

September night sky

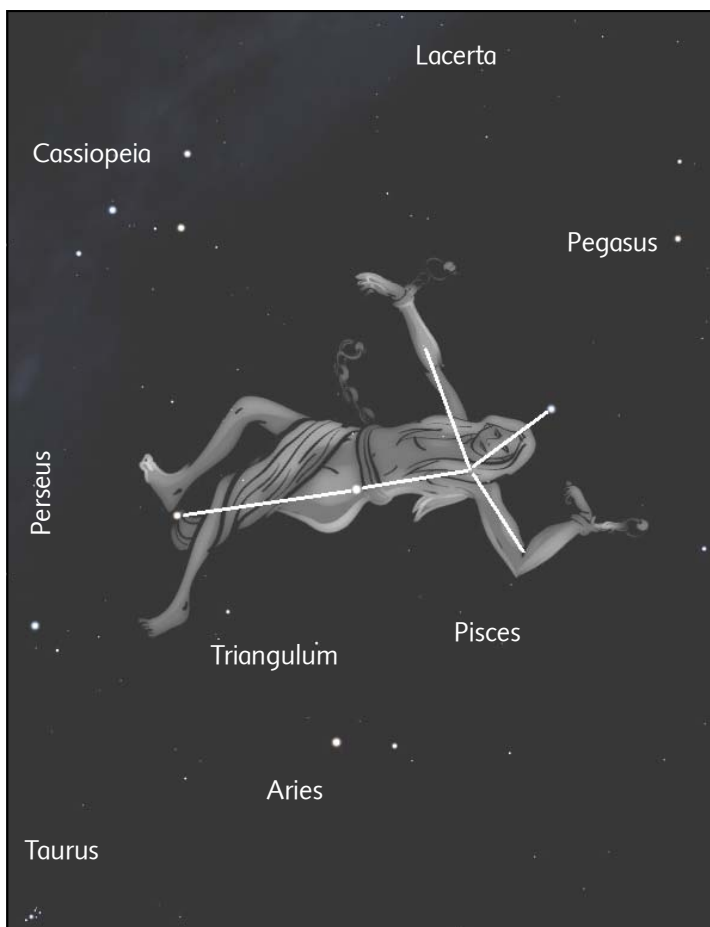
The Autumn season arrives in September, and with it some exciting constellations become well-placed in the night sky. Andromeda the Chained Lady is in the middle of a group which includes Cassiopeia the Queen, Perseus the Hero, and Pegasus the Winged Horse. This month Jupiter lives up to its nickname as "King of the Planets", shining brightly high in the sky. Use binoculars or a small telescope to see its four brightest moons, Ganymede, Callisto, Io and Europa, visible as pin-pricks of light.



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Constellation of the month: Andromeda

According to legend, Andromeda was the daughter of Queen Cassiopeia, a very boastful lady who claimed that Andromeda was even more beautiful than the daughters of the sea god Nereus. Obviously this annoyed Nereus, so to avenge the insult a sea monster was sent to destroy Cassiopeia's country. The Queen's only option was to chain Andromeda to the rocks as a sacrifice for the sea monster. Andromeda was about to be eaten when the hero Perseus arrived and slayed the beast. Andromeda then escaped with the help of Pegasus the winged horse. In the night sky Andromeda is shown chained to the rocks, awaiting her fate. Perseus is close by though, ready to rescue her!



Finding Andromeda

Andromeda itself isn't the most obvious of constellations, but luckily it's close to the distinctive "W" shape of Cassiopeia. Start off by looking high in the east and then try to track down the brighter stars making up Cassiopeia, which will be just above fainter Andromeda.

Look out for...

The famous Andromeda Galaxy is within this constellation's boundaries, close to the middle star. From a dark site away from light pollution it's actually possible to make out the bright centre of this galaxy with the naked eye. The Andromeda Galaxy is slightly bigger than our own Milky Way Galaxy and contains around a trillion stars. but looks very faint because it's an incredible 2,500,000 light-years away from us. Still, as galaxies go it's one of our closer neighbours. The force of gravity is moving the Andromeda Galaxy and the Milky Way together on a collision course, although they're so far apart that they won't impact for another 2.5 billion years. So we can all rest easy.

News flash: solar system discovered around a distant star

Astronomers have found a system of planets around another star. It contains at least five planets (ours has eight), and was discovered after astronomers saw the star "wobble" very slightly from side to side due to the planets' gravity gently pulling at the star as they orbit. These planets are 127 light-years away from us, so unfortunately we won't be visiting them any time soon!

*An artist's impression showing one of the newly-discovered planets orbiting its star.
Image credit: ESO/L. Calçada.*



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The planets in September

Mercury	is putting on a good display in the east before dawn.
Venus	is bright but very low in the western sky after sunset.
Mars	is not in a particularly good position to see this month.
Jupiter	is an exceptional sight shining brightly in the south-eastern sky.
Saturn	is lost in the glow of twilight.

Theme of the month: Astrophotography

Have you ever looked up at the night sky and thought that it would be good to take a photograph of the constellations? The good news is that it isn't as difficult as you might imagine, and after a few attempts you can produce some excellent images. You need two pieces of equipment. The first is a camera with manual settings allowing you to control the exposure. Most cameras with interchangeable lenses have this function, and a few compact cameras do as well. Film and digital cameras will both work for astrophotography, although with digital you can see your results immediately. The second thing you'll need is a sturdy tripod.



This exposure time of one hour captures startrails above a campsite.

The first step is to set your camera up on the tripod so it's as steady as possible. Next, focus the camera on infinity—this will make sure that the stars are sharp. Then use your manual mode and set the exposure (sometimes called "bulb") time to 20 seconds. Such a long exposure is needed because the stars are so faint. Now you can snap away, check your results, change some settings, and try again! Here are some things to consider:

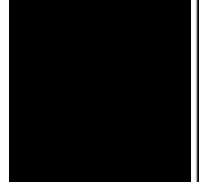
- * Longer exposures will create startrails as the Earth spins and the stars seem to move.
- * Increase the ISO setting on your camera to make the picture brighter but be careful as this may degrade your image quality.
- * Use a wide aperture (lower f number) to let more light into your camera.
- * Try to have something interesting in your picture's foreground to help it stand out.

Moon Calendar

1 September
Last Quarter



8 September
New Moon



15 September
First Quarter



23 September
Full Moon



Would you like to know more?

Details of our planetarium shows and back issues of this night sky guide can be found at:
<http://www.at-bristol.org.uk/theplanetarium>

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 that lets you create customised sky maps and see when satellites like the International Space Station will be visible. Head over to www.heavens-above.com and try it out.

Do you have an astronomy question for the At-Bristol planetarium team?

E-mail lee.pullen@at-bristol.org.uk and our keen astronomers will try to quench your thirst for knowledge!

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