

Jason Debrief Issues - 12/07

• Turnaround Time

- NDSF published document defining turn around time policy (on web)
 - Current model provides flexibility at the discretion of the EL
 - Anticipate incremental improvements, including:
 - Considering 12-hour watch, 2 operators vs. 3, will impact product
 - Input from other ROV operators
 - Better use of elevators (on a wire, guided, improved transfer capabilities)
 - Developing ways to move biological samples better
 - Launch/recovery manpower issues

• Air Weight Limitations

- Looking at alternate crane and base again
 - Bigger crane is a difficult, expensive solution due to ship deck strength and space constraints
- Looking at ways to reduce air weight of *Jason*
- Better use of elevators can help

• Cable Failure



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- **Pre-cruise planning** to include CSDS, EL and ROV manager
- All **equipment** requests must be in writing unless specifically identified as standard. Science-provided equipment must be identified. Web-based template needs to be used. We are updating our web forms.
- **EL/PI need to communicate daily** during cruise to facilitate common goals
- **EL** needs to lead the group and exhibit a **positive attitude**
- We will continue to field the **most qualified team** available
- The **PIs need better communication** among themselves, especially on multi-PI cruises
- **Cameras and lighting**
 - Building a new mount to move the P&T to the light bar for some circumstances
 - Purchased one new HMI light head to add to existing spares
 - Continuing with proposed upgrade to the camera systems as outlined by Bill Lange



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- The **data set** is delivered at the end of the cruise to the Chief Sci or designee. Since there has been confusion, we'll institute a sign off. The Chief Sci of record must take the data or sign off for the designee to take it.
- **Equipment repairs performed as needed - no overhaul period required**
 - Kraft arm is going to manufacturer for overhaul and upgrade of jaw closure from 200 lb to 1,000 lb. Ready by start of '08 ops.
 - Schilling arm: \$58k for overhaul is too much short term; purchasing more spares
 - Long term, a new manipulator system to be requested in '08 budget
 - Vehicle weight reduction exercise to commence this winter
 - Effer crane maintenance: spares, paint, etc.
 - Sharps to be upgraded this winter
 - SM2K currently being assessed to determine if it needs to be sent to manufacturer for repair
 - 300 kHz Doppler has one dead beam after recent overhaul by manufacturer. This model Doppler may have design flaws.
 - Considering LED lighting for *Jason* based on HROV tests



Fiber Optic Cable Failure

- *Jason* system has experienced two independent cable failures
 - UNOLS Pool Winch in 2006
 - University of Hawaii RV *Kilo Moana* 2007
- 2006 failure analysis was inconclusive but likely explanation is thought to be to either a manufacturing or cable heating issue
- 2007 failure is currently being analyzed by three parties:
 - The Rochester Corporation
 - Tension Member Technologies
 - Cable Testing Labs
- Extensive WHOI re-examination/testing of the *Jason* power system has not uncovered anything unusual
- In addition to the physical analysis of the failed cable samples, WHOI is seeking outside consultation on vehicle power system

