

Crewkerne & District Astronomical Society

Sky Notes : June 2015

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

Summer Solstice Is on June 21st. when we have the shortest night, 4¾ hours, and the longest daylight, 19¼ hours.

Moon's Phases

Full	June	02d. 16h. 19m.	
Last Quarter	"	09d. 15h. 42m.	
New	"	16d. 14h. 05m.	
First Quarter	"	24d. 11h. 03m.	
Moon at perigee (nearest to Earth)	June	10d. 05h.	Diam. 32' 18"
Moon at apogee (furthest from Earth)	"	23d. 17h.	" 29' 33"

The Planets

Mercury : Following inferior solar conjunction on May 30th., is now a morning object. It rises at dawn, 03.40 on the 7th.. Greatest W. elongation, 22°, occurs on the 24th., when it rises at 02.45, 55 minutes before the Sun. On the 30th. it rises at 02.40. Remaining in Taurus, at the start of the month it travels W. 3° to a stationary point on the 11th., then moves back E. 10° to the end of the month.. All month it lies less than 8° northwards of the Hyades open star cluster. Early on the 13th. it passes very close to the nearly New Moon. An occultation is visible from India and the Far East.

Mid month it will be mag. +1.8, 9.8" diam., elong. 19° W.. and rising at 03.10, ½ hour before dawn..

Venus : Still a good evening object, but getting earlier. On the 1st. it sets at 23.30, and by the end at 22.20, 2 hours after sunset. It reaches greatest E. elongation (45°) on the 6th. It starts the month in eastern Gemini, 6° S. of Pollux. Moving E.S.E. it enters Cancer around the 3rd., crosses it and just enters Leo at the end to lie some 10° N.W. of the 1st. mag. star Regulus, Alpha Leonis. A total distance of 25°.

Mid month it will be mag. -4.3, 26" diam., elong. 45.1° E. and setting just after 23.00.

Mars : With solar conjunction occurring on the 14th. Mars is almost unobservable this month. At the beginning it sets at 20.25, only 20 minutes after sunset. At the end of the month it rises at 03.25, 15 minutes before dawn. For the record it starts in the middle of Taurus some 6° N.E. of 1st. mag. star Aldebaran, Alpha Tauri. Travelling E. it enters Gemini around the 25th. and ends the month 4° inside it, a total travel of 20°. Mars is mag. +1.5 all month, with a diameter of 3.6".

Jupiter : Continues to be an evening object, but like Venus getting earlier. On the 1st. it sets just after midnight, and by the 30th. at 22.20 2 hours after sunset. Starting the month in eastern Cancer, it moves S.E. to enter Leo around the 7th. and ends it 2½° inside, some 8° N.W. of Regulus, and also within a degree of Venus. A total distance of 5°. On the 21st. at 00.00, Jupiter will lie 5° N. of the crescent Moon. Mid month it will be mag. -1.9, 33.6" diam., elong. 56° E. and setting at 23.20.

Saturn : Following opposition on May 23rd., is still visible most of the night. At the start of the month it rises an hour before the Sun and doesn't set until dawn the next day. At the end it sets at 01.40, 2 hours before dawn. On the 1st. it will lie on the border of N.W. Scorpius and Libra. It then travels 2° N.W. in Libra during the month. On the 1st. of June at 19.00 it will lie 2° S. of the nearly Full Moon, and again on the 29th. at 01.00.

Mid month it will be mag. +0.1, disc diam. 16.9", rings 41.7" (inclined at 24.2°), elong. 156° E. and setting at 02.40.
Titan, mag. 8.1 & elong. 190". Greatest W. elong. on June 1 & 17. Greatest E. elong. on June 9 & 25.

Uranus : A morning object, rising at 02.00, 1¾ hours before dawn on the 1st., and just after midnight on the 30th. Remaining in S.E. Pisces, near the border with Cetus, it moves 1° N.E. during the month, ending it ½° S.E. of the double star Zeta (86) Piscium (mags. 5.6 & 6.5, separation 23")

Mid month it will be mag. 5.9, 3.4" diam., elong. 64° W. and rising at 01.00.

Neptune : At the beginning of the month a morning object, rising at 01.00. On the 15th. it starts to rise before midnight, nominally becoming an evening/morning object. At the end it rises at 23.00. Continuing to lie in N.E. Aquarius, it travels a few arc minutes N.E. to a stationary point on the 12th., then it moves back a few arc mins. S.W to the end of the month. It will then again be 2° N.N.W. of the mag. 6.2 star 70 Aquarii.

Mid month it will be mag. 7.9, 2.3" diam., elong. 104° W. and rising at midnight.

Minor Planets (Asteroids)

2 Pallas : Pallas will be at opposition on June 12th. The second minor planet to be found, in March 1802, by Heinrich Olbers. With a diameter of 573 km. (356 miles) it is the second largest of the asteroids in the main belt between Mars and Jupiter. Its orbital period is 4.61 years. Its mean distance from the Sun is 2.77 Astronomical Units (some 258 million miles) and its orbit is inclined at 35° to the plane of the ecliptic. Its mass is 0.3% of our Moon, with a density of about 3.0 gm/cc, compared to the Earth's density of 5.5 gm/cc. However its mass is still great enough to produce a near spherical body, unlike most asteroids. At opposition it will lie 3.16 A.U. from the Sun and 2.41 A.U. from the Earth. Its very inclined elliptical orbit means that its distance from the Earth at an opposition can vary considerably, affecting its apparent brightness. At best, it can be mag. 7.1, but this year it is expected to be 9.4. at opposition on the 12th. It will then lie 40' S.E. of mag. 4.4 star Lambda (76) Hercules., and will be due South at midnight at an altitude of 65°. On May 8th. it will be 1° 20' N.W. of 4.3 mag. 95 Herc., at mag. 9.4. On May 29th. it will pass 35' N.N.E. of 5.7 mag. 84 Herc., at mag. 9.4. July 3rd. will see it 20' S. of 3.1 mag. Sarin, Delta (65) Herc. It will then be mag. 9.5. All this period, it should be visible in 50mm. binoculars, given clear skies.

Meteors

Ophiuchids : May 19 - July. Two maxima and radiants. First on June 10th. Radiant at R.A. 17h. 56m., Dec. -23°, in N.W. Sagittarius Culmination at 00.45, altitude 15°. Zenith Hourly Rate 5. Moon fairly favourable, L.Q., rising at 01.15 on the 11th.
Second on June 20th., radiant at R.A.17h.20m., Dec. -20° in N.E. Scorpius. Culmination at 23.20, altitude 18°, Z.H.R. 5. Moon again fairly favourable, 4 days old, setting at 22.40.