**64568**
Poikilitic Impact Melt Breccia
9.38 grams

![Image of 64568](image1.png)

Figure 1: Photo of 64568 showing numerous zap pits. Sample is about 3 cm across. S72-55370.

![Image of photomicrographs](image2.png)

Figure 2: Photomicrographs of thin section 64568,4 by C Meyer @ 50x.

**Introduction**
64568 is a rake sample from the bottom slope of Stone Mountain - see section on 64501. It has a poikilitic texture with a network of pyroxene phenocrysts surrounding small laths of plagioclase (figures 2 and 3). It was from the surface of the regolith, as illustrated by the zap pits (figure 1). It has been dated at ~ 3.87 b.y.

**Petrography**
Simonds et al. (1973) classified 64568 as a poikilitic rock and gave pyroxene data (figure 4). This sample should be compared with 64567, 64569 and 62235.

**Composition**
McKinley et al. (1984) give the chemical composition of 64568. The sample seems to have high K. Trace elements have not been reported.

**Crystallization Age**
Norman et al. (2006) determined the age of 64568 by Ar/Ar to be 3.867 ± 0.09 b.y. (figure 5).
Figure 3: Photos of thin section 64568,4 by C Meyer. 2 mm across
Table 1. Chemical composition of 64568.

<table>
<thead>
<tr>
<th>reference</th>
<th>McKinley83</th>
</tr>
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<tbody>
<tr>
<td>SiO2 %</td>
<td>47.84 (a)</td>
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<tr>
<td>TiO2</td>
<td>0.63 (a)</td>
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<td>Al2O3</td>
<td>22.88 (a)</td>
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<tr>
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<tr>
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<td>0.35 (a)</td>
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<tr>
<td>P2O5</td>
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</tr>
<tr>
<td>S %</td>
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</tr>
<tr>
<td>sum</td>
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</table>

(a) broad beam e probe

Other properties
Pearce and Simonds (1974) determined the ratio of Fe metal to Fe silicate by magnetic measurements.

Processing
There is only one small thin section of 74568.
References for 64568


Phinney W. and Lofgren G. (1973) Description, classification and inventory of Apollo 16 rake samples from stations 1, 4 and 13. Curator’s Office. JSC

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


