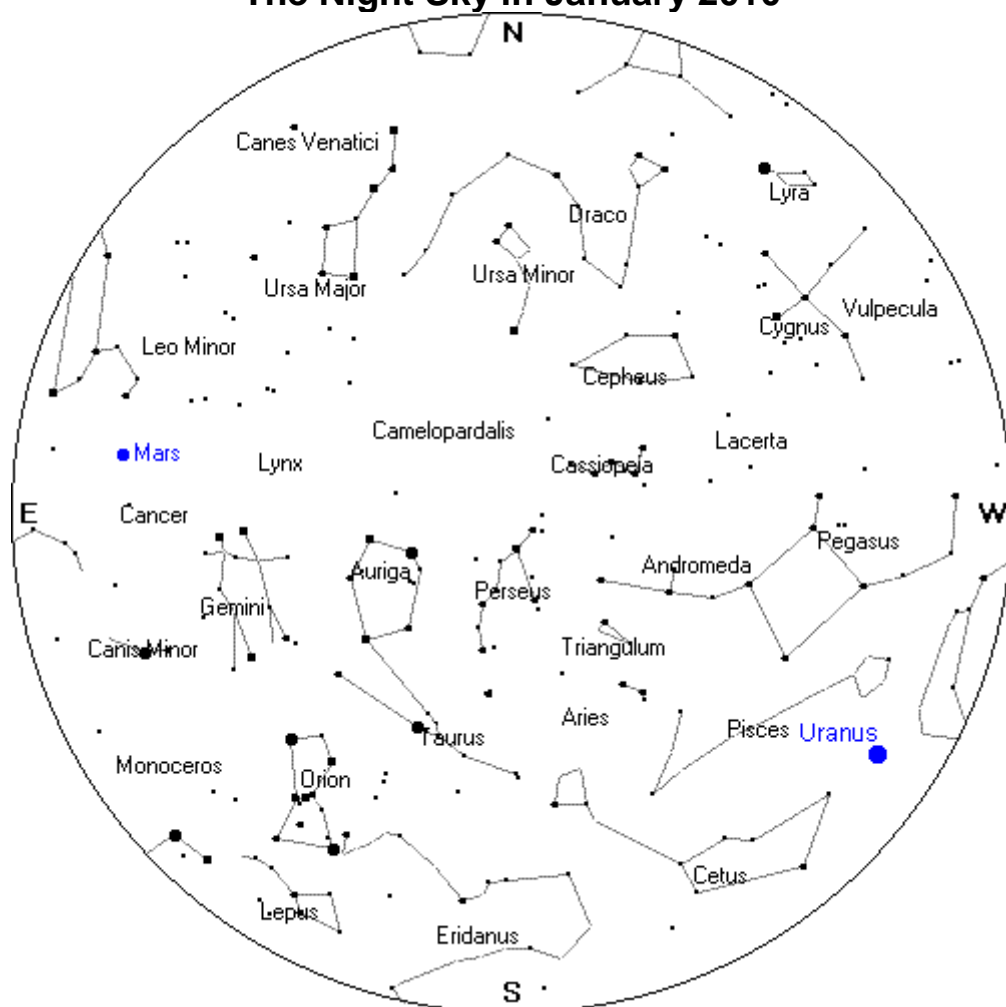


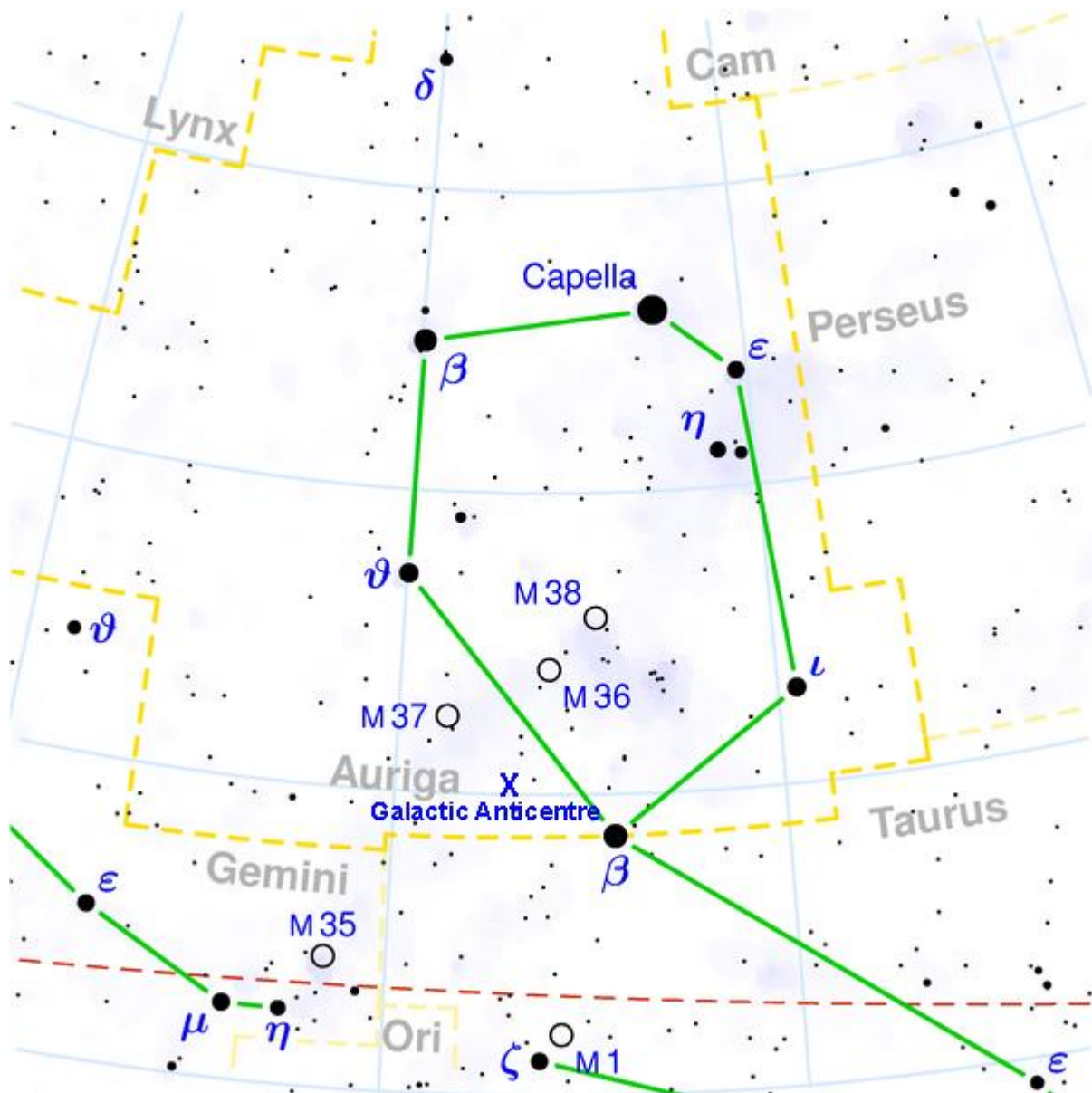
Dundee Astronomical Society The Night Sky in January 2010



The Sky at 8pm on 15th January 2010

[chart courtesy of www.heavens-above.com]

The prominent winter constellations are high in the south at the start of the year and will dominate the sky for another two months. The constellation, Auriga, the charioteer, is the highest in the sky and will appear almost overhead later in January evenings. The brightest star of Auriga is Capella, the sixth brightest in the entire sky and the third brightest in the northern hemisphere. Capella is situated at a distance of 42 light years and is a close double star, both of which are about 10 times the diameter of our Sun despite being a similar yellow colour. There are actually another two stars which make up the group, but these are faint, small red dwarf stars. Close to the second brightest star of Auriga lies the galactic anticentre, the point in the sky which is directly opposite the galactic core. The Milky Way is at its dimmest in this direction as we are looking through the thinnest part of it. Scanning the pentagonal shape of Auriga with binoculars will reveal three open star clusters. M36, M37 and M38, which lie at distances of about 4,200 light years.



Auriga is situated above Taurus, the Bull, and the second brightest star of Auriga forms the end of one of the bull's horns. Moving directly downwards towards Orion brings us to the star marking the tip of the bull's other horn. Just above this star is a faint misty patch which can only be made out with a large telescope on a clear, moonless night. This is the famous Crab Nebula, which is the remains of a brilliant supernova recorded by Chinese and Arab astronomers in 1054. It was discovered by John Bevis in 1731 and is at a distance of 6,500 light years. The nebula is expanding at a rate of 1,500 km per second and has, at its centre, a small and very dense rotating neutron star. It was once said that there were only two areas of astronomical study – that of the Crab Nebula and everything else.

The first meteor shower of the year, the Quadrantids, peaks at 6pm on the 3rd of January when there may be a maximum number of about 80 per hour. It is not particularly favourable this year with an 18 day old Moon. The Quadrantids are active from 1st January till 6th January.



Planets:

Mercury is likely to be too low to be seen in the early morning sky during January. It will be about 5° above the south eastern horizon around the 18th of the month.

Venus is too close to the Sun to be seen.

Mars starts the month in Leo but moves back into Cancer towards the end of the month. It is closest to Earth on the 29th January when it will be due south at midnight. Unless one of the famous dust storms takes place, detail on the surface will be seen in moderate sized telescopes.

Jupiter is becoming too low in the south west to be seen easily this month and sets at about 1930UT.

Saturn rises at about 11pm mid month and will be well placed by about 3am. Saturn's rings are now opening up as the planet's north pole is tilted 4.8 degrees towards us.

Uranus is an evening object in Aquarius.

Neptune can only be seen in Capricornus in early evening.

The Moon:

The Moon is at last quarter on the 7th, new on the 15th, at first quarter on the 23rd and full on the 30th.

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