Geophysical Research Abstracts
Vol. 16, EGU2014-11501, 2014
EGU General Assembly 2014

Tectonics of the Western Betics: the role of E-W strike slip fault corridors

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The tectonic origin of the arcuate Betic-Rif orogenic belt that surrounds the Alboran Sea at the western tip of the Mediterranean Sea remains debated. Here, we investigate the tectonic units cropping out in the Western Betics (Malaga region, Southern Spain) with the main goal of reconstructing the Oligo-Miocene evolution of the area. New structural data and geological mapping together with available data allow us to identify the main structural features of the area. Deformation is found to be extremely diffused but two E-W elongated tectonic blocks with different lithological composition are outlined by marked E-W dextral strike-slip corridors ending up in horse-tail splays. These E-W strike slip corridors are responsible for late Miocence tectonics of both the internal and external zones of the Betic Cordillera.