Grant Awards - Fiscal Year 2002

Nowcast/Forecast System for Ocean Circulation and Surface Winds - Observational Oceanography

**PI:**
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**Contract No:**
02-10-09

**Award Amount:**
$150,000

**Term:**
4/1/02 - 3/31/03

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**Scope of Work:**
The Nowcast/Forecast for Prince William Sound has an ocean circulation modeling component, an observational oceanography component and an information/data management component. The overall objective is to develop a prototype NFS for the Sound that will be capable of calculating temperature, salinity and current vector fields in near real-time, which can then be used in an oil spill fate and effects model, or in an ecosystem model. The PWS/NFS circulation model is forced by near real-time winds and sea level heights. Observations of ocean temperature, salinity and currents throughout the water column are used to validate the model simulations. Current measurement surveys in the central basin are made with a towed downward-looking acoustic Doppler current profiler (ADCP) approximately four times per year. T/S measurements are made at three stations in northern, central and southern PWS using XCTDs. Time series of currents are made at Hinchinbrook Entrance (a main connection between PWS and the northern Gulf of Alaska) using an upward-looking ADCP mooring. Alyeska Pipeline's Ship Escort/Response Vessel System (SERVS) has generously donated ship time for the surveys and mooring deployments. Future plans include expanding the ship-board surveys to more stations and transects, and adding more time-series measurements using instruments with real-time capability.