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CR 139987

TRACKING AIR-DROPPED DROGUES AND DYES FROM  
AIRCRAFT IN SUPPORT OF ERTS-1 CIRCULATION STUDIES

(E74-10747) TRACKING AIR-DROPPED DROGUES  
AND DYES FROM AIRCRAFT IN SUPPORT OF  
ERTS-1 CIRCULATION STUDIES (Delaware  
Univ.) 2 p

N74-32773

CSCL 08C

63/13

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00747

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September 16, 1974  
Report on Significant Results  
NASA ERTS-1 CONTRACT NAS5-21837  
UN 362 SR 9654

Prepared for  
GODDARD SPACE FLIGHT CENTER  
GREENBELT, MD 20771

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US Department of Commerce  
Springfield, VA. 22151

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### Significant Results

For two years ERTS-1 has been employed to investigate current circulation patterns in Delaware Bay under different tidal, flow and wind conditions. Since sufficient numbers of current meters and boats are not available, air-droppable drogues and dye packs have been developed and tested. The drogues consist of a styrofoam float and a line to which is attached a stainless steel biplane. The length of the line determines at what depth currents will be monitored. The floats are color coded to distinguish their movement and mark the depth of the biplanes. Simultaneously floating and anchored dye packs of fluorescein dye have been deployed from aircraft. The movement of the dye and drogues is tracked by sequential aerial photography, using fixed markers on shore or on buoys as reference points to calibrate the scale and direction of drogue movement. The current data obtained by this technique is then used to annotate current circulation maps derived from ERTS-1 imagery.