



**ANCIENT:** The Hellenistic-Roman theatre.



**AT WORK:** Archaeologists in Paphos.

# Technology meets the ancient world

## ARCHAEOLOGISTS USE AIR-BORNE CAMERAS TO PROBE THE PAST

By **Lucie Robson**

here was a peculiar sight in Kato Paphos on Wednesday as a large blue balloon hovered above one of Paphos' most important archaeological areas.

Cutting edge technology was meeting the ancient world with the balloon part of a research project co-organised by the University of Sydney, the Science and Technology for Archaeology Research Centre (STARC) of the Cyprus Institute, the Institute for Technology Applications to Cultural Heritage of the National Research Council in Italy and the Naples-based Interdepartmental Centre for Archaeological Services. The aim; to produce a digital 3D model of the Hellenistic-Roman Theatre near Ayia Kyriaki church.

"The balloon is similar to a child's," Acting Director of the Cyprus Institute, Professor Franco Niccolucci told *The Cyprus Weekly* before 'lift-off'. "We are very excited about such technology being combined with archaeology and culture. Something similar was done in Petra and Pompeii but this is the first time such a project has been con-

ducted in Cyprus. It is like a first born baby. In the end, the balloon will be in the sky and we will be like children with our toy!"

The balloon enabled three air-borne cameras and specialised software to record information about the theatre in three dimensions from an aerial perspective.

The data will be fed through a computer to create a digital model of the ancient site.

"It must be emphasised that the whole work is a research activity. It has not been tested before in similar conditions, so it has an experimental character. This in itself is pivotal," says Niccolucci. "Then there is the practical application. With the help of different combinations of images, we will get a more accurate idea of what the theatre looked like and discover new insights into its use.

This can help us understand possible present uses for it. For instance, we know that the Romans filled the stage area with water for spectacular productions. We can't do that physically because water is a scarce

commodity in Cyprus – but we will be able to do it digitally."

Built in 300BC, the site of the ancient theatre is the southern slope of Fabrika Hill and was used as a venue for performance and entertainment for over six and a half centuries. A devastating earthquake in 365AD left the theatre seriously damaged and it was abandoned.

The Department of Archaeology of the University of Sydney has been excavating the site of the ancient Hellenistic-Roman theatre under the auspices of the Cyprus Department of Antiquities since 1995. The next field visit is planned for October.

STARC is devoted to the development, introduction and use of advanced science and technologies in archaeology and cultural heritage. In 2007, it signed an agreement with Paphos and Yeroskipou municipalities for the development of its activities locally at selected sites and facilities.

A preliminary model of the theatre is expected to be produced in June, and the final one in September.



**EXPERIMENT:** *Professor Niccolucci and balloon.*