

Welcome to

# MT STROMLO OBSERVATORY

RESEARCH SCHOOL OF ASTRONOMY & ASTROPHYSICS



## BACKGROUND

Founded in 1924, the Mt Stromlo Observatory has played a central role in helping mankind to understand the Universe and today hosts a number of the world's leading astronomers and astrophysicists.

The Observatory is owned and operated by The Australian National University's Research School of Astronomy and Astrophysics (RSAA).

## THE FIRES

On Saturday 18 January 2003, the Observatory was devastated by the Canberra fires. Five telescopes, an historic administration building, seven houses and a superbly equipped workshop complex were destroyed in the fires.

Thankfully, the office buildings on site and much of the recent data accumulated by researchers were spared, enabling research to proceed – both through examination of data collected in the past and through observations from the University's other observatory, the nation's premier dark-sky research facility at Siding Spring, near Coonabarabran in northern New South Wales.

Despite the devastation of the January fires, staff were able to return to the mountain just three weeks later and today continue to produce some of the world's most exciting and outstanding astronomical research.

## RECOGNITION

The 2004 ANU Quality Review found that 75 per cent of the research conducted by the Research School is rated in the top 25 per cent of research in the world.

An independent international expert who was asked to review the School's work commented: "The RSAA research group has produced an astonishing fraction of the most important papers in astronomy and astrophysics in the last decade."

## RECENT RESEARCH HIGHLIGHTS

Some highlights in the past two years include:

- **Dr Paul Francis** coordinated an international team that discovered an enormous string of galaxies 300 million light-years long in the remote Universe, challenging existing theories about how the Universe evolved.
- **Professor Brian Schmidt** was recognised as Australia's smartest scientist in 2004 in *The Bulletin* magazine's Smart 100 list, for his research into the expansion of the universe. A team led by Professor Schmidt found the expansion of the universe was speeding up, not slowing down (the commonly held view).
- PhD student **Ms Rachel Moody** has discovered distant objects associated with the Solar System known as TNOs (Trans-Neptunian Objects) – nearly doubling the number known, with the largest being nearly half the size of Pluto. These objects were orbiting the Sun, far beyond the orbit of Neptune, providing important information about the formation of our Solar System.
- **Dr Simon Driver** has made the most accurate calculation of star numbers to date, finding that approximately 70 thousand million million million stars ( $7 \times 10^{22}$ ) shine down on us each night. That means there are more stars in the sky than all the grains of sand on every beach and in every desert on earth.

## MORE INFORMATION

For more information on Mt Stromlo Observatory and the research conducted by the Research School of Astronomy and Astrophysics, please visit our website.

<http://www.mso.anu.edu.au>

# FREQUENTLY ASKED QUESTIONS

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In the years prior to the fires of 2003, Mt Stromlo Observatory received more than 70,000 visitors each year. The Observatory has sparked an interest in science among generations of young Australians and is an icon of Australian science.

Following the fires of January 2003, thousands of people from around the world have contacted ANU, offering good wishes, donations for reconstruction and inquiring about progress in rebuilding.

The following provides answers to a few of the most frequently asked questions.

- **What was lost in the fires of 18 January 2003?**

Five telescopes, an historic administration building, seven houses and a workshop complex. Thankfully, two administration buildings and valuable data were spared.

- **What was the damage bill?**

The damage bill is still being assessed, as the University must wait until heritage plans are approved before the final rebuilding cost can be defined. However, it is safe to say the damage bill is considerably more than \$50 million.

- **What is being done now?**

Stage One redevelopment has commenced, with some funding from donations, insurance claims and the Commonwealth Government. This stage will result in the construction of Stage One of the Advanced Instrumentation and Technology Centre (AITC), replacing the lost workshops, and a new telescope, the SkyMapper, to be located at the ANU Siding Spring Observatory but controlled from Mt Stromlo.

Also as part of Stage One, the Near-infrared Integral Field Spectrometer, destroyed in the fires, is being rebuilt. The multimillion dollar instrument has been designed and built at Stromlo for one of the largest telescopes in the world.

The generous donations of many individuals and groups will be used to build three domes, to accommodate small telescopes which will be used for public viewing of the night sky.

- **Why does it look like little has been done?**

Demolition could not proceed to make the site safe for public access until approvals were granted by the Department of Environment and Heritage and the National Capital Authority. Those approvals, enabling demolition to begin, were not received until August 2004. Building of the AITC will commence in the next month.

- **What has ANU been doing to speed up this process?**

The University has been very active on three fronts:

- 1 Collecting and reconstructing data (much of which was lost in the fires) to plan for the reconstruction of the heritage-listed buildings and develop an overall plan for the observatory site.
- 2 Obtaining heritage approval. A Conservation Management Plan was submitted to the Department of Environment and Heritage in February 2004, the first under new heritage legislation. Formal approval of that plan is still awaited.
- 3 Confronting legal issues relating to insurance.

- **What is the outcome of negotiations with insurers?**

ANU has received part payment of the insurance claim for Mt Stromlo, but is still in discussion with each of the three insurers who covered the site.

- **When will reconstruction of the whole site occur?**

As further insurance money becomes available and heritage approvals are granted, further construction will occur, including reconstruction of the historic administration building.

- **What is the effect on staff?**

Mt Stromlo remains a very tight-knit community and we are fortunate that most staff have chosen to stay since the fire.