

PROGRAMME OF MEETING SESSIONS

SESSION 1. *Monday 12 September 1977 09.10h–12.40h.* CHAIRMAN: C. W. M. Swithinbank
RAPPORTEUR: S. J. Jones

Opening, by the President of the International Glaciological Society, M. de Quervain
INVITED PAPER: E. Whalley: The distortion of a water molecule in ice
D. W. Davidson and J. A. Ripmeester: Clathrate ices—recent results
Hermann Engelhardt and Barclay Kamb: X-ray determination of the structure of ice IV
G. P. Johari: On the heat capacity, entropy, and “glass transition” of vitreous ice
G. P. Johari and E. Whalley: The dipolar correlation factor of ice VI
D. D. Klug and E. Whalley: Origin of the high-frequency translational bands of ice I
P. Faure and A. Chosson: The translational lattice-vibration Raman spectrum of single-crystal ice Ih

SESSION 2. *Monday 12 September 1977 14.00h–18.00h.* CHAIRMAN: C. Jaccard
RAPPORTEUR: G. Noll

INVITED PAPER: J. F. Nagle: Configurational statistics
O. E. Mogensen and M. Eldrup: Vacancies in pure ice studied by positron annihilation techniques
M. Eldrup, O. E. Mogensen and J. H. Bilgram: Vacancies in HF-doped and in irradiated ice by positron annihilation techniques
J. H. Bilgram and H. Gränicher: Interaction of point defects in ice
G. C. Camplin, J. W. Glen and J. G. Paren: Theoretical models for interpreting the dielectric behaviour of HF-doped ice
RECENT WORK: F. E. Bates, S. M. Jacobs and J. E. Bertie: Infrared spectra of the ices at ≈ 4 K and the interpretation of the $\nu_{OD}(D_2O)$ bands of ices II and IX
D. A. Othen, P. G. Wright, F. E. Bates, D. K. Hendricksen, S. M. Jacobs and J. E. Bertie: Infrared spectra of the clathrate hydrates
Arturo Loria, Ezio Mazzega, Umberto del Pennino and Giovanni Andreotti: Measurements of the electrical properties of ice Ih single crystals by admittance and thermally stimulated depolarization techniques

SESSION 3. *Tuesday 13 September 1977 09.00h–12.40h.* CHAIRMAN: J. Perez
RAPPORTEUR: P. L. M. Plummer

INVITED PAPER: B. Dorner: Inelastic neutron scattering from ice and other proton-containing substances
Gerardo Wolfgang Gross, Iris Cox Hayslip and Roberta N. Hoy: Electrical conductivity and relaxation in ice crystals with known impurity content
M. Hubmann: Effect of pressure on the dielectric properties of ice Ih single crystals doped with NH_3 and HF
J. G. Paren and J. W. Glen: Electrical behaviour of finely divided ice
C. Boned, B. Lagourette and M. Clausse: Dielectric behaviour of dispersions of ice micro-crystals: a study versus temperature
N. Maeno and H. Nishimura: The electrical properties of ice surfaces
K. Itagaki: Dielectric properties of dislocation-free ice

SESSION 4. *Tuesday 13 September 1977 14.00h-17.45h.* CHAIRMAN: H. Engelhardt
RAPPORTEUR: J. G. Paren

- M. Varrot, G. Rochas and J. Klinger: Thermal conductivity of ice in the temperature range 0.5 to 5.0 K
I. Golecki and C. Jaccard: Radiation damage in ice at low temperatures studied by proton channelling
G. P. Johari and S. J. Jones: The orientation polarization in hexagonal ice parallel and perpendicular to the c -axis
G. Noll: The influence of the rate of deformation on the electrical properties of ice monocrystals
B. Stauffer and W. Berner: CO₂ in natural ice
N. D. Hargreaves: The radio-frequency birefringence of polar ice
Charles R. Bentley: *In situ* measurements of the activation energy for d.c. conduction in polar ice
Kenneth C. Jezek, John W. Clough, Charles R. Bentley and Sion Shabtaie: Dielectric permittivity of glacier ice measured *in situ* by radar wide-angle reflection
RECENT WORK: L. T. Traub and P. W. F. Gribbon: The activation energies of temperate snow samples
R. G. Ross, P. Andersson and G. Bäckström: Effects of H and D order on the thermal conductivity of ice phases

SESSION 5. *Wednesday 14 September 1977 09.00h-12.55h.* CHAIRMAN: E. Whalley
RAPPORTEUR: M. E. R. Walford

- INVITED PAPER: R. W. Whitworth: The core structure and the mobility of dislocations in ice
R. M. J. Cotterill and O. B. Pedersen: The dislocation formation volume in ice
J. Perez, C. Maï and R. Vassoille: Cooperative movement of H₂O molecules and dynamic behaviours of dislocations in ice Ih
René Vassoille, Christian Maï and Joseph Perez: Inelastic behaviour of ice Ih single crystals in the low-frequency range due to dislocations
N. K. Sinha: Observation of basal dislocations in ice by etching and replicating
C. V. McKnight and J. Hallett: X-ray topographic studies of dislocations in vapor-grown ice crystals
Y. Mizuno: Studies of crystal imperfections in ice with reference to the growth process by the use of X-ray diffraction topography and divergent Laue method
RECENT WORK: D. Joncich, J. Holder and A. V. Granato: Plastic behaviour of predeformed ice crystals

SESSION 6. *Thursday 15 September 1977 09.00h-12.55h.* CHAIRMAN: C. R. Bentley
RAPPORTEUR: G. P. Johari

- H. Shoji and A. Higashi: A deformation mechanism map of ice
D. R. Homer and J. W. Glen: The creep activation energies of ice
S. J. Jones and Jean-Guy Brunet: Deformation of ice single crystals close to the melting point
N. K. Sinha: Short-term rheology of polycrystalline ice
S. J. Jones: Effect of hydrostatic pressure on the creep of ice
R. C. Lile: The effect of anisotropy on the creep of polycrystalline ice
Robert W. Baker: The influence of ice-crystal size on creep
N. W. Riley, G. Noll and J. W. Glen: The creep of NaCl-doped ice monocrystals
RECENT WORK: Z. Watanabe: Breaking strength and creep expansion of deposited snow

SESSION 7. *Thursday 15 September 1977 14.00h–18.00h.* CHAIRMAN: A. Higashi
RAPPORTEUR: D. J. Goodman

INVITED PAPER: Stuart A. Rice, William G. Madden, Robert McGraw, Mark G. Sceats and Michael S. Bergren: *On the relationship between low-density amorphous solid water and ice Ih*

J. H. Bilgram and H. Güttinger: *Dynamical processes at the ice–water interface during solidification*

Othmar Buser and Claude Jaccard: *Charge separation by collision of ice particles on metals: electronic surface states*

RECENT WORK: Paul R. Camp: *Dimensional changes of ice Ih with time*

L. Couture: *Optical absorption spectra of H₂O ice doped with ytterbium chloride YbCl₃*

Patricia L. M. Plummer: *Molecular orbital calculations of water–ice surface interactions*

B. N. Hale and J. Kieffer: *An effective pair-potential study of the interaction of a water monomer with the basal-plane surface of ice Ih*

Thomas O'D. Hanley: *Frazil nucleation mechanisms*

SESSION 8. *Friday 16 September 1977 09.00h–12.45h.* CHAIRMAN: O. E. Mogensen
RAPPORTEUR: W. S. B. Paterson

INVITED PAPER: A. Higashi: *Structure and behaviour of grain boundaries in polycrystalline ice*

M. Matsuda and G. Wakahama: *Crystallographic structure of polycrystalline ice*

Paul Duval: *Anelastic behaviour of polycrystalline ice*

T. Hondoh and A. Higashi: *X-ray diffraction topographic observations of the large-angle grain boundary in ice under deformation*

S. C. Colbeck and N. Parssinen: *Regelation and the deformation of wet snow*

D. J. Goodman and D. Tabor: *Fracture toughness of ice: a preliminary account of some new experiments*

Katutosi Tusima: *Anisotropy of the kinetic friction on a single crystal of ice*

RECENT WORK: L. Levi: *Application of nucleation theory to the process of droplet freezing on an ice substrate*

SESSION 9. *Friday 16 September 1977 14.00h–16.00h.* CHAIRMAN: J. W. Glen
RAPPORTEURS: J. G. Paren
D. R. Homer

GENERAL DISCUSSION

Closing remarks by J. W. Glen

Closing of the Symposium by the President of the Society