Astronomy News

Night Sky 2018 – April

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| --- | --- | --- | --- |
| Sunrise | Sunset | Mercury Rises | Venus Sets |
| 1st – 6:47am  10th – 6:27am  20th – 6:06am  30th – 5:46am | 1st – 7:44pm  10th – 7:58pm  20th – 8:15pm  30th – 8:31pm | 5th – 6:19am  10th – 6:02am  15th – 5:49am  20th – 5:37am | 1st – 9:29pm  10th – 9:58pm  20th – 10:29pm  30th – 11:00pm |
| Moon Rise | Moon Set | Moon Rise | Moon Set |
| - - - - - -  1st – 8:55pm  2nd – 10:06pm  3rd – 11:14pm  5th – 12:19am  6th – 1:19am  7th – 2:14am  8th – 3:02am (LQ)  9th – 3:44am  10th – 4:20am  11th – 4:51am  12th – 5:19am  13th – 5:44am  14th – 6:07am  15th – 6:31am | 1st – 7:37am  2nd – 8:02am  3rd – 8:28am  4th – 8:57am  5th – 9:30am  6th – 10:08am  7th – 10:52am  8th – 11:42am (LQ)  9th – 12:38pm  10th – 1:38pm  11th – 2:42pm  12th – 3:49pm  13th – 4:58pm  14th – 6:09pm  15th – 7:22pm | 16th – 6:55am (New)  17th – 7:22am  18th – 7:54am  19th – 8:31am  20th – 9:17am  21st – 10:12am  22nd – 11:16am (FQ)  23rd – 12:27pm  24th – 1:41pm  25th – 2:56pm  26th – 4:11pm  27th – 5:25pm  28th – 6:37pm  29th – 7:48pm  30th – 8:58pm (Full) | 16th – 8:37pm (New)  17th – 9:54pm  18th – 11:09pm  20th – 12:22am  21st – 1:28am  22nd – 2:26am (FQ)  23rd – 3:13am  24th – 3:52am  25th – 4:24am  26th – 4:52am  27th – 5:16am  28th – 5:40am  29th – 6:04am  30th – 6:28am (Full)  - - - - - - |
| A useful site: [www.heavens-above.com](http://www.heavens-above.com/) |  |  |  |

There is a scheduled launch sometime this month\* from Vandenberg Air Force Base in California as part of an Iridium commercial satellite launch on a SpaceX Falcon 9 rocket. GRACE-FO (GRACE Follow-On), a partnership between NASA and the German Research Centre for Geosciences (GFZ), is a successor to the GRACE mission, which tracks Earth's gravity field and water movement.

There is a planned launch this month\* from Xichang, China. A Chinese Long March 3B rocket will launch the APStar-6C commercial communications satellite for APT Satellite Company Ltd under an end-to-end contract signed with China Great Wall Industry Corp (CGWIC).

Comet C/2016 N6 Panstarrs will be in the northern constellation of Camelopardalis this month. Its last observable magnitude was 12.5 (Mar 12th) It reaches perihelion this July. For further information please see 'Comets' and 'Constellations' in the website above.

For the first week this month before dawn Comet 24P Schaumasse will be approximately half way between the two bright stars Sabik and Zeta Ophiuchi in the constellation of Ophiuchus. Its last known magnitude was 13 (Mar 12th). For further information please see 'Comets' and 'Constellations' in the website above.

Mercury is at inferior conjunction on the 1st. It also rises no more than 30 minutes before the Sun this month and is unlikely to be seen in the dawn sky unless conditions are very favourable.

From the 1st - 5th at 5:45am in the SSE, Saturn and Mars will be no more than 2 degrees apart. On the 3rd they will be just 1¼ degrees apart with Saturn just above Mars.

There is a scheduled launch on the 2nd\* at 9:30pm\* from Cape Canaveral, Florida of a SpaceX Falcon 9 FT rocket (Possible Re-Use). It will launch the 14th operational Dragon cargo spacecraft to the International Space Station (ISS) with supplies and equipment. The Falcon 9 first stage will attempt a Return to Launch Site recovery via a powered landing in Cape Canaveral's Landing Zone1.

At 5:00am in the SSW on the 3rd, Jupiter will be 7 degrees to the lower left of the Moon in the constellation of Libra. At the same time 13 degrees above the SSE horizon, Mars will be 1½ degrees below the planet Saturn in Sagittarius.

On the 4th at 5:30am in the SSW, Jupiter will be 7 degrees to the lower right of the Moon.

The Moon will lie approximately midway between Saturn in the SSE and Jupiter in the SSW on the morning of the 5th.

There is a planned launch on the 5th\* from Kennedy Space Center of a SpaceX Falcon 9 rocket. Its payload is a 3.5 metric ton Bangabandhu-1 communications satellite for the Bangladash Telecommunication Regulatory Commission (BTRC), becoming the first geostationary communications satellite operated by the small Asian nation.

The Serpentids meteor shower reaches its peak on the evening of the 5th.

On the 6th Saturn will be 16 degrees to the lower left of the Moon with Mars 2½ degrees lower left of Saturn.

At 5:30am on the 7th, Saturn will be 4 degrees to the lower left of the Moon with Mars just under 3 degrees ton the lower right of Saturn.

At around the same time also on the 7th the asteroid Vesta is 5½ degrees to the upper right of the Moon. For further information please see 'Asteroids' and 'Star Chart' in the website above.

On the 8th at 5:30am in the SSE, Mars will be 5½ degrees to the right of the Moon with Saturn just 3 degrees to the upper right of Mars.

On the 9th at 4:50am the Moon will be due south east and just 7 degrees above the horizon.

During the evenings between the 10th - 18th the asteroid Ceres will pass within ½ a degree of the 4th magnitude star Iota Cancri in the constellation of Cancer which is approximately halfway between Castor in Gemini and the top of the back to front '?' in the Leo constellation. For further information please see 'Asteroids' and 'Star Chart' in the website above.

From 5:00am on the 11th the crescent Moon will be just above the ESE horizon.

There is a planned launch on the 12th\* from Cape Canaveral, Florida of an Atlas V rocket. The Air Force Space Command 11 Mission for the U.S. Air Force, utilizing the heavy-lift Atlas V 551 configuration with five Solid Rocket Boosters on the vehicle's first stage. Its mission will fly an as-of-yet undisclosed primary payload and a number of secondary payloads hosted on the ESPA Augmented Geostationary Laboratory Experiment (EAGLE).

On the 12th at 5:40am the crescent Moon will be due ESE and just 2 degrees above the horizon. Neptune is also just above the eastern horizon and 10 degrees to the left of the Moon.

There is a scheduled launch planned for the 16th\* at 1:32pm\* of a SpaceX Falcon 9 rocket from Cape Canaveral, Florida. NASA's Transiting Exoplanet Survey Satellite (TESS) is an all-sky survey mission that will discover thousands of exo-planets around nearby stars. It will host an array of telescopes designed to focus the nearest 200 Light Years from Earth for exo-planet candidates.

Saturn reaches aphelion (its most distant from the Sun in its orbit on the 17th).

On the 17th at 8:45pm a very thin crescent Moon will be 7 degrees to the lower left of Venus in the west.

Uranus is at superior conjunction with the Sun on the 18th.

At 9:00pm on the 18th Venus will be 12 degrees to the lower right of the crescent Moon

On the 19th\* there is a planned launch from Guiana Space Center, French Guiana of an Ariane 5 rocket. GSAT-11 and Intelsat 38 communications satellites will be put into Geostationary Transfer Orbit. GSAT-11 is India’s largest and most-powerful communications satellite to date. Intelsat 38 / Azerspace-2, built by Space Systems Loral, will be operated by Intelsat and Azercosmos.

An occultation of the bright star Aldebaran in Taurus by the Moon occurs on the 19th . Unfortunately it will only be seen from parts of Canada, Greenland, Scandinavia and Russia.

On the 19th at 9:30pm the crescent Moon will be due west.

In the west after 9:00pm from the 20th - 23rd, Comet C/2016 R2 Panstarrs will be passing 1 degree to the above right of the 3.69 magnitude star Zeta Aurigae Its last observed magnitude was 11 (Mar 12th). For further information please see 'Comets' and 'Constellations' in the website above. It will be at perihelion in early May.

On the 21st the asteroid 7 Iris will be within a 1/4 of a degree from the 3rd magnitude star Zeta Tauri in Taurus constellation. For further information please see 'Asteroids' and 'Sky Charts’ in the website above.

There is a planned launch on the 22nd\* from Baikonur Cosmodrome, Kazakhstan. A Russian government-operated Proton-M rocket with Briz-M upper stage will launch the second of four planned Blagovest dual-use communications satellites. The satellites are used for high-speed Internet services, TV distribution, radio broadcasting and voice/video networking.

At 9:00pm on the 22nd the two bright stars Castor and Pollux in Gemini point the way to the Moon.

The Lyrids meteor shower reaches its peak on the evening of the 22nd.

The Puppids meteor shower reaches its peak on the evening of the 23rd.

On the 24th at 9:00pm the bright star Regulus in Leo is less than ½ a degree below from the Moon. An occultation of the bright star Regulus (Leo) occurs just before sunset today. This will only be visible from a small area of central North Russia.

There is a planned launch on the 25th\* from the Plesetsk Cosmodrome, Russia. A Russian Rockot Booster – a converted UR-100N ballistic missile topped by a Briz-KM upper stage – will launch the Sentinel-3B satellite operated by ESA under the European Commission’s Copernicus Earth Observation Program. The Sentinel-3 satellites are the most-heavily instrumented satellites flying under Copernicus, hosting four instruments to deliver accurate data on land and ocean colour and topography as well as sea and land surface temperature with a rapid global revisit time and fast data availability for use in operational applications.

Low in the WSW during the evening of 26th the asteroid 2 Pallas will be 1½ degrees from the 2.7 magnitude star Cursa in the constellation of Eridanus which is 3½ degrees from the brightest star - Rigel in Orion. For further information please see 'Asteroids' and 'Sky Charts in the website above.

At 9:00pm on the 27th the 2.74 magnitude star Porrima in Virgo is just 1½ degrees to the right of the Moon.

Mercury reaches maximum western elongation from the Sun on the 29th. Mercury rises at 5:20am on this day.

At midnight on the 29th Jupiter will be 11 degrees to the lower left of the Moon and at 5:00am on the following morning they will be just 9 degrees apart.

At 10:00pm on the 30th Jupiter will be just 3½ degrees to the right of the Full Moon.

\* = Dates and times are subject to change.

Facts: Frank Borman was a hero of the American Space Odyssey. He led the first team of American astronauts to circle the Moon, extending man's horizons into space. He is internationally known as the Commander of the 1968 Apollo 8 mission. A romance with airplanes that began when he was just 15 years old, took Frank Borman to the Air Force then to NASA.

News: Transiting Exoplanet Survey Satellite (TESS) will provide prime targets for further, more detailed characterization with the James Webb Space Telescope (JWST), as well as other large ground-based and space-based telescopes of the future. TESS stars will be 30-100 times brighter than those surveyed by the Kepler satellite. It will comprise the most favorable targets for detailed investigations in the coming decades.

News Extra: For those of us stuck in light polluted areas there is a webcam operated by the Shetland tourist board:[www.shetlandwebcams.com/cliff-cam-3/](http://www.shetlandwebcams.com/cliff-cam-3/). Cliff Cam 3 looks north from Sumburgh Head. On a clear winters night you may get a good chance to get a glimpse of the Northern Lights or in the coming months view the seabird colonies as they rest on the cliff's edge.