

---TITLE: Lomas_HPLC_pigments_sediment trap_subm_December 2011.xls

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---FUNDING SOURCE AND GRANT NUMBER:

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---DATA SET OVERVIEW:

-These data were collected from sediment trap deployments on the following BEST cruises: HLY0802, HLY0803, HLY0902, KN195-10, TN249 and TN250. Data presented are pigment flux rates (ug/m²/d) and biogenic silica flux rates (mmol/m²/d). All samples were collected on the eastern Bering Sea shelf from 55-63°N and 164-180°W during spring and summer.

---INSTRUMENT DESCRIPTION:

Pigment samples were processed on an Agilent 1100 HPLC system (Van Heukelem and Thomas, 2001). Biogenic silica samples were determined by manual spectroscopy (Krause *et al.*, 2009).

Rates were calculated based upon sample mass, surface area of the sediment trap and deployment duration.

---DATA COLLECTION and PROCESSING:

-All samples were directly collected from the 'brine layer' in the sediment trap tubes from a given depth, and filtered immediately onto 25mm Ahlstrom 151 glass fiber filters (equivalent to Whatman GF/F filters) as described in the above references. After filtering, samples were folded in half, wrapped in precombusted aluminum foil and stored at -80°C until returned to the home institution for processing.

-Description of quality control procedures. Duplicate analyses were run (roughly 10% of the total number of samples) with the average difference found to always be <10%, and often better depending upon the absolute concentration.

---DATA FORMAT:

-Data are reported as a comma delimited ASCII text file. Reported data are the averages where replicate analyses were made. File naming convention is by PI's last name, parameters reported (ie., HPLC pigment sediment trap) and date submitted.

-Colum header information for dataset.

Cruise	Cruise name
Station_No.	Station Number within each cruise
Station_Name	Station Name for each Station Number
Cast_#	Consecutive CTD cast number within each cruise
Date/time (UTC)	YYYYMMDDhhmmss
Declat (oN)	Decmial degree latitude
Declong (oW)	Decimal degree longitude
Nominal_Depth (m)	nominal depth
Niskin	niskin number sample collected from
[flux-TChla]	Total chlorophyll a (ug/m2/d)
[flux-TChlb]	Total Chlorophyll b (ug/m2/d)
[flux-TChlc]	Total Chlorophyll c (ug/m2/d)
[flux-Caro]	Alpha+beta carotene (ug/m2/d)
[flux-But fuco]	19'-butanoyloxyfucoxanthin (ug/m2/d)
[flux-Hex fuco]	19'-hexanoyloxyfucoxanthin (ug/m2/d)
[flux-Allo]	Alloxanthin (ug/m2/d)
[flux-Diad]	Diadinoxanthin (ug/m2/d)
[flux-Diato]	Diatoxanthin (ug/m2/d)
[flux-Fuco]	Fucoxanthin (ug/m2/d)
[flux-Perid]	Peridinin (ug/m2/d)
[flux-Zea]	Zeaxanthin (ug/m2/d)
[flux-Chla]	Mono-vinyl Chlorophyll a (ug/m2/d)
[flux-DVChla]	Di-vinyl Chlorophyll a (ug/m2/d)
[flux-Chlidea]	Chlorophyllide a (ug/m2/d)
[flux-Chlb]	Mono-vinyl Chlorophyll b (ug/m2/d)
[flux-DVChlb]	Di-vinyl Chlorophyll b (ug/m2/d)
[flux-Chlc12]	Chlorophyll C1+C2 (ug/m2/d)
[flux-Chlc3]	Chlorophyll C3 (ug/m2/d)
[flux-Lut]	Lutein (ug/m2/d)
[flux-Neo]	Neoxanthin (ug/m2/d)
[flux-Viola]	Violaxanthin (ug/m2/d)
[flux-Phytin a]	Phaeophytin a (ug/m2/d)
[flux-Phide a]	Phaeophorbide a (ug/m2/d)
[flux-Pras]	Prasinoxanthin (ug/m2/d)
Flux-BioSi	Biogenic Silica flux (mmol/m2/d)

-All missing data are reported as "-9.99". NOTE: as more analyses are done this dataset will be updated and recorded below.

-Data version 1.0, December 2011

---DATA REMARKS:

-All data reported are free of known errors, whether in sample collection or sample analysis.

Any data where there is a question that would compromise the data quality have been omitted and listed as missing data.

---REFERENCES:

Krause, J., Nelson, D.M., Lomas, M.W., 2009. Biogeochemical responses to late-winter storms in the Sargasso Sea. II. Increased production and export of biogenic silica. *Deep Sea Research I*, doi:10.1016/j.dsr.2009.1001.1002.

Van Heukelem, L., Thomas, C., 2001. Computer-assisted high-performance liquid chromatography method development with applications to the isolation and analysis of phytoplankton pigments. *Journal of Chromatography A* 910, 31-49.