

+

#0036

+

**Northwest Africa 11962: A new lunar meteorite from the Procellarum KREEP Terrane.**

Bechtold\*, A., #Brandstätter, F., \*\*Koeberl, C., \*Dept. Lithospheric Research, Univ. Vienna & #Nat.Hist.Museum Vienna, Austria, [andreas.bechtold@univie.ac.at](mailto:andreas.bechtold@univie.ac.at).

Northwest Africa (NWA) 11962 was found as a single stone (~85 gram total mass) whose oxygen isotopic composition, petrological characteristics, and bulk chemistry is consistent with a lunar origin. The occurrence of glass spherules led to the classification as a regolith breccia [1]. Lithic clasts comprise gabbros, basalts, felsites, quartz monzogabbros (QMG), and symplectites. Felsites and QMGs are rare rock types of the lunar alkali-suite [2], making NWA 11962 a valuable object for petrogenetic studies. Bulk iron, thorium, and incompatible trace element concentrations point toward an origin of the meteorite from within the Procellarum KREEP Terrane [e.g., 3]. Although there are some similarities to other lunar regolith breccias (especially NWA 4472 [4]), NWA 11962 is considered not to be paired with any other known lunar meteorite.

[1] Meteoritical Bulletin, no. 107 (in preparation) [2] Jolliff, B.L. et al. (2011) Nature Geoscience 4(8), 566–571.

[3] Haskin, L.A. et al. (2000) J. Geophys. Res. 105(E8),

+

[4] Joy, K.H. et al. (2011) GCA 75(9), 2420–2452.

+

Cite abstract as:

Bechtold, A., Brandstätter, F., Koeberl, C. (2019) Northwest Africa 11962: A new lunar meteorite from the Procellarum KREEP Terrane.. Paneth Kolloquium, Nördlingen (Germany), abstract URL: <http://www.paneth.eu/PanethKolloquium/2019/0036.pdf> (abstract #0036).