Geophysical Research Abstracts, Vol. 7, 02541, 2005
SRef-ID: 1607-7962/gra/EGU05-A-02541

Analysis of the temporal variation of the apparent resistivity measurement in the seismic active area of Val d'Agri (southern Italy): preliminary results

M. Balasco (1), V. Lapenna (1), G. Romano (2), A. Siniscalchi (3) and L. Telesca (1)

(1) Istituto di Metodologie per l'Analisi Ambientale, CNR, C.da S.Loja, 85050 Tito (PZ), Italy (ltelesca@imaa.cnr.it), (2) CESI, Via. Ribattino 54, 20134 Milano (MI), Italy, (2) Università "Federico II", Naples, Italy, (3) Dipartimento di Geologia e Geofisica, Università di Bari, Italy

A continuous magnetotelluric system was installed in Agri Valley an intermountain basin of Southern Italian Apennines in June, 2003. The system is equipped with a digital receiver, MT24/LF (EMI Inc.), two magnetic sensors buried in the ground and orientated in N-S and E-W directions, and two electrical dipoles, 20m long and parallelly oriented with magnetic sensors. It is well know that the magnetotelluric method maps the variations in electrical resistivity within the Earth to great depths. Depth sounding is done by measuring the ratio of horizontal electric and magnetic field mutually perpendiculars at the surface of the earth getting the apparent resistivity and phase as function of frequency that represents the electrical properties of subsoil in depth. In the present paper we analyze the temporal variation of the hourly apparent resistivity and phase in order to better describe the site characteristics and to evaluate their significant changes respect to the background.