



## Testing Iberia Kinematics at Jurassic-Cretaceous

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Paleogeographic reconstructions of Iberia at Mesozoic are still a matter of debate. A major problem resides in the incompatibility existing between kinematic models and paleomagnetic data older than 120 Ma. Here, we investigate the origin of this misfit by finding and testing euler poles that fit Iberian mean paleomagnetic poles (123, 130 and 151 Ma) with global APWP. At 123 Ma 130 Ma, no geologically plausible solutions were found, questioning the validity of corresponding paleomagnetic data. Contrarily, for 151 Ma mean pole, coherent solutions were simulated, suggesting respective paleomagnetic data as potentially reliable. Based on these results, we propose a new magnetic reconstruction for Iberia and surrounding plates at  $\sim 150$  Ma, to which corresponds the IB-NAM euler pole  $-18.08 / 67.54 / -57.72$  (long / lat / angle). This is the first pre-drift reconstruction for Iberia to be compatible with paleomagnetic data. A complete and coherent model for the Jurassic-Cretaceous kinematic evolution of Iberia is still dependent on more and better paleomagnetic poles and on a reevaluation of magnetic anomalies, for which several problems remain unsolved.