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Integrated Geophysical and Archaeological investigations to study the site of Aquinum (Frosinone, Italy)

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To enhance the knowledge finalised to the location and conservation of the unknown buried structures below the actual studied levels, in the territory of the Ancient Aquinum (Frosinone, Italy) a scientific collaboration, inside the “Ager Aquinas Project” between the University of Salento (Department of Cultural Heritage – Laboratory of Ancient Topography and Photogrammetry) and the Institute of Technologies Applied to Cultural Heritage (ITABC-C.N.R.) has been developed, during 2008-2009 and it is still in progress. The site which is the subject of this paper had been identified in the past through air photo interpretation of vertical historical coverage and field – walking surveys.

Ancient Aquinum is characterised by two main aspects: the first depends by the presence of a very big defence-system with mighty walls and large ditch; the second characteristic is the presence or regular but not orthogonal road – system of the town, bordered by an unusual parallelogram shape of the blocks.

With the results obtained after the elaborations of the first aerial data sets and field surveys, has been possible to map the main town – planning, drawing the main road system inside and outside the town.

Although the analysis of the air photo evidence allowed the global interpretation of the site, it was not possible to reconstruct the archaeological evidences in the central portion of the town. Therefore the Project, during 2008, started with new acquisition and elaboration of aerial photos, field-walking surveys and GPR surveys with the aim to better define the urban plan of the central portion of the ancient town.

The location, depth, and size of the buried buildings were effectively estimated from non-destructive remote sensing with a gradiometric and ground-penetrating radar systems.

Recent archaeological excavations made (by Prof. Giuseppe Ceraudo – University of Salento, Lecce) during the summer 2009, have confirmed the structures individuated with the geophysical methods. This project is still in progress and new surveys, employing integrated geophysical methods, are planned for the next year.