



The Sky Tonight

LAS Observatory Public Open Evening
7 pm to 9.30pm (Thursday 23rd March 2017)

The stars and planets of the spring night sky

Welcome to the LAS Observatory for tonight's spring skies public open evening. The theme of the evening is the stars of the winter skies. Binoculars show star colours which may be too subtle to see with the unaided eye, look through one of the telescopes available tonight and you will see stars with colours ranging from blue (O type) to white blue, green through yellow to orange and red (M type) stars. All star colours are dependant on the stars surface temperature for example our Sun is an 'ordinary' yellow (G type) star. Blue stars are hot young stars, whilst red stars are larger cooler giant stars- so not all stars are the same.

We also have several planets in the spring skies, planet Mercury may be glimpsed very low in the western early evening twilight, setting at 8:50pm GMT, whilst the planet Mars may be seen low in the southwest in the constellation of Aries (the Ram), binoculars show its characteristic colour. Jupiter shines brightly in the constellation of Virgo just above the bright star Spica visible low in the east rising at 8:41pm GMT. Each planet has a characteristic appearance and different colour. Jupiter is a gas giant appearing yellowish due to its atmosphere and displays prominent cloud features (bands). All planets shine by reflecting sunlight.

As you become dark-adapted as twilight fades, look overhead to find the first stars to become visible. The brightest of these is the white star *Capella* in the constellation of *Auriga*.

Look over your left shoulder i.e. to the northeast and see the well know constellation of *Ursa Major*, 'Great Bear, or The Plough. Early evening *The Plough* is almost vertical, standing on its handle. Look at the two 'pointer' stars on the right hand side of the constellation, *Merek* and *Dubhe*. Follow a line through these two for a distance of five times the separation to find the fainter Pole star 'Polaris' in the constellation of *Ursa Minor* (The Little Bear). You are now looking north.

Low in the southeast you may see easily recognisable constellation of *Orion* (you will find its three 'belt' stars easily). Top left in *Orion* is the star *Betelgeuse* (a Red super giant star),

Below the three belt stars in *Orion* note the faint misty patch which is the *Orion Nebula* (Messier 42), a stellar nursery where new stars cause the gas clouds to shine. A wonderful sight in a small telescope is magnificent when viewed with the 0.5m telescope. Bottom right in *Orion* is the star *Rigel*.

Aldebaren (*The follower*) is another red star in the 'V' shape of *Taurus* (*Hyades* cluster), you can find *Taurus* above and to the right of *Orion*. You will easily find the famous seven sisters' or *Pleiades* star cluster – how many stars can you count with the unaided eye? Binoculars show many more stars with up to 400 stars visible in a telescope. Follow *Orion's* belt stars downward to find the brightest star in the night sky, *Sirius* (The Dog Star) in the constellation *Canis Major*, (The Greater Dog) low in the southeast. *Sirius* is actually 25 times brighter than our Sun and is relatively close at 8.6 light year distance. Compare this with distant *Rigel*, 55,000 times more luminous than our Sun.

To the left above *Orion*, lies the constellation of *Gemini*, a long rectangle of stars marked by two bright stars *Castor* and *Pollux*. (The Heavenly Twins) which point to the bright star *Regulus* in the constellation *Leo* (The Lion) seen rising low in the east by early evening. *Gemini* also has a nice star cluster *M35* visible in 10 x50 binoculars and small telescopes.

Look about half way along a line drawn between *Castor* and *Regulus* to find the open cluster *M44* (The Beehive cluster or *Praesepe*) containing around 200 stars. It is visible to the unaided eye as a misty patch, binoculars show it nicely. Also in the obscure constellation of *Cancer* (The Crab) is the 5 billion year old open cluster *M67* containing over 500 stars visible in small telescopes.

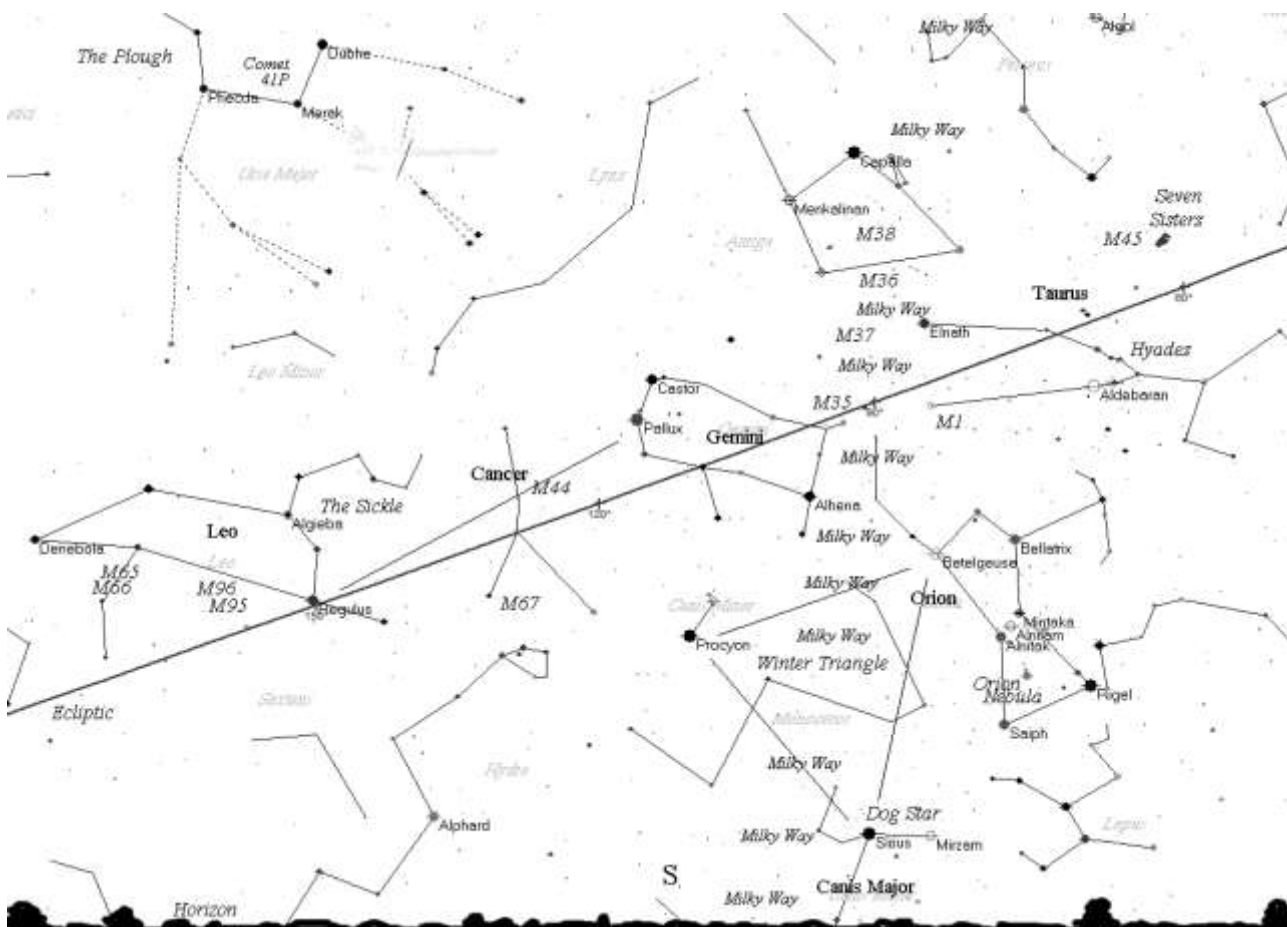
The constellation of *Leo* is easily recognised by the 'Sickle' asterism of stars resembling a reversed question mark and also the triangle of stars denoted by the star *Denebola*, the whole constellation resembling a crouching lion. *Leo* is also noted for a number of galaxies in particular the *Leo Triplet* of three edge on spiral galaxies *M65*, *M66* and *NGC 3628* visible in moderate telescopes on darker moonless evenings. When we look at the constellation of *Virgo* now rising in the east, we are looking out of the plane of our own Milky Way galaxy and at the realm of Galaxies [The *Virgo* Cluster, a vast super cluster of galaxies, the brighter members of which are visible as faint misty patches in moderate sized telescopes]

Also in our night sky during March /April is the periodic comet 41P (Tuttle-Giacobini-Kresak) which is currently approaching (harmlessly) within 0.14 AU (21 million km of Earth) in the coming weeks. The comet may best seen in moonless, dark skies as a faint misty patch, visible in binoculars near the *Plough* asterism in the constellation of *Ursa Major*. (Details on request or via the LAS web site, Night Sky notes)

For further information please contact Geoff Mitchell (LAS Secretary)

via the LAS Website www.lutonastrolink.org.uk

Fig 1 General sky map looking south early evening– Use your binoculars or the LAS telescopes to have a look at some of the stars and clusters of the spring night skies.



The principle spring constellations note Orion just past due south mid evening and with Leo rising.

You may like to keep these notes handy and if you have binoculars at home, why not take look at the colours of some of the principle stars shown on darker moonless nights in coming months.

The LAS holds regular indoor meetings at Univ of Bedfordshire, Putteridge Bury doors open from 7 pm, meeting 7.30pm until 9pm on the last Thursday each month (Our next meeting will be on Thursday 30th March 2017), All visitors are welcome – so why not come along - see Geoff Mitchell or visit the LAS website www.lutonastrolink.org.uk for more details.

To book for our forthcoming open evenings and to see much more astronomical news and the LAS Night Sky Notes for the forthcoming month, visit the LAS web site.

We hope that you have enjoyed our open evening tonight *Geoff Mitchell*

WWF Earth Hour – Saturday 25th March (8.30pm to 9.30pm) ... Lights out and look up!

You may like to arrange your own observing / Earth Hour events with neighbours and friends in support of this event – see LAS website for link.

Visit the BBC stargazing LIVE website for events in March 2017

Also see the Society for Popular Astronomy (SPA) website as an introduction, especially suited for younger observers or visit the British Astronomical Association (BAA) website for more advanced observers. Popular monthly publications are also available from newsagents and more details on line.