

For helping to corroborate the GPR results, EM methods were used as a comparative study. The results using EM31 instrument

with a 3.6 meter coil spacing show very similar results recorded on GPR time slices between 80–100 ns.

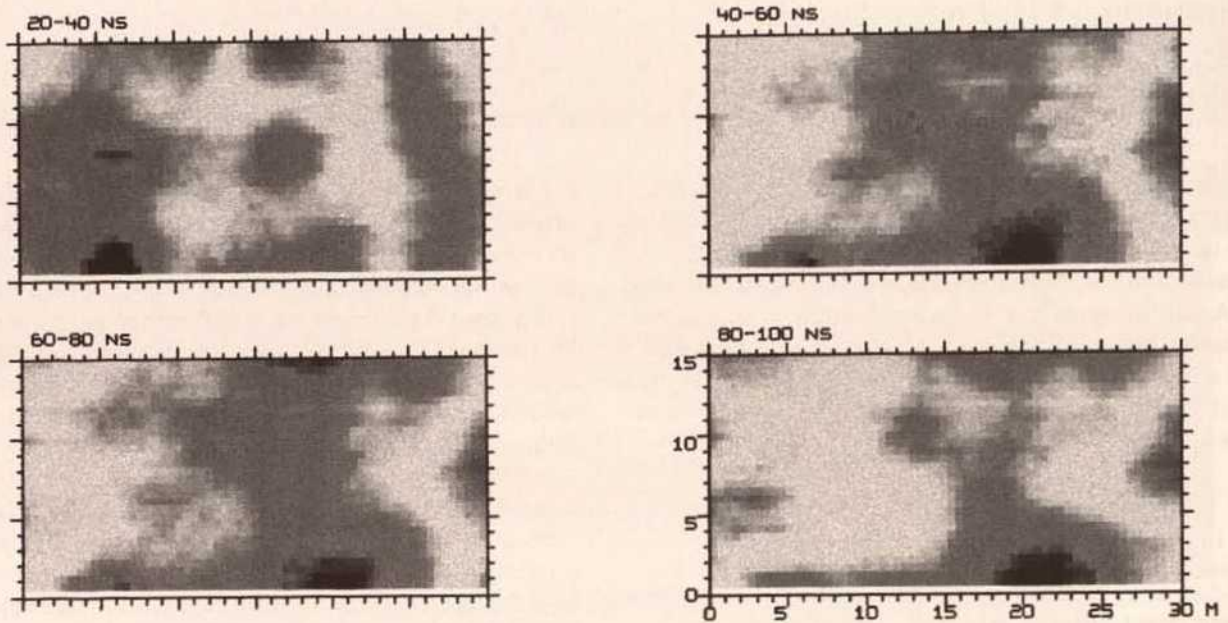


Fig. 2-5. Radar Time Slice Images at Harunotsuji from 20 to 100 ns

J. Orbons

Prospecting Roman pottery industries in the Argonne, France

The Argonne is a region in the north-east of France that is very well known for two reasons. First of all, it was an industry of Roman-age terra sigillata slipware, secondly the region was ravaged in the First World War. The area covers about 700 square kilometres and has several valleys running roughly north-south that cut through a chalk bedding. The French government has plans to develop the region. Prior to the development a large scale archaeological prospection took place. It was coordinated by Sander van der Leeuw from the University of Paris. The work started in the summer of 1996 and was finished in the autumn of 1998 covering 6 field-campaigns of one month each.

The work was carried out at 4 levels.

- Desktop analyses by importing a wide range of information into a GIS system. Geological maps, height-models, hydrological information, previous finds etc, etc, were all analysed.
- Field-walking was carried out at sites selected by the desktop analyses, producing many potentially new locations of Roman-age pottery ovens, but also locations of Roman settlements and road-structures.
- Geophysical surveys were carried out at sites discovered in the field-walking that looked promising for a close inspection.
- Pottery analyses produced additional information like dates and technical information on the pottery industry.

The results from the field-walking, the geophysical surveys and the pottery analyses were then imported back into the GIS, so a new analyses could be carried out. These new analyses were then used to guide the following field walkings and geophysical surveys. This iterative process made sure that a full representative sample of the region was prospected taking geology, hydrology and height into account.

A total of 7.5% of the 700 square kilometres were field walked, 32 sites were surveyed with geo-electrical and magnetic measurements covering a total of 47 hectares. With the help of students from the University of Utrecht, Department of Geophysics and the University of Patras in Greece, some geophysical experiments took place at several sites, trying to extract as much archaeological information from the discovered sites as possible. Many of the measured sites were also augered and the combination of the multiple measurements and the augering resulted in some remarkable archaeological information on the oven-sites.

Due to the integrated techniques and zooming in from large-scale surveys into close detailed inspections, a result was obtained that offers a good insight in the archaeology of the complete region.