

THE MOURA PHYLONITIC COMPLEX: A TECTONIC “MÉLANGE” RELATED WITH THE SOUTHERN IBERIA VARISCAN SUTURE

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The structure of the southernmost domain of Ossa Morena Zone (south sector of Iberian Autochthonous Terrane) is strongly controlled by earlier deformation events. The first two deformation events correspond to tangential strain regime, marked by sub-horizontal milonitic foliations. These events seem to be directly related with obduction/subduction process during the variscan ocean closure and the emplacement of Beja-Acebuches Terrane. In this domain (Évora-Beja domain – EBD), the upper tectonic unit (Moura Philonitic Complex - MPC) is interpreted as a tectonic “mélange”. MPC is mainly represented by greenschists and corresponds to a strongly imbricated complex, involving several levels of autochthonous sequence (mainly volcano-sedimentary rocks), but it also includes dismembered and scattered slices of ophiolites. The widespread greenschists facies overprint an earlier high-pressure metamorphic event (blueschists in central and eclogites in western sector of EBD). In what concerns geochemical signature, MPC includes amphibolites ranging from N-MORB to T/P-MORB (ophiolitic slices), mafic alkaline metavolcanics (autochthonous slices) and some felsic to intermediate intrusive bodies within micaschists with calco-alkaline affinities, which could represent arc-related-rocks. At macroscopic scale, the EBD autochthonous sequence is complete in the eastern region, with a stratigraphic sequence ranging from Precambrian to Silurian. Towards de WSW, MPC progressively cut the sequence below, just near the suture, where it superposes precambrian levels.