Plumes and Blooms Readme

Plumes and Blooms (PnB) occupies seven stations in the Santa Barbara Channel on a monthly to bimonthly basis. Nominal station locations are presented in the table below.

Station No	Latitude	Longitude
1	34 23.41 N	119 50.44 W
2	34 20.61 N	119 51.76 W
3	34 17.81 N	119 53.07 W
4	34 15.01 N	119 54.38 W
5	34 12.21 N	119 55.70 W
6	34 09.41 N	119 57.01 W
7	34 05.00 N	120 02.00 W

At each of the stations, deploy a CTD package with an AC9 (Wetlabs) and Hydroscat 6 (Hobi Labs) mounted in addition to a CTD, transmissometer and fluorometer. Cruises between August 1996 and December 2000 where conducted on the NOAA *R/V Balleena*. On these cruises, the Seabird 911e+ was the CTD model used and water for discrete samples was collected using a Niskin bottles mounted on a carousel and triggered to close via real time communication with the system. Cruises after December 2000 where conducted on the *Spirit of Santa Barbara;* a Seabird Seacat 19 is the CTD model used. This change of instrumentation is necessitated by the lack of a winch capable of supporting a conducting cable on the *Spirit of Santa Barbara.* Due to the lack of real time communication with the system, discrete water samples have been collected by hanging Niskin bottles on the wire and triggering them to close with messengers. Sometime in early 2003, we are expecting the arrival of a new NOAA research vessel for work to be done in the Santa Barbara Channel. Once on board the new vessel, we will resume use of the Seabird 911e+

Data Processing Notes:

CTD

Ctd files are processed using the following seasoft modules. First, files are converted from binary to ascii using datcnv. 911e+ files are then passed through the following modules: celltm, loopedit, filter, binavg, derive, asciiout, and rossum. Files from the seacat 19 are passed through the following modules: filter, alignctd, loopedit, binavg, derive, and asciiout. More info on these modules is available at http://www.seabird.com/pdf_documents/manuals/Seasoft_4.249Rev05-02.pdf

AC9

AC9 files are converted from binary to ascii using the Wetview software provided by Wetlabs. A depth correction is done based on the CTD measurements of depth, followed by despiking and averaging into 1 meter bins. Temperature, salinity and clean water calibration corrections are applied to the data as specified in the AC9 user manual. The manual is available at http://www.wetlabs.com/Products/ac9/ac9.htm.

HS6

HS6 files are converted from binary to ascii using Hydroscat software provided by Hobi Labs. The software applies the factory provided sigma correction, which is meant to account for attenuation of the light between emission by the instrument and detection by the sensors. The files are then binned and put through a moving average. More information on corrections to the data made by the factory supplied software is available at http://www.hobilabs.com/products/manuals/HS6Manual020122.pdf.

Discrete Samples

Water is collected for Chlorophyll a, nutrient, particulate Silica, absorption (phytoplankton, detritus and dissolved organic), and HPLC analysis. All of these analysis are performed according to JGOFS guidelines as listed in JGOFS report number 19 available at http://www.uib.no/jgofs/Publications/Report_Series/JGOFS_19.pdf.

PRR

The PRR is deployed with the ship's stern pointed into the sun to prevent interference from ship's shadow. The data is passed through a series of scripts which apply calibration data, remove data outside of acceptable tilt and roll parameters, and average the fields into 1 meter bins.

Contacts

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