

# Crewkerne & District Astronomical Society

## Sky Notes : October 2014

All timings are Universal Time. (G.M.T.) (B.S.T. - 1 hour)

Note B.S.T. ends on Sunday Oct. 26 at 02.00

### Moon's Phases

First Quarter	October	02d. 19h. 33m.	
Full	"	08d. 10h. 51m.	
Last Quarter	"	15d. 19h. 12m.	
New	"	23d. 21h. 57m.	
First Quarter	"	31d. 02h. 48m.	
Moon at perigee (nearest to Earth)	Oct.	06d. 10h.	Diam. 32' 57"
Moon at apogee (furthest from Earth)	"	18d. 06h.	" 29' 30"

**Total Eclipse of the Moon.** On October 8<sup>th</sup>, maximum at 10.54 U.T. Visible from the Americas and the Pacific, but not from Europe.

**Partial Solar Eclipse.** On October 23<sup>rd</sup>. Maximum occurs at 23.21 U.T., when 81% of the Sun will be obscured. Visible only from North America and the northern Pacific.

### The Planets

**Mercury** : At the start of the month a very early evening object, setting at 18.00, only 15 minutes after sunset. It reaches inferior conjunction with the Sun on the 16<sup>th</sup>, then becoming a morning object. By the end of the month it rises just after 05.00, 1¼ hours before dawn. Continues to lie in Virgo all month. At the start it travels 1° S.E. to a stationary point on the 4<sup>th</sup>, then turns back and moves 10° N.W. to reach another stationary point on the 25<sup>th</sup>, before finally moving 2° S.E. to the end of the month.

Mid month it will be mag. 4.9, 9" diam., elongation 5° E. and rising and setting at the same time as the Sun, at 06.30 & 17.05.

**Venus** : With superior conjunction with the Sun occurring on the 23<sup>rd</sup>, Venus is badly placed for observation this month. At the start of the month it is a very late morning object, rising at 05.30, ½ hour before the Sun, and getting later. After the 23<sup>rd</sup> it becomes an evening object, but even by the very end of the month it sets at 16.35, only a few minutes after sunset. Beginning the month in western Virgo, it moves S.E. to cross the whole constellation to enter Libra around the 29<sup>th</sup>, a total travel of 36°.

Mid month it will be mag. -3.8, 9.7" diam., elong. 3° W. and like Mercury, rising and setting at the same time as the Sun (06.30 & 17.05).

**Mars** : Remains an early evening object. On the 1<sup>st</sup> it sets at 19.45, 2 hours after sunset, and on the 31<sup>st</sup> at 19.10, 2¾ hours after the Sun. Starting the month in S.W. Ophiuchus, 4° N.N.E. of Antares, travelling E. it crosses into eastern Sagittarius around the 22<sup>nd</sup>. A total distance of 24° during the month. On the 14<sup>th</sup> it will pass 0.3° N. of the 3<sup>rd</sup> mag. star Theta Ophiuchi. On the 19<sup>th</sup>, around 22.00 U.T, comet Siding Spring (C/2013 A1) will pass 81,000 miles from Mars, (20 times Mars diam.). The comet will be mag. 8, and appearing 2' away from Mars which will be mag. 0.9.

Mid month it will be mag. +0.8, 5.8" diam., elong. 60° E. and setting at 19.30, 2¼ hours after sunset.

**Jupiter** : At the start of the month an early morning object, rising at 01.00, but from the 22<sup>nd</sup> it starts to rise before midnight (U.T.) and becomes nominally an evening object. By the end of the month it rises just before ½ past 11 p.m. It begins the month in the western side of Cancer. Travelling S.E. it crosses into Leo around the 14<sup>th</sup> and ends the month 10° W.N.W. of 1st. mag. star Regulus, Alpha Leonis. A total distance of 4°. On the 18<sup>th</sup> at 04.00 Jupiter will lie 5° N. of the 24 day old Moon.

Mid month it will be mag. -2.0, 34.8" diam., elong. 64° W. and rising at 00.20.

**Saturn** : An increasingly early evening object, approaching conjunction with the Sun on Nov. 18<sup>th</sup>. On the 1<sup>st</sup> it sets at 19.00, 1½ hours after sunset, and by the 31<sup>st</sup> at 17.10, only 40 minutes after the Sun. Remaining in eastern Libra, it moves 3° E.S.E. during the month, to end it some 15° W. of the border with Scorpius. On the 25<sup>th</sup> at 16.06 Saturn will lie less than 1° S. of the 2 day old Moon. An occultation will be visible from the U.K., ending an hour later, but low above the S.W. horizon.

Mid month it will be mag. +0.6, disc diam. 15.5", rings 35" (inclined at 22°), elong. 30° E. and setting at 18.15, an hour after the Sun. Titan, mag 8.1 & elong. 160". Greatest W. elong. on Oct. 4 & 20. E. elong. on Oct. 12 & 28.

**Uranus** : It is at opposition on the 7<sup>th</sup>, when it will be above the horizon all night. At midnight then it will lie due S., 44° above the horizon, at mag. 5.7, and 3.7" diam. Still in southern Pisces, only a few degrees N. of the border with Cetus, it continues to move S.W., 1¼° during the month, ending it 3° S. of the 4<sup>th</sup> mag. star Delta (63) Piscium.

Mid month it will still be mag. 5.7, 3.7" diam., but elong. 172° E. and setting at 05.45, 45 minutes before dawn..

**Neptune** : An evening object all month, but getting earlier. At the start of the month setting at 03.00, 3 hours before dawn, and by the end at 00.45. Continuing to lie in western Aquarius, it travels ½° S.W. during the month, starting it ½° N.W. of the 4.8 mag. star Sigma (57) Aquarii.

Mid month it will be mag. 7.8, 2.3" diam., elong. 134° E. and setting at 02.00.

### Meteors

**Piscids** : September – October. The third maxima occurs this month on the 13<sup>th</sup>. Radiant is at R.A. 01h. 44m., Dec. +14°, 10° S.W. of Hamal (Alpha Arietis). Culmination at 01.20 U.T., altitude 53°. Zenith Hourly Rate 10. The Moon is unfavourable, 2 days before L.Q., rising at 20.45, setting at 12.35 on the 14<sup>th</sup>.

**Orionids** : Oct. 16 - 30. Maximum Oct. 21 / 24. Radiant at R.A. 06h.24m., Dec. +15°, 10° N. of Betelgeuse, 1<sup>st</sup> mag. Alpha Orionis. Culmination at 04.30, altitude 54°. Z.H.R. 25. Moon very favourable, setting at 16.00 on the 21<sup>st</sup> & 17.30 on the 24<sup>th</sup>. Rising at 05.00 on the 22<sup>nd</sup>. One of the major annual showers, created when the Earth crosses the trail of dust left behind by comet Halley.