

PROGRAMME OF SESSIONS

Monday 6th September 1993 08.50–18.00 h

CHAIRMAN: David Peel

OPENING OF SYMPOSIUM: Heinz Miller, Chairman of SCAR WG on Glaciology.

INTRODUCTION TO DELEGATES: Liz Morris, Chairman of VISAG Organising Committee.

SESSION I. ICE CORES I

- J. Jouzel, N. I. Barkov, J. M. Barnola, M. Bender, J. Chappellaz, V. M. Kotlyakov, V. Lipenkov, C. Lorius, J. R. Petit, D. Raynaud, G. Raisbeck, C. Ritz, T. Sowers, M. Stievenard, F. Yiou and P. Yiou: Vostok ice cores: towards a second climatic cycle
C. U. Hammer, H. B. Clausen, and C. C. Langway, Jr: ECM stratigraphic dating of the Byrd Station ice core
R. Mulvaney, and D. A. Peel: Mid-Antarctic Peninsula ice cores: the potential for palaeoclimatic information
V. I. Morgan, C. W. Wooley, J. Li, W. Skinner and T. H. Jacka: Site information and initial results from deep ice drilling on Law Dome

SESSION II. ICE STREAMS I

CHAIRMAN: Bill Budd

- H. Engelhardt and B. Kamb: The Antarctic ice streaming mechanism from borehole studies
K. A. Echelmeyer and W. D. Harrison: The role of the margins in ice stream dynamics
C. J. van der Veen and I. M. Whillans: Controls on the West Antarctic ice sheet
R. M. Frolich and C. S. M. Doake: New light on ice stream margins
S. Anandakrishnan and R. B. Alley: Ice Stream C sticky spots detected by microearthquake monitoring
R. B. Alley, S. Anandakrishnan, C. R. Bentley and N. Lord: A water-piracy hypothesis for the stagnation of Ice Stream C

SESSION III. MASS BALANCE I

CHAIRMAN: Liz Morris

- I. Allison, M. Higham and R. Kiernan: Preliminary results from the Lambert–Amery regional glaciology experiment
C. S. Lingle, H. J. Zwally, T. C. Seiss and L. Lee: Recent elevation changes on Lambert Glacier and Amery Ice Shelf, from orbit crossover analysis of satellite radar altimetry

POSTER SESSION I

Tuesday 7th September 1993 08.30–18.00 h

SESSION IV. ICE/OCEAN

CHAIRMAN: Ian Allison

- U. Nixdorf, H. Oerter and H. Miller: First access to the ocean beneath the Ekström Ice Shelf by means of hot-water drilling
O. Orheim and S. Osterhus: Heat exchange and mass balance at the underside of the ice shelf Fimbulisen
A. Robinson, K. Makinson and K. Nicholls: Ocean circulation beneath Ronne Ice Shelf
A. Bombosch and A. Jenkins: Modelling the formation and deposition of frazil ice beneath Filchner Ronne Ice Shelf
J. Determann and R. Gerdes: Melting and freezing beneath ice-shelves: implications from a 3D-ocean circulation model
H. H. Hellmer and S. S. Jacobs: Ross Ice Shelf cavity response to annual shelf water variability
A. Jenkins: Thermohaline convection driven by the melting of Antarctic ice shelves and icebergs

SESSION V. MODELLING I

CHAIRMAN: Ian Whillans

- P. Huybrechts: Formation and disintegration of the Antarctic ice sheet
W. F. Budd, D. Jansen, E. Mavrikakis and B. Coustts: Modelling the Antarctic ice sheet changes through time
C. Genton: Antarctic climate modelling with general circulation models of the atmosphere
W. M. Connolley: Accumulation over Antarctica as represented by the UK Met. Office GCM

SESSION VI. ICE CORES II

CHAIRMAN: Bernhard Stauffer

- J.-R. Petit, M. Martin, J. Jouzel, N.I. Barkov and R. Vaikmae: The dust record in Antarctic ice: new data and comparison with other records
- A. Higashi and Y. Fujii: Studies on microparticles contained in medium depth ice cores retrieved at east Queen Maud Land, Antarctica
- L.G. Thompson, D.A. Peel, E. Mosley-Thompson, R. Mulvaney, J. Dai, P.N. Lin, M.E. Davis, C.F. Raymond: Climate since 1510 AD on the Dyer Plateau: evidence for recent climate change
- F. Nishio, O. Watanabe, P. Jacobs and H. Oerter: Weddell polynya recorded in ice core
- P. Ciais, J.W.C. White, J.R. Petit and J. Jouzel: The origin of Antarctic precipitations from surface snow deuterium excess data
- P. Martinerie, V. Ya. Lipenkov, J. Chappellaz and D. Raynaud: The air content record in the Vostok ice core

POSTER SUMMARIES

CHAIRMAN: Adrian Jenkins

- R. Bindshadler: Floating Ice
- D. Drewry: Glacial Geology
- J.R. Petit: Ice Cores
- P. Duval: Ice Properties
- D. MacAyeal: Ice Streams, Dynamics and Modelling
- O. Orheim: Mass Balance
- D. Vaughan: Remote Sensing

*20.30–22.00 h***POSTER SESSION II***Wednesday 8 September 1993 08.30–13.00 h***SESSION VII. ICE STREAMS II**

CHAIRMAN: Richard Alley

- D.R. MacAyeal, T. Scambos and R.A. Bindshadler: The basal stress regime of Ice Streams D and E, Antarctica
- A.M. Smith and C.S.M. Doake: Seabed depths at the mouth of Rutford Ice Stream, Antarctica
- S.R. Atre and C.R. Bentley: Indication of a dilatant bed near Downstream B camp, Ice Stream B
- R.A. Bindshadler and P.L. Vornberger: Detailed elevation map of Ice Stream C using satellite imagery and airborne radar
- R.W. Jacobel, A.E. Robinson and R.A. Bindshadler: Studies of the grounding line location on Ice Streams D/E, Antarctica
- D.G. Vaughan: The use of Kinematic GPS for the precise location of grounding lines on Antarctic ice streams

SESSION VIII. FLOATING ICE

CHAIRMAN: Jürgen Determann

- K. Grosfeld and F. Thyssen: Temperature investigation and modeling on Filchner–Ronne Ice Shelf, Antarctica
- H. Oerter, H. Eicken, J. Kipfstuhl, H. Miller and W. Graf: Textural and physical properties of two ice cores from the Filchner–Ronne Ice Shelf
- R. Souchez, J.L. Tison, R. Lorrain, C. Fléhoc, M. Stievenard, J. Jouzel and V. Maggi: Marine ice formation near grounding lines in Terra Nova Bay, Antarctica
- A. Danielson, M. Jeffries and K. Morris: Small-scale variability of physical properties and structural characteristics of Antarctic fast ice
- I. Allison and A. Worby: Seasonal changes of sea ice characteristics off East Antarctica
- T. Takizawa, K.I. Ohshima, S. Ushio, T. Kawamura and H. Enomoto: Temperature structure and characteristics appearing on the SSM/I images in the Cosmonaut Sea

*Thursday 9 September 1993 08.30–15.30 h***SESSION IX. REMOTE SENSING AND ICE PROPERTIES**

CHAIRMAN: John Glen

- R. Goldstein, H. Engelhardt, B. Kamb and R. Frolich: Satellite radar interferometry: application to Rutford Ice Stream
- A. Kovacs and A.J. Gow: The in-situ dielectric constant of polar firn revisited
- S. Fujita and S. Mae: The causes and the natures of ice-sheet radio-echo internal reflections estimated from the dielectric

properties of ice

O. Castelnau and P. Duval: Simulations of anisotropy and fabrics development in polar ices

T. H. Jacka and L. Jun: The steady state crystal size of deforming ice

T. Hondoh, T. Uchida, P. Duval, V. Ya. Lipenkov, A. N. Salamatin and S. Mae: Growth process of air-hydrate crystals in polar ice sheet

SESSION X. MODELLING II

CHAIRMAN: Philippe Huybrechts

R. C. A. Hindmarsh: Drainage basin evolution and divide form in Antarctica

R. Lestringant: A 2-D finite element computation of the flow in the transition zone between an ice-sheet and an ice-shelf

G. Casassa and I. M. Whillans: Decay of surface topography on the Ross Ice Shelf

A. N. Salamatin, V. Ya. Lipenkov and K. V. Blinov: Vostok climate record time scale deduced from the analysis of the bore-hole temperature profile

J. Moore, S. D. Mobbs, D. B. Ingham and J. C. King: A numerical model of blowing snow around an Antarctic building

SESSION XI. MASS BALANCE II

CHAIRMAN: Okitsugu Watanabe

J. C. King and P. S. Anderson: Heat and water vapour fluxes over an Antarctic ice shelf

O. Orheim: Iceberg calving rates and the mass balance of Antarctica

Q. Dahe, P. A. Mayewski, J. R. Petit, J. Jouzel, S. Whitlow, M. S. Twickler, R. Jiawen and W. Wenti: A study of snow pits in Inaccessibility region, Antarctica

E. Isaksson: 100 years of net accumulation and temperature changes from Dronning Maud Land, Antarctica

S. Takahashi, Y. Ageta, Y. Fujii and O. Watanabe: Surface mass balance on East Queen Maud Land in Antarctica observed by Japanese Antarctic Research Expeditions

Friday 10 September 1993 10.50–16.00 h

SESSION XII. ICE CORES III

CHAIRMAN: Claus Hammer

R. Vaikmaa, J. Jouzel, J. R. Petit, M. Stievenard and M. Toots: A new 30000 year Antarctic climate record from the Dome B ice core

S. L. Harder, S. G. Warren, R. J. Charlson, R. C. Finkel, J. Southon and M. Caffee: $^{10,7}\text{Be}$ and sulfate concentration in air and snow and exchange processes at the Antarctic snow surfaces

W. Graf, H. Moser, O. Reinwarth, J. Kipfstuhl, H. Oerter, A. Minikin and D. Wagenbach: Snow accumulation rates and isotopic contents (^2H , ^{18}O , ^3H) of near surface firn of the Filchner Ronne Ice Shelf, Antarctica

A. Minikin, D. Wagenbach, W. Graf and J. Kipfstuhl: Spatial and seasonal variations of snow chemistry at the central Filchner–Ronne Ice Shelf, Antarctica

T. Martin, J. M. Barnola and D. Raynaud: Atmospheric N_2O changes from ice core measurements: pre-industrial level and glacial-interglacial differences

SESSION XIII. MASS BALANCE III

CHAIRMAN: Chris Doake

D. J. Wingham, J. J. Proud, R. J. Arthern and D. R. Mantripp: Experimental investigations using ERS-1 observations of a new method of measuring the mass balance of the Antarctic ice sheet by satellite radar altimetry

S. Shabtaic and C. R. Bentley: Comparison of TRANSIT satellite and IGY surface elevations on the Ross Ice Shelf: thinning and retreat of the “ice plain”

B. K. Lucchitta, K. F. Mullins, C. E. Smith and J. G. Ferrigno: Velocities of the Smith Glacier Ice Tongue and Dotson Ice Shelf, Marie Byrd Land, West Antarctica

H. J. Zwally, T. C. Seiss, A. C. Brenner and J. DeMarzio: Antarctic ice sheet elevation changes

SUMMARY OF MEETING AND CLOSING DISCUSSION

CHAIRMAN: Heinz Miller