

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 30 SEP 1997		2. REPORT TYPE		3. DATES COVERED 00-00-1997 to 00-00-1997	
4. TITLE AND SUBTITLE The SIO Marine Observatory - The Development of an Instrumented, Offshore Test Platform for Oceanographic Research				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) University of California, San Diego, Scripps Institution of Oceanography, Physical Oceanography Research Division, La Jolla, CA, 92093				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 2	19a. NAME OF RESPONSIBLE PERSON
a REPORT unclassified	b ABSTRACT unclassified	c THIS PAGE unclassified			

THE SIO MARINE OBSERVATORY — THE DEVELOPMENT OF AN INSTRUMENTED, OFFSHORE TEST PLATFORM FOR OCEANOGRAPHIC RESEARCH

David P. Rogers

Physical Oceanography Research Division, Scripps Institution of Oceanography
La Jolla, CA 92093-0230

drogers@ucsd.edu, Phone: (619) 534-6412, FAX: (619) 534-7452

N00014-96-C-0050

LONG TERM GOALS

To develop a Marine Observatory at Scripps Institution of Oceanography that will provide researchers, development engineers, resource managers and others access to platforms that can be used to help develop new technologies; that will provide long time series measurements; and that will support multidisciplinary measurements in the littoral zone and across the coastal ocean.

SCIENTIFIC OBJECTIVES

The scientific objectives of this contract are to refurbish and modify two 10-m NDBC buoys to make oceanographic and meteorological measurements in the littoral zone and coastal ocean; to equip these platforms with a basic set of sensors and to make these data available to the community through a networked data acquisition system; to demonstrate the suitability of these platforms for basic and applied research in the coastal ocean and littoral zone; to make available these platforms to the research community to be used for the development of new technologies and for basic and applied research projects in the coastal ocean.

APPROACH

Understanding the processes that control the coastal ocean and littoral zone requires a comprehensive system of physical, chemical, biological and geological measurements between the shoreline and the continental slope. To demonstrate the utility of these measurements we are developing a Marine Observatory at Scripps Institution of Oceanography. Components of this observatory include oceanographic and meteorological measurements on the SIO pier, the deployment of two 10-m buoys between 2 and 20 km offshore to obtain in situ measurements across the coastal zone, a fiber optic network in the Scripps Canyon and over flat topography, acoustic remote sensing of the flow between the SIO pier and Buoy 1 at 2 km, radar techniques, such as CODAR or OSCAR to map the surface wave field, and surface based LIDAR, a network of shore-based pressure sensors, SODAR, wind profilers and digital imaging techniques to map the structure of the marine boundary layer and the air above.

WORK COMPLETED

The refurbishment of both 10-m buoys has been completed. Buoy #1 has been equipped with basic meteorological and oceanographic sensors. A data telemetry and acquisition system has been developed to provide web access and display for buoy information.

RESULTS

Not applicable to this contract at this time.

IMPACTS

This project has engendered considerable interest within the local community in San Diego as a source of meteorological and oceanographic data for use by schools and university researchers. Information from these platforms is available also to 3rd Fleet operations in San Diego coastal waters.

TRANSITIONS

Not applicable to this contract at this time.

RELATED PROJECTS

Several other programs are using Buoy #1 as a facility to test new measurement techniques. A group at IGPP are developing a GPS seismic array that can be deployed on the buoy. A group at NRAD are using the buoy as a source for a low-flyer detection program.