

Magnetometer Survey at the Early Latène Barrow at Glauberg, Germany and Izs Environs

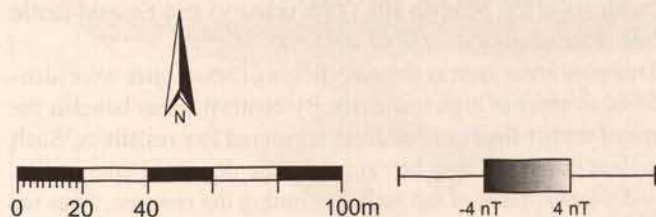


Fig. Glauburg-Glauberg, Wetterau district, Hessen; Monumental early La Tène barrow with ditch system; 256-gray-scale plot of the fluxgate-magnetometer survey (detail); order from the Department of the Preservation of Monuments in Hessen, Wiesbaden

In 1994 the Hesse Department for the Preservation of Monuments excavated a rich grave of the Early Latène period at the southern slope of the prehistoric hillfort of Glauberg in Hesse, Germany.

The grave goods (gold torque, bronze wine-flagon etc.) lead to the assumption that it was the grave of an important personality. In the course of further excavations, an almost completely preserved statue of an idealized celtic ruler or hero and fragments of three more statues were brought to light. These findings and excavations at the hillfort of the Glauberg proved that this site was an important place on the northern rim of the Celtic world, similar to the princely residences of southwestern Germany, northern Switzerland and eastern France.

In the first place aerial photography found hints for a barrow measuring about 50 m in diameter being surrounded by a ditch. The excavation in 1994 confirmed this idea. Further weak traces of features were visible in the near environs of the barrow.

A first magnetometer and resistance survey following the excavation and covering an area of 1.5 hectares with the barrow in its centre showed very soon that it was included into a large system of ditches that enclosed the area in the Iron Age period.

Until now an area of about 110 hectares was covered by an even 0,5 m grid system using a fluxgate-gradiometer. The ditch-system localized up to now has an extension of more than 1,2 km from east to west. Also visible are further ditch-systems of different age. Scattered over the whole area of investigation are several settlements of neolithic to Iron age context inside and outside the large Iron age ditch-system.

The magnetometer survey at the Glauberg makes the special operation of geophysical methods among archaeological field methods clear (excavation, aerial photography, field walking etc.). Its potentiality and increasing importance in archaeology once again becomes visible.

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A Comparative Study of Electromagnetic Survey and Excavation Results at Archaeological Sites Containing Kilns and Buildings

Electromagnetic probing was conducted before excavation on baked areas and trampled areas at a number of archaeological sites. The studies undertaken were as follows:

- (1) Magnetic surveys at a Suzu-ware kiln Site (14th century);
- (2) Magnetic investigation at the Paleolithic Ohara B site;
- (3) Electric resistivity surveys on trampled areas of the sites of buildings at the Murodo site (18th century) and Emashi castle site (15th century).

Results

- (1) Magnetic surveys of a kiln site (13–14th century). Both a proton precession magnetometer and a fluxgate gradiometer were used and clear magnetic anomalies appeared in four areas. Excavation revealed that the appearance of these anomalies is related to the direction of the major axis of the kilns. Kilns with their major axis aligned north-south show quite a good cor-