**Tuesday, March 2, 2010**
**MARS POLAR PROCESSES: SEASONAL ICE AND POLAR LAYERED DEPOSITS**
1:30 p.m. Waterway Ballroom 4

**Chairs:** Timothy Titus
Candice Hansen

1:30 p.m. Hansen C. J. * Portyankina G. Thomas N. Byrne S. McEwen A.  
*HiRISE Images of Spring on Mars* [#2029]
Spring on Mars is a time of active change at latitudes covered by seasonal CO$_2$ ice. HiRISE on MRO has imaged two southern and one northern spring seasons. We compare phenomena in the south to the north and investigate interannual variability.

1:45 p.m. Portyankina G. * Thomas N. Hansen C. Aye K.-M.  
*Cracks in Seasonal Semi-Translucent Ice Layer in Martian Polar Areas* [#2671]
We report observations of cracks in translucent ice layer in martian polar areas, both south and north. We argue in favour of them being fracture cracks.

2:00 p.m. Russell P. S. * Byrne S. Hansen C. J.  
*Active Mass Wasting of Ice Layers and Seasonal CO$_2$ Frost in the North Polar Region of Mars* [#2667]
We discuss new findings relating to two dramatic forms of recently discovered mass-wasting in the north polar region: block-wise failure of NPLD and basal-unit scarps as rockfalls and rockslides, and actively observed CO$_2$ frost-dust falls and avalanches at steep NPLD scarps.

2:15 p.m. Smith I. B. * Holt J. W. Mohrig D. Kim W.  
*Quantitative Radar Stratigraphy of the Uppermost North Polar Layered Deposits, Mars, and Processes Controlling Spiral Trough Migration* [#2431]
We quantitatively look at radar stratigraphy within the northern polar layered deposits to map accumulation patterns and learn about the processes governing spiral trough migration.

2:30 p.m. Holt J. W. * Byrne S. Fishbaugh K. Christian S. Putzig N. E. Phillips R. J. Tanaka K.  
*Chasma Boreale, Mars: A Product of Non-Uniform Polar Accumulation Influenced by Basal Topography* [#2547]
The mapping of radar unconformities within Planum Boreum, Mars reveals episodes of deposition and erosion leading to non-uniform accumulation of the NPLD and the early creation of Chasma Boreale, Gemina Lingula, and a now-buried, major chasma.

2:45 p.m. Guallini L. * Rossi A. P. Marinangeli L.  
*“Unconformity-Bounded” Units on Mars SPLD (Promethei Lingula): A First Step Towards Formal Stratigraphic Classification?* [#1721]
Preliminary SPLD stratigraphy (Promethei Lingula) has been defined using “Unconformity-Bounded” units. The unconformities allow us to correlate sections regionally. At present we hypothesize two depositional cycles divided by one erosional event.