Data Management Plan – Loeb & Santora

Data types: During the 1-year study period we will conduct field sampling during 3 cruises and analyses of resulting samples will generate biological, and photographic data, as well as model results (see Table 1). The types of instruments used and sampling strategy will be determined prior to the field work. Sampling stations will be determined based on the location of elevated acoustically-detected biomass generally associated with the Subantarctic Front, Polar Front and Southern ACC Front zones separating the Subantarctic, Polar Frontal and Antarctic biogeographic Zones. Three samples will be collected within the Subantarctic, Polar Frontal and Antarctic Zones during both the south-bound and north-bound transits. We will use paper and computer logs to keep track of the time of deployment and recovery of each net tow, names of computer files generated, and descriptions of samples. We will follow the best management practices outlined by the Biological and Chemical Oceanography Data Management Office (BCO-DMO), which are available on line (http://www.bco-dmo.org/files/bcodmo/BCO-DMO_Guidelines.pdf). At the conclusion of each cruise, these logs will be scanned, distributed to all cruise participants, and kept as part of the permanent record of the cruise.

Table 1. Description of the types of data to be generated during and after the cruise.

Type of data	Brief description
Underway data, satellite data, seabird distributions	Underway data include measurements of hydrographic parameters from the ship's flow through system, ADCP, XBT and meteorological instruments. Satellite products will be obtained from the NOAA Environmental Research Division. Seabird distributions will be estimated by daytime observations from shipboard while transiting between sampling stations.
Zooplankton samples and data obtained from them	Samples (fresh or formalin-preserved) from IKMT trawls will be processed at sea as much as possible. Entire samples or representative subsamples will be stored at MLML for further processing. Data include wet weight volumes, taxonomic id, abundance, length and width measurements and distributions. Data will be submitted to BCO-DMO and the Jellyfish Data Base Initiative (www.jellywatch.org/blooms). Photographs will be stored on computers, web sites, and available by request.
Underwater videography	Videos taken during net hauls will be stored on computers, websites, and available by request. Data include biogeographic and vertical distributions of scattering layers, zooplankton and nekton taxa and species...
Images from photomicroscopy	Images will be stored on computers, websites, and available by request. Data include species and taxa distributions and morphometrics.

Data availability:

Cruise data: Immediately following each cruise, the underway data collected from the ship's flow through system will be contributed by the vessel operator to the UNOLS central data repository at http://www.rvdata.us/catalog/ managed by the Rolling Deck to Repository (R2R) project. Also, R2R will ensure that the original underway measurements will be archived permanently at National Oceanographic Data Center (NODC). The remaining measurements will be managed by the Biological and Chemical Oceanography Data Management Office (BCO-DMO) and the data sets will

be available online from the BCO-DMO data system (http://bco-dmo.org/data/). BCO-DMO will also archive all the data they manage at NODC. Hydrographic, water chemistry, and zooplankton data will be stored indefinitely on our laboratory computers and with BCO-DMO and the NODC.

Images: Images will be stored indefinitely on our lab computers. Records will be cross-referenced to hydrographic and sample data.

Modeling results: Output will be stored on our computers within a GIS framework and syntheses (maps) will be generated for publications and presentations. For example, map products based on physical ocean conditions (satellite and shipboard), zooplankton/nekton concentrations, and seabird distributions will be saved as ArcView shapefile. Model code will be sourced from the Open Access statistical package R and spatial models for zooplankton and ocean conditions will be available on request.