



Magnetotelluric Investigation of the South Aegean Volcanic Arc, Greece

Despina Kalisperi (1), Gerardo Romano (2), Maxim Smirnov (3), Maria Kouli (1), Angela Perrone (2), John P. Makris (1), and Filippos Vallianatos (1)

(1) Technological Educational Institute, Chania, Crete, Greece (dkalisperi@chania.teicrete.gr), (2) Institute of Methodologies for Environmental Analysis (IMAA), National Research Council of Italy (CNR), (3) University of Oulu, Finland

The South Aegean Volcanic Arc (SAVA) is a chain of volcanic islands in the South Aegean resulting from the subduction of the African tectonic plate beneath the Eurasian plate. It extends from Methana, northwest, to the Island of Nisyros southeast (450 km total length). SAVA comprises a series of dormant and historically active volcanoes, with the most prominent to be Aegina, Methana, Milos, Santorini, Kolumbo, Kos and Nisyros. The aim of the ongoing research project “MagnetoTellurics in studying Geodynamics of the hEllenic ARc (MT-GEAR)” is to contribute to the investigation of the geoelectric structure of Southern Aegean, and particularly to attempt to image the Hellenic Subduction Zone. In this context, onshore magnetotelluric (MT) measurements were recently carried out on the central and eastern part of SAVA (Milos, Santorini, Nisyros and Kos Islands). Data were collected using two MT systems running simultaneously plus a remote reference station installed in Omalos plateau (Western Crete). Robust MT data analysis of the broad-band MT soundings and the resulting model of the conductivity structure of the South Aegean Volcanic Arc is presented.

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