

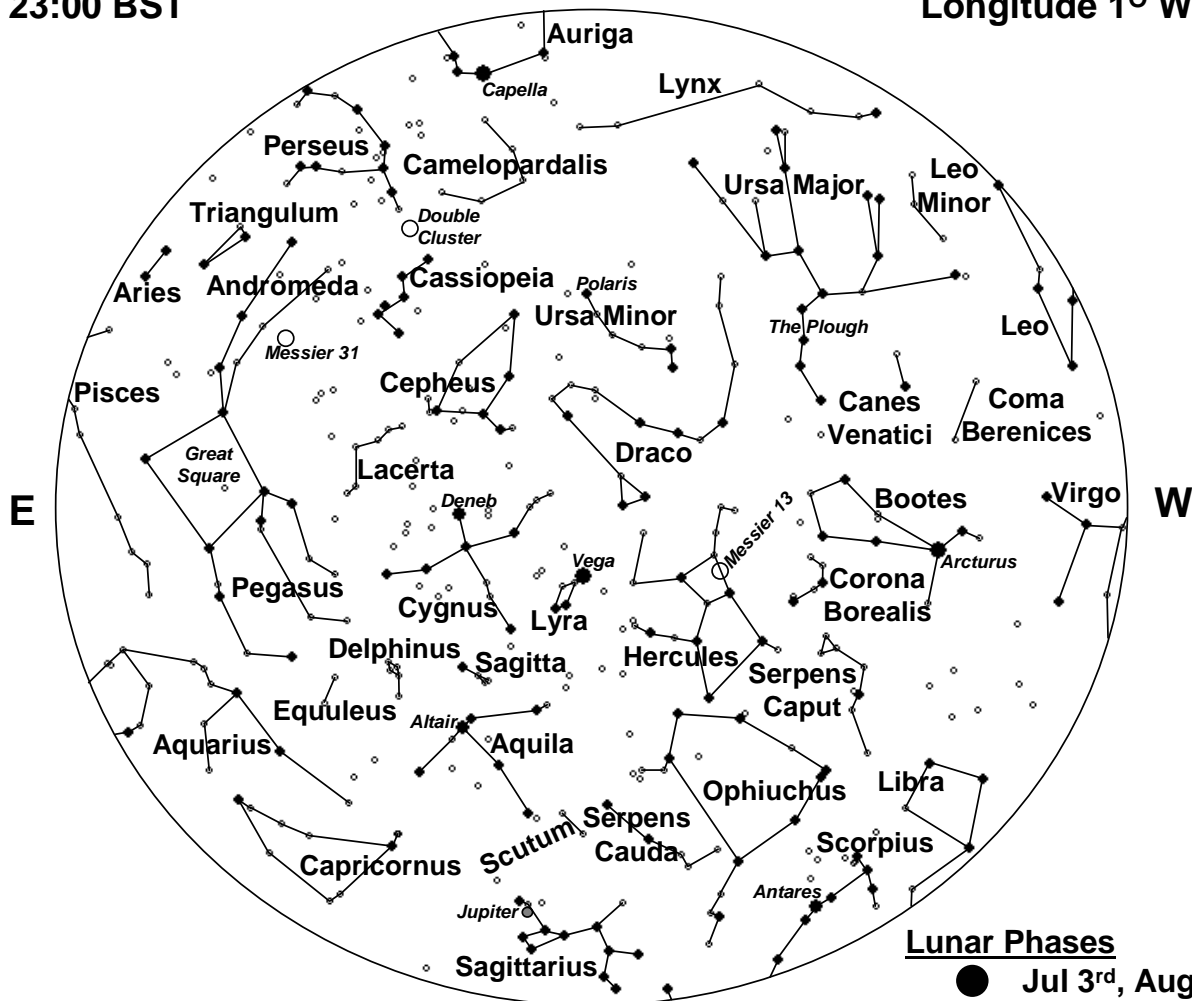
The Night Sky This Month

By 11pm at the end of July the seven stars of the Plough are descending towards the north-western horizon. Lower down and almost due west, the bright orange star Arcturus can be found by following the curve of the handle of the Plough. Just above the south-western horizon are the stars of Scorpius, led by fiery Antares. Due south is Sagittarius, marking the heart of our Milky Way galaxy, a splendid region of the sky which is unfortunately poorly seen from our latitudes. Well above Sagittarius in the South is the brilliant white star Vega, brightest member of the so-called "Summer Triangle". The other members of this trio, Deneb in the constellation of Cygnus and Altair in Aquila are further to the east. On dark, moonless nights the summer Milky Way should be clearly seen in this region of the sky. Above the eastern horizon, the Great Square of Pegasus stands, diamond shaped, leading the rising stars of autumn. In the north-east the "W" shape of Cassiopeia is also getting higher and down on the northern horizon lies the yellow star Capella.

Jul 31st 2008
23:00 BST

N

Latitude 52° N
Longitude 1° W



Sunrise 5:25
Sunset 20:55

S

Lunar Phases
 ● Jul 3rd, Aug 1
 ☾ Jul 10th, Aug
 ○ Jul 18th, Aug
 ☾ Jul 25th, Aug

Observing Highlights

Jupiter, in Sagittarius is the best observed planet during the Summer months and comes to opposition on July 9th. Throughout the first half of the year Saturn and Mars have been moving gradually closer together in the evening sky. By July 6th they are about two degrees apart and on that evening form an attractive conjunction with the three day old Moon which may be seen just below them. The closest

separation of the two planets (less than a degree) occurs a few nights later on July 10th. On the evening of August 13th Venus and Saturn will be less than a quarter of a degree apart, but this will be a difficult event to observe, low on the western horizon at dusk. There is a similar and equally difficult conjunction between Venus and Mercury a week later on August 20th.

The Perseid meteors may be seen for a few evenings around August 12th, but the presence of the waxing gibbous Moon will limit the number of “shooting stars” that can be seen this year. There is a partial solar eclipse on August 1st. This takes place between 9:33 and 11:07 BST. Please use a safe method to observe this event – on no account should the Sun be observed directly through any piece of optical equipment. Although only partial from the UK, this eclipse is total from parts of the Arctic and Central Asia. A Partial Lunar Eclipse on August 16th starts shortly after moonrise, with the umbral phase lasting between 20:36 and 23:45 BST.

The Naked Eye Nebulae

Amongst the stars in the night sky there are also a few very well known misty patches of light such as the Pleiades and the Orion Nebula. For observers struggling with the light polluted skies of the West Midlands it is difficult to think of there being more than a handful of objects like these which could be termed “naked eye nebulae”. It may come as a surprise therefore that the NGC and IC catalogues, which together contain about 13,000 deep sky objects, include no fewer than 83 with magnitude six or lower and therefore theoretically capable of being seen without optical aid. Of course many of these only betray their non-stellar nature when observed through binoculars or telescopes. I have nevertheless composed a list of 26 objects which in my opinion should be discernible to the naked eye as non-stellar, given reasonable eyesight and a reasonably dark sky. I should immediately add that my opinion in this case is definitely a humble and subjective one. I would very much welcome the views of members and others about objects which should be added to, or indeed subtracted from my list. Since I have never ventured south of the Equator, input would be especially welcome with regard to the more southerly members of the list.

One of the main areas of subjectivity arises because some of the open (or galactic) clusters such as the Coma Cluster and the Hyades are so close and large that they can be resolved by the naked eye into their individual stars. I have nevertheless included these as they clearly have a collective identity rather than being just random asterisms. The open clusters naturally dominate the list with 15 members out of the 26. These are: Praesepe (M44) in Cancer; M41 in Canis Major; The Coma Cluster (Mel 111); The Sword-Handle or Double Cluster (NGC 869/884) in Perseus (which I have counted as a single naked-eye object); M24 in Sagittarius; The Butterfly Cluster (M6), Ptolemy's Cluster (M7) and NGC 6231 in Scorpius, The Hyades (Mel 25) and Pleiades (M45) in Taurus, M47 in Puppis, NGC 2516 and NGC 3532 in Carina; The Jewel Box (NGC 4755) in Crux; and finally IC4665 in Ophiuchus.

The galaxies are the most distant category of dark sky object but nevertheless three of them feature on the list. These are the Andromeda Nebula (M31) and the Large and Small Magellanic Clouds. I have refrained from stretching a point by including the whole of the Milky Way as a fourth! The globular clusters contribute two examples: Omega Centauri and 47 Tucanae, unfortunately neither of which is visible from our latitudes. Very keen eyed observers may however like to argue a case for the best northern globulars such as M13 in Hercules.

My list includes three “true” nebulae: The Orion Nebula (M42); The Lagoon Nebula (M8) in Sagittarius; and the Tarantula Nebula (part of the Large Magellanic Cloud). Finally I have included three members of another class of non-stellar object which might not immediately be thought of in this context i.e. the “Dark” Nebulae. The best known of these is the Coal Sack in Crux and the other two are the Pipe Nebula (B78) in Ophiuchus and B92 in Sagittarius. Another question I look forward to getting feedback on is whether any more of the Dark Nebulae merit inclusion.