Geophysical Research Abstracts, Vol. 9, 11428, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-11428

From the Neolithic to the Early Bronze Age: provenance and technology of early ceramics from Sitia, East Crete

E. Nodarou (1), I. Iliopoulos (2) and Y. Papadatos (3)

(1) INSTAP Study Center for East Crete, Crete, Greece, (2) University of Patras, Department of Geology, Patras, Greece, (3) Hellenic Open University, Greece (enodarou@yahoo.gr)

Recent developments in archaeometric research and especially in the study of ancient ceramics have put emphasis on the integrated approach using a combination of analytical techniques. This approach has been proven of particular significance for the study of a broad array of issues, such as provenance, technology of manufacture, and technological choices.

The aim of this poster is to present the results of a study combining thin section petrography and scanning electron microscopy for the understanding of a ceramic assemblage from the island of Crete, Greece. The pottery comes from the settlement of Kephala Petras, Sitia, East Crete, and is dated to the transition from the Neolithic to the Early Bronze Age (*c.* 3000 BC).

The typological study of the material showed two main phases of occupation, in the Final Neolithic and the Early Minoan I period. In the earlier phase, the material bears strong typological similarities with sites outside Crete. However, there is debate among the scholars whether these off-island affinities are due to population movements or simple cultural influence. Within this context the use of thin section petrography proved to be of particular importance in identifying the local and imported components of the assemblage.

The second issue addressed refers to the technology of manufacture. Until recently the transition from the Neolithic to the Early Bronze Age on Crete was not clearly defined. The introduction of copper metallurgy at such an early date as evidenced at Kephala Petras indicates important technological developments previously unsuspected. The

typological study of the pottery showed clear differences between the two periods and raised important questions concerning the technologies involved. With the above in mind the integrated application of thin section petrography and scanning electron microscopy provided valuable insight in identifying the technological characteristics of each period, and the advances from the one period to the other, perhaps under the influence of the new pyrotechnology (metallurgy).

This work demonstrates how integrated analytical work, combined with typological study can offer new evidence and new perspectives on a problematic period of the Greek prehistory.