Astronomy News

**Night Sky 2019 – August**

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| **Sunrise** | **Sunset** | **Mercury Rises** | **Venus** |
| 1st – 5:36am  10th – 5:49am  20th – 6:05am  30th – 6:21am | 1st – 8:58pm  10th – 8:42pm  20th – 8:23pm  30th – 8:02pm | 5th – 4:23am  10th – 4:14am  15th – 4:21am  20th – 4:43am  25th – 5:14am | Is at inferior conjunction on the 14th and is not visible this month. |
| **Moon Rise** | **Moon Set** | **Moon Rise** | **Moon Set** |
| 1st - 5:39am  2nd – 7:02am**(ENE)**  3rd – 8:27am  4th – 9:51am  5th – 11:13am**(E)**  6th – 12:32pm  7th – 1:50pm  8th – 3:05pm**(ESE)**  9th – 4:16pm  10th – 5:23pm  11th – 6:22pm  12th – 7:13pm  13th – 7:54pm  14th – 8:28pm  15th – 8:56pm  16th – 9:19pm**(ESE)**  17th – 9:39pm  18th – 9:58pm  19th – 10:16pm**(E)** | 1st – 9:33pm  2nd – 10:06pm **(WNW)**  3rd – 10:33pm  4th – 10:57pm **(W)**  5th – 11:20pm  6th – 11:43pm  8th – 12:07am **(WSW)**  9th – 12:35am  10th – 1:07am  11th – 1:46am  12th – 2:33am  13th – 3:27am  14th – 4:27am  15th – 5:30am  16th – 6:35am **(WSW)**  17th – 7:41am  18th – 8:46am  19th – 9:51am **(W)**  20th – 10:57am | 20th – 10:34pm  21st – 10:54pm  22nd – 11:16pm**(ENE)**  23rd – 11:44pm  25th – 12:18am  26th – 1:03am  27th – 2:00am  28th – 3:10am  29th – 4:30am  30th – 5:55am**(ENE)**  31st – 7:21am  - - - - - - -  **Moon Phases**  New Moon – 1st  First Quarter –7th  Full Moon – 15th  Last Quarter – 23rd  New Moon – 30th | 21st – 12:03pm  22nd – 1:11pm **(WNW)**  23rd – 2:21pm  24th – 3:31pm  25th – 4:40pm  26th – 5:44pm  27th – 6:39pm  28th – 7:24pm  29th – 8:01pm **(WNW)**  30th – 8:31pm 287  31st – 8:57pm  - - - - - - -  **All times in notes**  **are set for**  **Somerton,**  **unless stated.** |
| A useful site: [www.heavens-above.com](http://www.heavens-above.com/) | A S Zielonka |  |  |

There is a possible launch this month\* of a Boeing Commercial Crew Pad Abort Test. Its to prepare the CST-100 Starliner spacecraft for crew transportation to the International Space Station (ISS). Boeing will test the systems' launch capability on the pad and during ascent. (See 'News' section below)

Comet C/2018 W2 Africano is in the constellation of Camelopardalis this month. Its at perihelion in September.

Comet C/2018 R3 Lemmon is in the constellation of Lynx at the beginning of the month. (For further information on either of these, please see 'Comet' section in the website above).

At 9:30pm on the 2nd a very thin crescent Moon is 4½ degrees above the horizon in the WNW (285 azimuth) with Regulus in Leo 5 degrees to the lower right of the Moon and just 1 degree above the horizon.

On the 3rd at 9:30pm in the west the star Denebola (2.1 mag) in Leo is 9 degrees directly above the thin crescent Moon.

In the west on 3rd at 10:00pm the Comet 123P West Hartley is 1¾ degrees above the star Porrima (2 .7 mag) in Virgo. It was at perihelion on Feb 5th. It is currently 2.880AU from us and at a very low magnitude. Unlikely to be seen with a small powered telescope.

The South Iota Aquariids meteor shower reaches its peak on the 4th.

At 10:00pm on the 4th the star Porrima (2.7 mag) in Virgo is 6 degrees to the left of the crescent Moon.

On the 5th at 10:00pm the star Spica (1.0 mag) in Virgo is 8 degrees to the lower left of the crescent Moon.

At 10:00pm on the 7th the Moon is between the two stars Zubeneschamali (2.6 mag) and Zubenelgenubi (2.7 mag) – both in Libra.

The asteroid Ceres is 3½ degrees below left of the Moon at 11:00pm on the 8th. (For further information please see 'Asteroid' section in the website above).

On the 8th at midnight the star Acrab (2.5 mag) in Scorpius is 3 degrees to the lower left of the Moon which is low in the south west.

At midnight on the 9th Jupiter is just 1¾ degrees to the lower left of the Moon in the south west.

On the 10th at midnight Jupiter is 12 degrees to the lower right of the Moon.

Mercury is at maximum western elongation on the 10th. On the 11th at 5:00am Castor and Pollux in the ENE point the way to Mercury. Mercury is 7½ degrees above the horizon and at 68.5 degrees azimuth.

At midnight on the 11th Saturn is 6 degrees to the upper left of the Moon. The star Omicron Sagittarii (3.7 mag) is just half a degree above Saturn between the 10th - 15th and by the 30th they will be 1 degree apart.

An occultation of Saturn by the Moon occurs on the 12th. This is only visible from Australia, North New Zealand and many of the islands north of these countries.

An occultation of Pluto occurs also on the 12th. This will be visible from central Africa and the north half of South America.

On the 12th at midnight Saturn is 6½ degrees to the right of the Moon low in the south.

The Perseids meteor shower reaches its peak on the 12th / 13th.

At midnight on the 14th the star Iota Capricorni (4.2 mag) is just 2¾ degrees to the upper left of the Moon.

On the 15th at 9:30pm the star Delta Capricorni (2.8 mag) is 3½ degrees to the upper right of the Moon.

At 10:15pm on the 16th the star Tau Aquarii (4.0 mag) is 1 degree below the Moon.

On the 16th at 11:00pm the asteroid Ceres is just 1¼ degrees above the star Dschubba (2.2 mag) in Scorpius. (For further information please see 'Asteroid' section in the website above).

The Beehive Cluster (M44) is just 1 degree to the upper right of Mercury on the 17th. At 5:00am Mercury's position is 4 degrees above the horizon and at 65 degrees azimuth (ENE).

On the 17th at midnight Neptune is 5¾ degrees to the upper right of the Moon. Neptune is ¾ of a degree to the left of the star Phi Aquarii (4.2 mag).

The Kappa Cygnids meteor shower reaches its peak on the 18th.

At 11:00pm on the 18th the star Iota Ceti (3.5 mag) in Cetus is 4½ degrees to the lower right of the Moon.

Mercury is at perihelion (its nearest to the Sun in its orbit) on the 20th.

On the 20th at midnight the star Nu Piscium (4.4 mag) in Pisces is 2¼ degrees above right of the Moon. Uranus is 10½ degrees to the left of the Moon.

In the east at midnight on the 21st Uranus is 6 degrees above the Moon. The Moon is also midway (2 degrees from both) between Mu Ceti (4.2 mag) and Xi Ceti (4.3 mag) in Cetus.

On the 22nd at midnight the asteroid Vesta is 3½ degrees to the lower left of the Moon. (For further information please see 'Asteroid' section in the website above).

Between 3:00 – 5:00am on the 24th the Moon will occult the star Delta Tauri (3.7 mag) in Taurus and other less brighter stars in close proximity.

At 5:00am on the 25th the star Zeta Tauri (2.9 mag) in Taurus is 4 degrees to the lower left of the crescent Moon.

On the 26th at 5:00am the star Mu Geminorum (2.8 mag) in Gemini is just 1¼ degrees to the left of the crescent Moon.

Mars is at aphelion ( Its most distant from the Sun in its orbit) on the 26th.

Between 4:30 – 5:00am on the 27th the Moon passes very close to the star Wasat in Gemini. It will pass within a ¼ of a degree to the upper left of the crescent Moon.

On the 30th at 1:00pm the Moon, Mercury, Venus and Mars are all within 5 degrees of the Sun.

At 8:30pm on the 31st low in the west (273 degrees azimuth) a very thin crescent Moon will be just 3 degrees above the horizon.

At the end of the month Neptune will be just ½ a degree left of the star Phi Aquarii (4.2 mag) in Aquarius.

\* = Dates and times are subject to change.

**Facts:** The Sun is 400 times larger than the Moon but is 400 times further away from Earth, making them appear the same size & only half a billionth of the energy released by the Sun reaches Earth.

**News:**NASA and Boeing completed two different tests of the CST-100 Starliner parachute system in June at two different locations in the desert of the western United States. The tests were part of a series of parachute tests providing valuable data needed to prove the system is safe to carry astronauts to and from the ISS as part of NASA's commercial Crew Program.

The first test, conducted on June 24th at the U.S. Army’s White Sands Missile Range in New Mexico, used a full-scale Starliner test article, known as a boiler plate, designed to simulate the actual spacecraft. This test featured a double failure scenario meaning one of the parachute system’s two drogue parachutes and one of the three main parachutes were both intentionally disabled to test how the remaining parachutes handled the additional loads during deployment and descent. The next test occurred on June 26th using a dart-shaped test device meant to function as a Starliner weight simulant. The device was released from a C-17 aircraft above the U.S. Army’s Yuma Proving Ground in Arizona. This was a “high Q” test, meaning the parachutes were intentionally inflated at higher pressures than they are expected to see during missions.