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Magnetotelluric and Seismic Studies across the Variscan Terranes of SW Iberia

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A large amount of geophysical and geological research activity has been carried out during the last 5 years in the SW of the Iberian Peninsula. Surface geology, Magnetotelluric and seismic reflection/refraction surveys sample one of the best exposures of the Variscan Orogen in Europe. The existence of this relatively large multidisciplinary data base provides a frame to calibrate the MT method and evaluate its contribution to the knowledge of the lithospheric structure. To date the MT database consists of 200 MT sites with periods raging from 0.004 to 4000s. Two of the MT surveys acquired in the area overlap deep normal incidence seismic reflection profile and two seismic wide-angle reflection transects. Although, multidisciplinary studies provide strong constraints on the structure and nature of the lithosphere, the joint interpretation of MT and seismics still reveals some difficulties for their integration.