

GEOMAGNETIC OBSERVATORIES OF THE UKRAINE: EQUIPMENT, MEASUREMENT PRACTICE AND DATA INTERPRETATION

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There are three Geomagnetic Observatories (GOs) in territory of Ukraine: GO “Lviv”, GO “Kiev” and GO “Odesa”. GO “Lviv” starts to operate in 1932. Unfortunately all materials of the observation till 1941 were lose. Observations were renew at 1952. Two series of the magnetometers were put into operation: main series – H, D, Z La Cour and duplicate series – H, D, Z Eshengagen. Absolute measurement carry out by magnetic theodolite COOK, induction inclinometer and quartz magnetometer. In 1966 proton magnetometer PM – 1 was installed. In 1970 geomagnetic variation stations were changed. Two series of Bobrov variation stations were installed. Now at the observatory operate two digital variation stations PSM – 8811 constructed by Polish Institute of Geophysics. Absolute measurements fulfill by DI fluxgate magnetometer with FLM1/B electronics. Observatory sent observation data to WDC – B2 in Moscow and is member of the INTERMAGNET. GO “Kiev” was located in Demidov with 1958 and now is in Dymytriv with 1964 (distance between these points about 10 km). Regular variation and absolute measurements was begun in 1958 by the standard equipment (La Cour, Bobrov, QHM, BMZ, PM-1). Now at the observatory operate two digital variometers LEMI-008 with GPS reference and internal memory (from 2004) and one digital variation stations PSM – 8811 (from 2009, March), DI fluxgate magnetometer LEMI - 203 (Lviv Centre of Institute of Space Research) and proton variation station MV-01 (Geologorazvedka, St.Peterburg). GO “Kiev” works in the test mode INTERMAGNET from 2005. The regular measurements of the Earth’s magnetic field at the GO “Odesa” are carried out by the standard equipment from a 1948 year for a present tense. GO “Odessa” needs modernization. Software MATLAB is used for the analysis and data processing of the Ukrainian GOs. The supervisions in Ukrainian GOs use for the decision different geomagnetic, geological and ecological tasks.

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