

Alvin Debrief Summaries - 12/07

Ledwell	Jan 2007	EPR
Shank	Jan 2007	EPR
Valentine	Jul 2007	Southern California
Lee	Aug 2007	Endeavor
Becker & Dilorio	Sep 2007	Endeavor, Juan de Fuca
Cary	Oct 2007	Guaymas EPR 9N



Alvin Debrief Issues - 12/07

Pre-Cruise Planning

- Pre-cruise communications between PI and shore-based personnel are not always being relayed adequately to *Alvin* ops group at sea

Alvin response: The Expedition Leader is included in pre-cruise meetings by phone when possible. An FTP site is available where all cruise info is kept, and this is accessible from the ship.

- For complex operations, direct communication between PI, Expedition Leader and pilots must occur well in advance

PIs are encouraged to visit the ship and meet with the Expedition Leader and pilots whenever possible (recent examples: Becker/Cowen in San Francisco / Jannasch in Astoria)



Alvin Debrief Issues - 12/07

Mobilization/Demobilization

- PIs and *Alvin* group need to make sure there is adequate time to prepare and interface equipment and do briefings before cruises with short initial transits

Incoming PIs are encouraged to arrive with their equipment as soon as possible after ship arrives in port. The *Alvin* Ops crew generally waits 2 or 3 days to start cruise wiring and get cruise gear; we could at least start dive briefs during this period. There have been times when the science party has gone to town to get “cruise supplies” and can’t be found...



Alvin Debrief Issues - 12/07

Operations – Vehicle

- All mechanical failures repaired by next day
- Good inventory of ready “hot spares”
- Batteries performed well and the only power-shortened dives were due to excessive thruster use or were immediately after a long period of *Alvin* down time

Battery service is performed on the spare battery on nearly every leg. We swap out the oldest tank almost every port stop. Long-term layups affect battery performance because we cannot perform adequate servicing.



Alvin Debrief Issues - 12/07

Operations - NDSF Equipment

- Navigation is generally considered acceptable, but some PIs wished in hindsight that they had taken the time to deploy the LBL system

PI's must weigh the pros and cons of time taken to lay and survey a transponder net. Multiple dive areas preclude laying of a net for only one or two dives.

- The *Alvin* CTD is currently of limited use due to lack of maintenance and calibration - needs to be looked after better

The CTD is now on a calibration maintenance schedule

- Both the shipboard and *Alvin* CTD need more spares

We are accepting donations to purchase spares



Alvin Debrief Issues - 12/07

Operations - User Equipment

- A large variety of often complex equipment was successfully interfaced with *Alvin* systems

A written list of NDSF and user-supplied equipment to be used on an upcoming leg is always helpful. Users have been known to arrive with “undocumented extras”, and we do our best to accommodate them.

- Key to success is a thorough discussion of all equipment issues and science needs with ALL of the *Alvin* pilots well before the dive. The Chief Scientist/PIs should be ready to present the cruise objectives to both the ship and *Alvin* crew shortly after sailing, and do daily dive briefs/debriefs in a group meeting format. The Chief Scientist is the primary point of contact when designating dive objectives and gear requirements.



Alvin Debrief Issues - 12/07

Personnel

- There have been significant changes in personnel in the past 1-2 years. We lost senior pilots Gavin and Tony, Pat has moved to Group Manager and Bruce to Expedition Leader, leaving us with a significantly less experienced pilot team.

Gavin is on extended P&I; no return date yet.

- However, Mark's skills have matured to excellence, Sean's are approaching that level rapidly and the newest PITs are advancing

Mike McCarthy should be qualified as pilot before 2008 operations start. We are actively interviewing potential new crew for 2008 ops and beyond.



Alvin Debrief Issues - 12/07

Data hand-over

- All PIs are satisfied with data hand-over

Alvin data is signed for by the Chief scientist – there is no doubt about who has what

- Data is not always accessible at sea or is difficult to find – there needs to be a centralized data portal

Alvin dive data and Top Lab navigation data are downloaded to “Linus” 2 - 4 hours after a dive and are accessible via the “sci0” account



Alvin Debrief Issues - 12/07

Additional PI Recommendations

- A better and simpler *Alvin* user information sheet is needed, including photos and detailed specs of all available equipment. This should be part of the pre-cruise planning questionnaire. Adding equipment information and descriptions to the cruise planning questionnaire and the web site is in the works. Example:

Available ALVIN Science Equipment

Major Water Samplers



A syringe-style sampler, each with a 1 liter volume. Can be configured in pairs with an inductively coupled link (ICL) for *in situ* temperature measurements. Bottles can be triggered individually in this configuration if required. Water weight : 22 lbs/pr with ICL. Capable of handling water temperatures up to 400 degC. These samplers require a dedicated storage system in the science basket, which will vary in size with the number of samplers used. A total of 6 major pairs are available at any one time. Post-dive care and maintenance of this equipment is the responsibility of the science party.

Yes _____ No _____ Number Required _____ With ICL? Yes _____ No _____

Expected No of Deployments _____



Alvin Debrief Issues - 12/07

Additional PI Recommendations (*cont.*)

- The *Alvin* Group should retain all science gear wiring diagrams for future use

Hard copies of the science wiring from any given cruise are kept by the ETs in the shop cruise folder. This information may become outdated because of equipment “improvements”, and pre-cruise work has had to be repeated.

- *Alvin* dives should not be scheduled on the Juan de Fuca after mid-September – it is not uncommon to lose half of scheduled dives

No argument here!

