

**Wednesday, November 12, 2008**  
**MARS SEASONAL POLAR CAPS: CO<sub>2</sub> ICE AND H<sub>2</sub>O FROST (continued)**  
**2:00 – 3:30 p.m.**

**Chair: J. Eluszkiewicz**

Langevin Y. \* Vincendon M. Poulet F. Gondet B. Bibring J.-P. Douté S. Seelos K. Titus T. Murchie S. **(Invited, 20 minutes)**

[Retreat of the North Seasonal Cap of Mars Observed by OMEGA and CRISM](#) [#9012]

OMEGA/MEX has now observed the retreat of the northern seasonal cap over three martian years. A coordinated campaign with OMEGA and CRISM/MRO has provided new information on the complex sublimation processes during the retreat of the north seasonal cap.

Appéré T. \* Schmitt B. Pommerol A. Douté S. Beck P. Forget F. Schmidt F. Langevin Y. Bibring J.-P. Gondet B.

[Spatial and Temporal Distributions of the Water Ice Annulus During Recession of the Northern Seasonal Condensates on Mars](#) [#9008]

Spatial extent and temporal evolutions of the water ice annulus surrounding the CO<sub>2</sub>-rich ice deposits during recession of the northern seasonal condensates (OMEGA/Mars Express observations).

Schmidt F. Schmitt B. \* Douté S. Forget F. Langevin Y. Bibring J.-P. OMEGA Team

[Asymmetric Release of CO<sub>2</sub> During Southern Spring](#) [#9003]

Observations in VIS and IR have shown that the sublimation of the Seasonal South Polar Cap (SSPC) is asymmetric. We calculate the asymmetric release of CO<sub>2</sub> using a sublimation model and discuss implications for the martian atmosphere (wind, argon).

Titus T. N. \* Michaels T. I. Colaprete A. Kieffer H. H. Langevin Y. Murchie S. L. Vincendon M. CRISM Science Team

[Exotic Processes within the Cryptic Region of Mars: A New Method for Near Real-Time Estimates of Wind Direction](#) [#9043]

Observations of the southern seasonal cap have revealed the presence of exotic features. Many of these features, including fans, are the result of cold CO<sub>2</sub> jets. Fans provide real-time wind directions, thus providing ground-truth for validating atmospheric models.

Chevrier V. F. \* Bryson K. Roe L. A. Blackburn D. G. White K. F.

[Sublimation Kinetics of CO<sub>2</sub> Ice and Evolution of the Martian Polar Caps](#) [#9073]

We show that sun insolation drives CO<sub>2</sub> ice sublimation on the martian poles. Due to eccentricity the southern perennial cap loses 0.3–0.4 m every year, as shown by MOC and HiRISE images. The south CO<sub>2</sub> perennial cap will disappear in three martian years.

Kahre M. A. \* Haberle R. M. Hollingsworth J. L. Murphy J. R.

[Understanding the Repeatable Nature of the Viking Surface Pressure Curves: Coupling Mars' CO<sub>2</sub> and Dust Cycles](#) [#9093]

We utilize a Mars GCM to investigate interactions between Mars' dust and CO<sub>2</sub> cycles with the goal of understanding the repeatable nature of the Viking surface pressure curves.

James P. B. Bonev B. P. **(1-minute poster summary)**

[Effect of Atmospheric Dust on Interannual Variability in the Martian South Polar Cap](#) [#9051]

The MY 28 perihelic dust event on Mars resulted in changes in CO<sub>2</sub> deposits in the vicinity of the RSPC. This work investigates whether the larger perihelic storm seen by MY 9 could effect the differences in the RSPC viewed by Mariner 9 and subsequent missions.

**3:30 – 4:00 p.m.**

**BREAK**