Geophysical Research Abstracts
Vol. 14, EGU2012-13897, 2012
EGU General Assembly 2012

Forcing a non linear system

A. Sutera
University of Rome La Sapienza, Department of Physics, Rome, Italy (alfonso.sutera@roma1.infn.it)

In the present paper we discuss the effect of forcing a nonlinear system. In particular, we will contrast the response of such a system when the forcing increases deterministically, versus the case when the forcing has a stochastic nature. By hypothesis, the amplitude of the two forcing is small with respect to the equilibrium time invariant forcing. It is shown that, if the system is nonlinear, the effect of the stochastic forcing has more dramatic impact than the deterministic case. The non linear system here considered describes a simple convective motion ‘’a la Saltzman” and care as been taken, so that the model is physically realizable, although the experimental apparatus may be not easy to assemble.