



## Transient GCM Simulations, 1950 - 2000: aerosol effects in China

Doris Folini (1), Martin Wild (2), and Adeline Bichet (3)

(1) ETH Zurich, Institute for Atmospheric and Climate Science, Switzerland (doris.folini@env.ethz.ch), (2) ETH Zurich, Institute for Atmospheric and Climate Science, Switzerland (martin.wild@env.ethz.ch), (3) ETH Zurich, Institute for Atmospheric and Climate Science, Switzerland (adeline.bichet@env.ethz.ch)

Recent decades have seen a tremendous change in Chinas economy. This change is accompanied by emissions of various kind, among them substantial aerosol emissions. Using aerosol emissions data from the National Institute for Environmental Studies (NIES) and the ECHAM5-HAM global climate model, we performed transient simulations covering the period 1950 to 2000. Besides an ensemble of control runs, simulations were carried out in which emissions of individual aerosols categories were frozen at their 1950 values (geographical distribution and total amount). We discuss the regionally varying effect of aerosol emissions on surface solar radiation, temperature, and precipitation.