



Carried high into the stratosphere by a balloon the size of a football stadium, the ASTHROS telescope will observe wavelengths of light that are not visible from the ground. The launch is planned for December 2023, from Antarctica.

*Image Credit: NASA/Goddard Space Flight Center Conceptual Image Lab/Michael Lentz 27 July 2020*

## What to look out for in the night sky

**1 October - Full Moon** This full moon is known as the Hunter Moon, Travel Moon or Blood Moon. It is also known as the Harvest Moon as this is the full moon that occurs closest to the September equinox each year. It is a Micro Full Moon as it is closest to its apogee, the point on its orbit furthest away from Earth.

**1 October - Mercury at Greatest Eastern Elongation** The planet will be at its highest point above the horizon in the evening, viewed in the western sky, just after sunset.

**7 October - Draconids Meteor Shower** This is a minor meteor shower, producing only about 10 meteors per hour. It is unusual because best viewing is in the early evening instead of early morning. The shower runs annually from 6 – 10 October and peaks this year on the night of the 7 October. The second quarter moon will ensure dark skies for viewing.

**13 October - Mars at Opposition** The red planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. It will be brighter than at any other time of the year and visible all night long. A medium-sized telescope will allow some of the dark details on the planet's surface to be seen.

**16 October - New Moon** The Moon will not be visible in the night sky and so this is the best time of the month to observe faint objects such as galaxies and star clusters because moonlight will not interfere.

**21/22 October - Orionids Meteor Shower** This is an average shower, producing a peak of 23 meteors per hour. The shower runs from 2 October to 7 November but peaks on the night of the 21/22 October. The waxing crescent moon will set before midnight, leaving dark skies. Best viewing will be after midnight, meteors visible anywhere in the sky.

**29/30 October - Southern Taurids Meteor Shower** This shower produces only 5-10 meteors per hour but can produce a higher than normal percentage of fireballs. The shower runs annually from 10 September to 20 November, peaking this year on the night of 29/30 October although the nearly full moon will block out all but the brightest meteors this year. Best viewing will be just after midnight and meteors can appear anywhere in the sky.

**31 October - Full Moon, Blue Moon** October has two Full Moons, which makes this Full Moon a Blue Moon.

**31 October - Uranus at Opposition** The planet will be at its closest approach to Earth, its face fully illuminated by the Sun. The planet will be brighter than at any other time of the year and will be visible all night long. However, due to its distance from Earth, it will only be seen as a tiny blue-green dot in all but the most powerful telescopes.

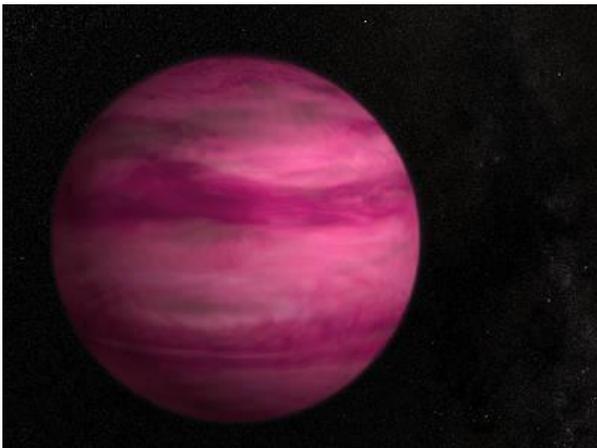
**10 November - Mercury at Greatest Western Elongation** This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look for the planet low in the eastern sky, just before sunrise.

**11/12 November - Northern Taurids Meteor Shower** This shower produces only 5-10 meteors per hour but, like the Southern Taurids, can produce a higher than normal percentage of fireballs. The shower runs annually from 20 October to 10 December but peaks this year on the night of the 11/12 November. The thin crescent moon should leave dark skies and best viewing will be just after midnight, meteors appearing anywhere in the sky.

**15 November - New Moon** This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere. This New Moon takes place very close to its perigee, the point on its orbit closest to the Earth

**16/17/18 November - Leonids Meteor Shower** This shower produces up to 15 meteors per hour. It runs annually from 6-30 November, peaking this year around 17 November. The crescent moon will set early in the evening, leaving dark skies for a good show. Best viewing will be after midnight and meteors can appear anywhere in the sky.

**30 November - Full Moon** This full moon is known as the Beaver Moon, Frosty Moon or Dark Moon.



This gas giant (dubbed GJ 504b), similar in size to Jupiter, is the planet with the lowest mass ever detected around a star, using direct imaging techniques. *Image credit: NASA/Goddard Space Flight Center/S. Wiessinger*

## Useful websites

### Spot the International Space Station:

[https://spotthestation.nasa.gov/sightings/view.cfm?country=United\\_Kingdom&region=England&city=Kettering#.Xxl13ihKhPY](https://spotthestation.nasa.gov/sightings/view.cfm?country=United_Kingdom&region=England&city=Kettering#.Xxl13ihKhPY)

[www.space.com](http://www.space.com)

<https://www.nasa.gov/>

<https://astronomynow.com/uk-sky-chart/>

<https://www.skyatnightmagazine.com/advice/skills/astronomy-guide-viewing-planets-night-sky/>

<https://www.timeanddate.com/astronomy/sights-to-see.html>

Registered Charity No: 1029891

[www.naastronomy.com](http://www.naastronomy.com)

