

Data Management Plan – University of Maine

J.1 Type of data

The primary data source for the proposed work will be digital videos of plankton in laboratory flows, using the VoPI system.

J.2 Data standards

The data are collected as image sequences using StreamPix software (by NorPix, Inc) and stored in NorPix's "sequence" file format. The images will then be converted to multi-frame TIFF images for archival storage. These TIFF images will then be processed using custom-made MATLAB codes to extract particle and plankton locations in 3D space. Lists of particle locations, trajectory indices, and times will be written to CSV files for archival storage. Thus, both the raw images and processed output will be stored in a way that allows easy evaluation with other software packages. Metadata for each of the experiments will be stored in an associated Word and Excel formats. These data will provide specific information about conditions in each of the experiments. Metadata and comments on each experiment will be also recorded as a hard copy in a lab notebook. A scanned copy of this notebook will be included in the data archive.

The code that analyzes the images to extract particle locations videos will follow a method described completely in peer-reviewed publication. The code will be made available on request for verification purposes.

J.3 Policies for access and sharing and provisions for appropriate protection and privacy

Data collected as part of this project will be prepared for publication in peer-reviewed journal in a timely manner. After publication, data will be freely shared with interested scientists and educators. The metadata and CSV files are easily transferred electronically, while the raw images are large enough that we will have to coordinate with interested parties to exchange a copy by mail.

J.4 Policies and provisions for re-use and re-distribution

Data can be re-used or re-distributed freely, provided that all publicly presented work created from this data includes attribution of the datasets to their original source.

J.5. Plans for archiving and preservation of access

All data will be archived on two (mirrored) external hard drives. A third copy will be stored on an external hard drive at UC Berkeley. Data will be preserved for a minimum of three years beyond the end of the proposed project.