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Organization: Naval Research Lab

Category: Ocean and Atmospheres

**Paper ID:** 57-00A-A1591

Title: Remote sensing of shallow-water properties

**Abstract:** Remote sensing is an important and effective tool in monitoring

environmental properties. Presently, most of the remote-sensing practices in water color are focused on the chlorophyll of the world oceans, with least efforts in inshore or near-shore waters. Compared to oceanic waters, these waters are much more complex in its configuration of members that affect the appearance of water color. Especially many of them have the effects of light reflected by sea bottom. To accurately derive water properties of such a scenario from remote sensing of water color, effects of the bottom have to be removed. Inversely, to derive bottom properties such as bottom depth from the appearance of water color, it is necessary to know optical properties of the water. Since the light scattered by the water column and the light reflected by the bottom are spectrally mixed together, the separation of the two is not straightforward. In this presentation, we would like to introduce the semi-analytical model that is developed for analytical derivation of water and bottom properties from water-color remote sensing, and present examples of its applications to data collected by ship-borne-, air-borne-, and

space-borne sensors.

Presentation Mode: Oral

**Keywords:** remote sensing, shallow water, bathymetry

Status: Pending.

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