

(MANDL, VAN HUSEN & LOBITZER in Vorbereitung) zeigt zusammenhängende Großstrukturen, die von der postulierten Tektonik/Seitenverschiebung zerschnitten sein müssten. Derartiges ist nicht erkennbar.

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The new late Jurassic - Cretaceous APW for Adria as a tectonic framework for the interpretation of paleomagnetic results from the Northern Adriatic Basin

MARTON, E.¹, COSOVIC, V.², ZAMPIERI, D.³, BUCKOVIC, D.², MORO, A.² & GRANDESSO, P.³

¹ Eötvös Lorand Geophysical Institute of Hungary, Budapest, Hungary; paleo@elgi.hu;

² University of Zagreb, Department of Geology and Palaeontology, Zagreb, Croatia;

³ University of Padova, Department of Geosciences, Padova, Italy

As a result of systematic paleomagnetic studies in stable Istria and in the foreland of the Southern Alps, the Late Jurassic-Cretaceous segment of the APW for stable Adria became well-constrained by direct measurements on biostratigraphically dated carbonates deposited simultaneously on a platform and in a basin (MARTON et al. 2008, 2010). This APW characterizes the movements of Adria during the named time interval and also serves as a reference framework for describing the displacements in the deformed margin of stable Adria relative to the „hard core“. When Late Cretaceous paleomagnetic results are referred to this framework from the islands of the Northern Adriatic basin, no relative movements are revealed between the stable core and the deformed margin of Adria. On the contrary, Jurassic paleomagnetic directions from the mainland (Dinaricum or Dinaridic domain) exhibit an about 30° CW rotation with respect to Adria, since the CCW rotation observed for the Dinaricum for coeval rocks is less than for those for stable Adria or for its imbricated margin.

The timing of the above described relative rotation is not yet solved. It can be „inherited“, i.e. due to the existence of two independent platforms (Adriatic and Dinaric), could be connected to thrusting of the Dinaricum over Adriaticum

or we can assume that the former did not participated in the post-Eocene CCW rotation of the former.

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The „tectonic trend“ of the Pieniny Klippen Belt (PKB) in the light of new palaeomagnetic results from the late Cretaceous red marls

MARTON, E.¹, GRABOWSKI, J.², PLASIENKA, D.³, KROBICKI, M.⁴, PETHE, M.^{1,5}, TUNYI, I.⁶ & HAAS, J.⁷

¹ Eötvös Lorand Geophysical Institute of Hungary, Budapest, Hungary; paleo@elgi.hu;

² Polish Geological Institute, Warsaw, Poland; jgra@pgi.gov.pl;

³ Comenius University, Bratislava, Slovakia; plasienka@fns.uniba.sk;

⁴ AGH University of Science and Technology, Cracow, Poland; krobicki@geol.agh.pl;

⁵ Eötvös Lorand University, Geophysics Department, Budapest, Hungary;

⁶ Geophysical Institute, Slovak Acad. Sci., Bratislava, Slovakia; geofituny@savba.sk;

⁷ Department of Geology, Eötvös Lorand Univ., Budapest, Hungary; haas@ludens.elte.hu

The PKB is a long, narrow shear zone of arcuated shape which separates the Central and Outer Western Carpathians. Oroclinal bending of the originally linear belt is the most popular concept for explaining the present shape. The PKB is made up of Jurassic-Paleocene sediments which suffered nappe transport during Late Cretaceous. According to BIRKENMAJER (1983) the mega-shear zone was formed by clockwise rotation of the Central Carpathians respective to the Outer Carpathians during Miocene and the strike-slip movements caused the megabrecciation that is the most characteristic feature of the PKB.

Modern paleomagnetic studies documented that both the Central Carpathians and the Outer Western Carpathians rotated CCW, with the same angle, after the Oligocene (MARTON et al. 1999, 2009) and the model of bending during the Miocene was not supported. Nevertheless, oroclinal bending before the Eocene was not excluded. In order to test this option, we studied with paleomagnetic method Albian-Senonian pelagic red marls from 13 localities distributed along the Slovak and Polish segments between Bratislava and Kosice.

The oriented samples were subjected to magnetic mineralogy, paleomagnetic and magnetic susceptibility anisotropy (AMS) measurements and the stable