TITLE: BEST_ICE_chl_2009

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DESCRIPTION:
This file contains the data for sea ice segments collected during the BEST 2009 field studies (HLY0901, HLY0902) 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 provided 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 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 cruise during which samples were collected

Station: Contains the name of the station in the cruise catalogue.

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

In 2009, three replicate ice cores (labeled core M1, M2, M3) were taken close to each other within a 2 m radius at our main sampling site. Only core M1 was analyzed over the entire core thickness, while for all other cores analysis focused on the bottom 10 to 30 cm. Furthermore up to three satellite sites (S1, S2, S3) were sampled in about 30 m distance to the main sampling site whenever station time permitted.

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