FILCHNER-RONNE ICE SHELF PROGRAMME (FRISP)

Report No. 11 (1997)

compiled by

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12th International Workshop of the Filchner-Ronne Ice Shelf Programme held at Department of Geological Sciences, Rock & Ice Physics Laboratory University College London, UK on 19th-21th June 1997

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Content

Introduction

The 12th International Workshop of the Filchner-Ronne Ice Shelf Programme (FRISP) was held in the United Kingdom at University College London, Department of Geological Sciences, Rock & Ice Physics Laboratory on 19th-21st June 1997. We are grateful to Prof. Philip Meredith, Dr. Peter Sammonds, Mrs Janet Baker and their colleagues, for hosting the workshop and organising it in an excellent manner. In total 26 participants from Austria, Germany, Norway, and the United Kingdom came together. For the first time the organisation of the workshop was done through the WWW homepage structure, which should be the preferable procedure in the future.

The 1996/97 Antarctic season suffered under heavy sea ice conditions in the Weddell Sea area which prevented the German and Norwegian research vessels Polarstern and Polar Queen from reaching the Filchner-Ronne-Schelfeis and also caused delays in the schedule of HMS Bransfield. Thus the planned German grounding line traverse across Ronne Ice Shelf did not take place. Neither the recovery of moorings in front of the Ronne Ice Shelf could be accomplished nor the completion of Monika Kristensen's earlier work which both were planned within the frame of the Norwegian Antarctic expedition programme.

The FRISP Report No. 11 combines 12 extended summaries of in total 17 talks and 3 posters which were presented at the workshop. Another 6 short abstracts were copied from the workshops programme. The papers collected in this volume present a good overview of the latest state of FRISP and the co-operation between the participating groups. The ice-shelf ocean interaction is still one of the major topics as well as the discussion of ice shelf stability. The work on the Berkner Island ice cores showed interesting results and will continue. A new two dimensional model deals with the grounding line mobility and stability discussion. The grounding line field work could not be accomplished on the Ronne Ice Shelf, but instead similar investigations were carried out on Ekströmisen. Thematic mapping of Filchner-Ronne-Schelfeis continued and shows new products and as far as possible (there are limitations due to the southern latitude) SAR data are now used for monitoring ice sheets and ice shelves.

The EPICA (European Project for Ice Coring in Antarctica) pre-site survey is progressing very well in Dronning Maud Land. New data on snow accumulation and snow chemistry in the uppermost part of the drainage basin of Filchner Schelfeis and Brunt Ice Shelf have been collected within this project and are now available. On the other hand the commitment of some groups to EPICA might cause a reduction of their engagement within FRISP.

Alfred-Wegener-Institute offered to host the 13th FRISP workshop in mid June 1998. It is planned to offer a separate homepage for FRISP within the external homepage of AWI (www.awi-bremerhaven.de) by the beginning of 1998.

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Presentations at the workshop

Mayer, C J	Ice dynamics across the grounding line: a two dimensional flow line model
Mayer, C Nixdorf, U	Geophysical investigations in the grounding zone area of the Ekström Ice Shelf
Doake, C M S	Analysis of break-up of Larsen Ice Shelf, Antarctic
Sammonds, P	Indentation testing of ice from the Filchner Ronne Ice Shelf
Sievers, J	SAR data interferometry applied to ice shelves: example Ekströmisen
Vaughan, D	Low profile ice sheets around Filchner-Ronne Ice Shelf
Sievers, J	FRISP thematic map series Filchner-Ronne-Schelfeis at 1:2 million scale
Johnson, M	Oceanic Environment of Ronne Entrance
Makinson, K	Residual tidal currents along Filchner Ronne Ice Front
Jenkins, A	Ocean circulation beneath ice shelves: first results from an isopycnic coordinate ocean general circulation model
Nøst, O A	Observations of the Antarctic Coastal Current, preliminary results from the Norwegian Antarctic Research Expedition, 1996/97
Paramor, T	The Antarctic Circumpolar Current: its oceanographic and climatic significance in the Late Quaternary
Oerter, H	The isotope content, H-2, O-18, 9 of the ice core B25 from Berkner Island in comparison with other ice cores from the Weddell Sea region
Miners, B	Using Ice core data to model the radio echo at Thyssenhöhe, Berkner Island
Walden, M	Review of the BAS EPICA 96/97 Radio Echo Survey Season
Winther, J-G	Nordic EPICA pre-site Survey in DML, 1996/97
Oerter, H	Stable isotope and chemical contents of near surface firn from Neumayer base towards Dronnning Maud Land, Antarctica

Posters presented:

Sievers, J	FRISP thematic map
Paramor, T	The Antarctic Circumpolar Current
Knight, B	The Berkner Island Traverse - initial results

General Discussion on field work plans, future research and links with other programmes. (The future plans will be included in FRISP Newsletter No. 10)