

FLUCTUATION-DISSIPATION RELATIONS ON THE BAROTROPIC MODEL ATTRACTOR

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This study is devoted to the numerical verification of the fluctuation-dissipation relations (FDR) for the barotropic atmospheric model. These relations link the impulse response operator of the system to its statistical characteristics (lag correlation coefficients) and could be used for the prediction of the system sensitivity to the small external perturbations. Though the FDR were originally obtained by Kraichnan for equilibrium regular systems (Liouville systems with quadratic conservation law) from our calculations it is clear that the FDR is satisfied to within a high tolerance even on the attractor of our nonregular model.