



## **Preliminary interpretations of syn- and posttectonic palaeomagnetism of Jurassic sediments from Velebit Mts (Karst Dinarides, Croatia)**

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Velebit Mts, a part of the Adria Microplate, belonged to a NE margin of Gondwana during the Carboniferous and Permian. While Permian is characterised by clastics, post-Permian sedimentation is dominated by a thick sequence of carbonate rocks. Today, the entire sequence, representing a stratigraphic range from Carboniferous to Recent, is in places more than 10,000 m thick.

The Early to Late Jurassic deposits (limestones in seven sites, reduction spots' limestones in one site and mudstones in one site) along the transect in Mali Halan in the southern part of the Velebit Mt. were studied using palaeomagnetic and rock magnetic measurements. Strata in the whole transect dips moderately to SW.

Magnetic susceptibility of diamagnetic carbonates is not affected by heating up to 400-500°C. SIRM(T) experiments revealed low temperature ( $T_{ub} < 400^\circ\text{C}$ ) Ti poor magnetite and some hematite phase in fresh samples. Heating in air results in excessive growth of new magnetite phase above 600°C.

Thermal and AF treatment were performed and were more successful for the Lower Jurassic sites with stronger NRM. It resulted in separation of two ChRM components: "L" with  $T_{ub}$  up to 200-250°C and "M" with  $T_{ub}$  up to 400-475°C or two coercivity spectra (very soft and harder) in most successfully demagnetized samples. In some samples only soft/LT component was recorded.

"M" component for the Lower and Middle Jurassic sites (345/30 in situ) correlates well with results of Marton (2008) for Early Jurassic grainstones in the same area. The tilt corrected data for "M" component fall close to Middle Jurassic segment for APWP for Africa. However site means for "M" component are distributed along the small circle with subhorizontal WNW trending axis. That may be interpreted as pre- to syntectonic remanence recorded during the regional folding. Such mechanism is consistent with paleomagnetic results for remagnetized Permian clastic sediments in Velebit Mts. (Crne Grede and Kosna localities, Lewandowski et al., 2012, AGU Fall Meeting, GP21A-1136).

"L" component (of lower accuracy) for Lower/Middle Jurassic sites (in situ) falls close to the Tertiary segment of APWP for Africa as well indicating its post-tectonic secondary origin.

For Upper Jurassic sites with lower NRM intensity "L" component seems to be post-tectonic but results for "M" component need to be yet discussed. AMS results for sites are not consistent between sites due to varying contribution of ferro- and diamagnetic phases to magnetic susceptibility in each site.