The night sky in February & March

by Brian Mills

(Written for 22:00 UT on 2013 March 1.)

In the east the bright stars Arcturus and Spica have both now risen, whilst Crater and Corvus that sit on the water snake's back are just coming into view. Now is a good time to try to find the faint constellations of Coma Berenices and Canes Venatici.

Looking south Cancer straddles the meridian with the head of Hydra just below, whilst depending on your horizon, you might be able to identify the northern part of Puppis that lies just to the east of Canis Major. The twins in Gemini and the bright star Procyon are now west of the meridian but still very prominent.

The winter constellations are making their way towards the western horizon, with Aldebaran and Capella almost due west.

In the north Deneb lies on the meridian with Vega a little to the east. Ursa Major is approaching the zenith, so Cassiopeia is dipping toward the horizon. The faint line of stars that makes up Lynx is now best placed for identification although the brightest star in the constellation is only magnitude 3.1. The Double Cluster in the sword handle of Perseus is still at an elevation of some 40° and an excellent binocular object.

The sky from Greenwich looking south and west at about 22:00UT on 2013 March 1. *(Stellarium).*

Phases of the Moon: 2013 February/March

Last quarter	*New*	*First quarter*	*Full*
Feb 3	Feb 10	Feb 17	Feb 25
Mar 4	Mar 11	Mar 19	Mar 27

Planets

Mercury should be visible from the second week of February onwards when it puts on its best evening show of the year. It reaches greatest eastern elongation (18°) on February 16 and is visible above the western horizon at an altitude of 10°, with the Sun at –6° (the end of civil twilight) as seen from Greenwich. Mercury then goes through inferior conjunction on March 4 after which it moves west of the Sun to become a morning object. Greatest elongation (west) follows on March 30 when it appears to be 28° from the Sun. This is a very poor apparition as seen from the UK because of the angle the ecliptic makes with the horizon in the mornings at this time of year.

Venus is lost in the solar glare at the beginning of the period in question, and experiences superior conjunction on March 28. It should become visible as an evening object in late May/early June.

Earth reaches the Spring, or Vernal, Equinox on March 20 at 11:02 UT, when day and night are roughly equal in length across the globe. British Summer Time commences on 31st March when UK clock time is set to one hour ahead of GMT or Universal Time, UT.

Mars sets just an hour and a quarter after the Sun at the beginning of February, making it unavailable for observation. The planet is heading for solar conjunction on April 18 and will therefore not be conveniently placed until July.

Jupiter continues to be well placed in Taurus at magnitude –2.5 at the start of February, fading to –2.1 at the end of March. It has now resumed direct motion, having reached its second stationary point at the end of January. By the end of March it sets at midnight UT.

Saturn rises at 01:00 at the start of the period, close to the Virgo/Libra border. It is brightening gradually as it approaches its April opposition and increases from mag +0.5 to +0.3. By the end of March it rises at around 21:00 UT.

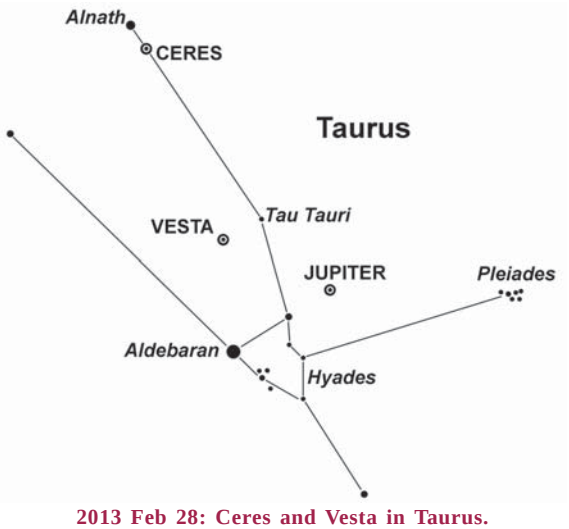
Uranus is an evening object at magnitude 5.9 and crosses from Pisces into Cetus at the beginning of March, but is quickly lost in the solar glare.

Neptune is too close to the Sun for observation during February and March, although by the end of March (despite its solar conjunction on February 21) it rises 50 minutes before the Sun.

Dwarf planets & comets

(1)Ceres (mag 8.2) and (4)Vesta (mag 7.8) are both located in Taurus for most of the period. Their positions are shown on the map for February 28 when Ceres lies exactly on a line between Alnath and Tau Tauri.

Comet C/2011 L4 (Pan-STARRS) could become a naked-eye object from the middle of March onwards (see also page 5 of this *Journal*). It should be visible after perihelion in Pisces after which it continues to move north, although by this time its brightness is fading. For a detailed ephemeris see the BAA Comet Section website at **http://www.ast.cam.ac.uk/~jds**



2013 Feb 28: Ceres and Vesta in Taurus.

Lunar occultations

In the table I've listed events for stars down to magnitude 7.0 although there are many others of fainter stars. DD= disappearance at the dark limb whilst RD= reappearance at the dark limb. There is a column headed 'mm' (millimetres) to show the minimum aperture telescope required to view the event. I'm sure that the occultation sub-section, within the Lunar Section, would welcome the results of any observations that you make. Times are for Greenwich and in UT.

Lunar occultations of bright stars

Date	*Time*	*Star*	*Mag*	*Ph*	*Alt °*	*% illum.*	*mm*
Feb 12	17:52	15 Piscium	6.5	DD	21	7	40
Feb 16	17:23	ZC 423	6.3	DD	55	39	70
Feb 18	18:36	ZC 691	6.3	DD	59	59	50
Feb 23	17:39	ZC 1318	5.9	DD	20	95	80
Feb 23	23:00	60 Cancri	5.4	DD	50	96	50
Feb 28	23:06	49 Virginis	5.2	RD	50	89	50
Mar 4	03:10	ZC 2307	3.9	RD	40	59	40
Mar 16	21:15	ZC 510	6.8	DD	20	24	50
Mar 17	22:53	ZC 654	6.0	DD	13	33	40
Mar 18	18:53	107 Tauri	6.5	DD	54	41	40
Mar 20	22:52	ZC 1057	6.8	DD	34	61	70
Mar 31	04:42	λ Librae	5.0	RD	16	82	40

Lunar graze occultations

Grazes of stars brighter than magnitude 7.0 occur on February 23, March 6 and March 21, being of magnitudes 6.2, 3.8, and 6.0 respectively although the March 6 event occurs at the bright limb. Please consult the BAA *Handbook* for more information.

Advance notices for 2013

April 28 – Saturn at opposition

September 8 – daylight occultation of Spica (alpha Virginis)

November 1 – Venus at greatest eastern elongation (evening object)

November/December – Comet 2012 S1 (ISON) could possibly become a brilliant comet for the end of the year.

Brian Mills