CIOSS is a cooperative (Federal-Academic) center of excellence for research and education, which involves satellite remote sensing of the ocean and its air-sea interface, along with models of the ocean and overlying atmosphere. It is a collaboration between NOAA/NESDIS and the College of Oceanographic and Atmospheric Sciences (COAS) at Oregon State University.

CIOSS projects address one or more of NOAA’s strategic Mission Goals and help NESDIS to fulfill its role in providing the remote sensing component of the “national backbone” for the Integrated Ocean Observing System (IOOS), through the development of ocean satellite observing systems and models that utilize satellite data.

The Cooperative Institute for Oceanographic Satellite Studies (CIOSS) has four Research Themes:

Theme 1: Satellite Sensors and Techniques
Theme 2: Ocean-Atmosphere Fields and Fluxes
Theme 3: Ocean-Atmosphere Models and Data Assimilation
Theme 4: Ocean-Atmosphere Analyses

NOAA’s Goals and Priorities

To achieve its mission, NOAA’s focus through 2010 will be on four MISSION GOALS:

1. Protect, Restore, and Manage the Use of Coastal and Ocean Resources through an Ecosystem Approach to Management
2. Understand Climate Variability and Change to Enhance Society’s Ability to Plan and Respond (Climate)
4. Support the Nation’s Commerce with Information for Safe, Efficient, and Environmentally Sound Transportation (Ecosystems)

CIOSS projects address one or more of NOAA’s strategic themes, including:

**Theme 1: Satellite Sensors and Techniques**

- Davis, Abbott: Coastal Ocean Applications and Science Team (COAST) Project – Helping to Define Future Ocean Color Sensors

**Theme 2: Ocean-Atmosphere Fields and Fluxes**

- Chelton, Rissen: Surface Wind and Wind Stress Climatology
- A satellite-based climatology of wind stress and other wind products for operational and research applications. The Interactive Climatology of Global Ocean Winds (COGOW) was designed for HazMat and other operational applications, as summarized in a recent paper in Remote Sensing of the Environment. A gridded climatology data set, more suited to research applications and for ocean modeling is nearly complete.

- Other projects under the NOAA Climate Theme include:
  - Estimates of Surface Radiation from AYHRR Data
  - Latitudinal Variability of Phytoplankton in CCS
  - A workshop on climate effects on California Current Ecosystems.

- Strutton, Wood: Harmful Algal Blooms (HAB) Research off Oregon, Occupies and Human Health.

- Strub, Barth: Multi-sensor satellite fields over the California Current.

**Theme 3: Ocean-Atmosphere Models and Data Assimilation**

- Allen, Egbert, Kurapov, Miller, Choi: Core Modeling in the GLOBEC NEP Program with Data Assimilation.
- CIOSS Theme 3: Ocean-Atmosphere Models and Data Assimilation.
- Chelton, Rissen: Surface Wind and Wind Stress Climatology
- A satellite-based climatology of wind stress and other wind products for operational and research applications. The Interactive Climatology of Global Ocean Winds (COGOW) was designed for HazMat and other operational applications, as summarized in a recent paper in Remote Sensing of the Environment. A gridded climatology data set, more suited to research applications and for ocean modeling is nearly complete.

**Theme 4: Ocean-Atmosphere Analyses**

- Freilich: Development of 12.5 km resolution near-coastal wind data set.
- CIOSS Theme 2: Ocean-Atmosphere Fields and Fluxes.
- This project develops, refines, and implements accurate, 12.5 km resolution wind speed and direction estimates from the QuickSCAT satellite sensor, closer to the coast than is possible with standard wind products.

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