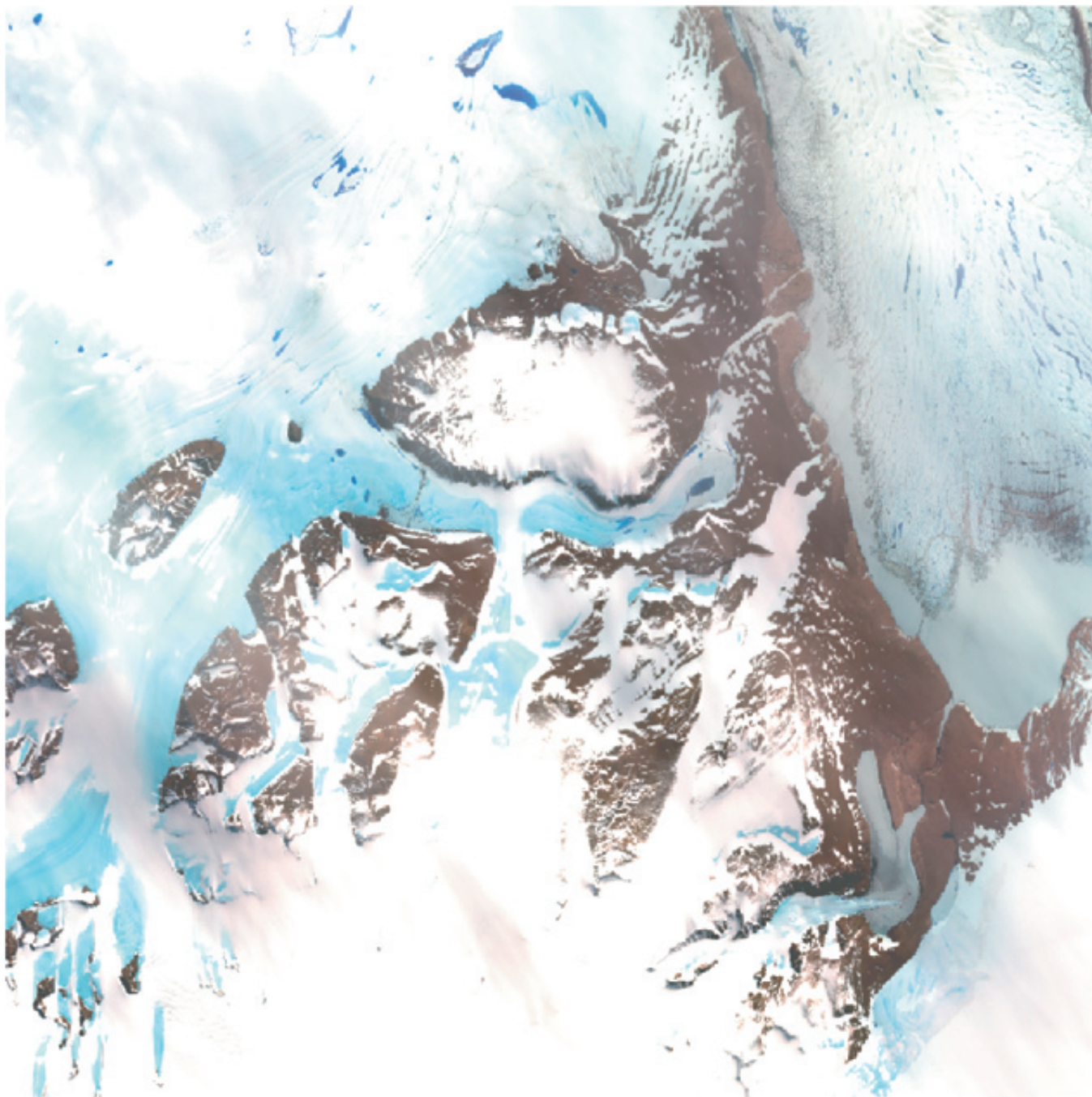


# Mapping Beaver Lake



AUSTRALIAN ANTARCTIC DATA CENTRE

One of the mapping projects for the Australian Antarctic Division Mapping Program in Antarctica during the 2003–04 summer, was the acquisition of SPOT 5 high resolution satellite imagery (2.5 metre pixels) of the area to the northwest of Beaver Lake and the

*Top: The SPOT 5 satellite image of the Beaver Lake area. It was acquired on 11 January 2004 at 11:26 Davis time – while the surveyors were still on the Lake and only fifteen minutes before the Twin Otter aircraft landed to take them back to Davis.*

*Right: Enroute from Beaver Lake camp to the Amery Peaks. This terrain is typical of the region being mapped from SPOT 5 and Aster imagery.*



MARTY BENAVENTE

location of ground control points to georeference this imagery. The Australian Antarctic Division map of the area was published in 1990 using geographic information derived from Russian maps of the region published in 1978. How or from which medium the geographic information in the Russian maps was derived is unknown.

The acquisition of satellite imagery and the mapping from this imagery is in support of geoscience and glaciology projects, the creation of geographical information system (GIS) data for the area and the production of a new digital map.

The SPOT 5 satellite imagery will be used to map topographic features such as glaciers, gorges, scree slopes and lakes while Aster satellite imagery (20 metre resolution) will be used in the production of a Digital Elevation Model.

*HENK BROLSMA, MAPPING OFFICER, AAD*



MARTY BENAVENTE

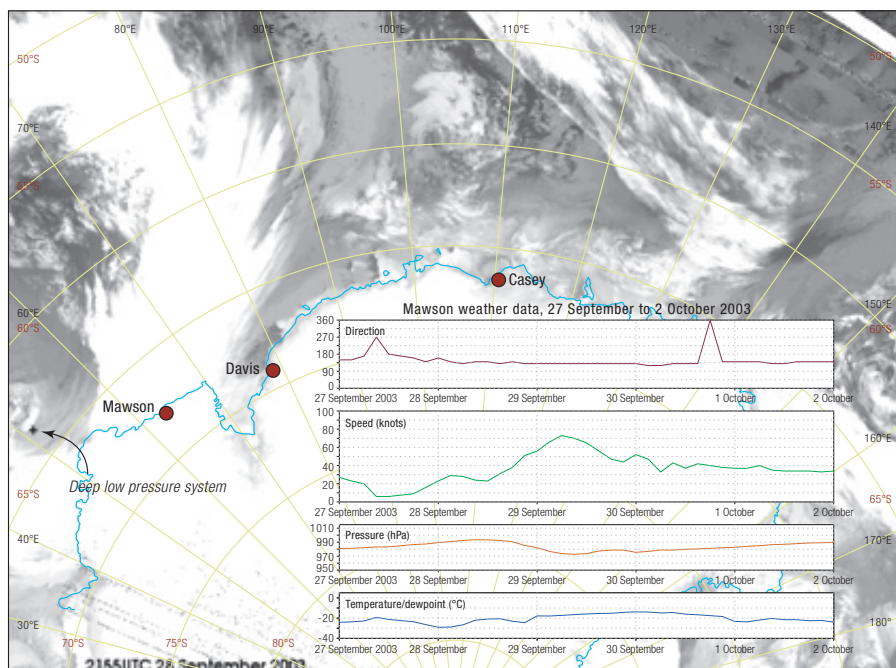
*Adrian Corvino surveys a ground control point, with Loewe Massif in the background.*

## Belgium, the tropics and the Antarctic Treaty System

The 2003–04 austral summer of weather forecasting in the Australian Antarctic Territory was, by all accounts, a very successful blend of international expertise and tropical-based know how! Marc De Keyser from Belgium, and Jane Golding from tropical Darwin, combined to cause one experienced Antarctic practitioner to declare 'Jane Golding and Marc de Keyser are the best forecasters I have ever worked with.'

Marc, who is a Belgian ex-Airforce meteorologist and who has worked with the British Antarctic Survey at Rothera, came to the Bureau's attention when he participated in the first International Symposium on Antarctic Weather Forecasting, which was held in Hobart in 1998. The underlying theme of that symposium was for international collaboration with respect to Antarctic weather forecasting. Accordingly, and in the spirit of part 1(b) of Article III of the Antarctic Treaty (see, for example <[http://www.scar.org/Treaty/Treaty\\_Text.htm](http://www.scar.org/Treaty/Treaty_Text.htm)>) that states 'scientific personnel shall be exchanged in Antarctica between expeditions and stations', the Bureau asked Marc to assist at Davis station last summer.

The figure above shows a satellite image of a typical 'blow' that Marc and Jane were required to anticipate in their



*The NOAA polar orbiting satellite image taken at 2155UTC on 28 September 2003 shows a deep low approaching Mawson station.*

roles as weather forecasters for the Australian Antarctic Program. The time series plot in the lower right hand corner shows the observations taken from Mawson Station around the time of the storm. The mean surface wind at Mawson exceeded 130 km/hr (70 kts) at the height of the storm, early on 29 September 2003.

*STEVE PENDLEBURY, REGIONAL DIRECTOR, BUREAU OF METEOROLOGY, TASMANIA/ ANTARCTICA REGION & NEIL ADAMS, BUREAU OF METEOROLOGY*