

+

#0217

+

Characterisation of new ureilitic samples from the Almahata Sitta strewn field

Roggon*, L., Hain, H., Horstmann, M., Bischoff, A.
*Institut für Planetologie, Wilhelm-Klemm-Str. 10, 48149 Münster, Germany. Email: l.roggon@uni-muenster.de

The mineralogy and petrography of 21 ureilitic samples among 30 new samples from the Almahata Sitta strewn field were studied by polarizing optical and scanning electron microscopy.

Ten of these samples are typical coarse-grained ureilites (e.g., MS-178), five are fine-grained (e.g., MS-186), and two are variable in grain size (MS-25, MS-184). Additionally, one recrystallized ureilitic sample is ultra fine-grained (MS-185) and three are breccias (MS-190, MS-191, MS-205). All fine-grained ureilites contain recrystallized olivine, which indicates a high degree of shock metamorphism. The maximum Fa-content in the olivine cores is ~24 mol%. The samples contain several vol% metal and sulfide. Besides the occurrence of the typical sulfide troilite, MS-185 also contains niningerite. MS-202 has a unusual texture similar to MS-156 [1]. Textures and mineralogy of the new samples match other Almahata Sitta ureilites described earlier [1,2].

[1] Bischoff, A. et al. (2010) Meteoritics & Planetary Science 45, 1638-1656. [2] Zolensky, M. et al. (2010). Meteoritics & Planetary Science 45, 1618-1637.

+

+

Cite abstract as:

Roggon, L., Hain, H., Horstmann, M., Bischoff, A. (2012) Characterisation of new ureilitic samples from the Almahata Sitta strewn field. Paneth Kolloquium, Nördlingen (Germany), abstract URL: <http://www.paneth.eu/PanethKolloquium/2012/0217.pdf> (abstract #0217).