ANNULAR ECLIPSE

10th May - visible Australia-wide mostly as a partial eclipse except in parts of Qld, NT & WA

On the 10th May 2013 the annular eclipse will be only visible along the narrow track that’s between 171 and 225 kilometres across. This track crosses through Western Australia, the Northern Territory, and Far North Queensland before heading into the Pacific Ocean. Across the rest of Australia, a partial solar eclipse will be seen. How much of the eclipse you will see, will depend on how close to the track you are - the closer you are to the larger the partial eclipse will be. This month's eclipse starts early on the morning of the 10th, just after sunrise at 7:50am AEST (for Sydney and Melbourne). As the eclipse starts early a good view of the eastern horizon is essential.

**PARTIAL ECLIPSE VISIBILITY**

<table>
<thead>
<tr>
<th>CITY</th>
<th>START MAXIMUM</th>
<th>FINISH % COVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelaide</td>
<td>7:09am</td>
<td>9:29am 50%</td>
</tr>
<tr>
<td>Brisbane</td>
<td>7:41am</td>
<td>10:28am 52%</td>
</tr>
<tr>
<td>Darwin</td>
<td>8:58am</td>
<td>9:23am 76%</td>
</tr>
<tr>
<td>Hobart</td>
<td>8:06am</td>
<td>9:57am 23%</td>
</tr>
<tr>
<td>Melbourne</td>
<td>7:50am</td>
<td>10:02am 7%</td>
</tr>
<tr>
<td>Perth</td>
<td>5:34am* 6:34am*</td>
<td>7:45am 79%</td>
</tr>
<tr>
<td>Sydney</td>
<td>7:50am</td>
<td>10:14am 59%</td>
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</tbody>
</table>

* Sun is below the horizon. Sunrise for Perth is 6:53am.

I must emphasise CAUTION! It is dangerous to watch the eclipse while the Moon is moving across the Sun. You must use a special solar filter on your telescope or binoculars or for a few dollars you can purchase eclipse glasses which are just like a pair of sunglasses fitted with special film to protect your eyes. Even if you are under the narrow path that allows you to see the annular then there is a small part of Sun not covered by the Moon - the ‘ring of fire’ and you cannot look at this without proper solar filters and glasses, so observers must be extremely careful!

Solar eclipses are fascinating to watch, especially if there are a few sunspots at the time. I still remember the first solar eclipse I saw, a partial in Sydney. So this May, do a little day-time astronomy and enjoy the wonders of a solar eclipse! Mel Halbert

When you wish upon a star- Makes no difference who you are.... or does it?

Q: Who is legally responsible for naming objects in the sky?
A: The IAU is the internationally recognized authority for naming celestial bodies and surface features on them. Names are not sold, but assigned according to internationally accepted rules.

Q: What does this mean in practice?
A: Names assigned by the IAU are recognized and used by scientists, space agencies, and authorities worldwide. When observing stars and planets or reporting about them in the news, everybody needs to know exactly which location a particular name refers to. The names assigned by the IAU are those that are used. These rules are firm where claims of property could theoretically be made.
The Saturn V was built in the 1960’s. It’s still the most powerful rocket successfully launched.

NASA’s new Space Launch System (SLS) is intended to be an enormous heavy-lift rocket that will rival the Saturn V in size and capabilities. In thinking about propulsion for the SLS, NASA for the first time in thirty years is considering something other than solid rocket boosters.

Solid rocket boosters (SRBs) offer a simple, controlled way to get a rocket into the sky. In the space shuttle era, the engines were huge cylinders. They were well-versed in their de
evolution: A number of companies developed liquid-fuelled engines for continental missiles using a variety of propellants. Solid rocket engines are simple to design and build, but they are expensive to manufacture and operate. Liquid-fuelled engines offer a more efficient and cost-effective alternative.

NASA engineers are now looking at the old F-1 rocket motors. They have taken out the old technical drawings, dusted them off and are applying twenty-first-century technology with the plan to rebuild them. It’s quite possible that the next generation of astronauts who will journey back to the Moon and on to Mars will be sitting on top of a rocket that is powered by a combination of liquid and solid fuels.

Errata - or is that Eratta?

Whilst it is difficult to understand that Professor Shatterini could possibly make a mistake in his Quiz it seems that it has actually happened! The great Professor blames the error on his faithful observatory night assistant, Ms. Maria Burom. It appears that she was in the middle of extrapolating some finer points in the preparation of linguini marinara at the same time she was preparing the Quiz for the great Professor. Her concentration was momentarily lost and she asked how many six-limbed creatures were in the sky. The original answer (in the email edition) was Sagittarius and Centaurus. Steven Howell and Win Howard pointed out that Musca also has six appendages!

25th OPEN NIGHT

On Saturday 16th May Macquarie University Association for Astronomy and the Department of Physics and Astronomy will celebrate the 25th Anniversary of Macquarie University Astronomy Open Night. Join us to celebrate astronomy and physics, including viewing the night sky through 30 telescopes operated by both Macquarie University astronomers and amateur astronomers.

Location: E7B Courtyard, Macquarie University. The Campus can be reached by car or by train (Macquarie University Station on the Northern Line).

Cost and payment: Kids: $5. Adults: $15. Families: $35 Although tickets will be available at the door, purchase online and bring your ticket!
Saturn is in the eastern sky early in the evening in Libra. This is an excellent opportunity to observe the ringed planet all night, if you wish.

Nep: Is still in Aquarius and rises after midnight in the eastern sky.

Uranus: is now in the eastern sky after dawn.

Mercury: is at Superior Conjunction behind the Sun on the 12th and will then join Venus and Jupiter in Taurus.

Venus: is now in the evening sky in the West. Watch as it moves up beside Jupiter and then Mercury makes three towards the end of the month.

Mars is not visible in the Sun’s glare at the moment. You’ll have to be patient.

Jupiter is between the horns of Taurus the bull, low in the western evening sky. Will begin jousting with Mercury and Venus.

Venus is now in the evening sky in the West. Watch as it moves up beside Jupiter and then Mercury makes three towards the end of the month.

Neptune: Is still in Aquarius and rises after midnight in the eastern sky.

Hubble Telescope imaged Comet (C/2012 S1) ISON on April 10, when the comet was slightly closer than Jupiter. The comet is surprisingly active as sunlight warms the surface and activates the dust coma surrounding the nucleus. A strong jet is blasting dust particles off the sunward-facing side of the comet’s nucleus. Already looking good!

Where did the astronauts find the lunar rover—It looks too big to fit into the landing module? The rover was a very clever piece of equipment. It was made of extremely lightweight materials and was designed to fold like origami into a small space under the side of the lander. It was unfolded by hand. See how here: http://youtu.be/QMMkvU-Uw3Q

The Binocular and Telescope Shop, 84 Wentworth Park Road, Glebe NSW 2037. Tel: 02 9518 7255
The Binocular and Telescope Shop, 519 Burke Road, Camberwell Vic 3124. Tel: 03 9822 0033

The Cosmos Centre near Charleville recently upgraded its array of telescopes by installing two 1inch Meade LX200 computer-controlled machines to complement its array of 12inch Meades. Don Whitman travelled from Sydney’s Binocular and Telescope to train the Cosmos Centre staff and overseen the installation of the new scopes.

The Cosmos Centre is 3km from the centre of Charleville along the Mitchell Highway, 780km from Brisbane. Opened in 2001, it has proved to be a very popular destination for schools in the area, local people and tourists, who visit the centre both in the day and in the night.

Offering nighttime and daytime shows, the centre is well-equipped for its task. A giant roof rolls off the telescopes controlled by well-trained operators who show visitors the amazing wonders of the southern constellations in the dark outback skies.

Seven hands-on displays give visitors time to become acquainted with the ancient star gazers and their beliefs. Visitors are encouraged to observe the Sun during the daytime, find out the difference between astrology and astronomy and examine individual space rocks (meteorites) from the excellent collection. Visitors can sit and enjoy a short film “Journey to Infinity” in the only cinema in Charleville. Experience the Hands on Displays in the Information Zone. Hold meteorites in your hand when our guides do ‘show and tell’ with the fabulous collection of meteorites.

The usual suspects line up at the ISA Astrocamp in idyllic surroundings.

The 7th IceniSpace AstroCamp (ISAC2013) star party was held over 3 nights from the 11th-13th April, in the beautiful dark skies of Lostock in the Hunter Valley, about 3.5 hours north-west of Sydney.

The star party was a great success, with 3 out of 3 beautiful clear nights with only some intermittent high cloud on the Friday night, but that added in a positive way to the timelapses and nightscapes. The days were warm, the nights were cool and there was no wind or rain. I really couldn’t have asked for better weather.

The build-up to each star party is a frenzy of activity (I is a one-man show) and gets quite stressful. I was a young man when I started organising these, and each one ages me a little more! It’s always such a relief when it’s over – but then when I hear the positive feedback and see all the great images and hear what a fantastic time the guests had, it encourages me to continue doing it again year after year.

We had about 120 attendees, with almost half of them first-timers! That’s a great sign of things to come and the guests had, it encourages me to continue doing it again year after year.

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UPGRADES WITH BIGGER SCOPES

COSMOS CENTRE IN QLD

DARK SKIES IN CENTRAL QUEENSLAND

The Cosmos Centre’s roof rolls off to reveal the telescopes ready for a night of observing.

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