Tuesday, March 17, 2015
SPECIAL SESSION:  HOW YOUNG IS YOUNG?
8:30 a.m.   Waterway Ballroom 1

Chair: Carolyn van der Bogert
Emerson Speyerer

8:30 a.m. Robbins S. J. *  
*The Lunar Crater Chronology: History, Current Knowledge, and Holes [#2629]
Chronology of The Moon: How well known is it?/Best ways to constrain?

8:45 a.m. Quantin-Nataf C. * Trey B. Amet Q. Allemand P.  
*The Lunar Cratering Rate Over the Last 1 GY Inferred from the Age of the Lunar Rayed Craters [#2692]
We assess the relative and absolute ages of lunar rayed craters, which allows us to discuss the lunar cratering rate over the last 1 G.y.

9:00 a.m. Mazrouei S. * Ghent R. R. Bottke W. F.  
*Has the Lunar Impact Flux Rate Changed in the Past Billion Years? [#2331]
We investigate the Copernican-era impact flux using a new method for determining crater ages derived from the LRO Diviner rock abundance dataset.

*Current Impact Rate on Earth, Moon, and Mars [#1854]
Planets are getting whacked, but are the bolides mostly from asteroids or comets? Can new observations help us to date young surfaces?

9:30 a.m. Speyerer E. J. * Robinson M. S. Povilaitis R. Z. Wagner R. V.  
*Dynamic Moon Revealed with High Resolution Temporal Imaging [#2325]
Automated change detection of high resolution NAC images has led to the discovery of 225 new impact craters and nearly 26,000 other surface changes.

*Copernican-Age Craters and LOLA Decameter-Scale Roughness [#2218]
Copernican-aged lunar craters typically exhibit high surface roughness at the decameter and smaller scales of multi-beam laser footprints.

10:00 a.m. Du J. * Fa W.  
*Dating Radar Dark Halo Craters Based on Postimpact Gardening Process of Crater Ejecta [#1346]
We propose a method to determine the absolute age of radar dark halo craters (RDHC) based on the impact gardening process of the crater ejecta.

10:15 a.m. van der Bogert C. H. * Michael G. Kneissl T. Hiesinger H. Pasckert J. H.  
*Effects of Count Area Size on Absolute Model Ages Derived from Random Crater Size-Frequency Distributions [#1742]
We generated random CSFDs for theoretical lunar surfaces with ages 0.1–4 Ga to study count area size effects without interference of real geological processes.

10:30 a.m. Kirchoff M. R. * Marchi S. Wünnemann K.  
*The Effects of Terrain Properties on Determining Crater Model Ages of Lunar Surfaces [#2121]
Using the model production function we show that terrain properties have an important effect on calculating crater model ages when using small craters.
10:45 a.m. Zanetti M. * Stadermann A. Jolliff B. L. van der Bogert C. H. Hiesinger H. et al.  
Auto-Secondary Cratering vs. Target Property Effects on Ejecta Blankets of Copernican Craters: What are the Implications for Age Dating Using Small-Diameter Crater Statistics? [#1209]  
Ghost craters in impact melt ponds and small-diameter crater statistics on melt ponds and ejecta suggest auto-secondary contamination affects crater statistics.

11:00 a.m. Plescia J. B. * Robison M. S.  
Lunar Self-Secondary Cratering: Implications for Cratering and Chronology [#2535]  
Self-secondary craters (secondary craters formed on the primary during cratering) are common on the Moon and have implications for crater-based chronologies.

11:15 a.m. Mahanti P. * Robinson M. S. Stelling R.  
How Old are Small Lunar Craters? A Depth-to-Diameter Ratio Based Analysis [#1615]  
Time-dependent degradation state of small lunar craters is modeled from measurements obtained from LRO Narrow Angle Camera based digital elevation models.

Young Lunar Mare Deposit at Flamsteed Indicated from Surface Radar Echo and Crater Degradation State [#1320]  
We propose a unique method to derive relative ages for lunar mare deposits using SELENE (Kaguya) LRS echo data.

11:45 a.m. Hiesinger H. * Simon I. van der Bogert C. H. Robinson M. S. Plescia J. B.  
New Crater Size-Frequency Distribution Measurements for Cone Crater at the Apollo 14 Landing Site [#1834]  
We performed new crater size-frequency distribution measurements for Cone Crater and compared these ages with previous absolute model ages and exposure ages.