Data Management Plan

The project investigators will comply with the data management and dissemination policies described in the *NSF Award and Administration Guide* (AAG, Chapter VI.D.4) and the *NSF Division of Ocean Sciences Sample and Data Policy*.

The proposed work will generate biological rate measurements (carbon and nitrate uptake), biogeochemical data including dissolved macronutrients (nitrate+nitrite, nitrite, ammonium, phosphate, silicate), chlorophyll a concentrations, biogenic silica, dissolved and leachable particulate iron, and molecular data on species identity and metabolic state from proposed water column and deckboard experimental studies.

Data are backed up locally on hourly timescales in each PI's lab with daily backup to off-site locations. Field observation data will be converted to flat ASCII files, which can be read easily by different software packages. Field data will include date, time, latitude, longitude, cast number, and depth, as appropriate. Quality flags will be assigned according to the ODS IODE Quality Flag scheme (IOC Manuals and Guides, 54, volume 3). Metadata will be prepared in accordance with BCO-DMO conventions and will include detailed descriptions of collection and analysis procedures.

All data will be submitted to the data archive managed by the **Biological & Chemical Oceanography Data Management Office (BCO-DMO)**; these data sets will be available online from the BCO-DMO data system. BCO-DMO will also ensure that project data are submitted to the appropriate national data archive. The PI will work with BCO-DMO to ensure data are archived appropriately at the **National Oceanographic Data Center (NDOC)** and that proper and complete documentation are archived along with the data. The project investigators will work with BCO-DMO data managers to make project data available online in compliance with the NSF OCE Sample and Data Policy. Data, samples, and other information collected under this project can be made publically available without restriction once submitted to the public repositories.

The PI's have extensive experience submitting data to BCO-DMO. Within the BCO-DMO system, our data will be linked to previous data generated by the co-PIs. Each PI will be responsible for sharing his/her subset of data among the project participants in a timely fashion. As this project leverages NASA EXPORTS we will also work with the NASA program manager to determine if a portion of the data are appropriate for submission through NASAs SeaWIFS Biooptical Archive and Storage System (SeaBASS; http://seabass.gsfc. nasa.gov/). In all cases quality controlled, calibrated data will be submitted to the repositories along with the associated uncertainty estimates. Metadata files will detail experimental designs as well as measurements (analytical) uncertainties.

Our proposed research will generate both raw and processed molecular sequence data corresponding to 18S amplicon sequencing for plankton community composition as well as data corresponding to metatranscriptome sequencing. Raw and processed read data will be deposited into the European Bioinformatic Institute's (EBI) metagenomics portal (https://www.ebi.ac.uk/metagenomics/). This portal is selected because of the ease of comparison to other projects (such as other marine eukaryotic metatranscriptomes) and that the data is mirrored in the US GenBank's Sequence Read Archive. Raw Processed data corresponding to community composition (18S) will also be submitted to the Silva rDNA database project so that it can easily be phylogenetically compared by the community to other datasets. These data will be linked to the BCO-DMO submissions.

We will keep NSF abreast of our compliance with data management through our annual reports. There will be no permission restrictions for these data once they are published.