

Jason debrief summaries - 05/08

Lonsdale	May 2008	Atlantis	Gulf of California
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Primary objective: rock sampling

26 dives; 1 per day; each a different location

Jason debrief issues - 05/08

1) Pre-cruise planning

- PI felt pressured to use Alvin instead of Jason
- Not clear to PI that digital bathy was wanted
- 8-hour turn-around time between dives was agreed upon in advance, with a daily dive schedule consisting of a 16 hr dive (4pm-8am) and 8 hrs on deck. Atlantis deck crew helped with launch and recovery.

2) Mobilization

- No major issues. Jason was ready to dive 4 hrs out of port.

Jason debrief issues - 05/08

3) Operations - vehicle

- Excellent. Only loss of dive time (~8hr) was due to a manipulator arm leak on last dive.
- Payload not an issue for this expedition.

4) Operations - NDSF provided equipment

- Video & DSC worked well
- LBL navigation not used, doppler performed poorly on steep slopes
- First use of new control vans - seemed to work well, although screen layout changed from watch to watch. Could it be standardized?

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5) Operations - User provided equipment

- None

6) NDSF Personnel - Expedition leader

- Excellent, except that dive durations were “over-zealously inflexible”

7) NDSF Personnel - Jason Team

- PI was impressed with the caliber and quality of the team - “best sailed with since 1970s”

8) Data hand-over

- No issues

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9) Demobilization

- No issues

10) Other recommendations

- PI felt strongly that US deep submergence community has not been best served by pooling of resources into a single-entity NDSF
- PI felt the deep submergence community would be better served by multiple ROVs vs. HOVs
- PI disappointed by lack of support for multibeam ops on Atlantis (system obsolete & techs untrained to make maps in support of dives)

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HDTV update from August 2007 Jason cruise

- 1-hour HDCAM highlight tapes made (but tapes cost \$65; decks cost \$20-50K!)
- Solution: HDV is an HD format on mini-DV tape (tapes cost \$5; decks cost \$1-2K). Video looks good, but not for frame grabs. (Can users record directly to HDV in future?)
- ROPOS has decided to go digital - HDTV to computer with 10 terabytes of storage. Plan is for users to walk off ship with HD video on terabyte hard drives. Users will need suitable computer and editing software.

Jason Debrief Issues

1) Appreciated improvements:

- New control vans
- Increased payload
- More flexibility with dive schedules & turn-around times
- Prototype HD video camera & frame-grabs
- Attitude adjustment?

NDSF response:

We're glad to hear that these improvements were well received and we'll continue to improve as feedback suggests.



Jason Debrief Issues

2) Software issues:

- Virtual Van still “on-line only”

NDSF response:

It is now available offline and useable via web browser.

- Better training for renav & mosaicing software?

NDSF response:

This was due to personnel changes and training is in progress.

- Future need: processing non-LBL navigation

NDSF response:

Agreed; this is a work in progress. NDSF will write code to change USBL to useable format.



Jason Debrief Issues

3) Vehicles “too delicate” (launch & recovery)?

- Weather limitations exclude half of the ocean at least half of the time, and become unsafe in marginal conditions

NDSF response:

Actual loss of dive time due to weather is <10% of total dives.

- Focus on increased depth capability may be misplaced (weather is more limiting)

NDSF response:

Agree that weather is the limiting factor (especially when working at higher latitudes such as 46°S), and suggest funding to develop a launch & recovery system (LARS)



Jason Debrief Issues

4) Video & still imagery

- Improved control system and pan & tilt for HD video camera

NDSF response:

Improved control of camera system will be implemented in the integration phase of the HD upgrade this year. Science observer will be responsible for operation of the HD camera, as is presently the case with the 3-chip camera.

- Do we still need a digital still camera (DSC)?

NDSF response:

Good question -- should be discussed here. We need more time with HD to answer this. Due to light requirements of the HD camera, we will likely continue to need a DSC with strobes. Could add strobes to HD.

- DSC in basket for close-up imagery?

NDSF response:

Good idea, and possible with minimal equipment purchases (e.g. tilt mechanism for basket). But this will take a large amount of sample storage space.



Turn Around Time Policy

- The standard turn-around time for NDSF ROV re-deployment is 12 hours.
- NDSF always attempts to shorten this TAT when possible.
- The primary consideration is operations personnel sleep/rest status.
- If there are repairs to be conducted on the vehicles this will affect our ability to do a faster turn around.
- Changes to vehicle configuration will affect our ability to do a faster turn around.
- If ops personnel are concentrating their efforts on science or other equipment repairs this will affect our ability to do a faster turn around.
- Deployments of elevators are also a consideration because NDSF personnel build, deploy, and navigate the elevators to the sea floor.
- Attempts should be made to have all launches and recoveries occur at the change of watch, i.e. 0400, 0800, 1200, 1600, 2000, and 0000. This will help keep personnel on their normal sleep schedule and make it easier to do a fast turn around.



Code of Federal Regulations

15.1111 Work hours and rest periods.

(a) Each person assigned duty as officer in charge of a navigational or engineering watch, or duty as a rating forming part of a navigational or engineering watch, on board any vessel that operates beyond the Boundary Line shall receive a minimum of 10 hours of rest in any 24-hour period.

(b) The hours of rest required under paragraph (a) of this section may be divided into no more than two periods, of which one must be at least 6 hours in length.

(c) The requirements of paragraphs (a) and (b) of this section need not be maintained in the case of an emergency or drill or in other overriding operational conditions.

(d) The minimum period of 10 hours of rest required under paragraph (a) of this section may be reduced to not less than 6 consecutive hours as long as:

- (1) No reduction extends beyond 2 days; and
- (2) Not less than 70 hours of rest are provided each 7-day period.



Turn Around Time Policy

- Current mode already often violates these regulations.
Example: 24-hour ops with vehicle recovery at 1600, followed by 4 hours of vehicle repairs and subsequent relaunch at 2400 (8-hour turn around), followed by watch schedule.
- Launch and recovery system could help facilitate shorter TAT.

