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Quarterly Progress Report

E82-10352

CR-168996

"An Investigation into the Utilization of HCMM Thermal Data for the
Discrimination of Volcanic and Eolian Geological Units"

NASA Contract No. NAS5-26728

For the Period September 1, 1981 to February 28, 1982

802-26750

Unclas
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Accomplishments and Significant Results - During these two quarters funding
was begun and

- 1) background studies were undertaken and completed with emphasis on the nature of the HCMM data set and the general geologic application of thermal inertia imaging using HCMM data.
- 2) CCT's of five of our sites of interest were obtained and displayed on our image display system.
- 3) Investigations were carried out to perform the upgrade of our image display system described in our proposal.
- 4) Work continued on the characterization of fragment/block size distributions in various terrain types with emphasis on volcanic terrain.
- 5) Preliminary analysis of other data sets was carried out with the goal of understanding the ability of different data sets to discriminate geologic unit boundaries, with special emphasis on volcanic terrain. This study is on one of our HCMM test sites. Specifically, Seasat L-band radar images of volcanic landforms at Newberry Volcano, Oregon, were analyzed and compared to Landsat band 7 images. We are presently beginning to correlate these results with HCMM data.

Publications

- 1) "Analysis of Seasat Radar Images of Newberry Volcano, Oregon" (R. G. Blom and Peter Mougins-Mark) submitted to Journal of Geophysical Research.

Plans for Next Reporting Period - Continued analysis of HCMM test sites, upgrade of image display system, definition of other correlative data set specific needs, definition of any additional HCMM CCTS required for the investigation.

Funds are being expended on schedule.

(E82-10352) AN INVESTIGATION INTO THE
UTILIZATION OF HCMM THERMAL DATA FOR THE
DISCRIMINATION OF VOLCANIC AND EOLIAN
GEOLOGICAL UNITS Quarterly Progress Report,
1 Sep. 1981 - 28 Feb. 1982 (Brown Univ.)



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