

## Astronomy News

### Night Sky 2020 - February

Sunrise	Sunset	Mercury Sets	Venus Rises
1 <sup>st</sup> – 7:49am 10 <sup>th</sup> – 7:34am 20 <sup>th</sup> – 7:15am 29 <sup>th</sup> – 6:57am	1 <sup>st</sup> – 5:01pm 10 <sup>th</sup> – 5:17pm 20 <sup>th</sup> – 5:35pm 29 <sup>th</sup> – 5:51pm	1 <sup>st</sup> – 6:14pm 8 <sup>th</sup> – 6:50pm 15 <sup>th</sup> – 6:58pm 22 <sup>nd</sup> – 6:20pm	1 <sup>st</sup> – 8:41pm 10 <sup>th</sup> – 9:07pm 20 <sup>th</sup> – 9:35pm 29 <sup>th</sup> – 10:00pm
Moon Rise	Moon Set	Moon Rise	Moon Set
1 <sup>st</sup> - 11:00am 2 <sup>nd</sup> – 11:20am (ENE) 3 <sup>rd</sup> – 11:44am 4 <sup>th</sup> – 12:15pm 5 <sup>th</sup> – 12:54pm 6 <sup>th</sup> – 1:45pm 7 <sup>th</sup> – 2:49pm 8 <sup>th</sup> – 4:05pm 9 <sup>th</sup> – 5:29pm (ENE) 10 <sup>th</sup> – 6:54pm 11 <sup>th</sup> – 8:20pm 12 <sup>th</sup> – 9:44pm (E) 13 <sup>th</sup> – 11:06pm 15 <sup>th</sup> – 12:27am (ESE) 16 <sup>th</sup> – 1:46am 17 <sup>th</sup> – 3:01am 18 <sup>th</sup> – 4:09am	2 <sup>nd</sup> – 1:07am 3 <sup>rd</sup> – 2:15am (WNW) 4 <sup>th</sup> – 3:25am 5 <sup>th</sup> – 4:35am 6 <sup>th</sup> – 5:40am 7 <sup>th</sup> – 6:38am 8 <sup>th</sup> – 7:26am 9 <sup>th</sup> – 8:05am 10 <sup>th</sup> – 8:35am (WNW) 11 <sup>th</sup> – 9:01am 12 <sup>th</sup> – 9:24am (W) 13 <sup>th</sup> – 9:46am 14 <sup>th</sup> – 10:08am 15 <sup>th</sup> – 10:32am (WSW) 16 <sup>th</sup> – 11:00am 17 <sup>th</sup> – 11:34am 18 <sup>th</sup> – 12:16pm	19 <sup>th</sup> – 5:09am 20 <sup>th</sup> – 5:59am 21 <sup>st</sup> – 6:38am 22 <sup>nd</sup> – 7:10am 23 <sup>rd</sup> – 7:35am (ESE) 24 <sup>th</sup> – 7:56am 25 <sup>th</sup> – 8:14am 26 <sup>th</sup> – 8:31am (E) 27 <sup>th</sup> – 8:48am 28 <sup>th</sup> – 9:05am 29 <sup>th</sup> – 9:23am (ENE) ----- All times in notes are set for Somerton unless stated	19 <sup>th</sup> – 1:07pm 20 <sup>th</sup> – 2:05pm 21 <sup>st</sup> – 3:09pm 22 <sup>nd</sup> – 4:16pm 23 <sup>rd</sup> – 5:24pm (WSW) 24 <sup>th</sup> – 6:31pm 25 <sup>th</sup> – 7:37pm 26 <sup>th</sup> – 8:43pm (W) 27 <sup>th</sup> – 9:49pm 28 <sup>th</sup> – 10:55pm ----- <b>Moon Phases</b> First Quarter – 2 <sup>nd</sup> Full Moon – 9 <sup>th</sup> Last Quarter – 15 <sup>th</sup> New Moon – 23 <sup>rd</sup>
A useful site: <a href="http://www.heavens-above.com">www.heavens-above.com</a>	A S Zielonka		

Comet 88P Howell (15mag - Jan 6<sup>th</sup>) is in Virgo this month. On the 1<sup>st</sup> Feb its distance from Earth is 2.140AU and on the 29<sup>th</sup> its distance is 1.647AU so this comet could possibly get brighter over the coming months. When it reaches perihelion on September 20<sup>th</sup> it will be within the orbit of Mars. On the 9<sup>th</sup>/10<sup>th</sup> May the comet will be at its closest to Earth at 1.080AU. Around May 20<sup>th</sup> it will be within half a degree of the star Porrima (2.7mag) in Virgo.

On the 1<sup>st</sup> at 6:50pm Uranus is 7½ degrees to the right of the Moon. The star Mu Ceti (4.2mag) in Cetus is 3 degrees to the upper left of the Moon.

At 11:00pm on the 2<sup>nd</sup> the star named '16369' (4.1mag) in Taurus is just 2 degrees to the left of the Moon.

On the 3<sup>rd</sup> at 11:00pm Aldebaran (0.8mag) in Taurus is 5 degrees to the upper left of the Moon.

From the 3<sup>rd</sup> - 5<sup>th</sup> Mars passes close to the star Theta Ophiuchi (3.2mag) in Ophiuchus. On the 4<sup>th</sup> Mars will be 2 degrees above left of the star. At 6:20am Mars is 10 degrees above the horizon and 148 degrees azimuth.

There is a launch scheduled on the 5<sup>th</sup>\* at 4:15pm\* from Cape Canaveral, Florida. **Solar Orbiter**, an international cooperative mission between European Space Agency (ESA) and NASA, will address central questions concerning our star, the Sun. The spacecraft will launch on a United Launch Alliance Atlas V 411 rocket. NASA's Launch Services Program is managing the launch.

The International Space Station (ISS) will pass within a degree of Venus on the 5<sup>th</sup> at 7:05:04.56pm. (Time uncertainty of about 0.8 minutes). ISS will be at -0.2 mag. (Please Note: The time is set from Langport)

At midnight on the 5<sup>th</sup> the star Propus (3.3mag) in Gemini is 1 degree to the upper left of the Moon. An occultation of the star Propus by the Moon occurs on the 6<sup>th</sup>. At 2:13:07am it disappears. It reappears at 3:17:15am. (Please note – These times are set from Yeovilton)

On the 6<sup>th</sup>\* at 9:16am\* The crew of Expedition 61(NASA astronaut Christina Koch, ESA astronaut Luca Parmitano and cosmonaut Alexander Skvortsov of Roscosmos) will return to Earth from the ISS aboard their Soyuz spacecraft, landing in Kazakhstan.

On the 6<sup>th</sup> at midnight the star Wasat (3.5mag) in Gemini is 2¼ degrees to the left of the Moon.

At 6:00pm on the 7<sup>th</sup> the stars Castor and Pollux in Gemini point the way to the Moon in the east.

On the 7<sup>th</sup> at 6:00pm the Beehive Cluster (M44) in Cancer is 5 degrees to the upper right of the Moon.

At 7:00pm on the 8<sup>th</sup> the star Eta Leonis (3.4mag) in Leo is 1½ degrees to the upper left of the Moon.

On the 9<sup>th</sup>\* at 10:39pm\* there is a scheduled launch from Wallops Flight Facility in Virginia. A Cygnus spacecraft aboard an Antares rocket, will deliver several tons of cargo to the International Space Station.

Mercury is at maximum eastern elongation from the Sun on the 10<sup>th</sup>.

Mercury is at perihelion on the 12<sup>th</sup>.

The star Lambda Aquarii (3.7mag) in Aquarius is just 1¾ degrees to the left of Mercury and ½ a degree below on the 12<sup>th</sup> at 6:30pm. Mercury is 4¾ degrees above the horizon and at 254 degrees azimuth. Neptune is 6½ degrees to the upper left of Mercury.

On the 12<sup>th</sup> at 11:00pm the star Porrima (2.7mag) in Virgo is 5½ degrees above right of the Moon in the east.

At 6:00am on the 15<sup>th</sup> the star Zubenelgenubi (2.7mag) in Libra is just 3½ degrees to the lower right of the Last Quarter Moon.

On the 16<sup>th</sup> at 6:30am the star Acrab (2.5mag) in Scorpius is just 2 degrees to the lower left of the crescent Moon.

At 6:45am on the 18<sup>th</sup> in the SSE, Mars is 3 degrees to the left of the crescent Moon and 1 degree lower.

An occultation of Mars by the Moon occurs on the 18<sup>th</sup>. This will only be visible from the USA and Mexico.

On the 19<sup>th</sup> at 6:45am Jupiter is 6½ degrees to the left of the thin crescent Moon. The star Nunki (2.0mag) in Sagittarius is 2¾ degrees below left of the Moon.

At 6:35am on the 20<sup>th</sup> the a very thin crescent Moon is due SE and 3 degrees above the horizon. Saturn is 4 degrees to the left of the Moon with Jupiter 6¼ degrees to the upper right.

The star Epsilon Piscium (4.2mag) in Pisces is just 1 degree to the lower right of Venus in the WSW on the 23<sup>rd</sup> at 7:00pm.

On the 24<sup>th</sup> at 6:10pm a very thin crescent Moon may be seen in the WSW. The Moon is 2¼ degrees above the horizon at 251 degrees azimuth. Neptune is 4½ degrees to the upper right of the Moon.

At 6:45pm on the 25<sup>th</sup> the star Iota Ceti (3.5mag) in Cetus is 6 degrees to the left of a thin crescent Moon.

On the 26<sup>th</sup> at 7:00pm Venus is 13 degrees directly above the crescent Moon in the WSW.

At 9:05pm on the 27<sup>th</sup> the Moon is due west with Venus 6¼ degrees to the right. Uranus is 11 degrees above the Moon and ½ a degree to the left.

On the 28<sup>th</sup> at 9:30pm Uranus is 5 degrees directly right of the Moon in the west.

Comet C/2017 T2 Panstarrs (9.5mag – Jan 6<sup>th</sup>) is at perihelion on May 4<sup>th</sup>. From Feb 29<sup>th</sup> – March 9<sup>th</sup> it will be within 2½ degrees of the star Epsilon Cassiopeiae (3.3mag).

\* = Dates and times are subject to change.

**News:** Announced on the 8<sup>th</sup> January. In the quest to discover how massive black holes form, astronomers have spotted several of these objects in some of the smallest galaxies yet found to host them.

**Facts:** Only two spacecraft, both robotic and launched by NASA, have visited Mercury so far, making it the least explored terrestrial planet. **Mariner 10** launched in 1973 and imaged around 45% of the planet's surface from 1974 until its end of mission in March 1975. **MESSENGER** was launched in 2008 and entered Mercury's orbit in 2011, making it the first spacecraft to do so. This mission lasted for four years before the probe succumbed to the planet's gravity and impacted its surface in 2015. It collected extensive data and images and transmitted them back to Earth to be studied by scientists.