

The March night sky now heralds the spring constellations as we head towards the vernal equinox on March 20<sup>th</sup>. The spring night sky contains many fine objects to view with both binocular and small telescopes.

The Milky Way stretches from the constellation of Auriga, marked by the bright star Capella in the east up into Perseus and through the 'W' shaped constellation of Cassiopeia high overhead and down along the cross shaped constellation of Cygnus low in the west. This faint band of stars best seen on dark moonless evenings

In the north Ursa Major, The Plough or The Great Bear is seen low with its handle or tail pointing to the horizon mid evening. Use the right hand pair of stars Dubhe and Merak (The pointers) to find the faint pole star Polaris and the position of North.

The seven sisters' (Pleiades, M45) star cluster are easily recognisable to the unaided eye as a small group of stars above the characteristic 'V' shaped asterism of the 'Hyades' star cluster in the constellation of Taurus also noted for the bright, red foreground star Aldebaran. In Arabic Al Dabaran is 'The follower' of the Pleiades across the skies, in old English colloquially known as 'the eye of the bull'.

The obscure constellation of Aries, lying to the west of Seven Sisters (M45) Pleiades star cluster only noted for the stars Hamal ( $\alpha$  Arietis), Sheratan ( $\beta$  Arietis) and Mesarthim ( $\gamma$  Arietis – a nice double star – pair of white stars) is also currently the constellation to locate the only planet in our mid evening skies – Uranus visible as a greenish star in binoculars and a tiny disk in telescopes. (Refer to finder chart – LAS Newsletter No 305).

By early evening the familiar winter constellations of Orion (The Hunter) is now slipping into the western skies making way for the spring constellations rising in the east. Orion is easily recognised by the three belt stars and the red star Betelgeuse (top left) and the white star Rigel (bottom right). Below the belt of Orion may be seen a misty patch to the unaided eye, this is the famous Orion Nebula (M42) – Binoculars show the shape of the nebula and the dark nebula feature known as the Fish Mouth. Telescopes show more detail and resolve the four bright stars known as the Trapezium. Adjacent to and slight north of M42 is the apostrophe shaped nebula (M43).

The constellation of Gemini is easily recognised by the two bright stars Castor and Pollux and the characteristic rectangular shape of stars. The western end of the constellation is embedded within the rich star fields of the Milky Way. M35 an open cluster seen as a misty patch in binoculars is a very nice sight when viewed telescopically.

The spring constellation of Leo rises by mid evening, the brightest star Regulus and the 'reversed question mark' shaped star asterism of 'The Sickle' makes this an easily recognisable constellation. Leo stretches eastward and is marked at the tail end by the star Denebola. Leo contains some moderately bright galaxy pairs visible in moderate sized telescopes on moonless evenings. M65/M66 and NGC 3628 form the famous galaxy triplet, all three galaxies being visible in the same telescopic field of view. Also a number of nice double stars (See LAS Newsletter No 320 for 'a feast of faint fuzzies' and double stars). The star Algieba ( $\gamma$  Leonis) is showcase example double star a nice pair of orange /yellow stars - split by a 60mm refractor at x120 magnification)

Mid way between Castor and Pollux (Gemini) and Regulus (Leo) lies the obscure constellation of Cancer (the Crab), with faint stars in the shape of an inverted 'Y' the most striking feature is the splendid open cluster M44 (The Beehive Cluster) or Praesepe. The cluster is visible to the unaided eye as twice the apparent size of the Moon misty patch, is a magnificent sight when viewed with binoculars or low magnification telescope. To the south of M44 lies another nice open cluster M67 although harder to resolve telescopically. M67 is thought to be one of the oldest open star clusters at 5 billion years old and 4.5 times more distant than M44 at a distance of 2,600 light years.

March are a prelude to the galaxy rich spring skies visible in the coming months as the constellations of Virgo and Coma Berenices can now be seen rising by late evening. The Virgo cluster of Galaxies has many relatively bright galaxies visible in moderate sized telescopes on moonless clear evenings ( Refer to LAS Newsletter No 320 and notes ) March 20<sup>th</sup> (the equinox) has equal day and night, the Sun now crosses north of the celestial equator,

Spring in the northern hemisphere has begun. Note that UK clocks change to BST (add 1 hour) on Sunday March 27th.

### Planets in March 2022

Mercury is not observable during March – conjunction on April 2<sup>nd</sup>

Venus is visible shining brightly low in dawn skies (-4.7m magnitude), 50% phase (dichotomy) March 20<sup>th</sup>

Mars fades a little, visible in dawn skies +1.1m magnitude, Mars moving from Sagittarius to Capricornus

Jupiter is not observable, conjunction is on March 5<sup>th</sup>.

Saturn visible in dawn twilight in the constellation of Capricornus.

Uranus is visible early evening low in SW in the constellation of Aries (Binocular / Telescope required)

Neptune is in the daytime skies with conjunction is March 13<sup>th</sup> and so is not visible.

### Moons phases in March 2022

New Moon	Mar 2 <sup>nd</sup>	Moonless, best time for deep sky observing. (Solar eclipse)
First Quarter	Mar 10 <sup>th</sup>	Best days to see shadow details in lunar craters (early evening)
Full Moon	Mar 18 <sup>th</sup>	Best days to see bright ray craters like Copernicus / Tycho.
Last Quarter	Mar 25 <sup>th</sup>	Moon visible in daytime skies. Do not look directly at the Sun.

Experience the Moon Illusion at moonrise /moonset, against foreground objects such as trees or buildings, the moon looks rather large (an optical illusion) – watch Full Moon rise March 18<sup>th</sup>. 18:28 UT (GMT)

Spring Equinox March 20<sup>th</sup> 15:33 UT, Sun crosses back north of celestial equator. Spring in N.Hemisphere begins

Meteor showers Virginids show some slow meteors with long trails, peaking during April

### The highlights of the month.

March skies, Milky Way visible high overhead on moonless evenings in darker skies.

Double cluster, on the Perseus /Cassiopeia border high overhead, nice pair of star clusters.

Pleiades (Seven Sister's) star cluster (M45) and Mars now low in south west, best seen with binoculars.

Beehive cluster (M44) visible to the unaided eye but best seen with binoculars.

The telescopic triplet of galaxies M65/M66/NGC3628 in the constellation of Leo.

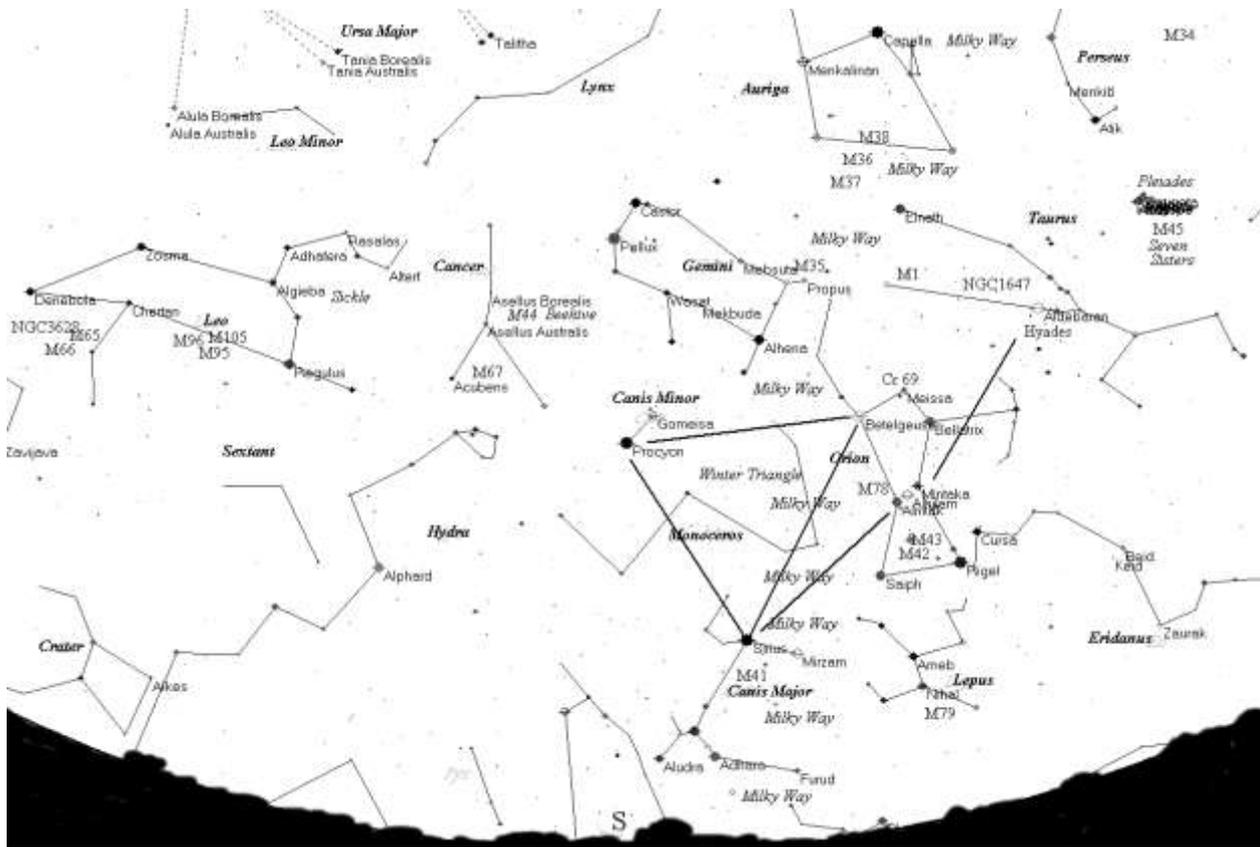
Virgo cluster of Galaxies - the brightest member galaxies can be detected with moderate telescopes.

### Moon visibility

The first chance to see the crescent moon is on March 3<sup>rd</sup> [**Only look after the Sun has completely set**]  
The 1.4% thin waxing crescent Moon is located low in twilight skies, Moonset is 18:41 UT (GMT).

More detailed sky notes and LAS Newsletters, Finder charts are available to LAS members via the Members` page on the LAS Website [www.lutonastrolink.org.uk](http://www.lutonastrolink.org.uk)

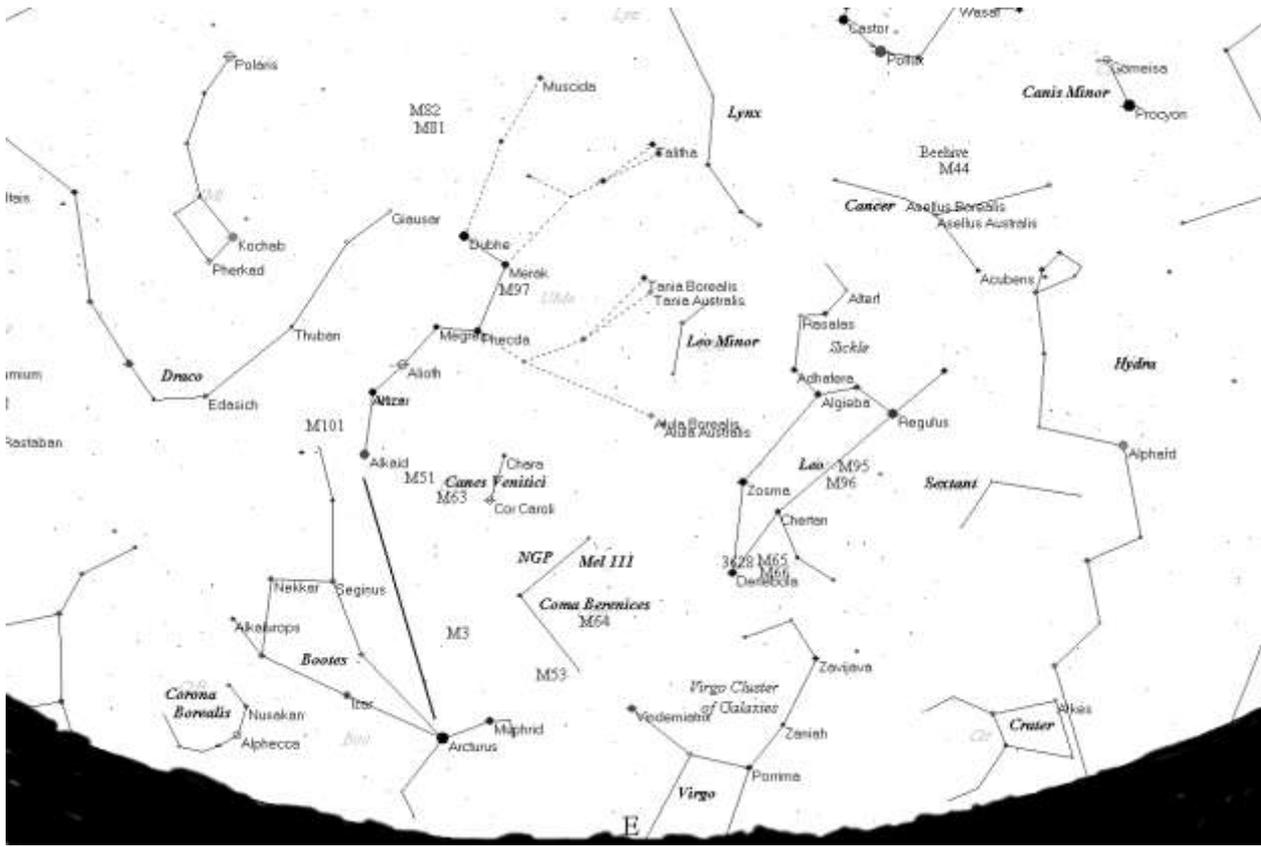
Sky looking south at 9pm, mid March 2022



Orion is placed in the south west; draw a line through the belt stars, down to the bright star Sirius (which can appear to twinkle at low elevation). Also known as The Dog Star, Sirius is in the constellation Canis Major (Greater Dog), whilst the star Procyon is in the constellation Canis Minor (Lesser Dog). Extend a line through Orion's belt upwards to find the red star Aldebaran in the constellation of Taurus and the Seven Sister's star cluster.

Gemini is placed high in the south with Castor leading Pollux across the sky. To the south east the constellation of Leo noted by the bright star Regulus and the 'Sickle' asterism of stars and outstretched body resembles a crouching lion, with the star Denebola at the tail end. Between Pollux and Regulus is a misty patch to the unaided eye, binoculars show the nice 'Beehive' star cluster M44 in the constellation of Cancer.

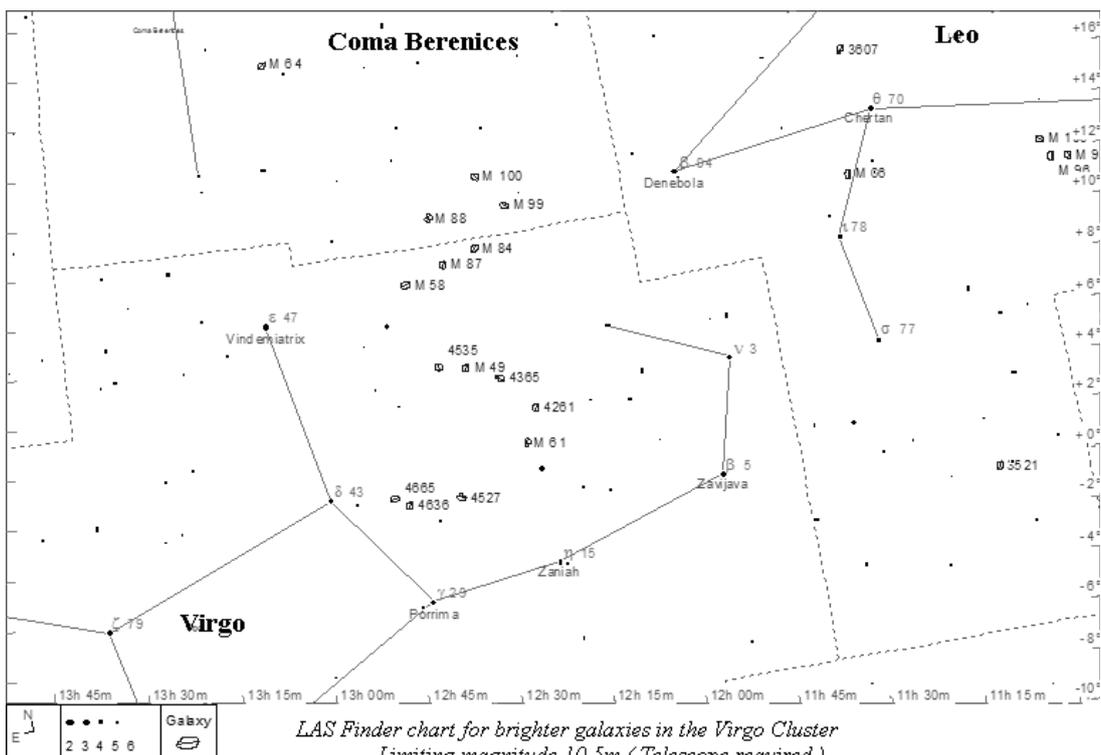
Sky looking east at 9pm early March 2022



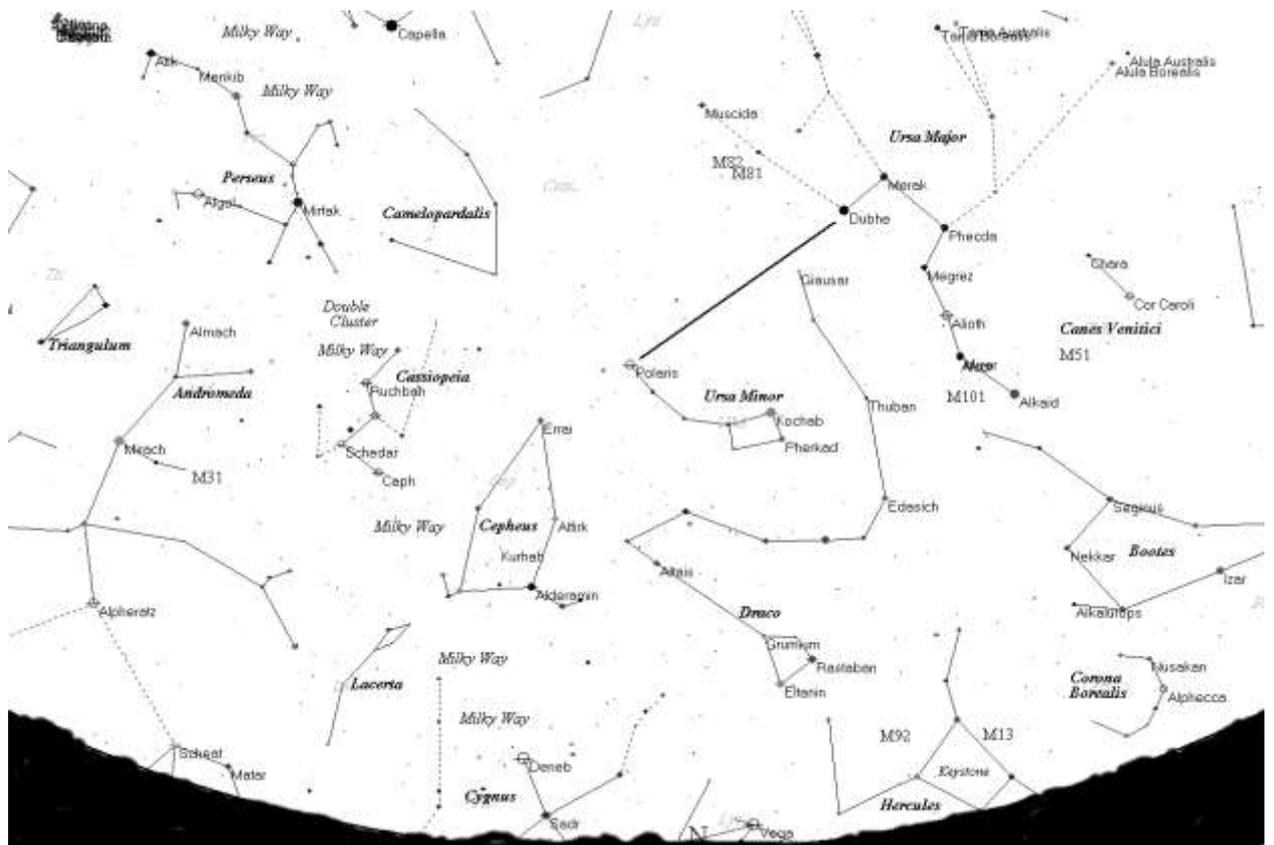
The spring constellations now appear in the eastern sky by mid evening. The orange star Arcturus is found by following the curve of stars in the handle of the Plough down. The constellation of Boötes, resembles a 'kite' or 'Club' in shape. Izar is a beautiful orange/ blue double star visible in small telescopes.

Virgo / Coma Berenices area contains a rich cluster of Galaxies [The Virgo super cluster]

The brightest member galaxies (limiting magnitude 10.5m) are shown below – moderate telescope required in dark / moonless conditions – averted vision recommended; many galaxies are low surface brightness objects



Sky looking north at 9pm mid March 2022



The Plough stands on its handle follow the pointer's Dubhe and Merak to find the polestar Polaris

The `W` shaped constellation of Cassiopeia looks more like an `M` and is on the opposite side of the polestar to the Plough.

Low in the north spot the bright stars Vega and Deneb, these are circumpolar as seen from UK i.e. they are always above our horizon and so do not set but skim the northern horizon before rising in the east by early morning.

