

Friday, April 28, 2017

**SOLAR SYSTEM SITES: EARTH IN TIME/DEEP BIOSPHERE:
SUSTAINED HABITABILITY, LIFE, AND THE BIOSIGNATURES OF A DYNAMIC EARLY EARTH III
11:15 a.m. Arizona Ballroom A-C**

**Chairs: Chris Reinhard
Charles Diamond**

- 11:15 a.m. Bray M. S. * Wu J. Reed B. C. Kretz C. B. Simister R. L. Henny C. Stewart F. J.
DiChristina T. J. Brandes J. A. Fowle D. A. Crowe S. A. Glass J. B.
[Shifting Microbial Communities Sustain Multi-Year Iron Reduction and Methanogenesis in Ferruginous Sediment Incubations](#) [#3439]
In this study we examined CH₄ and Fe cycling in anoxic incubations of ferruginous sediment from the Archean analogue Lake Matano, Indonesia.
- 11:30 a.m. Kaufman A. J. * Zhelezinskaia I. N. Farquhar J. Johnston D. T. Olson S. Lyons T.
Koehler M. C. Buick R.
[Environmental Controls on the Preservation of Atmospheric Sulfur in Neoproterozoic Marine Facies](#) [#3539]
Geochemical studies of Neoproterozoic marine facies in western Australia explore hypotheses related to sulfur cycling by photolytic reactions in an anoxic atmosphere.
- 11:45 a.m. Johnson A. C. * Reinhard C. T. Romaniello S. J. Greaney A. Garcia-Robledo E. Revsbech N. P.
Canfield D. E. Lyons T. W. Anbar A. D.
[Reconciling "Whiffs" of O₂ with the Archean MIF S Record: Insights from Sulfide Oxidation Experiments](#) [#3584]
To reconcile "whiffs" of O₂ and MIF S isotope anomalies before the Great Oxidation Event, I conducted sulfide oxidation experiments and built weathering models.
- 12:00 p.m. Lau K. V. * Macdonald F. A. Maher K. Payne J. L.
[Variable Ocean Oxygenation During the Cryogenian Non-Glacial Interval and Links to the Carbon Cycle: Insights from Uranium Isotopes](#) [#3447]
Uranium isotope data from Cryogenian limestones demonstrate that the ocean oxygenation was highly variable. Redox changes may be linked to the carbon cycle.
- 12:15 p.m. *Lunch*