67769

Impact Melt Breccia

3 grams

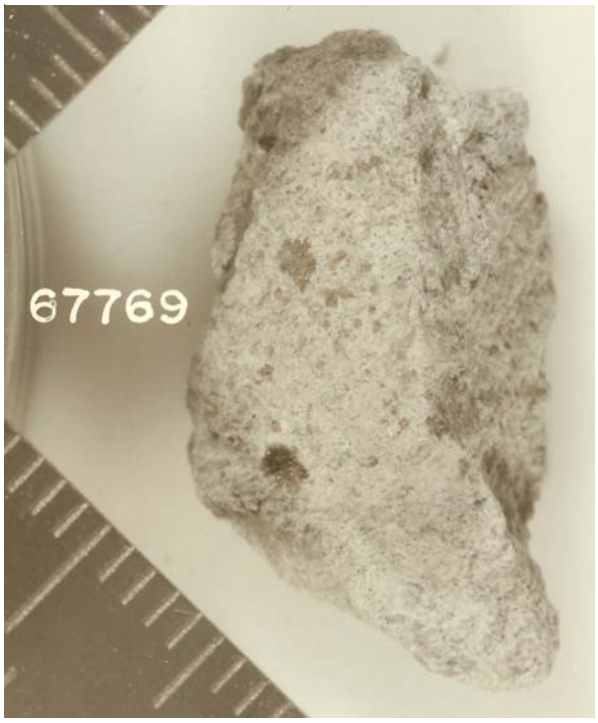

Figure 1: Photo of 67769. Scle marked in mm. S72-51044

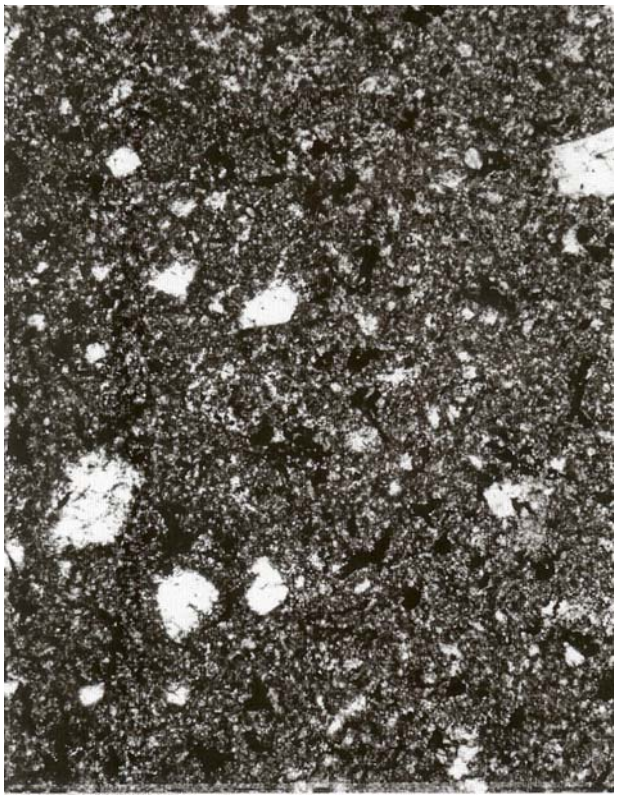

Figure 2: Photomicrograph of 67769.

Introduction

67769 is a rake sample collected from the rim of North Ray Crater – see section on 67701. It has a micropoikilitic texture indicating that it is an impact melt breccia.

Petrography

Steele and Smith (1973) studied the mineral chemistry of 67769, finding that plagioclase was An_{85-95} and that both high-Ca and low-Ca pyroxene were present. The pyroxene forms oikocrysts that surround plagioacse inclusions. Poikilitic ilmenite and Fe-metal is found at boundaries of pyroxene oikocrysts. Figure 2 is from Ryder and Norman (1980). Soffler et al. (1981, 1985) classify it as micropoikilitic impact melt but offer no analysis and it remains unstudied (*and an opportunity for future generations*).

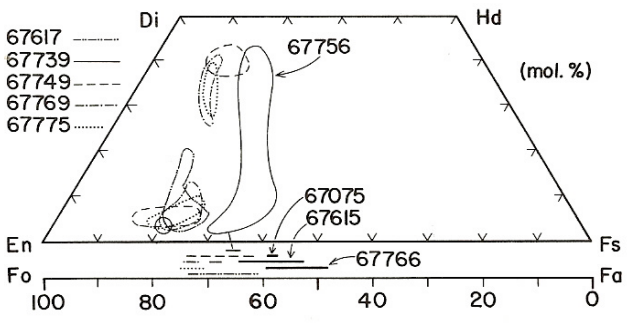

Figure 3: Composition of pyroxene and olivine in 67769 (Steele and Smith 1973).

Processing

There is one thin section.

References for 67769

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Ryder G. and Norman M.D. (1980) Catalog of Apollo 16 rocks (3 vol.). Curator's Office pub. #52, JSC #16904

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Steele I.M. and Smith J.V. (1973) Mineralogy and petrology of some Apollo 16 rocks and fines: General petrologic model of the moon. *Proc. 4th Lunar Sci. Conf.* 519-536.

Stöffler D., Bischoff A., Borchardt R., Burghele A., Deutsch A., Jessberger E.K., Ostertag R., Palme H., Spettel B., Reimold W.U., Wacker K. and Wanke H. (1985) Composition and evolution of the lunar crust in the Descartes highlands. *Proc. 15th Lunar Planet. Sci. Conf.* in J. Geophys. Res. **90**, C449-C506.

Sutton R.L. (1981) Documentation of Apollo 16 samples. In Geology of the Apollo 16 area, central lunar highlands. (Ulrich et al.) U.S.G.S. Prof. Paper 1048.