



The INCA International Course on ArchaeoGeophysics - an EU intensive program of teaching interdisciplinarity in science

Wolfgang Rabbel (1), Serif Baris (2), and Roman Pasteka (3)

(1) Institute of Geosciences, University of Kiel, Kiel, Germany (Rabbel.Wolfgang@googlemail.com), (2) Geophysical Institute, Kocaeli University, Izmit-Kocaeli, Turkey, (3) Geophysical Institute, Comenius University, Bratislava, Slovakia

As part of the European Union ERASMUS program the Universities of Kiel, Kocaeli and Bratislava have set up an international summer school on archaeological prospecting with geophysical methods. The general aims of the course are to improve interdisciplinary understanding between natural and philosophical sciences, represented by geophysics and archaeology, to teach state-of-the-art science and to apply this knowledge in real-world situations at the same time, to practice driving and presenting scientific results, and –last but not least – to improve the understanding between different cultures.

The first field courses were held near the cities of Iznik, Turkey, and Nitra, Slovakia. Iznik is the ancient city of Nicea located close to the Marmara Sea and the North Anatolian Fault Zone. Nitra is situated in western Slovakia close to the “Slovakian Gate”, a major geographical pathway to mining districts of bronze age in the Carpathian Mountains.

The course schedule comprises an introduction to the regional and local situation from archaeological and geologic-tectonic points of view situation, methodical lectures and practical field work with state-of-the art geophysical instruments (geomagnetics, geoelectrics, ground penetrating radar, micro-gravimetry). In-door course work comprises digital data processing and interpretations well as presenting results to students, local authorities and the public. Course participants are ca. 35 students of Archaeology and Geophysics. In cooperation with the local authorities sites were selected in order to demonstrate the different potential and requirements of geophysical prospection in archaeology. The sites comprised urban areas as wells as sites on the countryside, such as the prospecting of future construction ground, ancient and recent water supply systems, pre-historic settlement hills, and geological features. The field examples demonstrated the advantages, and often the need, to apply different exploration methods in order to obtain enlightening underground images. One of course highlights was the detection of the buried remnants of a previously unknown basilica of Byzantine age within the city of Iznik.