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Multifractal analysis of seismicity observed in the Mexican South Pacific region

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We investigated the multifractal properties of seismicity monitored on the Mexican Pacific south Coast. Some authors in several seismic regions around the world have investigated multifractality in earthquakes, reveling scaling regimes: non homogeneous and multifraltals at small scales, monofractals and close to Poissonian at large scales. Our analysis consider that the different subduction features, due to the interactions between the La Rivera and Cocos plates with the North America plate is able to describe local particular dynamical properties. The multifractal spectrum, f(α), calculated for four seismic subregions displays specific properties suggesting that such singularities spectrum contains local dynamical information which is able to contribute in the knowledge of the tectonics dynamics in subduction phenomena, in particular the four studied regions show multifractality behavior.