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GEOLOGIC APPLICATION OF THERMAL INERTIA IMAGING USING HCMM DATA

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16. Abstract

During the January-March 1980 quarter of the JPL/HCMM investigation, selection and ordering of the appropriate satellite data tapes needed for a comprehensive study of the geologic applications of HCMM data was completed. Preliminary processing of received tapes was begun and areas for further processing and calculation of thermal inertia were chosen.

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Introduction

The JPL/HCMM Investigation is a study of the feasibility of using thermal inertia, inferred from remotely sensed temperature data, to complement Landsat reflectivity data for reconnaissance geologic mapping and mineral exploration.

During the January - March 1980 quarter of this investigation sufficient HCMM images were received to complete selection and ordering of the appropriate satellite data tapes needed for processing. The tapes ordered during the last quarter were received, preliminary processing begun, images were created and areas for further processing and calculation of thermal inertia were chosen.

Problems

None

Accomplishments

HCMM images, received during this quarter, were evaluated and those with cloud-free coverage of JPL test sites, coincident with the dates of field work, were ordered in digital form. Sufficient images were received to complete the selection and ordering, begun during the last quarter, of the necessary number of satellite data tapes needed for processing.

The first batch of tapes, ordered in October, 1979, arrived during this quarter and preliminary digital processing was begun. The tapes were logged and images were created in order to judge the quality of the data. Selected areas on these images were then chosen for further processing and the calculation of thermal inertia using JPL models.

Significant Results

None

Presentations

Dr. Anne B. Kahle attended the HCMM Experiment Team Meeting, held at the