

# MEDIA RELEASE

NEWS FROM THE UNIVERSITY OF TASMANIA

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ATTENTION: Chiefs of Staff, News Directors

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## **New observatory set to shine in search for Earth-like planets**

University of Tasmania astronomers are to play a starring role in the international search for Earth-like planets in our home galaxy, with the commissioning of a new observatory in the state's southern Midlands.

The Greenhill Observatory, which houses a 1.27 metre optical telescope, at Bisdee Tier 60 kilometres north of Hobart was officially opened today (**Saturday 23 February 2013**) by the Governor of Tasmania, His Excellency the Honourable Peter Underwood.

The Vice-Chancellor, Professor Peter Rathjen, points to a long and proud astronomical tradition in Tasmania and at UTAS. "That tradition dates back to 1840 when Sir John Franklin established an observatory in the grounds of what is now Government House in Hobart.

"After World War II UTAS physicists Lester McAulay and Donald Cruickshank led a renaissance in astronomical research here. The 'founding father' of radio astronomy, American Grote Reber, arrived in 1954 to base his research career in southern Tasmania and in the 1960s development of the Mt Canopus site began.

"The official opening of the Bisdee Tier observatory and telescope opens an exciting new chapter in the history of extra-terrestrial exploration by UTAS."

The Head of the School of Mathematics and Physics, Professor John Dickey, said: "The new telescope, its enclosure and its environmental monitors have been designed from the ground up to be remotely operable, allowing UTAS astronomers and their collaborators worldwide to utilise the telescope efficiently, safely and inexpensively.

"It has been named after distinguished physicist Dr John Greenhill, who single-handedly renewed optical astronomy at UTAS in the decades leading up to his official retirement in the mid-1990s."

The Bisdee Tier site, 656 metres above sea level in the driest part of Tasmania and far from town and city lights, includes a lodge to accommodate up to 20 visiting scientists per year for up to several months at a time. The first international team is due to arrive mid-year to commence planet-hunting activities.

“We expect to catch 20 to 30 new planets per year, and some of them we expect to be Earth-like,” said Head Astronomer Dr Andrew Cole, who has fielded inquiries from scientists in the USA and Germany in recent months.

The new observatory, accessible only via a former forestry road over private property, is the culmination of five years’ hands-on work by a team of five from UTAS’ School of Mathematics and Physics. It has been funded by the University of Tasmania Foundation through generous contributions from individuals and organisations in Tasmania and around the world.

The telescope itself has been donated by Caisey Harlinton, an amateur Canadian astronomer living in England, who became aware of the existence of its 500kg primary mirror, in a Vancouver warehouse, in 2004.

The mirror had been cast in the US in 1970 and figured in Canada, and intended for use at UTAS’ Mt Canopus site near Cambridge. However the planned observatory expansion did not proceed and the mirror was placed in storage. (The Mt Canopus site will soon be decommissioned, as it is now badly light-polluted due to encroaching suburban development).

“Bisdee Tier should be a hundred times darker at night than Mt Canopus,” Dr Cole explains. “That increases the number of stars that can be observed per hour by a factor of six, providing an excellent home for a modern telescope.

“The telescope works by collecting light from very distant objects. The primary mirror redirects the light to a secondary mirror which then focuses it down to a cryogenic, 65-megapixel camera.”

A grant from the Australian Research Council has enabled Dr Cole to collaborate with astronomers at the Australian National University, the Institut d’Astrophysique de Paris and the University of Warsaw in Poland in obtaining state-of-the-art instrumentation for the telescope.

The one-metre telescope at Mt Canopus is to be given to Caisey Harlinton as a gesture of appreciation for his generosity. It will be reassembled at his New Mexico observatory.

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