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Ornstein-Uhlenbeck processes for geophysical data analysis.

In this presentation a three parameter stochastic process, termed the Gamma-Ornstein-Uhlenbeck process, will be implemented to analyze geophysical data. Such non-Gaussian Ornstein-Uhlenbeck processes offer the possibility of capturing important distributional deviations from Gaussianity and make the model flexible of dependence structures. It will be shown that the Gamma-Ornstein-Uhlenbeck process is a possible candidate for earthquake data modeling and this model may be used to estimate parameters related to some major events-namely major earthquakes. (Received September 05, 2014)