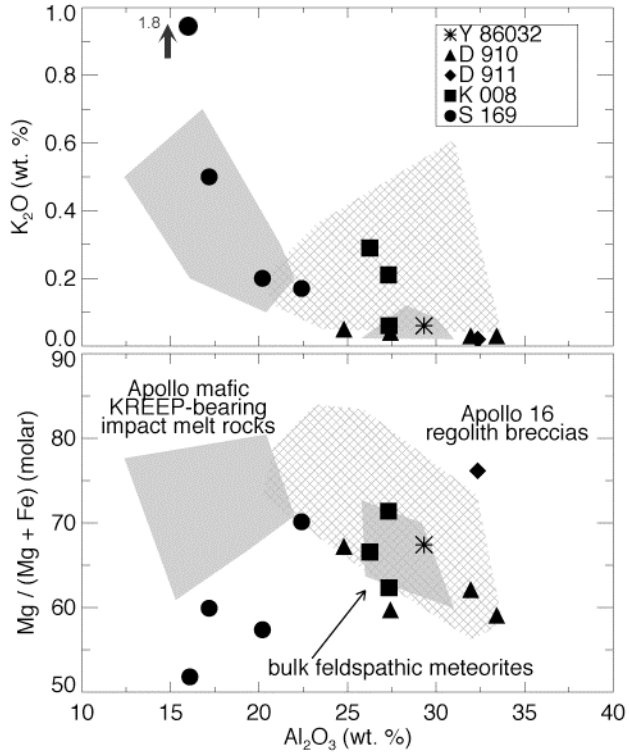
MORE IMPACT-MELT CLASTS IN FELDSPATHIC LUNAR METEORITES. B. A. Cohen, Inst. of Meteoritics, Univ. of New Mexico, Albuquerque, NM 87131 (bcohen@unm.edu).

Introduction: Impact-melt clasts in lunar meteorite breccias yield ages of impacts occurring in the vicinity of the breccia until its lithification [1]. Major-element chemistry of the clasts distinguishes the source terrane of the breccia. This study reports on 13 clasts in five new meteorites, identified using the petrographic microscope and backscattered-electron imaging and using the electron microprobe to obtain major-element chemistry via a grid of defocused beam analyses. Most analyses have low totals due to cracks; therefore, all analyses totalling 85-101% were normalized and averaged to yield the bulk composition of the clast. These clasts will be extracted from the meteorites for ^{40}Ar-^{39}Ar analysis.

Results: Yamato 86032, Dhofar 910, Dhofar 911, and Kalahari 008 are feldspathic breccias with varying amounts of regolith and impact-melt components [2]; both Dhofar meteorites may be paired with various other Dhofar meteorites. Impact-melt clasts in these meteorites are high in Al_2O_3 and have compositions within the range of Apollo 16 feldspathic breccias (Fig. 1), consistent with an origin in the feldspathic lunar highlands either prior to, or far away from, the nearside KREEP-rich terrane that produced mafic impact-melt rocks.

Sayh al Uhaymir (SaU) 169 [3] is mostly a KREEP-rich mafic impact melt breccia, probably originating from the nearside KREEP terrane. The SAU 169 rock also contains adhering regolith breccia, a sample of which was used for this study. Impact-melt clasts within SAU 169 include both feldspathic and KREEPy clasts (Fig. 1) derived from the lunar nearside.



References: [1] Cohen et al. (2005) MAPS, in press. [2] Korotev (2005) http://epsc.wustl.edu/admin/resources/moon_ meteorites.html. [3] Gnos et al. (2004) Science 305, 657–659.