

Ginger and Gadget in Antarctica

After much anticipation, the newly certified, ski-equipped ACASA 212-400 aircraft ('Ginger' and 'Gadget') touched down in Antarctica on 29 December 2004. A warm reception awaited them at the French station, Dumont D'Urville, and at Casey the following day.

Unfortunately, the aircrafts' arrival had been delayed by the complex nature of certification, the fitting of skis and ferry tanks, the obligation to meet the operating requirements set by the Civil Aviation Safety Authority, and weather conditions that did not match those needed for the flight from Hobart to Casey. This delay had a significant impact upon a range of planned scientific activities that were relying on the aircraft, including the Amery Ice Shelf Ocean Research project and some deep field science.

The demanding 3400 km flight over the Southern Ocean was a notable achievement, however, and the AAD is grateful to its French counterparts for the use of their skiway, support crew, accommodation and weather observations. Bureau of Meteorology staff at Hobart and Casey also provided a high standard of service, with the route forecast proving to be extremely accurate; while the Casey expeditioners did a fantastic job preparing and keeping both primary and alternate skiways serviceable – not only for the flight, but for the lengthy period of the 'deployment window' prior to the flight.

After aircrew familiarisation and training, both aircraft transferred to Davis Station and deployed field parties to the Amery Ice Shelf, Prince Charles Mountains and Grove Mountains. These operations on unprepared blue ice and snow surfaces provided invaluable experience to the aircrew.

On 12 January this year Gadget sustained nose gear damage while landing in the field. The reason for the failure is not yet known and investigations are continuing. Repairs were completed at Davis thanks to a cooperative effort between Australia, New Zealand, France, Italy and the USA, enabling spare parts to be flown to Concordia on the Antarctic Plateau. The parts were collected by Ginger – a trip that required the aircraft to operate in temperatures around -35°C and at altitudes of 3230 m. Gadget was ferried back to Hobart at the

end of the season, but was unable to play any further part in the flying programme from Davis. Despite this, Ginger's capabilities – in the sometimes brief windows of good weather – were maximised with the use of five pilots and three engineers. A total of 22 inter-station flights were flown during the season; the most notable being the 2780 km flight from Davis to Casey and back in one day.

The end-of-season north-bound ferry of both aircraft from Casey to Hobart on 3 March was conducted in excellent conditions and, in contrast to the south-bound ferry flight, occurred with very little delay. This was due predominantly to the tailwinds that commonly arise on this route and the flight was completed in approximately 10 hours.

The aircrafts' introduction to Antarctica has led to an overall improvement in the level of ground support and safety to both fixed and rotary wing operations provided by the AAD – particularly through the employment and training of dedicated aircraft ground support officers in skiway preparation and certification, loading of expeditioners and cargo, refuelling, weather observation, and expeditioner briefings. However, the venerable AS 350BA (Squirrel) helicopters, which have been operating for 19 years, will continue to provide essential support by maintaining the link between the Davis Plateau skiway and Davis Station, and by providing additional search and rescue coverage.

It was disappointing that the initial delays in delivery of the planes to Antarctica, and the damage to Gadget's nose gear during field operations, resulted in so many detrimental impacts to the planned science programmes. However, the operational knowledge gained in the performance of ferry flights, intra-station transfer and deployment, and the support and retrieval of field parties, will be invaluable to the continued implementation of a safe, efficient and reliable air transport system in the future.

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Aircraft Ground Support Officer Sharon Labudda prepares to hook up another load of cargo from Ginger to the Squirrel helicopter, for transfer to Davis.



SKYTRADERS