

Internship - Hydrographer Intern - Physical Scientist

Location: (NOAA Ship Okeanos Explorer (~130 days) and NOAA Joint Hydrographic Center, UNH (Remainder of the year))

Job Description

Two internships available.

Paid, full-time, 12-month duration with possible extensions.

The NOAA ship Okeanos Explorer (EX) is a new research vessel dedicated to exploring unknown areas of the deep-ocean. The vessel is equipped with a full ocean depth multibeam sonar mapping system and a two-bodied, deep-water remotely operated vehicle (ROV) system capable to diving to 6000m. Images, video, data and other information will be broadcast from the ship using a state-of-the-art satellite system to the Internet and Internet 2 and to science command centers located across the country.

To help accomplish these operations, NOAA's Office of Ocean Exploration (OE) has identified the need for two physical scientist (PS) positions, serving as hydrographers, focused on mapping-centric activities, specifically habitat mapping. Each PS will rotate between sea duty and shore-based duty stations.

Shipboard: The PS will be primarily responsible for maintaining and operating the vessel's hydrographic survey equipment, and managing associated mapping data. These duties include sonar data acquisition, data processing, data management and product generation. Secondly, the PS will be expected to help manage and archive all data aboard the vessel including mapping data and any video and photo imagery associated with the ROV. The PS will also be expected to help with ROV operations, though this is an ancillary responsibility, and those exact duties will depend on the skills and desires of the selected candidate.

Must be able to maintain and operate all mapping-related software packages and technology associated with sonar data acquisition and data management. Must also help maintain and support the mission-related computer systems, networking infrastructure and mission specific software packages.

Will be expected to troubleshoot and solve technical and operational problems in a time-critical environment and perform proof-of-performance testing and preventive maintenance. Will be involved in the design, development and implementation of new equipment and/or software related to maintaining and/or improving sonar system capabilities. Will also create advanced mapping products unique to EX's missions, and analyze operating programs and make constructive recommendations for improvements.

Other duties may include contributing to shipboard documentation; representing the vessel and Ocean Exploration at internal and external meetings; and writing and presenting papers at conferences related to EX operations.

On Shore: Physical scientist will be based at the Joint Hydrographic Center (JHC) at the University of New Hampshire, which focuses on research and development.

Shore based duties include post-processing and product development of EX mapping data and other non-charting mapping missions; supporting the processing center's data management and archiving paradigms; develop advanced, nontraditional mapping products. Other mapping-centric duties may arise based upon opportunities and direction from the JHC staff.

Required Skills

1 year + relevant hydrographic or mapping experience that includes general knowledge of hydrographic surveying and data processing and product creation, specifically with multibeam

sonar systems, ideally with Simrad equipment and software. Must have the ability to apply analytical and evaluative methods used to gather, analyze, and evaluate information about organizational design and management processes and to learn specific tasks related to data acquisition.

Should have data management experience, and have the ability to help create and maintain an efficient data pipeline and data network, conduct studies on programs involved in managing data, identify procedural problems using quantitative/qualitative methods to analyze findings and be able to make clear recommendations on system improvements.

Must have experience operating shipboard water sampling equipment and environment sensor technology and associated software, which includes but is not limited to, CTD, XBT, and thermosalinographs; Have experience with ancillary equipment directly supporting multibeam sonars, such as heave/pitch/roll sensors and geographic position system units.

Computer literacy - experience with personal computers and standard Windows computer operating systems; Word processing, spreadsheet software and database management required. Skilled with sonar processing software (such as Caris) and GIS software (Mapinfo or ArcInfo) required.

Strong interpersonal skills and communication skills, both verbal and written. Must be physically fit and medically qualified to spend 130 days at sea per year. Prefer experience with life aboard an ocean research vessel.

Education

Bachelor's degree or Master's degree that includes at least 24 semester hours in physical science, engineering, or mathematics and/or related technical discipline.

Please email your resume and cover letter to: careers@ertcorp.com

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