Crewkerne & District Astronomical Society

Sky Notes : August 2012

All timings are Universal Time. (Add one hour for B.S.T.).

Moon's Phases

Full	August	02d. 03h. 27m.
Last Quarter	"	09d. 18h. 55m.
New	"	17d. 15h. 54m.
First Quarter	"	24d. 13h. 54m.

Moon at apogee	(furthest from Earth)	August	10d. 11h.	Diam. 29' 35".
Moon at perigee	(nearest to Earth)	"	23d. 19h.	" 32' 19'

The Planets

Mercury : Following inferior conjunction with the Sun on July 28th,, is a morning object. Starting in Cancer, it travels 5° N.W. to a stationary point on the 7th., and then goes back S.E. 19° to enter Leo on the 26th. It moves a further 10° to end the month 2° N.W. of the 1st. mag. star Regulus, Alpha Leonis. It reaches greatest W. elongation (19°) on the 16th., when it will be mag. +0.1, 7.6" diam. and rising at 03.10, 1½ hours before dawn. .

Venus : Also a morning object, it travels 30° E. during the month. Starting in eastern Taurus, it enters N.W. Orion around the 4th. and crosses into Gemini on the 14th. It reaches greatest W. elongation (46°) on the 15th. It will then be mag.- 4.2, 24" diam., and rising at 01.00.

Mars : Still an early evening object, it moves 17° S.E. in Virgo during the month. On the 13th. it will pass 2° N. of 1st. mag. star Spica, Alpha Virginis. On the 17th. it will pass 3° S. of Saturn.
Mid month. it will be mag. +1.1, 5.5" diam.,, elong. 62° E and setting at 21.00, 1¾ hours after sunset.

Jupiter : Now a late evening / morning object, travelling 4½° E. in Taurus during the month. It starts the month lying 4½° N. of 1st. mag. star Aldebaran, Alpha Tauri. Another lunar occultation occurs at 21.00 on the 11th., but only visible from the far East (Pacific).
Mid month it will be mag. -2.2, 37" diam. , elong. 71° W., and rising at 23.00..

Saturn : An early evening object in western Virgo, moving 2° S.E. during the month. It continues to lie a few degrees N.E. of 1st. mag. Spica, Alpha Virginis. On the 17th. it will be passed by Mars, going 3° S. of Saturn. Mid month it will be mag. +0.8, disc diam. 16.3", rings 37" (inclined at 13.6°), elong. 62° E. and setting at 21.15, 1¾ hour after sunset..
Titan, mag. 8.6 and elong. 170". Greatest E. elong. on August 5 & 21 ; greatest W. elong. on August 13 & 29..

Uranus : A fairly late evening object. in southern Pisces, less than a degree N. of the border with Cetus. During the month it travels ¾°. S.W., ending it 1° N.E. of the 6th. mag. star 44 Piscium. Mid month it will be mag. 5.8, 3.6" diam., elong. 135° W., and rising at 20.40, 1 hour & 20 minutes after sunset

Neptune : An evening object, reaching opposition on the 24th. when it will be visible all night. At midnight then it will be due South at an altitude of 26°. At the start of the month it rises at 20.40, ¾ hour after sunset. During the month it moves just over 1° S.W. in Aquarius, near the border with Capricornus.
On the 3rd. at 22.00 it will lie 6° S. of the Full Moon, and again on the 31st. at 05.00.
Mid month it will be mag. 7.8, 2.4" diam., elong. 172° W, and rising at 19.40, 20 minutes after sunset..

Meteors

Delta Aquarids : July 15 - August 20. The second maximum occurs on August 6th. Radiant at R.A. 23h.04m., Dec, +02°, 13° S. of mag. 2.6 Alpha Peg.. Culmination at 02.00, altitude 41°. Z.H.R. 10. Moon unfavourable, 3 days after Full, rising at 21.00.

Perseids : July 23 – August 20. Maximum on August 12th. at 10.00. Radiant at R.A. 03h. 04m., Dec. +58°, around 8° N. of 2nd. mag. Alpha Pers., and is circumpolar. Zenith Hourly Rate 80. One of the best known showers, created when the Earth passes through the trail of dust left behind by Comet P109 Swift / Tuttle. It has a 129 year orbital period and its last perihelion passage was in 1992.
The Moon, 3 days after Last Quarter, rises around 00.30 (01.30 B.S.T.) on the 13th., so is fairly favourable.

Deep Sky Objects

M16 (NGC 6611 & IC 4703) : The 'Ghost' or 'Eagle' Nebula. An open cluster of stars surrounded by emission nebula in Serpens Cauda, discovered by Philippe Loys de Chéseaux in 1746 and noted by Charles Messier in 1764. Messier describes it as "A cluster of stars, mingled with faint luminosity, close to the tail of Serpens, not far from the parallel of Zeta in that constellation. With a small telescope this cluster appears to be a nebula". It lies 5,000 L.Y. away, with an age of 1 to 2 million years. The nebula extends over 315 L.Y., with an apparent size of 100' x 25', whilst the cluster of over 100 faint red stars is 30 L.Y. in diameter, apparent size 7'. The total magnitude is 6. Like the Orion Nebula (M42),. it is the site of extensive star formation, and a few years ago the Hubble Space Telescope took some remarkable photos of the activity – the so-called 'Pillars of Creation'.
With clear dark skies it can easily be found with binoculars, but a telescope is needed to see any details.
To find it, start from the 2.9 mag. star Lambda (22) Sag., the 'teapot lid' of the 'teapot' in Sagittarius. Go 5° N. to the 4th. mag. star 21 Sag. Continue on N. and slightly E. to.another 4th. mag . star Gamma Scuti. M16 lies 3° W.N.W. of it.
R.A. 18h. 19m., Dec. -13° 48'.

M17 (NGC 6618) : The 'Omega' or 'Horseshoe' or 'Swan' Nebula. Another open cluster of stars embedded in emission nebulae in Sagittarius. Also discovered by de Chéseaux in 1746 and listed by Messier in 1764, one of 15 Messier objects in Sagittarius. The large number is due to the centre of our galaxy lying in E. Sagittarius, the area most crowded with stars, dust & gas. M17 too is some 5,000 L.Y. from us, the nebula covering an area of 40 L.Y. x 30 L.Y., an apparent size of 45' x 35' and an integrated magnitude of 6.5. There are over 600 known stars within the whole nebula. The actual cluster contains at least 35 stars of 9th. mag. or fainter, with an apparent diameter of 25'. .M17 is also a radio source on 9.4 cm.
R.A. 18h. 20m., Dec. -16° 10'.
M17 lies only 2½° South of M16, and 2½° S.W. of 4th. mag. Gamma Scuti.

Arthur Davis July 2012