

# Crewkerne & District Astronomical Society

## Sky Notes : March 2013

All timings are Universal Time. (G.M.T.) Note : B.S.T. commences at 02.00 on Sunday March 31<sup>st</sup>. (U.T. + 1 hour)

### Moon's Phases

Last Quarter	March	04d. 21h. 53m.
New	"	11d. 19h. 51m.
First Quarter	"	19d. 17h. 27m.
Full	"	27d. 09h. 27m.

Moon at perigee (nearest to Earth)	March	05d. 23h.	Diam.	32' 18"
Moon at apogee (furthest from Earth)	"	19d. 03h.	"	29' 34"
Moon at perigee	"	31d. 04h.	"	32' 31"

### The Planets

**Mercury** : Not well placed this month. Inferior conjunction with the Sun, when Mercury passes between the Earth and the Sun, occurs on the 4<sup>th</sup>, then it becomes a morning object, but still close to the Sun for the rest of the month. Greatest W. elongation (31°) is on the 31<sup>st</sup>. when it rises at 05.00, 40 minutes before dawn. At the start of the month it lies just inside Pisces, by the Aquarius border.

It travels S.W. 12° to reach a stationary point on the 16<sup>th</sup>, having re-entered Aquarius around the 2<sup>nd</sup>. From the 16<sup>th</sup> it moves back N.E. 6° to the end of the month. On the 16<sup>th</sup> it will be mag. +1.5, 10" diam., elong. 19° W. and rising at 05.30, 40 minutes before the Sun.

**Venus** : For the whole of the month it will be below the horizon during the hours of darkness. Superior conjunction occurs on March 28<sup>th</sup>, when it will lie on the opposite side of the Sun to the Earth. It will then become an early evening object for the rest of the year. Even by the middle of April it will set only 20 minutes after sunset.

**Mars** : An extremely early evening object, approaching conjunction on April 16<sup>th</sup>. At the beginning of the month it sets at 18.30, ¾ hour after sunset, and by the end at 18.50, only 20 minutes after the Sun. Starting the month just in N.E. Aquarius, it enters S.W. Pisces around the 2<sup>nd</sup>. At the end it lies just N. of the border with Cetus, having travelled 25° N.E. in total.

Mid month it will be mag. +1.2, 4.0" diam., elong. 8° E. and setting at 18.40, 35 minutes after sunset.

**Jupiter** : Continues to be the best placed and brightest evening object. Remaining in Taurus, it moves 4° E. during the month and will be 5° N. of 1<sup>st</sup> mag. star Aldebaran, Alpha Tauri on the 24<sup>th</sup>. On the 18<sup>th</sup>, around midnight Jupiter will be 1.5° N. of the nearly F.Q. Moon. It will then be mag. -2.2, 37" diam., elong. 72° E. and setting at 00.45. At the end of the month it will set at midnight.

**Saturn** : A late evening / morning object. Remaining in W. Libra, near the border with Virgo, it moves 1° N.W. during the month. It reaches opposition at the end of April. Mid month it will be mag. +0.3, disc 18.3" diam., rings 41.5", (inclined at 19.1°), elong. 134° W. and rising at 22.00.

Titan, mag. 8.5 & elong. 180". Greatest E.. elong. on March 1<sup>st</sup>. & 17<sup>th</sup>. Greatest W.. elong. on March 9<sup>th</sup>. & 25<sup>th</sup>.

**Uranus** : With conjunction occurring on the 29<sup>th</sup>, it is an early evening object, best seen at the start of the month, when it sets at 20.00, 2¼ hours after sunset. Still in S. Pisces, very close to the border with Cetus, it travels just under 2° N.E. during the month. It starts 20 arc minutes N.E. of mag. 5.8 star 44 Piscium. Mid month it will be mag. 5.9, 3.4" diam., elong. 13° E. and setting at 19.00, 1 hour after the Sun.

**Neptune** : Following conjunction on 21<sup>st</sup> Feb., it is a very difficult late morning object all month. At the start it rises at 06.40, only 10 minutes before dawn and by the end at 05.00, 40 minutes before the Sun. In W. Aquarius, it moves 1.2° N.E. during the month. At the end it lies 1¼° W. and slightly N. of the 5<sup>th</sup> mag. star Sigma Aquarii. Mid month it will be mag. 8.0, 2.2" diam., elong. 21° W. and rising at 05.30, 40 minutes before dawn.

### Meteors

Like last month there are no showers this month. The next shower will be the Virginids, peaking around April 11 / 12.

### Variable Stars

**Algol (Beta Persei)** : Normally at mag. 2.1, every 69 hours it is partially eclipsed by a fainter orbiting companion star and drops to mag. 3.4. From maximum through minimum to maximum again takes 9.6 hours. Times of minima currently observable from the U.K. :- March 8 02.8h., March 10 23.6h., March 13 20.5h., March 31 01.4h., April 2 22.2h.

### Deep Sky Objects

**C49 (NGC 2237) & C50 (NGC 2244)** : Two items from Patrick Moore's 'Caldwell Catalogue', which he published in 1995 to supplement Charles Messier's famous catalogue of star clusters, nebulae and galaxies. Patrick listed 109 objects, like Messier, but some of them are in southern skies. Messier only listed objects that he could see from France.

C49 is the 'Great Nebula in Monoceros', an emission nebula best known as the 'Rosette Nebula', one of the largest and most massive in the night sky. Near the centre of C49 is C50 (NGC 2244), an open star cluster whose extremely hot young 'O' type stars provide the ultra violet radiation which energises the nebula. This cluster was first reliably reported by William Herschel in 1784. It is a little strange that he did not mention the surrounding nebula (C49) which is obvious to modern observers. The cluster has at least 100 members, the brightest at mag. 7. (12 Monocerotis is brighter at mag. 5.8, but is a foreground star, not a member of the cluster). Relatively young at 1 million years old, the cluster has a diam. of 43 L.Y., apparent size ½ ° diam. and an integrated mag. of 4.5. The Rosette (C49), while listed as NGC 2237, also includes some bright patches, eg. NGC 2238 & 2246. Various parts of the nebula were noted by early astronomers. It was not until 1850 that Edward Barnard photographed it to reveal its whole extent and earned it the name Rosette. It extends over 90 L.Y., with an apparent size of 1.3° x 1° and an integrated magnitude of 5. Because of its large size and low contrast it is best seen with binoculars or a low power rich field telescope – and dark clear skies ! R.A. 06h. 32.3m., Dec. 04°55'. To find it, start from Betelgeuse, 1<sup>st</sup> mag. Alpha Orionis, and go 7½° S.E. to mag. 4.3 Epsilon (8) Mon. NGC 2237 lies 2¼° E. of it.

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