



SKYCAL - Sky Events Calendar

Your web browser must have Javascript turned on. The following browsers have been successfully tested:

- **Macintosh** - Firefox 3.0 (*Safari NOT supported*)
- **Windows** - Firefox 3.0, Internet Explorer 6.0, Netscape 8.1

Introduction

There is always something interesting happening in the sky. The Moon cycles through its phases and occasionally passes near a bright planet. Sometimes the Moon eclipses the Sun. And sometimes the Moon itself is eclipsed as it passes through Earth's shadow. The planets move against the stars and are most prominent at opposition (Mars, Jupiter and Saturn) or at greatest elongation (Mercury and Venus). Earth makes its annual orbit around the Sun and passes through its four seasons.

SKYCAL (Sky Events Calendar) will help you keep track of the sky by calculating the local date and time of all these celestial happenings. It displays them on a convenient calendar that you can print and hang on the wall. You can generate a calendar for a single month or for an entire year. Just choose your **Time Zone**.

To use SKYCAL, make your selections in three simple steps:

- Section 1: Select a **Time Zone** for the calendar you wish to generate.
- Section 2: Select the sky events to include in the calendar (moon phases, eclipses, planet positions, meteor showers, etc).
- Section 3: Select the year or year and month of the calendar.

For **time zones** in North America and Europe, a **Daylight Saving Time (DST)** control appears that can be toggled on or off. In most of North America, DST is observed from the second Sunday of March through the first Sunday of November. In Europe, DST is called Summer Time (ST). ST is observed from the last Sunday of March through the last Sunday of October. The initial settings of SKYCAL (Time Zone & DST) are based on the time zone setting in your computer's internal clock.

All sky events in section 2 are selected by default. Change them as needed. In Section 3, enter the year or year and month of your calendar. At present, SKYCAL works for all years from 1801 through 2100. This range will increase soon. You can select calendars other than the western Gregorian Calendar by clicking the *Other Calendars* button and choosing a calendar from the drop-down menu.

Besides the traditional 7-day per week calendar format, you can also display the sky events in a table (opened in a new window). This format shows additional information about many events because it has more room to display the extra data. The table can be printed and saved.

To learn more about SKYCAL, see [About the Sky Events Calendar](#). Related links include:

- [All about Time Zones and Universal Time](#)
- [Year Dating Conventions](#)
- [Julian Day Number and Civil Date Calculator](#)
- [Calendars and Their History](#)

Section 1: Time Zone

Select **Time Zone**:

Section 2: Sky Events

Select Sky Events:

<input checked="" type="checkbox"/> Lunar Phases	<input checked="" type="checkbox"/> Moon Apogee/Perigee	<input checked="" type="checkbox"/> Meteor Showers
<input checked="" type="checkbox"/> Eclipses	<input checked="" type="checkbox"/> Moon-Planet Conjunctions	
<input checked="" type="checkbox"/> Equinoxes/Solstices	<input checked="" type="checkbox"/> Planet Events	

Section 3: Time Period of Calendar

Calendar: Julian/Gregorian Calendar Other Calendar

Year: Month:






Week begins on: Sunday (Western) Monday (Latin/Asian) Saturday (Near Eastern)

Generate Sky Calendar:

Generate Sky Events Table:






Calendar of Events

2018 January

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
 1 <u>Venus 1.9° W</u> <u>Mercury West 16:59</u> <u>Moon Perigee 18:54</u> <u>Moon N Dec 21:01</u> <u>Full Moon 23:24</u>	 2 <u>Perihelion 23:59</u>	 3 <u>Moon-Beehive 16:50</u> <u>Quadrantids 17:19</u>	 4 <u>Moon A Node 04:48</u>	 5 <u>Moon-Regulus 04:24</u>	 6 <u>Mars-Jup 21:39</u>	 7
 8 <u>Last Quarter 19:25</u>	 9 <u>Venus Super 03:16</u>	 10	 11 <u>Moon-Jupiter 02:59</u>	 12	 13 <u>Mercury-Sat 04:58</u>	 14 <u>Moon Apogee 23:09</u> <u>Moon-Saturn 23:13</u>
 15 <u>Moon S Dec 13:28</u>	 16 <u>New Moon 23:17</u>	 17	 18 <u>Moon D Node 11:28</u>	 19	 20	 21
 22	 23	 24 <u>First Quarter 19:20</u>	 25	 26	 27 <u>Moon-Aldeb 07:09</u>	 28
 29 <u>Moon N Dec 08:32</u>	 30 <u>Moon Perigee 06:54</u>	 31 <u>Moon-Beehive 04:19</u> <u>Full Moon 10:27</u> <u>Total Lun Ec 10:30</u> <u>Moon A Node 15:46</u>	 1 <u>Venus 5.7° E</u> <u>Moon-Regulus 15:24</u>	 2	 3	 4




All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 February

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
29 <u>Moon N Dec</u> 08:32	30 <u>Moon Perigee</u> 06:54	 31 <u>Moon-Beehive</u> 04:19 <u>Full Moon</u> 10:27 <u>Total Lun Ec</u> 10:30 <u>Moon A Node</u> 15:46	1 <u>Venus</u> 5.7° E <u>Moon-Regulus</u> 15:24	2	3	4
5	6	 7 <u>Last Quarter</u> 12:54 <u>Moon-Jupiter</u> 16:47	8	9 <u>Moon-Mars</u> 02:12	10	11 <u>Moon Apogee</u> 11:16 <u>Moon-Saturn</u> 11:46 <u>Mars-Antares</u> 13:40 <u>Moon S Dec</u> 20:21
12	13	14 <u>Moon D Node</u> 18:11	 15 <u>Par Solar Ec</u> 17:52 <u>New Moon</u> 18:05	16	17 <u>Mercury Super</u> 09:08	18
19	20	21	22	 23 <u>First Quarter</u> 05:09 <u>Moon-Aldeb</u> 14:07	24	25 <u>Moon N Dec</u> 17:07
26	27 <u>Moon Perigee</u> 11:48 <u>Moon-Beehive</u> 14:28	28 <u>Moon A Node</u> 02:03	 1 <u>Moon-Regulus</u> 02:09 <u>Venus</u> 12.4° E <u>Full Moon</u> 21:51	2	3	4 <u>Neptune Sun</u> 10:32






All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 March

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
26	27 <u>Moon Perigee</u> 11:48 <u>Moon-Beehive</u> 14:28	28 <u>Moon A Node</u> 02:03	 1 <u>Moon-Regulus</u> 02:09 <u>Venus</u> 12.4° E <u>Full Moon</u> 21:51	2	3	4 <u>Neptune Sun</u> 10:32
5	6	7 <u>Moon-Jupiter</u> 03:57	8	 9 <u>Last Quarter</u> 08:20 <u>Moon-Mars</u> 21:37	10 <u>Moon-Saturn</u> 23:37	11 <u>Moon S Dec</u> 03:39 <u>Moon Apogee</u> 06:13
12	13	14 <u>Moon D Node</u> 00:48	15 <u>Mercury East</u> 11:59	16	 17 <u>New Moon</u> 10:12	18 <u>Moon-Venus</u> 16:07
19 <u>Mercury-Ven</u> 04:51	20 <u>Spring Eq</u> 13:15	21	22 <u>Moon-Aldeb</u> 19:33	23	 24 <u>First Quarter</u> 12:35 <u>Moon N Dec</u> 23:04	25
26 <u>Moon Perigee</u> 14:17 <u>Moon-Beehive</u> 21:52	27 <u>Moon A Node</u> 07:56	28 <u>Moon-Regulus</u> 10:38	29	30	 31 <u>Full Moon</u> 09:37	1 <u>Venus</u> 19.9° E <u>Mercury Infer</u> 14:47





All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 April

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
26 <u>Moon Perigee</u> 14:17 <u>Moon-Beehive</u> 21:52	27 <u>Moon A Node</u> 07:56	28 <u>Moon-Regulus</u> 10:38	29	30	 31 <u>Full Moon</u> 09:37	1 <u>Venus</u> 19.9° E <u>Mercury Infer</u> 14:47
2 <u>Mars-Sat</u> 16:02	3 <u>Moon-Jupiter</u> 11:14	4	5	6	7 <u>Moon-Saturn</u> 09:50 <u>Moon S Dec</u> 11:37 <u>Moon-Mars</u> 15:15	 8 <u>Moon Apogee</u> 02:32 <u>Last Quarter</u> 04:18
9	10 <u>Moon D Node</u> 05:09	11	12	13	14	 15 <u>New Moon</u> 22:57
16	17 <u>Moon-Venus</u> 16:29	18 <u>Uranus Sun</u> 11:35	19 <u>Moon-Aldeb</u> 01:45	20 <u>Moon Perigee</u> 11:44	21 <u>Moon N Dec</u> 04:38	 22 <u>Lyrids</u> 14:49 <u>First Quarter</u> 18:46
23 <u>Moon-Beehive</u> 03:17 <u>Moon A Node</u> 09:19	24 <u>Venus-M45</u> 13:47 <u>Moon-Regulus</u> 16:39	25	26	27	28	 29 <u>Mercury West</u> 14:59 <u>Full Moon</u> 21:58
30 <u>Moon-Jupiter</u> 14:16	1 <u>Venus</u> 27.2° E	2 <u>Venus-Aldeb.</u> 10:24	3	4 <u>Moon-Saturn</u> 17:31 <u>Moon S Dec</u> 20:00	5 <u>Eta Aquarids</u> 04:03 <u>Moon Apogee</u> 21:35	6 <u>Moon-Mars</u> 04:24



All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 May

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
30 <u>Moon-Jupiter</u> 14:16	1 <u>Venus</u> 27.2° E	2 <u>Venus-Aldeb.</u> 10:24	3	4 <u>Moon-Saturn</u> 17:31 <u>Moon S.Dec</u> 20:00	5 <u>Eta Aquarids</u> 04:03 <u>Moon Apogee</u> 21:35	6 <u>Moon-Mars</u> 04:24
 7 <u>Moon D Node</u> 07:24 <u>Last Quarter</u> 23:09	8 <u>Jupiter Opp</u> 21:10	9	10	11	12	13 <u>Moon-Mercury</u> 14:21
14	 15 <u>New Moon</u> 08:48	16	17 <u>Moon-Venus</u> 15:11 <u>Moon Perigee</u> 18:06	18 <u>Moon N Dec</u> 12:02	19	20 <u>Moon-Beehive</u> 08:57 <u>Moon A Node</u> 10:13
21 <u>Moon-Regulus</u> 21:53	 22 <u>First Quarter</u> 00:49	23	24	25	26	27 <u>Moon-Jupiter</u> 14:39
28	 29 <u>Full Moon</u> 11:20	30	31 <u>Moon-Saturn</u> 22:20	1 <u>Moon S.Dec</u> 04:09 <u>Venus</u> 34.5° E	2 <u>Moon Apogee</u> 13:34	3 <u>Moon-Mars</u> 08:58 <u>Moon D.Node</u> 09:39







All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 June

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
28	 29 <u>Full Moon</u> 11:20	30	31 <u>Moon-Saturn</u> 22:20	1 <u>Moon S Dec</u> 04:09 <u>Venus</u> 34.5° E	2 <u>Moon Apogee</u> 13:34	3 <u>Moon-Mars</u> 08:58 <u>Moon D Node</u> 09:39
4	5 <u>Mercury Super</u> 22:53	 6 <u>Last Quarter</u> 15:32	7	8 <u>Venus-Pollux</u> 00:35	9	10
11	12	 13 <u>New Moon</u> 16:43	14 <u>Moon Perigee</u> 20:55 <u>Moon N Dec</u> 21:52	15	16 <u>Moon-Venus</u> 10:13 <u>Moon A Node</u> 14:50 <u>Moon-Beehive</u> 16:38	17
18 <u>Moon-Regulus</u> 04:25	19 <u>Venus-M44</u> 23:23	 20 <u>First Quarter</u> 07:51	21 <u>Summer Sol</u> 07:07	22	23 <u>Moon-Jupiter</u> 15:47	24 <u>Mercury-Pol.</u> 18:35
25	26	27 <u>Saturn Opp</u> 09:25	 28 <u>Moon-Saturn</u> 00:59 <u>Full Moon</u> 01:53 <u>Moon S Dec</u> 11:30	29 <u>Moon Apogee</u> 23:43	30 <u>Moon D Node</u> 13:44	1 <u>Venus</u> 40.7° E





All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 July

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
25	26	27 <u>Saturn Opp</u> 09:25	 28 <u>Moon-Saturn</u> 00:59 <u>Full Moon</u> 01:53 <u>Moon S.Dec</u> 11:30	29 <u>Moon Apogee</u> 23:43	30 <u>Moon D.Node</u> 13:44	1 <u>Venus</u> 40.7° E
2	3	4 <u>Mercury-M44</u> 02:39	5	 6 <u>Last Quarter</u> 04:51 <u>Aphelion</u> 12:59	7	8
9 <u>Venus-Reg.</u> 20:36	10 <u>Moon-Aldeb</u> 06:30	11	 12 <u>Mercury East</u> 01:59 <u>Moon N.Dec</u> 09:01 <u>New Moon</u> 23:48	13 <u>Par Solar Ec</u> 00:01 <u>Moon Perigee</u> 05:28 <u>Moon A.Node</u> 23:50	14 <u>Moon-Mercury</u> 19:04	15 <u>Moon-Regulus</u> 13:14
16 <u>Moon-Venus</u> 00:31	17	18	 19 <u>First Quarter</u> 16:52	20 <u>Moon-Jupiter</u> 20:57	21	22
23	24	25 <u>Moon-Saturn</u> 03:10 <u>Moon S.Dec</u> 17:55	26	 27 <u>Mars Opp</u> 02:31 <u>Moon Apogee</u> 02:44 <u>Full Moon</u> 17:21 <u>Total Lun Ec</u> 17:22 <u>Moon D.Node</u> 19:40	28 <u>Delta Aquarids</u> 05:50	29
30	31	1 <u>Venus</u> 45.1° E	2	3	 4 <u>Last Quarter</u> 15:18	5

All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 August

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
30	31	1 Venus 45.1° E	2	3	 4 Last Quarter 15:18	5
6 Moon-Aldeb 15:35	7	8 Moon N Dec 19:33 Mercury Infer 22:59	9	10 Moon A Node 10:40 Moon Perigee 15:05	 11 Par Solar Ec 06:47 New Moon 06:58	12 Perseids 21:44
13	14 Moon-Venus 10:35	15	16	17 Moon-Jupiter 07:38 Venus East 12:59	 18 First Quarter 04:49	19
20 Mercury-M44 23:07	21 Moon-Saturn 06:55 Moon S Dec 23:58	22	23 Moon Apogee 08:23	24 Moon D Node 01:51	25	 26 Full Moon 08:56 Mercury West 16:59
27	28	29	30	31	1 Venus-Spica 01:45 Venus 45° E	2

All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 September

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
27	28	29	30	31	1	2
					Venus-Spica 01:45 Venus 45° E	 Moon-Aldeb 22:34 Last Quarter 23:37
3	4	5	6	7	8	9
		Moon N Dec 03:56	Moon A Node 19:42 Moon-Beehive 23:13	Neptune Opp 14:19 Moon Perigee 22:21		 New Moon 15:01
10	11	12	13	14	15	16
			Moon-Jupiter 23:21			 First Quarter 20:15
17	18	19	20	21	22	23
Moon-Saturn 13:46	Moon S Dec 06:35	Moon Apogee 21:54	Moon D Node 06:30 Mercury Super 22:47		Autumn Eq 22:54	
 24	25	26	27	28	29	30
Full Moon 23:53						Moon-Aldeb 04:06


All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 October

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1 Venus 32.9° E	 2 Last Quarter 06:45 Moon N Dec 10:03	3	4 Moon A Node 00:10 Moon-Beehive 06:51	5 Moon-Regulus 18:58 Moon Perigee 19:29	6	7
8	 9 New Moon 00:47	10	11 Moon-Jupiter 18:21	12	13	14
15 Moon-Saturn 00:01 Moon S Dec 14:26 Mercury-Ven 23:32	 16 First Quarter 15:02	17 Moon D Node 09:03 Moon Apogee 16:16	18 Moon-Mars 10:01	19	20	21 Orionids 14:03
22	23 Uranus Opp 21:43	 24 Full Moon 13:45	25	26 Venus Infer 11:13	27 Moon-Aldeb 10:04	28
29 Mercury-Jup 03:28 Moon N Dec 15:34	30	 31 Moon A Node 00:46 Moon-Beehive 12:24 Last Quarter 13:40 Moon Perigee 17:05	1 Venus 10.6° W	2 Moon-Regulus 01:16	3	4

All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 November

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
29 <u>Mercury-Jup</u> 03:28 <u>Moon N Dec</u> 15:34	30	 31 <u>Moon A Node</u> 00:46 <u>Moon-Beehive</u> 12:24 <u>Last Quarter</u> 13:40 <u>Moon Perigee</u> 17:05	1 <u>Venus</u> 10.6° W	2 <u>Moon-Regulus</u> 01:16	3	4
5 <u>S. Taurids</u> 14:31	6 <u>Mercury East</u> 11:59	 7 <u>New Moon</u> 13:02	8	9 <u>Mercury-Ant.</u> 01:56	10	11 <u>Moon-Saturn</u> 12:46 <u>Moon S Dec</u> 23:21
12 <u>N. Taurids</u> 13:48	13 <u>Moon D Node</u> 11:04	14 <u>Moon Apogee</u> 12:57 <u>Venus-Spica</u> 20:23	 15 <u>First Quarter</u> 11:54	16 <u>Moon-Mars</u> 01:16	17 <u>Leonids</u> 20:05	18
19	20	21	22	 23 <u>Full Moon</u> 02:39 <u>Moon-Aldeb</u> 18:11	24	25 <u>Moon N Dec</u> 22:48
26 <u>Jupiter-Sun</u> 03:25 <u>Moon Perigee</u> 09:10	27 <u>Moon A Node</u> 02:18 <u>Mercury Infer</u> 06:10 <u>Moon-Beehive</u> 17:57	28	 29 <u>Moon-Regulus</u> 06:27 <u>Last Quarter</u> 21:19	30	1 <u>Venus</u> 39.9° W	2

All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

2018 December

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
26 <u>Jupiter Sun</u> 03:25 <u>Moon Perigee</u> 09:10	27 <u>Moon A Node</u> 02:18 <u>Mercury Infer</u> 06:10 <u>Moon-Beehive</u> 17:57	28	29 <u>Moon-Regulus</u> 06:27 <u>Last Quarter</u> 21:19	30	1 <u>Venus 39.9° W</u>	2
3 <u>Moon-Venus</u> 15:42	4	5	6	7 <u>New Moon</u> 04:20	8	9 <u>Moon-Saturn</u> 02:30 <u>Moon S.Dec</u> 08:12
10 <u>Moon D Node</u> 14:57	11	12 <u>Moon Apogee</u> 09:25	13	14 <u>Geminids</u> 09:16 <u>Moon-Mars</u> 20:21	15 <u>Mercury West</u> 07:59 <u>First Quarter</u> 08:49	16
17	18	19	20	21 <u>Moon-Aldeb</u> 04:31 <u>Mercury-Jup</u> 16:49 <u>Winter Sol</u> 19:22	22 <u>Mercury-Ant</u> 05:03 <u>Jup-Antares</u> 12:08 <u>Full Moon</u> 14:49 <u>Ursids</u> 18:00	23 <u>Moon N.Dec</u> 08:48
24 <u>Moon Perigee</u> 06:52 <u>Moon A Node</u> 08:54	25 <u>Moon-Beehive</u> 01:52	26 <u>Moon-Regulus</u> 13:06	27	28	29 <u>Last Quarter</u> 06:34	30
31	1 <u>Venus 46.9° W</u> <u>Moon-Venus</u> 18:50	2 <u>Saturn Sun</u> 01:53	3 <u>Moon-Jupiter</u> 04:37 <u>Perihelion</u> 06:59 <u>Quadrantids</u> 23:28	4	5 <u>Moon S.Dec</u> 15:46 <u>New Moon</u> 22:28 <u>Par. Solar Ec</u> 22:41	6 <u>Venus West</u> 01:59

All event times are given for UTC-3:00: Argentina Standard Time (AGT) for the entire year.

All SKYCAL astronomical calculations are by Fred Espenak, and he assumes full responsibility for their accuracy. Special thanks to National Space Club summer intern **Sumit Dutta** for his valuable assistance in developing the Sky Events Calendar (July 2007).

Permission is freely granted to reproduce this data when accompanied by an acknowledgment:

"Sky Events Calendar by Fred Espenak and Sumit Dutta (NASA's GSFC)"

- [Home](#)
- [Solar Eclipses](#)
- [Lunar Eclipses](#)
- [Transits](#)
- [Resources](#)

Website Manager: Robert M. Candey (Robert.M.Candey@nasa.gov)
Responsible NASA Official: Alex Young (c.a.young@nasa.gov)
Heliophysics Science Division, Code 670

NASA Goddard Space Flight Center
Greenbelt, MD 20771, USA