

Skynotes April 2009

MONTH HIGHLIGHTS

Saturn is the only planet visible in the evening sky. It can be found in the north-east at sunset. **Jupiter**, **Venus** and **Mars** are in the early morning sky. On the mornings of the 22nd and 23rd the **Moon** forms a nice triplet with Venus and Mars, low to the eastern horizon.

PLANETARIUM EVENTS

School Holidays

Scienceworks is daily from 10am – 4:30pm during the School Holidays (4th - 19th April; closed Good Friday). Planetarium session times are:

12pm: **Tycho to the Moon**
 1pm: **The Search for Life: are we alone?**
 2pm: **Stories in the Stars - the night sky of the Boorong people**
 3pm: **The Search for Life: are we alone?**

See the Melbourne Planetarium's [What's On](http://museumvictoria.com.au/planetarium/whatson/) (<http://museumvictoria.com.au/planetarium/whatson/>) listing for more details.

SUNRISE & SUNSET TIMES

	Rise	Set
Wednesday 1st	7:34*	7:14*
Saturday 11th	6:43	5:59
Tuesday 21st	6:52	5:46
Thursday 30th	7:00	5:35

*Daylight Savings time. Daylight savings ends on Sunday 5th. At 2am all clocks should be moved back one hour.

MOON PHASES

First Quarter	Friday 3rd
Full Moon	Friday 10th
Last Quarter	Friday 17th
New Moon	Saturday 25th

The Moon will be at perigee (closest to Earth) on Thursday 2nd and Tuesday 28th, at distances of 370,013km and 366,041km, respectively.

The Moon will be at apogee (furthest from Earth) on Thursday 16th at a distance of 404,231km.

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 1st the waxing crescent Moon sits near the star **Elnath**, one of the extended horns of *Taurus*, the bull.
- During the evening of the 3rd the **First Quarter Moon** sits near the twin star **Pollux** (*Gemini*).
- Throughout the night of the 6th the waxing gibbous Moon sits near **Regulus** (*Leo*).
- The following night on the 7th the Moon lies near **Saturn**.
- The Full Moon sits near the star **Spica** (*Virgo*) on the night of the 10th.
- On the 13th the Moon is very close to the red giant star **Antares** (*Scorpius*).
- During the morning of the 19th the waning crescent Moon sits above **Jupiter**.
- Before sunrise on the 22nd the Moon sits above **Venus** and **Mars**.
- Then on the morning of the 23rd the Moon lies below **Venus**.
- After sunset on the 28th the waxing crescent Moon is back near the star **Elnath** (*Taurus*).
- On the 30th the Moon once again sits near the twin star **Pollux** (*Gemini*).

PLANETS

Mercury never moves far enough from the **Sun** to be seen in the evening sky this month.

Venus appears in the eastern sky just before dawn. Near the end of the month it joins **Mars**, greatly outshining the red planet. On the morning of the 23rd the thin crescent **Moon** sits below Venus.

Mars is low to the eastern horizon before sunrise. It can be seen moving across to the north and meets up with **Venus** around the 22nd. By the end of the month Mars lies just below and to the right of Venus. Sitting just above Venus and Mars on the 22nd is the crescent **Moon**.

Jupiter can be found in the east during the early hours of the morning. Well below Jupiter, sitting much closer to the eastern horizon are **Mars** and **Venus**. Before sunrise on the 20th the thin crescent **Moon** sits just below Jupiter.

Saturn continues to shine brightly throughout the night and can be seen in the north-east at sunset. The planet forms a nice pair with the bright star **Regulus** in *Leo (the lion)* that lies to the left of Saturn. On the night of the 7th the **Moon** sits near Saturn.

METEORS

The *Lyrids* are the main meteor shower in April. The shower is centred near the bright star **Vega** in *Lyra, the lyre*, which appears low to the northern horizon around 3am - the best time to view meteors. The *Lyrids* are active between the 16th and the 25th, with a peak around the 22nd. The maximum hourly rate typically reaches 10, but occasionally outbursts occur when the meteor rate climbs to 100.

The *Pi-Puppids* is better placed for us but it is not a persistent shower. It is associated with **Comet Grigg-Skjellerup** and, being a relatively new shower, has periods of inactivity when the comet is far from the Sun. The good news is that the comet reached *perihelion* (closest approach to the Sun) last year so it's very possible that shower activity may have increased. The centre of the shower lies low in the south-west to the right of the bright star **Canopus** in *Carina, the keel*.

The **delta Pavonids**, which began in March, peaks on the 6th. This shower is centred on the little known constellation of *Pavo, the peacock*, which lies near the South Celestial Pole.

There should also be some meteor activity centred on *Scorpius* and *Sagittarius* that is best seen after midnight. Meteor activity in this region of the sky runs from the 15th through until July, with several peaks within this time.

STARS & CONSTELLATIONS

The *Southern Cross* can be found high in the south-east with the **Two Pointers** trailing behind.

To the right of the *Cross*, in the south-western sky, is the star **Canopus**, the second brightest star in the night sky. Low in the south is the star **Achernar**, the head of the river *Eridanus*. Achernar never sets in Melbourne and is called a circumpolar star. The *Southern Cross* and the **Two Pointers (Alpha and Beta Centauri)** are also circumpolar stars for observers in the southern hemisphere.

April is the month for catching both the summer constellation of *Orion, the hunter* and the winter constellation of *Scorpius* in the sky together for a brief time after sunset. You do, however, need a good view of

the horizon. *Orion* can be seen lying on his side low in the west below **Sirius**, the brightest star in the night sky. *Scorpius* can be found rising in the east with the red star **Antares** marking the Scorpion's heart.

INTERNATIONAL SPACE STATION

From Earth, the ISS appears as a bright star that steadily moves across the sky. It can often be seen from Melbourne, for example at:

6:11pm –6:17pm, Friday 17th April.

The Station will first appear above the north-west horizon, near *Orion, the hunter* and will travel directly overhead, pass the bright star **Sirius**, before disappearing in the south-east near the *Southern Cross* and **Two Pointers**.

Predictions of when to see the ISS can be obtained from the [Heaven's Above website. \(http://www.heavens-above.com\)](http://www.heavens-above.com)

ON THIS DAY

4th 1979, *Voyager 1* (USA) discovered the rings of **Jupiter**.

1st 1948, Alpha, Bethe and Gamow publish their famous paper analysing the 'hot Big Bang'.

2nd 1845, *Fizeau* and *Foucault* take the first photograph of the Sun.

3rd 1966, *Luna 10* (USSR) became the first spacecraft to orbit the **Moon**.

7th 1795, France adopts the metric system.

11th 1970, *Apollo 13* (USA) was launched on its ill-fated mission.

12th 1961, *Yuri Gagarin (Vostok 1)* USSR) became the first human in space.

12th 1981, *Columbia* (USA) was the first space shuttle to be launched.

14th 1611, The word "telescope" is first used, by Prince Frederico Cesi.

18th 1971, *Salyut 1* (USSR), the first space station, was launched.

21st 1990, The Hubble Space Telescope (*HST*) was launched on the space shuttle *Discovery*.

23rd 1971, First manned docking with a space station (USSR) was performed.

26th 1920, Harlow Shapley and Heber Curtis debated "The Scale of the Universe".