

Wednesday, November 12, 2008
WATER, CLOUDS, AND DUST: UNDERSTANDING CLOUDS
11:00 – 11:50 a.m.

Chair: P. Read

Madeleine J.-B. * Forget F. Millour E. Spiga A. Montmessin F. Bibring J.-P. Gondet B. Jouglet D. Vincendon M. Langevin Y. Schmitt B.

[*Microphysics and Radiative Effect of Water Ice Clouds on Mars: Modeling with the LMD/GCM and insights from the OMEGA/MEx Data Set*](#) [#9013]

Radiatively active water ice clouds of varying effective radius have been implemented in the LMD/GCM. Resulting water cycle has been compared to the TES/MGS observations, and to cloud particle size and NIR opacity retrieved from the OMEGA/MEx data set.

Verhoeven C. * Daerden F. Moreau D. Akingunola A. McConnell J. C. Kaminski J. W. Larsen N. [*Study of Ice Cloud Formation and Evolution in the Tropical Cloud Belt with a Detailed Microphysical Model*](#) [#9045]

We present a 1D detailed microphysical model for the martian dust and water ice clouds driven by the 3D MGCM GM3 and compare the results obtained in the Tropical Cloud Belt with SPICAM data.

Daerden F. * Verhoeven C. Moreau D. Kaminski J. W. McConnell J. C. Akingunola A. Larsen N. [*Influence of Detailed Microphysics on Cloud Formation in a Mars GCM*](#) [#9038]

The GM3 bulk condensation scheme is compared to a newly developed detailed microphysical description in order to estimate the influences of simplified schemes on ice cloud formation in Mars GCMs.

Kuroda T. * Hartogh P. Sakai D. Takahashi M.

[*Simulation of the Water Cycle on Mars in the CCSR/NIES/FRCGC MGCM*](#) [#9049]

Here we show first results of our three-dimensional water cycle simulations in a MGCM with a simple water cycle scheme. The model reproduces consistent changes of hygroscopicity in different season and dust opacity with observations.

Meslin P.-Y. Forget F. Millour E. (1-minute poster summary)

[*An Improved Model of Regolith-Atmosphere Exchange of Water Vapor in the LMD Global Climate Model*](#) [#9111]

We present an improved regolith-atmosphere exchange model used in the LMD Global Circulation Model to better represent the water cycle.