

Skynotes February 2009

Month Highlights

Mercury, **Mars** and **Jupiter** can all be found low to the eastern horizon in the early morning sky. They are joined by the crescent **Moon** on the morning of the 23rd. **Saturn** is also in the morning sky, sitting high in the north-west. **Venus** shines brightly in the western sky at sunset.

Planetarium Exhibition

Winning sky photos: the David Malin Awards

Some of the most spectacular images of the sky are currently on display at Scienceworks. See the winners and selected entries from the annual [photography competition](http://museumvictoria.com.au/scienceworks/whatson/event/?event=562582) (<http://museumvictoria.com.au/scienceworks/whatson/event/?event=562582>) named after the world-renowned astrophotographer and competition judge Prof David Malin. The competition is run by the Central West Astronomical Society based in the NSW town of Parkes, with support from Canon Australia and the CSIRO's Australia Telescope National Facility, and toured by Sydney Observatory.

Upcoming Planetarium Event

Discover the Night Sky – March 2009

The Melbourne Planetarium at Scienceworks presents special after-dark sessions, **Thursday evenings from 5 to 26 March** at 7pm. All evenings include complementary wine and cheese, the opportunity to chat to the Planetarium's Astronomer and be immersed in a planetarium experience. You will finish the evening stargazing through telescopes (weather permitting).

Each evening will showcase a different aspect of the night sky. For more information, pricing or bookings see the [What's On listing](http://museumvictoria.com.au/discover-the-night-sky) (<http://museumvictoria.com.au/discover-the-night-sky>) or call the Scienceworks Booking Office on 9392 4819 between 9am and 4.30pm, Monday to Friday.

Sunrise & Sunset Times

Rise	Set
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Sunday 1st	6:34	8:33
Wednesday 11th	6:45	8:23
Saturday 21st	6:56	8:11
Saturday 29th	7:03	8:02

Moon Phases

First Quarter	Tuesday	3rd
Full Moon	Tuesday	10th
Last Quarter	Tuesday	17th
New Moon	Wednesday	25th

The Moon will be at *apogee* (furthest from Earth) on Friday 20th at a distance of 405 131.

The Moon will be at *perigee* (closest to Earth) on Sunday 8th, at a distance of 361 486 km.

Let the Moon be Your Guide

The Moon can be used as a pointer to find other objects in the sky:

After sunset on the 4th, the waxing gibbous Moon lies near the star cluster **Pleiades**.

- On the night of the 8th, the Full Moon can be found near the twin stars of *Gemini*, **Castor** and **Pollux**.
- On the 10th the waning gibbous Moon rises next to **Regulus** (*Leo*, the lion).
- On the morning of the 12th the Moon sits above **Saturn**. During the early hours of the 14th the Moon lies near **Spica** (*Virgo*).
- Before sunrise on the 18th the waning crescent Moon is close to **Antares** (*Scorpius*).
- During the early morning of the 23rd, the thin crescent Moon sits next to **Mercury** with **Jupiter** and **Mars** below.
- On the 28th the Moon is back in the evening sky, next to bright **Venus**.

Planets

Mercury can be found in the eastern sky just before sunrise. It reaches its highest point above the horizon around the 11th. On the 23rd, the thin crescent **Moon** sits just to the left of Mercury with **Jupiter** and **Mars** below. Then as Mercury continues to drift back towards the

horizon it passes to the right of Jupiter on the 25th and sits above Mars on 28th.

Venus has one more month as the brilliant 'evening star'. It can be seen slowly heading towards the western horizon each night. On the 28th the thin crescent **Moon** sits just to the right of Venus during evening twilight.

Mars is in the early morning sky with **Mercury** and **Jupiter**. Mars keeps a steady distance above the horizon throughout the month. Mercury sits above and to the left of Mars at the start of the month. Jupiter is close to Mars on the 18th and Mercury is back near Mars on the 28th.

Jupiter rises out of the early morning glow around the middle of the month. On the 18th it lies just to the left of **Mars** (the two are 0.5° apart). It sits next to **Mercury** on the 25th, then the two part ways, as Jupiter moves higher and Mercury drops lower to the horizon.

Saturn sits high in the north-west at sunrise. On the morning of the 12th the **Moon** sits just above Saturn. By the middle of the month Saturn can be found rising in the east at sunset and visible in the sky all night long.

Meteors

The *alpha-centaurids* and *beta-centaurids* are active from the 2nd through until the 25th, with a peak around the 8th. Although the two showers have distinct characteristics, in practice it is difficult to distinguish between them. These showers are favourable for the Southern Hemisphere as they occur near the bright **Two Pointers** that point towards the *Southern Cross*. Although the showers are not generally strong, they often produce many bright meteors including some fireball type meteors, and almost one-third leave fine persistent trails. On good occasions rates of 25 meteors per hour have been recorded although lower rates of 3 to 14 meteors per hour are more usual.

Stars & Constellations

Orion, the hunter, can be seen high in the northern sky this month. This constellation appears upside down in the Southern Hemisphere and is best recognised as the Saucepan, with the base stars of the Saucepan making up Orion's belt and the handle forming Orion's sword. Above the saucepan is the blue-white supergiant star **Rigel**, one of Orion's legs, and below it is the red supergiant **Betelgeuse**, one of Orion's shoulders.

The *Southern Cross* and the **Pointers** are low in the south-east, which means that the **Magellanic Clouds**, our two nearest galaxies that sit opposite the *Southern Cross*, are high in the sky. Away from city lights, the Magellanic Clouds can be seen as two fuzzy patches, hence their name.

International Space Station

The ISS orbits the Earth every 90 minutes at an average distance of 400 km. The ISS appears as a bright star that steadily moves across the sky. It can often be seen from Melbourne, for example at:

8:43pm - 8:48pm, Thursday 12th February.

The Station will appear rising out of the north-west and travel below *Orion* before disappearing in the south-east.

Predictions of where and when to see the ISS can be obtained from the website: www.heavens-above.com (<http://www.heavens-above.com>)

On This Day

2nd 1931, the first mail delivery by rocket is made in Austria.

3rd 1966, *Luna 9* (USSR) made the first softlanding on the **Moon**, and transmitted the first images from the **Moon**.

3rd 1966, the USA launches its first operational weather satellite, *ESSA-1*.

5th 1974, *Mariner 10* (USA) returns the first close-up images of **Mercury**.

6th 1971, the first golf ball was hit on the **Moon**, *Apollo 14* (USA).

7th 1984, Bruce McCandless, from *Challenger* (USA) made the first untethered space walk.

11th 1970, Japan became the fourth nation in space with the launch of *Osumi-5*.

14th 1963, *Syncom 1* (USA), the first geosynchronous satellite, was launched.

15th 1564, Galileo Galilei was born.

18th 1930, Clyde Tombaugh (USA) discovered **Pluto**.

19th 1986, *MIR* (USSR), the first permanent space station, was launched.

20th 1962, *Friendship 7* carries the first American astronaut into Earth orbit.

23rd 1987, *SN1987A*, the closest and brightest supernova since 1054 was discovered.

24th 1968, the first *pulsar* was discovered (UK).

27th 1942, JS Hey (UK) discovers radio emissions coming from the **Sun**.