



The chemical Circulation Model ECHAM5/MESSy with internally generated QBO

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The high vertical resolution middle atmosphere version of the ECHAM5 GCM has been coupled with the new modular chemical submodel system MESSy (modular earth submodel system) for application in the UT/LS region. The system includes stratospheric and tropospheric gas phase chemistry, heterogeneous chemistry on polar stratospheric clouds and sulfate aerosol. Stratospheric water vapor is fully interactive. In the troposphere optionally heterogeneous chemistry in clouds can be included. The quasi-biennial oscillation (QBO) in the tropics is simulated by the model self-consistently. We show results of a multiyear simulation for the UT/LS region with focus on tropics and high latitudes.