



SUN Moving through *Capricornus* into *Aquarius*.

MOON New Moon on the 25th, Full Moon on the 9th. There will be a penumbral lunar eclipse on the 9th visible in East Asia and Australasia but not from Europe.

PLANETS **Mercury** is a morning object after the 3rd shining at 0.1^M low in the SE before sunrise. It is in conjunction with Jupiter, Mars and the Moon on the 23rd.

Venus is a brilliant evening presence shining at -4.6^M in the SW after sunset. It draws close to the Sun by the end of the month though.

Mars is drawing out from behind the Sun in the morning skies and shining at 1.0^M.

Jupiter is also drawing out from behind the Sun in the morning skies towards the end of the month and shining at -2.0^M.

Saturn rises just between 9 and 10pm and shines at 0.7^M as it moves slowly into *Leo*. Small telescopes will show the rings but this year they will appear at a small angle and any structure in them will be hard to see, even under good seeing. On Sept 4th they are exactly edge on and will disappear. This will allow you to see smaller moons normally hidden by the glare from the rings.

COMETS 2007 N3 (Lulin) reaches perihelion early in 2009, and will start the year at around 8th magnitude. It quickly brightens and becomes better placed for viewing in the morning sky. It reaches its brightest of around 6th magnitude in late February when in *Virgo*, rapidly becoming visible in the evening sky.

METEORS No meteors this month apart from the sporadic background of 5 per hour.

STARS Betelgeuse (α *orionis*) or "The shoulder of the Great One" is an orange looking star that is a fine example of a red supergiant. Its diameter has been measured at over 4 A.U.s and could encompass the orbit of Mars if placed where our Sun is. It is a variable star (0.4^M to 1.6^M) but is irregular. The multiple star system θ *orionis* lies at the heart of the Great Nebula in *Orion*. The four bright stars are often referred to as the Trapezium and are visible with a small telescope. Rigel (β *orionis*) is an example of a blue supergiant that could well turn into a supernova. It has a 7th magnitude companion that is also bluish when seen through a small telescope. Mintaka (δ *orionis*) is a binocular double. *U orionis* is in the same binocular field as χ^1 and is a mira type star having a brightness variation of 4.8^M to 13^M over 368 days.

NEBULÆ *Orion* plays host to the most spectacular of emission nebulae, the Great Nebula M42. It is visible to the naked eye as the middle "star" of his sword. Through binoculars or a small telescope it looks like a fan shaped cloud. Larger telescopes reveal an intricate structure and the central new-born stars that are illuminating it, together with the connected knot of M43. M78 is an 8th magnitude reflection nebula to the north of the belt. M11 or The Crab Nebula in *Taurus* is quite a challenge for binocular users, but larger instruments should reveal this fascinating supernova remnant.

CLUSTERS Three open clusters in *Auriga* are binocular objects: M36, M37 and M38. The "Seven Sisters" or Pleiades are a superb sight in any instrument at low powers, especially binoculars. The larger looser cluster the Hyades reveals many more members this way. NGC 2169 in *Orion* is an attractive 6th magnitude cluster.

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