

**FILCHNER-RONNE ICE SHELF PROGRAMME
(FRISP)**

Report No. 12 (1998)

compiled by

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**13th International Workshop of the
Filchner-Ronne Ice Shelf Programme
held at
Alfred-Wegener-Institute
for Polar- and Marine Research,
Bremerhaven, Germany
on 22nd-23rd June 1998**

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Introduction

The 13th International Workshop of the Filchner-Ronne Ice Shelf Programme (FRISP) was held in Germany at Alfred-Wegener-Institute for Polar und Marine Research (AWI) at Bremerhaven on 22nd-23rd June 1998. We are grateful to Prof. Miller and his colleagues for hosting the workshop and organising it in an excellent manner. In total 30 participants from Chile, Germany, Sweden, the United Kingdom, and the USA came together.

One highlight of the 1997/98 Antarctic season was the ROPEX98 cruise with HMS Endurance. Indeed, during this season sea ice conditions had been very favourable in the Southern Weddell Sea for this experiment.

The FRISP Report No. 12 combines 12 extended summaries of in total 15 talks and 4 posters which were presented at the workshop. The papers collected in this volume present a good overview of the latest state of FRISP and the co-operation between the participating groups. Oceanography and the ice-shelf ocean interaction is still one of the major topics. Radar and GPS measurements were done in various areas, especially in grounding zone areas of ice shelves to describe the flow regime of ice streams. The work on the Berkner Island ice cores showed more interesting results yielding in a 80-year tritium record.

While this report was edited, a large calving event happened on Ronne ice shelf. On October 13th BAS detected at first the calving of iceberg A38, as it was named later by the US National Ice Center. At the beginning the ice berg had an overall length of approximately 140 km and a width of 40 km. On October 22nd, 1998 the large iceberg broke into pieces. The western half was then named A-38B, the eastern part A-38A. A-38B hosts the German Filchner summer station, which drifts further to the North. The loss of the Filchner station will change the German plans for field work on the Filchner-Ronne-Schelfeis for the 1998/99 field season and will also influence the German research plans in this area in the future. Disintegration of ice shelves certainly will become a major topic for ice shelf research

British Antarctic Survey offered to host the 14th FRISP workshop in mid June 1998 at Cambridge.

Due to some technical problems we had to make a new front cover. I chose a picture similar to the old picture once taken by Heinz Kohnen. The edge of an ice shelf looks very much like the edge of a tabular iceberg. So both stability and break up of ice shelves are symbolised in this picture. How to continue with the FRISP workshops? Shall we continue in the old tradition, or has the time come to make larger changes? We should discuss this during the next FRISP workshop at Cambridge and within the SCAR Working Group of Glaciology.

It is gratefully acknowledged that once more Alfred-Wegener-Institute covers the expenses for printing this report.

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Presentations at the workshop

- K.W. Nicholls First results from the ROPEX98 cruise to the southern Weddell Sea.
- R. A. Woodgate Preliminary results from current meter moorings at the Filchner Ronne ice front.
- E. Fahrbach Gradual Warming of the Weddell Sea Deep and Bottom Water.
- L. Padman Updated Ocean Tidal Model of the southern Weddell Sea and FRIS.
- A. Jenkins Circulation beneath Filchner-Ronne Ice Shelf simulated by an isopycnic coordinate ocean model.
- K. Grosfeld Ocean circulation in the Filchner-Ronne Ice Shelf domain from 3D-modelling result.
- H. H. Hellmer Influence of ice shelf areas on water masses and circulation in the Weddell Sea.
- C. Casassa Radar and GPS studies at Horseshoe Valley, Patriot Hills, Antarctica.
- A. M. Smith Glaciological-Geophysical Investigations on Rutford Ice Stream and Carlson Inlet, 1997-98.
- H. F.J. Corr Airborne geophysical investigations of the Rutford Ice Stream drainage basin.
- B. Riedel First results of GPS-array observations in the grounding zone of Ekstrøm ice shelf.
- J. Sievers Ice shelf movement of Ekstrømissen by SAR interferometry.
- J.-O. Näslund Results of ice sheet modelling and field surveys in the Vestfjella/Heimefrontfjella region, western Dronning Maud Land.
- M. Huke The first 80-year tritium record: Berkner Island South dome.
- H. Oerter Summary of mass balance studies on Möllereisstrom and Foundation Ice Stream since 1980.

Posters presented:

- K. Grosfeld Changes in the circulation pattern and water mass characteristics of the Filchner Trough as a (possible) consequence of iceberg calving.
- A. Lambrecht Mass balance of the southeastern Ronne Ice Shelf, Antarctica.
- V. Damm GEOMAUD Expedition.
- G. Klockmann Simulation of snow compaction in the surroundings of Halley station.

General Discussion on field work plans, future research and links with other programmes. (The future plans will be included in FRISP Newsletter No. 11)

