

BOULDER 2, STATION 2

Sample 72315, 72335, 72355, 72375, 72395

Boulder 2 at Station 2 was one of three boulders sampled on the lower slopes of the South Massif (see section on Boulder 1, Station 2 for description of area). Boulder 2 lay approximately 50 m southwest of the LRV parking spot. It is greenish-gray or tan gray, and approximately 2 m wide and 2 m high as measured from the lunar surface. It is rounded, and smoother than Boulder 1. Several sets of fractures can be recognized, but no layering is visible. The boulder has a fillet about 25 cm high on its uphill side but overhangs the ground surface on its downhill side (fillet material was sampled as 72320).

The astronauts took 5 samples from Boulder 2 (Fig. 1). During sampling, Schmitt observed a distinctive half-meter patch on the surface that he interpreted as a clast of material similar to the rest of the boulder. Sample 72315 represents this "clast", and 72335 represents the "contact" with the groundmass. 72355, 72375, and 72395 represent normal boulder matrix. Petrographic and chemical studies show that all five samples are virtually identical; the distinctive patch was probably a spall. Each sample has an exterior side (with brown patina and zap pits) and a freshly-exposed interior surface.

Most of the studies of Boulder 2 were made by a loosely-knit Consortium led by the Caltech group (Dymek *et al.* 1976). All are clast-bearing fine-grained impact melts of low-K Fra Mauro with composition similar to others at the Apollo 17 landing site. The boulder is generally interpreted as a piece of an impact melt unit created in the Serenitatis impact at ~3.86 Ga ago. It rolled down the South Massif to its present position about 20 m.y. ago, according to exposure data.

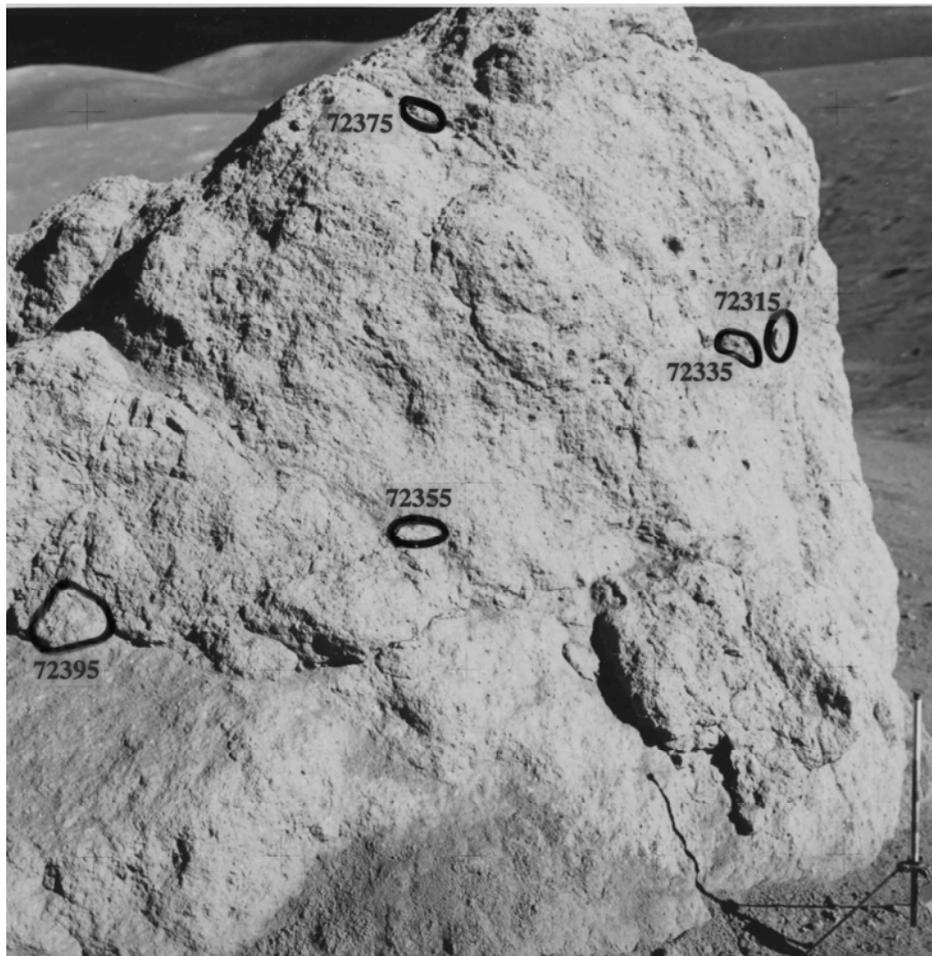


Figure 1. Sampling of Boulder 2, Station 2. The gnomon has a height of 62 cm. (AS137-20913).