Northwest Africa 2995, 2996, 3190, 4503, 5151, 5152, 5153, 5207 + 2 others

Basalt-bearing anorthositic fragmental breccia

538, 984, 41, 70, 289, 38, 48, 120, 691, 168 g

Figure 1: Northwest Africa (NWA) 2995 with a cut face exposing the interior.

Introduction

Northwest Africa (NWA) 2995 was found in Algeria in 2005 and purchased in November 2005 (Fig. 1). It is fully fusion crusted and exhibits minimal weathering (no alteration veins). Its interior reveals a multitude of light grey and white feldspathic clasts in a dark fine grained matrix (Fig. 2; Connolly et al., 2006; Bunch et al., 2006). Subsequently, as many as eight different stones (NWA 3190 and 4503) have been paired with NWA 2995 (Connolly et al., 2008), on the basis of their similar bulk compositions (that are also distinct from other lunar meteorites).

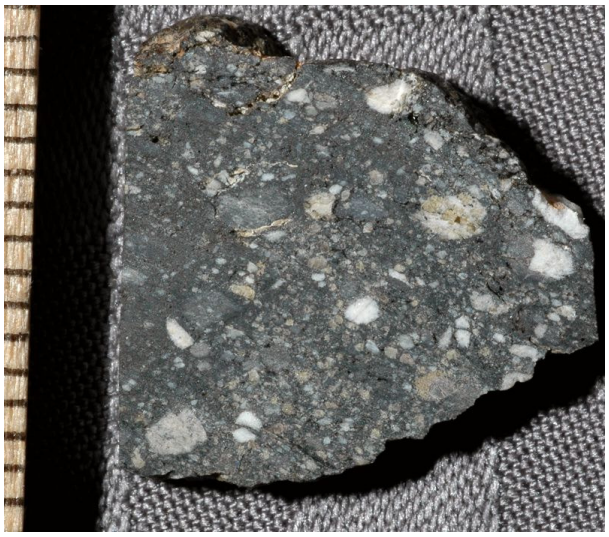

Figure 2: slab cut of NWA 2995 illustrating the feldspathic nature of the sample. Scale bar at left has 1 mm divisions (photo from R. Korotev).

Petrography, mineralogy, and chemistry

This fine grained feldspathic fragmental breccia contains many lithologies, such as norite, olivine basalt, sub-ophitic basalt, gabbro, KREEP basalt, troctolite, granulitic impact melt, anorthosite, and glassy impact melt. Breccia within a breccia textures are common, and there are shock melt veins crossing the sample (Bunch et al., 2006; Connolly et al., 2006, 2008; Korotev and Ziegler, 2007; Korotev et al., 2008).

Radiogenic age dating

None yet reported.

Cosmogenic isotopes and exposure ages

None yet reported.

K. Righter, Lunar Meteorite Compendium, 2008