

**THE POTENTIALITIES OF AIRBORNE DIGITAL SENSOR ADS40 FOR THE DOCUMENTATION AND REPRESENTATION OF ARCHAEOLOGICAL SITES**S D'AMELIO<sup>1</sup>, D EMMOLO<sup>1</sup>, P ORLANDO<sup>1</sup>

(1) Dipartimento di Rappresentazione - Università di Palermo, Palermo, Italy.

In the last years several air borne digital sensors alternative to the film photogrammetric cameras have been produced. These sensors are different both for the acquisition methods and for capability of recording data in several bands of the electromagnetic spectrum. In this study images acquired by the LH Systems ADS40 sensor have been used. The ADS40 is able to acquire data in three panchromatic and four multispectral bands at the same time. For the experimentation the archaeological sites of Imera and Solunto near Palermo, and the area around the "Villa Romana del Casale" located about 5 km outside the town of Piazza Armerina have been chosen. The test areas show different physical and morphological features. Himera lies about 24 miles east of Palermo on an upland without high-trunk vegetation. This configuration encourages remote sensing application. The area of the Villa del Casale, already surveyed using data acquired by the hyperspectral sensor MIVIS, can be used to compare the obtained results with the previous data. At last the archaeological sites of Solunto, situated on an high promontory, is an important workbench to produce high quality orthophotos.