Geophysical Research Abstracts,
Vol. 10, EGU2008-A-03717, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-03717
EGU General Assembly 2008

Global modeling of water ice clouds on Mars and comparison to SPICAM observations

F. Daerden(1), D. Akingunola(2), C. Verhoeven(1), J.C. McConnell(2), J.W. Kaminski(2), N. Mateshvili(1), D. Fussen(1)

(1)Belgian Institute for Space Aeronomy BIRA-IASB, Brussels, Belgium, (2)York University, Toronto, Canada

The Global Mars Multiscale Model (GM3) has been applied for a global study of water ice clouds in the Martian atmosphere. GM3 is a GCM based on the Canadian operational weather forecast model. Recently GM3 runs with an improved Martian water cycle including bulk ice freezing, eddy and molecular diffusion, gravitational sedimentation and transport between the polar caps, regolith and atmosphere. The model simulations are compared to cloud optical thickness data which have been retrieved from SPICAM nadir UV (200-310 nm) measurements after allowing for Rayleigh and aerosol scattering and surface scattering.