



## Swedish GEOTRACES related activities 2010/2011

- **Arctic GEOTRACES**

**Prioritized project of the Swedish Arctic Research programme:**

A proposal to the Swedish Research Council (VR) for a GEOTRACES cruise: *The dynamics of trace metal biogeochemistry in the Arctic Ocean: A GEOTRACES cruise using the icebreaker Oden. PI P. Andersson.*

The project is on the Swedish Polar Research Secretariat (SPRS) Roadmap for Polar Research during the coming 5 yr.

Requires international collaboration.

Per Andersson participated in US Arctic GEOTRACES workshop in Washington DC, 29/9 – 1/10, 2010

Bob Anderson visited Stockholm, Academy of Science and SPRS discussing Arctic GEOTRACES , Nov 2010.

- **Oden Southern Ocean 2010/11 Swe-US collaboration**

GEOTRACES related activities

- Trace metal speciation on *R/V Palmer*. Kuria Ndungu (SU/ITM)
- Nd isotopes on *R/V Palmer*. Per Andersson (NRM) Rob Sherrell (Rutgers Univ.)

Oden is withdrawn from Antarctic research during 2011/2012!

- **Participation in COST action ES0801**

Planning of a Baltic Sea GEOTRACES cruise (*R/V Oceania*, November 2011). Workshop in Gdansk , 14-15 March, 2011 cruise planning for. Swedish participant Johan Ingri (LuTU)



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- **COST action ES0801.** Student training (Sandra Pöhle from JUB) in separation of trace metal isotopes from sea water (Oct. 2011).
- **Participation in GEOTRACES intercalibration**  
*Nd, Th and Si isotopes*  
*Trace elements*
- **GEOTRACES west Atlantic Leg 3.** JC057 on RRS James Cook. Samples for  $^{232}\text{Th}$ , comparison of different sampling systems. P Andersson, M. Rijkenberg, H de Baar.
- **BIOGEOTRACES.** There is a general interest from Swedish marine biologists including Stefan Bertilsson (Uppsala), Birgitta Bergman (Stockholm), Britt-Marie Sjöberg (Stockholm), Johan Wikner (Umeå) and Anders Andersson (Uppsala).

### Abstract and presentations

Presentations of results at EUG Vienna, April 2011 and Goldschmidt in Prague, August 2011

Abstract submitted (P-O. Persson) to Data-Model Synergy Workshop in Barcelona, Nov 2011

### Selected publications GEOTRACES related results 2010/11

Alling V., Sanchez-Garcia L., Porcelli D., Pugach S., Vonk J.E., van Dongen B. Mörtz C.-M., Anderson L.G., Sokolov A., Andersson P., Humborg C., Semiletov I., Gustafsson Ö. (2010) Non-conservative behavior of dissolved organic carbon across the Laptev and East Siberian Seas. doi:10.1029/2010GB003834 Global Biogeochemical Cycles 24, GB4033

Persson P.-O., Andersson P.S., Zhang J. and Porcelli D. (2011) Determination of Nd isotopes in water: A chemical separation technique for extracting Nd from seawater using a chelating resin. dx.doi.org/10.1021/ac102529k Analytical Chemistry 83, 1336-1341.

## Plans for the Baltic expedition November 2011

### Scientific targets

Three main scientific targets were discussed at the meeting as foci for the cruise:

- i. Trace element and isotope (TEI) impact of the reducing conditions in the deep basins of the Baltic
- ii. TEI fluxes from marginal Baltic basins (e.g. Bothnia Gulf) and chemistry on mixing
- iii. TEI fluxes out of the Baltic to the Atlantic

