
DEPARTMENT SUMMARY

OVERVIEW:

The Department of Oceanography has developed a broad research program focused on physical oceanography to meet the anticipated future needs of the Navy. Our basic research themes are the development of scientific capabilities to measure, analyze, and forecast fields of littoral ocean variables, which occur in association with synoptic/mesoscale processes over limited regional temporal domains. The areas of emphasis include coastal and near shore ocean dynamics, air-sea interaction phenomena and boundary currents. Regions of interest include the polar seas, coastal ocean regions and strategic straits of the world.

Our applied research themes are the application of analyses and forecasts of upper ocean synoptic/mesoscale variability to Naval operations. Areas of emphasis include the impact of littoral processes, eddies and boundary currents on ocean surveillance systems, the effect of coastal ocean response to storms on acoustic propagation and ambient noise and the impact that the wave climate exerts on near shore processes and beach character as it pertains to mine/mine countermeasure and amphibious warfare.

These research themes require the development of numerical ocean prediction and synoptic oceanography capabilities. They are achieved through employment of modern dynamical and mathematical principles, numerical and statistical methods, computational and graphical facilities, and in-situ remote sensing observations.

CURRICULA SERVED:

- Meteorology and Oceanography
- Operational Oceanography
- Oceanography
- Undersea Warfare
- Space Systems Operations and Engineering

DEGREES GRANTED:

- Master of Science in Meteorology and Physical Oceanography
- Master of Science in Physical Oceanography
- Doctor of Philosophy

RESEARCH THRUSTS:

- Acoustical Oceanography:
Professor Ching-Sang Chiu, Emeritus Professor Robert Bourke, Assistant Professor Arthur Parsons, Research Professor James Wislon
- Air-Sea Interaction and Ocean Turbulence:
Professor Roland Garwood, Research Associate Professor Tim Stanton, Professor Peter Chu, Professor Le Ly
- Coastal and Nearshore Oceanography:
Associate Professor Jeff Paduan, Distinguished Professor Ed Thornton, Associate Professor Thomas Herbers, Research Assistant Professor Edith Gallagher, Assistant Professor Pierre Poulain, Professor Curt Collins, Research Professor Steve Ramp, Research Associate Professor Leslie Rosenfeld
- Numerical Prediction and Data Assimilation:
Associate Professor Mary Batteen, Professor Bert Semtner, Research Associate Professor Julie McClean, Research Assistant Professor Robin Tokmakian, Research Assistant Professor Ramsey Harcourt, Research Associate Professor Wieslaw Maslowski, Assistant Professor Pierre Poulain, Senior Lecturer Arlene Guest, Research Associate Professor Le Ly
- GI&S and Navigation: Research Professor James Clync, Assistant Professor Arthur Parsons

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- Polar Oceanography:
Research Associate Professor Wieslaw Maslowski, Research Assistant Professor Yuxia Zhang, Emeritus Professor Robert Bourke, Professor Roland Garwood, Research Assistant Professor Ramsey Harcourt

RESEARCH FACILITIES:

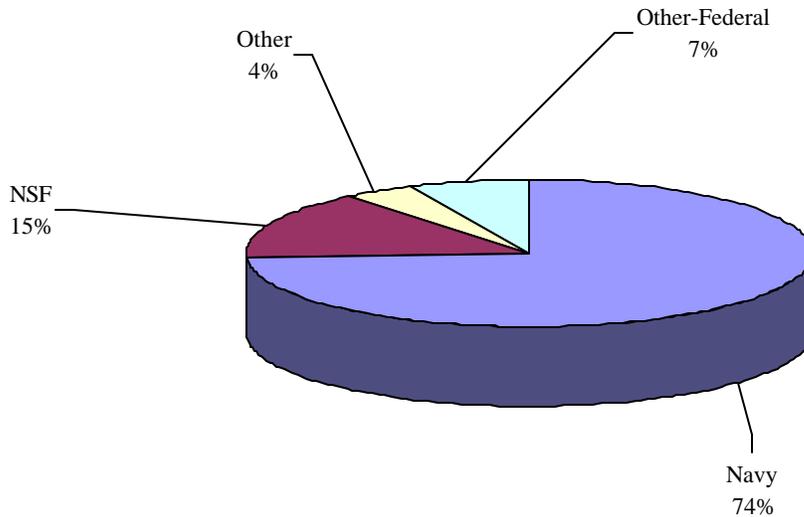
- Research Vessel *Point Sur*
- Ocean Acoustic Observatory at Point Sur
- Computer Graphics Laboratory
- Moored Equipment Laboratory
- Calibration Laboratory
- Tactical Environmental Support Laboratory

RESEARCH CHAIR:

- Office of Naval Research Chair in Arctic Marine Science

RESEARCH PROGRAM-FY2000:

The Naval Postgraduate School's research program exceeded \$43 million in FY2000. Over 93% of the Naval Postgraduate School Research Program is externally funded. A profile of the external research sponsors for the Department of Oceanography is provided below along with the size of the FY2000 externally funded program.



Size of Program: \$3977K