

## DATA MANAGEMENT PLAN

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**Oceanographic Data Types and Standards:** Collectively, the PIs will be responsible for coordinating data collection, data QA/QC, data sharing, and data archive. In order to ensure community access to all data, we will annually prepare and submit data inventory to BCO-DMO (Biological & Chemical Oceanography Data Management Office) following their submission guidelines.

The primary *ship-based* data types will include the following: 1. Hourly measurements of date, position, temperature, salinity, chl fluorescence, particulate beam attenuation coefficient, particulate backscattering coefficient, particle size distributions from the LISST instrument, and flow cytometric data from an IFCB, measured on seawater supplied by the ship's inflow line during the research cruise; 2. In situ high-frequency measurements of dissolved O<sub>2</sub> concentration while on each station; 3. Vertical profiles of in situ productivity (<sup>14</sup>C-NPP and <sup>18</sup>O-GOP), dissolved O<sub>2</sub>/Ar gas ratios, and particle flux rates while on each station; 4. Particle size distributions and flow cytometry data from discrete samples throughout the euphotic zone as measured on the ship via a LISST and IFCB instruments; 5. CTD data (pressure, temperature, salinity, calculated density, dissolved oxygen, fluorescence, turbidity and irradiance) measured at each station; 6. Depth-resolved profiles of particle concentrations obtained from the UVP and LISST while on each station; 7. Depth-resolved measurements of nutrients, pigments (HPLC), and particulate carbon (PC); 8. Discrete measurements of elemental and biochemical composition of plankton obtained over the diel cycle while on each station. 9. Wirewalker-based profiles of bio-optical properties while on each station. Note that samples for PC, HPLC, nutrients, productivity rates, elemental composition of plankton, discrete flow cytometry, require time to process and are expected to be available within a few months after collection.

*Float data:* The raw float data will be available in real time as was done in past missions (<https://hahana.soest.hawaii.edu/hot/trackmap/TrackMap.html>).

**Policies for Access and Sharing:** All metadata files, full data sets, derived data products and physical collections will be made publicly accessible within two (2) years of collection with BCO-DMO as the data repository. Our data will be made available by sending the quality-controlled data to BCO-DMO staff, who will then upload the data and metadata to their public server. No special expertise or experience is needed to transfer the data once it has been through quality control. After unit conversion, quality control, and sample processing are complete, the data will be uploaded and made publicly available at <http://bcodmo.org/data>.

**Policies and Provisions for Data Use and Distribution:** There will not be any permission restrictions placed on the data. The end-users of these data are likely to be biogeochemical oceanographers or microbiologist interested in biogeochemical cycling, ocean metabolism and related topics.

**Plans for Internal Data Sharing:** The investigators and graduate students will communicate at least once a month, as they all share offices within the same building. All will share an internal website for data assimilation.