Preliminary analysis of the Hellenic geomagnetic array stations’ response functions

B. Di Fiore (1), G. Balasis (1), P. Kapiris (1), I.A. Daglis (1), A. Ganas (2), and N. Melis (2)
(1) Institute for Space Applications and Remote Sensing, National Observatory of Athens, Metaxa and Vas. Pavlou, Penteli 15236, Athens, Greece (boris@space.noa.gr), (2) Institute of Geodynamics, National Observatory of Athens, 11810, Lofos Nymfon, PO Box 20048, Athens, Greece

The National Observatory of Athens currently operates the HellENIc GeoMagnetic Array (ENIGMA), an array of 4 ground-based magnetometer stations in the area of south-eastern Europe (central and southern Greece). Based on one year (2008) of vector magnetic field data, recorded at the various array sites, magnetic response function estimates are inferred at 5 s – 2048 s. The magnetic response functions are then viewed as real and imaginary induction arrows, detecting sharp conductivity boundaries and providing a picture of the geometry of regional conductors. First results from efforts on inversion and modelling of the ENIGMA magnetic response functions will also be discussed.