
**Friday, May 22, 2015**

**WHAT HAPPENS WHEN GOOD CRATERS GO BAD**

8:00 a.m.  E200 Auditorium

**Chairs:**  Kelsi Singer  
Bob Craddock

8:00 a.m.  Barlow N. G. *  
*Crater Morphology, Modification, and Production Populations: Some Cautions when Using Craters to Derive Age Estimates*  [#9026]
Crater size-frequency distribution analyses is a useful technique to estimate formation ages of planetary surfaces. However, users of the technique are not always aware of how morphology, modification, and production populations affect the results.

8:40 a.m.  Fassett C. I. *  Thomson B. J.  
*Resurfacing, Crater Degradation, and Crater Statistics*  [#9025]
Craters go away / Be wary of retention / Is the age an age?

9:05 a.m.  Watters W. A. *  Geiger L.  Fendrock M.  Gibson R.  Radford A.  
*Statistical Morphometry of Small Martian Craters: New Methods and Results*  [#9032]
Methods for automatic morphometric characterization of craters for large statistical studies; measured dependence of shape on size, terrain, modification, and velocity (via primary-to-secondary distance); evaluation of Ames Stereo Pipeline DEMs.

9:30 a.m.  Kite E. S. *  
*Unscrambling Noachian Crater Erosion on Mars*  [#9010]
Noachian crater modification records an uncertain combination of fluvio-lacustrine, volcanic and aeolian processes operating over uncertain timescales. Crater crosscutting statistics confirm that fluviolacustrine erosion spanned a >>10^6 yr interval.

9:55 a.m.  BREAK

10:05 a.m.  Kirchoff M. R. *  
*Crater Saturation of Solar System Surfaces: Insights from Spatial Statistics*  [#9029]
Results of using spatial statistics (quantitative measures of objects’ distributions in space) to constrain whether cratered surfaces throughout the solar system are in saturation equilibrium will be discussed.

10:30 a.m.  Minton D. A. *  Richardson J. E. Jr.  Fassett C. I.  
*Testing Crater Counting Assumptions with the Cratered Terrain Evolution Model*  [#9042]
Using CTEM to answer the questions; 1) How close to Poisson-distributed are crater count uncertainties? and 2) How does observed clustering in crater count densities of large craters relate to the changes in the impactor flux?

10:55 a.m.  Riggs J. D. *  Robbins S. J.  Kirchoff M. R.  Bierhaus E. B.  Weaver B. P.  
*Understanding Spatial Statistics for Purposes of Identifying Non-Primary and Saturated Impact Crater Populations*  [#9050]
We discuss some traditional unidimensional summarization statistics and some newer spatial point statistical methods for understanding and identifying non-primary and saturated impact crater populations observed on a variety of solar system bodies.

11:25 a.m.  DISCUSSION

12:25 p.m.  Robbins *  
*Thanks & Special MAPS Issue*