

GLACIOLOGICAL LITERATURE

THIS selected list of glaciological literature has been prepared by J. W. Glen with the assistance of T. H. Ellison, W. B. Harland, Miss D. M. Johnson, and the Staff of the Scott Polar Research Institute. Its field is 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. Glen of publications of glaciological interest.

GENERAL GLACIOLOGY

- JONES, Sir H. S. The inception and development of the International Geophysical Year. *Annals of the International Geophysical Year*, Vol. 1, 1959, p. 383-446.
- SCHYTT, V. Några preliminära forskningsresultat från främst den glaciologiska aktiviteten i Antarktis under det Internationella Geofysiska Året. *Ymer*, Årg. 79, Ht. 1, 1959, p. 63-67. [Preliminary results, especially glaciological, from International Geophysical Year in Antarctic.]

GLACIOLOGICAL INSTRUMENTS AND METHODS

- KOLESNIKOV, A. G., and SPERANSKAYA, A. A. Pribor dlya opredeleniya teplovykh potokov [Apparatus for determining heat flow]. *Izvestiya Akademii Nauk SSSR. Seriya Geofizicheskaya [News of the Academy of Sciences of the U.S.S.R. Geophysical Series]*, 1958, No. 11, p. 1351-59. [Apparatus for determining heat flow without disturbing the medium.]
- POUND, T. N. Calibration of snow gauges for the Antarctic Division. *Australian Defence Scientific Service, Aeronautical Research Laboratories, Aerodynamics Technical Memorandum* 139, 1958, [11] leaves. [Gauges developed at Mawson, Antarctica, to measure quantity of snow carried in snow bearing winds at various heights above ground.]
- VLADIMIROV, O. K., and CHERNIGOV, V. A. Opyt ispol'zovaniya oslableniya γ -luchey dlya opredeleniya plotnosti l'da i snega v usloviyakh Antarktity [An attempt to use γ -ray absorption to measure ice and snow densities in Antarctic conditions]. *Atomnaya Energiya [Atomic Energy]*, Tom 4, Vyp. 5, 1958, p. 474-75. [Laboratory and field tests of apparatus.]

PHYSICS OF ICE

- BASS, R. Zur Theorie der mechanischen Relaxation des Eises. *Zeitschrift für Physik*, Bd. 153, Ht. 1, 1958, p. 16-37. [Calculation of damping of mechanical vibrations in ice.]
- BOGORODSKIY, V. V. Uprugiyeh kharakteristiki l'da [Elastic properties of ice]. *Akusticheskiy Zhurnal [Journal of Acoustics]*, Tom 4, No. 1, 1958, p. 19-23. [Description of ultrasonic apparatus and results obtained for sea, river and lake ice.]
- BRILL, R., and others. Dielektrisches Verhalten von Eis-Ammoniumfluorid-Mischkristallen. [Von] R. Brill, H. Ender, A. Feuersanger. *Zeitschrift für Elektrochemie, Berichte der Bunsengesellschaft für physikalische Chemie*, Bd. 61, Nr. 8, 1957, p. 1071-75. [Results of experiments on dielectric relaxation interpreted in terms of molecular structure.]
- DAY, J. A. On the freezing of three to nine micron water droplets. *Journal of Meteorology*, Vol. 15, No. 2, 1958, p. 226-28. [Experiments on supercooling of very small water droplets.]
- GRÄNICHNER, H. Gitterfehlordnung und physikalische Eigenschaften hexagonaler und kubischer Eiskristalle. *Zeitschrift für Kristallographie*, Bd. 110, Ht. 5/6, 1958, p. 432-71. [Discussion of possible defects in the molecular structure of ice crystals and their effects on physical properties.]
- HILLIG, W. B. The kinetics of freezing of ice in the direction perpendicular to the basal plane. (*In Growth and perfection of crystals. Proceedings of the International Conference on Crystal Growth, Cooperstown, New York, Aug. 27-29, 1958.* New York, John Wiley and Sons, 1958, p. 350-60.) [Experiments show that rate of growth was strongly affected by impurities and crystal imperfections. Kinetics of growth are discussed.]
- KACHURIN, L. G. Sravneniye razlichnykh uravneniy zamerzaniya pereokhlazhdennykh vodnykh aerozoley [Comparison of various equations for the freezing of supercooled water aerosols]. *Izvestiya Akademii Nauk SSSR. Seriya Geofizicheskaya [News of the Academy of Sciences of the U.S.S.R. Geophysical Series]*, 1959, No. 1, p. 122-30.
- KLEBER, W., and WEIS, J. Keimbildung und Epitaxie von Ejs (I). *Zeitschrift für Kristallographie*, Bd. 110, Ht. 1, 1958, p. 30-46. [Study of shapes of ice crystals formed by epitaxy and comparison with those of other crystals.]
- LAFARGUE, C. Sur le rôle joué par les ions dans le phénomène de la surfusion de l'eau. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences*, Tom. 246, No. 12, 1958, p. 1894-96. [Experiments on supercooling of water with various salts dissolved in it.]
- LAFARGUE, M., and MILLECAMP, R. G. Sur les propriétés électromagnétiques de la glace des glaciers. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences*, Tom. 247, No. 12, 1958, p. 884-86. [Results of experiments on propagation of radio waves in ice of the Mer de Glace.]
- LISGARTEN, N. D. An electron diffraction study of ice deposits formed on silver iodide. *Philosophical Magazine*, Eighth Ser., Vol. 3, No. 35, 1958, p. 1306-11. [Study of oriented deposits down to -100° C. and of cubic or amorphous ice deposits at lower temperatures.]
- LUYET, B., and RAPATZ, G. Patterns of ice formation in some aqueous solutions. *Biodynamica*, Vol. 8, No. 156, 1958, p. 1-68. [Observations of habit of ice crystals formed in various solutions.]

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- NAKAYA, U., and others. Physical investigations on the growth of snow crystals. [By] U. Nakaya, M. Hanajima, J. Muguruma. *Journal of the Faculty of Science, Hokkaido University*, Ser. 2, Vol. 5, No. 3, 1958, p. 87-118. [Experiments using cine-microphotography to study attachment of droplets to snow crystals.]
- NIKANDROV, V. YA. Priroda obrazovaniya kapelek i l'dinok v usloviyakh bol'shikh peresyshcheniy [The formation of droplets and ice crystals under conditions of strong supersaturation]. *Trudy Glavnoy Geofizicheskoy Observatorii* [Transactions of the Principal Geophysical Observatory], Vyp. 73, 1958, p. 3-11. [Theoretical study of effect of solid CO₂ on supersaturated water vapour.]
- NIVEN, C. D. A proposed mechanism for ice friction. *Canadian Journal of Physics*, Vol. 37, No. 3, 1959, p. 247-55.
- ROULLEAU, M. Influence de la pureté de l'eau sur la production de charges électriques accompagnant la congélation. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences*, Tom. 248, No. 13, 1959, p. 2024-25. [Experiments showing that potential difference between water and ice is larger the purer the water.]
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- STEINEMANN, S. Experimentelle Untersuchungen zur Plastizität von Eis. *Beiträge zur Geologie der Schweiz. Geotechnische Serie. Hydrologie*, Nr. 10, 1958, 72 p. [Experiments on plastic deformation and recrystallization of ice and discussion of application to temperate glaciers.]
- TAKAMURA, T. On the melting and freezing behaviors of liquid held in the very narrow capillary. *Science Reports of the Tohoku Imperial University*, Ser. 1, Vol. 42, No. 1, 1958, p. 16-21. [Theory of supercooling in fine capillaries.]
- TAKAMURA, T. Studies on the melting and freezing temperatures of benzene and water condensed in the micropores of silica gel. *Science Reports of the Tohoku Imperial University*, Ser. 1, Vol. 42, No. 1, 1958, p. 22-30. [Measurement of supercooling.]
- YERMAKOVA, YE. A. O mekhanizme teplo- i massoobmena pri sublimatsii l'da pod vakuomom [On the mechanism of heat and mass exchange during the sublimation of ice in a vacuum]. *Inzhenerno-Fizicheskii Zhurnal* [Journal of Engineering Physics], 1958, No. 11, p. 73-79. [Theoretical discussion.]
- YERMAKOVA, YE. A. Nekotoryye rezul'taty eksperimental'nogo issledovaniya teploobmena pri sublimatsii l'da [Some results of experimental investigations on heat exchange during the sublimation of ice]. *Inzhenerno-Fizicheskii Zhurnal* [Journal of Engineering Physics], 1958, No. 12, p. 54-58. [Results of experiments both with and without radiant heat.]

LAND ICE. GLACIERS. ICE SHELVES

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- BUGAYEV, V. A., and TOLSTIKOV, YE. I. Profil' poverkhnosti Antarktity po linii Mirnyy—yuzhnyy polyus—Mak-Merdo—Mirnyy [Profile of the surface of Antarctica along the line Mirnyy—South Pole—McMurdo—Mirnyy]. *Izvestiya Akademii Nauk SSSR. Seriya Geograficheskaya* [News of the Academy of Sciences of the U.S.S.R. Geographical Series], 1959, No. 3, p. 72-79. [Heights recorded during Soviet flight, October 1958.]
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- EPSTEIN S., and SHARP, R. P. Oxygen isotope studies. *Transactions. American Geophysical Union*, Vol. 40, No. 1, 1959, p. 81-84. [Theory of method for dating ice and results from Greenland, South Pole and Blue Glacier, U.S.A.]
- ERIKSSON, B. E. Glaciological investigations in Jotunheimen and Sarek in the years 1955 to 1957. *Geographica*, Nr. 34, 1958, 208 p. [Morphological and meteorological observations in these glacial areas and regime of Skagastølsbreen and Mikaglaciären.]
- FRISTRUP, B. Gletscherundersøgelser i Grønland under det geofysiske år. *Grønland*, 1959, Nr. 5, p. 161-72. [Glaciological investigations in Greenland during International Geophysical Year, 1957-58.]
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- HATTERSLEY-SMITH, G. Glaciological research in northern Ellesmere Island. *Canadian Geographer*, No. 12, 1958, p. 32-34. [Observations of regime.]
- HATTERSLEY-SMITH, G. Glaciological work on "Operation Hazen", northern Ellesmere Island, 1958. *Canadian Alpine Journal*, Vol. 42, 1959, p. 73-74.

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- IVAN'KOV, P. I. Sovremennoye oledneniye Zangezurskogo Khrebt [Present ice cover of Zengezurkiy Khrebet]. *Privoda [Nature]*, 1959, No. 4, p. 114. [Location of small glaciers in southern Caucasus.]
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- KOTLYAKOV, V. M. Osobennosti stroeniya verkhney tolschi lednikovogo pokrova tsentral'nykh rayonov Antarktity [Features of the structure of the upper portion of the ice sheet of the central regions of Antarctica]. *Izvestiya Akademii Nauk SSSR. Seriya Geograficheskaya [News of the Academy of Sciences of the U.S.S.R. Geographical Series]*, 1959, No. 4, p. 3-16. [Density, hardness and temperature observations down to depth of 12 m. in vicinity of Soviet stations "Vostok-I" and "Komsomol'skaya", 1957.]
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- MÜLLER, F. Eight months of glacier and soil research in the Everest region. *Mountain World*, 1958/59, p. 191-208. [Narrative of expedition, measurement of surface speed, surface features, former extent of Khumbu Glacier, and of periglacial features.]
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- ZABIROV, R. D. Oledeniye sredney Azii [Glaciers of central Asia]. *Raboty Tian'-Shan'skoy Fiziko-Geograficheskoy Stantsii, Glyatsiologiya* [Works of the Tian'-Shan Physico-Geographical Station, Glaciology], Tom 1, 1958, p. 9-41. [General description of distribution, classification and characteristics.]

ICEBERGS. SEA, RIVER AND LAKE ICE

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- BROWNE, I. M. Ice drift in the Arctic Ocean. *Transactions. American Geophysical Union*, Vol. 40, No. 2, 1959, p. 195-200. [Preliminary analysis of data from U.S. I.G.Y. drifting stations, 1957-58.]
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GLACIAL GEOLOGY

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