



ATLAS - A new Lagrangian chemistry and transport model: First results from stratospheric chemistry runs

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ATLAS is a new global Chemical Transport Model (CTM) with full stratospheric chemistry and Lagrangian transport and mixing. Lagrangian models have some crucial advantages over Eulerian grid-box based models, like no numerical diffusion, no limitation of the time step of the model by the CFL criterion, conservation of mixing ratios by design and easy parallelization of code.

ATLAS features a detailed stratospheric chemistry module including 170 reactions, 46 species, a detailed treatment of heterogeneous chemistry and Lagrangian denitrification.

First results from stratospheric chemistry runs are presented for the Arctic winter 1999/2000. Results are compared to measurements of the SOLVE/THESEO campaign.