



## Earth Magnetic Field Measurements in Slovenia

**S. Beguš** (1), A. Bilc (2), R. Čop (3), D. Fefer (1), D. Radovan (4)

(1) Faculty of Electrical Engineering, Slovenia, (2) 2B d.o.o. Geoinformatics, Representation and Services, Slovenia, (3) The Faculty of Maritime Studies and Transport, Slovenia, (4) Geodetic Institute of Slovenia, Slovenia (samo.begus@fe.uni-lj.si / Fax: +386 1 4768 214 / Phone: +386 1 4768 421)

Geomagnetic observations and measurements in Slovenia have long tradition. In 1848 the Institute for Meteorology and Geomagnetism in Vienna has been founded. After the fall of the Austro-Hungarian Monarchy it was succeeded by the Institute for Meteorology and Geodynamics in Ljubljana. Geomagnetic research in Slovenia was discontinued after the second world war when important strategic research was transferred to military institutes in Belgrade. In the time of former Yugoslavia, geomagnetic measurements in Slovenia were carried out but measurement results are missing. At present the geomagnetic data for Slovenia is interpolated from the World geomagnetic model (WGM). The article is based on the research project »Determination of magnetic declination in Slovenia and comparison with global models of the earth magnetic field«, which is carried out by the Slovenian Research Agency and is funded by the Ministry of Defence. Its main goal is to provide a permanent observation system for magnetic declination, a connection to the global geomagnetic network and an automated permanent magnetic reference point (MRP) for recording of magnetic declination and absolute value of magnetic field. In the article the potential locations appropriate for taking long-time measurements in Slovenia are considered. Slovenia is a relatively densely populated country with a well developed traffic network, railway network, electronic communication network and power distribution network. According to recommendations an appropriate location for a MRP should be 30 km away from electric railway and 10 km away from power distribution network. At some locations preliminary measurements were carried out with the overhauser magnetometer and potassium gradiometer. The data obtained have been processed and presented

graphically.