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## Paleogeographic Reconstructions in the Mediterranean - A Paleomagnetic Study of Jurassic Sediments From Sardinia ()

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The paleogeography and tectonic history of the Corsica-Sardinia block and the opening of the Liguro-Provençal ocean since Oligocene times is based on a wealth of geologic, geophysical, and paleomagnetic studies and relatively well understood (Gattacceca et al. 2007, Vigliotti and Langenheim 1995). Conversely, the paleogeography of Sardinia and the surrounding regions during the Mesozoic is much less clear due to the absence of paleomagnetic data, except for a single study on Jurassic sediments from eastern Sardinia (Horner and Lowrie 1981). Consequently, pre-Oligocene deformations of Sardinia remain virtually undated. Recent paleomagnetic studies of dykes of Late Carboniferous and Permian age as well as Permian sediments have revealed significant counterclockwise rotations between Northern, Central and Southern Sardinia (Emmer et al., 2005). The geodynamic context these rotational movements are related to, however,

is still far from being clear. In an attempt to contribute to better time constraints for tectonic motions within Sardinia, a total of 208 oriented core samples from 24 sites of predominantly Jurassic age have been collected from the Nurra region (1), the Gulf of Orosei (2) and the Tacchi region (3). Unfortunately, samples taken from the northwest of Sardinia (1) proved to be too weakly magnetized and did not yield any stable directions. Primary directions of magnetization, passing the reversal test, were recovered from regions (2) and (3), yielding overall mean directions of  $D=284.8^\circ$ ,  $I=46.6^\circ$  ( $N=36$ ,  $\alpha_{95}=9.9$ ,  $k=32.1$ ) and  $D=267.0^\circ$ ,  $I=49.9^\circ$  ( $N=68$ ,  $\alpha_{95}=12.3$ ,  $k=13.5$ ) for the Gulf of Orosei and the Tacchi region, respectively. Taking into account error limits, these directions are not significantly different from each other and confirm and expand the limited data set of Horner and Lowrie (1981). Based on these new results, we conclude that no post-Jurassic deformation has affected the region. This suggests that the counterclockwise rotations previously observed in Permian rocks by Emmer et al. must be pre-Jurassic in age and cannot be related to subduction rollback tectonics during the Oligocene to Miocene as suggested by Helbig et al. (2006).

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