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Geophysical prospection in vicinity of the Southern Harz Mountains, Germany

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The Free University of Berlin and the Humboldt University of Berlin hosts the excellence cluster 264 Topoi, "The Formation and Transformation of Space and Knowledge in Ancient Civilizations". The Excellence Cluster pursues the goal of researching the interdependence of space and knowledge in the civilizations of the Ancient Near East, the Mediterranean, and Black Sea region and parts of the Eurasian steppe from the 6th millennium BC to around AD 500. Within this excellence cluster, the project A-I-10 "Settlement History of the South Harz Mountains" combines archaeological, geophysical, and geographical methods to identify the settlement history during the iron-age period.

The southern Harz Mountains were on the northern periphery of the Latène culture, which was organized around central sites. Here, towards the end of the 2nd century B.C., settlements of the Przeworsk culture are present, providing evidence of a process of migration into a limited "cultural island". From the geophysical perspective in this project, we discuss results of large-scale magnetic mapping and geoelectric surveys, which were used to determine localities, where subsequently archaeological excavations have been carried out. Magnetic prospecting has been performed with an eight-sensor gradiometer array mounted on a chart. Using a newly developed 10-channel-data logger LEA supporting a GPS-unit for accurate real time positioning high resolution measurements of 1 ha/h became possible. Geoelectric measurements have then been performed over selected sites to add more information on the sub-surface from a different perspective.