

## MAGNETIC SUSCEPTIBILITY MEASUREMENTS WITH LARGE GRIDDING IN ARCHAEOLOGICAL PROSPECTION

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Within the rescue archaeology, the geophysical prospection with large gridding (measurements of magnetic susceptibility and electric conductivity) makes it possible to outline the archaeological potentialities of the extended surveyed zone.

Two main hypothesis explain the increase of magnetic susceptibility in soils: burning and pedological activity. The established model should tend to a recognition of the natural phenomena and thus, by deduction, to the archaeological reconnaissance.

The natural reference frame primarily relates to superficial formation, mainly soil but also quaternary geological formations. The geological context of the performed surveys was granitic (A89 motorway), molassic and alluvial (A66 motorway) and loessic (North of Paris). Three factors determine the evolution of soil and thus of the magnetic signal: lithology, topography and vegetation cover.

Archaeological sites are quite well detected by magnetic susceptibility measurements with a large gridding, essentially when they present products of burning. The anthropogenic marks in the landscape primarily relate to the activities of exploitation of the natural environment: culture, forestry development..., related to the vegetation cover.