An active zone characterized by slow normal faults, the northwestern margin of the València trough (NE Iberia): a review [

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Analítica

The northwestern margin of the Valencia trough is an area of low strain characterized by slow normal faults and low to moderate seismicity. Since the mid 1990s this area has been the subject of a number of studies on active tectonic which have proposed different approaches to the location of active faults and to the calculation of the parameters that describe their seismic cycle. Fifty-six active faults have been found and a classification has been made in accordance with their characteristics: a) faults with clear evidence of large paleo-, historic or instrumental earthquakes (2/56); b) faults with evidence of accumulated activity during the Plio-Quaternary and with associated instrumental seismicity (7/56); c) faults with evidence of accumulated activity during the Plio-Quaternary and without associated instrumental seismicity (17/56); d) faults with associated instrumental seismicity and without evidence of accumulated activity during the Plio-Quaternary (30/56), and e) faults without evidence of activity or inactive faults. The parameters that describe the seismic cycle of these faults have been evaluated by different methods that use the geological data obtained for each fault except when paleoseismological studies were available. This classification can be applied to other areas with low slip faults because of the simplicity of the approaches adopted. This study reviews the different approaches proposed and describes the active faults located, highlighting the need a) to better understand active faults in slow strain zones through paleoseismological studies, and b) to include them in seismic hazard studies
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