Geophysical Research Abstracts, Vol. 9, 08267, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-08267

Accurate analysis of the distribution of epicenters in Western Provence and Eastern Languedoc (Southern France)

D. Amorese, J.-L. Lagarde and M. Font

Univ. Caen; CNRS UMR 6143 "M2C", F-14000 Caen, FRANCE (daniel.amorese@unicaen.fr, jean-louis.lagarde@unicaen.fr, marianne.font@unicaen.fr)

The present seismicity in Western Provence and Eastern Languedoc (Southern France) is weak. However,when the historical seismicity is considered, these regions are certainly among the most seismic areas of southern France. The tectonic setting of both studied regions is one of an active intraplate zone. In comparatively ”stable” areas like these, the study of small instrumental earthquakes ($M < 5$) is an indispensable source of information. Unfortunately, in these regions, the instrumental seismicity is, as a rule, rare and diffuse. Therefore, interpreting the spatial pattern of this seismicity through a visual inspection is a difficult and subjective process. This paper presents a quantifiable analysis of the seismicity of the study regions. Earthquakes are associated with fault zones by examining the number of epicenters per unit area. The analysis is performed through the Blade method applied on ”collapsed” epicenters. The analyzed data are extracted from the Laboratoire de Detection et de Geophysique Catalog. Our analysis highlights several significant epicenter alignments associated with known tectonic features.