Geophysical Research Abstracts, Vol. 9, 02375, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-02375

Subsampling methodology for analysis of nonlinear atmospheric time series

A. Gluhovsky

Department of Earth and Atmospheric Sciences, Purdue University, West Lafayette, Indiana, USA (aglu@purdue.edu)

Commonly employed methods of time series analysis are based on assumptions that are often unrealistic for atmospheric and climate data. These include the assumption of a linear model for the observed time series and the assumption that observations follow a normal distribution.

It will be discussed in the talk as to how modern resampling methods become instrumental in obtaining reliable inference from meteorological and climatological time series without making questionable assumptions about the data generating mechanism. In particular, computing subsampling confidence intervals for the variance and skewness of nonlinear time series will be addressed.

This work is supported by the National Science Foundation Grants ATM-0514674 and ATM-0541491.