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Modular Microstructure Profiler (MMP)

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LONG-TERM GOALS

This grant is to replace the Modular Microstructure Profiler (MMP) that was lost in Monterey Bay in August 2006 during AESOP, apparently due to an attack by a large shark.

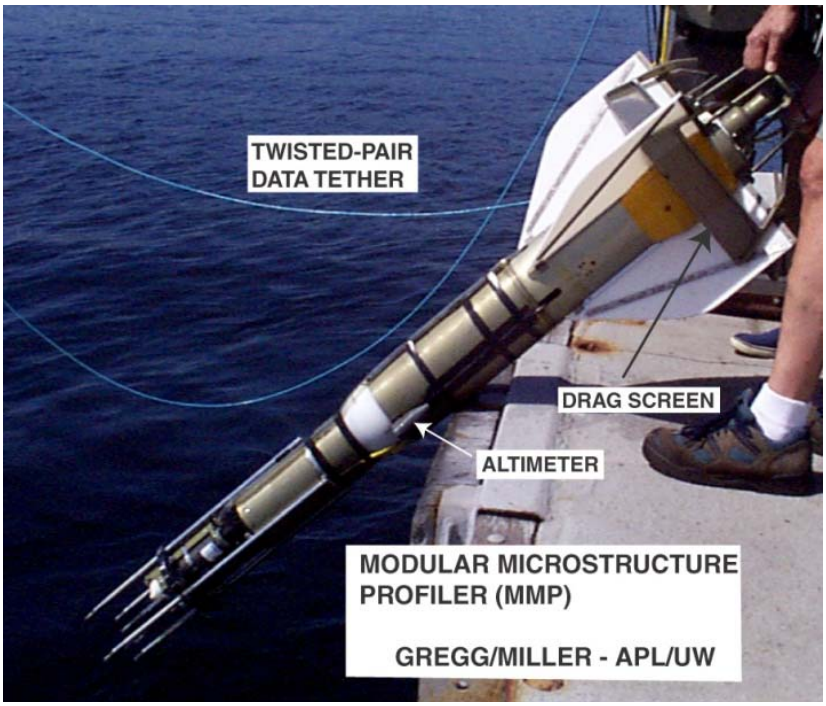

Figure 1: An MMP on deck ready to launch. MMPs are attached to the ship by twisted-pair data cables containing Kevlar for strength. Drag screen swings out to slow descent and folds in during ascent. Sensors are mounted on the lower end and protected by guard rods.

OBJECTIVES

Our objective is to complete the work as soon as possible.

APPROACH

The new instrument, MMP4, will be made as similar to the one lost, MMP2, as possible.

WORK COMPLETED

Because the money was received only a few weeks ago, fabrication has not begun. Because some electronic components in MMP2 are no longer made, it was built in 1993, new ones have been selected. Also, because MMP2 mechanical components were designed using an old CAD system, some of the drawings are being updated.

RESULTS

None have been obtained.

IMPACT/APPLICATIONS

Completion of MMP4 will allow continuous microstructure profiling for extended times during future ONR, NSF and NUWC projects we are undertaking.

RELATED PROJECTS

We use MMPs to provided background measurements to a NUWC project under Puget Sound Measurements (N00014-07-G-0557). Having MMP4 will allow us to operate continuously, instead of having to wait for an hour to charge batteries after operating for four hours.