

Thursday, November 13, 2008
TRACE SPECIES AND PHOTOCHEMISTRY (CONTINUED)
9:00 – 10:40 a.m.

Chair: R. T. Clancy

Krasnopolsky V. A. * (Invited, 20 minutes)

[*Some Results of Ground-based High-Resolution Spectroscopy of the Martian Atmosphere*](#) [#9040]

This is a summary of recent observations of the O₂ dayglow at 1.27 μm, CO mixing ratio, methane, and oxygen and carbon isotope ratios on Mars.

Novak R. E. * Mumma M. J. Villanueva G. Bonev B.

[*Maps of the O₂\(¹Δ\) Emission During the Mars Pre-Aphelion Season*](#) [#9107]

Maps of the O₂(¹Δ) emission during the Mars pre-aphelion season for five seasonal dates between Ls = 333° and Ls = 67° are presented. No detectible emissions occur at Ls = 333°, but they are strong at all observable latitudes at Ls = 50° and Ls = 67°.

McConnell J. C. * Kaminski J. W. Akingunola A. Abbas M. Daerden F. Hirst S.

[*A Comparison of Measurements of O₂\(¹Δ\) and NO Airglow with Calculations from GM3*](#) [#9092]

Chemical modelling of Mars and comparison of NO airglow measurements with GM3 model results.

González-Galindo F. * Gilli G. López-Valverde M. A. Forget F. Leblanc F.

[*Nitrogen and Ionospheric Chemistry in the Thermospheric LMD-MGCM*](#) [#9007]

The thermospheric LMD-MGCM chemistry has been extended and includes nitrogen species and a simple ionosphere. This allows for comparisons with datasets such as the NO nightglow observations by SPICAM and the electron density profiles obtained by MGS and MaRS on Mars Express.

Mumma M. * Villanueva G. Novak R. E. Hewagama T. Bonev B. P. DiSanti M. A.

Smith M. D. (Invited, 20 minutes)

[*Absolute Measurements of Methane on Mars: The Current Status*](#) [#9099]

Our study of methane on Mars now includes all seasons, with significant spatial coverage. When present, CH₄ occurs in extended plumes whose latitudinal profiles show marked maxima, consistent with release from discrete regions. Details are discussed.

Lefèvre F. * Forget F.

[*GCM Simulations of Martian Methane*](#) [#9017]

We present three-dimensional simulations of methane on Mars with the LMD general circulation model. Methane variations caused by photochemistry, transport, and CO₂ cycle are discussed for various emission scenarios.

10:40 – 11:10 a.m.

BREAK