

PALEOMAGNETISM OF THE NEA SANTA RHYOLITES AND COMPARISON WITH THE PELAGONIAN PERMO-TRASSIC

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In Spring 1987 we presented the average direction from 7 widespread Permo-triassic sites of the Greek Pelagonian: $D = 352^\circ / I = -7^\circ$ (1). Taking in account numerous remagnetisations we concluded that, after the P-Tr, anticlockwise (older) and clockwise (younger, i.e. Cainozoic) rotations must have taken place.

Turnell (1989, submitted Dec. 1986) found, in the Pelegonien lavas of Atalanti (probably Permian or lower Triassic in age) $D = 170^\circ / I = -8^\circ$ (supposedly reversed) and invoques anticlockwise and clockwise rotations too.

The Nea Senta rhyolites, 25 Km N of Thessaloniki, were described by Mercier (1968) who ascribed them to the Serbo-Macedonian zone. The age is Carboniferous, Permian or lower Triassic. They are turned over but peculiarly suited for paleomagnetism: the direction of the very stable HT component in situ ($D = 332^\circ / I = -13^\circ$) is very close to the average folding axis (strike $N327^\circ$); the carrier is haematite. After tectonic correction the direction turns to $D = 337^\circ / I = +11^\circ$: this is very similar to Turnell's result. No real fold test is possible, but before and after tectonic correction the direction is to the NNW with a shallow inclination.

Thus it is established that, despite the considerable post-Cretaceous clockwise rotation worked out by several authors in various parts of Greece, shallow inclinations to the NNW do exist in the Pelagonian and Serbo-Macedonian zones prior to this period. It seems that not much space is left either for a megashear between these two zones (Smith and Sprey, 1984) or for a large Vardeian ocean after the Permo-triassic, but the possible error concerning the ages of the units considered here remains large too.

(1) EUG IV, Strasbourg, oral presentation.

(2) Terra Cognita, 1987, 7, 2-3, p. 100 and 470.

(4) to Phys. Earth Planet. Int. (copy of manuscript available).