

MEDIA RELEASE

NEWS FROM THE UNIVERSITY OF TASMANIA

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ATTENTION: Chiefs of Staff, News Directors



Australian-first as satellite laser system probes space from Tasmania

Tasmania's North-West Coast is home to an Australian first, with an international Satellite Laser Ranging (SLR) system set up in Burnie.

The system, the only one of its kind in the world, will play a crucial role in helping scientists use satellites to measure phenomena such as climate change and sea level rise.

For the next five months the Burnie TAFE will house the laser system, which is making its debut on Australian shores.

The system complements an array of scientific instruments around Burnie and cements the city's role as one of only three primary calibration sites in the world for NASA and French space agency satellites.

"Tasmania is really putting itself on the global environmental map with the arrival of the Satellite Laser Ranging (SLR) system," said spatial scientist Dr Christopher Watson, from the University of Tasmania's School of Geography and Environmental Studies.

The green laser measures distances to satellites about 1300 km away, accurate to about the width of an index finger.

"The laser plays a fundamental role in helping us to use satellites to understand climate and sea-level changes, which assists in shaping and informing public policy and environmental planning around the globe," Dr Watson said.

French scientist Dr Francis Pierron, from the system's creator - the French Observatoire de la Cote d'Azur - has been joined by a colleague and other Australian researchers in setting up and trialling the system.

The laser system is used to measure exact distances to satellites, including Jason-1 - launched in 2001 - allowing scientists to accurately track orbits.



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In turn, the satellites record the precise measurements of sea level across the world's oceans.

“These satellites are the tool of choice when it comes to monitoring the world's sea levels,” Dr Watson said.

“The information from the satellites is vital in planning for the future, especially for somewhere like Australia where most of the population is clustered around the coast.”

Burnie is the only calibration site of its kind in the southern hemisphere. The site will be used to track NASA and French space agency satellites, but will also observe a number of additional satellites as they pass over.

Researchers from CSIRO Marine and Atmospheric Research, University of Tasmania and Australian National University are involved in the laser system project.

The team will spend the next five months trialling the equipment to investigate the Jason-1 mission, in preparation for the next satellite, Jason-2, to be launched in June next year.

In conjunction with Jason-2's launch, Global Positioning System (GPS) buoys, land based GPS receivers and ocean moorings will be deployed in Bass Strait to measure the precise height of the sea surface.

The laser system has been made available through funding from the Australian Government's National Collaborative Research Infrastructure Strategy (NCRIS). The Integrated Marine Observing System (IMOS) is supporting GPS buoy deployments and ocean moorings in Bass Strait.

To mark the system's arrival, the UTAS School of Geography and Environmental Studies will hold a free public lecture and viewing from 6.30pm-9pm next Monday, December 3 at Burnie TAFE.

For more information contact:

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Media note: Fast facts on the Satellite Laser Ranging system are attached.

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