



ČAAG – Czech Association of Geophysicists

Short History of Development and Production of Geophysical Instruments in the Czech Republic

Development and production of geophysical instruments in the Czech Republic has long tradition. Members of the CAAG are staff of companies mentioned above.

The beginning of the development and production of geophysical instruments dates back to the 1960's in Geofyzika Company located in Brno. Firstly, geoelectric apparatuses signed as Geska, Mimi, Gevy using for resistivity methods were produced. Then, apparatus signed IPOR using for induced polarization measurement and apparatus VDV or VDV-R for electromagnetic method of very low frequency waves. In the following years, devices for other geophysical methods - magnetometric and radiometric - were designed.

Development of proton magnetometers named PM-2 was the most significant magnetometric apparatuses, which are used in combination with the modern PMG-1 gradiometer up to now.

For radiometric measurements, development and production of the unique 256-channels gamma-ray spectrometers signed as GS-256 had prominent successful; they were produced by the Canadian Company named Exploranium consequently.

The greatest achievement of Geofyzika Brno was the development of a complex of laboratory instruments for the measurement of magnetic properties of rocks with special focus on paleomagnetic research. Basic instrumentation represented apparatuses for measurements of susceptibility and remanent magnetic polarization, including anisotropy, e.g. kappa meter KT-6/9, the kappa bridge KLY-2/3, astatic magnetometer LAM-20 and spinner magnetometer JR-4/5. It was also developed other auxiliary instruments as apparatus for rock samples demagnetizing and a set enabling the measurement in a zero magnetic field - Magnetic Vacuum Control System MAVACS. Examples of the devices produced in the second half of the 20th century are shown in figure (left above).

After the disintegration of Geofyzika Brno in the 1990s, the successor private companies emerged, among which GF Instruments, AGICO and GEORADIS, which are connected with the development and production of modern geophysical instruments, were established.

GF Instruments produces advanced ARES or ARES II geoelectric devices for profile resistivity measurements, including multichannel methodology, and also for induced polarisation tomography. Special apparatuses were developed for electromagnetic conductivity mapping (conductivity multi depth meter CMD-1, CMD-2 and CMD-4 probes). This company also developed for geomagnetic measurements magnetic susceptibility meter (SM-20 and Multi Kappa) and radiometric apparatuses Gamma Surveyor II, i.e. 1024 channels gamma spectrometer.

AGICO company produces first of all complex of laboratory equipment for the measurement of magnetic properties of rock (kappa bridges MFK1 and spinner magnetometers JR-6).

Examples of selected modern geophysical instruments of the cited companies are presented in figure (right above).



Exhibition of newly developed geophysical instrumentation
Brno, March 2017
Companies: AGICO, GEORADIS, GF Instruments, RS DYNAMICS, SatisGeo, W&R Instruments, ZH Instruments

