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1 Use of fractal geometry for a study of seismic temporal series

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Fractal geometry can be useful to extrapolate correctly the behaviour of earthquakes, seismic sequences and it could give us important support to better explain the mechanisms of seismicity. Earthquakes belong to a class of phenomena known as multi-fractals. In general it is important to define the fractal dimension D, but sometimes is not useful if we are describing a natural phenomenon; so it is necessary to define a D₀ called box-counting dimension and a D₂ called correlation dimension, usually D₀ >=D₂. In our work we analysed these dimensions related to some seismic sequences occurred in different areas of the world from 1990 to 2003. Data come from NEIC-USGS data bank.