

Healy Science Technical Support

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- Science Technical Support
- New TSG/PCO₂
- Multibeam (replacement)
- ADCPs
- Acoustic Comms (releases and transponders)
- Scoreboard replacement
- Mooring Winch
- Reference hydrophone interface
- Winch wire monitor

Science Technical Support

- NSF STARC solicitation
 - Solicitation out: ~August 10, 2011
 - Submission deadline: November: 8, 2010
 - March 1: verbal decline “.. but hope you will continue to be involved....”
 - Transition discussions started on April 4, 2011
 - LDEO received official decline from NSF on April 9, 2011
- LDEO will work with the awardee, NSF, & Healy on a transition plan
- LDEO will continue to support planning, updating documentation, including existing systems and plans.....

- First proposed in 2007 w/ plan by LDEO
- Spec written by CG missed important points
- LDEO updated the plan in 2008 w/ PC02, presented in '08, '09, '10
- Revisited at AICC 12/2010
- Funding in place 3/2011 - too late for dockside
- LDEO drafted a multi-stage plan to get the sensors installed before 2011 season
- Ship required a full TCTO plan w/ all phases in one.
- Not enough time to get it re-written and approved for 2011 season
- Consider temporary installation in a lab van for HLY1103

- Last winter:
 - Installed replacement OS150 (from UAF)
 - NSF will fund a new OS150 for Sikuliaq
 - Switched to UHDAS (spare computer ordered)
- Still need OS150 spares, have OS75 spares
- Re-routing cables (EMI issues) approved but delayed by emerging experiment
- Propose to replace the polyurethane ice protection window w/ Zelux window in CY2012-13 drydock

Multibeam Replacement

(Removed SB2112 & Installed EM122)

- Proposed by LDEO to NSF & AIC in 2003
- Installation Oct 2010 - Feb 2011
- Passed Sea Acceptance Test on first try (June 2011)
- Operated successfully all season
- Remaining issues:
 - noise (5, 4, 2) days between Hono & Dutch this year
 - documentation
 - clean up wiring

Communications

- Save ship time, reduce risk and improve performance of our ability to work with moorings by:
- Permanently installing a transducer in one of our “spare” wells for communicating & ranging to transponders and releases
- Acquiring a deck unit and integrating it into the Healy’s real-time science data system so that depth-corrected ranges (range rings) appear in our Mapserver
- John Kemp (WHOI) has a transducer to install. Hope to do this at least temporarily for Pickart’s cruise (HLY1103)

Scoreboard Replacement

- The original scoreboards were not suitable for the weather. CG purchased new ones that were not “plug and play” but are somewhat more weather proof.
- LDEO developed a software interface for the new (2nd generation) scoreboards in 2009
- External wiring for aft scoreboard is done. Expect to do the internal wiring and test during transit to Honolulu.

Mooring Winch

- Science programs on Healy have required a mooring winch every year for several years
- The mooring winch helps significantly with other evolutions (e.g. glider recovery)
- This type of mooring winch requires maintenance and operation training.
- Consider providing through the STARC award or winch pool

Reference Hydrophone

- A tool to understand and help track down acoustic noise and interference w/ our sonars
- A hydrophone came with the ship
- Hardware and software to provide access to the data is being developed
- Updated software will be tested on the way to Hawaii and used on the way to Dutch
- Add a higher frequency hydrophone in the future to cover full range of frequencies of interest