

Thursday, March 23, 2017

[R554]

TERRESTRIAL PLANET DIFFERENTIATION: EVERYWHERE EVERY WAY**1:30 p.m. Waterway Ballroom 5**

Chairs: Laura Schaefer
Etienne Médard

- 1:30 p.m. Schaefer L. K. *
[Oxygen Fugacity Evolution of Magma Oceans on Planetesimals and Protoplanets](#) [#3018]
We model the evolution of the oxidation state of magma oceans on protoplanets and planetary bodies.
- 1:45 p.m. Desch S. J. * Wu J. Buseck P. R.
[Earth's Water: Nebular Ingassing and Storage of Hydrogen in Earth's Core](#) [#1794]
The amount and D/H ratio of water on Earth is consistent with a combination of chondrites and nebula sources, plus storage of hydrogen in Earth's core.
- 2:00 p.m. Hakim K. * van Westrenen W. Dominik C.
[Mineralogy of Carbon-Enriched Rocky Extra-Solar Planets from Laboratory Experiments](#) [#2259]
We study the mineralogical make up of carbon-enriched rocky extra-solar planets with the help of high-pressure-temperature laboratory experiments.
- 2:15 p.m. Pahlevan K. * Schaefer L. Elkins-Tanton L. Desch S. Karato S.
[Hydrogen Isotopic Fractionation in the Terrestrial Magma Ocean](#) [#2933]
We find that the terrestrial magma ocean can generate H isotopic heterogeneity among its crystallization products.
- 2:30 p.m. Zube N. G. * Nimmo F. Jacobson S. A. Fischer R.
[The Trouble with Building Planets Too Quickly: Rapid Accretion in Grand Tack Simulations Requires Extremely Efficient Mantle Equilibration of Hf-W](#) [#1750]
Fast accretion in Grand Tack simulations causes high W anomalies that can only match measured Earth values if highly efficient metal equilibration is assumed.
- 2:45 p.m. Zeng L. * Jacobsen S. B. Hyung E. Vanderburg A. Lopez-Morales M. et al.
[Planet Size Distribution from the Kepler Mission and Its Implications for Planet Formation](#) [#1576]
The size distribution of exoplanets is bimodal—a division into two groups: Rocky planet (<2 R_⊕) and water-rich planet (>2 R_⊕) with or without gaseous envelope.