



Preliminary Results of Paleomagnetic Study on the Miocene - Quaternary Volcanic Rocks from the North of Lake Van, Turkey

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Collision between the Arabian and the Eurasian plates initiated in Serravallian age (12-13 Ma). This collision caused a large plateau formation about 2 km elevation. Result of the collision, Eastern Anatolian Region still continues to evolve as a young mountain belt. East-West trending folds, thrust faults and strike-slip fault systems were developed due to the compressional tectonic regime in the region. After the formation of the plateau, volcanism took place occupying large areas. The thickness of this volcanic series reaches to 1 km.

In order to determine tectonic evolution (rotational and latitudinal movements) of the North of the Lake Van, oriented paleomagnetic samples were collected from the volcanic rocks whose ages have already been determined from radiometric methods and ages range from Miocene to Quaternary times. The origin of the collected palaeomagnetic samples from different volcanic series were from volcanic centers in this region such as the followings: Aladağ, Tendürek, Etrusk, Girekol Mounths and Pliocene plate basalts.

Our preliminary results indicate that most of the clockwise and anticlockwise rotations and deformation occurred during the Miocene- Pliocene times. However, in Pleistocene time there weren't any considerable rotations and deformations. The main reason of the deformations were related with the collision between the Arabian plate and the Eurasian plate and accommodated by regional faults and westwards escape of Anatolia. Our results are in good agreement with previously done palaeomagnetic studies, seismological and GPS data in the region.