Saturday, July 25, 2015

RADIOMETRIC CLOCKS: WHAT THEY TELL US AND WHAT THEY DON'T: I
9:35 a.m.  Home Room

9:35 a.m.  Lindsay F. N. * Delaney J. S. Turpin B. D. Herzog G. F. Park J. Swisher C. C. III
The Importance of Sample Material for \(^{40}\text{Ar}/^{39}\text{Ar} \) Dating [6006]
Glass and brecciated rocks are unreliable materials for dating impact events using Ar isotope systematics. Such dates need reevaluation by dating single feldspar grains and small sized unbrecciated mafic materials.

Thompson L. M. Glotch T. D.
Argon Ages of Solid-State Maskelynite: What do the Ages Mean [6010]
Argon ages of Manicouagan maskelynite yield ages inconsistent with both target and impact age.

10:15 a.m.  Corrigan C. M. * Lunning N. G. Friedrich J. M. McCoy T. J.
An H Chondrite Clast in an LL Chondrite: Impact Melt or Incipient Partial Melt? [6005]
Examination of a melt clast in an LL ordinary chondrite breccia indicates that, while having affinities to H chondrites, may not simply be an impact melt.

10:35 a.m.  Coffee Break

10:50 a.m.  Mercer C. M. * Hodges K. V. Jolliff B. L. van Soest M. C. Wartho J.-A. Weirich J. R.
Spatially Resolved, Correlated Variations in Apparent \(^{40}\text{Ar}/^{39}\text{Ar} \) Ar Ages and Ca/K Ratios in Apollo 17 Impact Melt Breccia 77135 [6018]
Although the Apollo 17 impact melt breccia 77135 has experienced partial Ar loss, we found that the high spatial-resolution afforded by the laser microprobe \(^{40}\text{Ar}/^{39}\text{Ar} \) Ar method allowed us to avoid materials that preferentially experienced Ar loss.

11:10 a.m.  Bouvier A. * Wadhwa M. Korotev R. L. Hartmann W. K.
Pb-Pb Chronometry of Lunar Impact Melt Breccias and Comparison with Other Radiochronometric Records [6016]
We investigated Apollo 16 and lunar meteorite impact melt and fragmental breccias to compare the impact records in different chemical groups of the central highlands as well as random sites sampled in feldspathic meteorite breccias.

11:30 a.m.  Snape J. F. * Thissen F. Nemchin A. A. Bellucci J. J. Whitehouse M. J.
The Impact History of the Moon: Implications of New High-Resolution U-Pb Analyses of Apollo Impact Breccias [6014]
We present new U-Pb ages for a range Apollo impact breccias and discuss the implications for the impact history of the Moon, particularly with regard to models of the ~3.9 Ga lunar cataclysm.

11:50 a.m.  Norman M. D. *
Petrologic Evaluation of Pre-Cataclysm Impacts on the Moon [6021]
While we now have definitive evidence for basin-forming impacts on the Moon prior to 3.9 Ga, the sample-based record of older events at 4.2–4.3 Ga seems to reflect predominantly smaller craters or relatively shallow depths of emplacement.

12:10 p.m.  DISCUSSION

12:30 p.m.  Lunch