Friday, July 25, 2003
POLAR CAPS — PROCESSES AND TEMPORAL CHANGES
8:30 a.m. Ramo Auditorium

Chairs: B. C. Murray
H. H. Kieffer

8:30–8:50 a.m. Titus T. N. * Kieffer H. H.
Temporal and Spatial Distribution of Seasonal CO₂ Snow and Ice [#3273]
The Mars Global Surveyor thermal emission spectrometer has made observations of Mars’ north and south polar regions for two martian years. These observations are used to track the behavior of the seasonal polar caps.

8:50–9:10 a.m. Kieffer H. H. *
Behavior of Solid CO₂ on Mars: A Real Zoo [#3158]
The condensation of CO₂ on Mars involves several unique processes resulting in a menagerie of features in the seasonal polar caps. A physical model connects the progression of cryptic terrain, fans, black spiders, Dalmation spots and fried eggs.

9:10–9:30 a.m. Byrne S. * Ingersoll A. P. Pathare A. V.
Martian Climactic Events Inferred from South Polar Geomorphology on Timescales of Centuries [#3112]
We report on statistical properties of different Swiss-cheese populations within the southern residual cap. We use results from a model we have developed to attempt to infer their history. We find evidence of changing environmental conditions on the residual cap on timescales of martian centuries.

9:30–9:50 a.m. Vasavada A. R. * Richardson M. I. Byrne S. Ivanov A. B. Christensen P. R. THEMIS Team
Geologic Evolution of Mars’ North Polar Layered Deposits and Related Materials from Mars Odyssey THEMIS [#3156]
We investigate the morphology, color, and thermophysical properties of the north polar layered deposits and related materials with THEMIS data in order to understand their geologic evolution.

9:50–10:10 a.m. Thomas P. C. *
The South Polar Residual Cap of Mars: Landforms and Stratigraphy [#3058]
This work uses mapping of south polar residual cap features to infer deposit stratigraphy.

10:10–10:30 a.m. Murray B. C. * Koutnik M. Byrne S. Marsden P. Schaller E.
Preliminary South Polar History from Layered Deposit Landforms [#3116]
Examination of different crater populations on the southern layered deposits have led us to propose a geologic history. We conclude that there have been multiple episodes of burial and exhumation which seem inconsistent with a simple obliquity driven model.

10:30–11:00 a.m. Break