

# **AMS LINEATIONS AND THE ORIENTATION OF STRESS AXES DURING EARLY AND MIDDLE MIOCENE IN THE TRANSDANUBIAN RANGE, HUNGARY**

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Measurements of anisotropy of magnetic susceptibility (AMS) were carried out on fine grained sediments collected from 12 geographically distributed localities (101 samples) in the Transdanubian Range. From the 12 localities 9 are of late Oligocene age, 1 is older (late Eocene) and 2 are younger (early and middle Miocene).

The results of the AMS measurements show that the dominant magnetic fabric is foliated and the (locality) mean anisotropy degrees vary between 4% and 13%. Superimposed on the primary foliation, lineation is also indicated of which the degree is unrelated to that of the foliation. There is also no relationship between the directions of the measured lineations and the tectonic strikes recorded during sampling.

On the regional scale, the mean AMS ellipsoid is triaxial in both geographic and tectonic systems of co-ordinates but the grouping of the principal directions are somewhat tighter in the latter. Here,  $K_3$  is practically vertical, whilst  $K_1$  is close to horizontal in the direction of  $37^\circ$  E with 95% confidence angles  $E_{12} \approx 14^\circ$  and  $E_{13} \approx 8^\circ$ .

In our interpretation, the direction of  $K_1$  (mean lineation) is associated with the directions of the north-easterly extensions occurring during the early and middle Miocene as it was earlier shown (Márton and Fodor 2003, Tectonophysics 363, 201-224) by the results of microtectonic observations of brittle deformations in the same area.

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AMS lineation, Extension, Transdanubian Range

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