Geophysical Research Abstracts
Vol. 19, EGU2017-10313-1, 2017
EGU General Assembly 2017

Time series analysis of geoelectrical field as a possible seismic precursor for Mw=7.2 (2014) in Petatlán, México

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Around the world, electromagnetic anomalies have been seen before and during big earthquakes ($M > 7.0$). This work presents an analysis of the geoelectrical field in the coast of Guerrero, México. We present the evolution of the power spectral density by means of Fourier analysis of the electrical signal measured during 2013-2014 period. Furthermore, we applied different techniques of nonlinear time series analysis such as Detrended Fluctuation Analysis (DFA), estimation of Higuchi and Hurst exponents, and the evolution of central tendency measurements. Our results suggest a possible seismic precursor of the earthquake with magnitude $7.2 M_w$ in April $18^{th}, 2014$ in Petatlán Guerrero, México.