GLACIOLOGICAL LITERATURE

This is a selected list of glaciological literature on the scientific study of snow and ice and of their effects on the earth; for the literature on polar expeditions, and also on the "applied" aspects of glaciology, such as snow ploughs, readers should consult the bibliographies in each issue of the Polar Record. For Russian material the system of transliteration used is that agreed by the U.S. Board on Geographic Names and the Permanent Committee on Geographical Names for British Official Use in 1947. Readers can greatly assist by sending reprints of their publications to the Society, or by informing Dr. J. W. Glen of publications of glaciological interest. It should be noted that the Society does not necessarily hold copies of the items in this list, and also that the Society does not possess facilities for microfilming or photocopying.

GLACIOLOGICAL INSTRUMENTS AND METHODS


PHYSICS OF ICE


Clifford, J. Proton magnetic resonance data on ice. Chemical Communications, 1967, No. 17, p. 880-81. [Width of resonance line implies a proton spin-spin relaxation time of 5-10 μs. A narrow line is also observed and its origin is discussed in terms of liquid water or non-hydrogen-bonded water molecules.]


EVANS, L. F. Selective nucleation of the high-pressure ices. Journal of Applied Physics, Vol. 38, No. 12, 1967, p. 4930-32. [Use of selective nucleators to produce any required polymorph of ice from liquid at high pressure except ice II or VII.]

FAURE, P. and KAHANE, A. Interprétation des spectres optiques de basse fréquence de la glace à l’aide d’un modèle dynamique du réseau cristallin. Journal de Physique, Tom. 28, No. 11-12, 1967, p. 944-50. [Interpretation of low-frequency infra-red and Raman spectra of ice in terms of dynamical model of the lattice. English abstract.]


GLEN, J. W. The effect of disorder on dislocation movement and plastic deformation of ice. Physik der kondensierten Materie, Bd. 7, Ht. 1, 1968, p. 43-51. [Because of H disorder, dislocations can only move through ice if electrical point defects move and reverse H-bonds. French and German abstracts.]


JELLNJEK, H. H. G., and ISAAC, S. H. Sintering of powdered ice. Journal of Colloid and Interface Science, Vol. 25, No. 2, 1967, p. 245-54. [Rate of decrease of surface area of 0.5 µm ice spheres measured. Main cause is thought to be plastic flow under surface forces.]

KETCHAM, W. M., and HOBBS, P. V. The preferred orientation in the growth of ice from the melt. Journal of Crystal Growth, Vol. 1, No. 5, 1967, p. 263-70. [Experimental study of criteria by which one grain wedges out another.]

KNIGHT, C. A. The contact angle of water on ice. Journal of Colloid and Interface Science, Vol. 25, No. 2, 1967, p. 280-84. [Observation of angle of surfaces of thin layer of water freezing on a copper plate used to deduce information about surface energies.]


LAVROV, V. V. Koeffizient Puassona l'da pri staticheskoy nagruzke [Poisson coefficient of ice under a static load. Problemy Arkhitektur [Problems of the Arctic and Antarctica], Vyp. 26, 1967, p. 49-52.]

LEFEVRE, V. The freezing potential effect. Journal of Colloid and Interface Science, Vol. 25, No. 2, 1967, p. 263-69. [The potential developed on freezing dilute ionic solutions is explained in terms of a model of the ice-solution interface.]


ICEBERGS. SEA, RIVER AND LAKE ICE


icerocks. Sea, river and lake ice


CARSTENS, T. Experiments with supercooling and ice formation in flowing waters. Geophysikse Publikasiyoner, Vol. 26, No. 9, 1966, 16 p. [Confirms that supercooling is function of rate of heat loss and of quality of flow.]


KOPTEV, A. P. O roli sneznogo pokrova v protsessakh teplobloma [Role of snow cover in heat exchange processes]. Problemy Arkтики i Antarkтики [Problems of the Arctic and Antarctic], Vyp. 22, 1966, p. 82–89. [Effect when snow cover lies on floating ice.]


SHESTERIKOV, N. P. O pogloshchenii solnechnoy radiatsii l'dom pod snezhnitsy [Absorption of solar radiation by ice under puddles]. Problemy Arkтики i Antarkтики [Problems of the Arctic and Antarctic], Vyp. 25, 1967, p. 66–70. [Floating ice.]


GLACIAL GEOLOGY


GLACIOLOGICAL LITERATURE


MERGER, J. H. Glacier resurgence at the Atlantic/sub-boreal transition. Quarterly Journal of the Royal Meteorological Society, Vol. 93, No. 398, 1967, p. 528-34. [Suggests the cool phase was as severe as at the start of the sub-Atlantic.]


FROST ACTION ON ROCKS AND SOIL. FROZEN GROUND. PERMAGROWTH


SCHENK, E. On the formation of string bogs and aapamoors of the Arctic and Antarctic. Zeitsschrift für Geomorphologie, Bd. 10, Ht. 4, 1966, p. 346-68. [These formations are attributed to collapse of permafrost.]

WASHBURN, A. L. Instrumental observations of mass-wasting in the Mesters Víg district, northeast Greenland. Meddelelser om Grønland, Bd. 166, Nr. 4, 1967, 266 p. [Quantitative observations carried out from 1956 to 1961 at a number of experimental sites and resulting conclusions.]


ZAMORUYEV, V. V. Kamennyye glechetry v khrete Khamar-Daban [Rock glaciers in Khamar-Daban mountain range]. Izvestiya Vsesuznogo Geografskogo Obshchestva [News of the All-Union Geographical Society], Tom 97, Vyp. 1, 1965, p. 80-81.

METEOROLOGICAL AND CLIMATOCLOGICAL GLACIOLOGY


SNOW


GUNN, K. L. S. The number flux of snow crystals at the ground. Monthly Weather Review, Vol. 95, No. 12, 1967, p. 921–24. [Measurements show that main contribution to increase in snowfall rate is formation of new crystals rather than growth of existing ones.]


PROTSSENKO, V. F. Ob izmereniikhlotnosti snezhnogo pokrova [On the measurement of snow cover density]. Meteorologiya i gidrologiya [Meteorology and Hydrology], 1967, No. 7, p. 105–07. [Comparison of measurement using permanent markers with 1 km survey strips.]


YEN, Y. C. The rate of temperature propagation in moist porous mediums with particular reference to snow. Journal of Geophysical Research, Vol. 72, No. 4, 1967, p. 1283–88. [Heat transfer equation, neglecting effect of radiation and convection but including effect of vapour diffusion in porous media, formulated and solved numerically for snow, in density range from 0.1 to 0.45 g/cm³.]