

October 2011 Night Sky

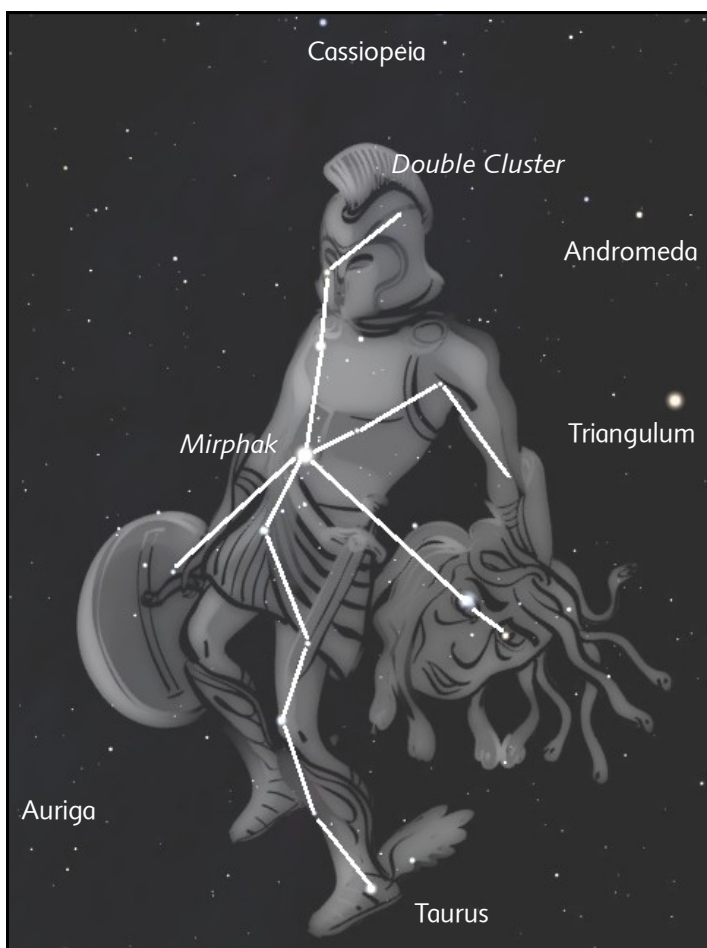


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As crisp Autumn nights draw in there's a lot to see after dark. Scan the skies with binoculars to reveal star clusters and nebulae dotted left, right and centre. No text introducing astronomy this month would be complete without mentioning World Space Week, 4 – 10 October. People all over the world will be celebrating everything space-related, so why not join them?

Constellation of the month: Perseus

Perseus was one of the Ancient Greeks' favourite heroes. According to legend he was challenged to slay the Medusa, a foul creature with live snakes for hair and a gaze that could turn you to stone. Perseus first collected all the equipment he'd need, including a helmet of invisibility so he could be sneaky; a special sword to cut off Medusa's head; and winged sandals to make a swift escape. He did kill Medusa and kept her head, using it as a weapon to turn his enemies to stone.



Finding Perseus

Looking fairly high in the eastern sky will put you in the right general direction to see Perseus. The brightest star is called Mirphak, and is about as bright as the stars in the distinctive nearby constellation Cassiopeia. Another way to find Perseus is to first track down the bright stars Capella in Auriga, and Aldebaran in Taurus. Draw a triangle with these stars and Cassiopeia; Perseus lies in the middle of this shape.

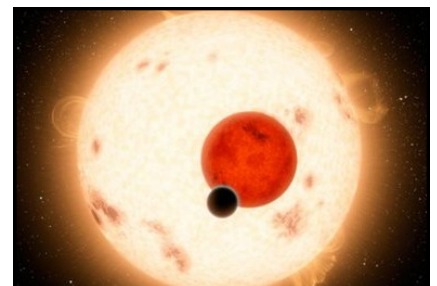
Look out for...

With dark skies you may be able to make out a patch of stars called the Double Cluster. These are actually two separate groups of stars. They appear close in the night sky but are in fact around 7000 light-years from the Earth. As star clusters go they are quite young, being only three to six million years old. Train binoculars on the Double Cluster for an even better view!

News flash: Planet orbiting two suns discovered

Astronomers using NASA's Kepler space telescope have found a planet orbiting a pair of stars some 200 light-years from Earth. To date over 650 planets beyond our Solar System — called extrasolar planets — have been discovered, but this is the first in a binary star system. Sunset as seen from this world would be a truly unforgettable sight!

This artist's impression shows the planet and two stars. Image: NASA.



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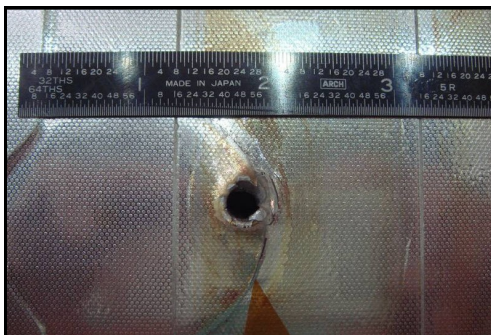
The planets in October

- Mercury** is too close to the Sun so cannot be seen this month.
Venus may be spotted low in the south-east after sunset.
Mars rises in the north-east at around 1am.
Jupiter is very bright, and so an unmistakable sight in the south.
Saturn cannot be seen this October.

Theme of the month: Space junk

We're often warned about the perils of waste on Earth, but it's a problem in space as well. There are tens of millions of pieces of rubbish in space, although most are tiny. More of a problem is that over 12,000 pieces of junk are in low Earth orbit, where many satellites operate.

Spacecraft launched now tend to have a thin layer of aluminium-like material covering them, which offers protection from small pieces of junk. However, some parts of spacecraft, such as solar panels, have to stay uncovered. This makes them vulnerable to collisions.



The Space Shuttle Endeavour was punctured by a piece of space junk. Image credit: NASA.

Currently not a lot can be done about space junk. Disused satellites are put into an isolated "graveyard orbit", which helps to an extent. There are ideas for building a device nicknamed a "laser broom" that would use a powerful laser on Earth to "sweep" material away. At the moment all plans to remove space junk are very expensive.

Moon calendar

04 October
First Quarter



12 October
Full Moon



20 October
Last Quarter



26 October
New Moon



Would you like to know more?

Zooniverse is a collection of projects that lets you help professional astronomers and maybe make a real discovery. Visit www.zooniverse.org to get started.

Stellarium is a planetarium program for your computer, showing a realistic 3D sky just as you would see if looking with your eyes or a telescope. Best of all, it's completely free. Download it at www.stellarium.org

Heavens Above is a website for you to create customised sky maps and see when satellites like the International Space Station and Iridium flares will be visible. Try it at www.heavens-above.com

The Bristol Astronomical Society is a group of local stargazers who are always keen to help beginners. Find out more via www.bristolastro.org.uk

Do you have an astronomy question for the At-Bristol planetarium team?
 E-mail lee.pullen@at-bristol.org.uk and our devoted astronomers will be happy to help!