

Wednesday, November 12, 2008
TRACE SPECIES AND PHOTOCHEMISTRY
4:00 – 5:40 p.m.

Chair: F. Lefevre

Sprague A. L. Boynton W. V. * Colaprete A. Janes D. M. Metzger A. E. Kerry K. E. Forget F.
Starr R. Haberle R. M.

[GRS Measurements of Mars' Atmospheric Argon: Effects of Updated Mars Model Atmospheres on Concentration Computations](#) [#9098]

Mars' atmospheric Ar concentrations for seasonal and geographically resolved measurements by the GRS on Mars Odyssey are discussed. No GCM has reproduced the Ar results — we will show new analyses using upgraded GCM model atmospheres from NASA and LMD.

Economou T. E. *

[Mars Atmosphere Argon Density Measurement on MER Mission](#) [#9102]

Using the Alpha Particle X-ray Spectrometer (APXS) on board Spirit and Opportunity rovers on MER mission, we were able to measure the argon density variation in the martian atmosphere as a function of seasonal changes.

Forget F. * Millour E. Montabone L. Lefevre F.

[Non Condensable Gas Enrichment and Depletion in the Martian Polar Regions](#) [#9106]

The local enrichment and depletion of non-condensable gas like argon resulting from the condensation-sublimation of CO₂ in the polar regions is simulated in details in the LMD GCM. Results are in good agreement with the GRS argon observations.

GRS Team Meslin P.-Y. * Boynton W. V. Sabroux J.-C. Forget F. Chassefière E. Gasnault O.
Pineau J. F. Metzger A. E. Janes B.

[New Evidence of the Presence of Radon in the Martian Atmosphere and Perspective of Use as a Geophysical Tracer](#) [#9122]

We present some new evidence of the presence of radon in the martian atmosphere based on Mars Odyssey GRS measurements and present its potential use as a geophysical tracer.

Haberle R. M. * Pilorget C. Wolff M. Lefèvre F. Forget F.

[Seasonal and Spatial Variability of Ozone as Inferred from MARCI UV Data](#) [#9109]

We use the MARCI B6/B7 ratios to qualitatively estimate the seasonal and spatial variations of column ozone abundances.

Fast K. E. * Kostiuk T. Hewagama T. Livengood T. A. Lefèvre F. Annen J. Delgado J. D.

[Probing the Distribution of Ozone on Mars](#) [#9108]

We present the application of HIPWAC line shapes of ozone on Mars to those produced by radiative transfer modeling of ozone profiles predicted by general circulation models, and to contemporaneous column abundances measured by Mars Express SPICAM.

Encrenaz T. * Greathouse T. K. Bitner M. Kruger A. Richter M. J. Lacy J. H. Bézard B. Fouchet T. Lefevre F. Forget F. Atreya S. K.

[Ground-based Infrared Observations of Water Vapor and Hydrogen Peroxide in the Atmosphere of Mars](#) [#9018]

Ground-based observations of water vapor and hydrogen peroxide have been obtained in the thermal infrared range, using the TEXES instrument at the NASA Infrared Telescope Facility, for different times of the seasonal cycle.

Altieri F. Zasova L. Montabone L. Spiga A. Bellucci G. Bibring J.-P. **(1-minute poster summary)**

[Waves Patterns Traced by Ozone on Mars Polar Regions](#) [#9056]

In this paper we report on atmospheric wave patterns traced by O₂ emission at 1.27 μm in the OMEGA data. The wave patterns have been observed over the polar regions of both hemispheres in the respective late winter/early spring.