MT TOPOIBERIA: LONG PERIOD MEASUREMENTS IN THE IBERIAN MASSIF (CENTRAL SPAIN)

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Within the context of the Spanish TOPOIBERIA project a number of MT profiles are being carried out in Iberia and northern Morocco. The data are collected with recently acquired instruments consisting of 5 ADU07 (BBMT) and 10 LEMI-417 (LMT) systems, which make up a new Spanish pool of MT instruments. Two profiles with the LMT system have been carried out to date. One profile was undertaken in the Iberian Massif (Central Iberian Zone and Ossa Morena Zone) and the other across the Betic Chain in the south of Spain. Both profiles together form a 400 km long transect from the centre of Iberia to the Mediterranean Sea. We present the results of the first profile located in the eastern part of the Central Iberian Zone. The profile crosses the boundary between the Ossa Morena and Central Iberian zones and reaches the Tajo basin, crossing the Sierra de Alcudia and the Toledo Mountains. It is a 210 km long profile in a NE direction, from NW of Toledo to the province of Córdoba. The MT data consist of 31 BBMT sites (T=0.001-1000s) and 9 LMT sites (T=10-20000s). Dimensionality analysis indicates two directions, one for medium and the other for long periods. 2D inversions with different strikes in accordance with dimensionality analysis were performed in order to detect common features in the resistivity structure as a first step prior to a 3D inversion.

Long period magnetotelluric data, deep structure, Iberian Massif

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