

**List of Danish Geodetical and Geophysical Publications 1957**

(Compiled by Dansk Geofysisk Forening)

Published in Copenhagen 1957 unless otherwise stated

EINAR ANDERSEN: 200 års videnskabelig geodætisk virksomhed i Danmark. — 1757 — 25. februar — 1957. — Geodætisk Institut Meddelelse No. 32.

The scientific geodetic surveying of Denmark was commenced on February 25th 1757 by the Royal Danish Society on a proposal by Peder de Kofod who in consequence was appointed as professor.

The paper presents the geodetic history of Denmark during the period 1757–1957. Included are lists of the more essential maps, publications, and biographical data.

EINAR ANDERSEN: Geodætisk Institut 1928–1955. — Geodætisk Institut Meddelelse No. 33.

The paper is a tribute to dr. N. E. Nørlund who retired in 1955 as director of the Danish Geodetic Institute. Dr. Nørlund took the initiative to the establishment in 1928 of the institute and during his leadership the institute has developed to its present state.

EINAR ANDERSEN: Seismologien i det geofysiske år. — Nordisk Astronomisk Tidsskrift 1957, pp. 13–21. — Polytekniker 23, pp. 119–123.

The main problems within seismology are discussed. The Danish seismological stations are described. The establishment of a fourth station at Station Nord, Northeast Greenland as a Danish contribution to the third Geophysical Year is announced.

EINAR ANDERSEN: Jordskælvene og det geofysiske år. — Naturens Verden, maj 1957, pp. 26–32.

The article deals with the same problems as mentioned in the article above. The present paper is, however, less detailed and in a more popular form.

Annuaire Magnétique, 1<sup>ère</sup> partie: Le Danemark (excepté le Groenland), 1955, Copenhagen 1956.

N. J. DAHL: On Water Supply from Wells. — Acta Polytechnica 236.

By taking the percolation into account the potential depression around a well cutting a deep aquifer can be shown to decrease asymptotically to nil by increasing distance from the well. The final potential in the aquifer may be found by superposition of the depression and the original ground-water flow.

FRANK ENGELUND: On the Theory of Multiple-Well Systems. — Acta Polytechnica 234.

The loss of head by flow of ground-water in an aquifer of uniform thickness to groups of wells may be divided in two steps: Depression by a continuous ditch and additional depressions caused by the single wells.

An approach to calculating the flow of phreatic water has been made, too.

Geodætisk Institut: Bulletin of the seismological station København, No. 65 (1955), No. 66 (1956), No. 67 (jan.–june 1957), No. 68 (july–sept. 1957).

The readings of 371, 311, 335, and 134 earthquakes, respectively. In Nos. 67 and 68 are microseismic readings included. Character, amplitude, and period are read on Galitzin N, E, and Z to the hours 0, 6, 12, and 18 GMT.

Bulletin of the seismological station Scoresbysund, No. 27 (1953).

The readings of 459 earthquakes.

Report on Astronomical Determinations 1954–1956. By EINAR ANDERSEN. Submitted to the Eleventh General Assembly of the IUGG held in 1957 in Toronto. 4 pp.

Report on Gravity Measurements 1954–1956. By EINAR ANDERSEN. Submitted to the Eleventh General Assembly of the IUGG held in 1957 in Toronto. 4 pp.

Report on Levelling of High Precision in the Period 1954–1956. By EINAR ANDERSEN. Submitted to the Eleventh General Assembly of the IUGG held in 1957 in Toronto. 4 pp.

Report on Triangulation and Base Measurements 1954–1956. By EINAR ANDERSEN. Submitted to the Eleventh General Assembly of the IUGG held in 1957 in Toronto. 4 pp.

Report on Seismology and Physics of the Earth's Interior 1953–1957. By EINAR ANDERSEN. Submitted to the Eleventh General Assembly of the IUGG held in 1957 in Toronto, Canada. Compiled by HENRY JENSEN. 6 pp.

1. The Stations. 2. The Routine Work. 3. Research Work. 4. Earthquakes. 5. Engineering Seismologi. 6. Gravity. 7. Bibliography.

HENRY JENSEN: On the Beat-Distribution in Group-Microseisms. — Geodætisk Institut Meddelelse No. 34.

First the annual variation for microseismic amplitude and period in Scoresbysund and København is given. Then it is shown that the beat-interval is logarithmic-normally distributed with only one parameter, as which the simple mean may be chosen. The mean value of the beat-interval is proportional to the period in the carrierwave. The beat-interval is greater in the vertical records than in the horizontal ones. This may be explained by assuming a Love-component in the microseisms.

HENRY JENSEN: Den seismiske uro. Vor Viden 1957–58, pp. 234–242.

A popular review of microseism, its nature and origin.

AXEL JESSEN: Präzisionsnivellement und Schweremessung. — Schweizerische Zeitschrift für Vermessung, Kulturtechnik und Photogrammetrie 55, pp. 225–227, Winterthur 1957.

An article from Landinspektøren 21, (confer the 1956-list of publications) is presented in German translation.

A. KILLERICH: Galathea-Ekspeditionens arbejde i Philippinergraven. — Ymer, 77. årg., pp. 200–222. Stockholm, 1957.

A report is given on the work carried out in the Philippine Deep by the Danish deep-sea expedition around the world 1950–52. The report emphasizes the sounding work and gives many sections and diagrams to show the depth conditions across the Deep. The vertical distribution of temperature, salinity and oxygen content is discussed, and the biological work is touched upon.

HANS KUHLMAN: Sandflugt og klitdannelse. — Geografisk Tidsskrift 56, pp. 1–19. (Summary in English).

Some sand-traps erected in order to catch the wind-transported sand were tested. As the sand drift was considered in relation to wind-velocity at a standard height level it was necessary to measure the roughness parameter,  $z_0$ , for each surface type. Some surface layers of loose sand becomes moist only with difficulty. It seems that these layers play a decisive role in sand drift in a moist climate.

HANS KUHLMAN: Kornstørrelser i klit- og strandsand. — Geografisk Tidsskrift 56, pp. 20–56. (Summary in English).

The determination of the question whether a sediment is eolic can probably be based exclusively on the distribution of the grain sizes, but only when disposing of a big and well-analysed collection of figures.

A. LUNDBAK: Surge Frequencies along the Danish Westcoast. — Deutsche Hydrographische Zeitschrift. Band 10, Heft 5, pp. 176–183. — Hamburg, 1957.

A review of four statistical methods and the corresponding formulas, applicable for surge frequencies and similar problems, are presented. Surge frequencies at Højer Sluice, Esbjerg, Hvide Sande, Thyborøn and Hirtshals, i.e. along the Danish westcoast, and also—as a comparison—at the Dutch coastal point Hoek van Holland are considered on this basis. It is

concluded that a frequency formula with three parameters can reproduce the actual frequencies rather well; but real forecasting of possible surge heights turns out to be more complicated. Nevertheless, some tentative "security levels" are stated.

J. M. LYSHEDE: Vandløbsregulering og afstrømningsmaksima. — Nordisk Jordbrugsforskning 39, pp. 173–176.

Distribution graphs of some Danish rivers before and after regulation are constructed. Comparison between observed floods and those computed on basis of the graphs shows tolerable correspondance. But no evident relation between size of drained areas and type of distribution graphs is found, probably because of too little knowledge about the height of the water level in the rivers before and after the regulation.

Meteorologisk Institut: Ugeberetning over nedbør m. m.

Månedstillæg til ugeberetning over nedbør m. m.

JENS TYGE MØLLER: Afvandringsproblemer i Rejsbymarsken. — Geografisk Tidsskrift 56, pp. 93–110. (Summary in English).

The narrow strip of saltmarsh along a part of the waddensea coast in South-Jutland is frequently inundated by the watercourses flowing through the area, partly because there is no relation between the capacity of the sluices and the maximal waterbearing in the corresponding rivers.

OLE MØLLER: Length of the Geodesic determined from Mercator Coordinates. — The International Hydrographic Review, vol. XXXIII No. 2, pp. 137–142., Monaco 1956.

A formula, the chief part of which is a series, is presented and discussed. It has formerly been published by D. H. Sadler, but was then developed to a decisively smaller number of terms.

Its application in the computation of hyperbolic lattices, when using highspeed electronic computers, is discussed.

Nautisk-Meteorologisk Årbog/Nautical-Meteorological Annual 1956.

JOHANNES OLSEN: Nye teorier til forklaring af Jordens magnetisme. — Ingeniøren 65, no. 26, pp. 530–534, 1956.

A review of modern researches concerning the secular variation of the earth-magnetic field in past geologic periods and the secular variation of the rotation period of the Earth which seem to throw new light on the origin of the earthmagnetic field.

JØRGEN RYBNER ET EIGIL UNGSTRUP: L'influence de la zone d'aurores boréales sur les liaisons radioélectriques. — Annales des Télécommunications 12, pp. 172–173.

JØRGEN RYBNER: Grønland og radiobølgerne. En dansk indsats i det geofysiske år. — Naturens Verden, august 1957, pp. 15–29.

A review of radio waves, wireless reception in Greenland, black out, atmospheric, and the Danish contribution to the geophysical year within the ionospheric field.

SVEND SAXOV: Nogle nyere gravimetre og deres anvendelighed. — Fysisk Tidsskrift 55, pp. 49–78.

The principles in a series of gravimeters are presented together with a review of the physical properties of material well suited. The problems of drift and calibration are touched upon. The applicability of gravimeters are mentioned.

SVEND SAXOV: Sænkningen i kalkundergrunden ved Taastrup. — Meddelelser Dansk Geologisk Forening 13, pp. 217–222.

Based upon information obtained in the Well Record Department of the Geological Survey of Denmark H. ØDUM has pointed out that a depression exists in the chalk subsurface near Taastrup (Sjælland).

A series of gravity profiles obtained by means of Worden gravimeter No. 142 belonging to the Danish Geodetic Institute have been carried out, the profiles being situated perpendicular

to the main direction of the depression. The resulting Bouguer anomalies gave a definite relief for the profiles Dybendal and Taastrup Gd., the relief being half a milligal. The other profiles did not give response.

It is concluded that the depression is very narrow and relatively deep-seated having the main direction north to south.

JENS SMED: Synoptic Hydrographic Charts, August 1956–May 1957.

Monthly charts showing surface water temperature and salinity, wind and current for the North Sea and adjacent waters. For details see the 1953 list.

JENS SMED: Monthly Anomalies of the Surface Temperature in Areas of the Northern North Atlantic in 1955. — Monthly Anomalies of the Surface Temperature in an Area off the Eastern Coast of Scotland in 1955. — *Annales Biologiques*, Vol. XII, pp. 10–11 and p. 71.

Positive anomalies (the period 1876–1915 being taken as standard) still predominate. In each of the regions as a whole the average anomaly over the year is  $0.3^{\circ}$  C., about the same as in 1954.

HELGE THOMSEN and M. V. L. LORCK: The state of the ice in the arctic seas 1954. — Appendix to the *Nautical-Meteorological Annual 1954*.

A. WIIN-NIELSEN: Meteorologien og Det geofysiske år. — *Naturens Verden* No. 10, okt. 1957, pp. 9–16, 24–27, 32.

Gives a short outlook upon the problems of modern synoptical meteorology, and how they are to be treated during the IGY.