

# **GEOTRACES activities in Germany, 2012**



## **COST workshop, Arctic cruise planning (AWI, April 2012)**

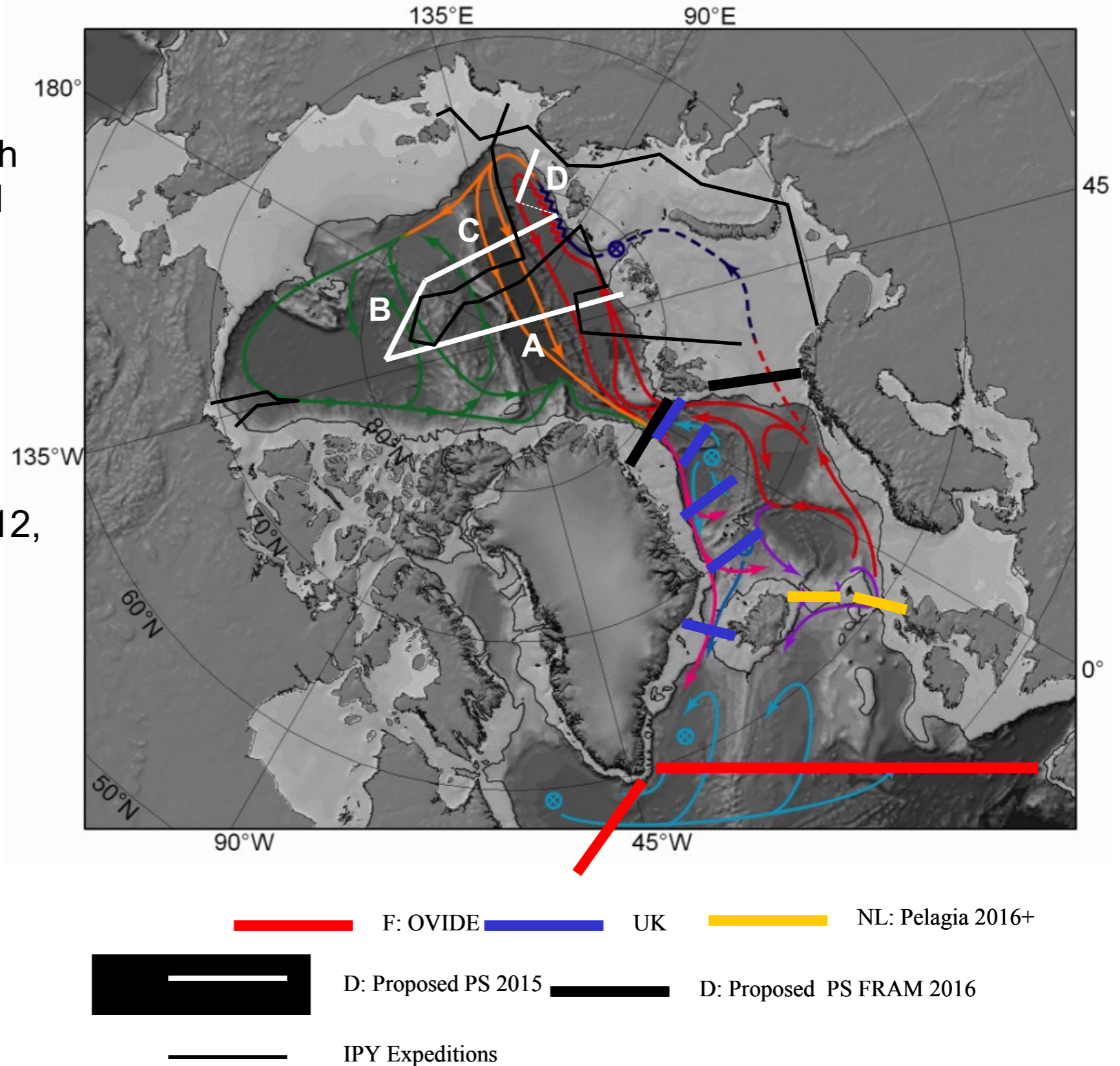
*participants: M. Rutgers v.d. Loeff (organizer), M. Frank, P. Masqué, H. de Baar, M. Rijkenberg, M. Lohan, K. Pahnke*



proposed cruise tracks for 2015 (Central Arctic, white) and 2016 (Fram Strait, black)

*R/V Polarstern*, in collaboration with physical oceanographers from AWI (U. Schauer) (repeat hydrographic sections, moorings)

1 proposal submitted in August 2012, lead PIs: M. Rutgers v.d. Loeff, U. Schauer

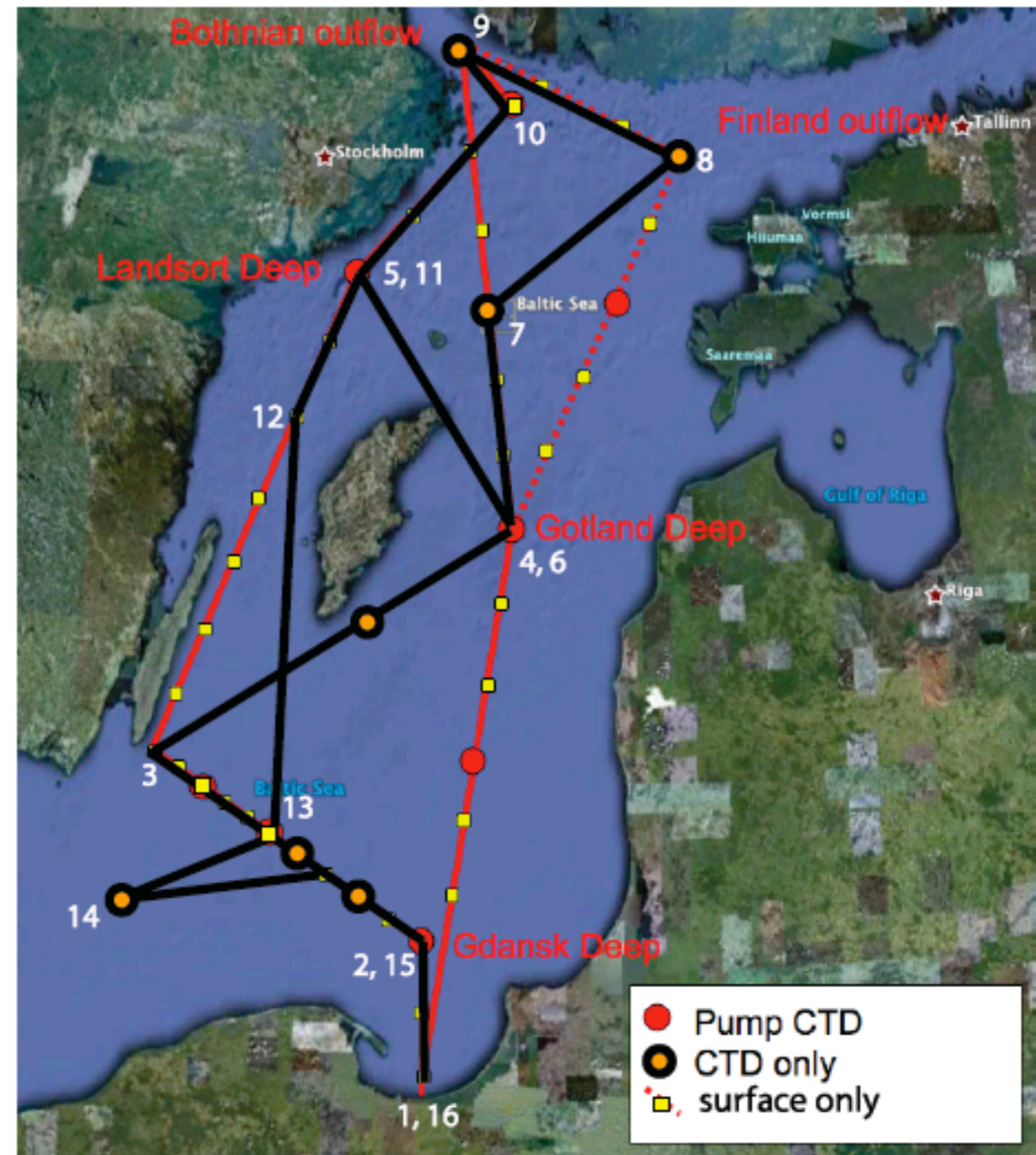


# Cruises, sampling

Martin Frank, Roland Stumpf, Tianyu Chen

- participation in Baltic Sea cruise (Polish-lead, *R/V Oceania*, Nov. 2011): dissolved and particulate  $\epsilon_{Nd}$  and REEs

Baltic Sea cruise track

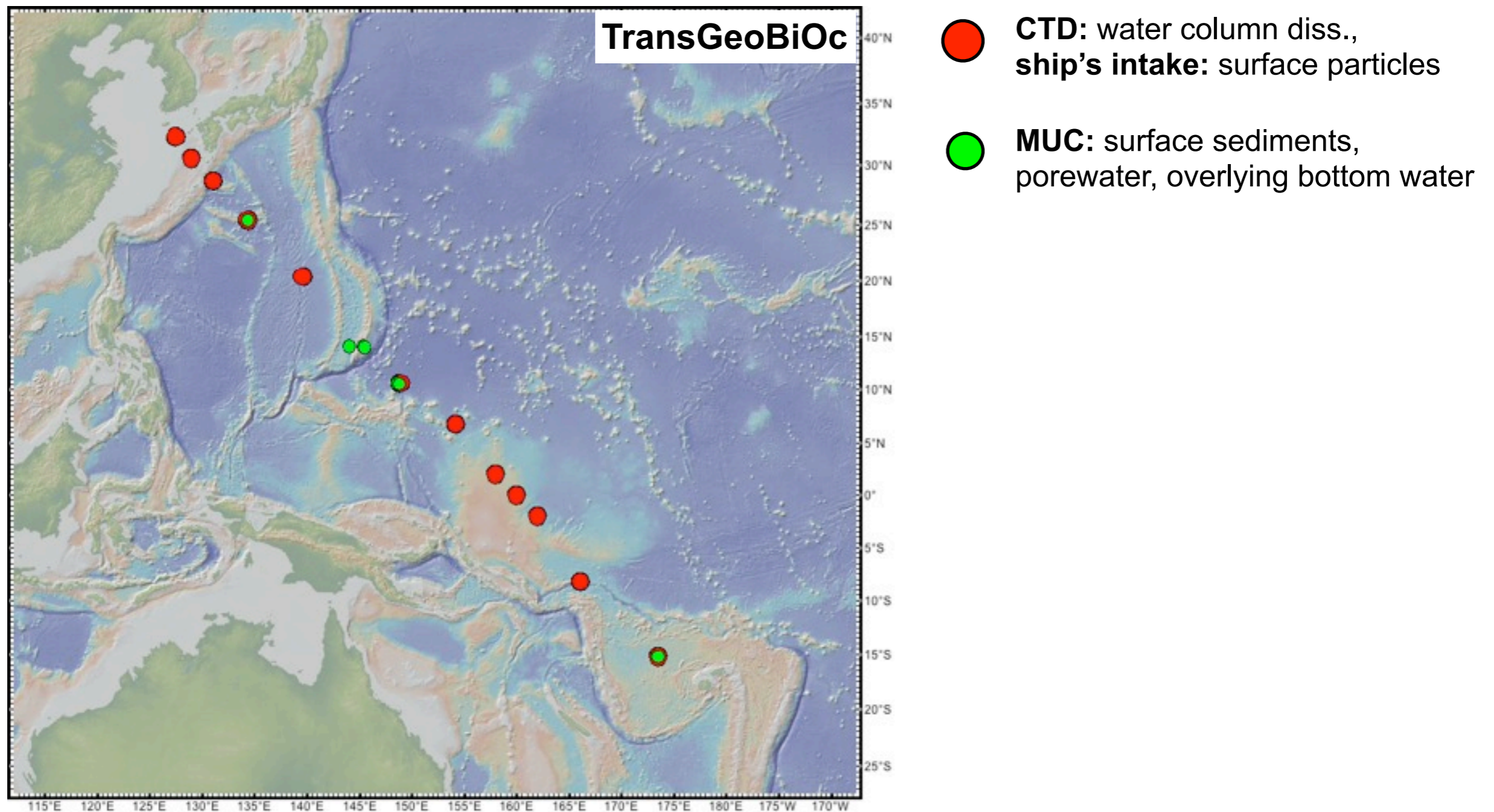


# Cruises, sampling

*Katharina Pahnke, Melanie Behrens (PhD student), Max Planck group, Univ. of Oldenburg*

**TransGeoBiOc** cruise, *R/V SONNE*, South Korea-Fiji (Sept.-Oct. 2012).

samples collected for  $\epsilon_{Nd}$  and REE on seawater (full water column), surface suspended particles, and some core-top sediments.

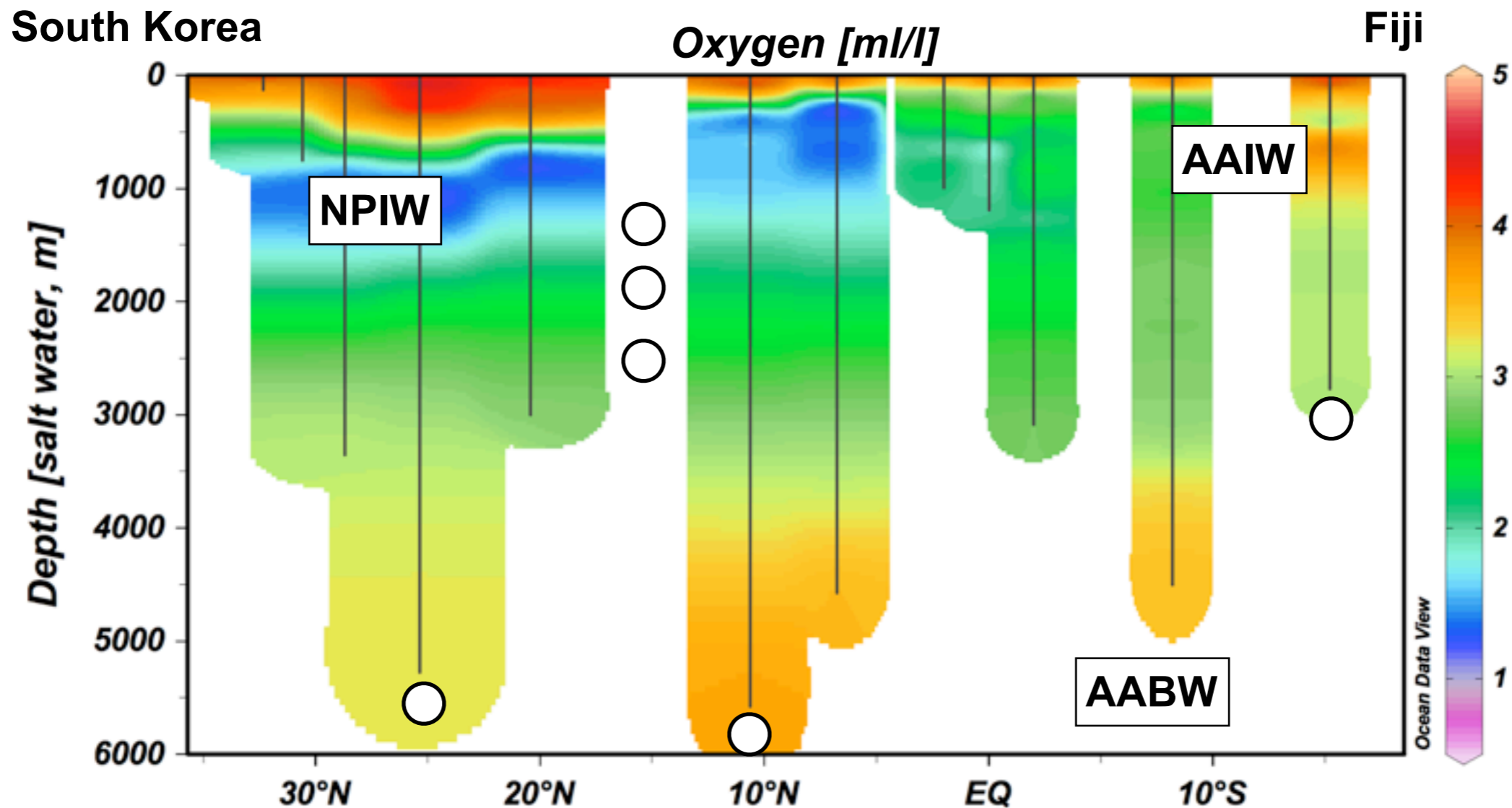
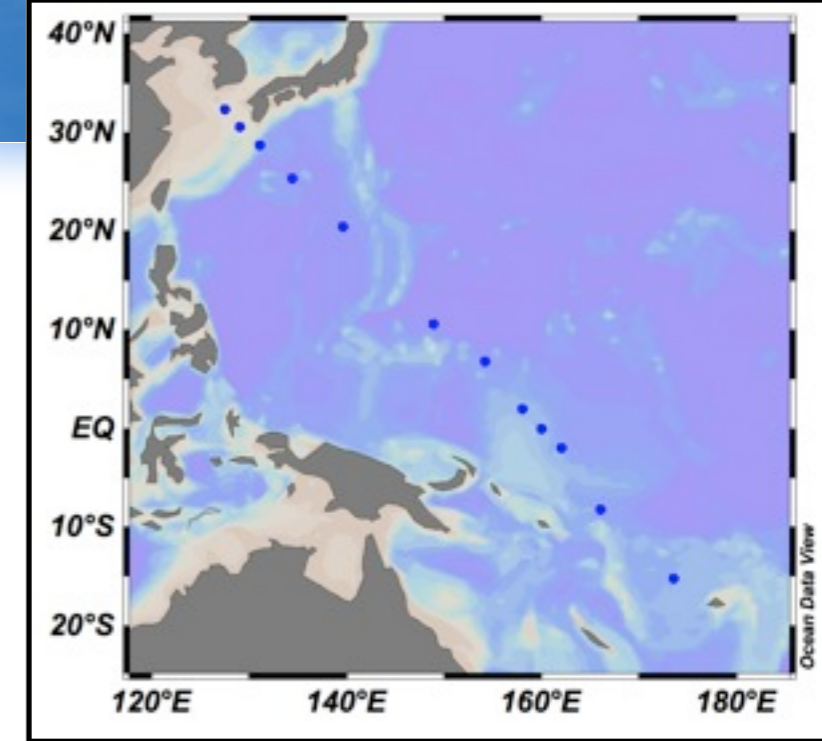


# Cruises, sampling

Katharina Pahnke, Melanie Behrens (PhD student)

## Hydrography & sampling

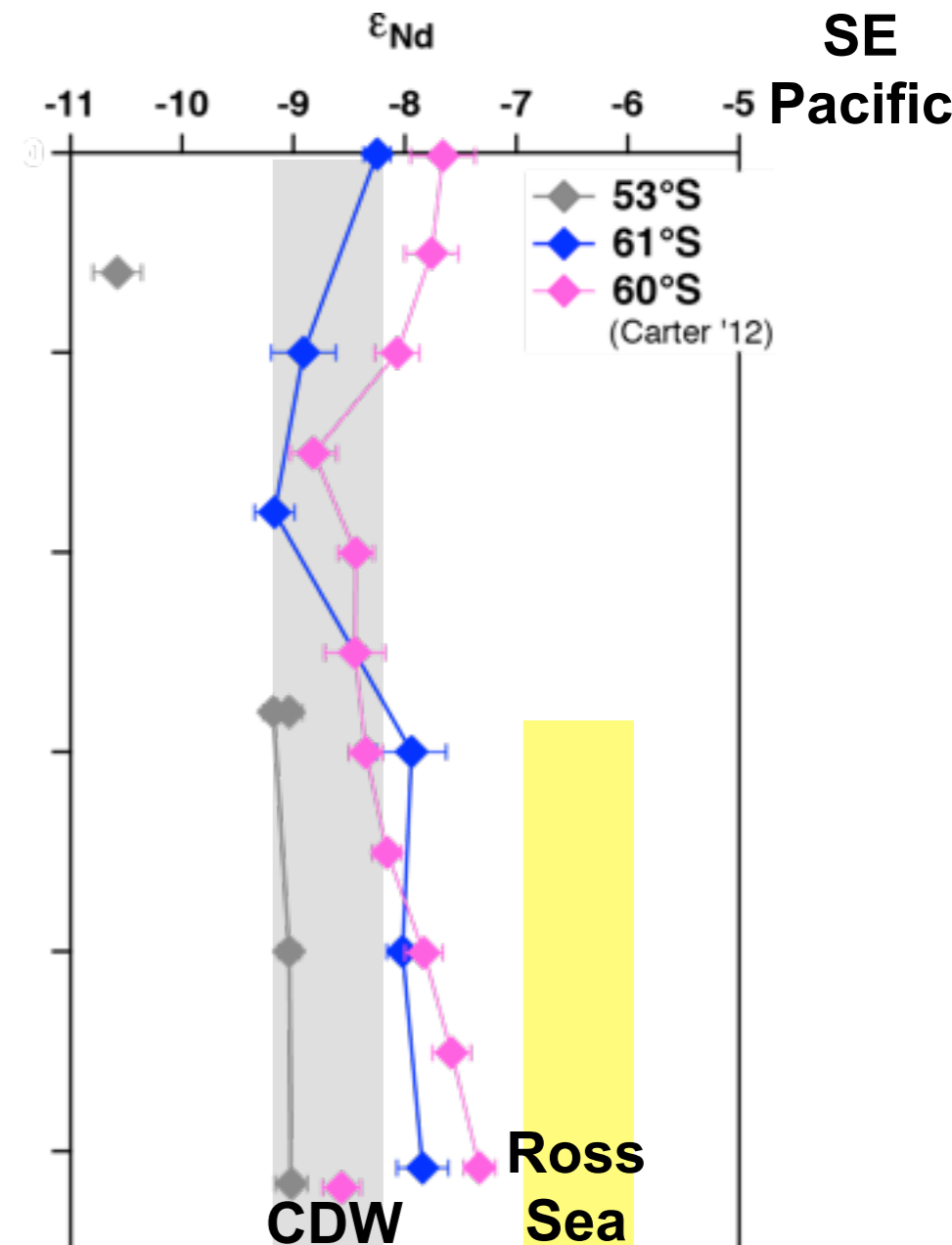
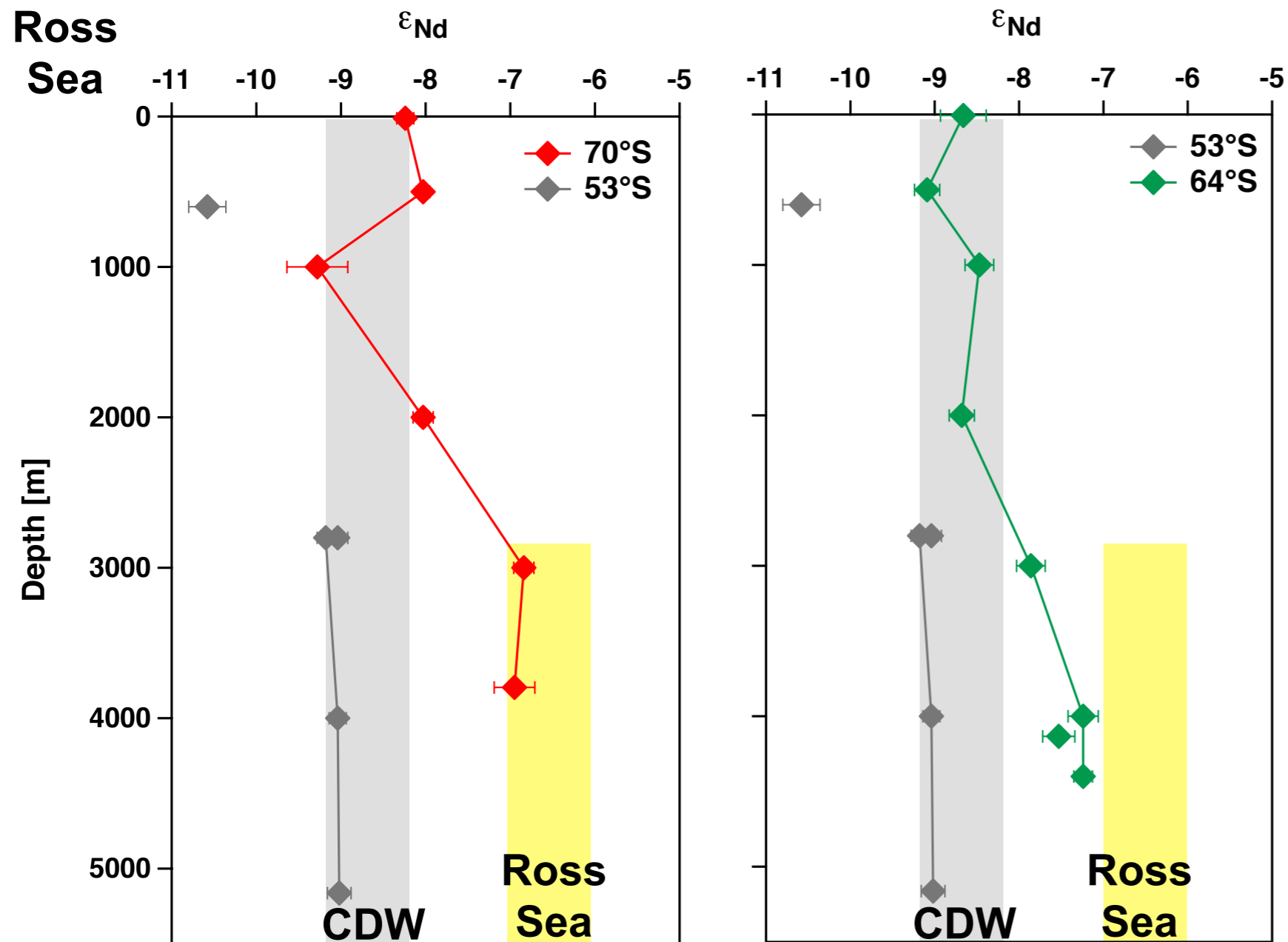
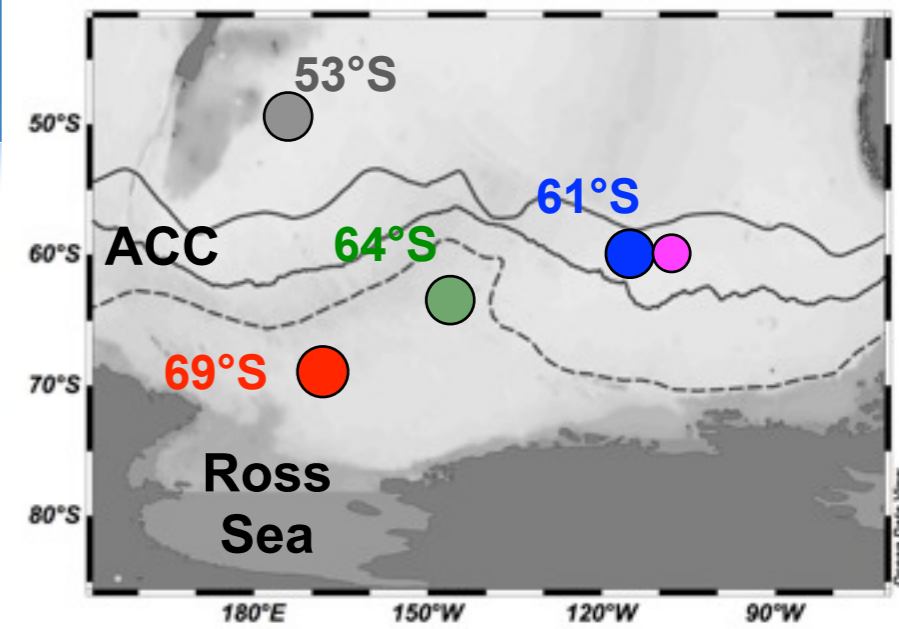
- | CTD: seawater profiles
- MUC: sediments, porewater, overlying water



# Data

Katharina Pahnke, Chandranath Basak (Max Planck group, Univ. of Oldenburg)

- *R/V Polarstern* 2009/10, ANT26/2  
dissolved  $\epsilon_{Nd}$  in the South Pacific  
→ bottom water carries Ross Sea  $\epsilon_{Nd}$  signal



## ***PhD defense:***

**Tobias Roeske** 'Dissolved Barium and particulate Rare Earth Elements as tracers for shelf-basin interaction in the Arctic Ocean' (University of Bremen, November 2011).  
Advisor: Michiel Rutgers v.d. Loeff (AWI)

## ***New equipment, Geomar, Kiel:***

- trace-metal clean GO-FLO rosette
- clean van
- mobile winch (expected 2013)



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- Rutgers v.d. Loeff, M.M.**, Cai, P., Stimac, I., Bauch, D., Hanfland, C., Roeske, T., Bradley Moran, S., 2012. Shelf-basin exchange times of Arctic surface waters estimated from <sup>228</sup>Th/<sup>228</sup>Ra disequilibrium. *Journal of Geophysical Research - Oceans* 117, C03024, doi:03010.01029/02011JC007478.
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