
Antarctic Science



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Drones go south in late-season Antarctic science mission

University of Tasmania researchers will use remotely piloted aircraft and a decade-long catalogue of data from diving elephant seals when they join a late-season Antarctic science mission on the US icebreaker *Nathaniel B Palmer*.

Nathaniel B Palmer sails from Hobart tomorrow to investigate the pathways of relatively warm ocean water from the margins of the Antarctic continent to the Antarctic continental shelf, a process believed crucial to the current melting of ice shelves.

The Australian Antarctic Marine Observing System (AAMOS) and the International Marine Snow Programme (IMAS) have been invited to participate in the oceanographic program. Dr Williams, an Australian Research Council Future Fellow, said the 40-day voyage will provide unique access to the late-season oceanographic environment in the region between Victoria Land and Prydz Bay.

"Data we have from monitoring the behaviour of elephant seals is a goldmine essentially, not only in terms of their seasonal migration patterns but also in terms of their foraging measurements from shipboard instruments will investigate this in detail, and during the voyage we will deploy several Argo autonomous profilers specially fitted to manoeuvre in sea-ice conditions and that will potentially provide us with year-round information on water temperature changes," he said.

Williams, together with Hokkaido University scientist and former TerraNova service leader Dr Peter M. Forster, will use drones in a pilot study to acquire aerial images of sea ice to determine floe size distribution. The drones have been developed with Dr Arko Lucieer and Dr Darren Turner from the University's TerraNova program.

This is the result of the collaboration between Lamont-Doherty Earth Observatory at Columbia University, the University of Tasmania and the Antarctic Climate and Ecosystems Cooperative Research Centre. Mission Director Dr Peter M. Forster will return to Hobart on May 3.

Background on ice ice: <http://thenewnormal.com.au/vis-antarctic->

Interview –

<https://www.youtube.com/watch?v=UDS5AAYIVj4>

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