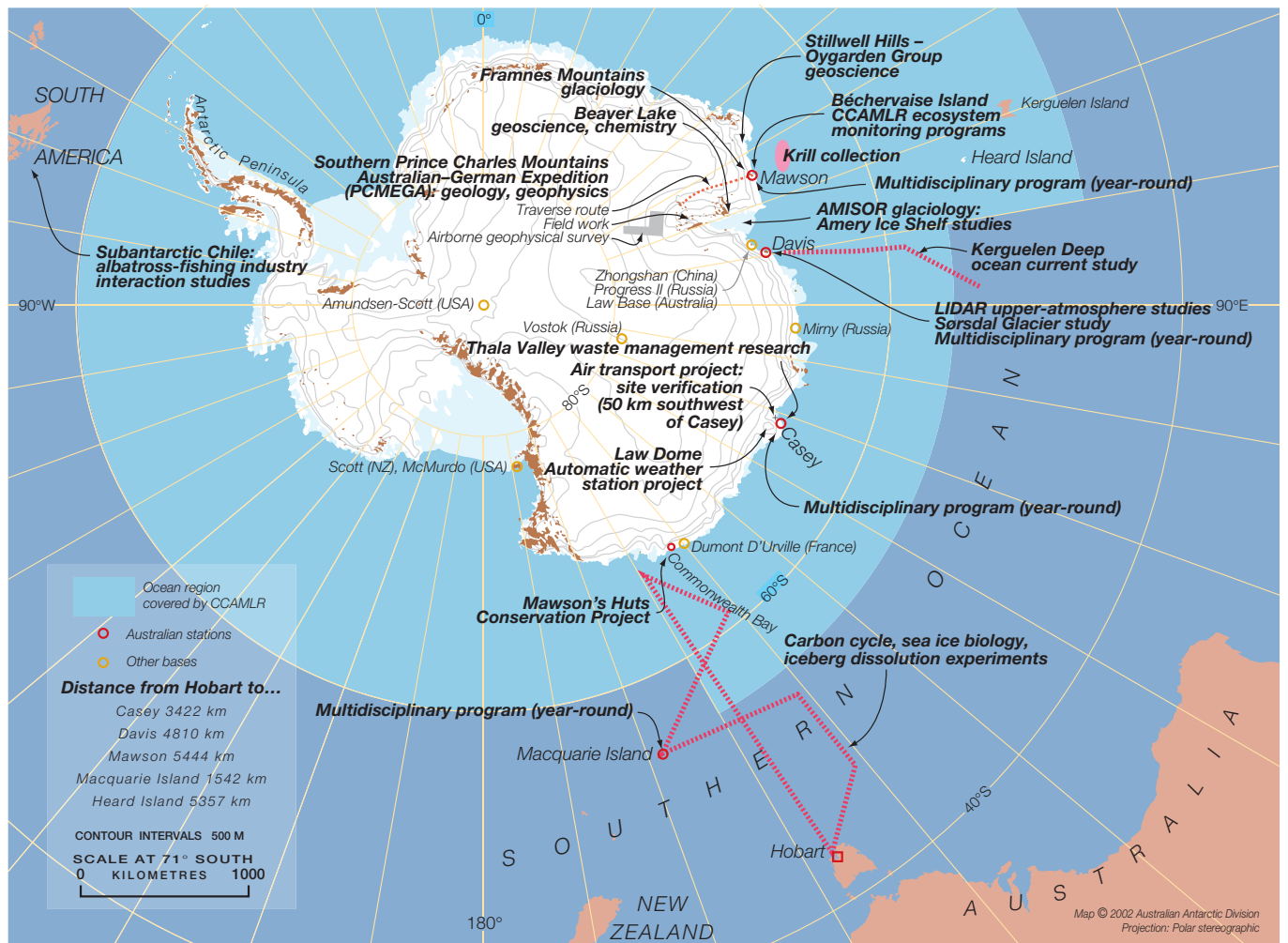


# Spanning the Antarctic: a busy research season



This season in Antarctica is characterised by full programs of scientific research and operational activities, including a major expedition to the southern Prince Charles Mountains range and construction trials on an ice runway for the proposed Antarctic air link. In addition there are two marine science voyages examining features of climate change, phytoplankton bloom, iceberg melt, krill swarm behaviour and plankton studies.

To get the season under way at the first possible opportunity the Russian ice-breaker *Kapitan Khlebnikov* departed from Cape Town in late September to deliver personnel to Mawson, Davis and Casey stations. The early arrival should enable Human Impacts researchers to work on rehabilitation of the Thala Valley tip site at Casey before the spring melt begins. Engineering crews at Mawson will start work on building an extension to the cosmic ray laboratory, and continue their work on the erection of a wind turbine power generation system. At Davis work will continue on the construction of a VHF radar facility to further strengthen the Space and Atmospheric Sciences instrument concentration at that location. To progress the proposed air-link to Antarctica construction trials will begin on a blue-ice runway near Casey station.

After years of planning and careful logistic analysis this season will see the deployment of a field party of Australian and German scientists into the southern Prince Charles Mountains. Thirty-four personnel will undertake geophysical and geological research in several locations in this remote and spectacular region, some 500 km south of Mawson station. The study, which is jointly funded by the AAD and the German Bundesanstalt für Geowissenschaft und Rohstoffe (equivalent to the geological survey), will be supported by a Twin Otter aircraft equipped with aeromagnetic and aerogravity instrumentation. The objective of the study is to better understand geological and glaciological histories and past climates of the region. Staff at Mawson station have been working on this project for almost a year and have successfully deployed fuel and equipment caches at strategic locations around the study site.

Major marine science voyages this season will continue long-term studies on the spring phytoplankton bloom, the changing quality of the Southern Ocean, and initiate a study on the melt rate of icebergs. These studies will help us to understand the rate and significance of environmental change. In February the RV *Aurora Australis* will undertake a hydroacoustic study of the behaviour of krill swarms off the

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Mawson coast, its centre of operation being dictated by the feeding behaviour of Adélie penguins that are bringing up their chicks on Béchervaise Island. This voyage will also gather data on the structure and flow of the Antarctic Circumpolar Current, as part of our climate and environment change research.

Altogether 500 scientists and support staff will travel south this season, on five different vessels conducting 14 voyages, making 2002-2003 one of the busiest seasons on record! ■

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