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University-National Oceanographic Laboratory System

Guidelines for Incorporating New Assets
Into the National Deep Submergence Facility

In the coming years there will be significant demand for new tools designed to carry out or support research, exploration, and installations within the ocean basins and on the deep seafloor. In conjunction with the development of new assets, there will also be a need for uniform community access to them. Because of these important pending issues, the National Science Foundation requested the Deep Submergence Science Committee (DeSSC) to develop criteria for incorporating assets into the National Deep Submergence Facility (NDSF). This document provides guidelines for how new, appropriate assets will be evaluated for incorporation into the NDSF.

Federal agencies and academic institutions considering incorporation of a deep-sea research asset into the NDSF will request DeSSC to review and consider the item for status. DeSSC will contact the current operator for further information. In consultation with the appropriate scientific community, DeSSC will evaluate the information provided and respond to the requesting Federal agency with a letter of recommendation.

A current operator should be prepared to provide the following information to the DeSSC in order for the item to be evaluated as a potential addition to the NDSF resource pool:

1. Is there a significant and established broad demand by the community for the asset and will this demand continue in the future? Evidence for meeting this requirement should include a sustained record of funding and successful deployments, documentation that includes publications based on this success, and letters of endorsement from the user community.

2. Would incorporating the asset into the NDSF make it significantly more beneficial to the community than it is now? How would the community benefit by having it in the facility?

3. Does the asset provide a unique capability to the deep submergence community that is not currently available from other facility assets and/or is the demand so high that a single asset cannot fulfill the demand? A full description of the asset should include its unique capabilities, the type of environment it is suited to work in, and the types of science (present and future) that it is suited to address. Operators should also include a statement regarding what type of vessels and capabilities are required to operate the asset (e.g. is dynamic positioning a requirement?)

4. Is the asset proven to be robust and beyond a developmental stage? Documentation of successful missions/deployments should be included with records of reliability, durations of deployments, and life expectancy.

5. What is the plan for transitioning this asset into the NDSF and how will it be incorporated operationally into the facility? This plan should include a detailed timeline.

6. What are the financial costs associated with the asset? Include complete documentation of the operational, maintenance, and personnel costs (current and estimated in the future), complete inventory of high-price components, documentation of off the shelf versus one-of a-kind required components, and number of required shore-based and ship-based personnel. Consideration should be given to the logistical support required for expeditions and shore-based work.

7. What is the mechanism for providing high-quality data products from the asset in a timely fashion that are easily accessible to the users? Are the data products in a standard format useable by the general community? Are the data products similar to those from other NDSF assets? Products such as navigation track lines and bathymetric maps should be produced by the end of the expedition. Other products may require longer time periods for processing. Information regarding expected timeline for completion of products should be included in the request.

DeSSC will review all NDSF assets on a periodic basis. New NDSF assets will be formally reviewed in the first and third year after initial incorporation into the facility. For these reviews, the operator will provide DeSSC a detailed analysis of the performance of the asset, including evaluations from recent users and a summary of true costs associated with the tools use over a period of time designated by DeSSC.