Geophysical Research Abstracts, Vol. 9, 04370, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-04370

Reference apparent polar wander curve for Adria from direct measurement on late Jurassic-Cretaceous sediments in autochthonous position

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Adria, the largest lithospheric fragment in the Central Mediterraneum, is the foreland of the Apennines, the Southern Alps and the Dinarides. The kinematic reconstruction of the mentioned mobile belts requires that we have a full control on the kinematics of their foreland. Direct paleomagnetic data from stable Adria were, however, not the best quality and also somewhat controversial. This explains why attempts were made to transfer paleomagnetic poles from related mobile areas to stable Adria, a procedure not without risk. In this paper we are presenting new paleomagnetic results from two parts of stable Adria, the Adige embayment, in Northern Italy and from stable Istria, in Croatia. These two areas represent Mesozoic, in outcrops mostly Cretaceous basin and platform facies, respectively. In both areas, a large number of geographically distributed localities were sampled and the samples subjected to standard paleomagnetic procedure. The results suggest that the two areas were not displaced with respect to each other. Therefore, the coeval paleomagnetic directions from both can be used in combination. In the data set now available, Cenomanian and younger Cretaceous is the best represented, followed by Albian. The Tithonian-Aptian segment is quite poor, for lack of evidence for the age of the obtained paleomangetic directions. Nevertheless, it is interesting that the length of the Cretaceous segment of the new apparent polar curve for Adria is quite short and corresponds to the coeval segment of the synthetic African polar wander curve (Besse & Courtillot 2002, 2003). The former is slightly displaced relative to the latter, but the counter-clockwise rotation suggested by the displacement is less that the one observed for the Eocene (Márton et al. 2003). Acknowledgement: This work was supported by Croatian-Hungarian Intergovernmental

Scientific and Technological project No HR-18/2004, Italian-Hungarian Intergovernmental Scientific and Technological project No I-12/2003 and Hungarian Research Foundation OTKA project No T049616.