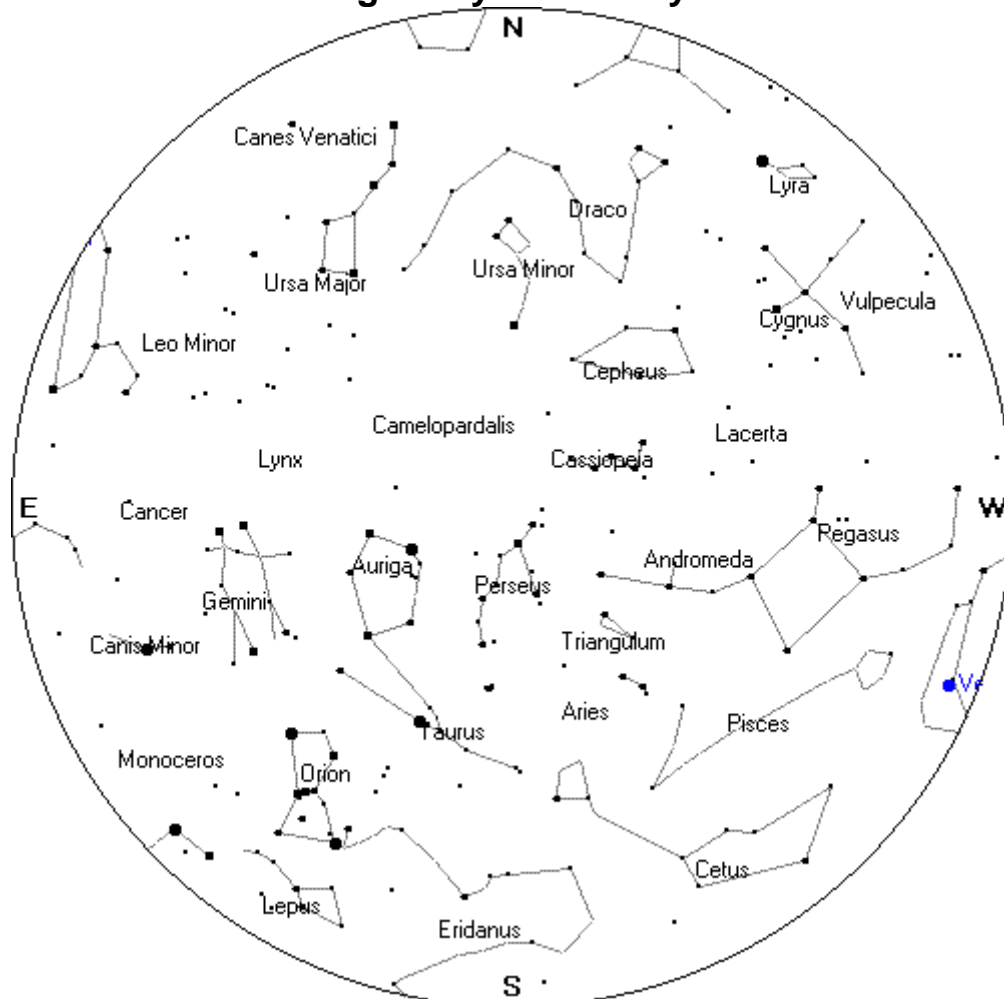


Dundee Astronomical Society The Night Sky in January 2009

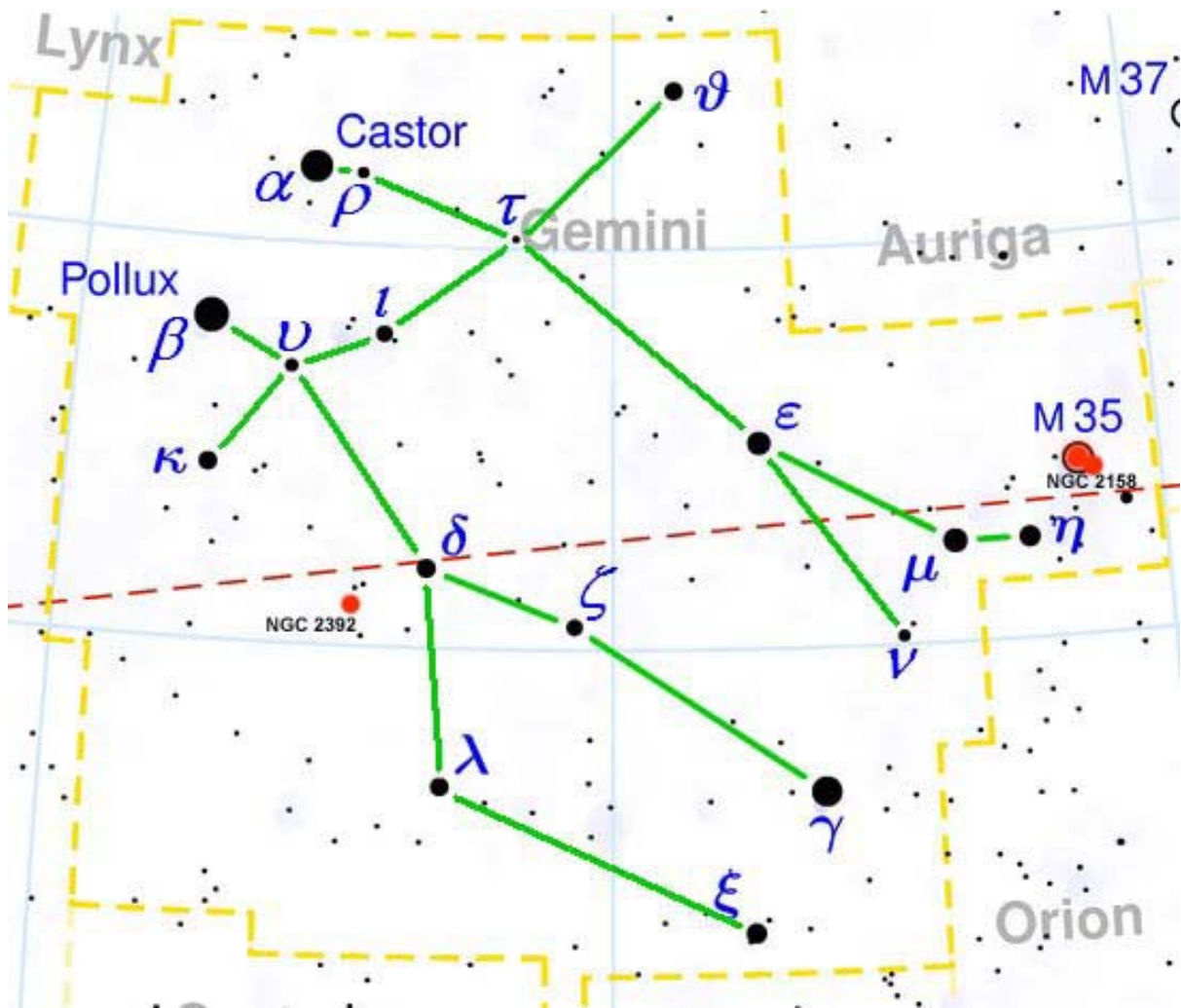


The Sky at 8pm on 15th January 2009

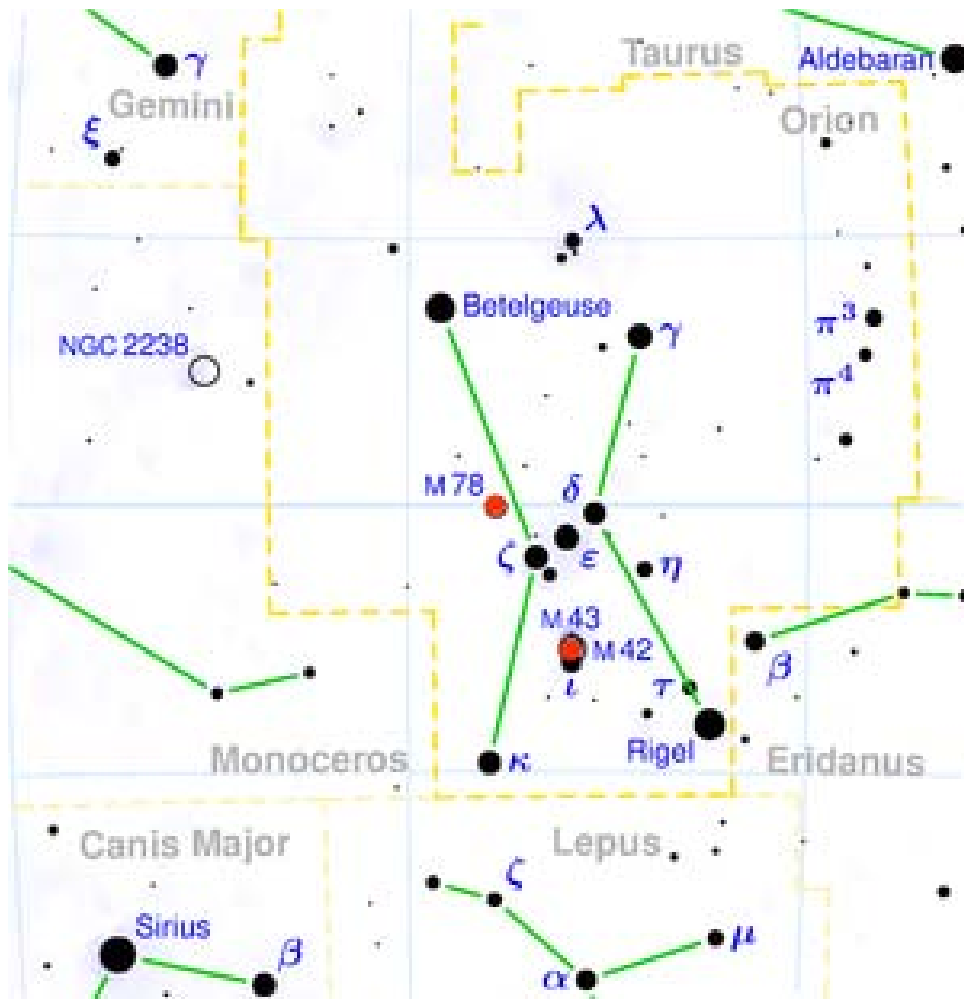
[chart courtesy of www.heavens-above.com]

Following last month's constellation, Auriga, Gemini will become more prominent in the mid evening sky during January. Castor (α Gem) is a multiple star which can be resolved into three components with a moderate amateur telescope, or two stars with a smaller one.

Three deep sky objects worth a look are M35, NGC 2158 and NGC 2392. M35 is an open cluster about 2,700 light years distant just a bit north of η Gem. Just beside M35 is the tighter group of NGC 2158. This looks a bit like a globular cluster but is actually an old galactic cluster about 1.05 billion years old with a distance of 16,000 light years. It was discovered by William Herschel in 1784. The third object of interest is NGC 2392, also known as the Eskimo Nebula. This is a planetary nebula near δ Gem. at a distance of 3,000 light years and is believed to be about 1,060 years old. It has a magnitude of 9.1 and can be seen with a moderate sized amateur telescope given a dark sky. This, too, was discovered by William Herschel but in 1787.



South of Gemini is Orion, the favourite constellation of many observers and one known by most non-astronomers. Most can make out the distinctly orange colour of Betelgeuse which contrasts markedly with the white-blue of Rigel below the belt of Orion. This constellation is full of bright and faint gaseous nebulae, the showpiece being M42, the Great Orion Nebula. This, together with M43, just beside M42, is easily visible in binoculars and is striking in small (or large) telescopes with the bright, young stars of the Trapezium just within the nebulosity beside the 'Fish's Mouth'. North of ζ Ori. is the reflection nebula M78 which can be seen with a telescope of 80mm in good conditions. Most of the other nebulosity in the Orion area requires much larger telescopes to glimpse visually but make interesting objects for the CCD imager.



The Quadrantid meteor shower reaches a short and sharp peak on the 3rd January, unfortunately at about midday! The radiant is in northern Böotes and, when the maximum is favourable, there may be a rate of 100 meteors per hour.



Planets

Mercury will be visible low in the south-west for the first two weeks in January. It will, however, be very low from the Dundee area as its declination is only about -20° . It will be at inferior conjunction on 20th January.

As the declination of Venus starts to increase, it will be a brilliant evening object (magnitude -4.3) for about four hours after the sun has set. By the end of January the disk of Venus will be about 30 arc seconds across and rather less than 50% illuminated.

Mars is in Sagittarius and will be quite close to the Sun during January and will present a very small disk.

Jupiter is not observable as it is in conjunction with the Sun on January 24th.

Saturn rises in mid-evening and is well placed in the southern sky by midnight and into the early hours. The rings are almost edge on and it is worth having a look for cloud bands and belts on Saturn's surface. These are not as obvious as those on Jupiter and I have always found a yellow/green filter helpful in increasing contrast but have a try of various filters to see if they help.

Uranus and Neptune are poorly placed for observation.

The Moon

The moon is at first quarter on 4th January, full on 11th January, last quarter on 18th January and new on 26th January.

From about 1620 UT on the evening of the 7th, the moon will occult some of the stars of the Pleiades. The brightest star, ϵ Tauri (mag. 3.0) will be occulted at about 1737 UT. The Moon will be 10 days old. Use whatever you have to view this event – binoculars will be particularly useful as quite an area is involved during the entire event.

Ken Kennedy
Director of Observations