Palaeomagnetism of Turkey and Eastern Mediterranean

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Palaeomagnetism has played, and continues to play, a key part in quantifying the geological evolution of Turkey. By resolving directions of the ancient magnetic field either when rocks were formed or when they were subject to later thermal-tectonic activity, palaeomagnetism is able to locate units ranging in size from large plates down to small fault blocks in their former orientations and thereby resolve cumulative later movements. Additional applications of this subject such as magnetostratigraphy may be able to date rocks units and resolve rates of their formation.

In Anatolia palaeomagnetism has been widely applied to Neotectonic rock units postdating closure of the NeoTethys to demonstrate that the region between the Arabian Shield in the south and the Pontides in the north has undergone widespread and distributed deformation. Many areas remain largely uninvestigated however, including eastern and north-eastern Turkey and the transition between the strike-slip and extensional domains in western Turkey.

The evolution of the blocks now comprising Turkey prior to the closure of NeoTethys remains only poorly studied and there is wide scope for investigating Palaeotectonic rock units with the aim of locating them prior to the break-up of Gondwana as well as tracking their movement across the Tethys and their history of impingement into the Eurasian margin.

This session will examine present palaeomagnetic data and their implications to the tectonic history of Turkey. It will also aim to recognise priority areas for future investigation and will provide an opportunity for workers applying this discipline within Turkey to liaise and compare their investigations.