

Crewkerne & District Astronomical Society

Sky Notes : June 2012

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

Moon's Phases

Full	June	04d. 11h. 12m.
Last Quarter	"	11d. 10h. 41m.
New	"	19d. 15h. 02m.
First Quarter	"	27d. 03h. 30m.

Moon at perigee (nearest to Earth)	June	03d. 13h.	Diam. 33' 20"
Moon at apogee (furthest from Earth)	"	16d. 02h.	" 29' 27"

Partial Lunar Eclipse on June 4th. Not visible from the U.K. ! Maximum obscuration 37%. First contact 08.48, maximum at 11.03, last contact at 13.18. Eclipse visible from most of the Pacific Ocean.

The Planets

Mercury : Following superior conjunction with the Sun on May 27th, is now an evening object all month, approaching greatest elongation (26° E.) on July 1st, when it will set at 21.40, over 1½ hours after sunset. Starting in Taurus, it travels E. into Gemini around the 4th, and crosses into Cancer around the 23rd. A total distance of 40° during the month. Mid month it will be mag. -0.4, 6.1" diameter, elongation 19° E., and setting at 21.45, 1¾ hours after the Sun.

Venus : Transit : At its inferior conjunction on Wednesday 6th, it will be exactly in line with the Earth and the Sun and will pass across the face of the Sun as seen from the Earth. First contact will be at 22h.09m. 42s. U.T. on the 5th. Maximum 'immersion', when Venus is nearest the disc's centre occurs at 01h. 29m. on the 6th, when it will be nearly ½ way between the Sun's limb and its centre, some 7 arc minutes from the limb. The transit ends at 04h.49m.32s. To see the complete transit go to the far East – the middle of the Pacific ! Unfortunately for us, the Sun and Venus do not rise here until 04.00 (05.00 BST), so at best we can only see the last 45 minutes of the transit. You will also need a low, clear N.E. horizon. The last Venus transit was on 8th. June 2004, and the whole event was visible from the U.K. The next one is not until 11th. December 2117. With maximum around 03.00, again very bad for us !

After conjunction Venus becomes a morning object for the rest of the year, but difficult to see until later in the month. Remaining in Taurus, it moves 10° W. to a stationary point on the 27th. On the 15th. at 06.00 it passes 4° N. of 1st. mag. Aldebaran, Alpha Tauri.. It will then be mag. -4.0, 54" diam., elong. 14° W.. and rising at 03.10, only ½ hour before dawn. On the 29th. it rises at 02.20, 1¼ hours before the Sun. . .

Mars : An early evening object, travelling 15° S.E. during the month. Starting in S.E. Leo, it crosses into Virgo around the 22nd. Mid month. it will be mag. +0.7, 7.1" diam., elong. 86° E and setting just before midnight. On the 26th. at 15.00 it will lie 6° N. of the F.Q. Moon.

Jupiter : Following solar conjunction last month, it is a morning object, but still close to the Sun. Moving 13° N.E. in western Taurus, it starts the month 5° S. of the Pleiades (M45) open star cluster. Mid month it will be mag. -2.0, 33.3" diam., elong. 24° W., and rising at 02.30, just over an hour before dawn.

Saturn : Continues to be an evening object in Virgo. Moving 2° N.W. to reach a stationary point on the 26th. , it then starts to move back S.E. All month it lies around 5° N. of Spica, 1st. mag. Alpha Virginis. Mid month it will be mag. +0.6, disc diam. 18", rings 41" (inclined at 12.6°), elong. 118° E. and setting at 01.20.

Titan, mag. 8.5 and elong. 185". Greatest E. elong. on June 2 & 18 ; greatest W. elong. on June 10 & 26..

Uranus : Remains a morning object practically all month, but it rises at midnight around the 25th., then becomes nominally an evening object. It continues to move N.E. in Pisces, close to the border with Cetus., ¾ during the month.

Mid month it will be mag. 5.9, 3.4" diam., elong. 76° W., and rising at 00.40.

Neptune : At the beginning of the month is a morning object, but like Uranus, becoming a late evening object. Around the 11th. it starts to rise before midnight. Still in Aquarius, at the very start of the month moves a few arc minutes N.E. to reach a stationary point on the 5th. It then moves back S.W. 9 minutes to the end of the month.. Mid month it will be mag. 7.9, 2.3" diam., elong. 111° W, and rising at 23.40..

Pluto (134340) : Following the decision by the International Astronomical Union to demote it to be a ' Dwarf Planet', it was also given a number like all the other dwarf planets and asteroids. It reaches opposition on June 29th. so it now gets its annual mention.

At opposition it will be in eastern Sagittarius at R.A. 18h.34m.14.9s., Dec. -19° 20' 21" and with magnitude 14.4. You will need at least a 10 inch telescope to detect it. As it happens, Pluto then lies only 0.6° S.E. of the open star cluster M25. In fact, between July 4th. and the 30th. it will pass across the outer southern fringe of the cluster. At opposition it will pass just under ½° N. of the mag. 7.4 star SAO 161619. The brightest star in the area is SAO 161564, at mag. 5.5, which lies 0.8° N. of M25. In June Pluto will be 31.24 Astronomical Units from the Earth and 32.255 A.U. from the Sun.

Its orbital period is 248 years, and its highly eccentric elliptical orbit (e = 0.25) can take it within the orbit of Neptune. It is also inclined at 17° to the plane of the ecliptic. These are two of the reasons that the I.A.U. demoted it from being a major planet in 2006. It is a member of the ' Kuiper Belt' where several recently discovered objects orbit in the outer Solar System. Currently Pluto has three known satellites. Charon, diam.1,200 km. and mag. 17.3, was discovered in 1978. Nix, at 88 km. & mag 23.4 and Hydra at 72 km. & mag. 22.9 were found in 2009. The N.A.S.A spacecraft ' New Horizons', launched in 2006, is due to go into orbit around Pluto in 2015.

Meteors

Ophiuchids : May 19 – July. Two maxima & radiant. June 9th., radiant at R.A.17h. 56m., Dec. 23°S. N.W. Sagittarius. Z.H.R. 5
Moon unfavourable, 3 days before L.Q., rising at 23.00. June 20th., radiant at R.A. 17h. 20m., Dec. 20°S. N.E. Scorpius. Z.H.R 5.
Moon very favourable, New, setting at 20.45.