



Study of instabilities in geoelectric time series measured during the preparation process of a main shock occurred in Mexico by means of the multifractal analysis and Tsallis statistics

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In [1] has been shown that the q -value that appears in Tsallis statistics is related to the extremes α_{\max} and α_{\min} of the multifractal spectrum $f(\alpha)$. This relationship has been used in order to study the underlying statistics describing properly the fully developed turbulence. One of the features for those systems indicates that the underlying statistics is not extensive. In this work we study the fluctuations, like a Seismo Electrical Signals, observed in geoelectric time series measured prior a main shock in México with $M = 6.6$, occurred on 24 October 1993. For this time series we obtain the multifractal spectrum and then we can calculate the q -values of the Tsallis' statistics. Our findings indicate a possible measure of the correlation between the preparation processes and the instability of the system.

[1] Lyra M L and Tsallis C 1998 Phys. Rev. Lett. 80 53