

**Thursday, March 26, 2009**  
**POSTER SESSION II: MARS: AQUEOUS PROCESSES IN VALLES MARINERIS**  
**AND THE SOUTHERN HIGHLANDS**  
**6:30 p.m. Town Center Exhibit Area**

Lucchitta B. K.

[\*Lakes in Valles Marineris, Mars \(I\): Walls, Mounds, Moats, and Volcanoes\*](#) [#2068]

Synthesis of research concerning lakes in the Valles Marineris suggests that the interior layered deposits were emplaced in a wet environment. Addressed are exhumation from the walls; eolian, fluvial, or volcanic origin; moats and inclined layers.

Lucchitta B. K.

[\*Lakes in Valles Marineris, Mars \(II\): Valleys, Channels, Shallow Lakes, and Age\*](#) [#2345]

Synthesis of research concerning lakes in the Valles Marineris suggests that interior layered deposits were emplaced in a wet environment. Addressed are the provenance of water; shallow, deep, and late lakes; ancestral basins; and age relations.

Popa C. Esposito F. Colangeli L.

[\*Tithonium Chasma on Mars: Evidences for Water Related Processes Time Span on Mars\*](#) [#1611]

Tithonium Chasma system west of VM present sulfate outcrops in ambiguous relationship with material that cuts through. We discuss the implications of their presence to the limits of water-dry transitions on Mars.

Gross C. Wendt L. Dumke A. Neukum G.

[\*Further Evidence for Multiple Flooding Events at Juventae Chasma and Maja Valles, Mars\*](#) [#1890]

We investigate the age relationship of Juventae Chasma to the adjacent Maja Valles to gain an explanation for the evolution of rhythmic LLD. We use impact crater size-frequency distributions for dating of the surface in the region.

Kostama V.-P. Raitala J. Ivanov M. A. Aittola M. Korteniemi J. Lahtela H. Törmänen T.

[\*Hydrologic History of the Eastern Hellas Basin Region, Mars\*](#) [#1582]

The eastern Hellas Basin rim region displays evidence for continued fluvial and glacial activity from Noachian-early Hesperian to Amazonian. The observations and analysis of the region suggest a complex and multitemporal fluvial activity.

Irwin R. P. III Maxwell T. A. Howard A. D. Higbie M. A.

[\*Floor Materials of Open Paleolake Basins on Mars\*](#) [#2358]

In Terra Cimmeria, Mars, Noachian craters with etched floor deposits are clustered in relatively dust-free areas, suggesting locally efficient aeolian erosion of crater floor sediments or more volcanic resurfacing closer to the dichotomy boundary.

Annex A. Grigsby B. Turney D. Zimbelman J. R. Rice J. W. Jr.

[\*Preliminary Analysis of Tinto Vallis and Palos Crater: A Proposal for CRISM Targeting\*](#) [#1459]

Preliminary CRISM study results of the Tinto Vallis and Palos crater paleo lake system. CTX, THEMIS, and TES data indicate water related minerals could be present in and around Palos, justifying the need for high resolution CRISM targets.

Baker D. M. Head J. W.

[\*The Origin of Eridania Lake and Ma'adim Vallis: An Investigation of Closed Chaos Basins, Hesperian Ridged Plains, and Tectonic Constructs on the Floor of a Large Hypothesized Paleolake on Mars\*](#) [#1835]

The stratigraphy of structures and units is analyzed on the floor of a potential paleolake south of Ma'adim Vallis, Mars. Closed chaos basins are potential sources of groundwater inputs, and may have been modified by later lava flow loading.