

# CWAS AstroFest

16-18 July 2004

Sponsored by Central West Credit Union  
CSIRO Australia Telescope National Facility  
Parkes Shire Council

<http://www.parkes.atnf.csiro.au/events/astrofest/>  
<http://www.parkes.nsw.gov.au/events/>

**Conference:** Registration \$40 (\$35 for under 18's) or \$5 per individual event

**Friday, 16 July:** Venue: The Coachman Hotel, Clarinda Room. Parkes.

**18:00-20:00** Science in the Pub: Theme - *"Life, the Universe and Everything"*

Compere: Dr Fred Watson.

Panelists: Dr David Malin, Dr John Reynolds, Prof. Brian Boyle

**Saturday, 17 July:** Venue: Parkes Observatory Visitors Centre

**09:00-10:00** Dr Fred Watson *"RAVEing Mad! Dissecting our Galaxy"*

**10:15-11:15** Rev. Robert Evans *"How Supernovae told us the Age and Destiny of the Universe"*

**11:30-12:30** Prof. Brian Boyle *"Gamma Ray Bursts, Black Holes and the Death of the Dinosaurs"*

**13:30-14:30** Dr Everett Gibson *"Unveiling the Secrets of the Red Planet."*

**15:30-16:30** **Civic Reception:** Coventry Room at Parkes Council Chambers.

Welcome by Mayor Robert Wilson, OAM. Presentation of the *"David Malin Awards"*.

**16:30-17:30** Dr David Malin. **The John Bolton Lecture:** *"Heaven and Earth: the Scale of Things"*

**18:00** Dark sky night at Cookamidgera. Starbecue and other fun activities.

**Sunday, 18 July:** Venue: Parkes Observatory Visitors Centre

**10:00-11:00** Dr Jessica Chapman *"Radio Astronomy at Dover Heights"*

**11:30-12:30** Jeanette Rothapfel *"Back to the Moon?"*

**13:30-14:30** Dr David Cooke, Fox Mason, Ben Lam and Cliff Smith *"Come and hear the Real Thing"*

**15:00-16:00** David Brodrick and Tim Kennedy *"Radio Astronomy - a Simple Approach"*

## Associated Events:

### **Apollo 11 Moon Rock Exhibition:**

From 12 July to 12 August at the Parkes Observatory Visitors Centre. Admission free.

### **Astrophotography Exhibition:**

All during July at the Parkes Observatory Visitors Centre. Admission free.

### **Astronomy Powerpak: A school holiday experience presented by Sydney Observatory**

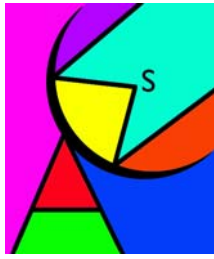
14-16 July touring selected towns in the Central West. Admission free.

### **Public Viewing Night:**

Saturday, 24 July from 6:30 pm at Bushmans Hill, Parkes. Admission free.

### **Family Day at "The DISH":**

Sunday, 18 July at the Parkes Observatory. Fun for all the Family. Admission free.



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## Talks

**Dr Fred Watson: “RAVEing Mad! Dissecting our Galaxy”**

RAVE is an exciting new project being undertaken at the Anglo-Australian Observatory on behalf of a large international collaboration. It aims to provide detailed information about the geography and history of our Galaxy, including its past interactions with other galaxies. The RAVE team - a bunch of wild megalomaniacs if ever there was one - aims to measure no less than 50 million stars over the next decade or so. Join Fred Watson as he RAVEs on about this ambitious project in a talk suitable for general audiences.

**Rev. Robert Evans: "How Supernovae told us the Age and Destiny of the Universe."**

Rev. Robert Evans is a world-renowned and highly respected amateur astronomer. He has discovered over 20 supernovae in distant galaxies, helping professional astronomers study and understand these incredible phenomena. Rev. Evans will describe his work and explain how amateurs contribute to this remarkable field of research.

**Dr Everett Gibson: “Unveiling the Secrets of the red Planet”.**

Dr Everett Gibson served as the co-leader of the Johnson Space Centre's Mars Meteorite Research Team which announced in 1996 the discovery of possible biogenic remnants in the famous ALH84001 meteorite. During the past three years he has served as one of the Inter-discipline Scientists for the European Space Agency's Mars Express/Beagle 2 mission to Mars. He is currently very active with the NASA Mars Exploration Program. During the Apollo missions he worked in the Lunar Receiving Laboratory and was waiting to receive the returned Apollo samples - he participated in the Apollo 11 return celebrations in Houston on his first day of employment with NASA in 1969.

Dr. Gibson's talk will highlight the recent exploration missions to Mars and the latest results.

**Prof. Brian Boyle: "Gamma Ray Bursts, Black Holes and the Death of the Dinosaurs”**

**The John Bolton Lecture**

**Dr David Malin: “Heaven and Earth: the Scale of Things”**

The human visual system is by far the richest source of information we have about the world around us. In a few seconds the unaided eye can direct our attention from distant stars, which can be thousands of light years away, to the hairs on the back of the hand, a few hundredths of a millimeter in diameter.

Both these objects are at the limit of our unaided vision, but the scale of size and distance stretches far beyond, to the incredibly small and unimaginably vast. In this talk Dr Malin will show that there is a continuum between the atomic and cosmic world, a unity that can be demonstrated with images made with telescopes and microscopes and other, much more exotic instruments.

**Dr Jessica Chapman: “Radio Astronomy at Dover Heights”**

Rodney Reserve, on the cliff tops at Dover Heights in the eastern suburbs of Sydney was one of the most remarkable and important astronomical sites in New South Wales. Between 1946 and 1954, this former WWII radar station was the leading field station of the CSIRO Division of Radiophysics, and was home to a succession of different radio telescopes that were used to make outstanding advances in radio astronomy.

Around 120 new radio sources were detected at Dover Heights. These were identified as gaseous nebulae in our own Galaxy, and as powerful sources of radio waves from distant galaxies. These discoveries showed that radio waves could be used to study the universe "from the solar system to the Cosmos" and firmly established Australia as a world leader in the emerging new science of radio astronomy.

Dr Jessica Chapman will discuss the people who worked at Dover Heights, the instruments that they built and their scientific achievements.

**Jeanette Rothapfel: “Back to the Moon?”**

Currently, the scientific community is excited by serious consideration being given to a return to the Moon and the possibility of establishing a lunar base. *For the first time in Australia*, the audience will be treated to a visual journey back to the Moon highlighted by access to actual lunar rock and soil samples from NASA’s Johnson Space Centre.

Can the Moon, a desolate world with no atmosphere and water, provide the natural resources that can be utilised for successful human settlement? What are the dangers for all space missions to destinations like the Moon or Mars or even the nearby International Space Station? Although the space shuttle will be made redundant in the near future and will be replaced by other space vehicles, an understanding of the issues related to launch, re-entry and everyday requirements for space shuttle astronauts will be used to consider the probability and needs of future, long distance space missions.

**Dr David Cooke, Fox Mason, Ben Lam and Cliff Smith: “Come and hear the Real Thing”**

On 21 July 1969, 600 million people around the world watched the historic Apollo 11 Moonwalk live on TV through signals received by the Parkes Radio Telescope. David Cooke, Neil “Fox” Mason, Ben Lam and Cliff Smith were four of the staff members who made it all possible. Come and hear their reminiscences of that great day, hear about their roles in history, hear what really happened – Come and hear the *Real Thing!*

**Tim Kennedy and David Brodrick: “Radio Astronomy - a Simple approach.”**

Radio astronomy, from the amateur's point of view, is often shrouded in mystery. Tim Kennedy and David Brodrick intend to lift this shroud by describing a simple radio telescope capable of capturing signals from Jupiter, the Sun and Galactic radio emissions. Furthermore, they intend to describe an expanded system using two simple radio telescopes linked together and with the ability to detect strong extragalactic radio sources and ultimately capable of mapping the entire sky. They offer you the chance to 'get your hands dirty' as you interact with these simple radio telescopes and interpret the data received.