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QUARTERLY REPORT

June 24, 1980

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**APPLICATIONS OF HCMM DATA
TO
SOIL MOISTURE SNOW
AND
ESTUARINE CURRENT STUDIES**

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TYPE II

A. Problem

A substitute tape for the nighttime 6/13/79 case has been located, viz., 5/27/79. However difficulty may be encountered in trying to produce a thermal inertial scene because of missing parameters on the 6/13/79 daytime tape.

B. Accomplishments

A summary of accomplishments achieved to the end of May 1980 was presented by David F. McGinnis at NASA/GSFC on June 17, 1980. Most of the effort involved the study of tidal patterns in Delaware Bay and the Cooper River estuary. (See Significant Results section for details)

The soil moisture gauge was inspected in early June and the problem was traced to the clock. The necessary repairs are being performed at the manufacturer and the gauge is expected to be operational before August 1.

C. Significant Results

The following significant results are noted:

1. HCMM thermal data are useful form monitoring estuarine surface thermal patterns.
2. Estuarine thermal patterns are, under certain conditions, indicative of the surface tidal current circulation patterns.
3. Under optimum conditions, estauries as small as the Cooper River (i.e., approximately 100 Km²) can be monitored for tidal/thermal circulation patterns by HCMM-type IR sensors

D. Publications

NONE

E. Recommendations

NONE

F. Funds Expended to Date

Balance of Funds (2.0 + 3.0) 5.0K

Spend this period 1.2

Funds remaining 3.8K

G. Data Utility

A check was made of imagery received against the data coverage sheets (through 5/31/79). The break-down by test site is as follows:

Luverne, received 73, possible 112

Cooper River, received 58, possible 87

Potomac River, received 49, possible 73

Cranberry Lake, received 21, possible 41