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# A comparison of ground electrotelluric activity between three regions of different level of seismicity

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In this work we present a comparative study of the ground electric self-potential behavior of three regions with notorious differences in their seismicity levels. The first one of low seismicity was electrically characterized by one electrotelluric monitoring station at Cholula (19.1$^o$N, 98.3$^o$W) in the Mexican state of Puebla. The second station was located at the city of Chilpancingo (17.11$^o$N, 99.24$^o$W) which is a region of intermediate seismicity. At the region of large seismicity, we had two monitoring stations [Ometepec (16.32$^o$N, 98.13$^o$W) and Acapulco (16.85$^o$N, 99.9$^o$W)], this last area is near the Middle American trench in the western coast of Guerrero State in southern Mexico. Each monitoring station generates a voltage time series, which is analyzed by the following methods: Spectral Analysis, Higuchi Dimension and Multifractal Detrended Fluctuation Analysis. The studied voltage time series correspond to the same time period for the four stations, from 1992 to 1993 and we find some possible correlations between the self-potential behavior and the corresponding seismicity levels.