

Dundee Astronomical Society The Night Sky in February 2010

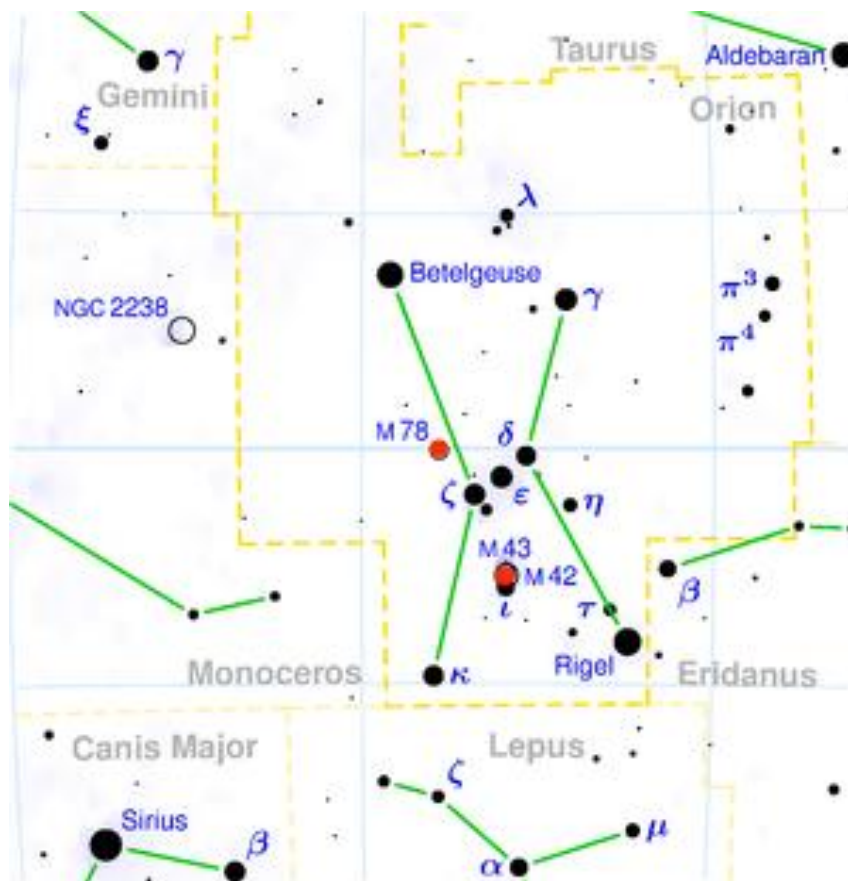


The Sky at 8pm on 15th February 2010

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

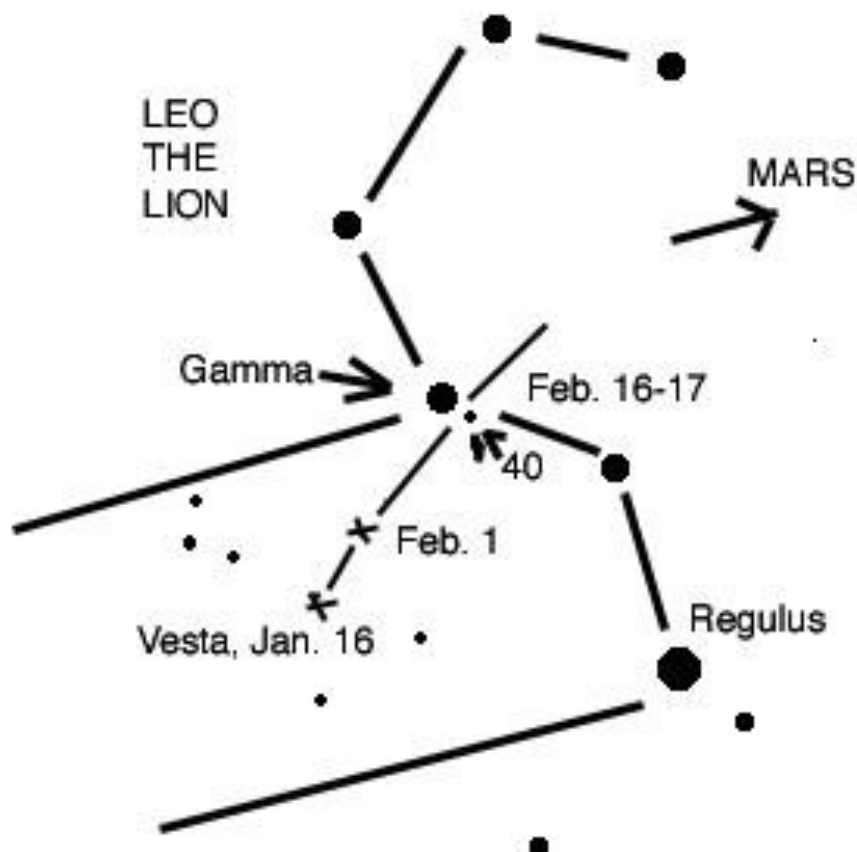
Orion, the most easily recognisable winter constellation, is in the south by mid evening throughout February. It is easy to imagine the Great Hunter with the red supergiant star, Betelgeuse, at his right shoulder, a small triangle of stars forming the head, the white supergiant, Rigel, at his foot and in between, the three stars of his belt. As stars moved into place, Orion was formed about 1.5 million years ago and will be seen, much as it is today, for another 2 million years. The stars of Orion are located in the Orion arm of our galaxy as is our own Sun. This is a fairly minor arm of the Galaxy but in the direction of Orion there are numerous areas of gas and dust which are at present forming new stars. Much of this material is about 1,500 light years away and the brightest of these areas is the Great Orion Nebula in the centre of Orion's sword below the left of the three stars of the belt. The nebula glows by the light of bright young stars, perhaps only a few million years old and can easily be seen with binoculars. With a small telescope, four of the brightest of these stars can be seen surrounded by glowing gas. There are many less obvious areas of nebulosity within Orion such as the area of the Horsehead and Flame nebulae, but these are more difficult to see and show more easily on digital imaging. M78 is worth a try on a clear, dark night but will, even then, only be seen as a faint object.

Betelgeuse is a variable red giant star and if placed at the centre of our solar system would engulf Mars and reach towards Jupiter. Its life will end as a supernova which may well occur quite soon in astronomical terms. However, that may not be for many tens of thousands of years yet but it will be a spectacular event when it happens. Rigel and the three stars of the belt are also supergiants with Alnilam, the central star of the belt, being the most powerful bright star in the sky. It outshines the Sun by 375,000 times!



For the first time in several years the Sun is showing signs of becoming active. Very few sunspots have been seen until December and January and this may indicate the start of the delayed new solar cycle. Aurorae have not been seen in the local skies since about 2004, but if solar activity continues to grow, we may again see that welcome sight by next winter.

February 18th sees asteroid Vesta at its closest in Leo. It will reach magnitude 6.1 and will be worth following with binoculars or should be quite easy to image with almost any digital camera given a few seconds exposure on a tripod. The diagram below shows where to look some days before and after its closest approach.



Mercury will be too low in the morning sky to be seen locally.

Venus will be very low in the south west at about 5pm by the middle of February.

Mars is visible in Cancer throughout the evening. Seen as a bright orange star in the south it was closest on January 27th and will gradually grow smaller and less bright as Earth moves away during the next few months.

Jupiter will be very low in the south west early in the evening and will be close to Venus in the middle of the month.

Saturn rises at about 8.30pm mid month and will be in the south east by midnight.

Uranus is low in the south west in the early evening.

Neptune moves eastwards of Jupiter during the month and is not readily observable.

The Moon is at last quarter on the 5th, new on the 14th and at first quarter on the 22nd and full on the 28th.

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