

Update from ONR Ocean Optics and Biology

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Division Reorganization (July 2003)

- Ocean Optics and Biology
 - Steve Ackleson (Physical Optics)
 - Joan Cleveland (Bio Optics)
 - Jim Eckman (Biological Oceanography)
 - Kim Penn (Program Support)
- Physical Oceanography
- Marine Meteorology
- Coastal Geosciences

Ocean Optics & Biology

Revised Program Thrust Area (p 1)

EO Propagation at Ocean Boundaries (*Ackleson*)

- Interaction of light with the shallow sea floor
- Optically-important processes in benthic boundary layer
- Radiative transfer across the air/water interface

Bio-Optical Processes (*Cleveland & Eckman*)

- Optically-important constituents
- Coupled models
- Thin layers

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Revised Program Thrust Area (p 2)

Bio-Acoustical Processes (*Eckman*)

- Acoustical properties of zooplankton and fish
- Backscatter from benthos and gassy sediments

Land-Ocean Interactions (*Cleveland*)

- Causal factors of coastal variability
- Episodic algal blooms

HICO

Hyperspectral Imager for the Coastal ocean

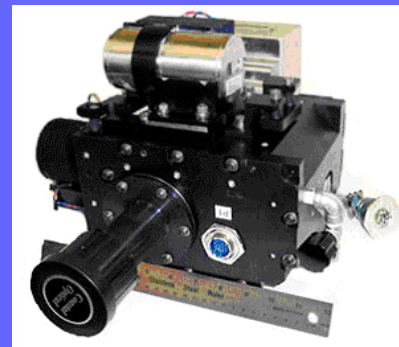
HICO: a pathfinder for future hyperspectral imaging of the coastal ocean from space

- Window Observational Research Facility (WORF) / US Destiny Module / International Space Station
- PHILLS hyperspectral imager (400-1000 nm)
- Novasol short wave infrared hyperspectral imager (1000 – 2500 nm)
- 20 m GSD



NRL PHILLS

Launch 4th Quarter, 2005



NovaSol 1600

Launch 4th Quarter, 2006

Participants:

University of Hawaii
Utah State University
NRL

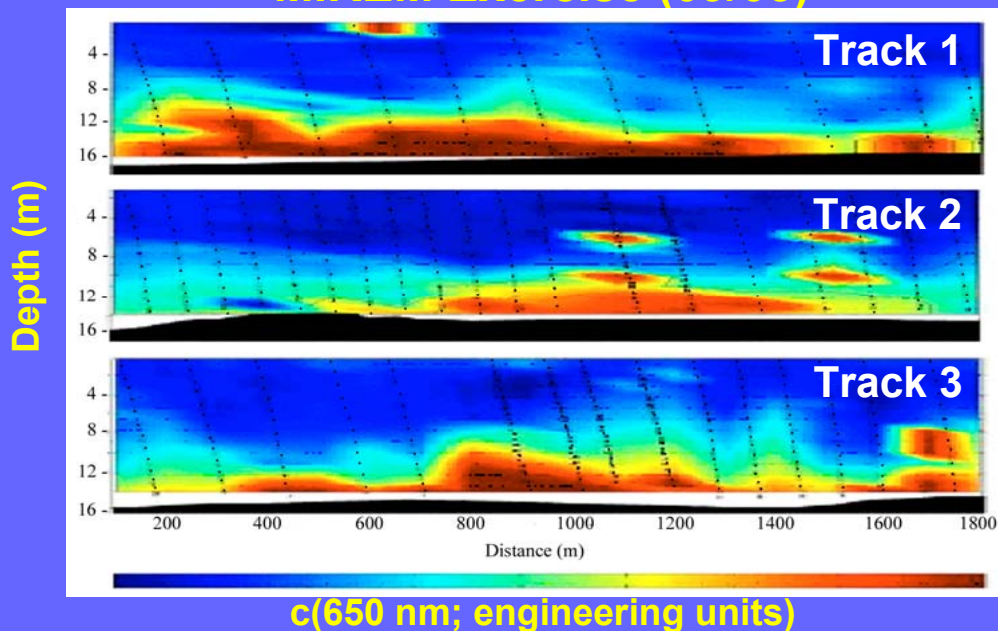
Autonomous Characterization of the Benthic Boundary Layer

(Schofield & Glenn, Rutgers Univ.; Twardowski, Wet Labs)



Glider-Based Spectral Attenuation Meter (SAM)

MIREM Exercise (09/03)



Key Issues:

- Light scatter from irregular particles & aggregates
- Effects of benthos on resuspension and particle aggregation rate
- Optical mass vs. actual mass
- Implications of an ideal PSD
- Effects on underwater imaging, diver visibility, and optical communications

Ocean Optics XVII

- 25-29 Oct 2004
- Short courses 23, 24 Oct
- Fremantle Australia
- Abstracts due 1 May 2004
- Web www.oceanopticsconference.org