Deep Submergence Science Committee
Woods Hole Oceanographic Institution
LOSOS Conference Room – Quissett Campus
Woods Hole, MA
May 18-19, 2016

Meeting Minutes

Appendices:

I: Participant List
II: UNOLS Report
III: NDSF Operator's Report
IV: NDSF Vehicle Operations Summary
V: NDSF Deep Submergence Vehicle Scheduling - 2017 and Beyond
VI: Sentry Debrief Summary
VII: Alvin Debrief Summary
VIII Jason Debrief Summary
IX: Summary of corrective actions to debriefs
X: Upgrades to National Deep Submergence Facility - *Jason*
XI: Upgrades to National Deep Submergence Facility - *Sentry*
XII: Upgrades to National Deep Submergence Facility - *Alvin*
XIII: NDSF Data management update
XIV: Video Workshop
XV: *Atlantis*/*Alvin*/Telepresence Chief Scientist Training Cruise
XVI: 2016 New User Program at AGU
XVII: R/V *Armstrong* Science Verification Cruise w.r.t. deep submergence vehicles
XVIII: DeSSC Chair Report
XIX: Ocean Observatories Initiative
XX: *Nereus* Legacy Fund
XXI: U. Hawaii ROV
XXII: Schmidt Ocean Institute 4500 m ROV

On-Going DeSSC Activities and New Action Items

DESSC recommends that there be a committee liaison to OOSC
Motion passed to include a Vice chair position in the DeSSC terms of reference: • Revise terms of reference • Identify vice chair
NDSF Debrief Process: • WHOI requests all NDSF PIs to submit the vehicle PCAR • Within one month of completion of NDSF cruise, Annette contacts chief scientist, Adam Soule, and DeSSC friend to schedule a debrief telecom. The debrief questions are provided. • *Sentry, Jason*, and *Alvin* Friends: o *Sentry* - Vicki Ferrini (Scott White was suggested) o *Alvin* - Amanda Demopoulos o *Jason* - Dave Emerson

DeSSC New User Program: December workshop on Saturday and Sunday before AGU. Program leaders include:

- Karyn Rogers (RPI)
- Vicki Ferrini
- Recruit a DeSSC member (Brian Glazer suggested)

DeSSC Social Media Lead – Identify DeSSC member to take the lead on updating the DeSSC Facebook page and other social media

Polar Deep Submergence – Work to engage the polar research community (Masako Tominaga)

Implement NDSF photo attribution process: Pete and Adam will follow-up on this.

Mentor program for new users – re-address

DESCEND2 Workshop Report – Pete Girguis is completing

Data Management, Optimizing Video Access, and Archiving – Vicki Ferrini

Form a working group to draft a paper on Telepresence-enabled science missions

Issues to include:

- Modes of operations
- Operational perspective – looking at reduced berths.
- Limitations
- Products
- Time management considerations
- Logistical considerations
- Recommendations on the usefulness of this technology would be very useful

Volunteers –

- Carl Kaiser – Sentry
- Matt Heintz - Jason
- Dave Emerson – end user expectations
- Nick Haymon
- Amanda Demopoulos
- Early Career Participant - Amanda Netburn (she can be a conduit to the NOAA users)
- Chris German, Chair

USBLs on UNOLS Vessels – Adam Soule provided the background information and action item description:

Background: The discussion was initiated in response to a question from an Alvin/Sentry debrief about who has responsibility for maintaining and operating the USBL system on Atlantis. The discussion evolved from there to a broader discussion about USBL capabilities within the UNOLS fleet.

USBL is a critical capability for NDSF operations, but is increasingly becoming routinely used by all sorts of seagoing operations (e.g., towed vehicles, heat-flow surveys, coring, non-NDSF ROVs, etc.). Many ships have a permanent USBL system installed, but they are all operated in slightly different ways and sometimes are hardware from different providers. The case in point is the Sonardyne system on R/V *Neil Armstrong* and the Kongsberg system on R/V *Sally Ride*.

NDSF also maintains and operates its own fly-away USBL systems that are installed on a pole on ships without USBL or with incompatible USBL systems.

The problem: It was suggested that the variety of flavors of USBL on various UNOLS platforms is problematic for the use of those systems by NDSF and other facilities.

The solution(s): One class of solutions was to standardize USBL systems across the fleet. This

seems unlikely if it requires replacement of functioning hardware, but there are likely gains to be made by standardizing how similar systems are operated on different vessels and developing guidelines that can be employed as USBL systems are updated and/or replaced. Alternatively, there is the possibility to enter into a service contract relationship with one of the providers wherein equipment is leased and there is some base level of capability/maintanence/etc. across the fleet. In this model, hardware is leased so that investment in hardware does not become an impediment to standardization.

Another potential solution is for the NDSF and other facilities to become more flexible in the USBL systems that they can operate with. There is an opportunity to test this model on a potential upcoming Jason demonstration cruise on *Sally Ride. Sally Ride* operates the Kongsberg system, *Jason* operates a Sonardyne system. If both systems are employed (Kongsberg installed on the ship, Sonardyne on a pole) the ability for *Jason* (and by analogy *Sentry*) to operate with the Kongsberg system can be tested and the Sonardyne system will be in place in the event that it doesn't work.

Action items: There is a need for this discussion to elevate to the level of the UNOLS FIC and RCRV. It is advised that NDSF help develop a summary of the landscape of USBL systems to facilitate this discussion. Assigned to Adam Soule and Andy Bowen

More to come…