

ONR Report to UNOLS RVOC October 2003

ONR News

- On August 14th Admiral Cohen announced the appointment of Dr. Lubard to the position of Technical Director at ONR. He replaces Dr. Xan Alexander who has departed to accept the position of Deputy Director of the Department of Homeland Security Advanced Projects Research Agency. Dr. Lubard joins us from the private sector where he has been working for many years in support of national security. He brings to ONR, a wealth of experience and has led research in the areas of electro-optics, synthetic aperture radar, towed arrays, laser radars, and multi-dimensional data analysis. He has experience as a Program Manager both in private industry and with DARPA. Dr. Lubard received his PhD in Aeronautical Engineering for the University of Maryland and we at ONR are very happy to welcome him aboard.
- On 27 August ONR welcomed Brigadier Gen (sel) Thomas D. Waldhauser to the position of Vice Chief of Naval Research.
- In response to changing Navy priorities and needs, there have been some changes and consolidations in S&T at ONR. Dr. Teri Paluszkiwicz assumed leadership of the new Physical Oceanography team which combines PhysO and Ocean Modeling under a single team. With Jeff Simmen's departure to lead UWAPL, Dr. Ellen Livingston took over as leader of Ocean Acoustics. Environmental Optics and Biological/Chemical Oceanography will come together under Dr. Steve Ackelson and Dr. Jim Eckman will lead a new team for NOPP projects.
- RADM Cohen has announced that Dr. Robert Holman of OSU and Dr. Bill Kuperman of Scripps have been appointed jointly to a four-year term as the 2004 Secretary of the Navy/Chief of Naval Operations Chairs in Oceanographic Science. They succeed Drs. Art Baggeroer of MIT, Bob Weller of Wood's Hole, Michael Gregg of UW and John Orcutt of Scripps, who shared the post from 1999 through this year. The CNO Executive Board established the Oceanographic Science Chairs in 1995 to recognize the critical role that oceanography plays for the fleet, to highlight it as a core Navy competency, and to promote the best oceanographic research and education. The Chairs, which are supported by ONR, are expected to help develop closer relationships between the oceanographic community and the operating fleet.

ONR Ship time:

- Since the end of the NavOceano work, a mainstay during the mid 1990s, overall Navy sponsored UNOLS ship time has declined. However, over the past 2 years other Navy requirements have begun to fill that gap.

- During calendar 2003 ONR is funding 793 days of UNOLS ship time. 168 days are on the Global AGORS, 344 on Intermediates and 281 are on the smaller vessels.
- Projected ship time requests for calendar 2004 are presently at 834 days but unfortunately there is more demand than available funding. I expect to fund approximately 740 days in 2004.

Fleet Renewal Issues:

- Following the completion of the Common Hull Study funded by ONR and carried out by NAVSEA and JJMA, and the 2 SMR workshops in Salt Lake City for the Ocean and Regional classes, NSF funded the follow on Phase 2 study to explore a Regional ship concept development in anticipation of NSF funding a Regional ship construction program. You have already seen some of the results of this effort which has crystallized the necessity of prioritizing the SMR's and brought to the forefront the various trade-offs necessary in ship design. In FY04 ONR will be funding a similar effort for concept development of the Ocean class vessels and it is expected that the desirability and feasibility of the various hull forms and layouts will be similarly clarified. A statement of work has already been developed for the study which will culminate in a document similar to that for the Regional class study and will provide the basis for Ocean class renewal when a funding path is identified. Comment and participation from the UNOLS community will be welcomed during this process and the contacts and mechanism will be announced at the time the contract is solidified.
- In the old news department, I am sure that all of you are aware of the report to congress submitted by the Secretary of the Navy last February, but I mention it because its submission in February was since the last RVOC meeting. To quickly recap, the origin of the report was ONR, it basically endorsed the FOFC report with a slightly accelerated schedule as preferred by CNR, calling for 3 to 4 new Regional Class ships over the next decade to be funded by NSF and 4 new Ocean Class vessels to be funded by Navy. The vessel definitions were taken from the SMR workshops conducted last year in Salt Lake City.
- Although cost estimates were given based on 2003 dollars, no funding or funding path was identified in the report. Admiral Cohen remains committed to the fleet renewal program and continues to work the funding issues with Navy leadership.

Other ONR Issues:

- Although the period of early failures we experienced with Z drives on the AGORS appears to have passed, ONR has funded the University of Washington to proceed with a pilot program of instrumentation for the various components of the Z drive system in the expectation that such

- instrumentation will not only shed light on the root causes of the earlier failures, but that ultimately it will provide us with sufficient notice of impending problems to minimize catastrophic failure and its impact on ship schedules and science programs. Depending upon the progress and success of that effort, the plan is to extend this system to all the Z-drive AGOR vessels in the next year or two.
- I have funded Dr. Curt Collins of the Naval Postgraduate School in Monterey to undertake a study of ship motion on Monohull VS: SWATH research vessels. The initial part of this study will focus on 2 similar sized vessels operating out of the same home port undertaking reasonably similar mission profiles. The POINT SUR and WESTERN FLYER both operate out of Moss Landing in the environs of the Monterey Bay. POINT SUR is 135 feet in length and displaces 640 Tons. WESTERN FLYER is 117 feet and 419 Tons displacement. Ground truth of sea state will be taken from Wave Rider buoys in Monterey Bay. Parallel to that effort the University of Hawaii has been given the go ahead to undertake the deployment of similar instrumentation for KILO-MOANA. The results of these studies will begin to clarify the issues involved in choosing the appropriate vessel designs for the renewal of the academic fleet.
 - The price structure for Iridium communications has recently changed for DOD customers. Because of these changes and an increase in interest in Iridium services, ONR is considering providing DOD Iridium SIM cards to the Navy AGOR ships on an experimental basis. A decision will be made as soon as the new cost structure is clarified by DISA.

Package handling systems, where are we now? Agenda item addressed Jointly by John Freitag, (ONR) and E.(Dolly) Dieter,(NSF)

- **This was primarily precipitated by pressure from the University of Hawaii based on the first cruises of the AGOR-26, Kilo-Moana. Previous to that U of Alaska had repeatedly brought up the fact that CTD operations from Alpha Helix were dangerous due to her mission profile resulting from her size and the weather conditions under which she operates. This has been considered a high priority for the new ARRV. University of Delaware has also brought forward plans for implementing a CTD handling system for the Cape Henlopen Replacement vessel. It was clear that this was not an isolated issue, nor was it going away. Dolly and I both agreed that the time has come to seriously consider a solution to this potentially dangerous problem.**
- **Neither Dolly nor I have any confidence that this problem has an immediate off the shelf solution. If that much were clear we both would be working toward outfitting the fleet. And it is a fleet wide problem which should be treated as such. In today's funding climate we simply cannot afford to fund an expensive white elephant which**

ends up rusting away as it is shoved farther and farther back in some dark warehouse, and anyone who has been in this business more than a few years can attest to seeing a couple of those. We have agreed that some investigation and study is required before committing large scale funding. The only thing clear at this point is that this is not a \$100,000 problem.

- **Dolly suggested that Matt Hawkins was a good candidate to head up a study and I agreed enthusiastically. We also agreed that we cannot afford a long term open ended affair that drags months into years. The intent here is to define a definitive answer in time for next years NSF SSSE proposal cycle.**
- **Matt accepted the challenge and proposed keeping the committee small with membership from Marine Sups, Tech groups, experienced science community representation and a member outside the academic operators circle. We feel that that balance has been achieved. The members are:**
 - **Matt Hawkins, Chair**
 - **Marc Willis, OSU Tech group**
 - **Andy Bowen, WHOI Science/Engineering**
 - **Tom Althouse, SIO Marsup**
 - **Jim Holick, Raytheon Polar Services**
- **Their charge is to:**
 - **Prepare a list of requirements covering a range of ship size**
 - **Investigate presently available commercial technology**
 - **Visit and observe systems in operation**
 - **Prepare a concrete set of specifications/recommendations**