

PROGRAMME Jan/Feb 2010

All talks and use of observatory equipment is free and members of the public are very welcome to attend the meetings and visit the observatory. We meet every Friday at 7.30PM at Airdrie Arts Centre unless otherwise stated. Please check web site or contact curators for further information

08 January Arthur Bannister: The Constellations of the Zodiac - CAPRICORN - First talk in a series of 12 by Arthur

15 January Paul Clark "How Things Work" - How they launch rockets - First talk in a series of 12 by Paul

22 January Isabel Morrison Isabel talking on the Constellation of Orion - Perhaps the most recognisable areas of the night sky.

29 January Aileen Malone Airdrie Burns Supper - Our last two Burn's supper were a great success. This will be Airdrie's third such Burn's supper as we celebrate the bard in astronomical style.

05 February Cairns Mason Sundials and their uses in 17th century Scotland. Cairns is the husband of Dr Catherine Mason Smith who gave us the popular talk last year on Robert Burns. This talk will be equally as informative and interesting.

12 February Arthur Bannister The Constellations of the Zodiac - AQUARIUS - Second talk in a series of 12 by Arthur

19 February Paul Clark "How Things Work" - Science onboard the ISS - Second talk in a series of 12 by Paul

26 February Observatory Meeting Airdrie Public Observatory will be open between 7:30 and 9:30 for views of the night sky. Should weather not permit viewing, we will have a video evening instead

05 March All Members Ten Minute Talks - Come along and enjoy a varied series of 10 minute talks on a whole array of subjects by our members. These usually prove very popular. Why not present a short talk yourself if you feel brave?

05 March Arthur Bannister The Constellations of the Zodiac - PISCES - Third talk in a series of 12 by Arthur

AIRDRIE ASTRONOMICAL ASSOCIATION
Registered Charity SC041014



ESTABLISHED 1896

AIRDRIE PUBLIC OBSERVATORY

THE NIGHT SKY - January 2010

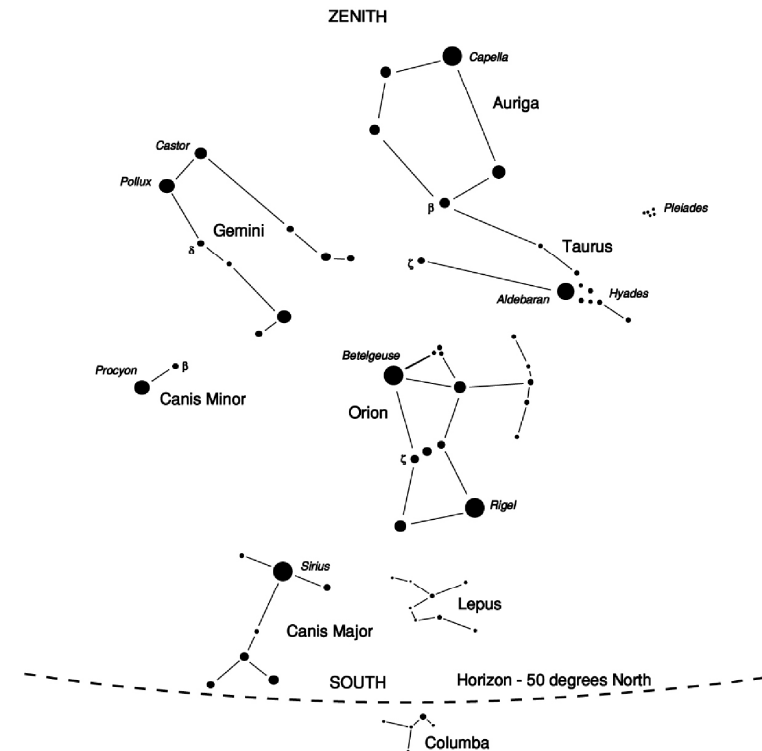
Edited by Raymond McCall



OBSERVATORY KEY HOLDERS

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The January Sky for Northern Observers



This map shows the constellations seen in the south around midnight. The brilliant constellation of Orion is seen in the south. Moving up and to the right - following the line of the three stars of Orion's belt - brings one to Taurus; the head of the bull being outlined by the V-shaped cluster called the Hyades with its eye delineated by the orange red star Aldebaran. Further up to the right lies the Pleiades Cluster. Towards the zenith from Taurus lies the constellation Auriga, whose brightest star Capella will be nearly overhead. To the upper left of Orion lie the heavenly twins, or Gemini, their heads indicated by the two bright stars Castor and Pollux. Down to the lower left of Orion lies the brightest star in the northern sky, Sirius, in the constellation Canis Major. Finally, up and to the left of Sirius is Procyon in Canis Minor.

(Image and text courtesy of Jodrell Bank - <http://www.jb.man.ac.uk/astronomy/>)

January 2010

The Sun is in the constellation of Sagittarius at the start of January, moving into Capricornus on January 20th; it has passed its most southerly point, and is slowly moving north again. At the start of January, in central Scotland, the Sun rises at 8:45 am and sets at 3:45 pm; the sky is reasonably dark between 5:30 pm and 7:00 am. By the end of the month, sunrise is 8:10 and sunset 4:40, and it's dark between 6:00 pm and 6:45 am. The Earth was at perihelion (its closest point to the Sun) on January 3rd. **REMEMBER** If you intend to do solar observing, always use the projection method. If you are unsure of this procedure, please ask some of the members for clarification. **Never look at the Sun with the naked eye!**

Mercury passes almost directly in front of the Sun on January 4th. But on January 27th it reaches its greatest distance west of the Sun, so we have a chance to glimpse this elusive little planet in the south-east at dawn. Any day around the middle of January, try looking to the south-east around 7:30 am. Mercury should appear like a tiny, star-like point of light, very low down in the twilight sky. It may be easiest to locate using a pair of binoculars; but once you know where it is, Mercury should be visible to the naked eye. **Don't be tempted to keep looking for it once the Sun is up.** If you can find the waning Moon at dawn on Tuesday 12th, Mercury will be the same height above the horizon, but 18 degrees further left. By the end of January, Mercury will be too low and faint to see.

Venus is at superior conjunction – almost directly behind the Sun – on January 11th, so we won't see this brilliant planet at all this month.

Mars is at opposition on January 29th – it lies opposite to the Sun in the sky – so it rises in the north-east at sunset and it shines all night. It is also at its closest to Earth this month, though this is not a particularly close opposition. Relative to the stars, Mars is moving steadily north-westwards from Leo into Cancer, drawing away from the bright star Regulus (in Leo) and approaching the bright "Twin" stars of Gemini. Mars itself looks star-like, but significantly brighter than most of the stars, and strongly orange in colour. Sirius is the only star that outshines Mars, but Sirius is much nearer the horizon, and flashes different colours as it twinkles. The only other object brighter than Mars is the planet Jupiter, which is visible only in the early evening, low down on the opposite side of the sky. In the telescope, the disc of Mars grows to 14 arc-seconds across this month; it should be possible to make out some detail, such as the small white cap at the north pole.

The giant planet Jupiter is low in the south-west at dusk. At the start of January, it is disappearing below the horizon at 8 pm; by the end of the month, it sets before 7 pm, so we have only a brief chance to see it. Relative to the stars, Jupiter is moving north-eastwards out of Capricornus into Aquarius. But

it's much brighter than any of the stars, and even outshines the planet Mars, which is coming up on the opposite side of the sky. On the evening of Sunday 17th January, the new crescent Moon will appear close to the lower right of Jupiter; the following night, it will appear directly above Jupiter.

Saturn is rising in the east before midnight, and it's high in the southern sky at about 5 am. It's almost stationary in the constellation of Virgo. Spica, the brightest star in Virgo, is to the lower left of Saturn; Saturn appears just a little brighter than Spica, but it's more creamy-yellow in colour, and shines with a steadier light. In a telescope, the disc of Saturn appears 18 arc-seconds across, and the famous rings form a narrow oval, 41 arc-seconds wide and only 4 arc-seconds high. Many of Saturn's moons can also be seen in the telescope. The largest and brightest is Titan, which will be close to the north of the planet around January 2nd and 18th, 3 arc-minutes east of the planet around the 6th and 22nd, close to the south of it around the 10th and 26th, and 3 arc-minutes west of it around the 14th and 30th. At dawn on Wednesday January 6th, our own waning Moon will appear to the lower right of Saturn; the two objects will be about 9 degrees apart.

Uranus is located in western Pisces and is bright enough to be seen in small binoculars at magnitude +5.9 but will still require a telescope in order to see it as anything other than a star (it's disk is only 3.5" across).

Neptune Jupiter is rapidly pulling away from Neptune after the third of their 3 conjunctions last year. As a result, it is getting harder to use Jupiter as a guide to locate Neptune so see diagram below for help!

