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# Attempting to decipher the strain field in Iberia during the Albian from magnetic fabrics?

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## Résumé

The anisotropy of the magnetic susceptibility is applied to Cretaceous (mainly Barremian-Cenomanian) sediments of the Iberian peninsula in order to ascertain the tectonic regime associated with the rotation of the Iberian plate in that period. The geodynamic evolution of the Iberian plate during this time has been studied since the 1960s from different points of view and the final cause and the chronology of the 30-40° anticlockwise rotation of Iberia that occurs at this time is still a matter of debate.

The development of the sedimentary basins, at that period is influenced by the geodynamic context (general and local) and their relationship with the previous basement anisotropies. These factors must be taken into account when interpreting the strain inferred from the magnetic fabrics.

This project is an ambitious attempt to understand the Mesozoic tectonics of Iberia through the completion of a thorough sampling (~ 500 sites) in the Iberian Peninsula. Many of the targeted basins are located at present within the Alpine orogens and intra-plate deformation areas: the Cantabrian Mountains (Western Pyrenees), the Iberian Range, the Central System and the Betic Cordillera, as well as the Mancha platform area. Sampling has been distributed in areas with low late compressional internal deformation focusing in the Utrillas Fm and its lateral equivalents, a unit with mainly continental origin, which is diachronous throughout the plate. Among the many challenges of such study, a proper age calibration is necessary to fulfill the objectives. Another challenge is to obtain the magnetic fabric of very fine grained sediments within the Utrillas Fm that help determine the geodynamic context of the basins, since this information has to be preserved after the inversion tectonics. Funding: PID2019-108753GB-C2.

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**Mots-Clés:** Rotation, Geodynamics, Iberia, Cretaceous, magnetic fabric

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