

Astronomy News

Night Sky 2018 - November

Sunrise	Sunset	Mercury Rises	Venus Rises
1 st – 7:03am	1 st – 4:45pm	-----	10 th – 5:29am
10 th – 7:19am	10 th – 4:30pm	-----	15 th – 5:01am
20 th – 7:35am	20 th – 4:17pm	-----	20 th – 4:39am
30 th – 7:51am	30 th – 4:08pm	30 th – 7:10am	25 th – 4:23am
			30 th – 4:12am
Moon Rise	Moon Set	Moon Rise	Moon Set
-----	1 st – 2:26pm	16 th – 2:03pm	17 th – 12:21am
2 nd – 12:10am	2 nd – 2:58pm	17 th – 2:26pm	18 th – 1:27am
3 rd – 1:28am	3 rd – 3:25pm	18 th – 2:47pm	19 th – 2:35am
4 th – 2:45am	4 th – 3:49pm	19 th – 3:08pm	20 th – 3:45am
5 th – 4:02am	5 th – 4:12pm	20 th – 3:30pm	21 st – 4:58am
6 th – 5:18am	6 th – 4:36pm	21 st – 3:53pm	22 nd – 6:13am
7 th – 6:33am (New)	7 th – 5:01pm (New)	22 nd – 4:21pm	23 rd – 7:29am (Full)
8 th – 7:46am	8 th – 5:29pm	23 rd – 4:54pm (Full)	24 th – 8:45am
9 th – 8:56am	9 th – 6:02pm	24 th – 5:36pm	25 th – 9:55am
10 th – 10:01am	10 th – 6:40pm	25 th – 6:26pm	26 th – 10:58am
11 th – 11:00am	11 th – 7:25pm	26 th – 7:31pm	27 th – 11:49am
12 th – 11:50am	12 th – 8:16pm	27 th – 8:42pm	28 th – 12:30pm
13 th – 12:33pm	13 th – 9:12pm	28 th – 9:59pm	29 th – 1:01pm
14 th – 1:08pm	14 th – 10:13pm	29 th – 11:17pm	30 th - 1:31pm (LQ)
15 th – 1:38pm (FQ)	15 th – 11:16pm (FQ)	-----	-----
A useful site: www.heavens-above.com	A S Zielonka		

There is a planned launch this month from Guiana Space Center, French Guiana of a Vega rocket. Its payload is PRISMA (Precursore Iperspettrale Della Missione Applicativa) and is for the Italian Space

Agency ASI. The 550 Kilogram satellite hosts a new type of electro-optical instrument comprising a hyperspectral sensor and medium-resolution image.

There is also a planned launch this month from Wenchang Satellite Launch Center, China of a Long March 5 rocket. The CZ-5 (Y3) mission will carry the Shijian-20 satellite, becoming the heaviest non-classified Geostationary Satellite ever deployed and debuted a new satellite platform designed for ultra-high-performance communications satellites. It is a close re-build of the Shijian-18 satellite lost in the July 2017 failure.

There is a planned launch on the 1st* from Cape Canaveral, of a Delta IV rocket. It will launch the tenth satellite (WGS-10) in the Wideband Global Satcom system operated by the U.S. Air Force. This will mark the second to last flight of the single-stick Delta IV rocket that is being phased out in favour of ULA's Atlas V and Vulcan vehicles that are more cost effective; Delta IV Heavy will continue flying into the 2020's from a stockpile of hardware established before production ended. WGS builds the high-throughput component of the U.S. Military's communications system, operating alongside the U.S. Air Force's AEHF program that provides tamper-proof, ultra-secure communications system – both designed for more resilient communications, but operate at much lower data rates than WGS.

Comet 46P Wirtanen is in the constellations Fornax and Cetus this month and being at a very low altitude its unlikely to be seen even though its very close to Earth. On the 1st its at a distance 0.269 AU and on the 30th 0.120AU. Lets hope it brightens up to be seen in December when it passes through Taurus mid-month.

In the early evening from the 1st - 5th Mars will be passing just above the stars Nashira (3.6 mag) and Delta Capricorni (2.8 mag) in the constellation of Capricorn.

On the 2nd at 6:00am the crescent Moon will be 2 degrees to the left of the bright star Regulus, Leo.

Comet 38P/Stephan-Oterma is at perihelion on the 10th and is 1.589AU from the Sun which means that it doesn't get within the orbit of Mars. Its currently in the constellation of Gemini. Its closest to Earth from the 13th - 19th December when it is at 0.766AU distance. For further information please see the “Comet Section” in the website above.

There is an occultation of Pluto by the Moon between 3:40pm – 6:32pm on the 12th. If you manage to see the crescent Moon in the western sky that is the location of Pluto.

An occultation of Mars by the Moon occurs on the 16th. This is only visible from the lower part of South America.

At 6:20am on the 5th a thin crescent Moon will be 20 degrees above Venus which is just 2 degrees above the ESE horizon.

In the evenings before 10:00pm from the 5th - 8th Neptune will be no more than a degree from Mars. There are in a very close conjunction on the 7th when Neptune will be just below Mars. For further information please see “Sky Chart” in the website above.

Mercury is at maximum eastern elongation from the Sun on the 6th.

On the 6th at 6:30am a very thin crescent Moon will be due ESE with Venus 9½ degrees to the lower right of it. The first magnitude star Spica in Virgo is just 4½ degrees above Venus.

The Taurids meteor shower reaches their peak on the evening of the 6th.

At 5pm on the 8th a very thin crescent Moon may be seen 3 degrees above the horizon in the WSW with Jupiter 3 degrees to the lower left.

On the 9th at 5:00pm a thin crescent Moon will be 6 degrees above Mercury and 7 degrees above the south west horizon.

At 5:45pm on the 10th the crescent Moon will be in the south west with Saturn 11½ degrees to the upper left of it.

Comet 38P Stephan-Oterma is at perihelion (Its closest to the Sun) on the 10th. Its distance from the Sun is 1.589 AU and its in the constellation of Gemini. (10.5 Mag on October 8th).

On the 11th at 5:00pm the crescent Moon will be less than a degree above the planet Saturn. If you manage to see the Moon around 4:00pm, binoculars or telescope may help you find Saturn just ½ a degree below the Moon.

At 5:30pm on the 12th Saturn will be 12½ degrees to the lower right of the Moon in the SSE.

On the 12th at midnight the asteroid Vesta will be 3 degrees below the Moon. For further information please see “Asteroids” in the website above.

In the mornings around 6:30am from the 14th - 16th Venus will be passing just 1½ degrees to the lower left of the first magnitude star Spica in Virgo.

On the 14th at 9:00pm in the south west, Mars will be 16 degrees to the upper left of the Moon. The 4th magnitude star Theta Capricorni is just 1½ degrees to the above right of the Moon.

There is a scheduled launch on the 15th* at 9:49am* of an Antares rocket from Wallops Flight Facility in Virginia. Its the Northrop Grumman Resupply mission to the ISS. It will deliver several tons of cargo including crew supplies and science experiments.

At 10:30pm on the 15th Mars is just 4 degrees above the Moon in the south west.

On the 16th at 6:45pm Mars is just 6½ degrees to the right of the Moon. Neptune is 7½ degrees to the upper left of the Moon and 2 degrees to the left of the 3.7 magnitude star Lambda Aquarii in Aquarius. An occultation of Mars by the Moon occurs also though it will only be visible from the very south tip of South America and Antarctica. (If you book up a holiday in Los Angeles you may see it... thats the Los Angeles in Chile)

At midnight on the 16th Comet 64P Swift-Gehrels (10.5 Mag on Oct 8th) is just 1 degree above the 2nd magnitude star Mirach in the constellation of Andromeda.

At 6:00pm on the 17th Neptune will be 6½ degrees to the upper right of the Moon.

At midnight on the 17th Comet 38P Stephan-Oterma is less than 1 degree below the 3.5 magnitude star Kappa Geminorum in the constellation of Gemini. Its magnitude was 10.5 (October 8th).

The Leonids meteor shower reaches their peak in the early hours before dawn on the 18th.

On the 18th at 6:00pm the 3.5 magnitude star Iota Ceti in the constellation of Cetus is just 4½ degrees directly below the Moon.

At midnight on the 19th Uranus is 14 degrees to the upper left of the Moon and 2 degrees above the 4.2 magnitude star Omicron Piscium in Pisces.

On the 20th at midnight Uranus is just 5 degrees to the upper right of the Moon.

On the 21st there is an occultation of the 4.2 magnitude star Mu Ceti in Cetus by the Moon. It approximately starts from 8:45:49pm – 9:56:52pm (The times are set for Street so there will be a slight difference).

Between 9:00 – 10:00pm on the 21st Comet 38P Stephan-Oterma will be in line with the bright stars Castor and Pollux in Gemini in the east. It will be 3½ degrees below Pollux.

The Alpha Monocerotids meteor shower reaches their peak on the night of the 21st soon after midnight.

At midnight on the 22nd the Pleiades star cluster will be 9 degrees above the Moon.

On the 23rd between 7:00 – 9:00pm the Moon will be passing just 1 degree from the 0.8 magnitude star Aldebaran in Taurus in the east.

Comet 48P Johnson (mag 12.5 on Oct 1st) passes within a ¼ of a degree to the 3.5 magnitude star 88Aquarii in Aquarius on the 24th.

Between 10:00 – 11:00pm on the 24th the Moon will be passing to within 1½ degrees of the 3rd Magnitude star Zeta Tauri in Taurus. At 10:30pm its just above the Moon.

On the 25th at 7:00pm the Moon will be 1½ degrees to the right of the 4th magnitude star Nu Geminorum in the constellation of Gemini.

The robotic lander (InSight) designed to study the interior of the planet Mars launched on the 5th May 2018 is due to land on the surface of Mars on the 26th. The Entry, Descent and Landing Phase is the final plunge of the Mars InSight Lander through the Martian atmosphere. It lasts about six minutes delivering the Lander safely to the surface of the Red Planet.

Jupiter is at superior conjunction on the 26th and is not visible this month.

Mercury is at inferior conjunction on the 27th.

At 7:00am on the 27th Castor and Pollux point towards the Moon, high in the western sky.

On the 29th at 7:00am the Moon will be just 2½ degrees above right of the 1st magnitude star, Regulus in Leo.

On the 30th at 5:25pm Saturn will be just 4 degrees above the horizon and due south west.

* = Dates and times are subject to change.

Facts: On October 12th 1964, the Soviet Union launched Voskhod 1, a 24 hour crewed mission that achieved several “firsts”. This was the first time that a spacecraft carried more than one person. Only two cosmonauts were planned to go, but Soviet politicians pressured the space program to add one more. This left no room for bulky spacesuits to be worn so this became the first spaceflight without spacesuits. The three cosmonauts were: Konstantin Feoktistov, Boris Yegorov and Vladimir Komarov.

News: According to an update (8th October) from NASA the Hubble space telescope is in trouble. One of the telescope's gyroscopes has failed, leaving Hubble with only two working gyros. Until the problem has been fixed, the telescope has been put into 'safe mode'. Its unclear how exactly NASA is going to move forward but it likely means its days are numbered.

Voyager 2 probe, launched on August 20th 1977 has detected “an increase in cosmic rays that originate outside our solar system”. With that data and the fact that its almost 11 billion miles from Earth means that it is close to leaving the confines of the Solar System.