

Tuesday, March 8, 2011

POSTER SESSION I: ATMOSPHERES: OBSERVATIONS AND PROCESSES

6:00 p.m. Town Center Exhibit Area

Daniels J. T. M. Russell C. T. Strangeway R. J. Zhang T. L.

[*Venus Lightning: Measurements Near the Polar Vortex*](#) [#1106]

Statistics of occurrence of lightning obtained by Venus Express over the north pole of Venus show an apparent correlation with the location of the polar vortex.

Migliorini A. Grassi D. Montabone L. Lebonnois S. Drossart P. Piccioni G.

[*Nightside Atmospheric Temperature Fields from the VIRTIS-Venus Express Data*](#) [#1076]

Thermal structure of the Venus nightside is investigated using VIRTIS-Venus Express data, covering the latitude range from 80°S to 80°N. Comparison with the LCD Venus GCM model show a qualitatively remarkable agreement.

Migliorini A. Piccioni G. Drossart P. Politi R. Snels M. Gérard J. C.

[*Oxygen Nightglow Investigation in the Visible Spectral Range, Using VIRTIS/Venus Express Data*](#) [#1126]

Oxygen emissions in the visible spectral range, detected with VIRTIS on board Venus Express, in the upper atmosphere of Venus.

Gondet B. Bertaux J. L. Bibring J. P. Montmessin F. Lefèvre F.

[*First Detection of O₂ Recombination Nightglow Emission at 1.27 μm in the Atmosphere of Mars with OMEGA/MEX and Comparison with Model*](#) [#1884]

OMEGA acquired night side limb profiles of the martian atmosphere. O₂ emission at 1.27 μm is observed. These observations of O₂ are compared with LMD-GCM, showing that downward transport from the thermosphere are occurring in the polar night.

Moores J. E. Osinski G. Whiteway J. A. Daerden F.

[*Stratification of HDO During Cloud Formation on Mars*](#) [#1402]

The formation of water ice cloud provides a means by which atmospheric HDO can be segregated, changing the observed D/H ratio. We will present numerical model results showing the extent of this vertical stratification.

Lawrence K. P. Brecht S. H. Ledvina S. A. Paty C. Johnson C. L.

[*Minimal Atmospheric Loss During Valley Network Formation Despite Lack of a Global Magnetic Field on Mars*](#) [#2495]

We compare integrated atmospheric loss rates with temporal uncertainties in the martian hydrologic history to determine whether a coeval dynamo is required to maintain conditions amenable to surface water during the late Noachian.

Wang M. Kobayashi T. Ping J.

[*Ionospheric Seasonal Variation in Martian Equatorial Region*](#) [#2510]

Using TEC of the martian ionosphere collected over one martian year from MARSIS onboard Mars Express, we have measured temporal changes of the martian ionosphere that correlate with the seasonal cycle of carbon dioxide, which is exchanged between the polar cap and atmosphere.