Geophysical Research Abstracts, Vol. 8, 07143, 2006

SRef-ID: 1607-7962/gra/EGU06-A-07143 © European Geosciences Union 2006



Quantifying scaling in real data from turbulent systems.

- **B. Hnat** (1), S.C. Chapman (1), G. Rowlands (1), N. W. Watkins (2)
- (1) Space and Astrophysics Group, University of Warwick, Coventry CV4 7AL, UK
- (2) British Antarctic Survey, Natural Environment Research Council, Cambridge, CB3 0ET, UK
- (B.Hnat@warwick.ac.uk)

Statistical properties of many geoscientific data sets emerge as the only universal aspect of their behaviour. Among these properties scaling is an important feature that can simplify the description and allow stochastic modeling of the data. The scaling properties of the data set are often obscured by the presence of undersampled extreme events - a particular problem for the PDFs with heavy tails. We examine structure function techniques combined with data conditioning that allows the determination of scaling exponents in geoscientific data, and compare with synthetic time series from Lévy flights.