

## Electromagnetic images in the western part of the North Anatolian Fault Zone, Turkey

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We have carried out wideband (320-0.0005Hz) magnetotelluric (MT) surveys along nine profiles in the western part of the North Anatolian Fault Zone (NAFZ), Turkey, including the ruptured fault associated with the Izmit earthquake which took place on 17 August 1999. Two-dimensional resistivity structures obtained along the four profiles have been already reported by Oshiman et al.(2002), Tank et al.(2003) and Tank et al.(2005). In this paper, we will focus on two profiles across both the western part of the ruptured fault in the northern branch of the NAFZ and the southern branch of the NAFZ. In order to improve the MT data quality, we applied remote reference technique (Gamble et.al., 1979). Dimensionality of the structure was investigated by means of tensor decompositions. Two-dimensional modelings were performed by using the code developed by Ogawa and Uchida (1996) with which TE (transverse electric), TM (transverse magnetic) and transfer functions.

We will discuss about correlation between the aftershock distribution and heterogeneity in the resistivity structure along the ruptured fault based on the two-dimensional structure models obtained so far along the six profiles.