20.41 | 1.2129618 | 7.72 | 0.4 | 41.3 |
| 10/06/2024 | 7:15:53.596 | 22:56:56.31 | 1.2060233 | 7.77 | 0.4 | 41.2 |
| 10/07/2024 | 7:18:04.211 | 22:54:28.49 | 1.1990602 | 7.81 | 0.4 | 41.2 |
| 10/08/2024 | 7:20:13.658 | 22:51:57.19 | 1.1920732 | 7.86 | 0.4 | 41.1 |
| 10/09/2024 | 7:22:21.918 | 22:49:22.65 | 1.1850630 | 7.90 | 0.4 | 41.1 |
| 10/10/2024 | 7:24:28.974 | 22:46:45.12 | 1.1780305 | 7.95 | 0.4 | 41.0 |
| 10/11/2024 | 7:26:34.805 | 22:44:04.85 | 1.1709763 | 8.00 | 0.4 | 40.9 |
| 10/12/2024 | 7:28:39.394 | 22:41:22.07 | 1.1639013 | 8.05 | 0.4 | 40.9 |
| 10/13/2024 | 7:30:42.722 | 22:38:37.02 | 1.1568060 | 8.10 | 0.3 | 40.8 |
| 10/14/2024 | 7:32:44.770 | 22:35:49.93 | 1.1496911 | 8.15 | 0.3 | 40.8 |
| 10/15/2024 | 7:34:45.523 | 22:33:01.02 | 1.1425572 | 8.20 | 0.3 | 40.7 |
| 10/16/2024 | 7:36:44.963 | 22:30:10.52 | 1.1354046 | 8.25 | 0.3 | 40.6 |
| 10/17/2024 | 7:38:43.072 | 22:27:18.67 | 1.1282338 | 8.30 | 0.3 | 40.6 |
| 10/18/2024 | 7:40:39.833 | 22:24:25.71 | 1.1210452 | 8.35 | 0.3 | 40.5 |
| 10/19/2024 | 7:42:35.223 | 22:21:31.92 | 1.1138391 | 8.41 | 0.3 | 40.5 |
| 10/20/2024 | 7:44:29.217 | 22:18:37.57 | 1.1066160 | 8.46 | 0.3 | 40.4 |
| 10/21/2024 | 7:46:21.784 | 22:15:42.97 | 1.0993764 | 8.52 | 0.2 | 40.4 |
| 10/22/2024 | 7:48:12.895 | 22:12:48.40 | 1.0921211 | 8.58 | 0.2 | 40.3 |
| 10/23/2024 | 7:50:02.515 | 22:09:54.17 | 1.0848508 | 8.63 | 0.2 | 40.2 |
| 10/24/2024 | 7:51:50.613 | 22:07:00.57 | 1.0775665 | 8.69 | 0.2 | 40.1 |
| 10/25/2024 | 7:53:37.156 | 22:04:07.90 | 1.0702693 | 8.75 | 0.2 | 40.0 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 7:55:22.112 | 22:01:16.45 | 1.0629604 | 8.81 | 0.2 | 39.9 |
| 10/27/2024 | 7:57:05.450 | 21:58:26.52 | 1.0556409 | 8.87 | 0.2 | 39.8 |
| 10/28/2024 | 7:58:47.137 | 21:55:38.42 | 1.0483123 | 8.93 | 0.1 | 39.7 |
| 10/29/2024 | 8:00:27.144 | 21:52:52.46 | 1.0409759 | 9.00 | 0.1 | 39.6 |
| 10/30/2024 | 8:02:05.438 | 21:50:08.94 | 1.0336332 | 9.06 | 0.1 | 39.5 |
| 10/31/2024 | 8:03:41.988 | 21:47:28.18 | 1.0262857 | 9.13 | 0.1 | 39.3 |
| 11/01/2024 | 8:05:16.762 | 21:44:50.50 | 1.0189352 | 9.19 | 0.1 | 39.2 |
| 11/02/2024 | 8:06:49.730 | 21:42:16.21 | 1.0115832 | 9.26 | 0.1 | 39.0 |
| 11/03/2024 | 8:08:20.858 | 21:39:45.64 | 1.0042314 | 9.33 | 0.1 | 38.8 |
| 11/04/2024 | 8:09:50.114 | 21:37:19.10 | 0.9968816 | 9.39 | 0.0 | 38.6 |
| 11/05/2024 | 8:11:17.466 | 21:34:56.93 | 0.9895356 | 9.46 | 0.0 | 38.5 |
| 11/06/2024 | 8:12:42.879 | 21:32:39.44 | 0.9821952 | 9.54 | -0.0 | 38.3 |
| 11/07/2024 | 8:14:06.319 | 21:30:26.94 | 0.9748623 | 9.61 | -0.0 | 38.1 |
| 11/08/2024 | 8:15:27.753 | 21:28:19.75 | 0.9675386 | 9.68 | -0.0 | 37.9 |
| 11/09/2024 | 8:16:47.147 | 21:26:18.17 | 0.9602260 | 9.75 | -0.1 | 37.6 |
| 11/10/2024 | 8:18:04.467 | 21:24:22.49 | 0.9529263 | 9.83 | -0.1 | 37.4 |
| 11/11/2024 | 8:19:19.679 | 21:22:33.00 | 0.9456412 | 9.90 | -0.1 | 37.2 |
| 11/12/2024 | 8:20:32.750 | 21:20:49.98 | 0.9383726 | 9.98 | -0.1 | 37.0 |
| 11/13/2024 | 8:21:43.646 | 21:19:13.72 | 0.9311220 | 10.06 | -0.1 | 36.8 |
| 11/14/2024 | 8:22:52.333 | 21:17:44.51 | 0.9238912 | 10.14 | -0.2 | 36.5 |
| 11/15/2024 | 8:23:58.774 | 21:16:22.65 | 0.9166817 | 10.22 | -0.2 | 36.3 |
| 11/16/2024 | 8:25:02.927 | 21:15:08.45 | 0.9094954 | 10.30 | -0.2 | 36.1 |
| 11/17/2024 | 8:26:04.747 | 21:14:02.25 | 0.9023340 | 10.38 | -0.2 | 35.8 |
| 11/18/2024 | 8:27:04.185 | 21:13:04.40 | 0.8951994 | 10.46 | -0.2 | 35.6 |
| 11/19/2024 | 8:28:01.188 | 21:12:15.22 | 0.8880937 | 10.55 | -0.2 | 35.3 |
| 11/20/2024 | 8:28:55.703 | 21:11:35.05 | 0.8810192 | 10.63 | -0.3 | 35.1 |
| 11/21/2024 | 8:29:47.678 | 21:11:04.21 | 0.8739782 | 10.72 | -0.3 | 34.8 |
| 11/22/2024 | 8:30:37.058 | 21:10:43.01 | 0.8669735 | 10.80 | -0.3 | 34.5 |
| 11/23/2024 | 8:31:23.792 | 21:10:31.77 | 0.8600076 | 10.89 | -0.3 | 34.2 |
| 11/24/2024 | 8:32:07.827 | 21:10:30.78 | 0.8530836 | 10.98 | -0.3 | 33.9 |
| 11/25/2024 | 8:32:49.113 | 21:10:40.33 | 0.8462044 | 11.07 | -0.4 | 33.6 |
| 11/26/2024 | 8:33:27.600 | 21:11:00.69 | 0.8393731 | 11.16 | -0.4 | 33.2 |
| 11/27/2024 | 8:34:03.236 | 21:11:32.15 | 0.8325929 | 11.25 | -0.4 | 32.8 |
| 11/28/2024 | 8:34:35.972 | 21:12:14.95 | 0.8258672 | 11.34 | -0.4 | 32.5 |
| 11/29/2024 | 8:35:05.760 | 21:13:09.35 | 0.8191993 | 11.43 | -0.5 | 32.1 |
| 11/30/2024 | 8:35:32.551 | 21:14:15.56 | 0.8125929 | 11.53 | -0.5 | 31.7 |
| 12/01/2024 | 8:35:56.298 | 21:15:33.81 | 0.8060514 | 11.62 | -0.5 | 31.3 |
| 12/02/2024 | 8:36:16.956 | 21:17:04.27 | 0.7995787 | 11.71 | -0.5 | 30.8 |
| 12/03/2024 | 8:36:34.479 | 21:18:47.12 | 0.7931784 | 11.81 | -0.5 | 30.4 |
| 12/04/2024 | 8:36:48.826 | 21:20:42.51 | 0.7868543 | 11.90 | -0.6 | 29.9 |
| 12/05/2024 | 8:36:59.954 | 21:22:50.53 | 0.7806103 | 12.00 | -0.6 | 29.5 |
| 12/06/2024 | 8:37:07.825 | 21:25:11.28 | 0.7744502 | 12.09 | -0.6 | 29.0 |
| 12/07/2024 | 8:37:12.405 | 21:27:44.78 | 0.7683778 | 12.19 | -0.6 | 28.5 |
| 12/08/2024 | 8:37:13.659 | 21:30:31.06 | 0.7623970 | 12.28 | -0.7 | 28.0 |
| 12/09/2024 | 8:37:11.560 | 21:33:30.09 | 0.7565115 | 12.38 | -0.7 | 27.5 |
| 12/10/2024 | 8:37:06.080 | 21:36:41.82 | 0.7507252 | 12.48 | -0.7 | 27.0 |
| 12/11/2024 | 8:36:57.195 | 21:40:06.17 | 0.7450416 | 12.57 | -0.7 | 26.4 |
| 12/12/2024 | 8:36:44.882 | 21:43:43.05 | 0.7394647 | 12.66 | -0.8 | 25.9 |
| 12/13/2024 | 8:36:29.119 | 21:47:32.35 | 0.7339981 | 12.76 | -0.8 | 25.4 |
| 12/14/2024 | 8:36:09.885 | 21:51:33.93 | 0.7286456 | 12.85 | -0.8 | 24.8 |

Mars - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 8:35:47.158 | 21:55:47.64 | 0.7234111 | 12.95 | -0.8 | 24.3 |
| 12/16/2024 | 8:35:20.917 | 22:00:13.29 | 0.7182985 | 13.04 | -0.9 | 23.7 |
| 12/17/2024 | 8:34:51.145 | 22:04:50.67 | 0.7133121 | 13.13 | -0.9 | 23.1 |
| 12/18/2024 | 8:34:17.828 | 22:09:39.51 | 0.7084561 | 13.22 | -0.9 | 22.5 |
| 12/19/2024 | 8:33:40.959 | 22:14:39.48 | 0.7037349 | 13.31 | -0.9 | 21.9 |
| 12/20/2024 | 8:33:00.539 | 22:19:50.22 | 0.6991530 | 13.40 | -0.9 | 21.3 |
| 12/21/2024 | 8:32:16.576 | 22:25:11.33 | 0.6947149 | 13.48 | -1.0 | 20.7 |
| 12/22/2024 | 8:31:29.086 | 22:30:42.34 | 0.6904254 | 13.56 | -1.0 | 20.0 |
| 12/23/2024 | 8:30:38.094 | 22:36:22.74 | 0.6862892 | 13.65 | -1.0 | 19.3 |
| 12/24/2024 | 8:29:43.633 | 22:42:11.97 | 0.6823109 | 13.73 | -1.0 | 18.6 |
| 12/25/2024 | 8:28:45.747 | 22:48:09.45 | 0.6784952 | 13.80 | -1.1 | 17.9 |
| 12/26/2024 | 8:27:44.486 | 22:54:14.50 | 0.6748469 | 13.88 | -1.1 | 17.2 |
| 12/27/2024 | 8:26:39.914 | 23:00:26.45 | 0.6713704 | 13.95 | -1.1 | 16.5 |
| 12/28/2024 | 8:25:32.101 | 23:06:44.57 | 0.6680704 | 14.02 | -1.1 | 15.7 |
| 12/29/2024 | 8:24:21.130 | 23:13:08.06 | 0.6649514 | 14.08 | -1.1 | 15.0 |
| 12/30/2024 | 8:23:07.093 | 23:19:36.12 | 0.6620176 | 14.15 | -1.2 | 14.2 |
| 12/31/2024 | 8:21:50.094 | 23:26:07.90 | 0.6592733 | 14.21 | -1.2 | 13.4 |
| 01/01/2025 | 8:20:30.247 | 23:32:42.50 | 0.6567224 | 14.26 | -1.2 | 12.6 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 2:14:44.626 | 12:15:31.29 | 4.4669843 | 44.13 | -2.6 | 10.2 |
| 01/01/2024 | 2:14:44.520 | 12:15:50.30 | 4.4814913 | 43.99 | -2.6 | 10.3 |
| 01/02/2024 | 2:14:45.215 | 12:16:13.42 | 4.4961192 | 43.85 | -2.6 | 10.4 |
| 01/03/2024 | 2:14:46.712 | 12:16:40.65 | 4.5108635 | 43.70 | -2.6 | 10.4 |
| 01/04/2024 | 2:14:49.011 | 12:17:11.99 | 4.5257195 | 43.56 | -2.6 | 10.5 |
| 01/05/2024 | 2:14:52.113 | 12:17:47.42 | 4.5406826 | 43.42 | -2.6 | 10.6 |
| 01/06/2024 | 2:14:56.016 | 12:18:26.94 | 4.5557481 | 43.27 | -2.6 | 10.7 |
| 01/07/2024 | 2:15:00.722 | 12:19:10.55 | 4.5709112 | 43.13 | -2.6 | 10.8 |
| 01/08/2024 | 2:15:06.228 | 12:19:58.24 | 4.5861671 | 42.99 | -2.6 | 10.8 |
| 01/09/2024 | 2:15:12.532 | 12:20:49.99 | 4.6015110 | 42.84 | -2.5 | 10.9 |
| 01/10/2024 | 2:15:19.632 | 12:21:45.78 | 4.6169380 | 42.70 | -2.5 | 11.0 |
| 01/11/2024 | 2:15:27.523 | 12:22:45.60 | 4.6324430 | 42.56 | -2.5 | 11.0 |
| 01/12/2024 | 2:15:36.200 | 12:23:49.39 | 4.6480211 | 42.41 | -2.5 | 11.1 |
| 01/13/2024 | 2:15:45.657 | 12:24:57.12 | 4.6636670 | 42.27 | -2.5 | 11.1 |
| 01/14/2024 | 2:15:55.888 | 12:26:08.74 | 4.6793757 | 42.13 | -2.5 | 11.2 |
| 01/15/2024 | 2:16:06.891 | 12:27:24.20 | 4.6951421 | 41.99 | -2.5 | 11.2 |
| 01/16/2024 | 2:16:18.660 | 12:28:43.46 | 4.7109611 | 41.85 | -2.5 | 11.2 |
| 01/17/2024 | 2:16:31.193 | 12:30:06.48 | 4.7268280 | 41.71 | -2.5 | 11.3 |
| 01/18/2024 | 2:16:44.486 | 12:31:33.23 | 4.7427380 | 41.57 | -2.5 | 11.3 |
| 01/19/2024 | 2:16:58.534 | 12:33:03.68 | 4.7586866 | 41.43 | -2.5 | 11.3 |
| 01/20/2024 | 2:17:13.331 | 12:34:37.79 | 4.7746692 | 41.29 | -2.5 | 11.3 |
| 01/21/2024 | 2:17:28.870 | 12:36:15.52 | 4.7906816 | 41.15 | -2.5 | 11.3 |
| 01/22/2024 | 2:17:45.143 | 12:37:56.81 | 4.8067195 | 41.01 | -2.4 | 11.4 |
| 01/23/2024 | 2:18:02.143 | 12:39:41.62 | 4.8227789 | 40.88 | -2.4 | 11.4 |
| 01/24/2024 | 2:18:19.862 | 12:41:29.89 | 4.8388557 | 40.74 | -2.4 | 11.4 |
| 01/25/2024 | 2:18:38.291 | 12:43:21.57 | 4.8549459 | 40.61 | -2.4 | 11.4 |
| 01/26/2024 | 2:18:57.425 | 12:45:16.61 | 4.8710457 | 40.47 | -2.4 | 11.4 |
| 01/27/2024 | 2:19:17.257 | 12:47:14.94 | 4.8871512 | 40.34 | -2.4 | 11.4 |
| 01/28/2024 | 2:19:37.780 | 12:49:16.52 | 4.9032586 | 40.21 | -2.4 | 11.4 |
| 01/29/2024 | 2:19:58.989 | 12:51:21.31 | 4.9193639 | 40.08 | -2.4 | 11.4 |
| 01/30/2024 | 2:20:20.879 | 12:53:29.25 | 4.9354635 | 39.94 | -2.4 | 11.4 |
| 01/31/2024 | 2:20:43.445 | 12:55:40.30 | 4.9515535 | 39.81 | -2.4 | 11.4 |
| 02/01/2024 | 2:21:06.681 | 12:57:54.43 | 4.9676302 | 39.69 | -2.4 | 11.4 |
| 02/02/2024 | 2:21:30.584 | 13:00:11.60 | 4.9836897 | 39.56 | -2.4 | 11.4 |
| 02/03/2024 | 2:21:55.147 | 13:02:31.76 | 4.9997283 | 39.43 | -2.4 | 11.4 |
| 02/04/2024 | 2:22:20.366 | 13:04:54.88 | 5.0157421 | 39.31 | -2.4 | 11.3 |
| 02/05/2024 | 2:22:46.234 | 13:07:20.92 | 5.0317273 | 39.18 | -2.3 | 11.3 |
| 02/06/2024 | 2:23:12.745 | 13:09:49.83 | 5.0476800 | 39.06 | -2.3 | 11.3 |
| 02/07/2024 | 2:23:39.892 | 13:12:21.57 | 5.0635965 | 38.93 | -2.3 | 11.3 |
| 02/08/2024 | 2:24:07.665 | 13:14:56.08 | 5.0794726 | 38.81 | -2.3 | 11.3 |
| 02/09/2024 | 2:24:36.057 | 13:17:33.29 | 5.0953044 | 38.69 | -2.3 | 11.2 |
| 02/10/2024 | 2:25:05.059 | 13:20:13.15 | 5.1110879 | 38.57 | -2.3 | 11.2 |
| 02/11/2024 | 2:25:34.663 | 13:22:55.57 | 5.1268192 | 38.45 | -2.3 | 11.2 |
| 02/12/2024 | 2:26:04.864 | 13:25:40.49 | 5.1424942 | 38.34 | -2.3 | 11.1 |
| 02/13/2024 | 2:26:35.655 | 13:28:27.87 | 5.1581092 | 38.22 | -2.3 | 11.1 |
| 02/14/2024 | 2:27:07.032 | 13:31:17.65 | 5.1736605 | 38.11 | -2.3 | 11.0 |
| 02/15/2024 | 2:27:38.987 | 13:34:09.79 | 5.1891447 | 37.99 | -2.3 | 11.0 |
| 02/16/2024 | 2:28:11.514 | 13:37:04.23 | 5.2045584 | 37.88 | -2.3 | 10.9 |
| 02/17/2024 | 2:28:44.604 | 13:40:00.94 | 5.2198984 | 37.77 | -2.3 | 10.8 |
| 02/18/2024 | 2:29:18.248 | 13:42:59.84 | 5.2351618 | 37.66 | -2.3 | 10.8 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 2:29:52.436 | 13:46:00.88 | 5.2503456 | 37.55 | -2.3 | 10.7 |
| 02/20/2024 | 2:30:27.161 | 13:49:03.99 | 5.2654469 | 37.44 | -2.3 | 10.7 |
| 02/21/2024 | 2:31:02.412 | 13:52:09.12 | 5.2804630 | 37.33 | -2.2 | 10.6 |
| 02/22/2024 | 2:31:38.183 | 13:55:16.20 | 5.2953913 | 37.23 | -2.2 | 10.5 |
| 02/23/2024 | 2:32:14.465 | 13:58:25.17 | 5.3102290 | 37.13 | -2.2 | 10.5 |
| 02/24/2024 | 2:32:51.253 | 14:01:35.98 | 5.3249736 | 37.02 | -2.2 | 10.4 |
| 02/25/2024 | 2:33:28.538 | 14:04:48.56 | 5.3396225 | 36.92 | -2.2 | 10.3 |
| 02/26/2024 | 2:34:06.316 | 14:08:02.88 | 5.3541731 | 36.82 | -2.2 | 10.3 |
| 02/27/2024 | 2:34:44.582 | 14:11:18.89 | 5.3686229 | 36.72 | -2.2 | 10.2 |
| 02/28/2024 | 2:35:23.329 | 14:14:36.53 | 5.3829694 | 36.62 | -2.2 | 10.1 |
| 02/29/2024 | 2:36:02.553 | 14:17:55.77 | 5.3972101 | 36.53 | -2.2 | 10.0 |
| 03/01/2024 | 2:36:42.249 | 14:21:16.57 | 5.4113424 | 36.43 | -2.2 | 10.0 |
| 03/02/2024 | 2:37:22.411 | 14:24:38.89 | 5.4253638 | 36.34 | -2.2 | 9.9 |
| 03/03/2024 | 2:38:03.034 | 14:28:02.69 | 5.4392718 | 36.24 | -2.2 | 9.8 |
| 03/04/2024 | 2:38:44.110 | 14:31:27.93 | 5.4530637 | 36.15 | -2.2 | 9.7 |
| 03/05/2024 | 2:39:25.634 | 14:34:54.56 | 5.4667372 | 36.06 | -2.2 | 9.7 |
| 03/06/2024 | 2:40:07.598 | 14:38:22.53 | 5.4802894 | 35.97 | -2.2 | 9.6 |
| 03/07/2024 | 2:40:49.993 | 14:41:51.78 | 5.4937177 | 35.89 | -2.2 | 9.5 |
| 03/08/2024 | 2:41:32.813 | 14:45:22.26 | 5.5070194 | 35.80 | -2.2 | 9.4 |
| 03/09/2024 | 2:42:16.048 | 14:48:53.90 | 5.5201919 | 35.71 | -2.2 | 9.3 |
| 03/10/2024 | 2:42:59.694 | 14:52:26.64 | 5.5332323 | 35.63 | -2.1 | 9.2 |
| 03/11/2024 | 2:43:43.745 | 14:56:00.42 | 5.5461381 | 35.55 | -2.1 | 9.1 |
| 03/12/2024 | 2:44:28.196 | 14:59:35.20 | 5.5589067 | 35.46 | -2.1 | 9.0 |
| 03/13/2024 | 2:45:13.044 | 15:03:10.93 | 5.5715358 | 35.38 | -2.1 | 8.9 |
| 03/14/2024 | 2:45:58.281 | 15:06:47.58 | 5.5840232 | 35.31 | -2.1 | 8.8 |
| 03/15/2024 | 2:46:43.901 | 15:10:25.10 | 5.5963668 | 35.23 | -2.1 | 8.7 |
| 03/16/2024 | 2:47:29.896 | 15:14:03.46 | 5.6085647 | 35.15 | -2.1 | 8.6 |
| 03/17/2024 | 2:48:16.256 | 15:17:42.59 | 5.6206152 | 35.08 | -2.1 | 8.4 |
| 03/18/2024 | 2:49:02.973 | 15:21:22.45 | 5.6325167 | 35.00 | -2.1 | 8.3 |
| 03/19/2024 | 2:49:50.040 | 15:25:02.97 | 5.6442675 | 34.93 | -2.1 | 8.2 |
| 03/20/2024 | 2:50:37.449 | 15:28:44.10 | 5.6558662 | 34.86 | -2.1 | 8.1 |
| 03/21/2024 | 2:51:25.193 | 15:32:25.79 | 5.6673112 | 34.79 | -2.1 | 8.0 |
| 03/22/2024 | 2:52:13.267 | 15:36:08.00 | 5.6786011 | 34.72 | -2.1 | 7.9 |
| 03/23/2024 | 2:53:01.664 | 15:39:50.67 | 5.6897345 | 34.65 | -2.1 | 7.8 |
| 03/24/2024 | 2:53:50.381 | 15:43:33.76 | 5.7007100 | 34.58 | -2.1 | 7.7 |
| 03/25/2024 | 2:54:39.412 | 15:47:17.23 | 5.7115262 | 34.52 | -2.1 | 7.5 |
| 03/26/2024 | 2:55:28.753 | 15:51:01.05 | 5.7221818 | 34.45 | -2.1 | 7.4 |
| 03/27/2024 | 2:56:18.400 | 15:54:45.19 | 5.7326753 | 34.39 | -2.1 | 7.3 |
| 03/28/2024 | 2:57:08.349 | 15:58:29.60 | 5.7430055 | 34.33 | -2.1 | 7.2 |
| 03/29/2024 | 2:57:58.595 | 16:02:14.27 | 5.7531710 | 34.27 | -2.1 | 7.1 |
| 03/30/2024 | 2:58:49.134 | 16:05:59.16 | 5.7631703 | 34.21 | -2.1 | 7.0 |
| 03/31/2024 | 2:59:39.960 | 16:09:44.24 | 5.7730021 | 34.15 | -2.1 | 6.9 |
| 04/01/2024 | 3:00:31.068 | 16:13:29.48 | 5.7826648 | 34.09 | -2.1 | 6.7 |
| 04/02/2024 | 3:01:22.452 | 16:17:14.83 | 5.7921570 | 34.04 | -2.1 | 6.6 |
| 04/03/2024 | 3:02:14.104 | 16:21:00.27 | 5.8014772 | 33.98 | -2.1 | 6.5 |
| 04/04/2024 | 3:03:06.018 | 16:24:45.73 | 5.8106238 | 33.93 | -2.1 | 6.4 |
| 04/05/2024 | 3:03:58.188 | 16:28:31.18 | 5.8195951 | 33.88 | -2.1 | 6.2 |
| 04/06/2024 | 3:04:50.608 | 16:32:16.55 | 5.8283897 | 33.83 | -2.0 | 6.1 |
| 04/07/2024 | 3:05:43.274 | 16:36:01.80 | 5.8370058 | 33.78 | -2.0 | 6.0 |
| 04/08/2024 | 3:06:36.181 | 16:39:46.89 | 5.8454419 | 33.73 | -2.0 | 5.8 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 3:07:29.328 | 16:43:31.79 | 5.8536966 | 33.68 | -2.0 | 5.7 |
| 04/10/2024 | 3:08:22.709 | 16:47:16.47 | 5.8617687 | 33.63 | -2.0 | 5.6 |
| 04/11/2024 | 3:09:16.319 | 16:51:00.91 | 5.8696569 | 33.59 | -2.0 | 5.4 |
| 04/12/2024 | 3:10:10.151 | 16:54:45.07 | 5.8773602 | 33.54 | -2.0 | 5.3 |
| 04/13/2024 | 3:11:04.198 | 16:58:28.92 | 5.8848779 | 33.50 | -2.0 | 5.2 |
| 04/14/2024 | 3:11:58.451 | 17:02:12.42 | 5.8922093 | 33.46 | -2.0 | 5.0 |
| 04/15/2024 | 3:12:52.903 | 17:05:55.52 | 5.8993536 | 33.42 | -2.0 | 4.9 |
| 04/16/2024 | 3:13:47.546 | 17:09:38.19 | 5.9063103 | 33.38 | -2.0 | 4.7 |
| 04/17/2024 | 3:14:42.376 | 17:13:20.37 | 5.9130790 | 33.34 | -2.0 | 4.6 |
| 04/18/2024 | 3:15:37.387 | 17:17:02.03 | 5.9196590 | 33.30 | -2.0 | 4.4 |
| 04/19/2024 | 3:16:32.573 | 17:20:43.13 | 5.9260500 | 33.27 | -2.0 | 4.3 |
| 04/20/2024 | 3:17:27.931 | 17:24:23.64 | 5.9322515 | 33.23 | -2.0 | 4.2 |
| 04/21/2024 | 3:18:23.457 | 17:28:03.54 | 5.9382630 | 33.20 | -2.0 | 4.0 |
| 04/22/2024 | 3:19:19.147 | 17:31:42.79 | 5.9440842 | 33.17 | -2.0 | 3.9 |
| 04/23/2024 | 3:20:14.998 | 17:35:21.37 | 5.9497145 | 33.14 | -2.0 | 3.8 |
| 04/24/2024 | 3:21:11.007 | 17:38:59.26 | 5.9551537 | 33.11 | -2.0 | 3.6 |
| 04/25/2024 | 3:22:07.169 | 17:42:36.45 | 5.9604012 | 33.08 | -2.0 | 3.5 |
| 04/26/2024 | 3:23:03.481 | 17:46:12.92 | 5.9654565 | 33.05 | -2.0 | 3.4 |
| 04/27/2024 | 3:23:59.938 | 17:49:48.64 | 5.9703192 | 33.02 | -2.0 | 3.2 |
| 04/28/2024 | 3:24:56.536 | 17:53:23.60 | 5.9749887 | 33.00 | -2.0 | 3.1 |
| 04/29/2024 | 3:25:53.268 | 17:56:57.77 | 5.9794644 | 32.97 | -2.0 | 3.0 |
| 04/30/2024 | 3:26:50.130 | 18:00:31.13 | 5.9837458 | 32.95 | -2.0 | 2.8 |
| 05/01/2024 | 3:27:47.114 | 18:04:03.64 | 5.9878321 | 32.92 | -2.0 | 2.7 |
| 05/02/2024 | 3:28:44.216 | 18:07:35.26 | 5.9917226 | 32.90 | -2.0 | 2.5 |
| 05/03/2024 | 3:29:41.430 | 18:11:05.96 | 5.9954166 | 32.88 | -2.0 | 2.4 |
| 05/04/2024 | 3:30:38.752 | 18:14:35.70 | 5.9989134 | 32.86 | -2.0 | 2.2 |
| 05/05/2024 | 3:31:36.178 | 18:18:04.45 | 6.0022121 | 32.85 | -2.0 | 2.1 |
| 05/06/2024 | 3:32:33.707 | 18:21:32.17 | 6.0053123 | 32.83 | -2.0 | 1.9 |
| 05/07/2024 | 3:33:31.334 | 18:24:58.87 | 6.0082132 | 32.81 | -2.0 | 1.8 |
| 05/08/2024 | 3:34:29.055 | 18:28:24.52 | 6.0109145 | 32.80 | -2.0 | 1.6 |
| 05/09/2024 | 3:35:26.865 | 18:31:49.12 | 6.0134158 | 32.78 | -2.0 | 1.5 |
| 05/10/2024 | 3:36:24.757 | 18:35:12.63 | 6.0157170 | 32.77 | -2.0 | 1.3 |
| 05/11/2024 | 3:37:22.722 | 18:38:35.04 | 6.0178182 | 32.76 | -2.0 | 1.2 |
| 05/12/2024 | 3:38:20.754 | 18:41:56.31 | 6.0197192 | 32.75 | -2.0 | 1.0 |
| 05/13/2024 | 3:39:18.845 | 18:45:16.42 | 6.0214205 | 32.74 | -2.0 | 0.9 |
| 05/14/2024 | 3:40:16.989 | 18:48:35.33 | 6.0229221 | 32.73 | -2.0 | 0.7 |
| 05/15/2024 | 3:41:15.180 | 18:51:53.02 | 6.0242243 | 32.73 | -2.0 | 0.6 |
| 05/16/2024 | 3:42:13.415 | 18:55:09.45 | 6.0253274 | 32.72 | -2.0 | 0.4 |
| 05/17/2024 | 3:43:11.688 | 18:58:24.60 | 6.0262318 | 32.71 | -2.0 | 0.3 |
| 05/18/2024 | 3:44:09.995 | 19:01:38.46 | 6.0269377 | 32.71 | -2.0 | 0.2 |
| 05/19/2024 | 3:45:08.335 | 19:04:51.01 | 6.0274455 | 32.71 | -2.0 | 0.1 |
| 05/20/2024 | 3:46:06.702 | 19:08:02.23 | 6.0277556 | 32.71 | -2.0 | 0.2 |
| 05/21/2024 | 3:47:05.094 | 19:11:12.12 | 6.0278681 | 32.71 | -2.0 | 0.3 |
| 05/22/2024 | 3:48:03.508 | 19:14:20.67 | 6.0277835 | 32.71 | -2.0 | 0.5 |
| 05/23/2024 | 3:49:01.940 | 19:17:27.88 | 6.0275021 | 32.71 | -2.0 | 0.6 |
| 05/24/2024 | 3:50:00.385 | 19:20:33.73 | 6.0270240 | 32.71 | -2.0 | 0.7 |
| 05/25/2024 | 3:50:58.839 | 19:23:38.22 | 6.0263497 | 32.71 | -2.0 | 0.9 |
| 05/26/2024 | 3:51:57.296 | 19:26:41.35 | 6.0254791 | 32.72 | -2.0 | 1.0 |
| 05/27/2024 | 3:52:55.750 | 19:29:43.09 | 6.0244124 | 32.72 | -2.0 | 1.1 |
| 05/28/2024 | 3:53:54.196 | 19:32:43.42 | 6.0231498 | 32.73 | -2.0 | 1.3 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 3:54:52.627 | 19:35:42.32 | 6.0216911 | 32.74 | -2.0 | 1.4 |
| 05/30/2024 | 3:55:51.039 | 19:38:39.76 | 6.0200364 | 32.75 | -2.0 | 1.6 |
| 05/31/2024 | 3:56:49.427 | 19:41:35.72 | 6.0181856 | 32.76 | -2.0 | 1.7 |
| 06/01/2024 | 3:57:47.788 | 19:44:30.18 | 6.0161387 | 32.77 | -2.0 | 1.9 |
| 06/02/2024 | 3:58:46.118 | 19:47:23.12 | 6.0138957 | 32.78 | -2.0 | 2.0 |
| 06/03/2024 | 3:59:44.415 | 19:50:14.54 | 6.0114567 | 32.79 | -2.0 | 2.2 |
| 06/04/2024 | 4:00:42.674 | 19:53:04.42 | 6.0088218 | 32.81 | -2.0 | 2.3 |
| 06/05/2024 | 4:01:40.890 | 19:55:52.78 | 6.0059914 | 32.82 | -2.0 | 2.5 |
| 06/06/2024 | 4:02:39.056 | 19:58:39.60 | 6.0029658 | 32.84 | -2.0 | 2.6 |
| 06/07/2024 | 4:03:37.165 | 20:01:24.88 | 5.9997456 | 32.86 | -2.0 | 2.8 |
| 06/08/2024 | 4:04:35.208 | 20:04:08.60 | 5.9963315 | 32.88 | -2.0 | 2.9 |
| 06/09/2024 | 4:05:33.179 | 20:06:50.75 | 5.9927242 | 32.90 | -2.0 | 3.1 |
| 06/10/2024 | 4:06:31.069 | 20:09:31.30 | 5.9889247 | 32.92 | -2.0 | 3.2 |
| 06/11/2024 | 4:07:28.872 | 20:12:10.23 | 5.9849337 | 32.94 | -2.0 | 3.3 |
| 06/12/2024 | 4:08:26.584 | 20:14:47.53 | 5.9807522 | 32.96 | -2.0 | 3.5 |
| 06/13/2024 | 4:09:24.198 | 20:17:23.18 | 5.9763812 | 32.99 | -2.0 | 3.6 |
| 06/14/2024 | 4:10:21.712 | 20:19:57.18 | 5.9718217 | 33.01 | -2.0 | 3.8 |
| 06/15/2024 | 4:11:19.120 | 20:22:29.52 | 5.9670747 | 33.04 | -2.0 | 3.9 |
| 06/16/2024 | 4:12:16.420 | 20:25:00.19 | 5.9621412 | 33.07 | -2.0 | 4.0 |
| 06/17/2024 | 4:13:13.607 | 20:27:29.20 | 5.9570222 | 33.09 | -2.0 | 4.2 |
| 06/18/2024 | 4:14:10.676 | 20:29:56.55 | 5.9517187 | 33.12 | -2.0 | 4.3 |
| 06/19/2024 | 4:15:07.625 | 20:32:22.24 | 5.9462316 | 33.15 | -2.0 | 4.4 |
| 06/20/2024 | 4:16:04.449 | 20:34:46.27 | 5.9405620 | 33.19 | -2.0 | 4.6 |
| 06/21/2024 | 4:17:01.143 | 20:37:08.66 | 5.9347107 | 33.22 | -2.0 | 4.7 |
| 06/22/2024 | 4:17:57.700 | 20:39:29.41 | 5.9286787 | 33.25 | -2.0 | 4.8 |
| 06/23/2024 | 4:18:54.114 | 20:41:48.51 | 5.9224668 | 33.29 | -2.0 | 4.9 |
| 06/24/2024 | 4:19:50.379 | 20:44:05.96 | 5.9160757 | 33.32 | -2.0 | 5.1 |
| 06/25/2024 | 4:20:46.489 | 20:46:21.75 | 5.9095062 | 33.36 | -2.0 | 5.2 |
| 06/26/2024 | 4:21:42.436 | 20:48:35.86 | 5.9027589 | 33.40 | -2.0 | 5.3 |
| 06/27/2024 | 4:22:38.216 | 20:50:48.27 | 5.8958344 | 33.44 | -2.0 | 5.5 |
| 06/28/2024 | 4:23:33.825 | 20:52:58.97 | 5.8887333 | 33.48 | -2.0 | 5.6 |
| 06/29/2024 | 4:24:29.259 | 20:55:07.96 | 5.8814562 | 33.52 | -2.0 | 5.7 |
| 06/30/2024 | 4:25:24.514 | 20:57:15.24 | 5.8740039 | 33.56 | -2.0 | 5.9 |
| 07/01/2024 | 4:26:19.586 | 20:59:20.81 | 5.8663772 | 33.61 | -2.0 | 6.0 |
| 07/02/2024 | 4:27:14.469 | 21:01:24.69 | 5.8585769 | 33.65 | -2.0 | 6.1 |
| 07/03/2024 | 4:28:09.156 | 21:03:26.88 | 5.8506041 | 33.70 | -2.0 | 6.3 |
| 07/04/2024 | 4:29:03.638 | 21:05:27.39 | 5.8424599 | 33.74 | -2.0 | 6.4 |
| 07/05/2024 | 4:29:57.907 | 21:07:26.22 | 5.8341456 | 33.79 | -2.0 | 6.5 |
| 07/06/2024 | 4:30:51.955 | 21:09:23.36 | 5.8256625 | 33.84 | -2.0 | 6.7 |
| 07/07/2024 | 4:31:45.772 | 21:11:18.81 | 5.8170120 | 33.89 | -2.0 | 6.8 |
| 07/08/2024 | 4:32:39.351 | 21:13:12.56 | 5.8081959 | 33.94 | -2.0 | 6.9 |
| 07/09/2024 | 4:33:32.686 | 21:15:04.60 | 5.7992155 | 34.00 | -2.0 | 7.0 |
| 07/10/2024 | 4:34:25.769 | 21:16:54.93 | 5.7900727 | 34.05 | -2.0 | 7.2 |
| 07/11/2024 | 4:35:18.597 | 21:18:43.55 | 5.7807690 | 34.10 | -2.0 | 7.3 |
| 07/12/2024 | 4:36:11.162 | 21:20:30.45 | 5.7713061 | 34.16 | -2.1 | 7.4 |
| 07/13/2024 | 4:37:03.461 | 21:22:15.64 | 5.7616859 | 34.22 | -2.1 | 7.5 |
| 07/14/2024 | 4:37:55.489 | 21:23:59.14 | 5.7519099 | 34.27 | -2.1 | 7.6 |
| 07/15/2024 | 4:38:47.241 | 21:25:40.96 | 5.7419799 | 34.33 | -2.1 | 7.7 |
| 07/16/2024 | 4:39:38.710 | 21:27:21.11 | 5.7318977 | 34.39 | -2.1 | 7.8 |
| 07/17/2024 | 4:40:29.893 | 21:28:59.60 | 5.7216650 | 34.46 | -2.1 | 7.9 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 4:41:20.783 | 21:30:36.45 | 5.7112834 | 34.52 | -2.1 | 8.0 |
| 07/19/2024 | 4:42:11.374 | 21:32:11.67 | 5.7007547 | 34.58 | -2.1 | 8.1 |
| 07/20/2024 | 4:43:01.658 | 21:33:45.29 | 5.6900804 | 34.65 | -2.1 | 8.2 |
| 07/21/2024 | 4:43:51.627 | 21:35:17.31 | 5.6792622 | 34.71 | -2.1 | 8.3 |
| 07/22/2024 | 4:44:41.275 | 21:36:47.72 | 5.6683015 | 34.78 | -2.1 | 8.4 |
| 07/23/2024 | 4:45:30.592 | 21:38:16.52 | 5.6571998 | 34.85 | -2.1 | 8.5 |
| 07/24/2024 | 4:46:19.573 | 21:39:43.70 | 5.6459584 | 34.92 | -2.1 | 8.6 |
| 07/25/2024 | 4:47:08.213 | 21:41:09.26 | 5.6345788 | 34.99 | -2.1 | 8.7 |
| 07/26/2024 | 4:47:56.506 | 21:42:33.20 | 5.6230622 | 35.06 | -2.1 | 8.8 |
| 07/27/2024 | 4:48:44.448 | 21:43:55.53 | 5.6114101 | 35.13 | -2.1 | 8.9 |
| 07/28/2024 | 4:49:32.033 | 21:45:16.26 | 5.5996240 | 35.21 | -2.1 | 9.1 |
| 07/29/2024 | 4:50:19.255 | 21:46:35.41 | 5.5877056 | 35.28 | -2.1 | 9.2 |
| 07/30/2024 | 4:51:06.106 | 21:47:53.02 | 5.5756566 | 35.36 | -2.1 | 9.3 |
| 07/31/2024 | 4:51:52.575 | 21:49:09.08 | 5.5634788 | 35.44 | -2.1 | 9.4 |
| 08/01/2024 | 4:52:38.654 | 21:50:23.62 | 5.5511743 | 35.51 | -2.1 | 9.4 |
| 08/02/2024 | 4:53:24.333 | 21:51:36.63 | 5.5387453 | 35.59 | -2.1 | 9.5 |
| 08/03/2024 | 4:54:09.601 | 21:52:48.13 | 5.5261938 | 35.67 | -2.1 | 9.6 |
| 08/04/2024 | 4:54:54.449 | 21:53:58.12 | 5.5135224 | 35.76 | -2.1 | 9.7 |
| 08/05/2024 | 4:55:38.869 | 21:55:06.60 | 5.5007333 | 35.84 | -2.1 | 9.8 |
| 08/06/2024 | 4:56:22.854 | 21:56:13.57 | 5.4878290 | 35.92 | -2.1 | 9.9 |
| 08/07/2024 | 4:57:06.395 | 21:57:19.04 | 5.4748121 | 36.01 | -2.1 | 10.0 |
| 08/08/2024 | 4:57:49.487 | 21:58:23.01 | 5.4616850 | 36.10 | -2.2 | 10.1 |
| 08/09/2024 | 4:58:32.122 | 21:59:25.51 | 5.4484505 | 36.18 | -2.2 | 10.1 |
| 08/10/2024 | 4:59:14.296 | 22:00:26.54 | 5.4351111 | 36.27 | -2.2 | 10.2 |
| 08/11/2024 | 4:59:56.001 | 22:01:26.13 | 5.4216694 | 36.36 | -2.2 | 10.3 |
| 08/12/2024 | 5:00:37.231 | 22:02:24.30 | 5.4081281 | 36.45 | -2.2 | 10.3 |
| 08/13/2024 | 5:01:17.979 | 22:03:21.07 | 5.3944898 | 36.55 | -2.2 | 10.4 |
| 08/14/2024 | 5:01:58.239 | 22:04:16.46 | 5.3807571 | 36.64 | -2.2 | 10.5 |
| 08/15/2024 | 5:02:38.003 | 22:05:10.50 | 5.3669327 | 36.73 | -2.2 | 10.5 |
| 08/16/2024 | 5:03:17.263 | 22:06:03.20 | 5.3530193 | 36.83 | -2.2 | 10.6 |
| 08/17/2024 | 5:03:56.011 | 22:06:54.60 | 5.3390193 | 36.93 | -2.2 | 10.6 |
| 08/18/2024 | 5:04:34.236 | 22:07:44.69 | 5.3249354 | 37.02 | -2.2 | 10.7 |
| 08/19/2024 | 5:05:11.932 | 22:08:33.48 | 5.3107699 | 37.12 | -2.2 | 10.7 |
| 08/20/2024 | 5:05:49.089 | 22:09:20.98 | 5.2965253 | 37.22 | -2.2 | 10.8 |
| 08/21/2024 | 5:06:25.700 | 22:10:07.18 | 5.2822039 | 37.32 | -2.2 | 10.8 |
| 08/22/2024 | 5:07:01.760 | 22:10:52.08 | 5.2678080 | 37.42 | -2.2 | 10.9 |
| 08/23/2024 | 5:07:37.263 | 22:11:35.69 | 5.2533400 | 37.53 | -2.2 | 11.0 |
| 08/24/2024 | 5:08:12.204 | 22:12:18.03 | 5.2388023 | 37.63 | -2.2 | 11.0 |
| 08/25/2024 | 5:08:46.575 | 22:12:59.14 | 5.2241975 | 37.74 | -2.2 | 11.1 |
| 08/26/2024 | 5:09:20.368 | 22:13:39.04 | 5.2095284 | 37.84 | -2.3 | 11.1 |
| 08/27/2024 | 5:09:53.571 | 22:14:17.75 | 5.1947977 | 37.95 | -2.3 | 11.2 |
| 08/28/2024 | 5:10:26.175 | 22:14:55.29 | 5.1800084 | 38.06 | -2.3 | 11.2 |
| 08/29/2024 | 5:10:58.168 | 22:15:31.67 | 5.1651638 | 38.17 | -2.3 | 11.2 |
| 08/30/2024 | 5:11:29.539 | 22:16:06.91 | 5.1502669 | 38.28 | -2.3 | 11.3 |
| 08/31/2024 | 5:12:00.279 | 22:16:41.02 | 5.1353212 | 38.39 | -2.3 | 11.3 |
| 09/01/2024 | 5:12:30.378 | 22:17:13.99 | 5.1203302 | 38.50 | -2.3 | 11.3 |
| 09/02/2024 | 5:12:59.828 | 22:17:45.84 | 5.1052972 | 38.62 | -2.3 | 11.4 |
| 09/03/2024 | 5:13:28.619 | 22:18:16.57 | 5.0902260 | 38.73 | -2.3 | 11.4 |
| 09/04/2024 | 5:13:56.746 | 22:18:46.19 | 5.0751201 | 38.85 | -2.3 | 11.4 |
| 09/05/2024 | 5:14:24.201 | 22:19:14.73 | 5.0599833 | 38.96 | -2.3 | 11.4 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 5:14:50.978 | 22:19:42.19 | 5.0448193 | 39.08 | -2.3 | 11.4 |
| 09/07/2024 | 5:15:17.069 | 22:20:08.60 | 5.0296318 | 39.20 | -2.3 | 11.4 |
| 09/08/2024 | 5:15:42.469 | 22:20:33.98 | 5.0144246 | 39.32 | -2.3 | 11.5 |
| 09/09/2024 | 5:16:07.171 | 22:20:58.35 | 4.9992015 | 39.44 | -2.3 | 11.5 |
| 09/10/2024 | 5:16:31.168 | 22:21:21.73 | 4.9839662 | 39.56 | -2.3 | 11.5 |
| 09/11/2024 | 5:16:54.453 | 22:21:44.16 | 4.9687227 | 39.68 | -2.3 | 11.4 |
| 09/12/2024 | 5:17:17.017 | 22:22:05.64 | 4.9534746 | 39.80 | -2.4 | 11.4 |
| 09/13/2024 | 5:17:38.854 | 22:22:26.21 | 4.9382258 | 39.92 | -2.4 | 11.4 |
| 09/14/2024 | 5:17:59.956 | 22:22:45.87 | 4.9229799 | 40.05 | -2.4 | 11.4 |
| 09/15/2024 | 5:18:20.313 | 22:23:04.63 | 4.9077407 | 40.17 | -2.4 | 11.4 |
| 09/16/2024 | 5:18:39.919 | 22:23:22.50 | 4.8925118 | 40.30 | -2.4 | 11.4 |
| 09/17/2024 | 5:18:58.766 | 22:23:39.47 | 4.8772967 | 40.42 | -2.4 | 11.4 |
| 09/18/2024 | 5:19:16.850 | 22:23:55.53 | 4.8620990 | 40.55 | -2.4 | 11.4 |
| 09/19/2024 | 5:19:34.166 | 22:24:10.70 | 4.8469222 | 40.67 | -2.4 | 11.3 |
| 09/20/2024 | 5:19:50.711 | 22:24:24.97 | 4.8317697 | 40.80 | -2.4 | 11.3 |
| 09/21/2024 | 5:20:06.479 | 22:24:38.37 | 4.8166453 | 40.93 | -2.4 | 11.3 |
| 09/22/2024 | 5:20:21.463 | 22:24:50.93 | 4.8015527 | 41.06 | -2.4 | 11.3 |
| 09/23/2024 | 5:20:35.656 | 22:25:02.67 | 4.7864959 | 41.19 | -2.4 | 11.2 |
| 09/24/2024 | 5:20:49.049 | 22:25:13.62 | 4.7714790 | 41.32 | -2.4 | 11.2 |
| 09/25/2024 | 5:21:01.631 | 22:25:23.76 | 4.7565062 | 41.45 | -2.4 | 11.2 |
| 09/26/2024 | 5:21:13.394 | 22:25:33.13 | 4.7415818 | 41.58 | -2.5 | 11.1 |
| 09/27/2024 | 5:21:24.331 | 22:25:41.70 | 4.7267104 | 41.71 | -2.5 | 11.1 |
| 09/28/2024 | 5:21:34.434 | 22:25:49.49 | 4.7118965 | 41.84 | -2.5 | 11.1 |
| 09/29/2024 | 5:21:43.698 | 22:25:56.49 | 4.6971447 | 41.97 | -2.5 | 11.0 |
| 09/30/2024 | 5:21:52.118 | 22:26:02.71 | 4.6824598 | 42.10 | -2.5 | 11.0 |
| 10/01/2024 | 5:21:59.689 | 22:26:08.14 | 4.6678464 | 42.23 | -2.5 | 10.9 |
| 10/02/2024 | 5:22:06.408 | 22:26:12.79 | 4.6533094 | 42.37 | -2.5 | 10.8 |
| 10/03/2024 | 5:22:12.273 | 22:26:16.68 | 4.6388537 | 42.50 | -2.5 | 10.8 |
| 10/04/2024 | 5:22:17.282 | 22:26:19.80 | 4.6244839 | 42.63 | -2.5 | 10.7 |
| 10/05/2024 | 5:22:21.431 | 22:26:22.17 | 4.6102050 | 42.76 | -2.5 | 10.6 |
| 10/06/2024 | 5:22:24.719 | 22:26:23.80 | 4.5960218 | 42.89 | -2.5 | 10.5 |
| 10/07/2024 | 5:22:27.145 | 22:26:24.71 | 4.5819391 | 43.03 | -2.5 | 10.4 |
| 10/08/2024 | 5:22:28.707 | 22:26:24.92 | 4.5679617 | 43.16 | -2.5 | 10.4 |
| 10/09/2024 | 5:22:29.402 | 22:26:24.42 | 4.5540945 | 43.29 | -2.5 | 10.3 |
| 10/10/2024 | 5:22:29.230 | 22:26:23.23 | 4.5403421 | 43.42 | -2.5 | 10.2 |
| 10/11/2024 | 5:22:28.187 | 22:26:21.36 | 4.5267092 | 43.55 | -2.6 | 10.1 |
| 10/12/2024 | 5:22:26.274 | 22:26:18.80 | 4.5132005 | 43.68 | -2.6 | 10.0 |
| 10/13/2024 | 5:22:23.489 | 22:26:15.55 | 4.4998204 | 43.81 | -2.6 | 9.9 |
| 10/14/2024 | 5:22:19.832 | 22:26:11.59 | 4.4865735 | 43.94 | -2.6 | 9.8 |
| 10/15/2024 | 5:22:15.305 | 22:26:06.90 | 4.4734642 | 44.07 | -2.6 | 9.7 |
| 10/16/2024 | 5:22:09.912 | 22:26:01.48 | 4.4604966 | 44.20 | -2.6 | 9.6 |
| 10/17/2024 | 5:22:03.655 | 22:25:55.31 | 4.4476752 | 44.33 | -2.6 | 9.5 |
| 10/18/2024 | 5:21:56.541 | 22:25:48.41 | 4.4350041 | 44.45 | -2.6 | 9.3 |
| 10/19/2024 | 5:21:48.571 | 22:25:40.77 | 4.4224878 | 44.58 | -2.6 | 9.2 |
| 10/20/2024 | 5:21:39.747 | 22:25:32.42 | 4.4101307 | 44.70 | -2.6 | 9.1 |
| 10/21/2024 | 5:21:30.070 | 22:25:23.37 | 4.3979373 | 44.83 | -2.6 | 9.0 |
| 10/22/2024 | 5:21:19.540 | 22:25:13.61 | 4.3859125 | 44.95 | -2.6 | 8.9 |
| 10/23/2024 | 5:21:08.157 | 22:25:03.14 | 4.3740609 | 45.07 | -2.6 | 8.7 |
| 10/24/2024 | 5:20:55.925 | 22:24:51.95 | 4.3623876 | 45.19 | -2.6 | 8.6 |
| 10/25/2024 | 5:20:42.845 | 22:24:40.02 | 4.3508973 | 45.31 | -2.6 | 8.5 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 5:20:28.924 | 22:24:27.33 | 4.3395950 | 45.43 | -2.7 | 8.3 |
| 10/27/2024 | 5:20:14.168 | 22:24:13.89 | 4.3284857 | 45.55 | -2.7 | 8.2 |
| 10/28/2024 | 5:19:58.586 | 22:23:59.68 | 4.3175744 | 45.66 | -2.7 | 8.1 |
| 10/29/2024 | 5:19:42.185 | 22:23:44.69 | 4.3068658 | 45.77 | -2.7 | 7.9 |
| 10/30/2024 | 5:19:24.976 | 22:23:28.92 | 4.2963649 | 45.89 | -2.7 | 7.7 |
| 10/31/2024 | 5:19:06.970 | 22:23:12.38 | 4.2860765 | 46.00 | -2.7 | 7.6 |
| 11/01/2024 | 5:18:48.177 | 22:22:55.05 | 4.2760054 | 46.11 | -2.7 | 7.4 |
| 11/02/2024 | 5:18:28.611 | 22:22:36.96 | 4.2661562 | 46.21 | -2.7 | 7.3 |
| 11/03/2024 | 5:18:08.283 | 22:22:18.10 | 4.2565335 | 46.32 | -2.7 | 7.1 |
| 11/04/2024 | 5:17:47.206 | 22:21:58.48 | 4.2471418 | 46.42 | -2.7 | 6.9 |
| 11/05/2024 | 5:17:25.393 | 22:21:38.11 | 4.2379855 | 46.52 | -2.7 | 6.7 |
| 11/06/2024 | 5:17:02.857 | 22:21:16.99 | 4.2290689 | 46.62 | -2.7 | 6.5 |
| 11/07/2024 | 5:16:39.611 | 22:20:55.12 | 4.2203960 | 46.71 | -2.7 | 6.4 |
| 11/08/2024 | 5:16:15.671 | 22:20:32.50 | 4.2119708 | 46.81 | -2.7 | 6.2 |
| 11/09/2024 | 5:15:51.051 | 22:20:09.12 | 4.2037971 | 46.90 | -2.7 | 6.0 |
| 11/10/2024 | 5:15:25.767 | 22:19:44.97 | 4.1958787 | 46.99 | -2.7 | 5.8 |
| 11/11/2024 | 5:14:59.836 | 22:19:20.04 | 4.1882188 | 47.07 | -2.7 | 5.6 |
| 11/12/2024 | 5:14:33.277 | 22:18:54.32 | 4.1808209 | 47.15 | -2.7 | 5.4 |
| 11/13/2024 | 5:14:06.111 | 22:18:27.79 | 4.1736882 | 47.24 | -2.8 | 5.2 |
| 11/14/2024 | 5:13:38.358 | 22:18:00.46 | 4.1668237 | 47.31 | -2.8 | 5.0 |
| 11/15/2024 | 5:13:10.039 | 22:17:32.36 | 4.1602305 | 47.39 | -2.8 | 4.9 |
| 11/16/2024 | 5:12:41.173 | 22:17:03.48 | 4.1539115 | 47.46 | -2.8 | 4.7 |
| 11/17/2024 | 5:12:11.778 | 22:16:33.87 | 4.1478697 | 47.53 | -2.8 | 4.5 |
| 11/18/2024 | 5:11:41.871 | 22:16:03.52 | 4.1421082 | 47.60 | -2.8 | 4.3 |
| 11/19/2024 | 5:11:11.470 | 22:15:32.45 | 4.1366299 | 47.66 | -2.8 | 4.1 |
| 11/20/2024 | 5:10:40.591 | 22:15:00.65 | 4.1314381 | 47.72 | -2.8 | 3.9 |
| 11/21/2024 | 5:10:09.256 | 22:14:28.14 | 4.1265355 | 47.78 | -2.8 | 3.7 |
| 11/22/2024 | 5:09:37.486 | 22:13:54.90 | 4.1219253 | 47.83 | -2.8 | 3.5 |
| 11/23/2024 | 5:09:05.303 | 22:13:20.95 | 4.1176102 | 47.88 | -2.8 | 3.3 |
| 11/24/2024 | 5:08:32.732 | 22:12:46.28 | 4.1135928 | 47.93 | -2.8 | 3.0 |
| 11/25/2024 | 5:07:59.798 | 22:12:10.93 | 4.1098759 | 47.97 | -2.8 | 2.8 |
| 11/26/2024 | 5:07:26.528 | 22:11:34.89 | 4.1064618 | 48.01 | -2.8 | 2.6 |
| 11/27/2024 | 5:06:52.948 | 22:10:58.21 | 4.1033529 | 48.05 | -2.8 | 2.4 |
| 11/28/2024 | 5:06:19.084 | 22:10:20.90 | 4.1005511 | 48.08 | -2.8 | 2.2 |
| 11/29/2024 | 5:05:44.965 | 22:09:42.99 | 4.0980585 | 48.11 | -2.8 | 1.9 |
| 11/30/2024 | 5:05:10.617 | 22:09:04.52 | 4.0958769 | 48.13 | -2.8 | 1.7 |
| 12/01/2024 | 5:04:36.069 | 22:08:25.53 | 4.0940077 | 48.15 | -2.8 | 1.5 |
| 12/02/2024 | 5:04:01.347 | 22:07:46.05 | 4.0924524 | 48.17 | -2.8 | 1.3 |
| 12/03/2024 | 5:03:26.478 | 22:07:06.12 | 4.0912121 | 48.19 | -2.8 | 1.0 |
| 12/04/2024 | 5:02:51.490 | 22:06:25.77 | 4.0902876 | 48.20 | -2.8 | 0.8 |
| 12/05/2024 | 5:02:16.408 | 22:05:45.04 | 4.0896797 | 48.21 | -2.8 | 0.6 |
| 12/06/2024 | 5:01:41.261 | 22:05:03.94 | 4.0893888 | 48.21 | -2.8 | 0.4 |
| 12/07/2024 | 5:01:06.075 | 22:04:22.50 | 4.0894150 | 48.21 | -2.8 | 0.2 |
| 12/08/2024 | 5:00:30.879 | 22:03:40.74 | 4.0897584 | 48.20 | -2.8 | 0.2 |
| 12/09/2024 | 4:59:55.701 | 22:02:58.70 | 4.0904185 | 48.20 | -2.8 | 0.4 |
| 12/10/2024 | 4:59:20.572 | 22:02:16.40 | 4.0913951 | 48.19 | -2.8 | 0.6 |
| 12/11/2024 | 4:58:45.521 | 22:01:33.88 | 4.0926874 | 48.17 | -2.8 | 0.8 |
| 12/12/2024 | 4:58:10.575 | 22:00:51.19 | 4.0942947 | 48.15 | -2.8 | 1.0 |
| 12/13/2024 | 4:57:35.764 | 22:00:08.39 | 4.0962161 | 48.13 | -2.8 | 1.2 |
| 12/14/2024 | 4:57:01.112 | 21:59:25.52 | 4.0984507 | 48.10 | -2.8 | 1.4 |

Jupiter - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 4:56:26.643 | 21:58:42.64 | 4.1009977 | 48.07 | -2.8 | 1.6 |
| 12/16/2024 | 4:55:52.380 | 21:57:59.79 | 4.1038558 | 48.04 | -2.8 | 1.9 |
| 12/17/2024 | 4:55:18.346 | 21:57:17.03 | 4.1070243 | 48.00 | -2.8 | 2.1 |
| 12/18/2024 | 4:54:44.562 | 21:56:34.38 | 4.1105018 | 47.96 | -2.8 | 2.3 |
| 12/19/2024 | 4:54:11.054 | 21:55:51.88 | 4.1142874 | 47.92 | -2.8 | 2.5 |
| 12/20/2024 | 4:53:37.844 | 21:55:09.56 | 4.1183798 | 47.87 | -2.8 | 2.7 |
| 12/21/2024 | 4:53:04.959 | 21:54:27.47 | 4.1227775 | 47.82 | -2.8 | 2.9 |
| 12/22/2024 | 4:52:32.425 | 21:53:45.65 | 4.1274790 | 47.76 | -2.8 | 3.1 |
| 12/23/2024 | 4:52:00.267 | 21:53:04.15 | 4.1324825 | 47.71 | -2.8 | 3.3 |
| 12/24/2024 | 4:51:28.510 | 21:52:23.03 | 4.1377863 | 47.65 | -2.8 | 3.6 |
| 12/25/2024 | 4:50:57.180 | 21:51:42.35 | 4.1433882 | 47.58 | -2.8 | 3.8 |
| 12/26/2024 | 4:50:26.301 | 21:51:02.15 | 4.1492861 | 47.51 | -2.8 | 4.0 |
| 12/27/2024 | 4:49:55.896 | 21:50:22.50 | 4.1554777 | 47.44 | -2.8 | 4.2 |
| 12/28/2024 | 4:49:25.989 | 21:49:43.47 | 4.1619602 | 47.37 | -2.8 | 4.4 |
| 12/29/2024 | 4:48:56.601 | 21:49:05.10 | 4.1687311 | 47.29 | -2.7 | 4.6 |
| 12/30/2024 | 4:48:27.754 | 21:48:27.47 | 4.1757875 | 47.21 | -2.7 | 4.8 |
| 12/31/2024 | 4:47:59.468 | 21:47:50.62 | 4.1831261 | 47.13 | -2.7 | 5.0 |
| 01/01/2025 | 4:47:31.761 | 21:47:14.59 | 4.1907437 | 47.04 | -2.7 | 5.2 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 22:22:46.803 | -11:52:19.62 | 10.2813436 | 16.16 | 0.9 | 4.7 |
| 01/01/2024 | 22:23:06.775 | -11:50:20.80 | 10.2946910 | 16.14 | 0.9 | 4.6 |
| 01/02/2024 | 22:23:27.002 | -11:48:20.52 | 10.3078781 | 16.12 | 0.9 | 4.6 |
| 01/03/2024 | 22:23:47.481 | -11:46:18.79 | 10.3209015 | 16.10 | 0.9 | 4.5 |
| 01/04/2024 | 22:24:08.210 | -11:44:15.64 | 10.3337579 | 16.08 | 0.9 | 4.4 |
| 01/05/2024 | 22:24:29.185 | -11:42:11.07 | 10.3464440 | 16.06 | 0.9 | 4.4 |
| 01/06/2024 | 22:24:50.403 | -11:40:05.10 | 10.3589565 | 16.04 | 0.9 | 4.3 |
| 01/07/2024 | 22:25:11.861 | -11:37:57.74 | 10.3712920 | 16.02 | 0.9 | 4.3 |
| 01/08/2024 | 22:25:33.557 | -11:35:49.03 | 10.3834471 | 16.01 | 0.9 | 4.2 |
| 01/09/2024 | 22:25:55.485 | -11:33:38.98 | 10.3954187 | 15.99 | 0.9 | 4.1 |
| 01/10/2024 | 22:26:17.641 | -11:31:27.63 | 10.4072033 | 15.97 | 0.9 | 4.1 |
| 01/11/2024 | 22:26:40.018 | -11:29:15.01 | 10.4187977 | 15.95 | 0.9 | 4.0 |
| 01/12/2024 | 22:27:02.610 | -11:27:01.17 | 10.4301988 | 15.93 | 0.9 | 3.9 |
| 01/13/2024 | 22:27:25.409 | -11:24:46.13 | 10.4414034 | 15.92 | 0.9 | 3.9 |
| 01/14/2024 | 22:27:48.409 | -11:22:29.93 | 10.4524087 | 15.90 | 0.9 | 3.8 |
| 01/15/2024 | 22:28:11.605 | -11:20:12.58 | 10.4632119 | 15.88 | 0.9 | 3.7 |
| 01/16/2024 | 22:28:34.993 | -11:17:54.10 | 10.4738104 | 15.87 | 0.9 | 3.6 |
| 01/17/2024 | 22:28:58.571 | -11:15:34.51 | 10.4842020 | 15.85 | 0.9 | 3.6 |
| 01/18/2024 | 22:29:22.336 | -11:13:13.81 | 10.4943844 | 15.84 | 0.9 | 3.5 |
| 01/19/2024 | 22:29:46.284 | -11:10:52.03 | 10.5043555 | 15.82 | 0.9 | 3.4 |
| 01/20/2024 | 22:30:10.412 | -11:08:29.20 | 10.5141134 | 15.81 | 0.9 | 3.3 |
| 01/21/2024 | 22:30:34.714 | -11:06:05.35 | 10.5236562 | 15.79 | 0.9 | 3.3 |
| 01/22/2024 | 22:30:59.186 | -11:03:40.51 | 10.5329820 | 15.78 | 0.9 | 3.2 |
| 01/23/2024 | 22:31:23.822 | -11:01:14.72 | 10.5420890 | 15.76 | 0.9 | 3.1 |
| 01/24/2024 | 22:31:48.616 | -10:58:48.01 | 10.5509755 | 15.75 | 0.9 | 3.0 |
| 01/25/2024 | 22:32:13.562 | -10:56:20.41 | 10.5596398 | 15.74 | 0.9 | 3.0 |
| 01/26/2024 | 22:32:38.656 | -10:53:51.94 | 10.5680800 | 15.73 | 0.9 | 2.9 |
| 01/27/2024 | 22:33:03.893 | -10:51:22.63 | 10.5762945 | 15.71 | 0.9 | 2.8 |
| 01/28/2024 | 22:33:29.269 | -10:48:52.50 | 10.5842814 | 15.70 | 0.9 | 2.7 |
| 01/29/2024 | 22:33:54.779 | -10:46:21.56 | 10.5920391 | 15.69 | 0.9 | 2.7 |
| 01/30/2024 | 22:34:20.421 | -10:43:49.83 | 10.5995658 | 15.68 | 0.9 | 2.6 |
| 01/31/2024 | 22:34:46.191 | -10:41:17.32 | 10.6068598 | 15.67 | 0.9 | 2.5 |
| 02/01/2024 | 22:35:12.086 | -10:38:44.06 | 10.6139193 | 15.66 | 0.9 | 2.4 |
| 02/02/2024 | 22:35:38.104 | -10:36:10.06 | 10.6207428 | 15.65 | 0.9 | 2.3 |
| 02/03/2024 | 22:36:04.240 | -10:33:35.34 | 10.6273284 | 15.64 | 0.9 | 2.3 |
| 02/04/2024 | 22:36:30.492 | -10:30:59.92 | 10.6336745 | 15.63 | 0.9 | 2.2 |
| 02/05/2024 | 22:36:56.855 | -10:28:23.83 | 10.6397794 | 15.62 | 0.9 | 2.1 |
| 02/06/2024 | 22:37:23.324 | -10:25:47.11 | 10.6456415 | 15.61 | 0.9 | 2.0 |
| 02/07/2024 | 22:37:49.895 | -10:23:09.78 | 10.6512591 | 15.60 | 0.9 | 1.9 |
| 02/08/2024 | 22:38:16.560 | -10:20:31.88 | 10.6566308 | 15.60 | 0.9 | 1.8 |
| 02/09/2024 | 22:38:43.313 | -10:17:53.47 | 10.6617549 | 15.59 | 0.9 | 1.7 |
| 02/10/2024 | 22:39:10.147 | -10:15:14.56 | 10.6666302 | 15.58 | 0.9 | 1.7 |
| 02/11/2024 | 22:39:37.055 | -10:12:35.19 | 10.6712553 | 15.57 | 0.9 | 1.6 |
| 02/12/2024 | 22:40:04.035 | -10:09:55.37 | 10.6756294 | 15.57 | 0.9 | 1.5 |
| 02/13/2024 | 22:40:31.082 | -10:07:15.13 | 10.6797515 | 15.56 | 0.9 | 1.4 |
| 02/14/2024 | 22:40:58.195 | -10:04:34.47 | 10.6836212 | 15.56 | 0.9 | 1.3 |
| 02/15/2024 | 22:41:25.371 | -10:01:53.41 | 10.6872378 | 15.55 | 0.9 | 1.2 |
| 02/16/2024 | 22:41:52.605 | -9:59:11.99 | 10.6906011 | 15.55 | 0.9 | 1.1 |
| 02/17/2024 | 22:42:19.894 | -9:56:30.24 | 10.6937109 | 15.54 | 0.9 | 1.0 |
| 02/18/2024 | 22:42:47.232 | -9:53:48.20 | 10.6965668 | 15.54 | 0.9 | 0.9 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 22:43:14.614 | -9:51:05.89 | 10.6991689 | 15.53 | 0.9 | 0.9 |
| 02/20/2024 | 22:43:42.035 | -9:48:23.36 | 10.7015169 | 15.53 | 0.9 | 0.8 |
| 02/21/2024 | 22:44:09.487 | -9:45:40.63 | 10.7036107 | 15.53 | 0.9 | 0.7 |
| 02/22/2024 | 22:44:36.968 | -9:42:57.73 | 10.7054503 | 15.52 | 0.9 | 0.6 |
| 02/23/2024 | 22:45:04.472 | -9:40:14.70 | 10.7070355 | 15.52 | 0.9 | 0.5 |
| 02/24/2024 | 22:45:31.995 | -9:37:31.54 | 10.7083662 | 15.52 | 0.9 | 0.4 |
| 02/25/2024 | 22:45:59.534 | -9:34:48.28 | 10.7094424 | 15.52 | 1.0 | 0.4 |
| 02/26/2024 | 22:46:27.085 | -9:32:04.94 | 10.7102640 | 15.52 | 1.0 | 0.3 |
| 02/27/2024 | 22:46:54.645 | -9:29:21.54 | 10.7108308 | 15.52 | 1.0 | 0.2 |
| 02/28/2024 | 22:47:22.211 | -9:26:38.09 | 10.7111428 | 15.52 | 1.0 | 0.2 |
| 02/29/2024 | 22:47:49.781 | -9:23:54.61 | 10.7111999 | 15.52 | 1.0 | 0.2 |
| 03/01/2024 | 22:48:17.351 | -9:21:11.12 | 10.7110020 | 15.52 | 1.0 | 0.2 |
| 03/02/2024 | 22:48:44.918 | -9:18:27.64 | 10.7105492 | 15.52 | 1.0 | 0.3 |
| 03/03/2024 | 22:49:12.479 | -9:15:44.21 | 10.7098413 | 15.52 | 1.0 | 0.3 |
| 03/04/2024 | 22:49:40.029 | -9:13:00.84 | 10.7088783 | 15.52 | 1.0 | 0.4 |
| 03/05/2024 | 22:50:07.564 | -9:10:17.58 | 10.7076602 | 15.52 | 1.0 | 0.5 |
| 03/06/2024 | 22:50:35.077 | -9:07:34.46 | 10.7061871 | 15.52 | 1.0 | 0.6 |
| 03/07/2024 | 22:51:02.563 | -9:04:51.52 | 10.7044591 | 15.53 | 1.0 | 0.7 |
| 03/08/2024 | 22:51:30.014 | -9:02:08.80 | 10.7024762 | 15.53 | 1.0 | 0.8 |
| 03/09/2024 | 22:51:57.427 | -8:59:26.33 | 10.7002388 | 15.53 | 1.0 | 0.9 |
| 03/10/2024 | 22:52:24.794 | -8:56:44.13 | 10.6977473 | 15.54 | 1.0 | 1.0 |
| 03/11/2024 | 22:52:52.114 | -8:54:02.23 | 10.6950024 | 15.54 | 1.0 | 1.0 |
| 03/12/2024 | 22:53:19.383 | -8:51:20.63 | 10.6920048 | 15.54 | 1.0 | 1.1 |
| 03/13/2024 | 22:53:46.601 | -8:48:39.35 | 10.6887557 | 15.55 | 1.0 | 1.2 |
| 03/14/2024 | 22:54:13.763 | -8:45:58.42 | 10.6852561 | 15.55 | 1.1 | 1.3 |
| 03/15/2024 | 22:54:40.867 | -8:43:17.88 | 10.6815074 | 15.56 | 1.1 | 1.4 |
| 03/16/2024 | 22:55:07.906 | -8:40:37.75 | 10.6775110 | 15.56 | 1.1 | 1.5 |
| 03/17/2024 | 22:55:34.876 | -8:37:58.07 | 10.6732681 | 15.57 | 1.1 | 1.6 |
| 03/18/2024 | 22:56:01.772 | -8:35:18.89 | 10.6687803 | 15.58 | 1.1 | 1.7 |
| 03/19/2024 | 22:56:28.587 | -8:32:40.22 | 10.6640489 | 15.58 | 1.1 | 1.7 |
| 03/20/2024 | 22:56:55.318 | -8:30:02.11 | 10.6590754 | 15.59 | 1.1 | 1.8 |
| 03/21/2024 | 22:57:21.960 | -8:27:24.58 | 10.6538612 | 15.60 | 1.1 | 1.9 |
| 03/22/2024 | 22:57:48.509 | -8:24:47.64 | 10.6484076 | 15.61 | 1.1 | 2.0 |
| 03/23/2024 | 22:58:14.962 | -8:22:11.33 | 10.6427161 | 15.62 | 1.1 | 2.1 |
| 03/24/2024 | 22:58:41.316 | -8:19:35.66 | 10.6367881 | 15.62 | 1.1 | 2.2 |
| 03/25/2024 | 22:59:07.567 | -8:17:00.64 | 10.6306250 | 15.63 | 1.1 | 2.2 |
| 03/26/2024 | 22:59:33.714 | -8:14:26.30 | 10.6242282 | 15.64 | 1.1 | 2.3 |
| 03/27/2024 | 22:59:59.754 | -8:11:52.64 | 10.6175991 | 15.65 | 1.1 | 2.4 |
| 03/28/2024 | 23:00:25.683 | -8:09:19.70 | 10.6107391 | 15.66 | 1.1 | 2.5 |
| 03/29/2024 | 23:00:51.501 | -8:06:47.48 | 10.6036495 | 15.67 | 1.1 | 2.6 |
| 03/30/2024 | 23:01:17.202 | -8:04:16.03 | 10.5963318 | 15.68 | 1.1 | 2.6 |
| 03/31/2024 | 23:01:42.783 | -8:01:45.35 | 10.5887873 | 15.70 | 1.1 | 2.7 |
| 04/01/2024 | 23:02:08.240 | -7:59:15.50 | 10.5810176 | 15.71 | 1.1 | 2.8 |
| 04/02/2024 | 23:02:33.567 | -7:56:46.49 | 10.5730240 | 15.72 | 1.1 | 2.9 |
| 04/03/2024 | 23:02:58.760 | -7:54:18.37 | 10.5648080 | 15.73 | 1.1 | 3.0 |
| 04/04/2024 | 23:03:23.812 | -7:51:51.17 | 10.5563711 | 15.74 | 1.1 | 3.1 |
| 04/05/2024 | 23:03:48.717 | -7:49:24.93 | 10.5477151 | 15.76 | 1.1 | 3.1 |
| 04/06/2024 | 23:04:13.472 | -7:46:59.68 | 10.5388416 | 15.77 | 1.1 | 3.2 |
| 04/07/2024 | 23:04:38.072 | -7:44:35.43 | 10.5297526 | 15.78 | 1.2 | 3.3 |
| 04/08/2024 | 23:05:02.515 | -7:42:12.21 | 10.5204501 | 15.80 | 1.2 | 3.4 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 23:05:26.799 | -7:39:50.02 | 10.5109363 | 15.81 | 1.2 | 3.5 |
| 04/10/2024 | 23:05:50.921 | -7:37:28.88 | 10.5012138 | 15.83 | 1.2 | 3.5 |
| 04/11/2024 | 23:06:14.879 | -7:35:08.82 | 10.4912851 | 15.84 | 1.2 | 3.6 |
| 04/12/2024 | 23:06:38.669 | -7:32:49.88 | 10.4811528 | 15.86 | 1.2 | 3.7 |
| 04/13/2024 | 23:07:02.286 | -7:30:32.09 | 10.4708198 | 15.87 | 1.2 | 3.8 |
| 04/14/2024 | 23:07:25.723 | -7:28:15.49 | 10.4602887 | 15.89 | 1.2 | 3.8 |
| 04/15/2024 | 23:07:48.977 | -7:26:00.12 | 10.4495623 | 15.90 | 1.2 | 3.9 |
| 04/16/2024 | 23:08:12.042 | -7:23:45.99 | 10.4386434 | 15.92 | 1.2 | 4.0 |
| 04/17/2024 | 23:08:34.913 | -7:21:33.14 | 10.4275346 | 15.94 | 1.2 | 4.0 |
| 04/18/2024 | 23:08:57.589 | -7:19:21.59 | 10.4162387 | 15.96 | 1.2 | 4.1 |
| 04/19/2024 | 23:09:20.064 | -7:17:11.36 | 10.4047584 | 15.97 | 1.2 | 4.2 |
| 04/20/2024 | 23:09:42.338 | -7:15:02.46 | 10.3930963 | 15.99 | 1.2 | 4.2 |
| 04/21/2024 | 23:10:04.406 | -7:12:54.91 | 10.3812552 | 16.01 | 1.2 | 4.3 |
| 04/22/2024 | 23:10:26.268 | -7:10:48.72 | 10.3692376 | 16.03 | 1.2 | 4.3 |
| 04/23/2024 | 23:10:47.920 | -7:08:43.92 | 10.3570463 | 16.05 | 1.2 | 4.4 |
| 04/24/2024 | 23:11:09.360 | -7:06:40.51 | 10.3446839 | 16.07 | 1.2 | 4.5 |
| 04/25/2024 | 23:11:30.587 | -7:04:38.52 | 10.3321529 | 16.09 | 1.2 | 4.5 |
| 04/26/2024 | 23:11:51.597 | -7:02:37.96 | 10.3194561 | 16.10 | 1.2 | 4.6 |
| 04/27/2024 | 23:12:12.387 | -7:00:38.86 | 10.3065959 | 16.13 | 1.2 | 4.6 |
| 04/28/2024 | 23:12:32.953 | -6:58:41.25 | 10.2935751 | 16.15 | 1.2 | 4.7 |
| 04/29/2024 | 23:12:53.290 | -6:56:45.15 | 10.2803962 | 16.17 | 1.2 | 4.8 |
| 04/30/2024 | 23:13:13.393 | -6:54:50.61 | 10.2670619 | 16.19 | 1.2 | 4.8 |
| 05/01/2024 | 23:13:33.257 | -6:52:57.66 | 10.2535749 | 16.21 | 1.2 | 4.9 |
| 05/02/2024 | 23:13:52.878 | -6:51:06.32 | 10.2399380 | 16.23 | 1.2 | 4.9 |
| 05/03/2024 | 23:14:12.250 | -6:49:16.62 | 10.2261540 | 16.25 | 1.2 | 5.0 |
| 05/04/2024 | 23:14:31.369 | -6:47:28.59 | 10.2122260 | 16.27 | 1.2 | 5.0 |
| 05/05/2024 | 23:14:50.235 | -6:45:42.24 | 10.1981570 | 16.30 | 1.2 | 5.1 |
| 05/06/2024 | 23:15:08.844 | -6:43:57.58 | 10.1839505 | 16.32 | 1.2 | 5.2 |
| 05/07/2024 | 23:15:27.195 | -6:42:14.62 | 10.1696097 | 16.34 | 1.2 | 5.2 |
| 05/08/2024 | 23:15:45.285 | -6:40:33.39 | 10.1551384 | 16.37 | 1.2 | 5.3 |
| 05/09/2024 | 23:16:03.113 | -6:38:53.91 | 10.1405403 | 16.39 | 1.2 | 5.3 |
| 05/10/2024 | 23:16:20.673 | -6:37:16.20 | 10.1258192 | 16.41 | 1.2 | 5.3 |
| 05/11/2024 | 23:16:37.960 | -6:35:40.31 | 10.1109789 | 16.44 | 1.2 | 5.4 |
| 05/12/2024 | 23:16:54.970 | -6:34:06.27 | 10.0960234 | 16.46 | 1.2 | 5.4 |
| 05/13/2024 | 23:17:11.698 | -6:32:34.10 | 10.0809564 | 16.49 | 1.2 | 5.5 |
| 05/14/2024 | 23:17:28.140 | -6:31:03.83 | 10.0657817 | 16.51 | 1.2 | 5.5 |
| 05/15/2024 | 23:17:44.293 | -6:29:35.47 | 10.0505033 | 16.54 | 1.2 | 5.5 |
| 05/16/2024 | 23:18:00.154 | -6:28:09.05 | 10.0351247 | 16.56 | 1.2 | 5.6 |
| 05/17/2024 | 23:18:15.721 | -6:26:44.56 | 10.0196498 | 16.59 | 1.2 | 5.6 |
| 05/18/2024 | 23:18:30.993 | -6:25:22.03 | 10.0040823 | 16.61 | 1.2 | 5.6 |
| 05/19/2024 | 23:18:45.967 | -6:24:01.46 | 9.9884259 | 16.64 | 1.2 | 5.7 |
| 05/20/2024 | 23:19:00.642 | -6:22:42.86 | 9.9726842 | 16.66 | 1.2 | 5.7 |
| 05/21/2024 | 23:19:15.017 | -6:21:26.24 | 9.9568609 | 16.69 | 1.2 | 5.7 |
| 05/22/2024 | 23:19:29.089 | -6:20:11.61 | 9.9409596 | 16.72 | 1.2 | 5.8 |
| 05/23/2024 | 23:19:42.858 | -6:18:58.98 | 9.9249839 | 16.75 | 1.2 | 5.8 |
| 05/24/2024 | 23:19:56.320 | -6:17:48.38 | 9.9089373 | 16.77 | 1.2 | 5.8 |
| 05/25/2024 | 23:20:09.473 | -6:16:39.81 | 9.8928235 | 16.80 | 1.2 | 5.8 |
| 05/26/2024 | 23:20:22.313 | -6:15:33.31 | 9.8766460 | 16.83 | 1.2 | 5.9 |
| 05/27/2024 | 23:20:34.836 | -6:14:28.90 | 9.8604084 | 16.85 | 1.2 | 5.9 |
| 05/28/2024 | 23:20:47.036 | -6:13:26.62 | 9.8441142 | 16.88 | 1.2 | 5.9 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 23:20:58.911 | -6:12:26.47 | 9.8277672 | 16.91 | 1.2 | 5.9 |
| 05/30/2024 | 23:21:10.456 | -6:11:28.49 | 9.8113710 | 16.94 | 1.2 | 5.9 |
| 05/31/2024 | 23:21:21.669 | -6:10:32.68 | 9.7949296 | 16.97 | 1.2 | 6.0 |
| 06/01/2024 | 23:21:32.548 | -6:09:39.06 | 9.7784468 | 17.00 | 1.2 | 6.0 |
| 06/02/2024 | 23:21:43.091 | -6:08:47.64 | 9.7619269 | 17.02 | 1.2 | 6.0 |
| 06/03/2024 | 23:21:53.298 | -6:07:58.41 | 9.7453741 | 17.05 | 1.2 | 6.0 |
| 06/04/2024 | 23:22:03.169 | -6:07:11.38 | 9.7287927 | 17.08 | 1.2 | 6.0 |
| 06/05/2024 | 23:22:12.700 | -6:06:26.57 | 9.7121872 | 17.11 | 1.2 | 6.0 |
| 06/06/2024 | 23:22:21.891 | -6:05:44.00 | 9.6955623 | 17.14 | 1.2 | 6.0 |
| 06/07/2024 | 23:22:30.736 | -6:05:03.68 | 9.6789226 | 17.17 | 1.2 | 6.1 |
| 06/08/2024 | 23:22:39.233 | -6:04:25.65 | 9.6622728 | 17.20 | 1.2 | 6.1 |
| 06/09/2024 | 23:22:47.377 | -6:03:49.92 | 9.6456174 | 17.23 | 1.2 | 6.1 |
| 06/10/2024 | 23:22:55.167 | -6:03:16.50 | 9.6289611 | 17.26 | 1.2 | 6.1 |
| 06/11/2024 | 23:23:02.599 | -6:02:45.41 | 9.6123086 | 17.29 | 1.1 | 6.1 |
| 06/12/2024 | 23:23:09.673 | -6:02:16.66 | 9.5956642 | 17.32 | 1.1 | 6.0 |
| 06/13/2024 | 23:23:16.387 | -6:01:50.23 | 9.5790325 | 17.35 | 1.1 | 6.0 |
| 06/14/2024 | 23:23:22.741 | -6:01:26.13 | 9.5624178 | 17.38 | 1.1 | 6.0 |
| 06/15/2024 | 23:23:28.735 | -6:01:04.36 | 9.5458247 | 17.41 | 1.1 | 6.0 |
| 06/16/2024 | 23:23:34.369 | -6:00:44.92 | 9.5292575 | 17.44 | 1.1 | 6.0 |
| 06/17/2024 | 23:23:39.644 | -6:00:27.79 | 9.5127204 | 17.47 | 1.1 | 6.0 |
| 06/18/2024 | 23:23:44.558 | -6:00:12.98 | 9.4962177 | 17.50 | 1.1 | 6.0 |
| 06/19/2024 | 23:23:49.113 | -6:00:00.48 | 9.4797537 | 17.53 | 1.1 | 6.0 |
| 06/20/2024 | 23:23:53.307 | -5:59:50.30 | 9.4633325 | 17.56 | 1.1 | 6.0 |
| 06/21/2024 | 23:23:57.140 | -5:59:42.44 | 9.4469583 | 17.59 | 1.1 | 5.9 |
| 06/22/2024 | 23:24:00.611 | -5:59:36.90 | 9.4306352 | 17.62 | 1.1 | 5.9 |
| 06/23/2024 | 23:24:03.717 | -5:59:33.71 | 9.4143672 | 17.65 | 1.1 | 5.9 |
| 06/24/2024 | 23:24:06.455 | -5:59:32.86 | 9.3981585 | 17.68 | 1.1 | 5.9 |
| 06/25/2024 | 23:24:08.823 | -5:59:34.38 | 9.3820131 | 17.71 | 1.1 | 5.9 |
| 06/26/2024 | 23:24:10.820 | -5:59:38.26 | 9.3659353 | 17.74 | 1.1 | 5.8 |
| 06/27/2024 | 23:24:12.444 | -5:59:44.51 | 9.3499293 | 17.77 | 1.1 | 5.8 |
| 06/28/2024 | 23:24:13.695 | -5:59:53.13 | 9.3339994 | 17.81 | 1.1 | 5.8 |
| 06/29/2024 | 23:24:14.576 | -6:00:04.09 | 9.3181502 | 17.84 | 1.1 | 5.8 |
| 06/30/2024 | 23:24:15.086 | -6:00:17.39 | 9.3023862 | 17.87 | 1.1 | 5.7 |
| 07/01/2024 | 23:24:15.228 | -6:00:33.01 | 9.2867122 | 17.90 | 1.1 | 5.7 |
| 07/02/2024 | 23:24:15.002 | -6:00:50.95 | 9.2711329 | 17.93 | 1.1 | 5.7 |
| 07/03/2024 | 23:24:14.409 | -6:01:11.22 | 9.2556531 | 17.96 | 1.1 | 5.6 |
| 07/04/2024 | 23:24:13.448 | -6:01:33.80 | 9.2402778 | 17.99 | 1.0 | 5.6 |
| 07/05/2024 | 23:24:12.117 | -6:01:58.70 | 9.2250119 | 18.02 | 1.0 | 5.6 |
| 07/06/2024 | 23:24:10.416 | -6:02:25.93 | 9.2098601 | 18.05 | 1.0 | 5.5 |
| 07/07/2024 | 23:24:08.345 | -6:02:55.48 | 9.1948274 | 18.07 | 1.0 | 5.5 |
| 07/08/2024 | 23:24:05.904 | -6:03:27.33 | 9.1799183 | 18.10 | 1.0 | 5.4 |
| 07/09/2024 | 23:24:03.094 | -6:04:01.49 | 9.1651377 | 18.13 | 1.0 | 5.4 |
| 07/10/2024 | 23:23:59.917 | -6:04:37.91 | 9.1504901 | 18.16 | 1.0 | 5.3 |
| 07/11/2024 | 23:23:56.375 | -6:05:16.60 | 9.1359800 | 18.19 | 1.0 | 5.3 |
| 07/12/2024 | 23:23:52.471 | -6:05:57.51 | 9.1216118 | 18.22 | 1.0 | 5.2 |
| 07/13/2024 | 23:23:48.209 | -6:06:40.62 | 9.1073899 | 18.25 | 1.0 | 5.1 |
| 07/14/2024 | 23:23:43.592 | -6:07:25.91 | 9.0933185 | 18.28 | 1.0 | 5.1 |
| 07/15/2024 | 23:23:38.622 | -6:08:13.34 | 9.0794019 | 18.30 | 1.0 | 5.0 |
| 07/16/2024 | 23:23:33.304 | -6:09:02.90 | 9.0656441 | 18.33 | 1.0 | 5.0 |
| 07/17/2024 | 23:23:27.640 | -6:09:54.55 | 9.0520492 | 18.36 | 1.0 | 4.9 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 23:23:21.634 | -6:10:48.28 | 9.0386211 | 18.39 | 1.0 | 4.8 |
| 07/19/2024 | 23:23:15.287 | -6:11:44.07 | 9.0253638 | 18.41 | 1.0 | 4.8 |
| 07/20/2024 | 23:23:08.601 | -6:12:41.90 | 9.0122811 | 18.44 | 1.0 | 4.7 |
| 07/21/2024 | 23:23:01.577 | -6:13:41.76 | 8.9993766 | 18.47 | 0.9 | 4.7 |
| 07/22/2024 | 23:22:54.216 | -6:14:43.64 | 8.9866542 | 18.49 | 0.9 | 4.6 |
| 07/23/2024 | 23:22:46.520 | -6:15:47.52 | 8.9741175 | 18.52 | 0.9 | 4.5 |
| 07/24/2024 | 23:22:38.490 | -6:16:53.38 | 8.9617704 | 18.54 | 0.9 | 4.5 |
| 07/25/2024 | 23:22:30.131 | -6:18:01.18 | 8.9496166 | 18.57 | 0.9 | 4.4 |
| 07/26/2024 | 23:22:21.447 | -6:19:10.89 | 8.9376601 | 18.59 | 0.9 | 4.3 |
| 07/27/2024 | 23:22:12.444 | -6:20:22.48 | 8.9259049 | 18.62 | 0.9 | 4.3 |
| 07/28/2024 | 23:22:03.126 | -6:21:35.89 | 8.9143551 | 18.64 | 0.9 | 4.2 |
| 07/29/2024 | 23:21:53.500 | -6:22:51.10 | 8.9030148 | 18.67 | 0.9 | 4.1 |
| 07/30/2024 | 23:21:43.568 | -6:24:08.08 | 8.8918881 | 18.69 | 0.9 | 4.0 |
| 07/31/2024 | 23:21:33.335 | -6:25:26.80 | 8.8809791 | 18.71 | 0.9 | 3.9 |
| 08/01/2024 | 23:21:22.803 | -6:26:47.24 | 8.8702919 | 18.74 | 0.9 | 3.9 |
| 08/02/2024 | 23:21:11.977 | -6:28:09.37 | 8.8598305 | 18.76 | 0.9 | 3.8 |
| 08/03/2024 | 23:21:00.859 | -6:29:33.16 | 8.8495989 | 18.78 | 0.9 | 3.7 |
| 08/04/2024 | 23:20:49.454 | -6:30:58.58 | 8.8396007 | 18.80 | 0.9 | 3.6 |
| 08/05/2024 | 23:20:37.767 | -6:32:25.58 | 8.8298398 | 18.82 | 0.8 | 3.5 |
| 08/06/2024 | 23:20:25.804 | -6:33:54.11 | 8.8203196 | 18.84 | 0.8 | 3.4 |
| 08/07/2024 | 23:20:13.572 | -6:35:24.14 | 8.8110435 | 18.86 | 0.8 | 3.3 |
| 08/08/2024 | 23:20:01.077 | -6:36:55.60 | 8.8020150 | 18.88 | 0.8 | 3.2 |
| 08/09/2024 | 23:19:48.326 | -6:38:28.44 | 8.7932370 | 18.90 | 0.8 | 3.2 |
| 08/10/2024 | 23:19:35.328 | -6:40:02.62 | 8.7847126 | 18.92 | 0.8 | 3.1 |
| 08/11/2024 | 23:19:22.090 | -6:41:38.06 | 8.7764448 | 18.94 | 0.8 | 3.0 |
| 08/12/2024 | 23:19:08.619 | -6:43:14.73 | 8.7684363 | 18.95 | 0.8 | 2.9 |
| 08/13/2024 | 23:18:54.923 | -6:44:52.56 | 8.7606898 | 18.97 | 0.8 | 2.8 |
| 08/14/2024 | 23:18:41.010 | -6:46:31.52 | 8.7532077 | 18.99 | 0.8 | 2.7 |
| 08/15/2024 | 23:18:26.884 | -6:48:11.55 | 8.7459925 | 19.00 | 0.8 | 2.6 |
| 08/16/2024 | 23:18:12.554 | -6:49:52.61 | 8.7390465 | 19.02 | 0.8 | 2.5 |
| 08/17/2024 | 23:17:58.024 | -6:51:34.66 | 8.7323717 | 19.03 | 0.8 | 2.4 |
| 08/18/2024 | 23:17:43.300 | -6:53:17.67 | 8.7259703 | 19.05 | 0.8 | 2.3 |
| 08/19/2024 | 23:17:28.387 | -6:55:01.59 | 8.7198443 | 19.06 | 0.7 | 2.2 |
| 08/20/2024 | 23:17:13.290 | -6:56:46.38 | 8.7139955 | 19.07 | 0.7 | 2.1 |
| 08/21/2024 | 23:16:58.018 | -6:58:31.99 | 8.7084261 | 19.08 | 0.7 | 2.0 |
| 08/22/2024 | 23:16:42.577 | -7:00:18.36 | 8.7031379 | 19.10 | 0.7 | 1.9 |
| 08/23/2024 | 23:16:26.979 | -7:02:05.41 | 8.6981330 | 19.11 | 0.7 | 1.8 |
| 08/24/2024 | 23:16:11.232 | -7:03:53.10 | 8.6934136 | 19.12 | 0.7 | 1.7 |
| 08/25/2024 | 23:15:55.345 | -7:05:41.36 | 8.6889818 | 19.13 | 0.7 | 1.6 |
| 08/26/2024 | 23:15:39.326 | -7:07:30.14 | 8.6848395 | 19.14 | 0.7 | 1.5 |
| 08/27/2024 | 23:15:23.184 | -7:09:19.40 | 8.6809890 | 19.14 | 0.7 | 1.4 |
| 08/28/2024 | 23:15:06.923 | -7:11:09.09 | 8.6774320 | 19.15 | 0.7 | 1.3 |
| 08/29/2024 | 23:14:50.553 | -7:12:59.16 | 8.6741703 | 19.16 | 0.7 | 1.2 |
| 08/30/2024 | 23:14:34.079 | -7:14:49.57 | 8.6712057 | 19.17 | 0.7 | 1.1 |
| 08/31/2024 | 23:14:17.510 | -7:16:40.26 | 8.6685396 | 19.17 | 0.7 | 1.0 |
| 09/01/2024 | 23:14:00.853 | -7:18:31.17 | 8.6661734 | 19.18 | 0.7 | 0.9 |
| 09/02/2024 | 23:13:44.119 | -7:20:22.24 | 8.6641082 | 19.18 | 0.7 | 0.7 |
| 09/03/2024 | 23:13:27.315 | -7:22:13.41 | 8.6623451 | 19.19 | 0.6 | 0.6 |
| 09/04/2024 | 23:13:10.453 | -7:24:04.60 | 8.6608849 | 19.19 | 0.6 | 0.5 |
| 09/05/2024 | 23:12:53.543 | -7:25:55.76 | 8.6597281 | 19.19 | 0.6 | 0.4 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 23:12:36.595 | -7:27:46.81 | 8.6588754 | 19.19 | 0.6 | 0.4 |
| 09/07/2024 | 23:12:19.620 | -7:29:37.68 | 8.6583271 | 19.19 | 0.6 | 0.3 |
| 09/08/2024 | 23:12:02.627 | -7:31:28.31 | 8.6580832 | 19.20 | 0.6 | 0.2 |
| 09/09/2024 | 23:11:45.627 | -7:33:18.64 | 8.6581439 | 19.20 | 0.6 | 0.2 |
| 09/10/2024 | 23:11:28.629 | -7:35:08.61 | 8.6585088 | 19.19 | 0.6 | 0.3 |
| 09/11/2024 | 23:11:11.643 | -7:36:58.16 | 8.6591779 | 19.19 | 0.6 | 0.4 |
| 09/12/2024 | 23:10:54.676 | -7:38:47.24 | 8.6601505 | 19.19 | 0.6 | 0.5 |
| 09/13/2024 | 23:10:37.738 | -7:40:35.81 | 8.6614262 | 19.19 | 0.6 | 0.6 |
| 09/14/2024 | 23:10:20.835 | -7:42:23.81 | 8.6630041 | 19.18 | 0.6 | 0.7 |
| 09/15/2024 | 23:10:03.974 | -7:44:11.20 | 8.6648836 | 19.18 | 0.6 | 0.8 |
| 09/16/2024 | 23:09:47.163 | -7:45:57.93 | 8.6670636 | 19.18 | 0.6 | 0.9 |
| 09/17/2024 | 23:09:30.410 | -7:47:43.96 | 8.6695432 | 19.17 | 0.6 | 1.0 |
| 09/18/2024 | 23:09:13.724 | -7:49:29.22 | 8.6723216 | 19.16 | 0.6 | 1.1 |
| 09/19/2024 | 23:08:57.114 | -7:51:13.65 | 8.6753978 | 19.16 | 0.6 | 1.2 |
| 09/20/2024 | 23:08:40.592 | -7:52:57.19 | 8.6787708 | 19.15 | 0.6 | 1.3 |
| 09/21/2024 | 23:08:24.169 | -7:54:39.77 | 8.6824400 | 19.14 | 0.6 | 1.4 |
| 09/22/2024 | 23:08:07.853 | -7:56:21.34 | 8.6864044 | 19.13 | 0.6 | 1.5 |
| 09/23/2024 | 23:07:51.653 | -7:58:01.86 | 8.6906631 | 19.12 | 0.6 | 1.6 |
| 09/24/2024 | 23:07:35.576 | -7:59:41.29 | 8.6952151 | 19.11 | 0.6 | 1.7 |
| 09/25/2024 | 23:07:19.628 | -8:01:19.59 | 8.7000593 | 19.10 | 0.6 | 1.8 |
| 09/26/2024 | 23:07:03.818 | -8:02:56.73 | 8.7051944 | 19.09 | 0.6 | 1.9 |
| 09/27/2024 | 23:06:48.152 | -8:04:32.64 | 8.7106189 | 19.08 | 0.6 | 2.0 |
| 09/28/2024 | 23:06:32.639 | -8:06:07.29 | 8.7163311 | 19.07 | 0.6 | 2.1 |
| 09/29/2024 | 23:06:17.287 | -8:07:40.61 | 8.7223293 | 19.05 | 0.6 | 2.2 |
| 09/30/2024 | 23:06:02.106 | -8:09:12.57 | 8.7286115 | 19.04 | 0.6 | 2.3 |
| 10/01/2024 | 23:05:47.103 | -8:10:43.09 | 8.7351755 | 19.03 | 0.6 | 2.4 |
| 10/02/2024 | 23:05:32.290 | -8:12:12.12 | 8.7420191 | 19.01 | 0.6 | 2.5 |
| 10/03/2024 | 23:05:17.674 | -8:13:39.61 | 8.7491398 | 19.00 | 0.6 | 2.6 |
| 10/04/2024 | 23:05:03.267 | -8:15:05.51 | 8.7565350 | 18.98 | 0.6 | 2.7 |
| 10/05/2024 | 23:04:49.075 | -8:16:29.76 | 8.7642019 | 18.96 | 0.6 | 2.8 |
| 10/06/2024 | 23:04:35.109 | -8:17:52.32 | 8.7721376 | 18.95 | 0.6 | 2.9 |
| 10/07/2024 | 23:04:21.375 | -8:19:13.14 | 8.7803391 | 18.93 | 0.6 | 3.0 |
| 10/08/2024 | 23:04:07.882 | -8:20:32.19 | 8.7888032 | 18.91 | 0.6 | 3.1 |
| 10/09/2024 | 23:03:54.636 | -8:21:49.44 | 8.7975266 | 18.89 | 0.6 | 3.2 |
| 10/10/2024 | 23:03:41.644 | -8:23:04.84 | 8.8065060 | 18.87 | 0.6 | 3.2 |
| 10/11/2024 | 23:03:28.910 | -8:24:18.38 | 8.8157377 | 18.85 | 0.6 | 3.3 |
| 10/12/2024 | 23:03:16.439 | -8:25:30.02 | 8.8252184 | 18.83 | 0.7 | 3.4 |
| 10/13/2024 | 23:03:04.238 | -8:26:39.75 | 8.8349442 | 18.81 | 0.7 | 3.5 |
| 10/14/2024 | 23:02:52.310 | -8:27:47.53 | 8.8449116 | 18.79 | 0.7 | 3.6 |
| 10/15/2024 | 23:02:40.661 | -8:28:53.34 | 8.8551170 | 18.77 | 0.7 | 3.7 |
| 10/16/2024 | 23:02:29.299 | -8:29:57.12 | 8.8655566 | 18.75 | 0.7 | 3.7 |
| 10/17/2024 | 23:02:18.231 | -8:30:58.84 | 8.8762269 | 18.72 | 0.7 | 3.8 |
| 10/18/2024 | 23:02:07.464 | -8:31:58.46 | 8.8871244 | 18.70 | 0.7 | 3.9 |
| 10/19/2024 | 23:01:57.005 | -8:32:55.96 | 8.8982458 | 18.68 | 0.7 | 4.0 |
| 10/20/2024 | 23:01:46.861 | -8:33:51.30 | 8.9095875 | 18.65 | 0.7 | 4.0 |
| 10/21/2024 | 23:01:37.034 | -8:34:44.47 | 8.9211462 | 18.63 | 0.7 | 4.1 |
| 10/22/2024 | 23:01:27.528 | -8:35:35.48 | 8.9329183 | 18.60 | 0.7 | 4.2 |
| 10/23/2024 | 23:01:18.347 | -8:36:24.29 | 8.9449001 | 18.58 | 0.7 | 4.3 |
| 10/24/2024 | 23:01:09.493 | -8:37:10.90 | 8.9570879 | 18.55 | 0.7 | 4.3 |
| 10/25/2024 | 23:01:00.971 | -8:37:55.28 | 8.9694778 | 18.53 | 0.7 | 4.4 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 23:00:52.785 | -8:38:37.40 | 8.9820658 | 18.50 | 0.7 | 4.5 |
| 10/27/2024 | 23:00:44.941 | -8:39:17.25 | 8.9948475 | 18.48 | 0.7 | 4.6 |
| 10/28/2024 | 23:00:37.443 | -8:39:54.79 | 9.0078189 | 18.45 | 0.7 | 4.6 |
| 10/29/2024 | 23:00:30.298 | -8:40:29.99 | 9.0209755 | 18.42 | 0.7 | 4.7 |
| 10/30/2024 | 23:00:23.509 | -8:41:02.82 | 9.0343127 | 18.40 | 0.7 | 4.8 |
| 10/31/2024 | 23:00:17.082 | -8:41:33.27 | 9.0478260 | 18.37 | 0.7 | 4.8 |
| 11/01/2024 | 23:00:11.021 | -8:42:01.31 | 9.0615106 | 18.34 | 0.8 | 4.9 |
| 11/02/2024 | 23:00:05.332 | -8:42:26.92 | 9.0753619 | 18.31 | 0.8 | 4.9 |
| 11/03/2024 | 23:00:00.017 | -8:42:50.08 | 9.0893748 | 18.28 | 0.8 | 5.0 |
| 11/04/2024 | 22:59:55.080 | -8:43:10.80 | 9.1035444 | 18.26 | 0.8 | 5.1 |
| 11/05/2024 | 22:59:50.523 | -8:43:29.05 | 9.1178658 | 18.23 | 0.8 | 5.1 |
| 11/06/2024 | 22:59:46.348 | -8:43:44.84 | 9.1323338 | 18.20 | 0.8 | 5.2 |
| 11/07/2024 | 22:59:42.555 | -8:43:58.18 | 9.1469434 | 18.17 | 0.8 | 5.2 |
| 11/08/2024 | 22:59:39.145 | -8:44:09.05 | 9.1616894 | 18.14 | 0.8 | 5.2 |
| 11/09/2024 | 22:59:36.119 | -8:44:17.47 | 9.1765666 | 18.11 | 0.8 | 5.3 |
| 11/10/2024 | 22:59:33.477 | -8:44:23.43 | 9.1915700 | 18.08 | 0.8 | 5.3 |
| 11/11/2024 | 22:59:31.220 | -8:44:26.93 | 9.2066946 | 18.05 | 0.8 | 5.4 |
| 11/12/2024 | 22:59:29.350 | -8:44:27.96 | 9.2219352 | 18.02 | 0.8 | 5.4 |
| 11/13/2024 | 22:59:27.870 | -8:44:26.51 | 9.2372870 | 17.99 | 0.8 | 5.4 |
| 11/14/2024 | 22:59:26.781 | -8:44:22.57 | 9.2527452 | 17.96 | 0.8 | 5.5 |
| 11/15/2024 | 22:59:26.088 | -8:44:16.13 | 9.2683052 | 17.93 | 0.8 | 5.5 |
| 11/16/2024 | 22:59:25.791 | -8:44:07.19 | 9.2839623 | 17.90 | 0.8 | 5.5 |
| 11/17/2024 | 22:59:25.890 | -8:43:55.76 | 9.2997119 | 17.87 | 0.8 | 5.6 |
| 11/18/2024 | 22:59:26.385 | -8:43:41.87 | 9.3155497 | 17.84 | 0.8 | 5.6 |
| 11/19/2024 | 22:59:27.274 | -8:43:25.51 | 9.3314710 | 17.81 | 0.8 | 5.6 |
| 11/20/2024 | 22:59:28.555 | -8:43:06.72 | 9.3474712 | 17.78 | 0.8 | 5.6 |
| 11/21/2024 | 22:59:30.227 | -8:42:45.48 | 9.3635455 | 17.75 | 0.9 | 5.7 |
| 11/22/2024 | 22:59:32.290 | -8:42:21.82 | 9.3796893 | 17.72 | 0.9 | 5.7 |
| 11/23/2024 | 22:59:34.745 | -8:41:55.71 | 9.3958976 | 17.69 | 0.9 | 5.7 |
| 11/24/2024 | 22:59:37.592 | -8:41:27.17 | 9.4121655 | 17.66 | 0.9 | 5.7 |
| 11/25/2024 | 22:59:40.832 | -8:40:56.18 | 9.4284880 | 17.63 | 0.9 | 5.8 |
| 11/26/2024 | 22:59:44.467 | -8:40:22.74 | 9.4448600 | 17.60 | 0.9 | 5.8 |
| 11/27/2024 | 22:59:48.495 | -8:39:46.86 | 9.4612763 | 17.57 | 0.9 | 5.8 |
| 11/28/2024 | 22:59:52.919 | -8:39:08.53 | 9.4777320 | 17.54 | 0.9 | 5.8 |
| 11/29/2024 | 22:59:57.738 | -8:38:27.76 | 9.4942217 | 17.50 | 0.9 | 5.8 |
| 11/30/2024 | 23:00:02.952 | -8:37:44.55 | 9.5107403 | 17.47 | 0.9 | 5.8 |
| 12/01/2024 | 23:00:08.560 | -8:36:58.92 | 9.5272825 | 17.44 | 0.9 | 5.8 |
| 12/02/2024 | 23:00:14.561 | -8:36:10.87 | 9.5438431 | 17.41 | 0.9 | 5.8 |
| 12/03/2024 | 23:00:20.952 | -8:35:20.44 | 9.5604167 | 17.38 | 0.9 | 5.8 |
| 12/04/2024 | 23:00:27.729 | -8:34:27.64 | 9.5769981 | 17.35 | 0.9 | 5.8 |
| 12/05/2024 | 23:00:34.891 | -8:33:32.50 | 9.5935820 | 17.32 | 0.9 | 5.8 |
| 12/06/2024 | 23:00:42.433 | -8:32:35.03 | 9.6101634 | 17.29 | 0.9 | 5.8 |
| 12/07/2024 | 23:00:50.353 | -8:31:35.26 | 9.6267370 | 17.26 | 0.9 | 5.8 |
| 12/08/2024 | 23:00:58.647 | -8:30:33.20 | 9.6432978 | 17.23 | 0.9 | 5.8 |
| 12/09/2024 | 23:01:07.313 | -8:29:28.87 | 9.6598409 | 17.20 | 0.9 | 5.8 |
| 12/10/2024 | 23:01:16.351 | -8:28:22.27 | 9.6763615 | 17.18 | 0.9 | 5.8 |
| 12/11/2024 | 23:01:25.759 | -8:27:13.40 | 9.6928550 | 17.15 | 0.9 | 5.8 |
| 12/12/2024 | 23:01:35.537 | -8:26:02.29 | 9.7093167 | 17.12 | 0.9 | 5.8 |
| 12/13/2024 | 23:01:45.683 | -8:24:48.94 | 9.7257424 | 17.09 | 1.0 | 5.8 |
| 12/14/2024 | 23:01:56.194 | -8:23:33.38 | 9.7421278 | 17.06 | 1.0 | 5.7 |

Saturn - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 23:02:07.067 | -8:22:15.63 | 9.7584685 | 17.03 | 1.0 | 5.7 |
| 12/16/2024 | 23:02:18.297 | -8:20:55.74 | 9.7747606 | 17.00 | 1.0 | 5.7 |
| 12/17/2024 | 23:02:29.879 | -8:19:33.72 | 9.7909997 | 16.97 | 1.0 | 5.7 |
| 12/18/2024 | 23:02:41.810 | -8:18:09.62 | 9.8071819 | 16.95 | 1.0 | 5.7 |
| 12/19/2024 | 23:02:54.084 | -8:16:43.43 | 9.8233027 | 16.92 | 1.0 | 5.6 |
| 12/20/2024 | 23:03:06.700 | -8:15:15.19 | 9.8393579 | 16.89 | 1.0 | 5.6 |
| 12/21/2024 | 23:03:19.655 | -8:13:44.90 | 9.8553433 | 16.86 | 1.0 | 5.6 |
| 12/22/2024 | 23:03:32.947 | -8:12:12.57 | 9.8712544 | 16.84 | 1.0 | 5.6 |
| 12/23/2024 | 23:03:46.575 | -8:10:38.21 | 9.8870869 | 16.81 | 1.0 | 5.5 |
| 12/24/2024 | 23:04:00.536 | -8:09:01.84 | 9.9028364 | 16.78 | 1.0 | 5.5 |
| 12/25/2024 | 23:04:14.829 | -8:07:23.46 | 9.9184985 | 16.76 | 1.0 | 5.5 |
| 12/26/2024 | 23:04:29.452 | -8:05:43.09 | 9.9340687 | 16.73 | 1.0 | 5.5 |
| 12/27/2024 | 23:04:44.401 | -8:04:00.76 | 9.9495428 | 16.70 | 1.0 | 5.4 |
| 12/28/2024 | 23:04:59.675 | -8:02:16.47 | 9.9649162 | 16.68 | 1.0 | 5.4 |
| 12/29/2024 | 23:05:15.268 | -8:00:30.26 | 9.9801847 | 16.65 | 1.0 | 5.4 |
| 12/30/2024 | 23:05:31.177 | -7:58:42.16 | 9.9953438 | 16.63 | 1.0 | 5.3 |
| 12/31/2024 | 23:05:47.397 | -7:56:52.19 | 10.0103892 | 16.60 | 1.0 | 5.3 |
| 01/01/2025 | 23:06:03.923 | -7:55:00.40 | 10.0253165 | 16.58 | 1.0 | 5.2 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 3:08:10.145 | 17:17:06.19 | 18.9622855 | 3.72 | 5.7 | 2.2 |
| 01/01/2024 | 3:08:04.735 | 17:16:45.74 | 18.9754101 | 3.71 | 5.7 | 2.2 |
| 01/02/2024 | 3:07:59.501 | 17:16:26.00 | 18.9887312 | 3.71 | 5.7 | 2.3 |
| 01/03/2024 | 3:07:54.448 | 17:16:06.97 | 19.0022443 | 3.71 | 5.7 | 2.3 |
| 01/04/2024 | 3:07:49.579 | 17:15:48.66 | 19.0159454 | 3.71 | 5.7 | 2.3 |
| 01/05/2024 | 3:07:44.897 | 17:15:31.10 | 19.0298298 | 3.70 | 5.7 | 2.4 |
| 01/06/2024 | 3:07:40.405 | 17:15:14.30 | 19.0438933 | 3.70 | 5.7 | 2.4 |
| 01/07/2024 | 3:07:36.107 | 17:14:58.28 | 19.0581311 | 3.70 | 5.7 | 2.4 |
| 01/08/2024 | 3:07:32.005 | 17:14:43.05 | 19.0725386 | 3.70 | 5.7 | 2.4 |
| 01/09/2024 | 3:07:28.101 | 17:14:28.64 | 19.0871110 | 3.69 | 5.7 | 2.5 |
| 01/10/2024 | 3:07:24.396 | 17:14:15.05 | 19.1018433 | 3.69 | 5.7 | 2.5 |
| 01/11/2024 | 3:07:20.890 | 17:14:02.29 | 19.1167304 | 3.69 | 5.7 | 2.5 |
| 01/12/2024 | 3:07:17.582 | 17:13:50.37 | 19.1317671 | 3.68 | 5.7 | 2.6 |
| 01/13/2024 | 3:07:14.472 | 17:13:39.27 | 19.1469479 | 3.68 | 5.7 | 2.6 |
| 01/14/2024 | 3:07:11.559 | 17:13:28.97 | 19.1622675 | 3.68 | 5.7 | 2.6 |
| 01/15/2024 | 3:07:08.847 | 17:13:19.49 | 19.1777202 | 3.68 | 5.7 | 2.6 |
| 01/16/2024 | 3:07:06.338 | 17:13:10.81 | 19.1933005 | 3.67 | 5.7 | 2.6 |
| 01/17/2024 | 3:07:04.035 | 17:13:02.95 | 19.2090029 | 3.67 | 5.7 | 2.7 |
| 01/18/2024 | 3:07:01.941 | 17:12:55.92 | 19.2248220 | 3.67 | 5.7 | 2.7 |
| 01/19/2024 | 3:07:00.059 | 17:12:49.73 | 19.2407524 | 3.66 | 5.7 | 2.7 |
| 01/20/2024 | 3:06:58.389 | 17:12:44.41 | 19.2567888 | 3.66 | 5.7 | 2.7 |
| 01/21/2024 | 3:06:56.931 | 17:12:39.95 | 19.2729261 | 3.66 | 5.7 | 2.7 |
| 01/22/2024 | 3:06:55.686 | 17:12:36.37 | 19.2891591 | 3.65 | 5.7 | 2.8 |
| 01/23/2024 | 3:06:54.651 | 17:12:33.67 | 19.3054828 | 3.65 | 5.7 | 2.8 |
| 01/24/2024 | 3:06:53.826 | 17:12:31.83 | 19.3218920 | 3.65 | 5.7 | 2.8 |
| 01/25/2024 | 3:06:53.210 | 17:12:30.86 | 19.3383818 | 3.64 | 5.7 | 2.8 |
| 01/26/2024 | 3:06:52.803 | 17:12:30.75 | 19.3549473 | 3.64 | 5.7 | 2.8 |
| 01/27/2024 | 3:06:52.604 | 17:12:31.48 | 19.3715833 | 3.64 | 5.7 | 2.8 |
| 01/28/2024 | 3:06:52.614 | 17:12:33.06 | 19.3882850 | 3.64 | 5.7 | 2.8 |
| 01/29/2024 | 3:06:52.834 | 17:12:35.49 | 19.4050474 | 3.63 | 5.7 | 2.8 |
| 01/30/2024 | 3:06:53.265 | 17:12:38.76 | 19.4218654 | 3.63 | 5.7 | 2.8 |
| 01/31/2024 | 3:06:53.908 | 17:12:42.88 | 19.4387339 | 3.63 | 5.7 | 2.9 |
| 02/01/2024 | 3:06:54.765 | 17:12:47.85 | 19.4556480 | 3.62 | 5.7 | 2.9 |
| 02/02/2024 | 3:06:55.836 | 17:12:53.68 | 19.4726025 | 3.62 | 5.7 | 2.9 |
| 02/03/2024 | 3:06:57.123 | 17:13:00.37 | 19.4895922 | 3.62 | 5.7 | 2.9 |
| 02/04/2024 | 3:06:58.626 | 17:13:07.94 | 19.5066119 | 3.61 | 5.7 | 2.9 |
| 02/05/2024 | 3:07:00.346 | 17:13:16.39 | 19.5236565 | 3.61 | 5.7 | 2.9 |
| 02/06/2024 | 3:07:02.281 | 17:13:25.73 | 19.5407206 | 3.61 | 5.7 | 2.9 |
| 02/07/2024 | 3:07:04.430 | 17:13:35.96 | 19.5577988 | 3.60 | 5.7 | 2.9 |
| 02/08/2024 | 3:07:06.792 | 17:13:47.06 | 19.5748856 | 3.60 | 5.7 | 2.9 |
| 02/09/2024 | 3:07:09.362 | 17:13:59.03 | 19.5919754 | 3.60 | 5.7 | 2.9 |
| 02/10/2024 | 3:07:12.139 | 17:14:11.85 | 19.6090627 | 3.59 | 5.7 | 2.9 |
| 02/11/2024 | 3:07:15.122 | 17:14:25.49 | 19.6261418 | 3.59 | 5.7 | 2.9 |
| 02/12/2024 | 3:07:18.312 | 17:14:39.95 | 19.6432069 | 3.59 | 5.7 | 2.9 |
| 02/13/2024 | 3:07:21.710 | 17:14:55.21 | 19.6602526 | 3.58 | 5.7 | 2.9 |
| 02/14/2024 | 3:07:25.317 | 17:15:11.30 | 19.6772733 | 3.58 | 5.7 | 2.9 |
| 02/15/2024 | 3:07:29.135 | 17:15:28.20 | 19.6942637 | 3.58 | 5.7 | 2.9 |
| 02/16/2024 | 3:07:33.162 | 17:15:45.94 | 19.7112186 | 3.58 | 5.8 | 2.9 |
| 02/17/2024 | 3:07:37.398 | 17:16:04.51 | 19.7281331 | 3.57 | 5.8 | 2.9 |
| 02/18/2024 | 3:07:41.839 | 17:16:23.92 | 19.7450021 | 3.57 | 5.8 | 2.9 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 3:07:46.483 | 17:16:44.14 | 19.7618210 | 3.57 | 5.8 | 2.8 |
| 02/20/2024 | 3:07:51.327 | 17:17:05.18 | 19.7785849 | 3.56 | 5.8 | 2.8 |
| 02/21/2024 | 3:07:56.369 | 17:17:27.01 | 19.7952892 | 3.56 | 5.8 | 2.8 |
| 02/22/2024 | 3:08:01.605 | 17:17:49.62 | 19.8119294 | 3.56 | 5.8 | 2.8 |
| 02/23/2024 | 3:08:07.035 | 17:18:13.00 | 19.8285010 | 3.55 | 5.8 | 2.8 |
| 02/24/2024 | 3:08:12.657 | 17:18:37.14 | 19.8449994 | 3.55 | 5.8 | 2.8 |
| 02/25/2024 | 3:08:18.471 | 17:19:02.02 | 19.8614202 | 3.55 | 5.8 | 2.8 |
| 02/26/2024 | 3:08:24.474 | 17:19:27.64 | 19.8777590 | 3.55 | 5.8 | 2.8 |
| 02/27/2024 | 3:08:30.668 | 17:19:53.98 | 19.8940115 | 3.54 | 5.8 | 2.8 |
| 02/28/2024 | 3:08:37.052 | 17:20:21.06 | 19.9101732 | 3.54 | 5.8 | 2.7 |
| 02/29/2024 | 3:08:43.625 | 17:20:48.86 | 19.9262398 | 3.54 | 5.8 | 2.7 |
| 03/01/2024 | 3:08:50.388 | 17:21:17.38 | 19.9422068 | 3.53 | 5.8 | 2.7 |
| 03/02/2024 | 3:08:57.339 | 17:21:46.64 | 19.9580700 | 3.53 | 5.8 | 2.7 |
| 03/03/2024 | 3:09:04.476 | 17:22:16.62 | 19.9738249 | 3.53 | 5.8 | 2.7 |
| 03/04/2024 | 3:09:11.798 | 17:22:47.32 | 19.9894671 | 3.53 | 5.8 | 2.7 |
| 03/05/2024 | 3:09:19.303 | 17:23:18.75 | 20.0049922 | 3.52 | 5.8 | 2.6 |
| 03/06/2024 | 3:09:26.987 | 17:23:50.88 | 20.0203957 | 3.52 | 5.8 | 2.6 |
| 03/07/2024 | 3:09:34.846 | 17:24:23.71 | 20.0356732 | 3.52 | 5.8 | 2.6 |
| 03/08/2024 | 3:09:42.877 | 17:24:57.22 | 20.0508200 | 3.52 | 5.8 | 2.6 |
| 03/09/2024 | 3:09:51.077 | 17:25:31.37 | 20.0658317 | 3.51 | 5.8 | 2.6 |
| 03/10/2024 | 3:09:59.443 | 17:26:06.14 | 20.0807036 | 3.51 | 5.8 | 2.5 |
| 03/11/2024 | 3:10:07.977 | 17:26:41.52 | 20.0954313 | 3.51 | 5.8 | 2.5 |
| 03/12/2024 | 3:10:16.678 | 17:27:17.51 | 20.1100103 | 3.50 | 5.8 | 2.5 |
| 03/13/2024 | 3:10:25.547 | 17:27:54.10 | 20.1244365 | 3.50 | 5.8 | 2.5 |
| 03/14/2024 | 3:10:34.583 | 17:28:31.30 | 20.1387058 | 3.50 | 5.8 | 2.4 |
| 03/15/2024 | 3:10:43.783 | 17:29:09.11 | 20.1528144 | 3.50 | 5.8 | 2.4 |
| 03/16/2024 | 3:10:53.144 | 17:29:47.53 | 20.1667586 | 3.49 | 5.8 | 2.4 |
| 03/17/2024 | 3:11:02.661 | 17:30:26.55 | 20.1805348 | 3.49 | 5.8 | 2.3 |
| 03/18/2024 | 3:11:12.331 | 17:31:06.14 | 20.1941398 | 3.49 | 5.8 | 2.3 |
| 03/19/2024 | 3:11:22.150 | 17:31:46.29 | 20.2075701 | 3.49 | 5.8 | 2.3 |
| 03/20/2024 | 3:11:32.114 | 17:32:26.99 | 20.2208226 | 3.49 | 5.8 | 2.2 |
| 03/21/2024 | 3:11:42.220 | 17:33:08.20 | 20.2338942 | 3.48 | 5.8 | 2.2 |
| 03/22/2024 | 3:11:52.467 | 17:33:49.92 | 20.2467818 | 3.48 | 5.8 | 2.2 |
| 03/23/2024 | 3:12:02.853 | 17:34:32.13 | 20.2594824 | 3.48 | 5.8 | 2.2 |
| 03/24/2024 | 3:12:13.375 | 17:35:14.81 | 20.2719930 | 3.48 | 5.8 | 2.1 |
| 03/25/2024 | 3:12:24.032 | 17:35:57.96 | 20.2843108 | 3.47 | 5.8 | 2.1 |
| 03/26/2024 | 3:12:34.824 | 17:36:41.57 | 20.2964328 | 3.47 | 5.8 | 2.1 |
| 03/27/2024 | 3:12:45.749 | 17:37:25.64 | 20.3083562 | 3.47 | 5.8 | 2.0 |
| 03/28/2024 | 3:12:56.807 | 17:38:10.16 | 20.3200783 | 3.47 | 5.8 | 2.0 |
| 03/29/2024 | 3:13:07.994 | 17:38:55.12 | 20.3315962 | 3.47 | 5.8 | 2.0 |
| 03/30/2024 | 3:13:19.310 | 17:39:40.53 | 20.3429070 | 3.46 | 5.8 | 1.9 |
| 03/31/2024 | 3:13:30.751 | 17:40:26.39 | 20.3540080 | 3.46 | 5.8 | 1.9 |
| 04/01/2024 | 3:13:42.315 | 17:41:12.68 | 20.3648965 | 3.46 | 5.8 | 1.9 |
| 04/02/2024 | 3:13:53.997 | 17:41:59.39 | 20.3755695 | 3.46 | 5.8 | 1.8 |
| 04/03/2024 | 3:14:05.795 | 17:42:46.51 | 20.3860242 | 3.46 | 5.8 | 1.8 |
| 04/04/2024 | 3:14:17.703 | 17:43:34.02 | 20.3962578 | 3.46 | 5.8 | 1.7 |
| 04/05/2024 | 3:14:29.718 | 17:44:21.88 | 20.4062675 | 3.45 | 5.8 | 1.7 |
| 04/06/2024 | 3:14:41.837 | 17:45:10.08 | 20.4160503 | 3.45 | 5.8 | 1.7 |
| 04/07/2024 | 3:14:54.058 | 17:45:58.60 | 20.4256035 | 3.45 | 5.8 | 1.6 |
| 04/08/2024 | 3:15:06.382 | 17:46:47.42 | 20.4349244 | 3.45 | 5.8 | 1.6 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 3:15:18.807 | 17:47:36.54 | 20.4440103 | 3.45 | 5.8 | 1.5 |
| 04/10/2024 | 3:15:31.334 | 17:48:25.96 | 20.4528589 | 3.45 | 5.8 | 1.5 |
| 04/11/2024 | 3:15:43.960 | 17:49:15.69 | 20.4614679 | 3.44 | 5.8 | 1.5 |
| 04/12/2024 | 3:15:56.682 | 17:50:05.72 | 20.4698354 | 3.44 | 5.8 | 1.4 |
| 04/13/2024 | 3:16:09.495 | 17:50:56.04 | 20.4779594 | 3.44 | 5.8 | 1.4 |
| 04/14/2024 | 3:16:22.393 | 17:51:46.64 | 20.4858384 | 3.44 | 5.8 | 1.3 |
| 04/15/2024 | 3:16:35.373 | 17:52:37.50 | 20.4934706 | 3.44 | 5.8 | 1.3 |
| 04/16/2024 | 3:16:48.431 | 17:53:28.59 | 20.5008548 | 3.44 | 5.8 | 1.2 |
| 04/17/2024 | 3:17:01.562 | 17:54:19.89 | 20.5079896 | 3.44 | 5.8 | 1.2 |
| 04/18/2024 | 3:17:14.765 | 17:55:11.40 | 20.5148735 | 3.44 | 5.8 | 1.2 |
| 04/19/2024 | 3:17:28.037 | 17:56:03.08 | 20.5215055 | 3.43 | 5.8 | 1.1 |
| 04/20/2024 | 3:17:41.375 | 17:56:54.93 | 20.5278842 | 3.43 | 5.8 | 1.1 |
| 04/21/2024 | 3:17:54.779 | 17:57:46.93 | 20.5340087 | 3.43 | 5.8 | 1.0 |
| 04/22/2024 | 3:18:08.247 | 17:58:39.09 | 20.5398777 | 3.43 | 5.8 | 1.0 |
| 04/23/2024 | 3:18:21.777 | 17:59:31.38 | 20.5454903 | 3.43 | 5.8 | 0.9 |
| 04/24/2024 | 3:18:35.368 | 18:00:23.82 | 20.5508454 | 3.43 | 5.8 | 0.9 |
| 04/25/2024 | 3:18:49.018 | 18:01:16.39 | 20.5559419 | 3.43 | 5.8 | 0.9 |
| 04/26/2024 | 3:19:02.725 | 18:02:09.09 | 20.5607790 | 3.43 | 5.8 | 0.8 |
| 04/27/2024 | 3:19:16.487 | 18:03:01.92 | 20.5653556 | 3.43 | 5.8 | 0.8 |
| 04/28/2024 | 3:19:30.298 | 18:03:54.88 | 20.5696707 | 3.43 | 5.8 | 0.7 |
| 04/29/2024 | 3:19:44.157 | 18:04:47.95 | 20.5737233 | 3.43 | 5.8 | 0.7 |
| 04/30/2024 | 3:19:58.059 | 18:05:41.11 | 20.5775123 | 3.43 | 5.8 | 0.6 |
| 05/01/2024 | 3:20:11.999 | 18:06:34.36 | 20.5810367 | 3.42 | 5.8 | 0.6 |
| 05/02/2024 | 3:20:25.973 | 18:07:27.66 | 20.5842955 | 3.42 | 5.8 | 0.5 |
| 05/03/2024 | 3:20:39.979 | 18:08:21.00 | 20.5872877 | 3.42 | 5.8 | 0.5 |
| 05/04/2024 | 3:20:54.014 | 18:09:14.35 | 20.5900122 | 3.42 | 5.8 | 0.5 |
| 05/05/2024 | 3:21:08.078 | 18:10:07.69 | 20.5924681 | 3.42 | 5.8 | 0.4 |
| 05/06/2024 | 3:21:22.169 | 18:11:01.03 | 20.5946546 | 3.42 | 5.8 | 0.4 |
| 05/07/2024 | 3:21:36.287 | 18:11:54.35 | 20.5965710 | 3.42 | 5.8 | 0.3 |
| 05/08/2024 | 3:21:50.431 | 18:12:47.68 | 20.5982168 | 3.42 | 5.8 | 0.3 |
| 05/09/2024 | 3:22:04.598 | 18:13:41.00 | 20.5995916 | 3.42 | 5.8 | 0.2 |
| 05/10/2024 | 3:22:18.782 | 18:14:34.31 | 20.6006953 | 3.42 | 5.8 | 0.2 |
| 05/11/2024 | 3:22:32.981 | 18:15:27.60 | 20.6015280 | 3.42 | 5.8 | 0.1 |
| 05/12/2024 | 3:22:47.187 | 18:16:20.85 | 20.6020898 | 3.42 | 5.8 | 0.1 |
| 05/13/2024 | 3:23:01.397 | 18:17:14.05 | 20.6023810 | 3.42 | 5.8 | 0.0 |
| 05/14/2024 | 3:23:15.607 | 18:18:07.16 | 20.6024019 | 3.42 | 5.8 | 0.0 |
| 05/15/2024 | 3:23:29.814 | 18:19:00.18 | 20.6021532 | 3.42 | 5.8 | 0.1 |
| 05/16/2024 | 3:23:44.016 | 18:19:53.09 | 20.6016352 | 3.42 | 5.8 | 0.1 |
| 05/17/2024 | 3:23:58.210 | 18:20:45.88 | 20.6008485 | 3.42 | 5.8 | 0.2 |
| 05/18/2024 | 3:24:12.394 | 18:21:38.52 | 20.5997937 | 3.42 | 5.8 | 0.2 |
| 05/19/2024 | 3:24:26.568 | 18:22:31.02 | 20.5984716 | 3.42 | 5.8 | 0.3 |
| 05/20/2024 | 3:24:40.729 | 18:23:23.38 | 20.5968827 | 3.42 | 5.8 | 0.3 |
| 05/21/2024 | 3:24:54.877 | 18:24:15.58 | 20.5950278 | 3.42 | 5.8 | 0.3 |
| 05/22/2024 | 3:25:09.009 | 18:25:07.63 | 20.5929076 | 3.42 | 5.8 | 0.4 |
| 05/23/2024 | 3:25:23.123 | 18:25:59.53 | 20.5905229 | 3.42 | 5.8 | 0.4 |
| 05/24/2024 | 3:25:37.218 | 18:26:51.27 | 20.5878744 | 3.42 | 5.8 | 0.5 |
| 05/25/2024 | 3:25:51.290 | 18:27:42.86 | 20.5849627 | 3.42 | 5.8 | 0.5 |
| 05/26/2024 | 3:26:05.334 | 18:28:34.28 | 20.5817887 | 3.42 | 5.8 | 0.6 |
| 05/27/2024 | 3:26:19.348 | 18:29:25.52 | 20.5783530 | 3.43 | 5.8 | 0.6 |
| 05/28/2024 | 3:26:33.326 | 18:30:16.57 | 20.5746562 | 3.43 | 5.8 | 0.7 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 3:26:47.264 | 18:31:07.41 | 20.5706990 | 3.43 | 5.8 | 0.7 |
| 05/30/2024 | 3:27:01.160 | 18:31:58.01 | 20.5664821 | 3.43 | 5.8 | 0.8 |
| 05/31/2024 | 3:27:15.011 | 18:32:48.35 | 20.5620061 | 3.43 | 5.8 | 0.8 |
| 06/01/2024 | 3:27:28.816 | 18:33:38.43 | 20.5572718 | 3.43 | 5.8 | 0.8 |
| 06/02/2024 | 3:27:42.574 | 18:34:28.23 | 20.5522799 | 3.43 | 5.8 | 0.9 |
| 06/03/2024 | 3:27:56.285 | 18:35:17.76 | 20.5470315 | 3.43 | 5.8 | 0.9 |
| 06/04/2024 | 3:28:09.948 | 18:36:07.01 | 20.5415277 | 3.43 | 5.8 | 1.0 |
| 06/05/2024 | 3:28:23.560 | 18:36:55.99 | 20.5357696 | 3.43 | 5.8 | 1.0 |
| 06/06/2024 | 3:28:37.117 | 18:37:44.71 | 20.5297588 | 3.43 | 5.8 | 1.1 |
| 06/07/2024 | 3:28:50.616 | 18:38:33.15 | 20.5234967 | 3.43 | 5.8 | 1.1 |
| 06/08/2024 | 3:29:04.051 | 18:39:21.31 | 20.5169851 | 3.44 | 5.8 | 1.2 |
| 06/09/2024 | 3:29:17.417 | 18:40:09.16 | 20.5102260 | 3.44 | 5.8 | 1.2 |
| 06/10/2024 | 3:29:30.711 | 18:40:56.68 | 20.5032213 | 3.44 | 5.8 | 1.3 |
| 06/11/2024 | 3:29:43.929 | 18:41:43.87 | 20.4959730 | 3.44 | 5.8 | 1.3 |
| 06/12/2024 | 3:29:57.069 | 18:42:30.70 | 20.4884832 | 3.44 | 5.8 | 1.3 |
| 06/13/2024 | 3:30:10.128 | 18:43:17.16 | 20.4807542 | 3.44 | 5.8 | 1.4 |
| 06/14/2024 | 3:30:23.105 | 18:44:03.24 | 20.4727881 | 3.44 | 5.8 | 1.4 |
| 06/15/2024 | 3:30:35.999 | 18:44:48.94 | 20.4645871 | 3.44 | 5.8 | 1.5 |
| 06/16/2024 | 3:30:48.808 | 18:45:34.25 | 20.4561536 | 3.45 | 5.8 | 1.5 |
| 06/17/2024 | 3:31:01.532 | 18:46:19.17 | 20.4474897 | 3.45 | 5.8 | 1.5 |
| 06/18/2024 | 3:31:14.168 | 18:47:03.71 | 20.4385978 | 3.45 | 5.8 | 1.6 |
| 06/19/2024 | 3:31:26.715 | 18:47:47.85 | 20.4294803 | 3.45 | 5.8 | 1.6 |
| 06/20/2024 | 3:31:39.172 | 18:48:31.61 | 20.4201394 | 3.45 | 5.8 | 1.7 |
| 06/21/2024 | 3:31:51.534 | 18:49:14.98 | 20.4105773 | 3.45 | 5.8 | 1.7 |
| 06/22/2024 | 3:32:03.800 | 18:49:57.97 | 20.4007964 | 3.45 | 5.8 | 1.7 |
| 06/23/2024 | 3:32:15.964 | 18:50:40.56 | 20.3907990 | 3.46 | 5.8 | 1.8 |
| 06/24/2024 | 3:32:28.024 | 18:51:22.74 | 20.3805870 | 3.46 | 5.8 | 1.8 |
| 06/25/2024 | 3:32:39.974 | 18:52:04.49 | 20.3701629 | 3.46 | 5.8 | 1.8 |
| 06/26/2024 | 3:32:51.812 | 18:52:45.79 | 20.3595286 | 3.46 | 5.8 | 1.9 |
| 06/27/2024 | 3:33:03.535 | 18:53:26.62 | 20.3486863 | 3.46 | 5.8 | 1.9 |
| 06/28/2024 | 3:33:15.143 | 18:54:06.98 | 20.3376383 | 3.47 | 5.8 | 1.9 |
| 06/29/2024 | 3:33:26.634 | 18:54:46.84 | 20.3263869 | 3.47 | 5.8 | 2.0 |
| 06/30/2024 | 3:33:38.010 | 18:55:26.23 | 20.3149343 | 3.47 | 5.8 | 2.0 |
| 07/01/2024 | 3:33:49.269 | 18:56:05.13 | 20.3032833 | 3.47 | 5.8 | 2.1 |
| 07/02/2024 | 3:34:00.409 | 18:56:43.55 | 20.2914363 | 3.47 | 5.8 | 2.1 |
| 07/03/2024 | 3:34:11.427 | 18:57:21.51 | 20.2793963 | 3.48 | 5.8 | 2.1 |
| 07/04/2024 | 3:34:22.320 | 18:57:58.99 | 20.2671663 | 3.48 | 5.8 | 2.2 |
| 07/05/2024 | 3:34:33.084 | 18:58:35.99 | 20.2547493 | 3.48 | 5.8 | 2.2 |
| 07/06/2024 | 3:34:43.713 | 18:59:12.50 | 20.2421486 | 3.48 | 5.8 | 2.2 |
| 07/07/2024 | 3:34:54.204 | 18:59:48.50 | 20.2293676 | 3.48 | 5.8 | 2.3 |
| 07/08/2024 | 3:35:04.553 | 19:00:23.97 | 20.2164097 | 3.49 | 5.8 | 2.3 |
| 07/09/2024 | 3:35:14.759 | 19:00:58.90 | 20.2032784 | 3.49 | 5.8 | 2.3 |
| 07/10/2024 | 3:35:24.819 | 19:01:33.28 | 20.1899773 | 3.49 | 5.8 | 2.3 |
| 07/11/2024 | 3:35:34.732 | 19:02:07.10 | 20.1765100 | 3.49 | 5.8 | 2.4 |
| 07/12/2024 | 3:35:44.498 | 19:02:40.35 | 20.1628801 | 3.50 | 5.8 | 2.4 |
| 07/13/2024 | 3:35:54.115 | 19:03:13.04 | 20.1490911 | 3.50 | 5.8 | 2.4 |
| 07/14/2024 | 3:36:03.582 | 19:03:45.16 | 20.1351469 | 3.50 | 5.8 | 2.5 |
| 07/15/2024 | 3:36:12.899 | 19:04:16.71 | 20.1210509 | 3.50 | 5.8 | 2.5 |
| 07/16/2024 | 3:36:22.064 | 19:04:47.70 | 20.1068070 | 3.51 | 5.8 | 2.5 |
| 07/17/2024 | 3:36:31.076 | 19:05:18.13 | 20.0924186 | 3.51 | 5.8 | 2.5 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 3:36:39.934 | 19:05:48.01 | 20.0778896 | 3.51 | 5.8 | 2.6 |
| 07/19/2024 | 3:36:48.635 | 19:06:17.34 | 20.0632234 | 3.51 | 5.8 | 2.6 |
| 07/20/2024 | 3:36:57.175 | 19:06:46.11 | 20.0484236 | 3.52 | 5.8 | 2.6 |
| 07/21/2024 | 3:37:05.550 | 19:07:14.31 | 20.0334939 | 3.52 | 5.8 | 2.6 |
| 07/22/2024 | 3:37:13.758 | 19:07:41.94 | 20.0184375 | 3.52 | 5.8 | 2.6 |
| 07/23/2024 | 3:37:21.796 | 19:08:08.97 | 20.0032580 | 3.52 | 5.8 | 2.7 |
| 07/24/2024 | 3:37:29.660 | 19:08:35.38 | 19.9879587 | 3.53 | 5.8 | 2.7 |
| 07/25/2024 | 3:37:37.351 | 19:09:01.15 | 19.9725431 | 3.53 | 5.8 | 2.7 |
| 07/26/2024 | 3:37:44.868 | 19:09:26.30 | 19.9570146 | 3.53 | 5.8 | 2.7 |
| 07/27/2024 | 3:37:52.214 | 19:09:50.80 | 19.9413768 | 3.53 | 5.8 | 2.7 |
| 07/28/2024 | 3:37:59.386 | 19:10:14.69 | 19.9256335 | 3.54 | 5.8 | 2.8 |
| 07/29/2024 | 3:38:06.385 | 19:10:37.95 | 19.9097884 | 3.54 | 5.8 | 2.8 |
| 07/30/2024 | 3:38:13.209 | 19:11:00.61 | 19.8938455 | 3.54 | 5.8 | 2.8 |
| 07/31/2024 | 3:38:19.854 | 19:11:22.65 | 19.8778090 | 3.55 | 5.8 | 2.8 |
| 08/01/2024 | 3:38:26.317 | 19:11:44.08 | 19.8616831 | 3.55 | 5.8 | 2.8 |
| 08/02/2024 | 3:38:32.595 | 19:12:04.89 | 19.8454722 | 3.55 | 5.8 | 2.8 |
| 08/03/2024 | 3:38:38.684 | 19:12:25.06 | 19.8291807 | 3.55 | 5.8 | 2.9 |
| 08/04/2024 | 3:38:44.582 | 19:12:44.59 | 19.8128132 | 3.56 | 5.8 | 2.9 |
| 08/05/2024 | 3:38:50.287 | 19:13:03.45 | 19.7963743 | 3.56 | 5.8 | 2.9 |
| 08/06/2024 | 3:38:55.797 | 19:13:21.65 | 19.7798686 | 3.56 | 5.8 | 2.9 |
| 08/07/2024 | 3:39:01.112 | 19:13:39.17 | 19.7633007 | 3.57 | 5.8 | 2.9 |
| 08/08/2024 | 3:39:06.232 | 19:13:56.01 | 19.7466754 | 3.57 | 5.8 | 2.9 |
| 08/09/2024 | 3:39:11.157 | 19:14:12.17 | 19.7299973 | 3.57 | 5.7 | 2.9 |
| 08/10/2024 | 3:39:15.886 | 19:14:27.65 | 19.7132711 | 3.58 | 5.7 | 2.9 |
| 08/11/2024 | 3:39:20.421 | 19:14:42.45 | 19.6965015 | 3.58 | 5.7 | 2.9 |
| 08/12/2024 | 3:39:24.760 | 19:14:56.59 | 19.6796932 | 3.58 | 5.7 | 2.9 |
| 08/13/2024 | 3:39:28.904 | 19:15:10.06 | 19.6628507 | 3.58 | 5.7 | 2.9 |
| 08/14/2024 | 3:39:32.852 | 19:15:22.88 | 19.6459788 | 3.59 | 5.7 | 2.9 |
| 08/15/2024 | 3:39:36.602 | 19:15:35.04 | 19.6290819 | 3.59 | 5.7 | 2.9 |
| 08/16/2024 | 3:39:40.152 | 19:15:46.56 | 19.6121646 | 3.59 | 5.7 | 2.9 |
| 08/17/2024 | 3:39:43.502 | 19:15:57.42 | 19.5952314 | 3.60 | 5.7 | 2.9 |
| 08/18/2024 | 3:39:46.647 | 19:16:07.63 | 19.5782866 | 3.60 | 5.7 | 2.9 |
| 08/19/2024 | 3:39:49.585 | 19:16:17.16 | 19.5613346 | 3.60 | 5.7 | 2.9 |
| 08/20/2024 | 3:39:52.316 | 19:16:25.99 | 19.5443795 | 3.61 | 5.7 | 2.9 |
| 08/21/2024 | 3:39:54.838 | 19:16:34.13 | 19.5274258 | 3.61 | 5.7 | 2.9 |
| 08/22/2024 | 3:39:57.154 | 19:16:41.54 | 19.5104774 | 3.61 | 5.7 | 2.9 |
| 08/23/2024 | 3:39:59.265 | 19:16:48.25 | 19.4935389 | 3.62 | 5.7 | 2.9 |
| 08/24/2024 | 3:40:01.173 | 19:16:54.26 | 19.4766144 | 3.62 | 5.7 | 2.9 |
| 08/25/2024 | 3:40:02.879 | 19:16:59.58 | 19.4597086 | 3.62 | 5.7 | 2.9 |
| 08/26/2024 | 3:40:04.382 | 19:17:04.23 | 19.4428262 | 3.63 | 5.7 | 2.9 |
| 08/27/2024 | 3:40:05.680 | 19:17:08.20 | 19.4259718 | 3.63 | 5.7 | 2.9 |
| 08/28/2024 | 3:40:06.771 | 19:17:11.52 | 19.4091503 | 3.63 | 5.7 | 2.9 |
| 08/29/2024 | 3:40:07.654 | 19:17:14.15 | 19.3923668 | 3.63 | 5.7 | 2.9 |
| 08/30/2024 | 3:40:08.325 | 19:17:16.11 | 19.3756263 | 3.64 | 5.7 | 2.9 |
| 08/31/2024 | 3:40:08.784 | 19:17:17.38 | 19.3589338 | 3.64 | 5.7 | 2.9 |
| 09/01/2024 | 3:40:09.030 | 19:17:17.95 | 19.3422946 | 3.64 | 5.7 | 2.9 |
| 09/02/2024 | 3:40:09.063 | 19:17:17.81 | 19.3257137 | 3.65 | 5.7 | 2.9 |
| 09/03/2024 | 3:40:08.884 | 19:17:16.96 | 19.3091963 | 3.65 | 5.7 | 2.9 |
| 09/04/2024 | 3:40:08.494 | 19:17:15.41 | 19.2927476 | 3.65 | 5.7 | 2.9 |
| 09/05/2024 | 3:40:07.895 | 19:17:13.14 | 19.2763725 | 3.66 | 5.7 | 2.8 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 3:40:07.088 | 19:17:10.17 | 19.2600764 | 3.66 | 5.7 | 2.8 |
| 09/07/2024 | 3:40:06.074 | 19:17:06.51 | 19.2438641 | 3.66 | 5.7 | 2.8 |
| 09/08/2024 | 3:40:04.856 | 19:17:02.16 | 19.2277407 | 3.67 | 5.7 | 2.8 |
| 09/09/2024 | 3:40:03.434 | 19:16:57.14 | 19.2117111 | 3.67 | 5.7 | 2.8 |
| 09/10/2024 | 3:40:01.809 | 19:16:51.45 | 19.1957803 | 3.67 | 5.7 | 2.8 |
| 09/11/2024 | 3:39:59.982 | 19:16:45.11 | 19.1799530 | 3.67 | 5.7 | 2.7 |
| 09/12/2024 | 3:39:57.954 | 19:16:38.11 | 19.1642340 | 3.68 | 5.7 | 2.7 |
| 09/13/2024 | 3:39:55.723 | 19:16:30.47 | 19.1486280 | 3.68 | 5.7 | 2.7 |
| 09/14/2024 | 3:39:53.290 | 19:16:22.18 | 19.1331394 | 3.68 | 5.7 | 2.7 |
| 09/15/2024 | 3:39:50.653 | 19:16:13.24 | 19.1177729 | 3.69 | 5.7 | 2.6 |
| 09/16/2024 | 3:39:47.812 | 19:16:03.64 | 19.1025327 | 3.69 | 5.7 | 2.6 |
| 09/17/2024 | 3:39:44.769 | 19:15:53.36 | 19.0874231 | 3.69 | 5.7 | 2.6 |
| 09/18/2024 | 3:39:41.526 | 19:15:42.40 | 19.0724483 | 3.70 | 5.7 | 2.6 |
| 09/19/2024 | 3:39:38.086 | 19:15:30.76 | 19.0576125 | 3.70 | 5.7 | 2.5 |
| 09/20/2024 | 3:39:34.454 | 19:15:18.44 | 19.0429199 | 3.70 | 5.7 | 2.5 |
| 09/21/2024 | 3:39:30.632 | 19:15:05.49 | 19.0283748 | 3.70 | 5.7 | 2.5 |
| 09/22/2024 | 3:39:26.623 | 19:14:51.90 | 19.0139816 | 3.71 | 5.7 | 2.5 |
| 09/23/2024 | 3:39:22.427 | 19:14:37.70 | 18.9997449 | 3.71 | 5.7 | 2.4 |
| 09/24/2024 | 3:39:18.043 | 19:14:22.89 | 18.9856692 | 3.71 | 5.7 | 2.4 |
| 09/25/2024 | 3:39:13.471 | 19:14:07.47 | 18.9717592 | 3.72 | 5.7 | 2.4 |
| 09/26/2024 | 3:39:08.710 | 19:13:51.45 | 18.9580196 | 3.72 | 5.7 | 2.4 |
| 09/27/2024 | 3:39:03.762 | 19:13:34.81 | 18.9444551 | 3.72 | 5.7 | 2.3 |
| 09/28/2024 | 3:38:58.627 | 19:13:17.55 | 18.9310705 | 3.72 | 5.7 | 2.3 |
| 09/29/2024 | 3:38:53.306 | 19:12:59.67 | 18.9178703 | 3.73 | 5.7 | 2.3 |
| 09/30/2024 | 3:38:47.804 | 19:12:41.18 | 18.9048592 | 3.73 | 5.7 | 2.2 |
| 10/01/2024 | 3:38:42.123 | 19:12:22.07 | 18.8920418 | 3.73 | 5.7 | 2.2 |
| 10/02/2024 | 3:38:36.265 | 19:12:02.35 | 18.8794225 | 3.73 | 5.7 | 2.2 |
| 10/03/2024 | 3:38:30.236 | 19:11:42.03 | 18.8670059 | 3.74 | 5.6 | 2.1 |
| 10/04/2024 | 3:38:24.038 | 19:11:21.13 | 18.8547962 | 3.74 | 5.6 | 2.1 |
| 10/05/2024 | 3:38:17.675 | 19:10:59.66 | 18.8427978 | 3.74 | 5.6 | 2.1 |
| 10/06/2024 | 3:38:11.150 | 19:10:37.64 | 18.8310147 | 3.74 | 5.6 | 2.0 |
| 10/07/2024 | 3:38:04.467 | 19:10:15.09 | 18.8194510 | 3.75 | 5.6 | 2.0 |
| 10/08/2024 | 3:37:57.628 | 19:09:52.01 | 18.8081106 | 3.75 | 5.6 | 1.9 |
| 10/09/2024 | 3:37:50.635 | 19:09:28.42 | 18.7969974 | 3.75 | 5.6 | 1.9 |
| 10/10/2024 | 3:37:43.490 | 19:09:04.33 | 18.7861151 | 3.75 | 5.6 | 1.8 |
| 10/11/2024 | 3:37:36.195 | 19:08:39.75 | 18.7754671 | 3.75 | 5.6 | 1.8 |
| 10/12/2024 | 3:37:28.751 | 19:08:14.69 | 18.7650570 | 3.76 | 5.6 | 1.8 |
| 10/13/2024 | 3:37:21.161 | 19:07:49.12 | 18.7548878 | 3.76 | 5.6 | 1.7 |
| 10/14/2024 | 3:37:13.426 | 19:07:23.07 | 18.7449629 | 3.76 | 5.6 | 1.7 |
| 10/15/2024 | 3:37:05.551 | 19:06:56.52 | 18.7352852 | 3.76 | 5.6 | 1.6 |
| 10/16/2024 | 3:36:57.541 | 19:06:29.47 | 18.7258575 | 3.76 | 5.6 | 1.6 |
| 10/17/2024 | 3:36:49.401 | 19:06:01.94 | 18.7166828 | 3.77 | 5.6 | 1.5 |
| 10/18/2024 | 3:36:41.137 | 19:05:33.95 | 18.7077639 | 3.77 | 5.6 | 1.5 |
| 10/19/2024 | 3:36:32.755 | 19:05:05.54 | 18.6991037 | 3.77 | 5.6 | 1.5 |
| 10/20/2024 | 3:36:24.256 | 19:04:36.72 | 18.6907051 | 3.77 | 5.6 | 1.4 |
| 10/21/2024 | 3:36:15.643 | 19:04:07.51 | 18.6825712 | 3.77 | 5.6 | 1.4 |
| 10/22/2024 | 3:36:06.916 | 19:03:37.92 | 18.6747050 | 3.77 | 5.6 | 1.3 |
| 10/23/2024 | 3:35:58.077 | 19:03:07.95 | 18.6671096 | 3.78 | 5.6 | 1.3 |
| 10/24/2024 | 3:35:49.128 | 19:02:37.61 | 18.6597881 | 3.78 | 5.6 | 1.2 |
| 10/25/2024 | 3:35:40.071 | 19:02:06.90 | 18.6527434 | 3.78 | 5.6 | 1.2 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 3:35:30.910 | 19:01:35.81 | 18.6459783 | 3.78 | 5.6 | 1.1 |
| 10/27/2024 | 3:35:21.651 | 19:01:04.37 | 18.6394958 | 3.78 | 5.6 | 1.1 |
| 10/28/2024 | 3:35:12.296 | 19:00:32.57 | 18.6332985 | 3.78 | 5.6 | 1.0 |
| 10/29/2024 | 3:35:02.853 | 19:00:00.42 | 18.6273890 | 3.78 | 5.6 | 1.0 |
| 10/30/2024 | 3:34:53.325 | 18:59:27.96 | 18.6217698 | 3.78 | 5.6 | 0.9 |
| 10/31/2024 | 3:34:43.719 | 18:58:55.19 | 18.6164432 | 3.79 | 5.6 | 0.9 |
| 11/01/2024 | 3:34:34.039 | 18:58:22.14 | 18.6114114 | 3.79 | 5.6 | 0.8 |
| 11/02/2024 | 3:34:24.291 | 18:57:48.82 | 18.6066765 | 3.79 | 5.6 | 0.8 |
| 11/03/2024 | 3:34:14.480 | 18:57:15.27 | 18.6022404 | 3.79 | 5.6 | 0.7 |
| 11/04/2024 | 3:34:04.609 | 18:56:41.50 | 18.5981048 | 3.79 | 5.6 | 0.7 |
| 11/05/2024 | 3:33:54.683 | 18:56:07.53 | 18.5942713 | 3.79 | 5.6 | 0.6 |
| 11/06/2024 | 3:33:44.705 | 18:55:33.38 | 18.5907413 | 3.79 | 5.6 | 0.6 |
| 11/07/2024 | 3:33:34.677 | 18:54:59.05 | 18.5875161 | 3.79 | 5.6 | 0.5 |
| 11/08/2024 | 3:33:24.605 | 18:54:24.57 | 18.5845967 | 3.79 | 5.6 | 0.5 |
| 11/09/2024 | 3:33:14.489 | 18:53:49.93 | 18.5819840 | 3.79 | 5.6 | 0.4 |
| 11/10/2024 | 3:33:04.336 | 18:53:15.14 | 18.5796787 | 3.79 | 5.6 | 0.4 |
| 11/11/2024 | 3:32:54.148 | 18:52:40.20 | 18.5776813 | 3.79 | 5.6 | 0.3 |
| 11/12/2024 | 3:32:43.932 | 18:52:05.12 | 18.5759924 | 3.79 | 5.6 | 0.3 |
| 11/13/2024 | 3:32:33.695 | 18:51:29.92 | 18.5746122 | 3.79 | 5.6 | 0.2 |
| 11/14/2024 | 3:32:23.443 | 18:50:54.62 | 18.5735410 | 3.79 | 5.6 | 0.2 |
| 11/15/2024 | 3:32:13.182 | 18:50:19.24 | 18.5727790 | 3.79 | 5.6 | 0.1 |
| 11/16/2024 | 3:32:02.919 | 18:49:43.83 | 18.5723265 | 3.79 | 5.6 | 0.1 |
| 11/17/2024 | 3:31:52.655 | 18:49:08.40 | 18.5721837 | 3.79 | 5.6 | 0.0 |
| 11/18/2024 | 3:31:42.393 | 18:48:32.98 | 18.5723509 | 3.79 | 5.6 | 0.1 |
| 11/19/2024 | 3:31:32.135 | 18:47:57.56 | 18.5728285 | 3.79 | 5.6 | 0.1 |
| 11/20/2024 | 3:31:21.883 | 18:47:22.17 | 18.5736166 | 3.79 | 5.6 | 0.2 |
| 11/21/2024 | 3:31:11.640 | 18:46:46.80 | 18.5747156 | 3.79 | 5.6 | 0.2 |
| 11/22/2024 | 3:31:01.411 | 18:46:11.45 | 18.5761254 | 3.79 | 5.6 | 0.3 |
| 11/23/2024 | 3:30:51.199 | 18:45:36.14 | 18.5778461 | 3.79 | 5.6 | 0.3 |
| 11/24/2024 | 3:30:41.012 | 18:45:00.89 | 18.5798775 | 3.79 | 5.6 | 0.4 |
| 11/25/2024 | 3:30:30.854 | 18:44:25.69 | 18.5822195 | 3.79 | 5.6 | 0.4 |
| 11/26/2024 | 3:30:20.730 | 18:43:50.59 | 18.5848714 | 3.79 | 5.6 | 0.5 |
| 11/27/2024 | 3:30:10.648 | 18:43:15.59 | 18.5878328 | 3.79 | 5.6 | 0.5 |
| 11/28/2024 | 3:30:00.613 | 18:42:40.72 | 18.5911030 | 3.79 | 5.6 | 0.6 |
| 11/29/2024 | 3:29:50.629 | 18:42:06.01 | 18.5946810 | 3.79 | 5.6 | 0.6 |
| 11/30/2024 | 3:29:40.703 | 18:41:31.48 | 18.5985658 | 3.79 | 5.6 | 0.7 |
| 12/01/2024 | 3:29:30.839 | 18:40:57.15 | 18.6027563 | 3.79 | 5.6 | 0.7 |
| 12/02/2024 | 3:29:21.040 | 18:40:23.04 | 18.6072509 | 3.79 | 5.6 | 0.8 |
| 12/03/2024 | 3:29:11.311 | 18:39:49.19 | 18.6120483 | 3.79 | 5.6 | 0.8 |
| 12/04/2024 | 3:29:01.654 | 18:39:15.59 | 18.6171465 | 3.79 | 5.6 | 0.9 |
| 12/05/2024 | 3:28:52.073 | 18:38:42.26 | 18.6225437 | 3.78 | 5.6 | 0.9 |
| 12/06/2024 | 3:28:42.570 | 18:38:09.21 | 18.6282378 | 3.78 | 5.6 | 1.0 |
| 12/07/2024 | 3:28:33.149 | 18:37:36.44 | 18.6342265 | 3.78 | 5.6 | 1.0 |
| 12/08/2024 | 3:28:23.815 | 18:37:03.95 | 18.6405073 | 3.78 | 5.6 | 1.1 |
| 12/09/2024 | 3:28:14.572 | 18:36:31.76 | 18.6470778 | 3.78 | 5.6 | 1.1 |
| 12/10/2024 | 3:28:05.427 | 18:35:59.88 | 18.6539352 | 3.78 | 5.6 | 1.2 |
| 12/11/2024 | 3:27:56.385 | 18:35:28.33 | 18.6610770 | 3.78 | 5.6 | 1.2 |
| 12/12/2024 | 3:27:47.452 | 18:34:57.14 | 18.6685002 | 3.78 | 5.6 | 1.3 |
| 12/13/2024 | 3:27:38.634 | 18:34:26.33 | 18.6762023 | 3.77 | 5.6 | 1.3 |
| 12/14/2024 | 3:27:29.933 | 18:33:55.93 | 18.6841804 | 3.77 | 5.6 | 1.4 |

Uranus - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 3:27:21.352 | 18:33:25.97 | 18.6924318 | 3.77 | 5.6 | 1.4 |
| 12/16/2024 | 3:27:12.893 | 18:32:56.45 | 18.7009539 | 3.77 | 5.6 | 1.5 |
| 12/17/2024 | 3:27:04.555 | 18:32:27.38 | 18.7097440 | 3.77 | 5.6 | 1.5 |
| 12/18/2024 | 3:26:56.341 | 18:31:58.76 | 18.7187993 | 3.77 | 5.6 | 1.5 |
| 12/19/2024 | 3:26:48.253 | 18:31:30.59 | 18.7281172 | 3.76 | 5.6 | 1.6 |
| 12/20/2024 | 3:26:40.296 | 18:31:02.88 | 18.7376947 | 3.76 | 5.6 | 1.6 |
| 12/21/2024 | 3:26:32.472 | 18:30:35.64 | 18.7475290 | 3.76 | 5.6 | 1.7 |
| 12/22/2024 | 3:26:24.788 | 18:30:08.87 | 18.7576169 | 3.76 | 5.6 | 1.7 |
| 12/23/2024 | 3:26:17.247 | 18:29:42.60 | 18.7679553 | 3.76 | 5.6 | 1.8 |
| 12/24/2024 | 3:26:09.854 | 18:29:16.85 | 18.7785409 | 3.75 | 5.6 | 1.8 |
| 12/25/2024 | 3:26:02.614 | 18:28:51.62 | 18.7893702 | 3.75 | 5.6 | 1.8 |
| 12/26/2024 | 3:25:55.530 | 18:28:26.95 | 18.8004397 | 3.75 | 5.6 | 1.9 |
| 12/27/2024 | 3:25:48.607 | 18:28:02.85 | 18.8117456 | 3.75 | 5.6 | 1.9 |
| 12/28/2024 | 3:25:41.848 | 18:27:39.35 | 18.8232842 | 3.74 | 5.6 | 2.0 |
| 12/29/2024 | 3:25:35.256 | 18:27:16.46 | 18.8350515 | 3.74 | 5.6 | 2.0 |
| 12/30/2024 | 3:25:28.833 | 18:26:54.19 | 18.8470434 | 3.74 | 5.6 | 2.1 |
| 12/31/2024 | 3:25:22.581 | 18:26:32.56 | 18.8592556 | 3.74 | 5.6 | 2.1 |
| 01/01/2025 | 3:25:16.500 | 18:26:11.58 | 18.8716838 | 3.73 | 5.6 | 2.1 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 23:43:50.172 | -3:05:54.29 | 30.1257491 | 2.27 | 7.9 | 1.8 |
| 01/01/2024 | 23:43:53.270 | -3:05:32.04 | 30.1425478 | 2.27 | 7.9 | 1.8 |
| 01/02/2024 | 23:43:56.486 | -3:05:09.03 | 30.1592705 | 2.26 | 7.9 | 1.8 |
| 01/03/2024 | 23:43:59.820 | -3:04:45.28 | 30.1759123 | 2.26 | 7.9 | 1.8 |
| 01/04/2024 | 23:44:03.274 | -3:04:20.76 | 30.1924681 | 2.26 | 7.9 | 1.8 |
| 01/05/2024 | 23:44:06.847 | -3:03:55.49 | 30.2089331 | 2.26 | 7.9 | 1.8 |
| 01/06/2024 | 23:44:10.540 | -3:03:29.45 | 30.2253022 | 2.26 | 7.9 | 1.8 |
| 01/07/2024 | 23:44:14.353 | -3:03:02.66 | 30.2415703 | 2.26 | 7.9 | 1.8 |
| 01/08/2024 | 23:44:18.285 | -3:02:35.11 | 30.2577324 | 2.26 | 7.9 | 1.7 |
| 01/09/2024 | 23:44:22.336 | -3:02:06.81 | 30.2737834 | 2.26 | 7.9 | 1.7 |
| 01/10/2024 | 23:44:26.505 | -3:01:37.76 | 30.2897182 | 2.25 | 7.9 | 1.7 |
| 01/11/2024 | 23:44:30.788 | -3:01:08.01 | 30.3055317 | 2.25 | 7.9 | 1.7 |
| 01/12/2024 | 23:44:35.182 | -3:00:37.55 | 30.3212186 | 2.25 | 7.9 | 1.7 |
| 01/13/2024 | 23:44:39.684 | -3:00:06.41 | 30.3367741 | 2.25 | 7.9 | 1.7 |
| 01/14/2024 | 23:44:44.292 | -2:59:34.62 | 30.3521932 | 2.25 | 7.9 | 1.7 |
| 01/15/2024 | 23:44:49.004 | -2:59:02.16 | 30.3674710 | 2.25 | 7.9 | 1.6 |
| 01/16/2024 | 23:44:53.821 | -2:58:29.06 | 30.3826029 | 2.25 | 7.9 | 1.6 |
| 01/17/2024 | 23:44:58.742 | -2:57:55.29 | 30.3975846 | 2.25 | 7.9 | 1.6 |
| 01/18/2024 | 23:45:03.770 | -2:57:20.85 | 30.4124118 | 2.25 | 7.9 | 1.6 |
| 01/19/2024 | 23:45:08.904 | -2:56:45.76 | 30.4270802 | 2.24 | 7.9 | 1.6 |
| 01/20/2024 | 23:45:14.143 | -2:56:10.01 | 30.4415861 | 2.24 | 7.9 | 1.6 |
| 01/21/2024 | 23:45:19.485 | -2:55:33.61 | 30.4559255 | 2.24 | 7.9 | 1.5 |
| 01/22/2024 | 23:45:24.929 | -2:54:56.59 | 30.4700946 | 2.24 | 7.9 | 1.5 |
| 01/23/2024 | 23:45:30.471 | -2:54:18.96 | 30.4840896 | 2.24 | 7.9 | 1.5 |
| 01/24/2024 | 23:45:36.109 | -2:53:40.74 | 30.4979071 | 2.24 | 7.9 | 1.5 |
| 01/25/2024 | 23:45:41.841 | -2:53:01.95 | 30.5115432 | 2.24 | 7.9 | 1.5 |
| 01/26/2024 | 23:45:47.663 | -2:52:22.59 | 30.5249945 | 2.24 | 7.9 | 1.4 |
| 01/27/2024 | 23:45:53.576 | -2:51:42.69 | 30.5382573 | 2.24 | 7.9 | 1.4 |
| 01/28/2024 | 23:45:59.576 | -2:51:02.24 | 30.5513282 | 2.24 | 7.9 | 1.4 |
| 01/29/2024 | 23:46:05.663 | -2:50:21.26 | 30.5642034 | 2.23 | 7.9 | 1.4 |
| 01/30/2024 | 23:46:11.837 | -2:49:39.75 | 30.5768796 | 2.23 | 7.9 | 1.4 |
| 01/31/2024 | 23:46:18.097 | -2:48:57.71 | 30.5893531 | 2.23 | 7.9 | 1.3 |
| 02/01/2024 | 23:46:24.443 | -2:48:15.15 | 30.6016205 | 2.23 | 7.9 | 1.3 |
| 02/02/2024 | 23:46:30.874 | -2:47:32.06 | 30.6136782 | 2.23 | 7.9 | 1.3 |
| 02/03/2024 | 23:46:37.390 | -2:46:48.46 | 30.6255228 | 2.23 | 7.9 | 1.3 |
| 02/04/2024 | 23:46:43.989 | -2:46:04.34 | 30.6371509 | 2.23 | 7.9 | 1.2 |
| 02/05/2024 | 23:46:50.672 | -2:45:19.72 | 30.6485588 | 2.23 | 7.9 | 1.2 |
| 02/06/2024 | 23:46:57.434 | -2:44:34.62 | 30.6597432 | 2.23 | 7.9 | 1.2 |
| 02/07/2024 | 23:47:04.275 | -2:43:49.04 | 30.6707007 | 2.23 | 7.9 | 1.2 |
| 02/08/2024 | 23:47:11.190 | -2:43:03.02 | 30.6814278 | 2.23 | 7.9 | 1.1 |
| 02/09/2024 | 23:47:18.176 | -2:42:16.57 | 30.6919212 | 2.22 | 7.9 | 1.1 |
| 02/10/2024 | 23:47:25.229 | -2:41:29.73 | 30.7021775 | 2.22 | 7.9 | 1.1 |
| 02/11/2024 | 23:47:32.346 | -2:40:42.50 | 30.7121938 | 2.22 | 7.9 | 1.1 |
| 02/12/2024 | 23:47:39.526 | -2:39:54.90 | 30.7219670 | 2.22 | 7.9 | 1.0 |
| 02/13/2024 | 23:47:46.770 | -2:39:06.91 | 30.7314945 | 2.22 | 7.9 | 1.0 |
| 02/14/2024 | 23:47:54.079 | -2:38:18.55 | 30.7407738 | 2.22 | 7.9 | 1.0 |
| 02/15/2024 | 23:48:01.451 | -2:37:29.80 | 30.7498026 | 2.22 | 7.9 | 0.9 |
| 02/16/2024 | 23:48:08.886 | -2:36:40.69 | 30.7585787 | 2.22 | 7.9 | 0.9 |
| 02/17/2024 | 23:48:16.382 | -2:35:51.21 | 30.7671002 | 2.22 | 7.9 | 0.9 |
| 02/18/2024 | 23:48:23.936 | -2:35:01.40 | 30.7753653 | 2.22 | 7.9 | 0.9 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 23:48:31.545 | -2:34:11.28 | 30.7833720 | 2.22 | 7.9 | 0.8 |
| 02/20/2024 | 23:48:39.207 | -2:33:20.86 | 30.7911188 | 2.22 | 8.0 | 0.8 |
| 02/21/2024 | 23:48:46.917 | -2:32:30.15 | 30.7986040 | 2.22 | 8.0 | 0.8 |
| 02/22/2024 | 23:48:54.674 | -2:31:39.19 | 30.8058259 | 2.22 | 8.0 | 0.7 |
| 02/23/2024 | 23:49:02.474 | -2:30:47.99 | 30.8127830 | 2.22 | 8.0 | 0.7 |
| 02/24/2024 | 23:49:10.317 | -2:29:56.55 | 30.8194737 | 2.22 | 8.0 | 0.7 |
| 02/25/2024 | 23:49:18.201 | -2:29:04.88 | 30.8258965 | 2.22 | 8.0 | 0.7 |
| 02/26/2024 | 23:49:26.125 | -2:28:12.99 | 30.8320499 | 2.21 | 8.0 | 0.6 |
| 02/27/2024 | 23:49:34.088 | -2:27:20.89 | 30.8379326 | 2.21 | 8.0 | 0.6 |
| 02/28/2024 | 23:49:42.089 | -2:26:28.59 | 30.8435429 | 2.21 | 8.0 | 0.6 |
| 02/29/2024 | 23:49:50.127 | -2:25:36.07 | 30.8488796 | 2.21 | 8.0 | 0.5 |
| 03/01/2024 | 23:49:58.203 | -2:24:43.36 | 30.8539412 | 2.21 | 8.0 | 0.5 |
| 03/02/2024 | 23:50:06.313 | -2:23:50.46 | 30.8587264 | 2.21 | 8.0 | 0.5 |
| 03/03/2024 | 23:50:14.458 | -2:22:57.37 | 30.8632339 | 2.21 | 8.0 | 0.5 |
| 03/04/2024 | 23:50:22.635 | -2:22:04.12 | 30.8674622 | 2.21 | 8.0 | 0.4 |
| 03/05/2024 | 23:50:30.841 | -2:21:10.72 | 30.8714102 | 2.21 | 8.0 | 0.4 |
| 03/06/2024 | 23:50:39.074 | -2:20:17.19 | 30.8750767 | 2.21 | 8.0 | 0.4 |
| 03/07/2024 | 23:50:47.329 | -2:19:23.56 | 30.8784603 | 2.21 | 8.0 | 0.3 |
| 03/08/2024 | 23:50:55.602 | -2:18:29.84 | 30.8815600 | 2.21 | 8.0 | 0.3 |
| 03/09/2024 | 23:51:03.891 | -2:17:36.07 | 30.8843749 | 2.21 | 8.0 | 0.3 |
| 03/10/2024 | 23:51:12.193 | -2:16:42.26 | 30.8869039 | 2.21 | 8.0 | 0.2 |
| 03/11/2024 | 23:51:20.508 | -2:15:48.40 | 30.8891466 | 2.21 | 8.0 | 0.2 |
| 03/12/2024 | 23:51:28.836 | -2:14:54.49 | 30.8911024 | 2.21 | 8.0 | 0.2 |
| 03/13/2024 | 23:51:37.178 | -2:14:00.54 | 30.8927711 | 2.21 | 8.0 | 0.1 |
| 03/14/2024 | 23:51:45.532 | -2:13:06.54 | 30.8941529 | 2.21 | 8.0 | 0.1 |
| 03/15/2024 | 23:51:53.897 | -2:12:12.52 | 30.8952478 | 2.21 | 8.0 | 0.1 |
| 03/16/2024 | 23:52:02.271 | -2:11:18.49 | 30.8960561 | 2.21 | 8.0 | 0.1 |
| 03/17/2024 | 23:52:10.649 | -2:10:24.47 | 30.8965783 | 2.21 | 8.0 | 0.0 |
| 03/18/2024 | 23:52:19.029 | -2:09:30.48 | 30.8968149 | 2.21 | 8.0 | 0.1 |
| 03/19/2024 | 23:52:27.407 | -2:08:36.55 | 30.8967662 | 2.21 | 8.0 | 0.1 |
| 03/20/2024 | 23:52:35.781 | -2:07:42.69 | 30.8964330 | 2.21 | 8.0 | 0.1 |
| 03/21/2024 | 23:52:44.148 | -2:06:48.92 | 30.8958157 | 2.21 | 8.0 | 0.1 |
| 03/22/2024 | 23:52:52.507 | -2:05:55.25 | 30.8949150 | 2.21 | 8.0 | 0.2 |
| 03/23/2024 | 23:53:00.856 | -2:05:01.68 | 30.8937316 | 2.21 | 8.0 | 0.2 |
| 03/24/2024 | 23:53:09.193 | -2:04:08.24 | 30.8922660 | 2.21 | 8.0 | 0.2 |
| 03/25/2024 | 23:53:17.518 | -2:03:14.91 | 30.8905191 | 2.21 | 8.0 | 0.2 |
| 03/26/2024 | 23:53:25.830 | -2:02:21.70 | 30.8884916 | 2.21 | 8.0 | 0.3 |
| 03/27/2024 | 23:53:34.129 | -2:01:28.63 | 30.8861840 | 2.21 | 8.0 | 0.3 |
| 03/28/2024 | 23:53:42.414 | -2:00:35.68 | 30.8835973 | 2.21 | 8.0 | 0.3 |
| 03/29/2024 | 23:53:50.683 | -1:59:42.88 | 30.8807322 | 2.21 | 8.0 | 0.4 |
| 03/30/2024 | 23:53:58.935 | -1:58:50.23 | 30.8775895 | 2.21 | 8.0 | 0.4 |
| 03/31/2024 | 23:54:07.169 | -1:57:57.74 | 30.8741699 | 2.21 | 8.0 | 0.4 |
| 04/01/2024 | 23:54:15.382 | -1:57:05.43 | 30.8704743 | 2.21 | 8.0 | 0.5 |
| 04/02/2024 | 23:54:23.570 | -1:56:13.32 | 30.8665036 | 2.21 | 8.0 | 0.5 |
| 04/03/2024 | 23:54:31.731 | -1:55:21.43 | 30.8622587 | 2.21 | 8.0 | 0.5 |
| 04/04/2024 | 23:54:39.862 | -1:54:29.77 | 30.8577405 | 2.21 | 8.0 | 0.6 |
| 04/05/2024 | 23:54:47.958 | -1:53:38.38 | 30.8529501 | 2.21 | 8.0 | 0.6 |
| 04/06/2024 | 23:54:56.018 | -1:52:47.27 | 30.8478887 | 2.21 | 8.0 | 0.6 |
| 04/07/2024 | 23:55:04.041 | -1:51:56.44 | 30.8425576 | 2.21 | 8.0 | 0.6 |
| 04/08/2024 | 23:55:12.026 | -1:51:05.89 | 30.8369584 | 2.21 | 8.0 | 0.7 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 23:55:19.973 | -1:50:15.63 | 30.8310926 | 2.21 | 8.0 | 0.7 |
| 04/10/2024 | 23:55:27.884 | -1:49:25.64 | 30.8249624 | 2.22 | 8.0 | 0.7 |
| 04/11/2024 | 23:55:35.757 | -1:48:35.94 | 30.8185697 | 2.22 | 8.0 | 0.8 |
| 04/12/2024 | 23:55:43.590 | -1:47:46.54 | 30.8119170 | 2.22 | 8.0 | 0.8 |
| 04/13/2024 | 23:55:51.380 | -1:46:57.46 | 30.8050065 | 2.22 | 8.0 | 0.8 |
| 04/14/2024 | 23:55:59.123 | -1:46:08.73 | 30.7978406 | 2.22 | 8.0 | 0.9 |
| 04/15/2024 | 23:56:06.817 | -1:45:20.36 | 30.7904220 | 2.22 | 8.0 | 0.9 |
| 04/16/2024 | 23:56:14.458 | -1:44:32.37 | 30.7827530 | 2.22 | 7.9 | 0.9 |
| 04/17/2024 | 23:56:22.044 | -1:43:44.78 | 30.7748363 | 2.22 | 7.9 | 0.9 |
| 04/18/2024 | 23:56:29.574 | -1:42:57.60 | 30.7666743 | 2.22 | 7.9 | 1.0 |
| 04/19/2024 | 23:56:37.045 | -1:42:10.83 | 30.7582696 | 2.22 | 7.9 | 1.0 |
| 04/20/2024 | 23:56:44.459 | -1:41:24.48 | 30.7496247 | 2.22 | 7.9 | 1.0 |
| 04/21/2024 | 23:56:51.812 | -1:40:38.56 | 30.7407423 | 2.22 | 7.9 | 1.1 |
| 04/22/2024 | 23:56:59.106 | -1:39:53.06 | 30.7316249 | 2.22 | 7.9 | 1.1 |
| 04/23/2024 | 23:57:06.339 | -1:39:07.99 | 30.7222750 | 2.22 | 7.9 | 1.1 |
| 04/24/2024 | 23:57:13.512 | -1:38:23.36 | 30.7126952 | 2.22 | 7.9 | 1.1 |
| 04/25/2024 | 23:57:20.623 | -1:37:39.15 | 30.7028882 | 2.22 | 7.9 | 1.2 |
| 04/26/2024 | 23:57:27.672 | -1:36:55.39 | 30.6928565 | 2.22 | 7.9 | 1.2 |
| 04/27/2024 | 23:57:34.657 | -1:36:12.08 | 30.6826026 | 2.23 | 7.9 | 1.2 |
| 04/28/2024 | 23:57:41.576 | -1:35:29.23 | 30.6721291 | 2.23 | 7.9 | 1.2 |
| 04/29/2024 | 23:57:48.426 | -1:34:46.87 | 30.6614386 | 2.23 | 7.9 | 1.3 |
| 04/30/2024 | 23:57:55.205 | -1:34:05.00 | 30.6505338 | 2.23 | 7.9 | 1.3 |
| 05/01/2024 | 23:58:01.910 | -1:33:23.65 | 30.6394173 | 2.23 | 7.9 | 1.3 |
| 05/02/2024 | 23:58:08.537 | -1:32:42.84 | 30.6280919 | 2.23 | 7.9 | 1.3 |
| 05/03/2024 | 23:58:15.085 | -1:32:02.57 | 30.6165603 | 2.23 | 7.9 | 1.3 |
| 05/04/2024 | 23:58:21.552 | -1:31:22.86 | 30.6048256 | 2.23 | 7.9 | 1.4 |
| 05/05/2024 | 23:58:27.939 | -1:30:43.71 | 30.5928907 | 2.23 | 7.9 | 1.4 |
| 05/06/2024 | 23:58:34.245 | -1:30:05.11 | 30.5807591 | 2.23 | 7.9 | 1.4 |
| 05/07/2024 | 23:58:40.472 | -1:29:27.06 | 30.5684340 | 2.23 | 7.9 | 1.4 |
| 05/08/2024 | 23:58:46.620 | -1:28:49.56 | 30.5559191 | 2.23 | 7.9 | 1.5 |
| 05/09/2024 | 23:58:52.687 | -1:28:12.61 | 30.5432183 | 2.24 | 7.9 | 1.5 |
| 05/10/2024 | 23:58:58.671 | -1:27:36.24 | 30.5303352 | 2.24 | 7.9 | 1.5 |
| 05/11/2024 | 23:59:04.569 | -1:27:00.45 | 30.5172740 | 2.24 | 7.9 | 1.5 |
| 05/12/2024 | 23:59:10.378 | -1:26:25.28 | 30.5040386 | 2.24 | 7.9 | 1.5 |
| 05/13/2024 | 23:59:16.095 | -1:25:50.73 | 30.4906330 | 2.24 | 7.9 | 1.6 |
| 05/14/2024 | 23:59:21.719 | -1:25:16.82 | 30.4770613 | 2.24 | 7.9 | 1.6 |
| 05/15/2024 | 23:59:27.248 | -1:24:43.56 | 30.4633273 | 2.24 | 7.9 | 1.6 |
| 05/16/2024 | 23:59:32.680 | -1:24:10.96 | 30.4494352 | 2.24 | 7.9 | 1.6 |
| 05/17/2024 | 23:59:38.016 | -1:23:39.01 | 30.4353887 | 2.24 | 7.9 | 1.6 |
| 05/18/2024 | 23:59:43.255 | -1:23:07.71 | 30.4211920 | 2.24 | 7.9 | 1.7 |
| 05/19/2024 | 23:59:48.396 | -1:22:37.08 | 30.4068489 | 2.25 | 7.9 | 1.7 |
| 05/20/2024 | 23:59:53.442 | -1:22:07.09 | 30.3923633 | 2.25 | 7.9 | 1.7 |
| 05/21/2024 | 23:59:58.390 | -1:21:37.77 | 30.3777392 | 2.25 | 7.9 | 1.7 |
| 05/22/2024 | 0:00:03.241 | -1:21:09.09 | 30.3629804 | 2.25 | 7.9 | 1.7 |
| 05/23/2024 | 0:00:07.996 | -1:20:41.07 | 30.3480907 | 2.25 | 7.9 | 1.7 |
| 05/24/2024 | 0:00:12.653 | -1:20:13.71 | 30.3330740 | 2.25 | 7.9 | 1.7 |
| 05/25/2024 | 0:00:17.210 | -1:19:47.02 | 30.3179341 | 2.25 | 7.9 | 1.8 |
| 05/26/2024 | 0:00:21.666 | -1:19:21.01 | 30.3026748 | 2.25 | 7.9 | 1.8 |
| 05/27/2024 | 0:00:26.018 | -1:18:55.69 | 30.2872998 | 2.25 | 7.9 | 1.8 |
| 05/28/2024 | 0:00:30.264 | -1:18:31.08 | 30.2718130 | 2.26 | 7.9 | 1.8 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 0:00:34.402 | -1:18:07.20 | 30.2562181 | 2.26 | 7.9 | 1.8 |
| 05/30/2024 | 0:00:38.429 | -1:17:44.06 | 30.2405193 | 2.26 | 7.9 | 1.8 |
| 05/31/2024 | 0:00:42.345 | -1:17:21.66 | 30.2247203 | 2.26 | 7.9 | 1.8 |
| 06/01/2024 | 0:00:46.151 | -1:16:59.99 | 30.2088255 | 2.26 | 7.9 | 1.8 |
| 06/02/2024 | 0:00:49.846 | -1:16:39.06 | 30.1928390 | 2.26 | 7.9 | 1.9 |
| 06/03/2024 | 0:00:53.433 | -1:16:18.85 | 30.1767652 | 2.26 | 7.9 | 1.9 |
| 06/04/2024 | 0:00:56.912 | -1:15:59.36 | 30.1606088 | 2.26 | 7.9 | 1.9 |
| 06/05/2024 | 0:01:00.283 | -1:15:40.59 | 30.1443743 | 2.27 | 7.9 | 1.9 |
| 06/06/2024 | 0:01:03.544 | -1:15:22.55 | 30.1280666 | 2.27 | 7.9 | 1.9 |
| 06/07/2024 | 0:01:06.694 | -1:15:05.24 | 30.1116905 | 2.27 | 7.9 | 1.9 |
| 06/08/2024 | 0:01:09.730 | -1:14:48.70 | 30.0952510 | 2.27 | 7.9 | 1.9 |
| 06/09/2024 | 0:01:12.651 | -1:14:32.92 | 30.0787528 | 2.27 | 7.9 | 1.9 |
| 06/10/2024 | 0:01:15.453 | -1:14:17.92 | 30.0622009 | 2.27 | 7.9 | 1.9 |
| 06/11/2024 | 0:01:18.137 | -1:14:03.70 | 30.0456002 | 2.27 | 7.9 | 1.9 |
| 06/12/2024 | 0:01:20.701 | -1:13:50.28 | 30.0289554 | 2.27 | 7.9 | 1.9 |
| 06/13/2024 | 0:01:23.146 | -1:13:37.64 | 30.0122713 | 2.28 | 7.9 | 1.9 |
| 06/14/2024 | 0:01:25.472 | -1:13:25.79 | 29.9955526 | 2.28 | 7.9 | 1.9 |
| 06/15/2024 | 0:01:27.680 | -1:13:14.71 | 29.9788041 | 2.28 | 7.9 | 1.9 |
| 06/16/2024 | 0:01:29.770 | -1:13:04.40 | 29.9620302 | 2.28 | 7.9 | 1.9 |
| 06/17/2024 | 0:01:31.744 | -1:12:54.86 | 29.9452357 | 2.28 | 7.9 | 1.9 |
| 06/18/2024 | 0:01:33.602 | -1:12:46.08 | 29.9284251 | 2.28 | 7.9 | 2.0 |
| 06/19/2024 | 0:01:35.344 | -1:12:38.06 | 29.9116028 | 2.28 | 7.9 | 2.0 |
| 06/20/2024 | 0:01:36.971 | -1:12:30.79 | 29.8947733 | 2.28 | 7.9 | 2.0 |
| 06/21/2024 | 0:01:38.483 | -1:12:24.28 | 29.8779411 | 2.29 | 7.9 | 2.0 |
| 06/22/2024 | 0:01:39.877 | -1:12:18.53 | 29.8611103 | 2.29 | 7.9 | 2.0 |
| 06/23/2024 | 0:01:41.153 | -1:12:13.55 | 29.8442854 | 2.29 | 7.9 | 2.0 |
| 06/24/2024 | 0:01:42.309 | -1:12:09.35 | 29.8274706 | 2.29 | 7.9 | 1.9 |
| 06/25/2024 | 0:01:43.343 | -1:12:05.95 | 29.8106702 | 2.29 | 7.9 | 1.9 |
| 06/26/2024 | 0:01:44.254 | -1:12:03.35 | 29.7938886 | 2.29 | 7.9 | 1.9 |
| 06/27/2024 | 0:01:45.041 | -1:12:01.55 | 29.7771301 | 2.29 | 7.9 | 1.9 |
| 06/28/2024 | 0:01:45.705 | -1:12:00.55 | 29.7603992 | 2.29 | 7.9 | 1.9 |
| 06/29/2024 | 0:01:46.249 | -1:12:00.33 | 29.7437005 | 2.30 | 7.9 | 1.9 |
| 06/30/2024 | 0:01:46.674 | -1:12:00.88 | 29.7270388 | 2.30 | 7.9 | 1.9 |
| 07/01/2024 | 0:01:46.981 | -1:12:02.19 | 29.7104189 | 2.30 | 7.9 | 1.9 |
| 07/02/2024 | 0:01:47.172 | -1:12:04.26 | 29.6938456 | 2.30 | 7.9 | 1.9 |
| 07/03/2024 | 0:01:47.246 | -1:12:07.08 | 29.6773240 | 2.30 | 7.9 | 1.9 |
| 07/04/2024 | 0:01:47.202 | -1:12:10.66 | 29.6608591 | 2.30 | 7.9 | 1.9 |
| 07/05/2024 | 0:01:47.040 | -1:12:15.01 | 29.6444560 | 2.30 | 7.9 | 1.9 |
| 07/06/2024 | 0:01:46.757 | -1:12:20.13 | 29.6281197 | 2.30 | 7.9 | 1.9 |
| 07/07/2024 | 0:01:46.353 | -1:12:26.04 | 29.6118552 | 2.31 | 7.9 | 1.9 |
| 07/08/2024 | 0:01:45.827 | -1:12:32.73 | 29.5956675 | 2.31 | 7.9 | 1.9 |
| 07/09/2024 | 0:01:45.179 | -1:12:40.20 | 29.5795614 | 2.31 | 7.9 | 1.9 |
| 07/10/2024 | 0:01:44.410 | -1:12:48.45 | 29.5635419 | 2.31 | 7.9 | 1.9 |
| 07/11/2024 | 0:01:43.521 | -1:12:57.47 | 29.5476136 | 2.31 | 7.9 | 1.8 |
| 07/12/2024 | 0:01:42.514 | -1:13:07.25 | 29.5317813 | 2.31 | 7.9 | 1.8 |
| 07/13/2024 | 0:01:41.390 | -1:13:17.77 | 29.5160494 | 2.31 | 7.9 | 1.8 |
| 07/14/2024 | 0:01:40.151 | -1:13:29.03 | 29.5004226 | 2.31 | 7.9 | 1.8 |
| 07/15/2024 | 0:01:38.798 | -1:13:41.01 | 29.4849052 | 2.32 | 7.9 | 1.8 |
| 07/16/2024 | 0:01:37.334 | -1:13:53.70 | 29.4695017 | 2.32 | 7.9 | 1.8 |
| 07/17/2024 | 0:01:35.759 | -1:14:07.09 | 29.4542162 | 2.32 | 7.9 | 1.8 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 0:01:34.074 | -1:14:21.18 | 29.4390531 | 2.32 | 7.9 | 1.8 |
| 07/19/2024 | 0:01:32.279 | -1:14:35.96 | 29.4240165 | 2.32 | 7.9 | 1.7 |
| 07/20/2024 | 0:01:30.374 | -1:14:51.44 | 29.4091103 | 2.32 | 7.9 | 1.7 |
| 07/21/2024 | 0:01:28.357 | -1:15:07.62 | 29.3943385 | 2.32 | 7.8 | 1.7 |
| 07/22/2024 | 0:01:26.229 | -1:15:24.51 | 29.3797052 | 2.32 | 7.8 | 1.7 |
| 07/23/2024 | 0:01:23.987 | -1:15:42.11 | 29.3652141 | 2.33 | 7.8 | 1.7 |
| 07/24/2024 | 0:01:21.633 | -1:16:00.43 | 29.3508692 | 2.33 | 7.8 | 1.7 |
| 07/25/2024 | 0:01:19.168 | -1:16:19.44 | 29.3366745 | 2.33 | 7.8 | 1.6 |
| 07/26/2024 | 0:01:16.594 | -1:16:39.13 | 29.3226342 | 2.33 | 7.8 | 1.6 |
| 07/27/2024 | 0:01:13.915 | -1:16:59.48 | 29.3087524 | 2.33 | 7.8 | 1.6 |
| 07/28/2024 | 0:01:11.133 | -1:17:20.47 | 29.2950333 | 2.33 | 7.8 | 1.6 |
| 07/29/2024 | 0:01:08.250 | -1:17:42.10 | 29.2814814 | 2.33 | 7.8 | 1.6 |
| 07/30/2024 | 0:01:05.267 | -1:18:04.35 | 29.2681009 | 2.33 | 7.8 | 1.6 |
| 07/31/2024 | 0:01:02.185 | -1:18:27.22 | 29.2548962 | 2.33 | 7.8 | 1.5 |
| 08/01/2024 | 0:00:59.002 | -1:18:50.71 | 29.2418717 | 2.34 | 7.8 | 1.5 |
| 08/02/2024 | 0:00:55.719 | -1:19:14.83 | 29.2290318 | 2.34 | 7.8 | 1.5 |
| 08/03/2024 | 0:00:52.336 | -1:19:39.57 | 29.2163806 | 2.34 | 7.8 | 1.5 |
| 08/04/2024 | 0:00:48.852 | -1:20:04.93 | 29.2039224 | 2.34 | 7.8 | 1.4 |
| 08/05/2024 | 0:00:45.270 | -1:20:30.90 | 29.1916613 | 2.34 | 7.8 | 1.4 |
| 08/06/2024 | 0:00:41.589 | -1:20:57.48 | 29.1796013 | 2.34 | 7.8 | 1.4 |
| 08/07/2024 | 0:00:37.812 | -1:21:24.65 | 29.1677461 | 2.34 | 7.8 | 1.4 |
| 08/08/2024 | 0:00:33.942 | -1:21:52.40 | 29.1560996 | 2.34 | 7.8 | 1.4 |
| 08/09/2024 | 0:00:29.982 | -1:22:20.70 | 29.1446655 | 2.34 | 7.8 | 1.3 |
| 08/10/2024 | 0:00:25.933 | -1:22:49.54 | 29.1334472 | 2.34 | 7.8 | 1.3 |
| 08/11/2024 | 0:00:21.798 | -1:23:18.89 | 29.1224483 | 2.34 | 7.8 | 1.3 |
| 08/12/2024 | 0:00:17.580 | -1:23:48.75 | 29.1116720 | 2.35 | 7.8 | 1.2 |
| 08/13/2024 | 0:00:13.281 | -1:24:19.10 | 29.1011215 | 2.35 | 7.8 | 1.2 |
| 08/14/2024 | 0:00:08.903 | -1:24:49.92 | 29.0907999 | 2.35 | 7.8 | 1.2 |
| 08/15/2024 | 0:00:04.447 | -1:25:21.21 | 29.0807102 | 2.35 | 7.8 | 1.2 |
| 08/16/2024 | 23:59:59.914 | -1:25:52.96 | 29.0708553 | 2.35 | 7.8 | 1.1 |
| 08/17/2024 | 23:59:55.304 | -1:26:25.17 | 29.0612379 | 2.35 | 7.8 | 1.1 |
| 08/18/2024 | 23:59:50.618 | -1:26:57.83 | 29.0518607 | 2.35 | 7.8 | 1.1 |
| 08/19/2024 | 23:59:45.855 | -1:27:30.95 | 29.0427263 | 2.35 | 7.8 | 1.1 |
| 08/20/2024 | 23:59:41.016 | -1:28:04.52 | 29.0338372 | 2.35 | 7.8 | 1.0 |
| 08/21/2024 | 23:59:36.102 | -1:28:38.54 | 29.0251960 | 2.35 | 7.8 | 1.0 |
| 08/22/2024 | 23:59:31.117 | -1:29:12.96 | 29.0168054 | 2.35 | 7.8 | 1.0 |
| 08/23/2024 | 23:59:26.065 | -1:29:47.79 | 29.0086680 | 2.35 | 7.8 | 0.9 |
| 08/24/2024 | 23:59:20.950 | -1:30:22.97 | 29.0007866 | 2.35 | 7.8 | 0.9 |
| 08/25/2024 | 23:59:15.775 | -1:30:58.50 | 28.9931639 | 2.36 | 7.8 | 0.9 |
| 08/26/2024 | 23:59:10.542 | -1:31:34.37 | 28.9858029 | 2.36 | 7.8 | 0.9 |
| 08/27/2024 | 23:59:05.252 | -1:32:10.56 | 28.9787063 | 2.36 | 7.8 | 0.8 |
| 08/28/2024 | 23:58:59.906 | -1:32:47.07 | 28.9718769 | 2.36 | 7.8 | 0.8 |
| 08/29/2024 | 23:58:54.503 | -1:33:23.90 | 28.9653173 | 2.36 | 7.8 | 0.8 |
| 08/30/2024 | 23:58:49.045 | -1:34:01.04 | 28.9590303 | 2.36 | 7.8 | 0.7 |
| 08/31/2024 | 23:58:43.533 | -1:34:38.49 | 28.9530181 | 2.36 | 7.8 | 0.7 |
| 09/01/2024 | 23:58:37.969 | -1:35:16.23 | 28.9472832 | 2.36 | 7.8 | 0.7 |
| 09/02/2024 | 23:58:32.354 | -1:35:54.25 | 28.9418278 | 2.36 | 7.8 | 0.6 |
| 09/03/2024 | 23:58:26.691 | -1:36:32.53 | 28.9366540 | 2.36 | 7.8 | 0.6 |
| 09/04/2024 | 23:58:20.983 | -1:37:11.05 | 28.9317636 | 2.36 | 7.8 | 0.6 |
| 09/05/2024 | 23:58:15.233 | -1:37:49.80 | 28.9271586 | 2.36 | 7.8 | 0.5 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 23:58:09.446 | -1:38:28.74 | 28.9228406 | 2.36 | 7.8 | 0.5 |
| 09/07/2024 | 23:58:03.623 | -1:39:07.85 | 28.9188110 | 2.36 | 7.8 | 0.5 |
| 09/08/2024 | 23:57:57.769 | -1:39:47.12 | 28.9150713 | 2.36 | 7.8 | 0.4 |
| 09/09/2024 | 23:57:51.886 | -1:40:26.52 | 28.9116227 | 2.36 | 7.8 | 0.4 |
| 09/10/2024 | 23:57:45.977 | -1:41:06.04 | 28.9084662 | 2.36 | 7.8 | 0.4 |
| 09/11/2024 | 23:57:40.043 | -1:41:45.66 | 28.9056028 | 2.36 | 7.8 | 0.3 |
| 09/12/2024 | 23:57:34.087 | -1:42:25.37 | 28.9030334 | 2.36 | 7.8 | 0.3 |
| 09/13/2024 | 23:57:28.110 | -1:43:05.17 | 28.9007586 | 2.36 | 7.8 | 0.3 |
| 09/14/2024 | 23:57:22.113 | -1:43:45.05 | 28.8987790 | 2.36 | 7.8 | 0.2 |
| 09/15/2024 | 23:57:16.096 | -1:44:25.00 | 28.8970951 | 2.36 | 7.8 | 0.2 |
| 09/16/2024 | 23:57:10.060 | -1:45:05.02 | 28.8957072 | 2.36 | 7.8 | 0.2 |
| 09/17/2024 | 23:57:04.007 | -1:45:45.09 | 28.8946158 | 2.36 | 7.8 | 0.1 |
| 09/18/2024 | 23:56:57.940 | -1:46:25.20 | 28.8938210 | 2.36 | 7.8 | 0.1 |
| 09/19/2024 | 23:56:51.863 | -1:47:05.32 | 28.8933233 | 2.36 | 7.8 | 0.1 |
| 09/20/2024 | 23:56:45.781 | -1:47:45.42 | 28.8931232 | 2.36 | 7.8 | 0.1 |
| 09/21/2024 | 23:56:39.698 | -1:48:25.47 | 28.8932210 | 2.36 | 7.8 | 0.0 |
| 09/22/2024 | 23:56:33.618 | -1:49:05.45 | 28.8936173 | 2.36 | 7.8 | 0.0 |
| 09/23/2024 | 23:56:27.541 | -1:49:45.35 | 28.8943125 | 2.36 | 7.8 | 0.1 |
| 09/24/2024 | 23:56:21.468 | -1:50:25.17 | 28.8953072 | 2.36 | 7.8 | 0.1 |
| 09/25/2024 | 23:56:15.401 | -1:51:04.91 | 28.8966016 | 2.36 | 7.8 | 0.1 |
| 09/26/2024 | 23:56:09.340 | -1:51:44.55 | 28.8981960 | 2.36 | 7.8 | 0.2 |
| 09/27/2024 | 23:56:03.286 | -1:52:24.09 | 28.9000904 | 2.36 | 7.8 | 0.2 |
| 09/28/2024 | 23:55:57.241 | -1:53:03.52 | 28.9022847 | 2.36 | 7.8 | 0.2 |
| 09/29/2024 | 23:55:51.208 | -1:53:42.82 | 28.9047789 | 2.36 | 7.8 | 0.3 |
| 09/30/2024 | 23:55:45.190 | -1:54:21.97 | 28.9075724 | 2.36 | 7.8 | 0.3 |
| 10/01/2024 | 23:55:39.189 | -1:55:00.95 | 28.9106647 | 2.36 | 7.8 | 0.3 |
| 10/02/2024 | 23:55:33.208 | -1:55:39.74 | 28.9140552 | 2.36 | 7.8 | 0.4 |
| 10/03/2024 | 23:55:27.253 | -1:56:18.32 | 28.9177431 | 2.36 | 7.8 | 0.4 |
| 10/04/2024 | 23:55:21.325 | -1:56:56.66 | 28.9217273 | 2.36 | 7.8 | 0.4 |
| 10/05/2024 | 23:55:15.429 | -1:57:34.74 | 28.9260068 | 2.36 | 7.8 | 0.5 |
| 10/06/2024 | 23:55:09.568 | -1:58:12.54 | 28.9305801 | 2.36 | 7.8 | 0.5 |
| 10/07/2024 | 23:55:03.744 | -1:58:50.05 | 28.9354460 | 2.36 | 7.8 | 0.5 |
| 10/08/2024 | 23:54:57.959 | -1:59:27.25 | 28.9406028 | 2.36 | 7.8 | 0.6 |
| 10/09/2024 | 23:54:52.215 | -2:00:04.12 | 28.9460487 | 2.36 | 7.8 | 0.6 |
| 10/10/2024 | 23:54:46.514 | -2:00:40.67 | 28.9517821 | 2.36 | 7.8 | 0.6 |
| 10/11/2024 | 23:54:40.857 | -2:01:16.88 | 28.9578008 | 2.36 | 7.8 | 0.7 |
| 10/12/2024 | 23:54:35.244 | -2:01:52.75 | 28.9641028 | 2.36 | 7.8 | 0.7 |
| 10/13/2024 | 23:54:29.677 | -2:02:28.27 | 28.9706860 | 2.36 | 7.8 | 0.7 |
| 10/14/2024 | 23:54:24.156 | -2:03:03.43 | 28.9775482 | 2.36 | 7.8 | 0.7 |
| 10/15/2024 | 23:54:18.685 | -2:03:38.23 | 28.9846870 | 2.36 | 7.8 | 0.8 |
| 10/16/2024 | 23:54:13.266 | -2:04:12.63 | 28.9921002 | 2.36 | 7.8 | 0.8 |
| 10/17/2024 | 23:54:07.904 | -2:04:46.62 | 28.9997856 | 2.35 | 7.8 | 0.8 |
| 10/18/2024 | 23:54:02.603 | -2:05:20.15 | 29.0077410 | 2.35 | 7.8 | 0.9 |
| 10/19/2024 | 23:53:57.367 | -2:05:53.22 | 29.0159643 | 2.35 | 7.8 | 0.9 |
| 10/20/2024 | 23:53:52.197 | -2:06:25.81 | 29.0244534 | 2.35 | 7.8 | 0.9 |
| 10/21/2024 | 23:53:47.096 | -2:06:57.91 | 29.0332063 | 2.35 | 7.8 | 1.0 |
| 10/22/2024 | 23:53:42.062 | -2:07:29.52 | 29.0422207 | 2.35 | 7.8 | 1.0 |
| 10/23/2024 | 23:53:37.096 | -2:08:00.65 | 29.0514944 | 2.35 | 7.8 | 1.0 |
| 10/24/2024 | 23:53:32.198 | -2:08:31.29 | 29.0610250 | 2.35 | 7.8 | 1.0 |
| 10/25/2024 | 23:53:27.371 | -2:09:01.44 | 29.0708098 | 2.35 | 7.8 | 1.1 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 23:53:22.615 | -2:09:31.07 | 29.0808463 | 2.35 | 7.8 | 1.1 |
| 10/27/2024 | 23:53:17.933 | -2:10:00.18 | 29.0911315 | 2.35 | 7.8 | 1.1 |
| 10/28/2024 | 23:53:13.328 | -2:10:28.75 | 29.1016625 | 2.35 | 7.8 | 1.1 |
| 10/29/2024 | 23:53:08.802 | -2:10:56.76 | 29.1124360 | 2.35 | 7.8 | 1.2 |
| 10/30/2024 | 23:53:04.359 | -2:11:24.18 | 29.1234490 | 2.34 | 7.8 | 1.2 |
| 10/31/2024 | 23:53:00.002 | -2:11:51.01 | 29.1346979 | 2.34 | 7.8 | 1.2 |
| 11/01/2024 | 23:52:55.734 | -2:12:17.22 | 29.1461792 | 2.34 | 7.8 | 1.3 |
| 11/02/2024 | 23:52:51.557 | -2:12:42.80 | 29.1578892 | 2.34 | 7.8 | 1.3 |
| 11/03/2024 | 23:52:47.473 | -2:13:07.73 | 29.1698241 | 2.34 | 7.8 | 1.3 |
| 11/04/2024 | 23:52:43.484 | -2:13:32.00 | 29.1819801 | 2.34 | 7.8 | 1.3 |
| 11/05/2024 | 23:52:39.592 | -2:13:55.61 | 29.1943530 | 2.34 | 7.8 | 1.4 |
| 11/06/2024 | 23:52:35.796 | -2:14:18.55 | 29.2069387 | 2.34 | 7.8 | 1.4 |
| 11/07/2024 | 23:52:32.099 | -2:14:40.82 | 29.2197331 | 2.34 | 7.8 | 1.4 |
| 11/08/2024 | 23:52:28.499 | -2:15:02.42 | 29.2327316 | 2.34 | 7.8 | 1.4 |
| 11/09/2024 | 23:52:24.997 | -2:15:23.35 | 29.2459301 | 2.33 | 7.8 | 1.4 |
| 11/10/2024 | 23:52:21.593 | -2:15:43.61 | 29.2593241 | 2.33 | 7.8 | 1.5 |
| 11/11/2024 | 23:52:18.289 | -2:16:03.18 | 29.2729090 | 2.33 | 7.8 | 1.5 |
| 11/12/2024 | 23:52:15.088 | -2:16:22.06 | 29.2866806 | 2.33 | 7.8 | 1.5 |
| 11/13/2024 | 23:52:11.991 | -2:16:40.22 | 29.3006344 | 2.33 | 7.8 | 1.5 |
| 11/14/2024 | 23:52:09.003 | -2:16:57.65 | 29.3147661 | 2.33 | 7.8 | 1.5 |
| 11/15/2024 | 23:52:06.127 | -2:17:14.32 | 29.3290715 | 2.33 | 7.8 | 1.6 |
| 11/16/2024 | 23:52:03.364 | -2:17:30.23 | 29.3435463 | 2.33 | 7.8 | 1.6 |
| 11/17/2024 | 23:52:00.715 | -2:17:45.37 | 29.3581866 | 2.33 | 7.8 | 1.6 |
| 11/18/2024 | 23:51:58.180 | -2:17:59.74 | 29.3729880 | 2.32 | 7.8 | 1.6 |
| 11/19/2024 | 23:51:55.758 | -2:18:13.36 | 29.3879465 | 2.32 | 7.8 | 1.6 |
| 11/20/2024 | 23:51:53.448 | -2:18:26.24 | 29.4030579 | 2.32 | 7.8 | 1.6 |
| 11/21/2024 | 23:51:51.249 | -2:18:38.36 | 29.4183177 | 2.32 | 7.9 | 1.7 |
| 11/22/2024 | 23:51:49.163 | -2:18:49.73 | 29.4337215 | 2.32 | 7.9 | 1.7 |
| 11/23/2024 | 23:51:47.190 | -2:19:00.34 | 29.4492647 | 2.32 | 7.9 | 1.7 |
| 11/24/2024 | 23:51:45.333 | -2:19:10.19 | 29.4649426 | 2.32 | 7.9 | 1.7 |
| 11/25/2024 | 23:51:43.593 | -2:19:19.24 | 29.4807504 | 2.32 | 7.9 | 1.7 |
| 11/26/2024 | 23:51:41.973 | -2:19:27.51 | 29.4966831 | 2.32 | 7.9 | 1.7 |
| 11/27/2024 | 23:51:40.474 | -2:19:34.96 | 29.5127358 | 2.31 | 7.9 | 1.7 |
| 11/28/2024 | 23:51:39.098 | -2:19:41.59 | 29.5289034 | 2.31 | 7.9 | 1.8 |
| 11/29/2024 | 23:51:37.847 | -2:19:47.40 | 29.5451806 | 2.31 | 7.9 | 1.8 |
| 11/30/2024 | 23:51:36.723 | -2:19:52.37 | 29.5615623 | 2.31 | 7.9 | 1.8 |
| 12/01/2024 | 23:51:35.725 | -2:19:56.50 | 29.5780430 | 2.31 | 7.9 | 1.8 |
| 12/02/2024 | 23:51:34.854 | -2:19:59.79 | 29.5946174 | 2.31 | 7.9 | 1.8 |
| 12/03/2024 | 23:51:34.111 | -2:20:02.24 | 29.6112800 | 2.31 | 7.9 | 1.8 |
| 12/04/2024 | 23:51:33.494 | -2:20:03.87 | 29.6280251 | 2.30 | 7.9 | 1.8 |
| 12/05/2024 | 23:51:33.002 | -2:20:04.66 | 29.6448474 | 2.30 | 7.9 | 1.8 |
| 12/06/2024 | 23:51:32.634 | -2:20:04.64 | 29.6617410 | 2.30 | 7.9 | 1.8 |
| 12/07/2024 | 23:51:32.390 | -2:20:03.81 | 29.6787006 | 2.30 | 7.9 | 1.8 |
| 12/08/2024 | 23:51:32.270 | -2:20:02.16 | 29.6957204 | 2.30 | 7.9 | 1.8 |
| 12/09/2024 | 23:51:32.275 | -2:19:59.69 | 29.7127952 | 2.30 | 7.9 | 1.9 |
| 12/10/2024 | 23:51:32.406 | -2:19:56.40 | 29.7299193 | 2.30 | 7.9 | 1.9 |
| 12/11/2024 | 23:51:32.665 | -2:19:52.27 | 29.7470876 | 2.30 | 7.9 | 1.9 |
| 12/12/2024 | 23:51:33.055 | -2:19:47.28 | 29.7642947 | 2.29 | 7.9 | 1.9 |
| 12/13/2024 | 23:51:33.576 | -2:19:41.44 | 29.7815356 | 2.29 | 7.9 | 1.9 |
| 12/14/2024 | 23:51:34.229 | -2:19:34.74 | 29.7988054 | 2.29 | 7.9 | 1.9 |

Neptune - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 23:51:35.013 | -2:19:27.19 | 29.8160990 | 2.29 | 7.9 | 1.9 |
| 12/16/2024 | 23:51:35.925 | -2:19:18.81 | 29.8334115 | 2.29 | 7.9 | 1.9 |
| 12/17/2024 | 23:51:36.964 | -2:19:09.62 | 29.8507381 | 2.29 | 7.9 | 1.9 |
| 12/18/2024 | 23:51:38.127 | -2:18:59.61 | 29.8680738 | 2.29 | 7.9 | 1.9 |
| 12/19/2024 | 23:51:39.414 | -2:18:48.81 | 29.8854136 | 2.29 | 7.9 | 1.9 |
| 12/20/2024 | 23:51:40.825 | -2:18:37.20 | 29.9027524 | 2.28 | 7.9 | 1.9 |
| 12/21/2024 | 23:51:42.360 | -2:18:24.80 | 29.9200852 | 2.28 | 7.9 | 1.9 |
| 12/22/2024 | 23:51:44.020 | -2:18:11.58 | 29.9374066 | 2.28 | 7.9 | 1.9 |
| 12/23/2024 | 23:51:45.805 | -2:17:57.56 | 29.9547115 | 2.28 | 7.9 | 1.9 |
| 12/24/2024 | 23:51:47.717 | -2:17:42.71 | 29.9719946 | 2.28 | 7.9 | 1.9 |
| 12/25/2024 | 23:51:49.757 | -2:17:27.05 | 29.9892504 | 2.28 | 7.9 | 1.9 |
| 12/26/2024 | 23:51:51.924 | -2:17:10.56 | 30.0064737 | 2.28 | 7.9 | 1.9 |
| 12/27/2024 | 23:51:54.220 | -2:16:53.25 | 30.0236590 | 2.27 | 7.9 | 1.9 |
| 12/28/2024 | 23:51:56.644 | -2:16:35.11 | 30.0408008 | 2.27 | 7.9 | 1.9 |
| 12/29/2024 | 23:51:59.196 | -2:16:16.15 | 30.0578937 | 2.27 | 7.9 | 1.8 |
| 12/30/2024 | 23:52:01.873 | -2:15:56.39 | 30.0749323 | 2.27 | 7.9 | 1.8 |
| 12/31/2024 | 23:52:04.675 | -2:15:35.83 | 30.0919109 | 2.27 | 7.9 | 1.8 |
| 01/01/2025 | 23:52:07.600 | -2:15:14.49 | 30.1088242 | 2.27 | 7.9 | 1.8 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/31/2023 | 20:08:24.841 | -22:59:44.86 | 35.8414950 | 0.09 | 14.5 | 0.6 |
| 01/01/2024 | 20:08:32.768 | -22:59:24.65 | 35.8480484 | 0.09 | 14.5 | 0.5 |
| 01/02/2024 | 20:08:40.732 | -22:59:04.37 | 35.8543249 | 0.09 | 14.5 | 0.5 |
| 01/03/2024 | 20:08:48.733 | -22:58:44.02 | 35.8603225 | 0.09 | 14.5 | 0.5 |
| 01/04/2024 | 20:08:56.769 | -22:58:23.61 | 35.8660395 | 0.09 | 14.5 | 0.5 |
| 01/05/2024 | 20:09:04.840 | -22:58:03.13 | 35.8714743 | 0.09 | 14.5 | 0.4 |
| 01/06/2024 | 20:09:12.945 | -22:57:42.58 | 35.8766251 | 0.09 | 14.5 | 0.4 |
| 01/07/2024 | 20:09:21.083 | -22:57:21.99 | 35.8814903 | 0.09 | 14.5 | 0.4 |
| 01/08/2024 | 20:09:29.254 | -22:57:01.35 | 35.8860684 | 0.09 | 14.5 | 0.3 |
| 01/09/2024 | 20:09:37.455 | -22:56:40.69 | 35.8903581 | 0.09 | 14.5 | 0.3 |
| 01/10/2024 | 20:09:45.684 | -22:56:20.02 | 35.8943578 | 0.09 | 14.5 | 0.3 |
| 01/11/2024 | 20:09:53.936 | -22:55:59.35 | 35.8980665 | 0.09 | 14.5 | 0.3 |
| 01/12/2024 | 20:10:02.207 | -22:55:38.72 | 35.9014831 | 0.09 | 14.5 | 0.2 |
| 01/13/2024 | 20:10:10.492 | -22:55:18.11 | 35.9046067 | 0.09 | 14.5 | 0.2 |
| 01/14/2024 | 20:10:18.788 | -22:54:57.54 | 35.9074367 | 0.09 | 14.5 | 0.2 |
| 01/15/2024 | 20:10:27.093 | -22:54:36.98 | 35.9099727 | 0.09 | 14.5 | 0.2 |
| 01/16/2024 | 20:10:35.405 | -22:54:16.44 | 35.9122145 | 0.09 | 14.5 | 0.1 |
| 01/17/2024 | 20:10:43.725 | -22:53:55.90 | 35.9141621 | 0.09 | 14.5 | 0.1 |
| 01/18/2024 | 20:10:52.053 | -22:53:35.37 | 35.9158155 | 0.09 | 14.5 | 0.1 |
| 01/19/2024 | 20:11:00.390 | -22:53:14.86 | 35.9171751 | 0.09 | 14.5 | 0.1 |
| 01/20/2024 | 20:11:08.733 | -22:52:54.38 | 35.9182409 | 0.09 | 14.5 | 0.1 |
| 01/21/2024 | 20:11:17.081 | -22:52:33.95 | 35.9190135 | 0.09 | 14.5 | 0.1 |
| 01/22/2024 | 20:11:25.431 | -22:52:13.59 | 35.9194930 | 0.09 | 14.5 | 0.1 |
| 01/23/2024 | 20:11:33.780 | -22:51:53.31 | 35.9196800 | 0.09 | 14.5 | 0.1 |
| 01/24/2024 | 20:11:42.124 | -22:51:33.12 | 35.9195747 | 0.09 | 14.5 | 0.1 |
| 01/25/2024 | 20:11:50.460 | -22:51:13.03 | 35.9191777 | 0.09 | 14.5 | 0.2 |
| 01/26/2024 | 20:11:58.786 | -22:50:53.04 | 35.9184893 | 0.09 | 14.5 | 0.2 |
| 01/27/2024 | 20:12:07.098 | -22:50:33.16 | 35.9175099 | 0.09 | 14.5 | 0.2 |
| 01/28/2024 | 20:12:15.395 | -22:50:13.38 | 35.9162402 | 0.09 | 14.5 | 0.2 |
| 01/29/2024 | 20:12:23.676 | -22:49:53.70 | 35.9146805 | 0.09 | 14.5 | 0.3 |
| 01/30/2024 | 20:12:31.939 | -22:49:34.12 | 35.9128314 | 0.09 | 14.5 | 0.3 |
| 01/31/2024 | 20:12:40.184 | -22:49:14.64 | 35.9106936 | 0.09 | 14.5 | 0.3 |
| 02/01/2024 | 20:12:48.410 | -22:48:55.26 | 35.9082676 | 0.09 | 14.5 | 0.3 |
| 02/02/2024 | 20:12:56.616 | -22:48:35.99 | 35.9055542 | 0.09 | 14.5 | 0.4 |
| 02/03/2024 | 20:13:04.801 | -22:48:16.83 | 35.9025542 | 0.09 | 14.5 | 0.4 |
| 02/04/2024 | 20:13:12.965 | -22:47:57.79 | 35.8992684 | 0.09 | 14.5 | 0.4 |
| 02/05/2024 | 20:13:21.106 | -22:47:38.88 | 35.8956976 | 0.09 | 14.5 | 0.4 |
| 02/06/2024 | 20:13:29.221 | -22:47:20.13 | 35.8918430 | 0.09 | 14.5 | 0.5 |
| 02/07/2024 | 20:13:37.308 | -22:47:01.55 | 35.8877056 | 0.09 | 14.5 | 0.5 |
| 02/08/2024 | 20:13:45.361 | -22:46:43.15 | 35.8832866 | 0.09 | 14.5 | 0.5 |
| 02/09/2024 | 20:13:53.378 | -22:46:24.95 | 35.8785875 | 0.09 | 14.5 | 0.5 |
| 02/10/2024 | 20:14:01.352 | -22:46:06.95 | 35.8736098 | 0.09 | 14.5 | 0.6 |
| 02/11/2024 | 20:14:09.282 | -22:45:49.14 | 35.8683554 | 0.09 | 14.5 | 0.6 |
| 02/12/2024 | 20:14:17.166 | -22:45:31.52 | 35.8628264 | 0.09 | 14.5 | 0.6 |
| 02/13/2024 | 20:14:25.005 | -22:45:14.07 | 35.8570250 | 0.09 | 14.5 | 0.7 |
| 02/14/2024 | 20:14:32.798 | -22:44:56.78 | 35.8509535 | 0.09 | 14.5 | 0.7 |
| 02/15/2024 | 20:14:40.547 | -22:44:39.68 | 35.8446145 | 0.09 | 14.5 | 0.7 |
| 02/16/2024 | 20:14:48.251 | -22:44:22.76 | 35.8380106 | 0.09 | 14.5 | 0.7 |
| 02/17/2024 | 20:14:55.909 | -22:44:06.06 | 35.8311444 | 0.09 | 14.5 | 0.8 |
| 02/18/2024 | 20:15:03.517 | -22:43:49.58 | 35.8240184 | 0.09 | 14.5 | 0.8 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 02/19/2024 | 20:15:11.072 | -22:43:33.34 | 35.8166354 | 0.09 | 14.5 | 0.8 |
| 02/20/2024 | 20:15:18.572 | -22:43:17.35 | 35.8089979 | 0.09 | 14.5 | 0.8 |
| 02/21/2024 | 20:15:26.013 | -22:43:01.62 | 35.8011085 | 0.09 | 14.5 | 0.8 |
| 02/22/2024 | 20:15:33.394 | -22:42:46.15 | 35.7929699 | 0.09 | 14.5 | 0.9 |
| 02/23/2024 | 20:15:40.711 | -22:42:30.95 | 35.7845848 | 0.09 | 14.5 | 0.9 |
| 02/24/2024 | 20:15:47.962 | -22:42:16.00 | 35.7759557 | 0.09 | 14.5 | 0.9 |
| 02/25/2024 | 20:15:55.148 | -22:42:01.31 | 35.7670854 | 0.09 | 14.5 | 0.9 |
| 02/26/2024 | 20:16:02.266 | -22:41:46.88 | 35.7579765 | 0.09 | 14.5 | 1.0 |
| 02/27/2024 | 20:16:09.316 | -22:41:32.71 | 35.7486318 | 0.09 | 14.5 | 1.0 |
| 02/28/2024 | 20:16:16.299 | -22:41:18.78 | 35.7390539 | 0.09 | 14.5 | 1.0 |
| 02/29/2024 | 20:16:23.212 | -22:41:05.12 | 35.7292458 | 0.09 | 14.5 | 1.0 |
| 03/01/2024 | 20:16:30.057 | -22:40:51.71 | 35.7192101 | 0.09 | 14.5 | 1.0 |
| 03/02/2024 | 20:16:36.833 | -22:40:38.58 | 35.7089498 | 0.09 | 14.5 | 1.1 |
| 03/03/2024 | 20:16:43.537 | -22:40:25.72 | 35.6984677 | 0.09 | 14.5 | 1.1 |
| 03/04/2024 | 20:16:50.169 | -22:40:13.16 | 35.6877670 | 0.09 | 14.5 | 1.1 |
| 03/05/2024 | 20:16:56.727 | -22:40:00.91 | 35.6768507 | 0.09 | 14.5 | 1.1 |
| 03/06/2024 | 20:17:03.206 | -22:39:48.98 | 35.6657219 | 0.09 | 14.5 | 1.2 |
| 03/07/2024 | 20:17:09.604 | -22:39:37.39 | 35.6543839 | 0.09 | 14.5 | 1.2 |
| 03/08/2024 | 20:17:15.916 | -22:39:26.14 | 35.6428402 | 0.09 | 14.5 | 1.2 |
| 03/09/2024 | 20:17:22.140 | -22:39:15.22 | 35.6310944 | 0.09 | 14.5 | 1.2 |
| 03/10/2024 | 20:17:28.273 | -22:39:04.64 | 35.6191503 | 0.09 | 14.5 | 1.2 |
| 03/11/2024 | 20:17:34.316 | -22:38:54.36 | 35.6070118 | 0.09 | 14.5 | 1.3 |
| 03/12/2024 | 20:17:40.269 | -22:38:44.39 | 35.5946832 | 0.09 | 14.5 | 1.3 |
| 03/13/2024 | 20:17:46.134 | -22:38:34.73 | 35.5821688 | 0.09 | 14.5 | 1.3 |
| 03/14/2024 | 20:17:51.912 | -22:38:25.37 | 35.5694729 | 0.09 | 14.5 | 1.3 |
| 03/15/2024 | 20:17:57.602 | -22:38:16.35 | 35.5565999 | 0.09 | 14.5 | 1.3 |
| 03/16/2024 | 20:18:03.202 | -22:38:07.68 | 35.5435541 | 0.09 | 14.5 | 1.3 |
| 03/17/2024 | 20:18:08.709 | -22:37:59.37 | 35.5303399 | 0.09 | 14.5 | 1.4 |
| 03/18/2024 | 20:18:14.121 | -22:37:51.43 | 35.5169615 | 0.09 | 14.5 | 1.4 |
| 03/19/2024 | 20:18:19.434 | -22:37:43.87 | 35.5034233 | 0.09 | 14.5 | 1.4 |
| 03/20/2024 | 20:18:24.648 | -22:37:36.70 | 35.4897294 | 0.09 | 14.5 | 1.4 |
| 03/21/2024 | 20:18:29.760 | -22:37:29.90 | 35.4758841 | 0.09 | 14.5 | 1.4 |
| 03/22/2024 | 20:18:34.768 | -22:37:23.47 | 35.4618916 | 0.09 | 14.5 | 1.4 |
| 03/23/2024 | 20:18:39.673 | -22:37:17.42 | 35.4477559 | 0.09 | 14.5 | 1.4 |
| 03/24/2024 | 20:18:44.474 | -22:37:11.73 | 35.4334814 | 0.09 | 14.5 | 1.5 |
| 03/25/2024 | 20:18:49.171 | -22:37:06.41 | 35.4190721 | 0.09 | 14.5 | 1.5 |
| 03/26/2024 | 20:18:53.764 | -22:37:01.44 | 35.4045321 | 0.09 | 14.5 | 1.5 |
| 03/27/2024 | 20:18:58.253 | -22:36:56.83 | 35.3898658 | 0.09 | 14.5 | 1.5 |
| 03/28/2024 | 20:19:02.639 | -22:36:52.58 | 35.3750772 | 0.09 | 14.5 | 1.5 |
| 03/29/2024 | 20:19:06.921 | -22:36:48.70 | 35.3601705 | 0.09 | 14.5 | 1.5 |
| 03/30/2024 | 20:19:11.100 | -22:36:45.19 | 35.3451499 | 0.09 | 14.5 | 1.5 |
| 03/31/2024 | 20:19:15.174 | -22:36:42.06 | 35.3300197 | 0.09 | 14.5 | 1.5 |
| 04/01/2024 | 20:19:19.142 | -22:36:39.32 | 35.3147842 | 0.09 | 14.5 | 1.5 |
| 04/02/2024 | 20:19:23.002 | -22:36:36.99 | 35.2994477 | 0.09 | 14.5 | 1.6 |
| 04/03/2024 | 20:19:26.750 | -22:36:35.08 | 35.2840146 | 0.09 | 14.5 | 1.6 |
| 04/04/2024 | 20:19:30.384 | -22:36:33.58 | 35.2684896 | 0.09 | 14.5 | 1.6 |
| 04/05/2024 | 20:19:33.902 | -22:36:32.50 | 35.2528772 | 0.09 | 14.5 | 1.6 |
| 04/06/2024 | 20:19:37.302 | -22:36:31.83 | 35.2371823 | 0.09 | 14.5 | 1.6 |
| 04/07/2024 | 20:19:40.583 | -22:36:31.55 | 35.2214097 | 0.09 | 14.5 | 1.6 |
| 04/08/2024 | 20:19:43.747 | -22:36:31.65 | 35.2055646 | 0.09 | 14.5 | 1.6 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 04/09/2024 | 20:19:46.796 | -22:36:32.12 | 35.1896521 | 0.09 | 14.5 | 1.6 |
| 04/10/2024 | 20:19:49.732 | -22:36:32.97 | 35.1736776 | 0.09 | 14.5 | 1.6 |
| 04/11/2024 | 20:19:52.556 | -22:36:34.19 | 35.1576463 | 0.09 | 14.5 | 1.6 |
| 04/12/2024 | 20:19:55.267 | -22:36:35.81 | 35.1415635 | 0.09 | 14.5 | 1.6 |
| 04/13/2024 | 20:19:57.863 | -22:36:37.85 | 35.1254344 | 0.09 | 14.5 | 1.6 |
| 04/14/2024 | 20:20:00.342 | -22:36:40.31 | 35.1092641 | 0.09 | 14.5 | 1.6 |
| 04/15/2024 | 20:20:02.703 | -22:36:43.19 | 35.0930577 | 0.09 | 14.5 | 1.6 |
| 04/16/2024 | 20:20:04.942 | -22:36:46.51 | 35.0768202 | 0.09 | 14.5 | 1.6 |
| 04/17/2024 | 20:20:07.060 | -22:36:50.24 | 35.0605563 | 0.09 | 14.5 | 1.7 |
| 04/18/2024 | 20:20:09.056 | -22:36:54.39 | 35.0442711 | 0.09 | 14.5 | 1.7 |
| 04/19/2024 | 20:20:10.930 | -22:36:58.95 | 35.0279692 | 0.09 | 14.5 | 1.7 |
| 04/20/2024 | 20:20:12.682 | -22:37:03.90 | 35.0116554 | 0.09 | 14.5 | 1.7 |
| 04/21/2024 | 20:20:14.313 | -22:37:09.25 | 34.9953345 | 0.09 | 14.5 | 1.7 |
| 04/22/2024 | 20:20:15.825 | -22:37:14.98 | 34.9790110 | 0.09 | 14.5 | 1.7 |
| 04/23/2024 | 20:20:17.217 | -22:37:21.09 | 34.9626897 | 0.09 | 14.5 | 1.7 |
| 04/24/2024 | 20:20:18.492 | -22:37:27.57 | 34.9463751 | 0.09 | 14.5 | 1.7 |
| 04/25/2024 | 20:20:19.650 | -22:37:34.44 | 34.9300719 | 0.09 | 14.5 | 1.7 |
| 04/26/2024 | 20:20:20.693 | -22:37:41.69 | 34.9137845 | 0.09 | 14.5 | 1.7 |
| 04/27/2024 | 20:20:21.619 | -22:37:49.32 | 34.8975175 | 0.09 | 14.5 | 1.7 |
| 04/28/2024 | 20:20:22.428 | -22:37:57.35 | 34.8812755 | 0.09 | 14.5 | 1.6 |
| 04/29/2024 | 20:20:23.119 | -22:38:05.78 | 34.8650632 | 0.09 | 14.5 | 1.6 |
| 04/30/2024 | 20:20:23.690 | -22:38:14.63 | 34.8488851 | 0.09 | 14.5 | 1.6 |
| 05/01/2024 | 20:20:24.140 | -22:38:23.88 | 34.8327459 | 0.09 | 14.5 | 1.6 |
| 05/02/2024 | 20:20:24.467 | -22:38:33.55 | 34.8166506 | 0.09 | 14.5 | 1.6 |
| 05/03/2024 | 20:20:24.670 | -22:38:43.61 | 34.8006038 | 0.09 | 14.5 | 1.6 |
| 05/04/2024 | 20:20:24.748 | -22:38:54.05 | 34.7846106 | 0.09 | 14.5 | 1.6 |
| 05/05/2024 | 20:20:24.705 | -22:39:04.86 | 34.7686760 | 0.09 | 14.5 | 1.6 |
| 05/06/2024 | 20:20:24.542 | -22:39:16.02 | 34.7528052 | 0.09 | 14.5 | 1.6 |
| 05/07/2024 | 20:20:24.262 | -22:39:27.52 | 34.7370034 | 0.09 | 14.5 | 1.6 |
| 05/08/2024 | 20:20:23.867 | -22:39:39.37 | 34.7212758 | 0.09 | 14.5 | 1.6 |
| 05/09/2024 | 20:20:23.358 | -22:39:51.57 | 34.7056276 | 0.09 | 14.5 | 1.6 |
| 05/10/2024 | 20:20:22.736 | -22:40:04.14 | 34.6900638 | 0.09 | 14.5 | 1.6 |
| 05/11/2024 | 20:20:21.999 | -22:40:17.09 | 34.6745895 | 0.09 | 14.5 | 1.6 |
| 05/12/2024 | 20:20:21.145 | -22:40:30.42 | 34.6592096 | 0.09 | 14.5 | 1.6 |
| 05/13/2024 | 20:20:20.173 | -22:40:44.13 | 34.6439289 | 0.09 | 14.5 | 1.6 |
| 05/14/2024 | 20:20:19.083 | -22:40:58.22 | 34.6287519 | 0.09 | 14.5 | 1.6 |
| 05/15/2024 | 20:20:17.875 | -22:41:12.67 | 34.6136833 | 0.09 | 14.5 | 1.5 |
| 05/16/2024 | 20:20:16.550 | -22:41:27.46 | 34.5987274 | 0.09 | 14.5 | 1.5 |
| 05/17/2024 | 20:20:15.109 | -22:41:42.60 | 34.5838887 | 0.09 | 14.5 | 1.5 |
| 05/18/2024 | 20:20:13.554 | -22:41:58.06 | 34.5691715 | 0.09 | 14.5 | 1.5 |
| 05/19/2024 | 20:20:11.887 | -22:42:13.84 | 34.5545799 | 0.09 | 14.5 | 1.5 |
| 05/20/2024 | 20:20:10.110 | -22:42:29.93 | 34.5401182 | 0.09 | 14.5 | 1.5 |
| 05/21/2024 | 20:20:08.225 | -22:42:46.31 | 34.5257903 | 0.09 | 14.5 | 1.5 |
| 05/22/2024 | 20:20:06.233 | -22:43:02.99 | 34.5116004 | 0.09 | 14.5 | 1.5 |
| 05/23/2024 | 20:20:04.137 | -22:43:19.97 | 34.4975523 | 0.09 | 14.5 | 1.4 |
| 05/24/2024 | 20:20:01.938 | -22:43:37.25 | 34.4836501 | 0.10 | 14.5 | 1.4 |
| 05/25/2024 | 20:19:59.636 | -22:43:54.83 | 34.4698975 | 0.10 | 14.5 | 1.4 |
| 05/26/2024 | 20:19:57.230 | -22:44:12.72 | 34.4562986 | 0.10 | 14.5 | 1.4 |
| 05/27/2024 | 20:19:54.721 | -22:44:30.92 | 34.4428572 | 0.10 | 14.5 | 1.4 |
| 05/28/2024 | 20:19:52.106 | -22:44:49.43 | 34.4295771 | 0.10 | 14.5 | 1.4 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 05/29/2024 | 20:19:49.386 | -22:45:08.25 | 34.4164625 | 0.10 | 14.5 | 1.4 |
| 05/30/2024 | 20:19:46.560 | -22:45:27.36 | 34.4035172 | 0.10 | 14.5 | 1.3 |
| 05/31/2024 | 20:19:43.629 | -22:45:46.75 | 34.3907455 | 0.10 | 14.5 | 1.3 |
| 06/01/2024 | 20:19:40.595 | -22:46:06.39 | 34.3781513 | 0.10 | 14.5 | 1.3 |
| 06/02/2024 | 20:19:37.462 | -22:46:26.27 | 34.3657390 | 0.10 | 14.5 | 1.3 |
| 06/03/2024 | 20:19:34.232 | -22:46:46.38 | 34.3535126 | 0.10 | 14.5 | 1.3 |
| 06/04/2024 | 20:19:30.910 | -22:47:06.71 | 34.3414764 | 0.10 | 14.5 | 1.3 |
| 06/05/2024 | 20:19:27.497 | -22:47:27.27 | 34.3296345 | 0.10 | 14.5 | 1.2 |
| 06/06/2024 | 20:19:23.995 | -22:47:48.07 | 34.3179910 | 0.10 | 14.5 | 1.2 |
| 06/07/2024 | 20:19:20.404 | -22:48:09.10 | 34.3065498 | 0.10 | 14.5 | 1.2 |
| 06/08/2024 | 20:19:16.723 | -22:48:30.38 | 34.2953148 | 0.10 | 14.5 | 1.2 |
| 06/09/2024 | 20:19:12.952 | -22:48:51.90 | 34.2842895 | 0.10 | 14.5 | 1.2 |
| 06/10/2024 | 20:19:09.091 | -22:49:13.66 | 34.2734775 | 0.10 | 14.4 | 1.1 |
| 06/11/2024 | 20:19:05.140 | -22:49:35.64 | 34.2628821 | 0.10 | 14.4 | 1.1 |
| 06/12/2024 | 20:19:01.102 | -22:49:57.83 | 34.2525066 | 0.10 | 14.4 | 1.1 |
| 06/13/2024 | 20:18:56.978 | -22:50:20.21 | 34.2423540 | 0.10 | 14.4 | 1.1 |
| 06/14/2024 | 20:18:52.771 | -22:50:42.77 | 34.2324274 | 0.10 | 14.4 | 1.0 |
| 06/15/2024 | 20:18:48.483 | -22:51:05.50 | 34.2227297 | 0.10 | 14.4 | 1.0 |
| 06/16/2024 | 20:18:44.118 | -22:51:28.38 | 34.2132636 | 0.10 | 14.4 | 1.0 |
| 06/17/2024 | 20:18:39.677 | -22:51:51.40 | 34.2040318 | 0.10 | 14.4 | 1.0 |
| 06/18/2024 | 20:18:35.165 | -22:52:14.56 | 34.1950370 | 0.10 | 14.4 | 0.9 |
| 06/19/2024 | 20:18:30.583 | -22:52:37.85 | 34.1862816 | 0.10 | 14.4 | 0.9 |
| 06/20/2024 | 20:18:25.934 | -22:53:01.27 | 34.1777681 | 0.10 | 14.4 | 0.9 |
| 06/21/2024 | 20:18:21.220 | -22:53:24.82 | 34.1694990 | 0.10 | 14.4 | 0.9 |
| 06/22/2024 | 20:18:16.441 | -22:53:48.52 | 34.1614764 | 0.10 | 14.4 | 0.9 |
| 06/23/2024 | 20:18:11.596 | -22:54:12.35 | 34.1537028 | 0.10 | 14.4 | 0.8 |
| 06/24/2024 | 20:18:06.687 | -22:54:36.32 | 34.1461803 | 0.10 | 14.4 | 0.8 |
| 06/25/2024 | 20:18:01.712 | -22:55:00.42 | 34.1389115 | 0.10 | 14.4 | 0.8 |
| 06/26/2024 | 20:17:56.671 | -22:55:24.64 | 34.1318985 | 0.10 | 14.4 | 0.8 |
| 06/27/2024 | 20:17:51.567 | -22:55:48.96 | 34.1251439 | 0.10 | 14.4 | 0.7 |
| 06/28/2024 | 20:17:46.402 | -22:56:13.36 | 34.1186500 | 0.10 | 14.4 | 0.7 |
| 06/29/2024 | 20:17:41.179 | -22:56:37.82 | 34.1124193 | 0.10 | 14.4 | 0.7 |
| 06/30/2024 | 20:17:35.904 | -22:57:02.32 | 34.1064543 | 0.10 | 14.4 | 0.7 |
| 07/01/2024 | 20:17:30.579 | -22:57:26.86 | 34.1007573 | 0.10 | 14.4 | 0.6 |
| 07/02/2024 | 20:17:25.209 | -22:57:51.44 | 34.0953308 | 0.10 | 14.4 | 0.6 |
| 07/03/2024 | 20:17:19.794 | -22:58:16.07 | 34.0901768 | 0.10 | 14.4 | 0.6 |
| 07/04/2024 | 20:17:14.337 | -22:58:40.74 | 34.0852976 | 0.10 | 14.4 | 0.6 |
| 07/05/2024 | 20:17:08.838 | -22:59:05.46 | 34.0806951 | 0.10 | 14.4 | 0.5 |
| 07/06/2024 | 20:17:03.297 | -22:59:30.23 | 34.0763711 | 0.10 | 14.4 | 0.5 |
| 07/07/2024 | 20:16:57.714 | -22:59:55.05 | 34.0723273 | 0.10 | 14.4 | 0.5 |
| 07/08/2024 | 20:16:52.091 | -23:00:19.89 | 34.0685651 | 0.10 | 14.4 | 0.4 |
| 07/09/2024 | 20:16:46.430 | -23:00:44.76 | 34.0650858 | 0.10 | 14.4 | 0.4 |
| 07/10/2024 | 20:16:40.732 | -23:01:09.62 | 34.0618907 | 0.10 | 14.4 | 0.4 |
| 07/11/2024 | 20:16:35.001 | -23:01:34.47 | 34.0589806 | 0.10 | 14.4 | 0.4 |
| 07/12/2024 | 20:16:29.240 | -23:01:59.29 | 34.0563566 | 0.10 | 14.4 | 0.3 |
| 07/13/2024 | 20:16:23.452 | -23:02:24.06 | 34.0540193 | 0.10 | 14.4 | 0.3 |
| 07/14/2024 | 20:16:17.640 | -23:02:48.78 | 34.0519696 | 0.10 | 14.4 | 0.3 |
| 07/15/2024 | 20:16:11.809 | -23:03:13.44 | 34.0502079 | 0.10 | 14.4 | 0.3 |
| 07/16/2024 | 20:16:05.961 | -23:03:38.03 | 34.0487347 | 0.10 | 14.4 | 0.2 |
| 07/17/2024 | 20:16:00.099 | -23:04:02.55 | 34.0475505 | 0.10 | 14.4 | 0.2 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 07/18/2024 | 20:15:54.226 | -23:04:27.00 | 34.0466554 | 0.10 | 14.4 | 0.2 |
| 07/19/2024 | 20:15:48.342 | -23:04:51.38 | 34.0460497 | 0.10 | 14.4 | 0.2 |
| 07/20/2024 | 20:15:42.449 | -23:05:15.70 | 34.0457335 | 0.10 | 14.4 | 0.1 |
| 07/21/2024 | 20:15:36.546 | -23:05:39.96 | 34.0457070 | 0.10 | 14.4 | 0.1 |
| 07/22/2024 | 20:15:30.634 | -23:06:04.15 | 34.0459704 | 0.10 | 14.4 | 0.1 |
| 07/23/2024 | 20:15:24.713 | -23:06:28.26 | 34.0465237 | 0.10 | 14.4 | 0.1 |
| 07/24/2024 | 20:15:18.783 | -23:06:52.28 | 34.0473671 | 0.10 | 14.4 | 0.1 |
| 07/25/2024 | 20:15:12.849 | -23:07:16.18 | 34.0485010 | 0.10 | 14.4 | 0.1 |
| 07/26/2024 | 20:15:06.913 | -23:07:39.94 | 34.0499255 | 0.10 | 14.4 | 0.1 |
| 07/27/2024 | 20:15:00.980 | -23:08:03.54 | 34.0516409 | 0.10 | 14.4 | 0.1 |
| 07/28/2024 | 20:14:55.056 | -23:08:26.99 | 34.0536474 | 0.10 | 14.4 | 0.2 |
| 07/29/2024 | 20:14:49.142 | -23:08:50.28 | 34.0559452 | 0.10 | 14.4 | 0.2 |
| 07/30/2024 | 20:14:43.242 | -23:09:13.41 | 34.0585341 | 0.10 | 14.4 | 0.2 |
| 07/31/2024 | 20:14:37.358 | -23:09:36.39 | 34.0614141 | 0.10 | 14.4 | 0.2 |
| 08/01/2024 | 20:14:31.490 | -23:09:59.22 | 34.0645850 | 0.10 | 14.4 | 0.3 |
| 08/02/2024 | 20:14:25.639 | -23:10:21.91 | 34.0680462 | 0.10 | 14.4 | 0.3 |
| 08/03/2024 | 20:14:19.805 | -23:10:44.45 | 34.0717972 | 0.10 | 14.4 | 0.3 |
| 08/04/2024 | 20:14:13.989 | -23:11:06.83 | 34.0758371 | 0.10 | 14.4 | 0.3 |
| 08/05/2024 | 20:14:08.194 | -23:11:29.03 | 34.0801652 | 0.10 | 14.4 | 0.4 |
| 08/06/2024 | 20:14:02.420 | -23:11:51.05 | 34.0847801 | 0.10 | 14.4 | 0.4 |
| 08/07/2024 | 20:13:56.673 | -23:12:12.87 | 34.0896808 | 0.10 | 14.4 | 0.4 |
| 08/08/2024 | 20:13:50.953 | -23:12:34.47 | 34.0948659 | 0.10 | 14.4 | 0.4 |
| 08/09/2024 | 20:13:45.265 | -23:12:55.84 | 34.1003338 | 0.10 | 14.4 | 0.5 |
| 08/10/2024 | 20:13:39.613 | -23:13:16.98 | 34.1060829 | 0.10 | 14.4 | 0.5 |
| 08/11/2024 | 20:13:33.998 | -23:13:37.87 | 34.1121116 | 0.10 | 14.4 | 0.5 |
| 08/12/2024 | 20:13:28.426 | -23:13:58.51 | 34.1184181 | 0.10 | 14.4 | 0.5 |
| 08/13/2024 | 20:13:22.898 | -23:14:18.90 | 34.1250004 | 0.10 | 14.4 | 0.6 |
| 08/14/2024 | 20:13:17.417 | -23:14:39.04 | 34.1318566 | 0.10 | 14.4 | 0.6 |
| 08/15/2024 | 20:13:11.984 | -23:14:58.93 | 34.1389847 | 0.10 | 14.4 | 0.6 |
| 08/16/2024 | 20:13:06.601 | -23:15:18.57 | 34.1463824 | 0.10 | 14.4 | 0.6 |
| 08/17/2024 | 20:13:01.268 | -23:15:37.98 | 34.1540477 | 0.10 | 14.4 | 0.7 |
| 08/18/2024 | 20:12:55.985 | -23:15:57.15 | 34.1619783 | 0.10 | 14.4 | 0.7 |
| 08/19/2024 | 20:12:50.751 | -23:16:16.08 | 34.1701722 | 0.10 | 14.4 | 0.7 |
| 08/20/2024 | 20:12:45.568 | -23:16:34.75 | 34.1786271 | 0.10 | 14.4 | 0.7 |
| 08/21/2024 | 20:12:40.436 | -23:16:53.14 | 34.1873411 | 0.10 | 14.4 | 0.8 |
| 08/22/2024 | 20:12:35.359 | -23:17:11.24 | 34.1963122 | 0.10 | 14.4 | 0.8 |
| 08/23/2024 | 20:12:30.341 | -23:17:29.02 | 34.2055382 | 0.10 | 14.4 | 0.8 |
| 08/24/2024 | 20:12:25.388 | -23:17:46.48 | 34.2150173 | 0.10 | 14.4 | 0.8 |
| 08/25/2024 | 20:12:20.502 | -23:18:03.62 | 34.2247474 | 0.10 | 14.4 | 0.9 |
| 08/26/2024 | 20:12:15.687 | -23:18:20.44 | 34.2347263 | 0.10 | 14.5 | 0.9 |
| 08/27/2024 | 20:12:10.943 | -23:18:36.97 | 34.2449517 | 0.10 | 14.5 | 0.9 |
| 08/28/2024 | 20:12:06.271 | -23:18:53.20 | 34.2554211 | 0.10 | 14.5 | 0.9 |
| 08/29/2024 | 20:12:01.671 | -23:19:09.13 | 34.2661320 | 0.10 | 14.5 | 1.0 |
| 08/30/2024 | 20:11:57.143 | -23:19:24.77 | 34.2770816 | 0.10 | 14.5 | 1.0 |
| 08/31/2024 | 20:11:52.688 | -23:19:40.11 | 34.2882670 | 0.10 | 14.5 | 1.0 |
| 09/01/2024 | 20:11:48.308 | -23:19:55.14 | 34.2996851 | 0.10 | 14.5 | 1.0 |
| 09/02/2024 | 20:11:44.003 | -23:20:09.84 | 34.3113327 | 0.10 | 14.5 | 1.1 |
| 09/03/2024 | 20:11:39.776 | -23:20:24.22 | 34.3232065 | 0.10 | 14.5 | 1.1 |
| 09/04/2024 | 20:11:35.629 | -23:20:38.25 | 34.3353031 | 0.10 | 14.5 | 1.1 |
| 09/05/2024 | 20:11:31.566 | -23:20:51.92 | 34.3476190 | 0.10 | 14.5 | 1.1 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 09/06/2024 | 20:11:27.589 | -23:21:05.23 | 34.3601504 | 0.10 | 14.5 | 1.1 |
| 09/07/2024 | 20:11:23.702 | -23:21:18.17 | 34.3728936 | 0.10 | 14.5 | 1.2 |
| 09/08/2024 | 20:11:19.905 | -23:21:30.74 | 34.3858449 | 0.10 | 14.5 | 1.2 |
| 09/09/2024 | 20:11:16.203 | -23:21:42.94 | 34.3990004 | 0.10 | 14.5 | 1.2 |
| 09/10/2024 | 20:11:12.596 | -23:21:54.78 | 34.4123560 | 0.10 | 14.5 | 1.2 |
| 09/11/2024 | 20:11:09.087 | -23:22:06.25 | 34.4259079 | 0.10 | 14.5 | 1.2 |
| 09/12/2024 | 20:11:05.675 | -23:22:17.37 | 34.4396519 | 0.10 | 14.5 | 1.2 |
| 09/13/2024 | 20:11:02.361 | -23:22:28.14 | 34.4535840 | 0.10 | 14.5 | 1.3 |
| 09/14/2024 | 20:10:59.145 | -23:22:38.57 | 34.4677001 | 0.10 | 14.5 | 1.3 |
| 09/15/2024 | 20:10:56.025 | -23:22:48.65 | 34.4819962 | 0.10 | 14.5 | 1.3 |
| 09/16/2024 | 20:10:53.001 | -23:22:58.38 | 34.4964683 | 0.09 | 14.5 | 1.3 |
| 09/17/2024 | 20:10:50.073 | -23:23:07.75 | 34.5111123 | 0.09 | 14.5 | 1.3 |
| 09/18/2024 | 20:10:47.243 | -23:23:16.73 | 34.5259245 | 0.09 | 14.5 | 1.3 |
| 09/19/2024 | 20:10:44.515 | -23:23:25.31 | 34.5409010 | 0.09 | 14.5 | 1.4 |
| 09/20/2024 | 20:10:41.892 | -23:23:33.49 | 34.5560380 | 0.09 | 14.5 | 1.4 |
| 09/21/2024 | 20:10:39.378 | -23:23:41.25 | 34.5713319 | 0.09 | 14.5 | 1.4 |
| 09/22/2024 | 20:10:36.975 | -23:23:48.62 | 34.5867788 | 0.09 | 14.5 | 1.4 |
| 09/23/2024 | 20:10:34.685 | -23:23:55.60 | 34.6023748 | 0.09 | 14.5 | 1.4 |
| 09/24/2024 | 20:10:32.506 | -23:24:02.22 | 34.6181158 | 0.09 | 14.5 | 1.4 |
| 09/25/2024 | 20:10:30.438 | -23:24:08.47 | 34.6339977 | 0.09 | 14.5 | 1.4 |
| 09/26/2024 | 20:10:28.480 | -23:24:14.36 | 34.6500162 | 0.09 | 14.5 | 1.5 |
| 09/27/2024 | 20:10:26.631 | -23:24:19.88 | 34.6661668 | 0.09 | 14.5 | 1.5 |
| 09/28/2024 | 20:10:24.893 | -23:24:25.03 | 34.6824449 | 0.09 | 14.5 | 1.5 |
| 09/29/2024 | 20:10:23.265 | -23:24:29.81 | 34.6988459 | 0.09 | 14.5 | 1.5 |
| 09/30/2024 | 20:10:21.749 | -23:24:34.20 | 34.7153651 | 0.09 | 14.5 | 1.5 |
| 10/01/2024 | 20:10:20.347 | -23:24:38.19 | 34.7319975 | 0.09 | 14.5 | 1.5 |
| 10/02/2024 | 20:10:19.060 | -23:24:41.78 | 34.7487382 | 0.09 | 14.5 | 1.5 |
| 10/03/2024 | 20:10:17.891 | -23:24:44.97 | 34.7655823 | 0.09 | 14.5 | 1.5 |
| 10/04/2024 | 20:10:16.840 | -23:24:47.74 | 34.7825247 | 0.09 | 14.5 | 1.5 |
| 10/05/2024 | 20:10:15.911 | -23:24:50.10 | 34.7995602 | 0.09 | 14.5 | 1.5 |
| 10/06/2024 | 20:10:15.104 | -23:24:52.05 | 34.8166838 | 0.09 | 14.5 | 1.6 |
| 10/07/2024 | 20:10:14.421 | -23:24:53.60 | 34.8338903 | 0.09 | 14.5 | 1.6 |
| 10/08/2024 | 20:10:13.861 | -23:24:54.75 | 34.8511745 | 0.09 | 14.5 | 1.6 |
| 10/09/2024 | 20:10:13.425 | -23:24:55.52 | 34.8685311 | 0.09 | 14.5 | 1.6 |
| 10/10/2024 | 20:10:13.112 | -23:24:55.92 | 34.8859551 | 0.09 | 14.5 | 1.6 |
| 10/11/2024 | 20:10:12.921 | -23:24:55.94 | 34.9034413 | 0.09 | 14.5 | 1.6 |
| 10/12/2024 | 20:10:12.850 | -23:24:55.60 | 34.9209845 | 0.09 | 14.5 | 1.6 |
| 10/13/2024 | 20:10:12.898 | -23:24:54.89 | 34.9385797 | 0.09 | 14.5 | 1.6 |
| 10/14/2024 | 20:10:13.064 | -23:24:53.80 | 34.9562220 | 0.09 | 14.5 | 1.6 |
| 10/15/2024 | 20:10:13.348 | -23:24:52.34 | 34.9739063 | 0.09 | 14.5 | 1.6 |
| 10/16/2024 | 20:10:13.751 | -23:24:50.47 | 34.9916280 | 0.09 | 14.5 | 1.6 |
| 10/17/2024 | 20:10:14.276 | -23:24:48.19 | 35.0093825 | 0.09 | 14.5 | 1.6 |
| 10/18/2024 | 20:10:14.927 | -23:24:45.49 | 35.0271650 | 0.09 | 14.5 | 1.6 |
| 10/19/2024 | 20:10:15.705 | -23:24:42.39 | 35.0449710 | 0.09 | 14.5 | 1.6 |
| 10/20/2024 | 20:10:16.611 | -23:24:38.90 | 35.0627960 | 0.09 | 14.5 | 1.6 |
| 10/21/2024 | 20:10:17.643 | -23:24:35.04 | 35.0806352 | 0.09 | 14.5 | 1.6 |
| 10/22/2024 | 20:10:18.800 | -23:24:30.83 | 35.0984838 | 0.09 | 14.5 | 1.6 |
| 10/23/2024 | 20:10:20.079 | -23:24:26.27 | 35.1163371 | 0.09 | 14.5 | 1.6 |
| 10/24/2024 | 20:10:21.480 | -23:24:21.36 | 35.1341898 | 0.09 | 14.5 | 1.6 |
| 10/25/2024 | 20:10:23.000 | -23:24:16.10 | 35.1520370 | 0.09 | 14.5 | 1.6 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 10/26/2024 | 20:10:24.639 | -23:24:10.49 | 35.1698735 | 0.09 | 14.5 | 1.6 |
| 10/27/2024 | 20:10:26.398 | -23:24:04.52 | 35.1876941 | 0.09 | 14.5 | 1.6 |
| 10/28/2024 | 20:10:28.277 | -23:23:58.17 | 35.2054935 | 0.09 | 14.5 | 1.6 |
| 10/29/2024 | 20:10:30.278 | -23:23:51.45 | 35.2232663 | 0.09 | 14.5 | 1.6 |
| 10/30/2024 | 20:10:32.400 | -23:23:44.36 | 35.2410074 | 0.09 | 14.5 | 1.6 |
| 10/31/2024 | 20:10:34.645 | -23:23:36.89 | 35.2587112 | 0.09 | 14.5 | 1.6 |
| 11/01/2024 | 20:10:37.013 | -23:23:29.05 | 35.2763725 | 0.09 | 14.5 | 1.6 |
| 11/02/2024 | 20:10:39.506 | -23:23:20.83 | 35.2939859 | 0.09 | 14.5 | 1.6 |
| 11/03/2024 | 20:10:42.123 | -23:23:12.25 | 35.3115461 | 0.09 | 14.5 | 1.6 |
| 11/04/2024 | 20:10:44.863 | -23:23:03.32 | 35.3290476 | 0.09 | 14.5 | 1.6 |
| 11/05/2024 | 20:10:47.726 | -23:22:54.05 | 35.3464854 | 0.09 | 14.5 | 1.6 |
| 11/06/2024 | 20:10:50.710 | -23:22:44.46 | 35.3638540 | 0.09 | 14.5 | 1.6 |
| 11/07/2024 | 20:10:53.813 | -23:22:34.54 | 35.3811483 | 0.09 | 14.5 | 1.5 |
| 11/08/2024 | 20:10:57.032 | -23:22:24.30 | 35.3983633 | 0.09 | 14.5 | 1.5 |
| 11/09/2024 | 20:11:00.366 | -23:22:13.76 | 35.4154939 | 0.09 | 14.5 | 1.5 |
| 11/10/2024 | 20:11:03.812 | -23:22:02.91 | 35.4325353 | 0.09 | 14.5 | 1.5 |
| 11/11/2024 | 20:11:07.368 | -23:21:51.73 | 35.4494826 | 0.09 | 14.5 | 1.5 |
| 11/12/2024 | 20:11:11.036 | -23:21:40.23 | 35.4663313 | 0.09 | 14.5 | 1.5 |
| 11/13/2024 | 20:11:14.816 | -23:21:28.39 | 35.4830768 | 0.09 | 14.5 | 1.5 |
| 11/14/2024 | 20:11:18.710 | -23:21:16.20 | 35.4997148 | 0.09 | 14.5 | 1.5 |
| 11/15/2024 | 20:11:22.719 | -23:21:03.67 | 35.5162410 | 0.09 | 14.5 | 1.5 |
| 11/16/2024 | 20:11:26.844 | -23:20:50.82 | 35.5326512 | 0.09 | 14.5 | 1.5 |
| 11/17/2024 | 20:11:31.083 | -23:20:37.67 | 35.5489410 | 0.09 | 14.5 | 1.4 |
| 11/18/2024 | 20:11:35.435 | -23:20:24.23 | 35.5651063 | 0.09 | 14.5 | 1.4 |
| 11/19/2024 | 20:11:39.895 | -23:20:10.53 | 35.5811428 | 0.09 | 14.5 | 1.4 |
| 11/20/2024 | 20:11:44.460 | -23:19:56.56 | 35.5970459 | 0.09 | 14.5 | 1.4 |
| 11/21/2024 | 20:11:49.129 | -23:19:42.34 | 35.6128112 | 0.09 | 14.5 | 1.4 |
| 11/22/2024 | 20:11:53.899 | -23:19:27.85 | 35.6284342 | 0.09 | 14.5 | 1.4 |
| 11/23/2024 | 20:11:58.770 | -23:19:13.08 | 35.6439104 | 0.09 | 14.5 | 1.4 |
| 11/24/2024 | 20:12:03.741 | -23:18:58.05 | 35.6592351 | 0.09 | 14.5 | 1.4 |
| 11/25/2024 | 20:12:08.812 | -23:18:42.73 | 35.6744038 | 0.09 | 14.5 | 1.3 |
| 11/26/2024 | 20:12:13.983 | -23:18:27.14 | 35.6894119 | 0.09 | 14.5 | 1.3 |
| 11/27/2024 | 20:12:19.255 | -23:18:11.26 | 35.7042550 | 0.09 | 14.5 | 1.3 |
| 11/28/2024 | 20:12:24.628 | -23:17:55.11 | 35.7189285 | 0.09 | 14.5 | 1.3 |
| 11/29/2024 | 20:12:30.100 | -23:17:38.69 | 35.7334280 | 0.09 | 14.5 | 1.3 |
| 11/30/2024 | 20:12:35.672 | -23:17:22.01 | 35.7477490 | 0.09 | 14.5 | 1.3 |
| 12/01/2024 | 20:12:41.342 | -23:17:05.08 | 35.7618872 | 0.09 | 14.5 | 1.2 |
| 12/02/2024 | 20:12:47.108 | -23:16:47.92 | 35.7758383 | 0.09 | 14.5 | 1.2 |
| 12/03/2024 | 20:12:52.969 | -23:16:30.53 | 35.7895982 | 0.09 | 14.6 | 1.2 |
| 12/04/2024 | 20:12:58.920 | -23:16:12.93 | 35.8031626 | 0.09 | 14.6 | 1.2 |
| 12/05/2024 | 20:13:04.960 | -23:15:55.14 | 35.8165276 | 0.09 | 14.6 | 1.2 |
| 12/06/2024 | 20:13:11.084 | -23:15:37.15 | 35.8296894 | 0.09 | 14.6 | 1.1 |
| 12/07/2024 | 20:13:17.291 | -23:15:18.96 | 35.8426443 | 0.09 | 14.6 | 1.1 |
| 12/08/2024 | 20:13:23.577 | -23:15:00.58 | 35.8553887 | 0.09 | 14.6 | 1.1 |
| 12/09/2024 | 20:13:29.943 | -23:14:41.99 | 35.8679192 | 0.09 | 14.6 | 1.1 |
| 12/10/2024 | 20:13:36.387 | -23:14:23.18 | 35.8802326 | 0.09 | 14.6 | 1.1 |
| 12/11/2024 | 20:13:42.911 | -23:14:04.17 | 35.8923259 | 0.09 | 14.6 | 1.0 |
| 12/12/2024 | 20:13:49.516 | -23:13:44.94 | 35.9041960 | 0.09 | 14.6 | 1.0 |
| 12/13/2024 | 20:13:56.201 | -23:13:25.51 | 35.9158401 | 0.09 | 14.6 | 1.0 |
| 12/14/2024 | 20:14:02.965 | -23:13:05.90 | 35.9272554 | 0.09 | 14.6 | 1.0 |

Pluto - Apparent data

| Date 0 h TT | Right Ascension hms | Declination dms | Distance au | Diameter arc sec | Magnitude | Phase Angle deg. |
|----------------|------------------------|--------------------|----------------|---------------------|-----------|------------------------|
| 12/15/2024 | 20:14:09.806 | -23:12:46.12 | 35.9384392 | 0.09 | 14.6 | 1.0 |
| 12/16/2024 | 20:14:16.720 | -23:12:26.21 | 35.9493886 | 0.09 | 14.6 | 0.9 |
| 12/17/2024 | 20:14:23.702 | -23:12:06.17 | 35.9601010 | 0.09 | 14.6 | 0.9 |
| 12/18/2024 | 20:14:30.751 | -23:11:46.01 | 35.9705733 | 0.09 | 14.6 | 0.9 |
| 12/19/2024 | 20:14:37.862 | -23:11:25.72 | 35.9808029 | 0.09 | 14.6 | 0.9 |
| 12/20/2024 | 20:14:45.033 | -23:11:05.30 | 35.9907867 | 0.09 | 14.6 | 0.8 |
| 12/21/2024 | 20:14:52.265 | -23:10:44.76 | 36.0005220 | 0.09 | 14.6 | 0.8 |
| 12/22/2024 | 20:14:59.556 | -23:10:24.08 | 36.0100058 | 0.09 | 14.6 | 0.8 |
| 12/23/2024 | 20:15:06.905 | -23:10:03.26 | 36.0192354 | 0.09 | 14.6 | 0.8 |
| 12/24/2024 | 20:15:14.313 | -23:09:42.31 | 36.0282079 | 0.09 | 14.6 | 0.8 |
| 12/25/2024 | 20:15:21.778 | -23:09:21.23 | 36.0369207 | 0.09 | 14.6 | 0.7 |
| 12/26/2024 | 20:15:29.300 | -23:09:00.02 | 36.0453712 | 0.09 | 14.6 | 0.7 |
| 12/27/2024 | 20:15:36.878 | -23:08:38.70 | 36.0535568 | 0.09 | 14.6 | 0.7 |
| 12/28/2024 | 20:15:44.511 | -23:08:17.28 | 36.0614750 | 0.09 | 14.6 | 0.7 |
| 12/29/2024 | 20:15:52.195 | -23:07:55.77 | 36.0691234 | 0.09 | 14.6 | 0.6 |
| 12/30/2024 | 20:15:59.930 | -23:07:34.19 | 36.0764997 | 0.09 | 14.6 | 0.6 |
| 12/31/2024 | 20:16:07.710 | -23:07:12.55 | 36.0836017 | 0.09 | 14.6 | 0.6 |
| 01/01/2025 | 20:16:15.534 | -23:06:50.86 | 36.0904274 | 0.09 | 14.6 | 0.5 |