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5 September 1975

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Type II progress Report for Period June 1, 1975 to August 31, 1975

Prepared for: National Aeronautics and Space Administration  
Goddard Space Flight Center  
Greenbelt, Maryland 20771

A. Problems

The LANDSAT negatives received from NOAA are on material of variable thickness. When making paper prints for analysis, the annotation block information is often lost. Constant changes in enlarger focus is necessary when printing a series of pictures from variable thickness negatives. Some of the thicker negatives appear to be poorer in resolution than the thin films. This could be because of differences in the generation of the contact positives that were used.

B. Accomplishments

1) All the LANDSAT 1 and 2 images of San Pablo Bay are being correlated with sediment distribution pattern; measures by the U.S. Army Corps of Engineers. The Corps pattern measurements are part of a Dredge Disposal Study carried out in the Bay area. As part of this program dredged material was marked with tracer material and re-introduced at a site off Mare Island where rapid dispersal occurs. Each month bottom samples were collected at numerous grid points throughout the Bay. Analysis was made to determine the content of tracer material present. This information was then computerized and geographic plots were made for monthly period. These plots are now being compared with the density patterns present in LANDSAT 1 and 2 images. To date a

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(E75-10412) [REMOTE SENSING OF SAN PABLO  
BAY AND SANTA BARBARA CHANNEL ISLANDS]  
Progress Report, 1 Jun. - 31 Aug. 1975 (Army  
Engineer District, San Francisco, Calif.)  
2 p HT 7.25

correlation has been found showing that sediment transport patterns present on the LANDSAT imagery may be utilized in forecasting bottom sediment distribution patterns.

2) A flight test remote sensing program has been planned for October to correlate with the LANDSAT overpass. This aircraft data collection will consist of utilizing various film/filter combinations for detecting nearshore processes. Simultaneously, sea truth water column data will be collected for later correlation with the satellite and aircraft imagery. This flight will take place in the Santa Barbara-Channel Islands area. This project is scheduled to collect information from the Oceanic Current Period along the California coast.

3) Enhancement of coastal current and sediment transport information utilizing "standard" photographic techniques. Plotting of current vectors.

4) Plan for utilizing the G.E. Image 100 at the Jet Propulsion Laboratory for enhancing nearshore processes. Before this can commence, pertinent CCT's must be ordered from NASA.

C. Significant Results - None

D. Publications - None

E. Recommended Changes

Use the same thickness of film in making all LANDSAT negatives.

F. Funds Expended - \$9,325

G. Data Use Tabulation

Value of data allowed	<u>\$6,300</u>
Value of data ordered	<u>Standing order</u>
Value of data received *	<u>\$1,928</u>

\* Based on revised NOAA 70mm cost listing