

**INTRODUCTION:** 60615 is a light gray, coherent, basaltic impact melt. Irregularly shaped vugs (up to 13 mm across) are common (Fig. 1). Small, very thin areas of glass partially coat one surface. It is a rake sample collected about 70 m west southwest of the Lunar Module. Zap pits are heterogeneously distributed.

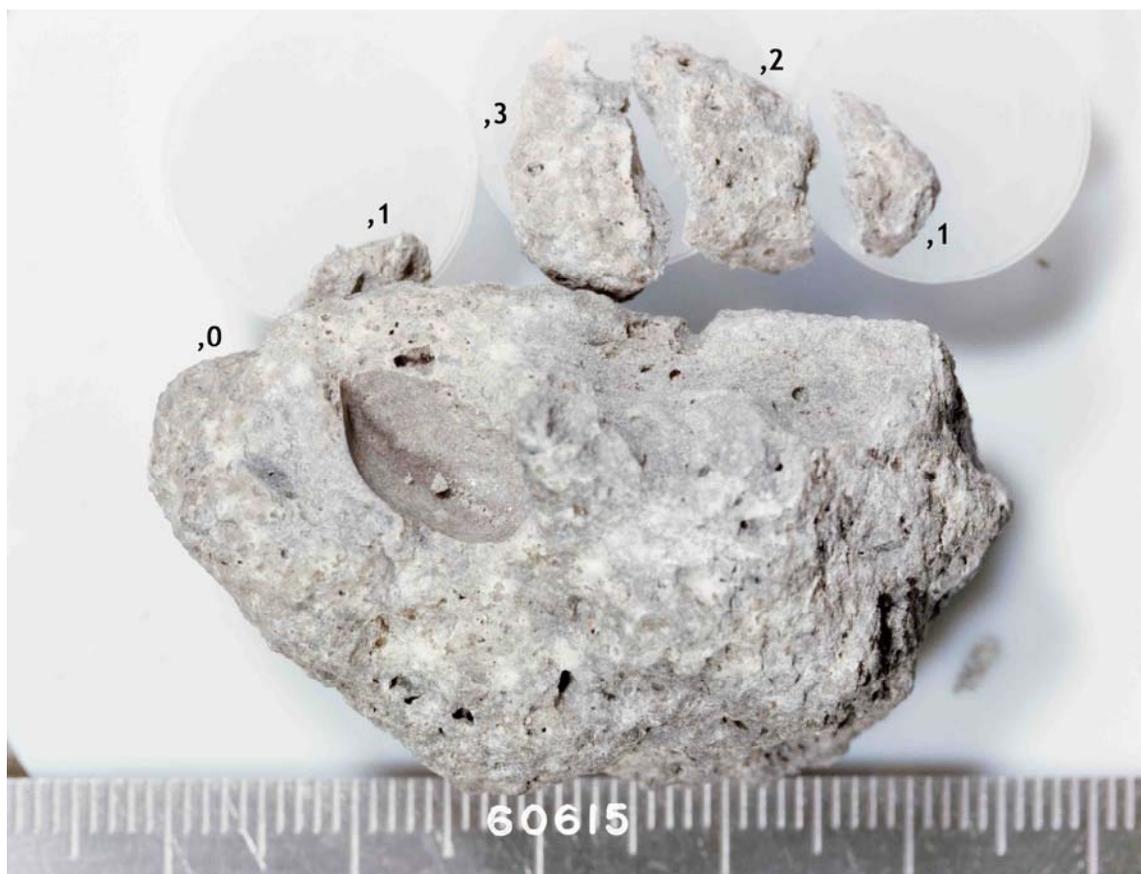


FIGURE 1. Smallest scale division in mm. S-73-20458.

**PETROLOGY:** Dowty et al. (1974b) and Warner et al. (1976b) provide petrographic descriptions. Mineral analyses are tabulated by Dowty et al. (1976). The texture of 60615 is predominantly intergranular with olivine and pyroxene confined to interstices between fine (~0.1 mm) plagioclase laths (Fig. 2). Mafic minerals are unusually magnesian (Fig. 3). Plagioclase laths and xenocrysts are of the same composition. Accessory phases include ilmenite, armalcolite, rutile, Fe-metal (4.3-13.6% Ni, 0.6-1.03% Co), schreibersite and troilite. Angular xenocrysts of plagioclase account for ~4% of the rock. One “breccia” clast is noted by Warner et al. (1976b).

CHEMISTRY: Major and trace element abundances are reported by Laul and Schmitt (1973). A defocussed electron beam analysis (DBA) of a thin section is presented by Dowty et al. (1974b) and reproduced by Warner et al. (1976b).

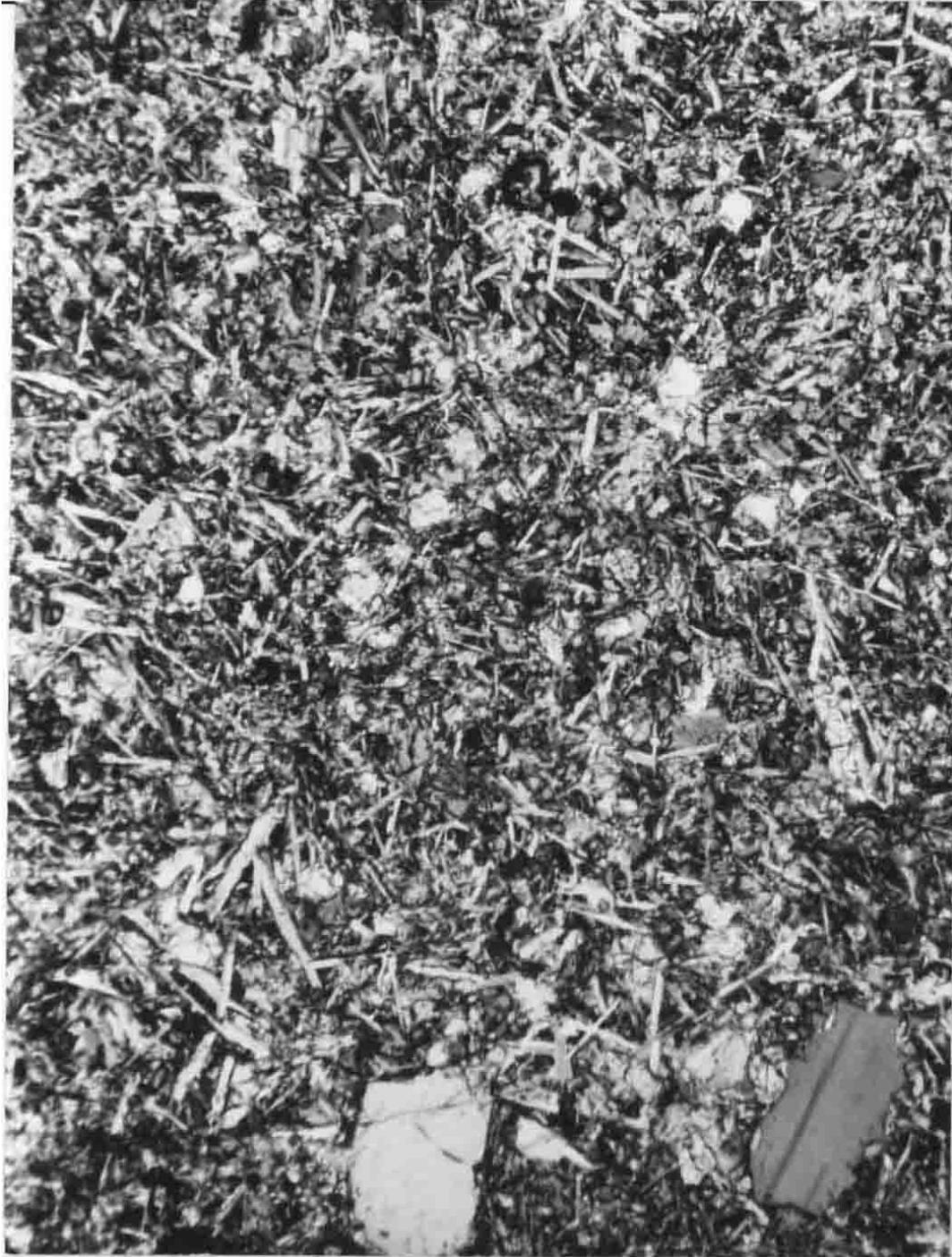


FIGURE 2. 60615,8. xpl. Width 2 mm.

60615 is somewhat less aluminous than most other basaltic impact melts from Apollo 16 (Table 1). The bulk Mg/Fe is quite high as reflected in the mineral compositions. Rare earth elements are slightly enriched compared to local soils. Siderophiles indicate a significant meteoritic component.

PROCESSING AND SUBDIVISIONS: In 1973 representative chips were removed and allocated for thin sections and petrography (,1), chemistry (,2) and for isotopic analyses (,3).

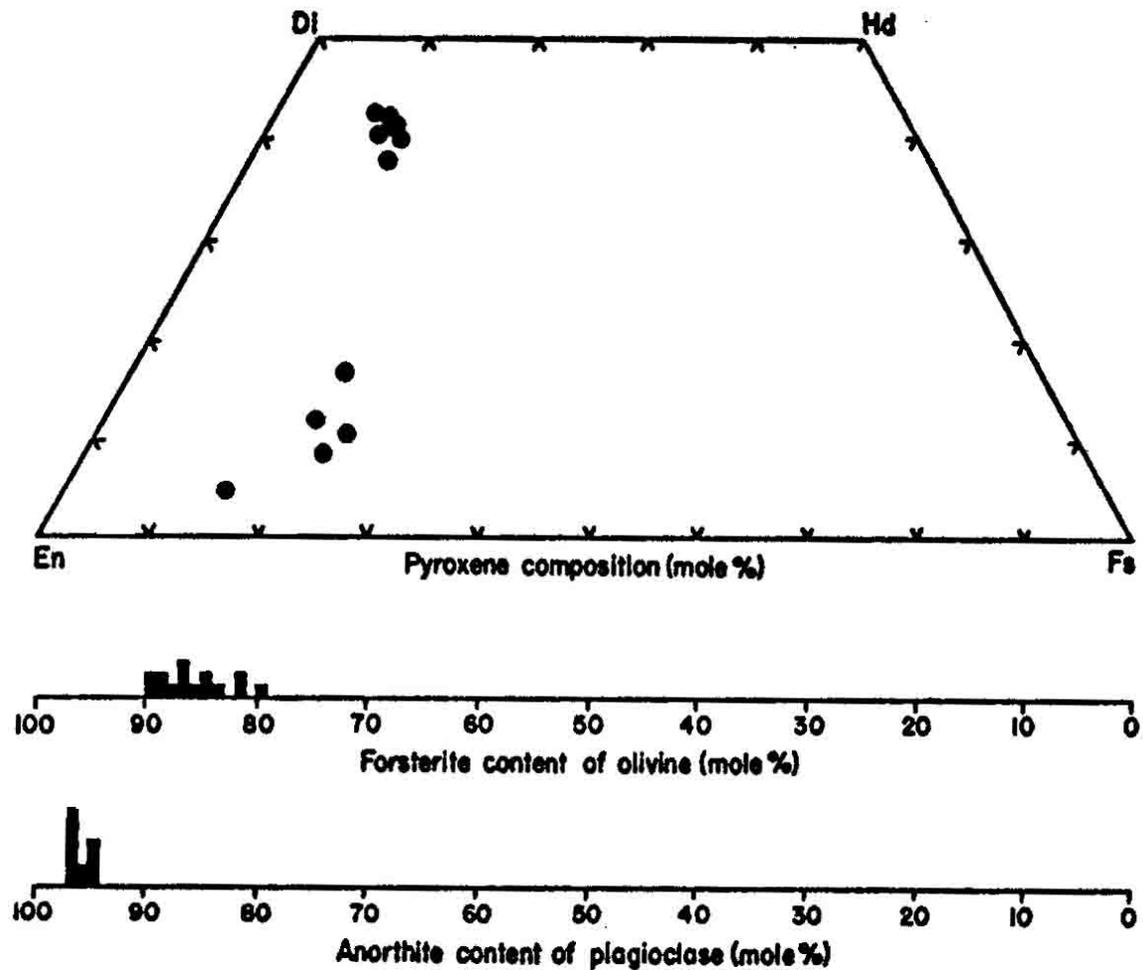


FIGURE 3. Mineral compositions;  
from R. Warner et al. (1976b).

TABLE 1. Summary chemistry of 60615.

SiO <sub>2</sub>	44.9
TiO <sub>2</sub>	0.52
Al <sub>2</sub> O <sub>3</sub>	21.8
Cr <sub>2</sub> O <sub>3</sub>	0.144
FeO	5.3
MnO	0.071
MgO	14.2
CaO	12.5
Na <sub>2</sub> O	0.386
K <sub>2</sub> O	0.13
P <sub>2</sub> O <sub>5</sub>	0.09
Sr	
La	16.9
Lu	0.77
Rb	
Sc	9.0
Ni	490
Co	32
Ir ppb	9
Au ppb	8
C	
N	
S	
Zn	
Cu	

Oxides in wt%; others in ppm except as noted.