

## **A LARGE SCALE GPR SURVEY TO LOCATE THE ROMAN STATION CLUNIA**

**W. Neubauer (1)(2), A. Eder-Hinterleitner (1), S. Seren (1), P. Melichar (1)**

(1) Archeo Prospections, Central Institute for Meteorology and Geodynamics, Hohe Warte 38, A- 1190 Vienna, archeo@zamg.ac.at/Fax: +431 3686621

(2) IDEA Geophysical Prospection, University of Vienna, Franz Kleingasse1, A-1190 Vienna, Wolfgang.Neubauer@univie.ac.at/Fax: +431 4277 9404

In 1883/84 two large Roman buildings were excavated near Feldkirch, Austria. The buildings were interpreted as the Roman station Clunia situated on the Roman road crossing the Alpes from Mediolanum (Milano) to Brigantium (Bregenz) as known from the Tabula Peutingeriana. As the excavation map has no coordinates the excavation area could not be located any more. Due to the planning of industrial buildings an area of 15 ha should be surveyed to locate the former excavation area. A large scale magnetic survey using high resolution cesium gradiometers (0.005 nT / 0.5 x 0.125 m raster) and a subsequent detailed resistivity survey using multiplexed RM15 resistivity meters (0.5 x 0.5 m grid, a=0.5; 0.1 m) was able to locate the excavated buildings but showed further archaeological structures not known so far. To get more detailed 3D information on the monuments an additional large scale GPR survey covering 5 ha was carried out using a PulseEKKO 1000 ground penetrating radar (0.5 x 0.05 m grid). The archaeological interpretation of the depth slices visualised as digital images showed eight buildings situated close to a 20 m wide road. Based on the archaeological evidence derived from the combined interpretation of the geophysical results we produce a 3D archaeological reconstruction of the Roman site covering 30000 m<sup>2</sup> presenting a comprehensive archaeological interpretation model.