Norway

Overview

Scientific work on trace elements and their isotopes in the ocean was carried out mainly through global biogeochemical ocean modeling at The University of Bergen (Geophysical Institute and Bjerknes Centre for Climate Research/Centre for Climate Dynamics). In 2012, a revised version of the HAMOCC2s model for simulations of ^{230}Th and ^{231}Pa was provided. More specifically, the particle flux scheme was changed in order to allow for a more realistic concentration of particles in the water column (and to adjust the equilibrium constants accordingly). With the present model set up improved simulations of the particle attached and dissolved phases of ^{230}Th and ^{231}Pa in the water column as well as the sediment bioturbated layer could be carried out (pre-industrial, under elevated CO_2).

On the analytical side, apart from minor work on trace metals, continued work on $\delta^{13}C$ was carried out. A re-evaluation of natural $\delta^{13}C$ distributions (Suess corrected) in the global ocean is ongoing (by M. Eide, A. Olsen, U. Ninnemann et al.) as part of the NARE funded SOVAR project. A new project SNACS (coordinator A. Olsen) is funded through NORKLIMA which will include support for a new North Atlantic cruise and sampling for carbon isotope work tracing signals back to source regions and calibrating proxy recorders.

Presentations at meetings

- Heinze, C., 2012, BIOFEEDBACK – Biogeochemical feedbacks in the climate system, plenary presentations at SKD Days (annual meeting of core project BIOFEEDBACK of the Centre of Climate Dynamics), held at Hotel Augustin, 28 November 2012, Bjerknes Centre for Climate Research, Bergen Norway.

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