Crewkerne & District Astronomical Society

Sky Notes : August 2013

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

Moon's Phases

New	August	06d. 21h. 51m.
First Quarter	"	14d. 10h. 56m.
Full	"	21d. 01h. 45m.
Last Quarter	"	28d. 09h. 35m.

Moon at apogee	(furthest from Earth)	August	03d. 09h.	Diam.	29' 27"
Moon at perigee	(nearest to Earth)	"	19d. 02h.	"	32' 59"
Moon at apogee		"	31d. 00h.	"	29' 31"

The Planets

Mercury : A morning object for most of the month. Best seen early in the month, as it reaches superior conjunction (on the opposite side of the Sun) on the 24th. It was at greatest W. elongation (20°) at the end of July. On the 1st. it will rise just before 03.00 U.T., 1½. hours before dawn. By the 20th. it will rise at 04.15, only ½ hour before the Sun. During the month it travels over 50° S.E. Starting in Gemini, it enters Cancer around the 8th., crosses it and goes into Leo around the 17th. On the 5th. it passes 7° S. of 1st. mag. star Pollux, Beta Geminorum. Mid month it will be mag. –1.4, 5.5" diam., elong. 10° W. and rising at 03.50, an hour before sunrise.

Venus : Continues to be an early evening object, throughout the month setting around an hour after the Sun. During the month it moves 35° S.E. Starting in Leo, it crosses into Virgo around the 12th. On the 9th. Venus lies 5° N. of the thin crescent Moon. Catch it early, as the moon sets soon after 9 p.m. B.S.T. Mid month it will be mag. –3.9, 13.5" diam., elong. 36° E. and setting at 20.20 U.T., an hour after sunset.

Mars : Remains a morning object. It moves 22° E. during the month, starting in Gemini and entering Cancer at the very end. On the 19th. it will pass 6° S. of Pollux, 1st. mag. Beta Geminorum. Mid month it will be mag. +1.6, 4.0" diam., elong. 31° W. and rising at 01.45 U.T., nearly 3 hours before dawn.

Jupiter : Continues to be an early morning object this month, but early in September it starts to rise before midnight, nominally becoming an evening object. Remaining in Gemini, it travels 6 ½° E. during the month. Mid month it will be mag. –2.0, 33.7" diam., elong. 41° W. and rising at 01.00.

Saturn : An early evening object. Barely moving in E. Virgo, very close to the border with Libra, and some 12° E. of the 1st. mag. star Spica, Alpha Virginis, it travels only 1½° S.E. during the month. Mid month it will be mag. +0.7, disc diam. 16.5", rings 37.3" (inclined at 17.8°), elong. 74° E. and setting at 21.50.
Titan, mag. 8.7 & elong. 170". Greatest E. elong. on August 7th. & 23rd... Greatest W. elong. on Aug. 15th. & 31st..

Uranus : A late evening object, in southern Pisces a couple of degrees North of the border with Cetus. During the month it moves ¾.° S.W., starting from a point 3° S.S.W. of the 3.5 mag. star Delta (63) Piscium. Mid month it will be mag. 5.8, 3.6" diam., elong. 130° W. and rising at 20.45.

Neptune : An evening object, rising around an hour before Uranus. Still in Aquarius, it travels just under 1 ° S.W. during the month, starting it 1° W.N.W. of the 5th. mag. star Sigma (57) Aquarii. It is at opposition on August 27th. when it will be mag. 7.8, 2.4" diam. and above the horizon all night, rising at sunset, 19.00. At midnight then it will be due South, at an altitude of 28° above our horizon. On the 21st. Neptune lies 6° S. of the Full Moon.

Asteroids

7 Iris : Of all the asteroids reaching opposition this year, Iris will be the brightest (though not brilliant !). Opposition occurs on the 16th., when it will be mag. 7.9 and visible in binoculars. The seventh asteroid or minor planet to be found, it was discovered by the English astronomer John Hind in 1847. It has a diameter of 203 km. (126 miles) and an orbital period of 4 years. Its orbit is quite eccentric and is inclined at 5½° to the plane of the ecliptic. Mean solar distance is 2.39 A.U.
Throughout the summer Iris travels West and slightly South in southern Aquarius. During August it covers 7½°. On the 16th. it will lie ¾° North of 2.9 mag. star Beta (22) Aqarii, the brightest star in the area. It will then be at R.A 21h. 32m., Dec.-4° 49', 1.17 A.U. from the Earth and 2.18 A.U. from the Sun. At midnight then it will be due South at an altitude of 34°.

Meteors

Delta Aquarids : July 15 – August 20. The second of two maxima occurs on August 6th. Radiant is at R.A. 23h. 04m., Dec. +02°, 13° S. of mag. 2.6 Alpha Peg. Culmination at 02.00, altitude 41°. Zenith Hourly Rate 10. Moon very favourable, New, setting at 19.00.

Perseids : July 23 – August 20. Maximum on August 12 at 16.00. Radiant at R.A. 03h. 04m., Dec. +58°, around 8° N. of 2nd. mag. Alpha Pers. and is circumpolar. Z.H.R. 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 is not too favourable. Two days before 1st. Quarter, and setting at 22.30 B.S.T.

Deep Sky Objects

M2 (NGC 7089) : A globular cluster in Aquarius, discovered in September 1746 by Jean- Dominique Maraldi whilst searching for a comet. 14 years later Charles Messier found it and listed it as the second object in his infamous catalogue of objects to avoid when searching for comets. He acknowledged Maraldi's precedence in its discovery. M2 is a dense cluster of 1.5 million stars with a mass of 900,000 Suns situated 40,850 L.Y. away from us with a diameter of 190 L.Y. Its apparent diam. is 16' with a magnitude of 6.4. The brightest stars in it reach a mag. of 13.1. M2 lies 5° N. of the 2.9 mag. star Beta (22) Aquarii and it can be easily found with binoculars, although at least a 6 inch telescope is needed to see the individual stars. R.A. 21h. 33.5m., Dec. -0° 49'.

Arthur Davis July 2013