

Thursday, July 26, 2018

## POSTER SESSION II: MARS: METEORITES AND SAMPLE RETURN

5:30 p.m. Foyer

Povinec P. P. Ferrière L. Jull A. J. T. Koeberl C. Kovářik A. Sýkora I.

[\*Cosmogenic Radionuclides in Martian Meteorites: The Tissint Case\*](#) [#6182]

The pre-atmospheric radius and cosmic-ray exposure age of the Tissint meteoroid has been estimated using the  $^{26}\text{Al}$  method to be  $(20 \pm 3)$  cm. and  $(0.9 \pm 0.3)$  Myr, respectively.

Cox M. A. Daly L. Cavosie A. J. Bland P. A. Lee M. R. Cohen B. E. Cairney J. M.

Eder K. Yang L.

[\*Complex Twinning in Baddeleyite from the Martian Meteorite North West Africa \(NWA\) 11522;\*](#)[\*Preliminary Results\*](#) [#6257]

Electron backscatter diffraction (EBSD) maps of baddeleyite and zircon grains from the matrix of NWA 11522.

Hoffmann V. H. Funaki M. Torii M.

[\*Magnetic Signature of the Miller Range \(MIL\) Nakhrites\*](#) [#6268]

In this contribution we will focus on the magnetic and mineralogical signature of the four paired Miller Range nakhrites: MIL 03346, MIL 090030, MIL 090032 and MIL 090136.

Lee M. R. Daly L. Piazzolo S. Forman L. V. Campanale F. Trimby P. W. Baumgarner R. Benedix G.

[\*Shock-Enhanced Aqueous Alteration of the Nakhrite Miller Range 03346\*](#) [#6120]

The nakhrite MIL 03346 contains deformation bands within which the mesostasis has been pervasively aqueously altered – were these post-shock fluids martian or terrestrial?

Daly L. Lee M. R. Cohen B. E. Cairney J. Eder K. Yang L. Cox M. A. Cavosie A. J.

[\*High Pressure Excursions in the Matrix of Martian Meteorite Northwest Africa \(NWA\) 11522\*](#) [#6237]

Atom probe tomography of the matrix of NWA 11522 a pair of NWA 7014, or 'Black Beauty' exhibit a high pressure assemblage of phases that suggest that the sample may have a heterogeneous shock metamorphic history between matrix and clasts.

Krzysińska A. M. Schofield P. F. Geraki K. Ignatyev K. Mosselmans J. F. W.

Michalski J. R. Smith C. L.

[\*Constraining the Nature of Fluid Alteration Events in the Martian Subsurface Using Trace Element Signatures in Nakhrites\*](#) [#6260]

We have used synchrotron X-ray fluorescence mapping to characterise the trace element distributions in fluid alteration phases in nakhrite martian meteorites with a view to constraining the nature of fluid flow events and the source of the fluids.

Krzysińska A. M. \* Schofield P. F. Endrizzi M. Newville M. Lanzirotti A.

Michalski J. R. Smith C. L.

[\*Correlative 4D Tomographic Study of Alteration Veins in Nakhrites to Non-Destructively Determine Fluid Flow Sequences in the Martian Subsurface\*](#) [#6225]

Element- and phase-specific XRF/XRD-CT imaging of alteration veins in Nakhla and Lafayette reveals a sequence of alteration events in the martian subsurface.