

Report Documentation Page			Form Approved OMB No. 0704-0188		
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1. REPORT DATE 30 SEP 1997		2. REPORT TYPE		3. DATES COVERED 00-00-1997 to 00-00-1997	
4. TITLE AND SUBTITLE Instrumentation for the SIO Marine Observatory				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			

INSTRUMENTATION FOR THE SIO MARINE OBSERVATORY

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N00014-97-1-0467

LONG TERM GOALS

To instrument the 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 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. The DURIP funds are providing the basic sensors to make a variety of meteorological measurements from the buoys.

WORK COMPLETED

The refurbishment of both 10-m buoys has been completed. Most of the sensors have been purchased or are on order. Buoy #1 has been equipped with basic meteorological and oceanographic sensors. A data telemetry and acquisition system has been developed for these sensors.

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.