H. Becker (1), M. Ciminale (2) and D. Gallo (2)

(1) Bay. Land. Denk. Department of Archaeological Prospection and Aerial Archaeology, Munchen, Germany
(2) Department of Geology and Geophysics, University, Bari, Italy

INTEGRATED TECHNOLOGIES FOR ARCHAEOLOGICAL INVESTIGATION APPLIED IN THE CELONE VALLEY (SOUTHERN ITALY)

Starting from Spring 2003, a non-intrusive investigation, integrating aerial photographic and high-resolution magnetic survey, was planned in the Celone River Valley (Southern Italy) where an accurate archaeological field survey allowed to recognize more than 200 sites (villages, villas, farms, necropolis, etc.) dating from Neolithic until the Middle Ages. To date, four vast settlements have been prospected.

During the intense flight activity, a large quantity of oblique colour photos was collected, orthorectified, geocoded, and processed.

With regard to the geophysical survey, the four sites were investigated with two cesium magnetometers in quadro-sensor configuration. Up to now, more than 470,000 m² were covered. Data were processed in order to minimize the noisy contributions and obtain their best visualisation.

The combined interpretation allowed to locate and recognize many buried archaeological remains while the use of a GIS yielded a more comprehensive and rigorous interpretation of the different results.