

EXAMINATION OF SAMPLE OF SURVEYOR III STRUT
FOR METEOROID IMPACTS

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ABSTRACT

A $1-\frac{1}{2}$ " long sample of the bare $\frac{1}{2}$ " diameter hollow aluminum alloy strut returned from Surveyor III, and an equivalent terrestrial sample, were both made available for optical examination, whose purpose was to determine whether any meteoroid impact data could be obtained.

A coupled microscope with two degrees of translational freedom and one degree of rotational freedom was assembled. This equipment permitted large field low power optical scanning (10X - 80X) to be transferred to higher magnification scanning (315X) at the same centerline site.

Three candidate "craters" were found on the initial low power scan. However, more careful examination under high magnification eliminated all of these as potential hypervelocity impact sites.

The conclusion drawn is that the sample does not reveal any unequivocally identifiable meteoroid impacts, within the magnification and resolution limits used.