

**Wednesday, February 12, 2014**  
**PHYSICS AND SPACE TECHNOLOGY I**  
**10:30 a.m. Expo Hall A3**

**Chairs: Lawrence Heilbronn**  
**John Norbury**

- 10:30 a.m. Zeitlin C. Hassler D. M. Wimmer-Schweingruber R. S. Ehresmann B. Rafkin S. C. R. Guo J. Köhler J. Böttcher S. Böhm E. Martin C. Reitz G. Kim M. Posner A.  
[\*New Results from the MSL-RAD Experiment on the Curiosity Mars Rover\*](#) [#3314]  
Radiation Assessment Detector (RAD) is an energetic particle detector capable of measuring all charged particles that contribute to the radiation health risks that will be faced by future explorers to the red planet.
- 10:48 a.m. O'Neill P. M. Kim M. Y.  
[\*Badhwar-O'Neill 2011 Galactic Cosmic Ray Model Update and Future Improvements\*](#) [#3015]  
The Badhwar-O'Neill Galactic Cosmic Ray Model is used by space mission planners for the certification of micro-electronic systems and analysis of radiation health risks to astronauts. This work describes the most recent version of the BO GCR model (BO'11) and future improvements.
- 11:06 a.m. Norbury J. W. Badavi F. F. Blattnig S. R. Slaba T. C. Norman R.  
[\*Comparison of Galactic Cosmic Ray Environment Models\*](#) [#3016]  
Space radiation transport codes require galactic cosmic ray (GCR) environment models as input. Recommendations for further model development and experimental measurements will be discussed.
- 11:24 a.m. Slaba T. C. Blattnig S. R. Norman R. B. Xu X.  
[\*GCR Model Propagated Uncertainties\*](#) [#3066]  
Models of the ambient GCR environment in deep space are a critical component of vehicle design and astronaut risk assessment. In this work, we examine the uncertainty of commonly used GCR models and the impact on exposure quantities of interest for space radiation shielding applications.
- 11:42 a.m. Badavi F. F.  
[\*Validation of the New Trapped Proton Electron Models \(AP9/AE9\)\*](#) [#3006]  
Geomagnetic trapped radiation environment discussion.
- 12:00 p.m. LUNCH