



Research & Development

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Benthic processes

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Research

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Information Applications

MBARI ocean observing systems

MOOS mooring and vertical profiler

Project Manager: Mark Chaffey

(a) Work in 2002 will include verifying the performance of the basic design by monitoring the test mooring and proceeding with the detailed design of the next deployment system. This second deployment will have the complete mooring system in the low power configuration and be able to power benthic instruments, and is currently scheduled for 2003.

(b) Efforts in 2002 will be directed toward the following

(i) Monitoring the test mooring performance.

- ▼ To verify the accuracy of the WHOI CABLE dynamics model used to predict mooring riser cable configuration and cable loading.
- ▼ To test the design life of the cable terminations, bending/axial strain relief's, and other mechanical elements of the design.
- ▼ To verify our ability to perform the ROV operations necessary for completing the connections between the riser cable and the seafloor mounted instrumentation.

(ii) Completing the preliminary and detailed designs of the MOOS mooring subsystems.

- ▼ Electrical power system.
- ▼ Mooring controller (extension of NMC).
- ▼ Integration with field test release of ISI.
- ▼ Local (intra-mooring system communications) design.
- ▼ Over-the-horizon communications design.
- ▼ Vertical profiler (concept design only)
- ▼ Modifications to the mechanical design based on the results from the test deployment.

(iii) Starting the fabricating of system #2. This



mooring will include the final low power version power system, completed intra-node communications system and a data connection back to shore. The operating software will be an initial release of ISI software with proof-of-concept applications drivers to support the specific instrument suite specified in the target science experiment.

(iv) Completing a literature search on development of Vertical Profilers and undertaking a feasibility study to incorporate a vertical profiler into the MOOS mooring system.

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