

Grange Observatory

**ASTRONOMICAL ALMANAC
FOR YEAR 2025**

Introduction to Reports Generated by Astronomy Lab 2

In all reports, times and dates are in CET standard time (not daylight savings time or summer time). Times are in 24 hour format.

Abbreviations used in reports:

| | |
|------------|-----------------------|
| AU | Astronomical Units |
| CET | Central European Time |
| D | Degrees |
| DEC | Declination |
| DIST | Distance |
| DSO | December Solstice |
| E | East |
| FM | Full Moon |
| FQ | First Quarter Moon |
| H | Hours |
| ILL FR, | |
| ILLUM FRAC | Illuminated Fraction |
| JSO | June Solstice |
| KM | Kilometers |
| LE | Lunar Eclipse |
| LQ | Last Quarter Moon |
| M | Minutes |
| MEQ | March Equinox |
| MR | Moon Rise |
| MS | Moon Set |
| N | North |
| NM | New Moon |
| RA | Right Ascension |
| S | South, Seconds |
| SE | Solar Eclipse |
| SEQ | September Equinox |
| SR | Sunrise |
| SS | Sunset |
| UT | Universal Time |
| W | West |
| ZHR | Zenithal Hourly Rate |

February 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|--|--|---|---|---|--|
| | | | | | | 1 SR: 07:51 SS: 17:39 MR: 09:29 MS: 21:27 |
| 2 SR: 07:50 SS: 17:41 MR: 09:48 MS: 22:45 | 3 SR: 07:49 SS: 17:42 MR: 10:08 MS: None | 4 SR: 07:48 SS: 17:43 MR: 10:30 MS: 00:04 | 5 SR: 07:47 SS: 17:45 MR: 10:56 MS: 01:25 FQ: 09:04 | 6 SR: 07:45 SS: 17:46 MR: 11:29 MS: 02:45 | 7 SR: 07:44 SS: 17:48 MR: 12:12 MS: 04:02 | 8 SR: 07:43 SS: 17:49 MR: 13:07 MS: 05:11 |
| 9 SR: 07:41 SS: 17:51 MR: 14:13 MS: 06:08 | 10 SR: 07:40 SS: 17:52 MR: 15:25 MS: 06:52 | 11 SR: 07:38 SS: 17:54 MR: 16:39 MS: 07:25 | 12 SR: 07:37 SS: 17:55 MR: 17:51 MS: 07:51 FM: 14:54 | 13 SR: 07:35 SS: 17:56 MR: 19:00 MS: 08:11 | 14 SR: 07:34 SS: 17:58 MR: 20:07 MS: 08:29 | 15 SR: 07:32 SS: 17:59 MR: 21:11 MS: 08:44 |
| 16 SR: 07:31 SS: 18:01 MR: 22:16 MS: 09:00 | 17 SR: 07:29 SS: 18:02 MR: 23:20 MS: 09:16 | 18 SR: 07:28 SS: 18:04 MR: None MS: 09:34 | 19 SR: 07:26 SS: 18:05 MR: 00:26 MS: 09:55 | 20 SR: 07:24 SS: 18:06 MR: 01:33 MS: 10:21 LQ: 18:35 | 21 SR: 07:23 SS: 18:08 MR: 02:41 MS: 10:54 | 22 SR: 07:21 SS: 18:09 MR: 03:45 MS: 11:38 |
| 23 SR: 07:20 SS: 18:11 MR: 04:44 MS: 12:35 | 24 SR: 07:18 SS: 18:12 MR: 05:33 MS: 13:43 | 25 SR: 07:16 SS: 18:13 MR: 06:12 MS: 14:59 | 26 SR: 07:14 SS: 18:15 MR: 06:44 MS: 16:20 | 27 SR: 07:13 SS: 18:16 MR: 07:09 MS: 17:41 | 28 SR: 07:11 SS: 18:18 MR: 07:31 MS: 19:03 NM: 01:47 | |

March 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|--|--|--|--|--|--|
| | | | | | | 1 SR: 07:09 SS: 18:19 MR: 07:51 MS: 20:24 |
| 2 SR: 07:08 SS: 18:20 MR: 08:11 MS: 21:46 | 3 SR: 07:06 SS: 18:22 MR: 08:33 MS: 23:09 | 4 SR: 07:04 SS: 18:23 MR: 08:58 MS: None | 5 SR: 07:02 SS: 18:24 MR: 09:29 MS: 00:32 | 6 SR: 07:00 SS: 18:26 MR: 10:10 MS: 01:53 FQ: 17:34 | 7 SR: 06:59 SS: 18:27 MR: 11:01 MS: 03:05 | 8 SR: 06:57 SS: 18:28 MR: 12:04 MS: 04:06 |
| 9 SR: 06:55 SS: 18:30 MR: 13:14 MS: 04:53 | 10 SR: 06:53 SS: 18:31 MR: 14:27 MS: 05:28 | 11 SR: 06:51 SS: 18:32 MR: 15:38 MS: 05:55 | 12 SR: 06:49 SS: 18:34 MR: 16:48 MS: 06:17 | 13 SR: 06:48 SS: 18:35 MR: 17:55 MS: 06:35 | 14 SR: 06:46 SS: 18:36 MR: 19:00 MS: 06:51 FM: 07:56 LE: 08:02 | 15 SR: 06:44 SS: 18:38 MR: 20:04 MS: 07:06 |
| 16 SR: 06:42 SS: 18:39 MR: 21:08 MS: 07:22 | 17 SR: 06:40 SS: 18:40 MR: 22:14 MS: 07:39 | 18 SR: 06:38 SS: 18:41 MR: 23:21 MS: 07:58 | 19 SR: 06:36 SS: 18:43 MR: None MS: 08:22 | 20 SR: 06:34 SS: 18:44 MR: 00:28 MS: 08:52 MEQ: 09:57 | 21 SR: 06:33 SS: 18:45 MR: 01:33 MS: 09:31 | 22 SR: 06:31 SS: 18:47 MR: 02:33 MS: 10:21 LQ: 12:32 |
| 23 SR: 06:29 SS: 18:48 MR: 03:25 MS: 11:23 | 24 SR: 06:27 SS: 18:49 MR: 04:07 MS: 12:34 | 25 SR: 06:25 SS: 18:51 MR: 04:41 MS: 13:51 | 26 SR: 06:23 SS: 18:52 MR: 05:09 MS: 15:11 | 27 SR: 06:21 SS: 18:53 MR: 05:32 MS: 16:32 | 28 SR: 06:19 SS: 18:54 MR: 05:52 MS: 17:53 | 29 SR: 06:17 SS: 18:56 MR: 06:12 MS: 19:16 NM: 12:00 SE: 11:47 |
| 30 SR: 06:16 SS: 18:57 MR: 06:34 MS: 20:41 | 31 SR: 06:14 SS: 18:58 MR: 06:58 MS: 22:08 | | | | | |

April 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 1 | 2 | 3 | 4 | 5 |
| | | SR: 06:12 | SR: 06:10 | SR: 06:08 | SR: 06:06 | SR: 06:04 |
| | | SS: 18:59 | SS: 19:01 | SS: 19:02 | SS: 19:03 | SS: 19:05 |
| | | MR: 07:27 | MR: 08:05 | MR: 08:54 | MR: 09:55 | MR: 11:04 |
| | | MS: 23:33 | MS: None | MS: 00:52 | MS: 01:59 | MS: 02:52 |
| | | | | | | FQ: 03:17 |
| | | | | | | |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| SR: 06:03 | SR: 06:01 | SR: 05:59 | SR: 05:57 | SR: 05:55 | SR: 05:53 | SR: 05:52 |
| SS: 19:06 | SS: 19:07 | SS: 19:08 | SS: 19:10 | SS: 19:11 | SS: 19:12 | SS: 19:13 |
| MR: 12:17 | MR: 13:29 | MR: 14:39 | MR: 15:46 | MR: 16:51 | MR: 17:55 | MR: 18:59 |
| MS: 03:31 | MS: 04:00 | MS: 04:23 | MS: 04:42 | MS: 04:58 | MS: 05:14 | MS: 05:29 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| SR: 05:50 | SR: 05:48 | SR: 05:46 | SR: 05:45 | SR: 05:43 | SR: 05:41 | SR: 05:39 |
| SS: 19:15 | SS: 19:16 | SS: 19:17 | SS: 19:19 | SS: 19:20 | SS: 19:21 | SS: 19:22 |
| MR: 20:04 | MR: 21:10 | MR: 22:17 | MR: 23:23 | MR: None | MR: 00:25 | MR: 01:19 |
| MS: 05:45 | MS: 06:04 | MS: 06:26 | MS: 06:54 | MS: 07:30 | MS: 08:15 | MS: 09:12 |
| FM: 01:24 | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| SR: 05:38 | SR: 05:36 | SR: 05:34 | SR: 05:33 | SR: 05:31 | SR: 05:30 | SR: 05:28 |
| SS: 19:24 | SS: 19:25 | SS: 19:26 | SS: 19:27 | SS: 19:29 | SS: 19:30 | SS: 19:31 |
| MR: 02:04 | MR: 02:40 | MR: 03:09 | MR: 03:33 | MR: 03:54 | MR: 04:13 | MR: 04:34 |
| MS: 10:18 | MS: 11:31 | MS: 12:47 | MS: 14:05 | MS: 15:23 | MS: 16:44 | MS: 18:07 |
| | LQ: 02:38 | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 27 | 28 | 29 | 30 | | | |
| SR: 05:26 | SR: 05:25 | SR: 05:23 | SR: 05:22 | | | |
| SS: 19:33 | SS: 19:34 | SS: 19:35 | SS: 19:36 | | | |
| MR: 04:56 | MR: 05:23 | MR: 05:57 | MR: 06:42 | | | |
| MS: 19:33 | MS: 21:01 | MS: 22:27 | MS: 23:43 | | | |
| NM: 20:33 | | | | | | |
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June 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SR: 04:47 | SR: 04:47 | SR: 04:46 | SR: 04:46 | SR: 04:46 | SR: 04:45 | SR: 04:45 |
| SS: 20:12 | SS: 20:13 | SS: 20:13 | SS: 20:14 | SS: 20:15 | SS: 20:16 | SS: 20:16 |
| MR: 10:14 | MR: 11:26 | MR: 12:33 | MR: 13:38 | MR: 14:42 | MR: 15:46 | MR: 16:51 |
| MS: 00:29 | MS: 00:52 | MS: 01:10 | MS: 01:27 | MS: 01:42 | MS: 01:58 | MS: 02:15 |
| | | FQ: 04:42 | | | | |
| | | | | | | |
| | | | | | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| SR: 04:45 | SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 |
| SS: 20:17 | SS: 20:18 | SS: 20:18 | SS: 20:19 | SS: 20:19 | SS: 20:20 | SS: 20:20 |
| MR: 17:58 | MR: 19:05 | MR: 20:09 | MR: 21:09 | MR: 22:00 | MR: 22:41 | MR: 23:13 |
| MS: 02:35 | MS: 03:00 | MS: 03:31 | MS: 04:11 | MS: 05:01 | MS: 06:02 | MS: 07:11 |
| | | | FM: 08:46 | | | |
| | | | | | | |
| | | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 | SR: 04:44 |
| SS: 20:21 | SS: 20:21 | SS: 20:21 | SS: 20:22 | SS: 20:22 | SS: 20:22 | SS: 20:22 |
| MR: 23:39 | MR: None | MR: 00:01 | MR: 00:21 | MR: 00:39 | MR: 00:59 | MR: 01:21 |
| MS: 08:24 | MS: 09:38 | MS: 10:52 | MS: 12:07 | MS: 13:22 | MS: 14:41 | MS: 16:02 |
| | | | LQ: 20:21 | | | |
| | | | | | | JSO:03:38 |
| | | | | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| SR: 04:44 | SR: 04:45 | SR: 04:45 | SR: 04:45 | SR: 04:46 | SR: 04:46 | SR: 04:47 |
| SS: 20:23 | SS: 20:23 | SS: 20:23 | SS: 20:23 | SS: 20:23 | SS: 20:23 | SS: 20:23 |
| MR: 01:47 | MR: 02:21 | MR: 03:06 | MR: 04:05 | MR: 05:17 | MR: 06:35 | MR: 07:53 |
| MS: 17:27 | MS: 18:50 | MS: 20:05 | MS: 21:06 | MS: 21:53 | MS: 22:27 | MS: 22:53 |
| | | | NM: 11:34 | | | |
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| 29 | 30 | | | | | |
| SR: 04:47 | SR: 04:48 | | | | | |
| SS: 20:23 | SS: 20:23 | | | | | |
| MR: 09:07 | MR: 10:18 | | | | | |
| MS: 23:13 | MS: 23:31 | | | | | |
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July 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 1 | 2 | 3 | 4 | 5 |
| | | SR: 04:48 | SR: 04:49 | SR: 04:49 | SR: 04:50 | SR: 04:51 |
| | | SS: 20:22 | SS: 20:22 | SS: 20:22 | SS: 20:22 | SS: 20:21 |
| | | MR: 11:25 | MR: 12:30 | MR: 13:35 | MR: 14:40 | MR: 15:46 |
| | | MS: 23:47 | MS: None | MS: 00:03 | MS: 00:20 | MS: 00:39 |
| | | | FQ: 20:30 | | | |
| | | | | | | |
| | | | | | | |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| SR: 04:51 | SR: 04:52 | SR: 04:53 | SR: 04:54 | SR: 04:54 | SR: 04:55 | SR: 04:56 |
| SS: 20:21 | SS: 20:21 | SS: 20:20 | SS: 20:20 | SS: 20:19 | SS: 20:18 | SS: 20:18 |
| MR: 16:53 | MR: 17:59 | MR: 19:00 | MR: 19:55 | MR: 20:39 | MR: 21:15 | MR: 21:43 |
| MS: 01:01 | MS: 01:30 | MS: 02:07 | MS: 02:54 | MS: 03:52 | MS: 04:59 | MS: 06:13 |
| | | | | FM: 21:39 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| SR: 04:57 | SR: 04:58 | SR: 04:59 | SR: 05:00 | SR: 05:01 | SR: 05:02 | SR: 05:03 |
| SS: 20:17 | SS: 20:16 | SS: 20:16 | SS: 20:15 | SS: 20:14 | SS: 20:13 | SS: 20:13 |
| MR: 22:07 | MR: 22:27 | MR: 22:45 | MR: 23:04 | MR: 23:24 | MR: 23:48 | MR: None |
| MS: 07:28 | MS: 08:43 | MS: 09:58 | MS: 11:13 | MS: 12:29 | MS: 13:48 | MS: 15:09 |
| | | | | | LQ: 01:40 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| SR: 05:04 | SR: 05:05 | SR: 05:06 | SR: 05:07 | SR: 05:08 | SR: 05:09 | SR: 05:10 |
| SS: 20:12 | SS: 20:11 | SS: 20:10 | SS: 20:09 | SS: 20:08 | SS: 20:07 | SS: 20:06 |
| MR: 00:18 | MR: 00:58 | MR: 01:50 | MR: 02:55 | MR: 04:10 | MR: 05:29 | MR: 06:46 |
| MS: 16:31 | MS: 17:48 | MS: 18:54 | MS: 19:45 | MS: 20:24 | MS: 20:53 | MS: 21:16 |
| | | | | NM: 20:12 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 27 | 28 | 29 | 30 | 31 | | |
| SR: 05:11 | SR: 05:12 | SR: 05:13 | SR: 05:14 | SR: 05:15 | | |
| SS: 20:04 | SS: 20:03 | SS: 20:02 | SS: 20:01 | SS: 20:00 | | |
| MR: 07:59 | MR: 09:08 | MR: 10:15 | MR: 11:21 | MR: 12:26 | | |
| MS: 21:35 | MS: 21:51 | MS: 22:07 | MS: 22:24 | MS: 22:42 | | |
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August 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | | | 1 | 2 |
| | | | | | SR: 05:17 | SR: 05:18 |
| | | | | | SS: 19:58 | SS: 19:57 |
| | | | | | MR: 13:32 | MR: 14:39 |
| | | | | | MS: 23:03 | MS: 23:29 |
| | | | | | FQ: 13:41 | |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| SR: 05:19 | SR: 05:20 | SR: 05:21 | SR: 05:22 | SR: 05:24 | SR: 05:25 | SR: 05:26 |
| SS: 19:56 | SS: 19:54 | SS: 19:53 | SS: 19:52 | SS: 19:50 | SS: 19:49 | SS: 19:47 |
| MR: 15:45 | MR: 16:49 | MR: 17:46 | MR: 18:35 | MR: 19:14 | MR: 19:45 | MR: 20:10 |
| MS: None | MS: 00:02 | MS: 00:44 | MS: 01:38 | MS: 02:42 | MS: 03:55 | MS: 05:11 |
| | | | | | | FM: 08:57 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| SR: 05:27 | SR: 05:28 | SR: 05:29 | SR: 05:31 | SR: 05:32 | SR: 05:33 | SR: 05:34 |
| SS: 19:46 | SS: 19:44 | SS: 19:43 | SS: 19:41 | SS: 19:40 | SS: 19:38 | SS: 19:36 |
| MR: 20:32 | MR: 20:51 | MR: 21:10 | MR: 21:30 | MR: 21:52 | MR: 22:20 | MR: 22:56 |
| MS: 06:28 | MS: 07:44 | MS: 09:01 | MS: 10:18 | MS: 11:37 | MS: 12:58 | MS: 14:19 |
| | | | | | | LQ: 06:14 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| SR: 05:35 | SR: 05:37 | SR: 05:38 | SR: 05:39 | SR: 05:40 | SR: 05:41 | SR: 05:43 |
| SS: 19:35 | SS: 19:33 | SS: 19:31 | SS: 19:30 | SS: 19:28 | SS: 19:26 | SS: 19:25 |
| MR: 23:43 | MR: None | MR: 00:42 | MR: 01:53 | MR: 03:09 | MR: 04:26 | MR: 05:40 |
| MS: 15:37 | MS: 16:45 | MS: 17:41 | MS: 18:23 | MS: 18:54 | MS: 19:19 | MS: 19:39 |
| | | | | | | NM: 07:07 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| SR: 05:44 | SR: 05:45 | SR: 05:46 | SR: 05:47 | SR: 05:49 | SR: 05:50 | SR: 05:51 |
| SS: 19:23 | SS: 19:21 | SS: 19:19 | SS: 19:18 | SS: 19:16 | SS: 19:14 | SS: 19:12 |
| MR: 06:51 | MR: 07:59 | MR: 09:06 | MR: 10:11 | MR: 11:17 | MR: 12:24 | MR: 13:31 |
| MS: 19:56 | MS: 20:12 | MS: 20:28 | MS: 20:46 | MS: 21:05 | MS: 21:29 | MS: 21:59 |
| 31 | | | | | | |
| SR: 05:52 | | | | | | |
| SS: 19:10 | | | | | | |
| MR: 14:35 | | | | | | |
| MS: 22:36 | | | | | | |
| FQ: 07:26 | | | | | | |

September 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | SR: 05:53 | SR: 05:55 | SR: 05:56 | SR: 05:57 | SR: 05:58 | SR: 05:59 |
| | SS: 19:09 | SS: 19:07 | SS: 19:05 | SS: 19:03 | SS: 19:01 | SS: 18:59 |
| | MR: 15:35 | MR: 16:27 | MR: 17:10 | MR: 17:44 | MR: 18:12 | MR: 18:35 |
| | MS: 23:25 | MS: None | MS: 00:24 | MS: 01:33 | MS: 02:47 | MS: 04:04 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| SR: 06:01 | SR: 06:02 | SR: 06:03 | SR: 06:04 | SR: 06:05 | SR: 06:07 | SR: 06:08 |
| SS: 18:57 | SS: 18:56 | SS: 18:54 | SS: 18:52 | SS: 18:50 | SS: 18:48 | SS: 18:46 |
| MR: 18:55 | MR: 19:14 | MR: 19:34 | MR: 19:56 | MR: 20:23 | MR: 20:56 | MR: 21:40 |
| MS: 05:22 | MS: 06:41 | MS: 08:00 | MS: 09:20 | MS: 10:43 | MS: 12:07 | MS: 13:27 |
| FM: 19:11 | | | | | | |
| LE: 19:11 | | | | | | |
| | | | | | | |
| | | | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| SR: 06:09 | SR: 06:10 | SR: 06:11 | SR: 06:13 | SR: 06:14 | SR: 06:15 | SR: 06:16 |
| SS: 18:44 | SS: 18:42 | SS: 18:40 | SS: 18:38 | SS: 18:36 | SS: 18:35 | SS: 18:33 |
| MR: 22:36 | MR: 23:43 | MR: None | MR: 00:57 | MR: 02:13 | MR: 03:26 | MR: 04:37 |
| MS: 14:39 | MS: 15:38 | MS: 16:24 | MS: 16:57 | MS: 17:23 | MS: 17:44 | MS: 18:02 |
| LQ: 11:35 | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| SR: 06:17 | SR: 06:19 | SR: 06:20 | SR: 06:21 | SR: 06:22 | SR: 06:24 | SR: 06:25 |
| SS: 18:31 | SS: 18:29 | SS: 18:27 | SS: 18:25 | SS: 18:23 | SS: 18:21 | SS: 18:19 |
| MR: 05:46 | MR: 06:52 | MR: 07:58 | MR: 09:04 | MR: 10:11 | MR: 11:17 | MR: 12:23 |
| MS: 18:18 | MS: 18:34 | MS: 18:51 | MS: 19:10 | MS: 19:32 | MS: 19:59 | MS: 20:33 |
| NM: 20:55 | | | | | | |
| SE: 20:43 | | | | | | |
| | SEQ:19:18 | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 28 | 29 | 30 | | | | |
| SR: 06:26 | SR: 06:27 | SR: 06:28 | | | | |
| SS: 18:17 | SS: 18:15 | SS: 18:14 | | | | |
| MR: 13:24 | MR: 14:18 | MR: 15:04 | | | | |
| MS: 21:16 | MS: 22:10 | MS: 23:14 | | | | |
| | | FQ: 00:55 | | | | |
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November 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|--|--|--|---|--|--|
| | | | | | | 1 SR: 07:10 SS: 17:19 MR: 15:18 MS: 01:47 |
| 2 SR: 07:12 SS: 17:18 MR: 15:37 MS: 03:03 | 3 SR: 07:13 SS: 17:16 MR: 15:57 MS: 04:21 | 4 SR: 07:15 SS: 17:15 MR: 16:21 MS: 05:43 | 5 SR: 07:16 SS: 17:14 MR: 16:49 MS: 07:09 FM: 14:20 | 6 SR: 07:17 SS: 17:12 MR: 17:26 MS: 08:37 | 7 SR: 07:19 SS: 17:11 MR: 18:15 MS: 10:03 | 8 SR: 07:20 SS: 17:10 MR: 19:18 MS: 11:17 |
| 9 SR: 07:21 SS: 17:09 MR: 20:32 MS: 12:16 | 10 SR: 07:23 SS: 17:07 MR: 21:49 MS: 12:59 | 11 SR: 07:24 SS: 17:06 MR: 23:06 MS: 13:31 | 12 SR: 07:26 SS: 17:05 MR: None MS: 13:55 LQ: 06:30 | 13 SR: 07:27 SS: 17:04 MR: 00:19 MS: 14:15 | 14 SR: 07:28 SS: 17:03 MR: 01:28 MS: 14:32 | 15 SR: 07:30 SS: 17:02 MR: 02:35 MS: 14:48 |
| 16 SR: 07:31 SS: 17:01 MR: 03:40 MS: 15:04 | 17 SR: 07:32 SS: 17:00 MR: 04:45 MS: 15:22 | 18 SR: 07:34 SS: 16:59 MR: 05:50 MS: 15:42 | 19 SR: 07:35 SS: 16:58 MR: 06:56 MS: 16:05 | 20 SR: 07:36 SS: 16:57 MR: 08:03 MS: 16:35 NM: 07:48 | 21 SR: 07:38 SS: 16:57 MR: 09:07 MS: 17:12 | 22 SR: 07:39 SS: 16:56 MR: 10:05 MS: 17:59 |
| 23 SR: 07:40 SS: 16:55 MR: 10:56 MS: 18:55 | 24 SR: 07:42 SS: 16:55 MR: 11:38 MS: 19:59 | 25 SR: 07:43 SS: 16:54 MR: 12:11 MS: 21:08 | 26 SR: 07:44 SS: 16:53 MR: 12:38 MS: 22:19 | 27 SR: 07:45 SS: 16:53 MR: 13:01 MS: 23:30 | 28 SR: 07:47 SS: 16:52 MR: 13:20 MS: None FQ: 08:00 | 29 SR: 07:48 SS: 16:52 MR: 13:39 MS: 00:42 |
| 30 SR: 07:49 SS: 16:51 MR: 13:58 MS: 01:57 | | | | | | |

December 2025

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | SR: 07:50 | SR: 07:51 | SR: 07:52 | SR: 07:53 | SR: 07:54 | SR: 07:55 |
| | SS: 16:51 | SS: 16:50 | SS: 16:50 | SS: 16:50 | SS: 16:50 | SS: 16:49 |
| | MR: 14:19 | MR: 14:44 | MR: 15:16 | MR: 15:58 | MR: 16:55 | MR: 18:06 |
| | MS: 03:14 | MS: 04:35 | MS: 06:01 | MS: 07:28 | MS: 08:50 | MS: 09:58 |
| | | | | | FM: 00:15 | |
| | | | | | | |
| | | | | | | |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| SR: 07:56 | SR: 07:57 | SR: 07:58 | SR: 07:59 | SR: 08:00 | SR: 08:01 | SR: 08:02 |
| SS: 16:49 | SS: 16:49 | SS: 16:49 | SS: 16:49 | SS: 16:49 | SS: 16:49 | SS: 16:49 |
| MR: 19:26 | MR: 20:46 | MR: 22:04 | MR: 23:16 | MR: None | MR: 00:25 | MR: 01:31 |
| MS: 10:50 | MS: 11:28 | MS: 11:57 | MS: 12:19 | MS: 12:37 | MS: 12:54 | MS: 13:10 |
| | | | | LQ: 21:53 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| SR: 08:03 | SR: 08:03 | SR: 08:04 | SR: 08:05 | SR: 08:05 | SR: 08:06 | SR: 08:07 |
| SS: 16:50 | SS: 16:50 | SS: 16:50 | SS: 16:50 | SS: 16:51 | SS: 16:51 | SS: 16:52 |
| MR: 02:36 | MR: 03:41 | MR: 04:47 | MR: 05:53 | MR: 06:58 | MR: 07:59 | MR: 08:53 |
| MS: 13:27 | MS: 13:46 | MS: 14:09 | MS: 14:36 | MS: 15:11 | MS: 15:55 | MS: 16:49 |
| | | | | | | NM: 02:44 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| SR: 08:07 | SR: 08:08 | SR: 08:08 | SR: 08:09 | SR: 08:09 | SR: 08:09 | SR: 08:09 |
| SS: 16:52 | SS: 16:53 | SS: 16:53 | SS: 16:54 | SS: 16:54 | SS: 16:55 | SS: 16:56 |
| MR: 09:37 | MR: 10:13 | MR: 10:42 | MR: 11:05 | MR: 11:25 | MR: 11:44 | MR: 12:02 |
| MS: 17:52 | MS: 19:00 | MS: 20:10 | MS: 21:21 | MS: 22:32 | MS: 23:43 | MS: None |
| | | | | | | FQ: 20:11 |
| | | | | | | |
| DSO:16:00 | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 28 | 29 | 30 | 31 | | | |
| SR: 08:10 | SR: 08:10 | SR: 08:10 | SR: 08:10 | | | |
| SS: 16:57 | SS: 16:57 | SS: 16:58 | SS: 16:59 | | | |
| MR: 12:21 | MR: 12:43 | MR: 13:10 | MR: 13:46 | | | |
| MS: 00:57 | MS: 02:13 | MS: 03:34 | MS: 04:57 | | | |
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Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Seasons Report for 2025

| | | |
|-----------------------|----------------|------------|
| MEQ: 20/03/2025 09:57 | Winter Length: | 88,99 days |
| JSO: 21/06/2025 03:38 | Spring Length: | 92,74 days |
| SEQ: 22/09/2025 19:18 | Summer Length: | 93,65 days |
| DSO: 21/12/2025 16:00 | Autumn Length: | 89,86 days |

Dates of Easter Report for 2025

20/04/2025

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Lunar Eclipse Report for 2025

Lunar eclipse on 14/03/2025

Moon rise: 19:00
Moon set: 06:51
Magnitude: 1,18
Partial phase begins: 06:14
Total phase begins: 07:30
Time of maximum eclipse: 08:02
Total phase ends: 08:35
Partial phase ends: 09:51

Lunar eclipse on 07/09/2025

Moon rise: 18:55
Moon set: 05:22
Magnitude: 1,36
Partial phase begins: 17:27
Total phase begins: 18:30
Time of maximum eclipse: 19:11
Total phase ends: 19:51
Partial phase ends: 20:55

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Solar Eclipse Report for 2025

Solar eclipse on 29/03/2025

Sun rise: 06:17

Sun set: 18:56

Time of maximum eclipse: 11:47

Eclipse is partial, maximum magnitude = 0,93

Eclipse is visible in the northern hemisphere

Solar eclipse on 21/09/2025

Sun rise: 06:17

Sun set: 18:31

Time of maximum eclipse: 20:43

Eclipse is partial, maximum magnitude = 0,86

Eclipse is visible in the southern hemisphere

The time of maximum eclipse (above) does not necessarily specify when the eclipse will be maximal when viewed from the specified location.

To see how the eclipse will look at the specified location, run a Planetarium movie of the eclipse.

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
 Local Time = UT + 1,00 hours Elevation: 470 meters

Planet View Info Report for 01/01/2025 to 31/12/2025

Mercury

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST (AU) |
|------------|-------|-------|-----------|------------|------------|--------|-----------|
| 01/01/2025 | 06:37 | 15:33 | 17h16m18s | -21°56'43" | 20°58'08" | 0,773 | 1,14807 |
| 08/01/2025 | 06:57 | 15:40 | 17h57m20s | -23°17'01" | 18°33'58" | 0,858 | 1,25290 |
| 15/01/2025 | 07:17 | 15:55 | 18h41m56s | -23°47'12" | 15°30'42" | 0,912 | 1,32975 |
| 22/01/2025 | 07:33 | 16:17 | 19h28m37s | -23°16'37" | 12°00'40" | 0,949 | 1,38109 |
| 29/01/2025 | 07:45 | 16:47 | 20h16m29s | -21°39'21" | 8°05'58" | 0,976 | 1,40787 |
| 05/02/2025 | 07:52 | 17:22 | 21h04m58s | -18°51'54" | 3°53'07" | 0,994 | 1,40860 |
| 12/02/2025 | 07:54 | 18:02 | 21h53m39s | -14°52'57" | 2°45'43" | 0,996 | 1,37836 |
| 19/02/2025 | 07:53 | 18:45 | 22h41m59s | -9°46'10" | 7°51'27" | 0,962 | 1,30764 |
| 26/02/2025 | 07:47 | 19:27 | 23h28m06s | -3°50'45" | 13°31'40" | 0,846 | 1,18433 |
| 05/03/2025 | 07:34 | 20:00 | 0h06m37s | 1°56'44" | 17°39'39" | 0,603 | 1,00869 |
| 12/03/2025 | 07:12 | 20:06 | 0h28m09s | 5°57'04" | 17°20'58" | 0,298 | 0,81719 |
| 19/03/2025 | 06:39 | 19:35 | 0h26m13s | 6°39'42" | 10°36'33" | 0,070 | 0,66856 |
| 26/03/2025 | 06:04 | 18:37 | 0h07m37s | 4°04'59" | 3°42'57" | 0,007 | 0,60066 |
| 02/04/2025 | 05:34 | 17:41 | 23h51m15s | 0°31'14" | 14°22'10" | 0,090 | 0,61238 |
| 09/04/2025 | 05:14 | 17:05 | 23h49m26s | -1°37'15" | 22°28'16" | 0,227 | 0,67657 |
| 16/04/2025 | 04:59 | 16:52 | 0h02m12s | -1°42'51" | 26°29'39" | 0,360 | 0,76721 |
| 23/04/2025 | 04:49 | 16:56 | 0h25m37s | -0°03'33" | 27°21'19" | 0,475 | 0,86964 |
| 30/04/2025 | 04:40 | 17:12 | 0h56m40s | 2°56'09" | 25°53'08" | 0,579 | 0,97701 |
| 07/05/2025 | 04:34 | 17:40 | 1h34m00s | 6°56'03" | 22°32'37" | 0,684 | 1,08527 |
| 14/05/2025 | 04:30 | 18:17 | 2h17m48s | 11°37'43" | 17°29'57" | 0,797 | 1,18871 |
| 21/05/2025 | 04:32 | 19:04 | 3h09m13s | 16°37'01" | 10°47'25" | 0,914 | 1,27476 |
| 28/05/2025 | 04:42 | 19:59 | 4h08m58s | 21°11'42" | 2°40'47" | 0,994 | 1,32005 |
| 04/06/2025 | 05:04 | 20:53 | 5h14m18s | 24°19'46" | 6°05'24" | 0,969 | 1,30076 |
| 11/06/2025 | 05:35 | 21:33 | 6h18m04s | 25°18'47" | 13°52'14" | 0,847 | 1,22049 |
| 18/06/2025 | 06:08 | 21:53 | 7h14m03s | 24°20'04" | 19°53'17" | 0,701 | 1,10750 |
| 25/06/2025 | 06:39 | 21:57 | 7h59m49s | 22°02'50" | 23°54'16" | 0,568 | 0,98592 |
| 02/07/2025 | 07:00 | 21:48 | 8h34m44s | 19°06'39" | 25°48'39" | 0,447 | 0,86810 |
| 09/07/2025 | 07:10 | 21:29 | 8h58m02s | 16°07'04" | 25°17'54" | 0,329 | 0,76051 |
| 16/07/2025 | 07:03 | 20:59 | 9h08m07s | 13°40'13" | 21°47'49" | 0,206 | 0,66964 |
| 23/07/2025 | 06:35 | 20:21 | 9h03m25s | 12°25'09" | 14°48'56" | 0,089 | 0,60649 |
| 30/07/2025 | 05:48 | 19:38 | 8h46m13s | 12°50'06" | 5°59'33" | 0,015 | 0,58873 |
| 06/08/2025 | 04:55 | 19:01 | 8h27m54s | 14°36'33" | 9°11'37" | 0,043 | 0,63509 |
| 13/08/2025 | 04:15 | 18:41 | 8h24m20s | 16°33'43" | 16°19'26" | 0,193 | 0,75129 |
| 20/08/2025 | 04:04 | 18:38 | 8h43m44s | 17°24'18" | 18°33'51" | 0,442 | 0,92179 |
| 27/08/2025 | 04:22 | 18:45 | 9h23m35s | 16°11'23" | 15°50'11" | 0,721 | 1,10833 |
| 03/09/2025 | 05:01 | 18:52 | 10h14m03s | 12°43'22" | 10°02'47" | 0,918 | 1,26095 |
| 10/09/2025 | 05:46 | 18:54 | 11h05m11s | 7°46'03" | 3°37'33" | 0,992 | 1,35393 |
| 17/09/2025 | 06:29 | 18:51 | 11h52m49s | 2°15'46" | 3°22'19" | 0,994 | 1,39387 |
| 24/09/2025 | 07:07 | 18:46 | 12h36m49s | -3°12'44" | 8°32'09" | 0,969 | 1,39537 |
| 01/10/2025 | 07:42 | 18:38 | 13h18m11s | -8°22'00" | 13°06'56" | 0,933 | 1,36848 |
| 08/10/2025 | 08:14 | 18:31 | 13h57m50s | -13°02'20" | 17°01'01" | 0,889 | 1,31811 |
| 15/10/2025 | 08:42 | 18:23 | 14h36m17s | -17°06'15" | 20°14'27" | 0,834 | 1,24575 |
| 22/10/2025 | 09:07 | 18:17 | 15h13m11s | -20°25'34" | 22°39'50" | 0,759 | 1,15088 |
| 29/10/2025 | 09:25 | 18:11 | 15h46m41s | -22°48'57" | 23°51'46" | 0,648 | 1,03278 |
| 05/11/2025 | 09:27 | 18:02 | 16h11m38s | -23°58'17" | 22°43'03" | 0,474 | 0,89474 |
| 12/11/2025 | 09:00 | 17:41 | 16h17m02s | -23°19'26" | 16°44'19" | 0,221 | 0,75632 |
| 19/11/2025 | 07:50 | 17:03 | 15h52m04s | -20°07'21" | 3°16'12" | 0,008 | 0,67815 |
| 26/11/2025 | 06:34 | 16:24 | 15h20m38s | -16°15'19" | 12°08'41" | 0,129 | 0,73540 |
| 03/12/2025 | 06:04 | 15:59 | 15h19m27s | -15°38'29" | 19°39'08" | 0,446 | 0,89215 |
| 10/12/2025 | 06:10 | 15:48 | 15h43m43s | -17°34'49" | 20°34'50" | 0,684 | 1,05861 |
| 17/12/2025 | 06:32 | 15:45 | 16h20m06s | -20°09'18" | 18°41'26" | 0,821 | 1,19588 |
| 24/12/2025 | 06:58 | 15:49 | 17h02m12s | -22°23'29" | 15°45'53" | 0,898 | 1,29854 |
| 31/12/2025 | 07:23 | 16:00 | 17h47m29s | -23°52'09" | 12°25'21" | 0,944 | 1,36981 |

Venus

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST(AU) |
|------------|-------|-------|-----------|------------|------------|--------|----------|
| 01/01/2025 | 10:42 | 20:58 | 22h01m36s | -13°35'11" | 46°54'51" | 0,555 | 0,75081 |
| 08/01/2025 | 10:28 | 21:11 | 22h29m00s | -10°26'36" | 47°09'06" | 0,521 | 0,69906 |
| 15/01/2025 | 10:12 | 21:23 | 22h54m32s | -7°10'34" | 47°05'10" | 0,484 | 0,64714 |
| 22/01/2025 | 09:54 | 21:32 | 23h18m01s | -3°52'02" | 46°38'00" | 0,444 | 0,59541 |
| 29/01/2025 | 09:35 | 21:38 | 23h39m14s | -0°36'00" | 45°41'24" | 0,400 | 0,54422 |
| 05/02/2025 | 09:13 | 21:41 | 23h57m45s | 2°31'55" | 44°07'00" | 0,351 | 0,49401 |
| 12/02/2025 | 08:49 | 21:40 | 0h12m51s | 5°25'00" | 41°42'55" | 0,297 | 0,44548 |
| 19/02/2025 | 08:22 | 21:32 | 0h23m35s | 7°54'52" | 38°13'59" | 0,238 | 0,39975 |
| 26/02/2025 | 07:51 | 21:17 | 0h28m49s | 9°50'49" | 33°23'20" | 0,174 | 0,35831 |
| 05/03/2025 | 07:17 | 20:52 | 0h27m26s | 10°58'42" | 26°56'23" | 0,110 | 0,32315 |
| 12/03/2025 | 06:41 | 20:15 | 0h19m03s | 11°02'38" | 18°56'13" | 0,053 | 0,29691 |
| 19/03/2025 | 06:05 | 19:28 | 0h05m13s | 9°54'19" | 10°45'10" | 0,017 | 0,28258 |
| 26/03/2025 | 05:31 | 18:36 | 23h49m57s | 7°47'19" | 9°25'32" | 0,013 | 0,28226 |
| 02/04/2025 | 05:02 | 17:47 | 23h38m04s | 5°18'03" | 16°55'21" | 0,042 | 0,29611 |
| 09/04/2025 | 04:38 | 17:06 | 23h32m40s | 3°06'10" | 25°01'41" | 0,095 | 0,32245 |
| 16/04/2025 | 04:18 | 16:36 | 23h34m34s | 1°36'12" | 31°41'22" | 0,158 | 0,35864 |
| 23/04/2025 | 04:02 | 16:15 | 23h42m59s | 0°55'21" | 36°42'37" | 0,221 | 0,40195 |
| 30/04/2025 | 03:48 | 16:02 | 23h56m34s | 1°00'06" | 40°19'11" | 0,281 | 0,45015 |
| 07/05/2025 | 03:35 | 15:55 | 0h13m59s | 1°43'09" | 42°48'43" | 0,336 | 0,50168 |
| 14/05/2025 | 03:23 | 15:53 | 0h34m17s | 2°56'53" | 44°26'07" | 0,386 | 0,55549 |
| 21/05/2025 | 03:11 | 15:55 | 0h56m48s | 4°34'16" | 45°23'10" | 0,431 | 0,61071 |
| 28/05/2025 | 03:00 | 15:59 | 1h21m03s | 6°28'35" | 45°49'17" | 0,473 | 0,66665 |
| 04/06/2025 | 02:49 | 16:06 | 1h46m44s | 8°33'42" | 45°51'23" | 0,511 | 0,72286 |
| 11/06/2025 | 02:39 | 16:15 | 2h13m41s | 10°44'12" | 45°34'17" | 0,547 | 0,77905 |
| 18/06/2025 | 02:31 | 16:25 | 2h41m52s | 12°55'02" | 45°01'38" | 0,580 | 0,83490 |
| 25/06/2025 | 02:23 | 16:36 | 3h11m13s | 15°01'17" | 44°16'34" | 0,611 | 0,89007 |
| 02/07/2025 | 02:17 | 16:48 | 3h41m44s | 16°58'13" | 43°21'27" | 0,641 | 0,94434 |
| 09/07/2025 | 02:13 | 17:00 | 4h13m22s | 18°41'23" | 42°17'53" | 0,669 | 0,99759 |
| 16/07/2025 | 02:11 | 17:12 | 4h46m05s | 20°06'42" | 41°07'07" | 0,696 | 1,04966 |
| 23/07/2025 | 02:12 | 17:24 | 5h19m46s | 21°10'23" | 39°50'25" | 0,721 | 1,10032 |
| 30/07/2025 | 02:15 | 17:34 | 5h54m14s | 21°49'11" | 38°28'50" | 0,745 | 1,14941 |
| 06/08/2025 | 02:22 | 17:42 | 6h29m15s | 22°00'40" | 37°02'59" | 0,768 | 1,19685 |
| 13/08/2025 | 02:31 | 17:48 | 7h04m35s | 21°43'19" | 35°33'22" | 0,789 | 1,24258 |
| 20/08/2025 | 02:43 | 17:52 | 7h39m58s | 20°56'35" | 34°00'38" | 0,810 | 1,28645 |
| 27/08/2025 | 02:57 | 17:53 | 8h15m09s | 19°40'59" | 32°25'24" | 0,830 | 1,32830 |
| 03/09/2025 | 03:12 | 17:51 | 8h49m55s | 17°58'02" | 30°47'56" | 0,848 | 1,36810 |
| 10/09/2025 | 03:29 | 17:48 | 9h24m07s | 15°50'03" | 29°08'30" | 0,866 | 1,40584 |
| 17/09/2025 | 03:46 | 17:42 | 9h57m45s | 13°19'55" | 27°27'29" | 0,882 | 1,44145 |
| 24/09/2025 | 04:04 | 17:36 | 10h30m47s | 10°31'02" | 25°45'18" | 0,897 | 1,47480 |
| 01/10/2025 | 04:22 | 17:28 | 11h03m20s | 7°27'09" | 24°02'10" | 0,912 | 1,50588 |
| 08/10/2025 | 04:40 | 17:19 | 11h35m30s | 4°12'11" | 22°18'11" | 0,925 | 1,53473 |
| 15/10/2025 | 04:58 | 17:09 | 12h07m30s | 0°50'04" | 20°33'38" | 0,937 | 1,56136 |
| 22/10/2025 | 05:16 | 17:00 | 12h39m31s | -2°35'04" | 18°48'51" | 0,947 | 1,58569 |
| 29/10/2025 | 05:34 | 16:51 | 13h11m46s | -5°58'59" | 17°03'57" | 0,957 | 1,60771 |
| 05/11/2025 | 05:53 | 16:43 | 13h44m28s | -9°17'18" | 15°19'00" | 0,966 | 1,62751 |
| 12/11/2025 | 06:12 | 16:35 | 14h17m49s | -12°25'38" | 13°34'11" | 0,973 | 1,64515 |
| 19/11/2025 | 06:31 | 16:29 | 14h51m59s | -15°19'27" | 11°49'45" | 0,980 | 1,66062 |
| 26/11/2025 | 06:51 | 16:25 | 15h27m05s | -17°54'08" | 10°05'47" | 0,985 | 1,67389 |
| 03/12/2025 | 07:10 | 16:24 | 16h03m10s | -20°05'11" | 8°22'16" | 0,990 | 1,68505 |
| 10/12/2025 | 07:27 | 16:25 | 16h40m11s | -21°48'27" | 6°39'21" | 0,994 | 1,69421 |
| 17/12/2025 | 07:44 | 16:29 | 17h17m58s | -23°00'19" | 4°57'20" | 0,997 | 1,70138 |
| 24/12/2025 | 07:58 | 16:37 | 17h56m17s | -23°38'04" | 3°16'42" | 0,998 | 1,70652 |
| 31/12/2025 | 08:09 | 16:48 | 18h34m46s | -23°40'08" | 1°39'43" | 1,000 | 1,70967 |

Mars

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST(AU) |
|------------|-------|-------|-----------|------------|------------|--------|----------|
| 01/01/2025 | 18:16 | 09:54 | 8h20m30s | 23°32'53" | 158°33'51" | 0,987 | 0,65673 |
| 08/01/2025 | 17:34 | 09:21 | 8h10m04s | 24°18'53" | 167°50'04" | 0,996 | 0,64458 |
| 15/01/2025 | 16:51 | 08:45 | 7h58m20s | 25°01'06" | 175°27'02" | 0,999 | 0,64294 |
| 22/01/2025 | 16:09 | 08:09 | 7h46m26s | 25°35'13" | 170°37'46" | 0,998 | 0,65218 |
| 29/01/2025 | 15:28 | 07:33 | 7h35m30s | 25°58'45" | 161°34'23" | 0,991 | 0,67214 |
| 05/02/2025 | 14:51 | 06:58 | 7h26m33s | 26°11'14" | 152°38'05" | 0,981 | 0,70206 |
| 12/02/2025 | 14:17 | 06:24 | 7h20m11s | 26°13'58" | 144°13'41" | 0,968 | 0,74066 |
| 19/02/2025 | 13:47 | 05:53 | 7h16m40s | 26°08'52" | 136°26'53" | 0,955 | 0,78655 |
| 26/02/2025 | 13:20 | 05:24 | 7h15m55s | 25°57'39" | 129°17'58" | 0,943 | 0,83843 |
| 05/03/2025 | 12:56 | 04:56 | 7h17m48s | 25°41'28" | 122°45'15" | 0,932 | 0,89508 |
| 12/03/2025 | 12:35 | 04:31 | 7h21m59s | 25°21'00" | 116°45'35" | 0,923 | 0,95527 |
| 19/03/2025 | 12:16 | 04:07 | 7h28m09s | 24°56'33" | 111°14'44" | 0,915 | 1,01804 |
| 26/03/2025 | 11:59 | 03:45 | 7h36m00s | 24°28'02" | 106°08'43" | 0,909 | 1,08265 |
| 02/04/2025 | 11:44 | 03:24 | 7h45m16s | 23°55'13" | 101°24'30" | 0,904 | 1,14845 |
| 09/04/2025 | 11:30 | 03:03 | 7h55m42s | 23°17'51" | 96°59'26" | 0,901 | 1,21476 |
| 16/04/2025 | 11:18 | 02:44 | 8h07m06s | 22°35'43" | 92°50'44" | 0,899 | 1,28110 |
| 23/04/2025 | 11:06 | 02:24 | 8h19m15s | 21°48'36" | 88°55'58" | 0,899 | 1,34713 |
| 30/04/2025 | 10:56 | 02:05 | 8h32m04s | 20°56'19" | 85°13'30" | 0,899 | 1,41252 |
| 07/05/2025 | 10:47 | 01:46 | 8h45m23s | 19°58'47" | 81°42'06" | 0,900 | 1,47689 |
| 14/05/2025 | 10:38 | 01:27 | 8h59m06s | 18°56'02" | 78°20'20" | 0,902 | 1,53998 |
| 21/05/2025 | 10:30 | 01:08 | 9h13m09s | 17°48'08" | 75°06'49" | 0,904 | 1,60163 |
| 28/05/2025 | 10:22 | 00:49 | 9h27m27s | 16°35'09" | 72°00'40" | 0,907 | 1,66168 |
| 04/06/2025 | 10:15 | 00:30 | 9h41m58s | 15°17'16" | 69°01'19" | 0,910 | 1,71990 |
| 11/06/2025 | 10:08 | 00:11 | 9h56m39s | 13°54'44" | 66°08'05" | 0,913 | 1,77611 |
| 18/06/2025 | 10:02 | 23:49 | 10h11m28s | 12°27'50" | 63°20'06" | 0,917 | 1,83027 |
| 25/06/2025 | 09:56 | 23:30 | 10h26m25s | 10°56'49" | 60°36'46" | 0,921 | 1,88232 |
| 02/07/2025 | 09:50 | 23:11 | 10h41m29s | 9°21'59" | 57°57'50" | 0,925 | 1,93208 |
| 09/07/2025 | 09:44 | 22:51 | 10h56m39s | 7°43'46" | 55°22'58" | 0,929 | 1,97946 |
| 16/07/2025 | 09:39 | 22:32 | 11h11m57s | 6°02'33" | 52°51'37" | 0,934 | 2,02446 |
| 23/07/2025 | 09:34 | 22:13 | 11h27m22s | 4°18'43" | 50°23'19" | 0,938 | 2,06709 |
| 30/07/2025 | 09:29 | 21:54 | 11h42m56s | 2°32'39" | 47°57'57" | 0,942 | 2,10723 |
| 06/08/2025 | 09:25 | 21:35 | 11h58m40s | 0°44'52" | 45°35'23" | 0,946 | 2,14482 |
| 13/08/2025 | 09:20 | 21:16 | 12h14m36s | -1°04'07" | 43°15'15" | 0,951 | 2,17991 |
| 20/08/2025 | 09:16 | 20:57 | 12h30m45s | -2°53'49" | 40°57'13" | 0,955 | 2,21255 |
| 27/08/2025 | 09:12 | 20:39 | 12h47m09s | -4°43'42" | 38°41'10" | 0,959 | 2,24268 |
| 03/09/2025 | 09:09 | 20:20 | 13h03m50s | -6°33'10" | 36°27'07" | 0,962 | 2,27025 |
| 10/09/2025 | 09:06 | 20:02 | 13h20m51s | -8°21'31" | 34°14'54" | 0,966 | 2,29534 |
| 17/09/2025 | 09:03 | 19:45 | 13h38m12s | -10°08'08" | 32°04'13" | 0,970 | 2,31806 |
| 24/09/2025 | 09:00 | 19:28 | 13h55m57s | -11°52'18" | 29°55'00" | 0,973 | 2,33838 |
| 01/10/2025 | 08:58 | 19:11 | 14h14m08s | -13°33'14" | 27°47'22" | 0,977 | 2,35629 |
| 08/10/2025 | 08:56 | 18:55 | 14h32m46s | -15°10'03" | 25°41'17" | 0,980 | 2,37189 |
| 15/10/2025 | 08:55 | 18:40 | 14h51m53s | -16°41'56" | 23°36'33" | 0,983 | 2,38532 |
| 22/10/2025 | 08:53 | 18:25 | 15h11m30s | -18°07'58" | 21°33'07" | 0,985 | 2,39661 |
| 29/10/2025 | 08:52 | 18:12 | 15h31m38s | -19°27'12" | 19°31'09" | 0,988 | 2,40577 |
| 05/11/2025 | 08:51 | 17:59 | 15h52m17s | -20°38'39" | 17°30'44" | 0,990 | 2,41291 |
| 12/11/2025 | 08:50 | 17:48 | 16h13m26s | -21°41'21" | 15°31'49" | 0,992 | 2,41822 |
| 19/11/2025 | 08:48 | 17:37 | 16h35m05s | -22°34'23" | 13°34'20" | 0,994 | 2,42176 |
| 26/11/2025 | 08:46 | 17:28 | 16h57m12s | -23°16'51" | 11°38'29" | 0,995 | 2,42358 |
| 03/12/2025 | 08:44 | 17:21 | 17h19m41s | -23°47'57" | 9°44'30" | 0,997 | 2,42379 |
| 10/12/2025 | 08:41 | 17:14 | 17h42m31s | -24°06'59" | 7°52'26" | 0,998 | 2,42260 |
| 17/12/2025 | 08:37 | 17:10 | 18h05m37s | -24°13'25" | 6°02'25" | 0,999 | 2,42011 |
| 24/12/2025 | 08:32 | 17:06 | 18h28m52s | -24°06'52" | 4°15'01" | 0,999 | 2,41637 |
| 31/12/2025 | 08:26 | 17:04 | 18h52m13s | -23°47'12" | 2°32'13" | 1,000 | 2,41150 |

Jupiter

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST(AU) |
|------------|-------|-------|----------|-----------|------------|--------|----------|
| 01/01/2025 | 14:54 | 06:13 | 4h47m28s | 21°47'20" | 152°22'11" | 0,998 | 4,18899 |
| 08/01/2025 | 14:24 | 05:42 | 4h44m32s | 21°43'34" | 144°33'08" | 0,997 | 4,24983 |
| 15/01/2025 | 13:55 | 05:12 | 4h42m11s | 21°40'44" | 136°52'32" | 0,996 | 4,32277 |
| 22/01/2025 | 13:26 | 04:43 | 4h40m28s | 21°39'03" | 129°21'18" | 0,994 | 4,40633 |
| 29/01/2025 | 12:57 | 04:14 | 4h39m27s | 21°38'37" | 122°00'04" | 0,993 | 4,49901 |
| 05/02/2025 | 12:29 | 03:46 | 4h39m08s | 21°39'32" | 114°49'38" | 0,992 | 4,59913 |
| 12/02/2025 | 12:02 | 03:19 | 4h39m33s | 21°41'49" | 107°50'20" | 0,991 | 4,70491 |
| 19/02/2025 | 11:35 | 02:53 | 4h40m38s | 21°45'21" | 101°01'54" | 0,991 | 4,81473 |
| 26/02/2025 | 11:09 | 02:28 | 4h42m24s | 21°50'04" | 94°23'54" | 0,991 | 4,92706 |
| 05/03/2025 | 10:44 | 02:03 | 4h44m48s | 21°55'47" | 87°56'07" | 0,990 | 5,04039 |
| 12/03/2025 | 10:18 | 01:39 | 4h47m47s | 22°02'21" | 81°38'16" | 0,991 | 5,15320 |
| 19/03/2025 | 09:54 | 01:16 | 4h51m19s | 22°09'32" | 75°29'40" | 0,991 | 5,26425 |
| 26/03/2025 | 09:30 | 00:53 | 4h55m22s | 22°17'08" | 69°29'29" | 0,992 | 5,37241 |
| 02/04/2025 | 09:06 | 00:31 | 4h59m52s | 22°24'58" | 63°37'10" | 0,992 | 5,47659 |
| 09/04/2025 | 08:43 | 00:09 | 5h04m48s | 22°32'48" | 57°52'19" | 0,993 | 5,57573 |
| 16/04/2025 | 08:20 | 23:44 | 5h10m05s | 22°40'27" | 52°14'15" | 0,994 | 5,66903 |
| 23/04/2025 | 07:57 | 23:23 | 5h15m42s | 22°47'44" | 46°42'06" | 0,995 | 5,75579 |
| 30/04/2025 | 07:35 | 23:02 | 5h21m37s | 22°54'29" | 41°15'13" | 0,996 | 5,83532 |
| 07/05/2025 | 07:13 | 22:41 | 5h27m46s | 23°00'33" | 35°53'15" | 0,997 | 5,90696 |
| 14/05/2025 | 06:51 | 22:20 | 5h34m09s | 23°05'48" | 30°35'36" | 0,997 | 5,97028 |
| 21/05/2025 | 06:30 | 22:00 | 5h40m42s | 23°10'07" | 25°21'29" | 0,998 | 6,02493 |
| 28/05/2025 | 06:09 | 21:39 | 5h47m24s | 23°13'26" | 20°10'13" | 0,999 | 6,07052 |
| 04/06/2025 | 05:48 | 21:19 | 5h54m13s | 23°15'40" | 15°01'24" | 0,999 | 6,10672 |
| 11/06/2025 | 05:27 | 20:58 | 6h01m07s | 23°16'46" | 9°54'38" | 1,000 | 6,13338 |
| 18/06/2025 | 05:07 | 20:37 | 6h08m03s | 23°16'42" | 4°49'11" | 1,000 | 6,15041 |
| 25/06/2025 | 04:46 | 20:17 | 6h15m01s | 23°15'27" | 0°17'57" | 1,000 | 6,15769 |
| 02/07/2025 | 04:26 | 19:56 | 6h21m58s | 23°13'03" | 5°20'50" | 1,000 | 6,15513 |
| 09/07/2025 | 04:05 | 19:35 | 6h28m52s | 23°09'30" | 10°25'52" | 1,000 | 6,14281 |
| 16/07/2025 | 03:45 | 19:14 | 6h35m43s | 23°04'53" | 15°31'51" | 0,999 | 6,12089 |
| 23/07/2025 | 03:25 | 18:52 | 6h42m27s | 22°59'14" | 20°39'34" | 0,999 | 6,08948 |
| 30/07/2025 | 03:04 | 18:31 | 6h49m03s | 22°52'40" | 25°49'30" | 0,998 | 6,04872 |
| 06/08/2025 | 02:44 | 18:09 | 6h55m30s | 22°45'16" | 31°02'04" | 0,997 | 5,99895 |
| 13/08/2025 | 02:23 | 17:47 | 7h01m45s | 22°37'11" | 36°17'51" | 0,997 | 5,94057 |
| 20/08/2025 | 02:03 | 17:25 | 7h07m46s | 22°28'32" | 41°37'43" | 0,996 | 5,87394 |
| 27/08/2025 | 01:42 | 17:02 | 7h13m32s | 22°19'30" | 47°02'20" | 0,995 | 5,79948 |
| 03/09/2025 | 01:20 | 16:39 | 7h18m59s | 22°10'16" | 52°32'07" | 0,994 | 5,71783 |
| 10/09/2025 | 00:59 | 16:16 | 7h24m07s | 22°01'01" | 58°07'38" | 0,993 | 5,62970 |
| 17/09/2025 | 00:37 | 15:52 | 7h28m52s | 21°51'57" | 63°49'47" | 0,992 | 5,53579 |
| 24/09/2025 | 00:14 | 15:28 | 7h33m12s | 21°43'19" | 69°39'23" | 0,992 | 5,43687 |
| 01/10/2025 | 23:48 | 15:04 | 7h37m05s | 21°35'19" | 75°36'53" | 0,991 | 5,33397 |
| 08/10/2025 | 23:24 | 14:39 | 7h40m28s | 21°28'12" | 81°42'48" | 0,991 | 5,22819 |
| 15/10/2025 | 23:00 | 14:14 | 7h43m18s | 21°22'10" | 87°57'57" | 0,991 | 5,12066 |
| 22/10/2025 | 22:35 | 13:48 | 7h45m34s | 21°17'27" | 94°23'08" | 0,991 | 5,01259 |
| 29/10/2025 | 22:09 | 13:22 | 7h47m13s | 21°14'14" | 100°58'43" | 0,991 | 4,90545 |
| 05/11/2025 | 21:43 | 12:55 | 7h48m12s | 21°12'39" | 107°44'54" | 0,992 | 4,80079 |
| 12/11/2025 | 21:16 | 12:28 | 7h48m32s | 21°12'50" | 114°42'03" | 0,992 | 4,70012 |
| 19/11/2025 | 20:47 | 12:00 | 7h48m10s | 21°14'49" | 121°50'34" | 0,993 | 4,60505 |
| 26/11/2025 | 20:18 | 11:32 | 7h47m07s | 21°18'35" | 129°10'09" | 0,995 | 4,51734 |
| 03/12/2025 | 19:49 | 11:03 | 7h45m24s | 21°24'01" | 136°40'03" | 0,996 | 4,43871 |
| 10/12/2025 | 19:18 | 10:34 | 7h43m04s | 21°30'55" | 144°19'34" | 0,997 | 4,37068 |
| 17/12/2025 | 18:47 | 10:04 | 7h40m11s | 21°39'01" | 152°07'51" | 0,998 | 4,31471 |
| 24/12/2025 | 18:15 | 09:34 | 7h36m49s | 21°48'00" | 160°03'21" | 0,999 | 4,27218 |
| 31/12/2025 | 17:43 | 09:04 | 7h33m05s | 21°57'28" | 168°03'53" | 1,000 | 4,24416 |

Saturn

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST(AU) |
|------------|-------|-------|-----------|-----------|------------|--------|----------|
| 01/01/2025 | 11:21 | 22:22 | 23h06m14s | -7°54'09" | 63°46'03" | 0,998 | 10,04746 |
| 08/01/2025 | 10:55 | 21:58 | 23h08m18s | -7°40'20" | 57°11'47" | 0,998 | 10,14837 |
| 15/01/2025 | 10:29 | 21:33 | 23h10m35s | -7°25'11" | 50°41'28" | 0,998 | 10,24204 |
| 22/01/2025 | 10:02 | 21:10 | 23h13m03s | -7°08'52" | 44°14'43" | 0,999 | 10,32742 |
| 29/01/2025 | 09:36 | 20:46 | 23h15m42s | -6°51'30" | 37°51'16" | 0,999 | 10,40351 |
| 05/02/2025 | 09:10 | 20:22 | 23h18m30s | -6°33'16" | 31°31'10" | 0,999 | 10,46933 |
| 12/02/2025 | 08:44 | 19:59 | 23h21m26s | -6°14'19" | 25°14'30" | 1,000 | 10,52419 |
| 19/02/2025 | 08:19 | 19:36 | 23h24m28s | -5°54'49" | 19°01'08" | 1,000 | 10,56758 |
| 26/02/2025 | 07:53 | 19:13 | 23h27m34s | -5°34'54" | 12°51'27" | 1,000 | 10,59906 |
| 05/03/2025 | 07:27 | 18:50 | 23h30m43s | -5°14'45" | 6°48'58" | 1,000 | 10,61823 |
| 12/03/2025 | 07:01 | 18:27 | 23h33m54s | -4°54'31" | 1°57'35" | 1,000 | 10,62497 |
| 19/03/2025 | 06:36 | 18:04 | 23h37m05s | -4°34'22" | 6°01'15" | 1,000 | 10,61935 |
| 26/03/2025 | 06:10 | 17:41 | 23h40m14s | -4°14'27" | 11°57'11" | 1,000 | 10,60144 |
| 02/04/2025 | 05:44 | 17:18 | 23h43m22s | -3°54'55" | 17°58'43" | 1,000 | 10,57141 |
| 09/04/2025 | 05:18 | 16:54 | 23h46m25s | -3°35'55" | 24°01'08" | 1,000 | 10,52964 |
| 16/04/2025 | 04:53 | 16:31 | 23h49m23s | -3°17'37" | 30°03'52" | 0,999 | 10,47669 |
| 23/04/2025 | 04:27 | 16:08 | 23h52m14s | -3°00'08" | 36°07'14" | 0,999 | 10,41313 |
| 30/04/2025 | 04:01 | 15:44 | 23h54m57s | -2°43'38" | 42°11'36" | 0,999 | 10,33956 |
| 07/05/2025 | 03:35 | 15:20 | 23h57m32s | -2°28'15" | 48°17'04" | 0,998 | 10,25684 |
| 14/05/2025 | 03:09 | 14:56 | 23h59m55s | -2°14'08" | 54°23'57" | 0,998 | 10,16594 |
| 21/05/2025 | 02:43 | 14:31 | 0h02m08s | -2°01'22" | 60°32'54" | 0,998 | 10,06783 |
| 28/05/2025 | 02:16 | 14:06 | 0h04m07s | -1°50'07" | 66°44'30" | 0,998 | 9,96351 |
| 04/06/2025 | 01:50 | 13:41 | 0h05m53s | -1°40'28" | 72°58'58" | 0,997 | 9,85421 |
| 11/06/2025 | 01:23 | 13:16 | 0h07m23s | -1°32'33" | 79°16'34" | 0,997 | 9,74126 |
| 18/06/2025 | 00:57 | 12:50 | 0h08m38s | -1°26'24" | 85°37'53" | 0,997 | 9,62594 |
| 25/06/2025 | 00:30 | 12:23 | 0h09m36s | -1°22'08" | 92°03'31" | 0,997 | 9,50959 |
| 02/07/2025 | 00:03 | 11:57 | 0h10m17s | -1°19'48" | 98°33'40" | 0,997 | 9,39371 |
| 09/07/2025 | 23:32 | 11:30 | 0h10m40s | -1°19'26" | 105°08'24" | 0,997 | 9,27988 |
| 16/07/2025 | 23:04 | 11:02 | 0h10m44s | -1°21'00" | 111°48'02" | 0,998 | 9,16957 |
| 23/07/2025 | 22:37 | 10:34 | 0h10m31s | -1°24'29" | 118°33'00" | 0,998 | 9,06425 |
| 30/07/2025 | 22:09 | 10:06 | 0h10m00s | -1°29'51" | 125°23'18" | 0,998 | 8,96553 |
| 06/08/2025 | 21:41 | 09:37 | 0h09m11s | -1°36'59" | 132°18'34" | 0,998 | 8,87496 |
| 13/08/2025 | 21:13 | 09:08 | 0h08m07s | -1°45'43" | 139°18'40" | 0,999 | 8,79391 |
| 20/08/2025 | 20:45 | 08:38 | 0h06m47s | -1°55'52" | 146°23'30" | 0,999 | 8,72365 |
| 27/08/2025 | 20:17 | 08:08 | 0h05m15s | -2°07'14" | 153°32'30" | 0,999 | 8,66545 |
| 03/09/2025 | 19:48 | 07:38 | 0h03m32s | -2°19'32" | 160°44'15" | 1,000 | 8,62039 |
| 10/09/2025 | 19:20 | 07:08 | 0h01m41s | -2°32'26" | 167°56'00" | 1,000 | 8,58924 |
| 17/09/2025 | 18:51 | 06:38 | 23h59m45s | -2°45'40" | 174°52'59" | 1,000 | 8,57254 |
| 24/09/2025 | 18:23 | 06:07 | 23h57m46s | -2°58'52" | 176°08'47" | 1,000 | 8,57074 |
| 01/10/2025 | 17:54 | 05:37 | 23h55m48s | -3°11'41" | 169°22'27" | 1,000 | 8,58396 |
| 08/10/2025 | 17:25 | 05:07 | 23h53m54s | -3°23'47" | 162°05'33" | 1,000 | 8,61191 |
| 15/10/2025 | 16:57 | 04:37 | 23h52m06s | -3°34'51" | 154°44'37" | 1,000 | 8,65410 |
| 22/10/2025 | 16:28 | 04:07 | 23h50m29s | -3°44'37" | 147°23'10" | 0,999 | 8,70990 |
| 29/10/2025 | 16:00 | 03:37 | 23h49m04s | -3°52'49" | 140°02'56" | 0,999 | 8,77835 |
| 05/11/2025 | 15:32 | 03:08 | 23h47m53s | -3°59'15" | 132°45'02" | 0,999 | 8,85817 |
| 12/11/2025 | 15:04 | 02:39 | 23h46m59s | -4°03'45" | 125°29'59" | 0,998 | 8,94798 |
| 19/11/2025 | 14:36 | 02:11 | 23h46m22s | -4°06'14" | 118°18'04" | 0,998 | 9,04637 |
| 26/11/2025 | 14:08 | 01:43 | 23h46m04s | -4°06'36" | 111°09'53" | 0,998 | 9,15172 |
| 03/12/2025 | 13:40 | 01:16 | 23h46m05s | -4°04'50" | 104°06'00" | 0,997 | 9,26223 |
| 10/12/2025 | 13:13 | 00:49 | 23h46m26s | -4°00'57" | 97°06'28" | 0,997 | 9,37619 |
| 17/12/2025 | 12:46 | 00:23 | 23h47m06s | -3°55'02" | 90°11'13" | 0,997 | 9,49196 |
| 24/12/2025 | 12:19 | 23:53 | 23h48m04s | -3°47'07" | 83°20'22" | 0,997 | 9,60782 |
| 31/12/2025 | 11:52 | 23:27 | 23h49m21s | -3°37'18" | 76°34'12" | 0,997 | 9,72203 |

Uranus

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST(AU) |
|------------|-------|-------|----------|-----------|------------|--------|----------|
| 01/01/2025 | 13:49 | 04:34 | 3h25m14s | 18°26'14" | 132°48'09" | 1,000 | 18,87404 |
| 08/01/2025 | 13:21 | 04:06 | 3h24m37s | 18°24'06" | 125°30'53" | 1,000 | 18,96670 |
| 15/01/2025 | 12:53 | 03:38 | 3h24m09s | 18°22'31" | 118°16'15" | 1,000 | 19,06808 |
| 22/01/2025 | 12:25 | 03:10 | 3h23m50s | 18°21'33" | 111°04'21" | 0,999 | 19,17653 |
| 29/01/2025 | 11:58 | 02:42 | 3h23m42s | 18°21'13" | 103°55'22" | 0,999 | 19,29040 |
| 05/02/2025 | 11:30 | 02:15 | 3h23m45s | 18°21'32" | 96°49'44" | 0,999 | 19,40785 |
| 12/02/2025 | 11:03 | 01:48 | 3h23m58s | 18°22'30" | 89°47'51" | 0,999 | 19,52697 |
| 19/02/2025 | 10:36 | 01:21 | 3h24m22s | 18°24'06" | 82°49'39" | 0,999 | 19,64604 |
| 26/02/2025 | 10:09 | 00:54 | 3h24m56s | 18°26'19" | 75°55'01" | 0,999 | 19,76337 |
| 05/03/2025 | 09:42 | 00:27 | 3h25m39s | 18°29'07" | 69°04'06" | 0,999 | 19,87722 |
| 12/03/2025 | 09:15 | 00:01 | 3h26m32s | 18°32'28" | 62°17'07" | 0,999 | 19,98596 |
| 19/03/2025 | 08:48 | 23:31 | 3h27m33s | 18°36'17" | 55°33'51" | 1,000 | 20,08816 |
| 26/03/2025 | 08:21 | 23:05 | 3h28m43s | 18°40'33" | 48°53'59" | 1,000 | 20,18257 |
| 02/04/2025 | 07:55 | 22:39 | 3h29m59s | 18°45'12" | 42°17'21" | 1,000 | 20,26791 |
| 09/04/2025 | 07:28 | 22:13 | 3h31m22s | 18°50'11" | 35°44'02" | 1,000 | 20,34308 |
| 16/04/2025 | 07:02 | 21:48 | 3h32m50s | 18°55'24" | 29°13'47" | 1,000 | 20,40724 |
| 23/04/2025 | 06:35 | 21:22 | 3h34m22s | 19°00'50" | 22°46'05" | 1,000 | 20,45971 |
| 30/04/2025 | 06:09 | 20:57 | 3h35m58s | 19°06'24" | 16°20'36" | 1,000 | 20,49982 |
| 07/05/2025 | 05:42 | 20:31 | 3h37m37s | 19°12'03" | 9°57'17" | 1,000 | 20,52711 |
| 14/05/2025 | 05:16 | 20:06 | 3h39m17s | 19°17'43" | 3°36'03" | 1,000 | 20,54137 |
| 21/05/2025 | 04:50 | 19:41 | 3h40m58s | 19°23'21" | 2°45'00" | 1,000 | 20,54253 |
| 28/05/2025 | 04:23 | 19:15 | 3h42m38s | 19°28'54" | 9°04'02" | 1,000 | 20,53055 |
| 04/06/2025 | 03:57 | 18:50 | 3h44m18s | 19°34'18" | 15°22'42" | 1,000 | 20,50555 |
| 11/06/2025 | 03:31 | 18:24 | 3h45m55s | 19°39'31" | 21°40'58" | 1,000 | 20,46794 |
| 18/06/2025 | 03:04 | 17:59 | 3h47m29s | 19°44'31" | 27°59'24" | 1,000 | 20,41822 |
| 25/06/2025 | 02:38 | 17:33 | 3h48m59s | 19°49'14" | 34°18'35" | 1,000 | 20,35689 |
| 02/07/2025 | 02:12 | 17:07 | 3h50m25s | 19°53'39" | 40°38'43" | 1,000 | 20,28465 |
| 09/07/2025 | 01:45 | 16:41 | 3h51m44s | 19°57'43" | 47°00'00" | 1,000 | 20,20245 |
| 16/07/2025 | 01:18 | 16:15 | 3h52m57s | 20°01'26" | 53°22'54" | 1,000 | 20,11128 |
| 23/07/2025 | 00:52 | 15:49 | 3h54m03s | 20°04'43" | 59°48'01" | 0,999 | 20,01215 |
| 30/07/2025 | 00:25 | 15:23 | 3h55m01s | 20°07'35" | 66°15'38" | 0,999 | 19,90623 |
| 06/08/2025 | 23:54 | 14:56 | 3h55m50s | 20°10'00" | 72°45'49" | 0,999 | 19,79494 |
| 13/08/2025 | 23:27 | 14:30 | 3h56m30s | 20°11'57" | 79°18'54" | 0,999 | 19,67968 |
| 20/08/2025 | 23:00 | 14:03 | 3h57m00s | 20°13'25" | 85°55'24" | 0,999 | 19,56184 |
| 27/08/2025 | 22:33 | 13:35 | 3h57m21s | 20°14'24" | 92°35'34" | 0,999 | 19,44298 |
| 03/09/2025 | 22:05 | 13:08 | 3h57m30s | 20°14'52" | 99°19'20" | 0,999 | 19,32478 |
| 10/09/2025 | 21:38 | 12:41 | 3h57m30s | 20°14'50" | 106°06'46" | 0,999 | 19,20890 |
| 17/09/2025 | 21:10 | 12:13 | 3h57m19s | 20°14'18" | 112°58'14" | 0,999 | 19,09691 |
| 24/09/2025 | 20:42 | 11:45 | 3h56m58s | 20°13'17" | 119°53'50" | 1,000 | 18,99046 |
| 01/10/2025 | 20:14 | 11:17 | 3h56m28s | 20°11'47" | 126°53'19" | 1,000 | 18,89125 |
| 08/10/2025 | 19:46 | 10:48 | 3h55m48s | 20°09'50" | 133°56'25" | 1,000 | 18,80084 |
| 15/10/2025 | 19:18 | 10:20 | 3h55m00s | 20°07'29" | 141°03'14" | 1,000 | 18,72058 |
| 22/10/2025 | 18:50 | 09:51 | 3h54m05s | 20°04'45" | 148°13'40" | 1,000 | 18,65182 |
| 29/10/2025 | 18:22 | 09:22 | 3h53m03s | 20°01'41" | 155°27'15" | 1,000 | 18,59582 |
| 05/11/2025 | 17:53 | 08:53 | 3h51m56s | 19°58'21" | 162°43'22" | 1,000 | 18,55354 |
| 12/11/2025 | 17:25 | 08:24 | 3h50m46s | 19°54'49" | 170°01'47" | 1,000 | 18,52566 |
| 19/11/2025 | 16:56 | 07:55 | 3h49m33s | 19°51'09" | 177°22'00" | 1,000 | 18,51273 |
| 26/11/2025 | 16:28 | 07:26 | 3h48m20s | 19°47'25" | 175°15'15" | 1,000 | 18,51511 |
| 03/12/2025 | 16:00 | 06:57 | 3h47m09s | 19°43'44" | 167°52'45" | 1,000 | 18,53276 |
| 10/12/2025 | 15:31 | 06:28 | 3h45m59s | 19°40'10" | 160°29'56" | 1,000 | 18,56533 |
| 17/12/2025 | 15:03 | 06:00 | 3h44m54s | 19°36'48" | 153°07'09" | 1,000 | 18,61233 |
| 24/12/2025 | 14:35 | 05:31 | 3h43m54s | 19°33'43" | 145°45'03" | 1,000 | 18,67305 |
| 31/12/2025 | 14:06 | 05:02 | 3h43m02s | 19°30'59" | 138°24'25" | 1,000 | 18,74640 |

Neptune

| Date | Rise | Set | RA | Dec | Elongation | Ill Fr | DIST(AU) |
|------------|-------|-------|-----------|-----------|------------|--------|----------|
| 01/01/2025 | 11:44 | 23:31 | 23h52m09s | -2°15'04" | 76°29'22" | 1,000 | 30,10886 |
| 08/01/2025 | 11:17 | 23:04 | 23h52m33s | -2°12'13" | 69°27'57" | 1,000 | 30,22497 |
| 15/01/2025 | 10:50 | 22:37 | 23h53m03s | -2°08'47" | 62°28'25" | 1,000 | 30,33590 |
| 22/01/2025 | 10:22 | 22:10 | 23h53m37s | -2°04'47" | 55°30'40" | 1,000 | 30,44015 |
| 29/01/2025 | 09:55 | 21:44 | 23h54m17s | -2°00'17" | 48°34'38" | 1,000 | 30,53623 |
| 05/02/2025 | 09:28 | 21:17 | 23h55m01s | -1°55'19" | 41°40'35" | 1,000 | 30,62272 |
| 12/02/2025 | 09:01 | 20:51 | 23h55m49s | -1°49'58" | 34°48'48" | 1,000 | 30,69844 |
| 19/02/2025 | 08:34 | 20:25 | 23h56m40s | -1°44'18" | 27°59'08" | 1,000 | 30,76246 |
| 26/02/2025 | 08:07 | 19:58 | 23h57m35s | -1°38'21" | 21°11'29" | 1,000 | 30,81397 |
| 05/03/2025 | 07:40 | 19:32 | 23h58m31s | -1°32'14" | 14°26'14" | 1,000 | 30,85222 |
| 12/03/2025 | 07:13 | 19:06 | 23h59m28s | -1°25'58" | 7°44'52" | 1,000 | 30,87679 |
| 19/03/2025 | 06:46 | 18:40 | 0h00m27s | -1°19'41" | 1°34'20" | 1,000 | 30,88750 |
| 26/03/2025 | 06:19 | 18:14 | 0h01m25s | -1°13'24" | 5°52'54" | 1,000 | 30,88429 |
| 02/04/2025 | 05:52 | 17:48 | 0h02m23s | -1°07'12" | 12°28'03" | 1,000 | 30,86718 |
| 09/04/2025 | 05:25 | 17:21 | 0h03m20s | -1°01'10" | 19°04'45" | 1,000 | 30,83650 |
| 16/04/2025 | 04:58 | 16:55 | 0h04m15s | -0°55'22" | 25°40'51" | 1,000 | 30,79282 |
| 23/04/2025 | 04:31 | 16:29 | 0h05m08s | -0°49'50" | 32°16'23" | 1,000 | 30,73674 |
| 30/04/2025 | 04:04 | 16:02 | 0h05m58s | -0°44'40" | 38°51'28" | 1,000 | 30,66897 |
| 07/05/2025 | 03:37 | 15:36 | 0h06m45s | -0°39'53" | 45°26'01" | 1,000 | 30,59048 |
| 14/05/2025 | 03:10 | 15:10 | 0h07m27s | -0°35'33" | 52°00'09" | 1,000 | 30,50243 |
| 21/05/2025 | 02:43 | 14:43 | 0h08m06s | -0°31'42" | 58°34'20" | 1,000 | 30,40596 |
| 28/05/2025 | 02:15 | 14:16 | 0h08m39s | -0°28'24" | 65°08'56" | 1,000 | 30,30228 |
| 04/06/2025 | 01:48 | 13:49 | 0h09m08s | -0°25'40" | 71°43'58" | 1,000 | 30,19281 |
| 11/06/2025 | 01:21 | 13:22 | 0h09m31s | -0°23'32" | 78°19'30" | 1,000 | 30,07910 |
| 18/06/2025 | 00:54 | 12:55 | 0h09m49s | -0°22'01" | 84°55'56" | 1,000 | 29,96261 |
| 25/06/2025 | 00:26 | 12:28 | 0h10m01s | -0°21'07" | 91°33'42" | 1,000 | 29,84485 |
| 02/07/2025 | 23:55 | 12:00 | 0h10m07s | -0°20'52" | 98°12'50" | 1,000 | 29,72745 |
| 09/07/2025 | 23:27 | 11:33 | 0h10m07s | -0°21'15" | 104°53'17" | 1,000 | 29,61211 |
| 16/07/2025 | 23:00 | 11:05 | 0h10m01s | -0°22'16" | 111°35'20" | 1,000 | 29,50036 |
| 23/07/2025 | 22:32 | 10:37 | 0h09m50s | -0°23'52" | 118°19'23" | 1,000 | 29,39370 |
| 30/07/2025 | 22:04 | 10:09 | 0h09m33s | -0°26'03" | 125°05'27" | 1,000 | 29,29373 |
| 06/08/2025 | 21:37 | 09:41 | 0h09m11s | -0°28'45" | 131°53'20" | 1,000 | 29,20197 |
| 13/08/2025 | 21:09 | 09:13 | 0h08m44s | -0°31'57" | 138°43'07" | 1,000 | 29,11969 |
| 20/08/2025 | 20:41 | 08:45 | 0h08m13s | -0°35'35" | 145°35'05" | 1,000 | 29,04810 |
| 27/08/2025 | 20:13 | 08:16 | 0h07m39s | -0°39'34" | 152°29'10" | 1,000 | 28,98838 |
| 03/09/2025 | 19:46 | 07:48 | 0h07m01s | -0°43'51" | 159°24'53" | 1,000 | 28,94153 |
| 10/09/2025 | 19:18 | 07:20 | 0h06m21s | -0°48'21" | 166°21'43" | 1,000 | 28,90825 |
| 17/09/2025 | 18:50 | 06:51 | 0h05m39s | -0°52'59" | 173°17'33" | 1,000 | 28,88908 |
| 24/09/2025 | 18:22 | 06:22 | 0h04m57s | -0°57'40" | 178°32'52" | 1,000 | 28,88447 |
| 01/10/2025 | 17:54 | 05:54 | 0h04m14s | -1°02'18" | 172°20'38" | 1,000 | 28,89463 |
| 08/10/2025 | 17:26 | 05:25 | 0h03m33s | -1°06'48" | 165°19'21" | 1,000 | 28,91938 |
| 15/10/2025 | 16:58 | 04:57 | 0h02m53s | -1°11'05" | 158°14'30" | 1,000 | 28,95839 |
| 22/10/2025 | 16:30 | 04:29 | 0h02m15s | -1°15'05" | 151°07'50" | 1,000 | 29,01121 |
| 29/10/2025 | 16:02 | 04:00 | 0h01m40s | -1°18'41" | 144°00'11" | 1,000 | 29,07711 |
| 05/11/2025 | 15:35 | 03:32 | 0h01m10s | -1°21'50" | 136°52'07" | 1,000 | 29,15502 |
| 12/11/2025 | 15:07 | 03:04 | 0h00m43s | -1°24'28" | 129°43'44" | 1,000 | 29,24376 |
| 19/11/2025 | 14:39 | 02:36 | 0h00m22s | -1°26'32" | 122°35'08" | 1,000 | 29,34207 |
| 26/11/2025 | 14:11 | 02:08 | 0h00m06s | -1°27'59" | 115°26'41" | 1,000 | 29,44845 |
| 03/12/2025 | 13:44 | 01:40 | 23h59m56s | -1°28'47" | 108°18'54" | 1,000 | 29,56119 |
| 10/12/2025 | 13:16 | 01:13 | 23h59m52s | -1°28'55" | 101°11'56" | 1,000 | 29,67855 |
| 17/12/2025 | 12:49 | 00:45 | 23h59m54s | -1°28'23" | 94°05'43" | 1,000 | 29,79885 |
| 24/12/2025 | 12:21 | 00:18 | 0h00m03s | -1°27'09" | 87°00'35" | 1,000 | 29,92025 |
| 31/12/2025 | 11:54 | 23:47 | 0h00m18s | -1°25'15" | 79°56'57" | 1,000 | 30,04083 |

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Planet Apsides Report for 2025

Earth

| | | | |
|------------|------------|--------------------|---------|
| 03/01/2025 | Perihelion | Distance from Sun: | 0,98 AU |
| 05/07/2025 | Aphelion | Distance from Sun: | 1,02 AU |

Mercury

| | | | |
|------------|------------|--------------------|---------|
| 04/03/2025 | Perihelion | Distance from Sun: | 0,31 AU |
| 31/05/2025 | Perihelion | Distance from Sun: | 0,31 AU |
| 27/08/2025 | Perihelion | Distance from Sun: | 0,31 AU |
| 23/11/2025 | Perihelion | Distance from Sun: | 0,31 AU |
| 19/01/2025 | Aphelion | Distance from Sun: | 0,47 AU |
| 17/04/2025 | Aphelion | Distance from Sun: | 0,47 AU |
| 14/07/2025 | Aphelion | Distance from Sun: | 0,47 AU |
| 10/10/2025 | Aphelion | Distance from Sun: | 0,47 AU |

Venus

| | | | |
|------------|------------|--------------------|---------|
| 19/02/2025 | Perihelion | Distance from Sun: | 0,72 AU |
| 02/10/2025 | Perihelion | Distance from Sun: | 0,72 AU |
| 12/06/2025 | Aphelion | Distance from Sun: | 0,73 AU |

Mars

| | | | |
|------------|----------|--------------------|---------|
| 17/04/2025 | Aphelion | Distance from Sun: | 1,67 AU |
|------------|----------|--------------------|---------|

Jupiter

No Apsis

Saturn

No Apsis

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Planet Conjunction/Opposition Report for 01/01/2025 to 31/12/2025

Mercury

| Date | Hour | Event |
|------------|------|----------------------|
| 09/02/2025 | 12 | Superior Conjunction |
| 25/03/2025 | 0 | Inferior Conjunction |
| 30/05/2025 | 4 | Superior Conjunction |
| 01/08/2025 | 0 | Inferior Conjunction |
| 13/09/2025 | 12 | Superior Conjunction |
| 20/11/2025 | 9 | Inferior Conjunction |

Venus

| Date | Hour | Event |
|------------|------|----------------------|
| 23/03/2025 | 1 | Inferior Conjunction |

Mars

| Date | Hour | Event |
|------------|------|------------|
| 16/01/2025 | 3 | Opposition |

Jupiter

| Date | Hour | Event |
|------------|------|---------------------------|
| 25/06/2025 | 0 | Conjunction (Occultation) |

Saturn

| Date | Hour | Event |
|------------|------|-------------|
| 12/03/2025 | 12 | Conjunction |
| 21/09/2025 | 6 | Opposition |

Uranus

| Date | Hour | Event |
|------------|------|---------------------------|
| 18/05/2025 | 0 | Conjunction (Occultation) |
| 22/11/2025 | 0 | Opposition |

Neptune

| Date | Hour | Event |
|------------|------|-------------|
| 20/03/2025 | 0 | Conjunction |
| 24/09/2025 | 0 | Opposition |

Planet Data Report

| Planet | Mean Dist From Sun (AU) | Period of Revolution | Inclination | Equatorial Diameter (km) |
|---------|-------------------------------|-------------------------|-------------|--------------------------------|
| Mercury | 0,39 | 88 days | 7° | 4880 |
| Venus | 0,72 | 224,7 days | 3,4° | 12100 |
| Earth | 1,00 | 365,24 days | 0° | 12756 |
| Mars | 1,52 | 687 days | 1,9° | 6794 |
| Jupiter | 5,20 | 11,86 years | 1,3° | 143200 |
| Saturn | 9,54 | 29,46 years | 2,5° | 120000 |
| Uranus | 19,18 | 84 years | 0,8° | 52290 |
| Neptune | 30,06 | 165 years | 1,8° | 50450 |

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Moon Apsides Report for 01/01/2025 to 31/12/2025

| Date | Hour | Apsis | Distance (km) | Diameter |
|------------|------|---------|---------------|----------|
| 08/01/2025 | 1 | Perigee | 370189 | 0,5380° |
| 21/01/2025 | 6 | Apogee | 404300 | 0,4926° |
| 02/02/2025 | 4 | Perigee | 367464 | 0,5420° |
| 18/02/2025 | 2 | Apogee | 404872 | 0,4919° |
| 01/03/2025 | 22 | Perigee | 361968 | 0,5502° |
| 17/03/2025 | 17 | Apogee | 405758 | 0,4908° |
| 30/03/2025 | 6 | Perigee | 358134 | 0,5561° |
| 14/04/2025 | 0 | Apogee | 406300 | 0,4902° |
| 27/04/2025 | 17 | Perigee | 357127 | 0,5577° |
| 11/05/2025 | 2 | Apogee | 406225 | 0,4903° |
| 26/05/2025 | 2 | Perigee | 359035 | 0,5547° |
| 07/06/2025 | 11 | Apogee | 405558 | 0,4911° |
| 23/06/2025 | 6 | Perigee | 363190 | 0,5484° |
| 05/07/2025 | 4 | Apogee | 404642 | 0,4922° |
| 20/07/2025 | 15 | Perigee | 368039 | 0,5411° |
| 01/08/2025 | 22 | Apogee | 404167 | 0,4928° |
| 14/08/2025 | 19 | Perigee | 369284 | 0,5393° |
| 29/08/2025 | 16 | Apogee | 404559 | 0,4923° |
| 10/09/2025 | 13 | Perigee | 364775 | 0,5460° |
| 26/09/2025 | 11 | Apogee | 405565 | 0,4911° |
| 08/10/2025 | 14 | Perigee | 359813 | 0,5535° |
| 24/10/2025 | 1 | Apogee | 406453 | 0,4900° |
| 06/11/2025 | 0 | Perigee | 356847 | 0,5581° |
| 20/11/2025 | 4 | Apogee | 406693 | 0,4897° |
| 04/12/2025 | 12 | Perigee | 356991 | 0,5579° |
| 17/12/2025 | 7 | Apogee | 406311 | 0,4902° |

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Moon Nodes Report for 01/01/2025 to 31/12/2025

| Date | Time | Node | Illuminated Fraction |
|------------|-------|------------|----------------------|
| 05/01/2025 | 20:45 | Ascending | 0,37 |
| 19/01/2025 | 02:47 | Descending | 0,75 |
| 01/02/2025 | 23:05 | Ascending | 0,15 |
| 15/02/2025 | 07:52 | Descending | 0,93 |
| 01/03/2025 | 06:39 | Ascending | 0,02 |
| 14/03/2025 | 14:44 | Descending | 1,00 |
| 28/03/2025 | 17:28 | Ascending | 0,01 |
| 10/04/2025 | 20:55 | Descending | 0,96 |
| 25/04/2025 | 03:22 | Ascending | 0,10 |
| 08/05/2025 | 00:43 | Descending | 0,82 |
| 22/05/2025 | 09:04 | Ascending | 0,30 |
| 04/06/2025 | 02:32 | Descending | 0,59 |
| 18/06/2025 | 10:40 | Ascending | 0,54 |
| 01/07/2025 | 04:45 | Descending | 0,35 |
| 15/07/2025 | 11:41 | Ascending | 0,77 |
| 28/07/2025 | 09:29 | Descending | 0,14 |
| 11/08/2025 | 15:52 | Ascending | 0,93 |
| 24/08/2025 | 16:40 | Descending | 0,02 |
| 08/09/2025 | 00:07 | Ascending | 1,00 |
| 21/09/2025 | 00:12 | Descending | 0,01 |
| 05/10/2025 | 10:19 | Ascending | 0,96 |
| 18/10/2025 | 05:33 | Descending | 0,10 |
| 01/11/2025 | 18:45 | Ascending | 0,81 |
| 14/11/2025 | 07:37 | Descending | 0,29 |
| 28/11/2025 | 22:32 | Ascending | 0,57 |
| 11/12/2025 | 08:33 | Descending | 0,55 |
| 25/12/2025 | 23:02 | Ascending | 0,31 |

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
Local Time = UT + 1,00 hours Elevation: 470 meters

Meteor Showers Report for 01/01/2025 to 31/12/2025

| Date | Meteor Shower | ZHR | RA | DEC | Illum. Frac. | Longitude |
|------------|--------------------|-----|--------|------|--------------|-----------|
| 04/01/2025 | Quadrantids | 80 | 15h28m | 50° | 0,19 | 284° |
| 12/04/2025 | Virginids | 5 | 14h04m | -9° | 0,99 | 22° |
| 22/04/2025 | Lyrids | 12 | 18h08m | 32° | 0,40 | 32° |
| 28/04/2025 | alpha-Scorpiids | 5 | 16h32m | -24° | 0,00 | 38° |
| 06/05/2025 | eta-Aquarids | 35 | 22h20m | -1° | 0,65 | 45° |
| 13/05/2025 | alpha-Scorpiids | 5 | 16h04m | -24° | 1,00 | 52° |
| 10/06/2025 | Ophiuchids | 5 | 17h56m | -23° | 0,98 | 79° |
| 20/06/2025 | Ophiuchids | 5 | 17h20m | -20° | 0,36 | 89° |
| 08/07/2025 | Capricornids | 5 | | | 0,92 | 106° |
| 16/07/2025 | Capricornids | 5 | 20h44m | -15° | 0,72 | 113° |
| 21/07/2025 | alpha-Cygnids | 5 | 21h00m | 48° | 0,18 | 118° |
| 26/07/2025 | Capricornids | 5 | 21h00m | -15° | 0,02 | 123° |
| 29/07/2025 | delta-Aquarids | 20 | 22h36m | -17° | 0,19 | 126° |
| 31/07/2025 | Piscis Australids | 5 | 22h40m | -30° | 0,36 | 128° |
| 02/08/2025 | alpha-Capricornids | 5 | 20h36m | -10° | 0,55 | 130° |
| 07/08/2025 | iota-Aquarids | 8 | 22h10m | -15° | 0,94 | 134° |
| 13/08/2025 | Perseids | 75 | 3h04m | 58° | 0,84 | 140° |
| 21/08/2025 | alpha-Cygnids | 5 | 21h00m | 48° | 0,06 | 148° |
| 09/09/2025 | Piscids | 10 | 0h36m | 7° | 0,98 | 166° |
| 21/09/2025 | Piscids | 5 | 0h24m | 0° | 0,01 | 178° |
| 13/10/2025 | Piscids | ?? | 1h44m | 14° | 0,58 | 200° |
| 22/10/2025 | Orionids | 25 | 6h24m | 15° | 0,00 | 209° |
| 04/11/2025 | Taurids | 8 | 3h44m | 14° | 0,97 | 221° |
| 18/11/2025 | Leonids | 10 | 10h08m | 22° | 0,05 | 236° |
| 09/12/2025 | Puppids-Velids | 15 | 9h00m | -48° | 0,78 | 257° |
| 14/12/2025 | Geminids | 75 | 7h28m | 32° | 0,29 | 262° |
| 23/12/2025 | Ursids | 5 | 14h28m | 78° | 0,08 | 271° |
| 26/12/2025 | Puppids-Velids | 15 | 9h20m | -65° | 0,32 | 274° |

Grange Obs. Latitude: 45°08'32" N Longitude: 7°08'26" E
 Local Time = UT + 1,00 hours Elevation: 470 meters

Twilight Report for 01/01/2025 to 31/12/2025

| Date | Sun Rise | Set | Astronomical Begin | End | Nautical Begin | End | Civil Begin | End |
|------------|-------------|-------|-----------------------|-------|-------------------|-------|----------------|-------|
| 01/01/2025 | 08:10 | 17:00 | 06:18 | 18:52 | 06:54 | 18:16 | 07:31 | 17:39 |
| 08/01/2025 | 08:09 | 17:07 | 06:18 | 18:58 | 06:54 | 18:23 | 07:31 | 17:46 |
| 15/01/2025 | 08:06 | 17:16 | 06:17 | 19:05 | 06:52 | 18:30 | 07:28 | 17:54 |
| 22/01/2025 | 08:02 | 17:25 | 06:13 | 19:13 | 06:48 | 18:38 | 07:24 | 18:03 |
| 29/01/2025 | 07:55 | 17:35 | 06:08 | 19:21 | 06:43 | 18:47 | 07:18 | 18:12 |
| 05/02/2025 | 07:47 | 17:45 | 06:01 | 19:30 | 06:36 | 18:56 | 07:11 | 18:21 |
| 12/02/2025 | 07:37 | 17:55 | 05:53 | 19:39 | 06:27 | 19:05 | 07:02 | 18:30 |
| 19/02/2025 | 07:26 | 18:05 | 05:43 | 19:48 | 06:17 | 19:14 | 06:51 | 18:40 |
| 26/02/2025 | 07:14 | 18:15 | 05:32 | 19:57 | 06:06 | 19:23 | 06:40 | 18:49 |
| 05/03/2025 | 07:02 | 18:24 | 05:20 | 20:07 | 05:54 | 19:32 | 06:28 | 18:58 |
| 12/03/2025 | 06:49 | 18:34 | 05:07 | 20:16 | 05:41 | 19:42 | 06:15 | 19:08 |
| 19/03/2025 | 06:36 | 18:43 | 04:53 | 20:26 | 05:28 | 19:51 | 06:02 | 19:17 |
| 26/03/2025 | 06:23 | 18:52 | 04:38 | 20:37 | 05:14 | 20:01 | 05:49 | 19:26 |
| 02/04/2025 | 06:10 | 19:01 | 04:23 | 20:48 | 05:00 | 20:11 | 05:35 | 19:35 |
| 09/04/2025 | 05:57 | 19:10 | 04:07 | 20:59 | 04:46 | 20:21 | 05:22 | 19:45 |
| 16/04/2025 | 05:45 | 19:19 | 03:51 | 21:12 | 04:32 | 20:32 | 05:09 | 19:54 |
| 23/04/2025 | 05:33 | 19:27 | 03:35 | 21:25 | 04:18 | 20:43 | 04:56 | 20:04 |
| 30/04/2025 | 05:22 | 19:36 | 03:20 | 21:38 | 04:04 | 20:54 | 04:44 | 20:14 |
| 07/05/2025 | 05:12 | 19:45 | 03:04 | 21:53 | 03:52 | 21:05 | 04:33 | 20:23 |
| 14/05/2025 | 05:03 | 19:53 | 02:49 | 22:07 | 03:40 | 21:16 | 04:24 | 20:33 |
| 21/05/2025 | 04:56 | 20:01 | 02:35 | 22:21 | 03:30 | 21:27 | 04:15 | 20:42 |
| 28/05/2025 | 04:50 | 20:08 | 02:23 | 22:35 | 03:22 | 21:37 | 04:08 | 20:50 |
| 04/06/2025 | 04:46 | 20:14 | 02:13 | 22:47 | 03:15 | 21:45 | 04:04 | 20:56 |
| 11/06/2025 | 04:44 | 20:19 | 02:06 | 22:56 | 03:12 | 21:51 | 04:01 | 21:02 |
| 18/06/2025 | 04:44 | 20:22 | 02:04 | 23:02 | 03:11 | 21:55 | 04:00 | 21:05 |
| 25/06/2025 | 04:45 | 20:23 | 02:06 | 23:02 | 03:12 | 21:56 | 04:02 | 21:06 |
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| 16/07/2025 | 05:00 | 20:15 | 02:34 | 22:40 | 03:32 | 21:43 | 04:18 | 20:56 |
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| 30/07/2025 | 05:14 | 20:01 | 03:02 | 22:13 | 03:52 | 21:23 | 04:35 | 20:40 |
| 06/08/2025 | 05:22 | 19:52 | 03:16 | 21:58 | 04:03 | 21:11 | 04:44 | 20:30 |
| 13/08/2025 | 05:31 | 19:41 | 03:29 | 21:42 | 04:14 | 20:58 | 04:53 | 20:18 |
| 20/08/2025 | 05:39 | 19:30 | 03:43 | 21:26 | 04:24 | 20:44 | 05:03 | 20:06 |
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