

Numerical approximation of atmospheric-ocean models with the subdivision algorithm*

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Abstract

The Lorenz-Maas System is a coupled atmospheric-ocean model. It contains the Maas System which models the ocean (3-dimensional slow ocean) and the Lorenz84 System which models the atmosphere (3-dimensional fast atmosphere). Both systems are coupled to each other. In the near past this System was used to describe the long term and bifurcation behaviour of climate models with simple numerical methods. In our talk we will use the established Subdivision Algorithm to analyse this System. Furthermore we will investigate (also with the Subdivision Algorithm) some reduced versions (stochastic models) of the Lorenz-Maas System and compare the results to the original one.

*oral communication.