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DISTRIBUTION AND CONCENTRATION OF SUSPENDED MATTER  
IN DELAWARE BAY

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V. Klemas and W. Philpot  
Center for Remote Sensing  
College of Marine Studies  
University of Delaware

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OF SUSPENDED MATTER IN DELAWARE BAY  
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## SIGNIFICANT RESULTS

In a single LANDSAT scene, if the atmospheric conditions are essentially constant over the scene, changes in upwelling radiance from the water are essentially related to the relative strength of absorption and scattering by the water. The usual measure of this relative strength is the single scattering albedo  $w_0$  which is the percentage of light removed from a beam by scattering.

The problem of remote sensing of suspended matter in water was analyzed in terms of the single-scattering albedo and a semi-empirical relationship between satellite radiance measurements and the concentration of suspended matter in the water was developed. The relationship was tested using data from the 7 July 1973 LANDSAT overpass of Delaware Bay with good results. Suspended sediment concentration maps for the entire Delaware Bay were prepared using radiance values extracted from LANDSAT MSS imagery and correlating them with ground truth samples collected from boats and a helicopter.