



## Flow around the Tibetan Plateau: A shallow water model approach

T. Frisia (1), K. Fraedrich (1,2), H. Borth (2), O. Bothe (2), and X. Zhu (1)

(1) Max Planck Institute for Meteorology, Hamburg, Germany (Thomas.Frisius@zmaw.de), (2) Meteorological Institute, University Hamburg, Hamburg, Germany

A global high resolution shallow water model is used to simulate the atmospheric flow regimes around the Tibetan Plateau as a response to large scale forcing. The Tibetan Plateau is introduced as an isolated large scale topographic obstacle affecting the large scale flow anomalies prescribed by up- and downstream vorticity sources, which are related to low frequency teleconnection patterns (like North Atlantic Oscillation or Pacific-North America pattern). The response regimes are associated with dry and wet conditions observed over the eastern Tibetan Plateau. In this sense we aim at a minimum complexity model of interactions between large scale atmospheric flow anomalies and the Tibetan Plateau.