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European Sedimentary Basins: Deciphering Palaeozoic intra-Pangea Wrench Faulting

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Thick sections of sedimentary deposits act as tape recorders of the geomagnetic field over time and allow high resolution paleogeographic reconstructions. Over the past years, we were able to put together a considerable paleomagnetic data set collected from Early Permian and Mesozoic deposits in numerous sedimentary basins throughout Southwest Europe. This data set monitors relative block rotations about vertical axis in this area and thus provides convincing evidence for intra-Pangean wrench faulting in the Early Permian ($\sim$ 285-265 Ma).
Here, we present previously processed data from Permian sedimentary sections from Southwest France and Sardinia together with data from the Saar-Nahe basin in West Germany. New data from the Permian/Triassic boundary from Sardinian sedimentary basins and data from Permian dyke swarms add further information to draw a more complete picture of the paleogeographic evolution of the Gondwana/Laurasia plate boundary and help to describe controversial intra-Pangean mobility and wrench faulting in the Early Permian.