THE MONTHLY SKYGUIDE

What's in the sky in OCTOBER 2009?

SUN Moving through *Virgo* the Maiden into *Libra* the Balance.

MOON New Moon on the 18th, Full Moon on the 4th.

PLANETS **Mercury** is an early morning object during the first fortnight of the month, low in the SE just before sunrise. and shining at -1M.
Venus is another morning object close to Mercury and Saturn shining brilliantly in the pre-dawn sky at -3.9M.
Mars is a bright (-0.3M) orange object moving through *Cancer* and visible after midnight. At the end of the month it lies in front of the Beehive cluster, so a good photo op!
Jupiter is a bright (-2.5M) evening object low down in the west and passing through *Capricornus*.
Saturn is a morning object in Virgo shining at 1.1M. Around the 13th it is in conjunction with the much brighter Venus.

COMETS Comet 88P/Howell is scheduled to return to perihelion after mid month and its estimated brightness of 10th magnitude puts it beyond casual binocular range but visible in modest telescopes as it hovers on the border between *Ophiuchus* and *Scorpius*.

METEORS The Taurid meteor shower is active this month, beginning on the 20th and carrying on until late November. It is a weak shower with a maximum rate of 10 per hour. These dust grains entering our atmosphere at speeds of 50km/s are the remains of comet P/Encke.
Also present are the Orionids, which originate from comet P/Halley and peak on the 23rd. Clear skies should give a rate of up to 25 per hour after midnight.

STARS γ *delphini* is a nice telescopic double star with coloured components, described as yellow and emerald green. Keep an eye on this constellation, which despite its small size has played host to more than its fair share of novæ, the most famous being George Alcock's 1967 discovery of *HR delphini*.
Al Giedi (α *capricornus*) is a naked eye double, whereas Dabih (β *capricornus*) is a binocular double with contrasting colours.
Observers in the far south of the country will be able to see Fomalhaut (α *pisces austrinus*) twinkling on the horizon.

NEBULÆ There are two planetary nebulæ in this region of the sky (so called because they appear as disks in a small telescope, rather like a planet). In reality they are shells of gas thrown off a star in the last stages of its life. Both of these are in the constellation of *Aquarius*.
NGC 7009 or the Saturn Nebula is fairly bright and compact. Binoculars show a fuzzy star-like object. A small telescope reveals twin lobes either side that resemble the rings of Saturn.
The Helix Nebula (NGC 7293) requires exceptionally clear skies to make out this large but dim smoke ring from the UK. Better views will be gained by travelling further South. This is the nearest and largest planetary nebula lying at a distance of 450 ly. and is best observed with binoculars or a rich field telescope.

CLUSTERS One of the best globular clusters in northern skies is visible just beyond the nose of *Pegasus*. M15 is a compact and fairly bright ball of several hundred thousand stars and is a prodigious source of X-rays. Astrophysicists have suggested that a supermassive black hole lies at the centre. It is visible with the naked eye, but binoculars or a small telescope will reveal more detail.
M2 is another globular cluster immediately below M15 and at 6.4M is a binocular object.
M72 in *Aquarius,* is a telescopic object, whilst M30 in *Capricornus* is a rewarding binocular globular despite its low altitude from the UK

GALAXIES There are no worthwhile galaxies in this area of sky.