TITLE: BEST_ICE_chl_2008

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Description:

This file contains the data for sea ice segments collected during the BEST 2008 field studies (cruises HLY0801 and HLY0802). For details on expeditions as well as station locations check the cruise reports available at http://www.eol.ucar.edu/projects/best/.The data are in a standard excel format spreadsheet.

Ice cores were taken with a Kovacs 9 cm (inner diameter) ice corer and sectioned into sections of variable thickness. Ice sections were melted in a cool room and filtered onto GF/F filters. Algal pigments were extracted with 90% acetone and measured according to Arar and Collins (1997).

Description of columns

Cruise: Identifies the BEST cruise during which ice samples were taken: HLY0801 and HLY0802

Station: Contains the official name of the station as used in the cruise report.

Date: Date on which station was sampled.

Segment: Ice cores were taken using a 9 cm diameter ice corer and sectioned on the ice floes in sections of variable thickness. The numbers provided in this column give the section thickness in centimeters as the distance from the bottom of the sea ice towards the top of the ice. Example: Section 0-1 is the lowermost 1 cm section at the interface between ice and water. Section 2-5: section is 2 to 5 cm distance from the ice water interface.

In 2008, three replicate ice cores (labeled core a, b, c) were taken close to each other within a 2 m radius. Furthermore two satellite sites (S1, S2) were sampled in about 30 m distance to the main sampling site whenever station time permitted. Three replicates (labeled A, B, C) were taken at each satellite site.

Chl a (µg/l): Concentration of chlorophyll a in a certain ice core segment.

Phaeo (µg/l): Concentration of phaeophytin in a certain ice core segment.

Reference:
Arar EJ, Collins GB. 1997. Method 445.0. in vitro determination of chlorophyll a and phaeophytin a in marine and freshwater by fluorescence. EPA Report, National Exposure Research Laboratory Office of Research and Development. U.S. Environmental Protection Agency, Cincinnati, Ohio