

PUBLICATIONS OF THE GEODETIC INSTITUTE OF FINLAND

REVIEW.

The International Hydrographic Bureau has received publications N° 30 and 31 of the Geodetic Institute of Finland.

In the first T. HONKASALO reviews the relative gravity measurements effected in Finland during 1937.

The instruments employed were described in publication N° 23; in particular the Sterneck apparatus, which comprises 4 pendulums of copper and 4 of invar. Special attention has been given to the temperature corrections.

In the second publication Pentti KALAJA describes the methods and the results of the base-line measurements carried out by the Geodetic Institute between 1933 and 1939, as well as the studies of the variation in the lengths of invar wire.

Five measurements of the base-lines were made, as well as calibrations of the wires and numerous comparisons between the old and new trial bases. In this article are found a description of the accessory apparatus for the extremities of the bases and supports, the thermometers employed and the levelling instruments. The author, after having given the formulae which he employs for determining the lengths and the various corrections, studies the influence of the torsion of the wire and the springs, as well as the spiral twisting of the mean axis. He draws attention to this cause of systematic error which might modify the length of the wire, the disappearance of which is probably one of the causes of the elongation of the new wire (pages 48-51).

He also studies the local deformations of the wire, and then the influence of the occurrences during the measurements. He gives the results of all of the measurements with their mean errors and ends with the bibliography of all works which treat of these questions.

