

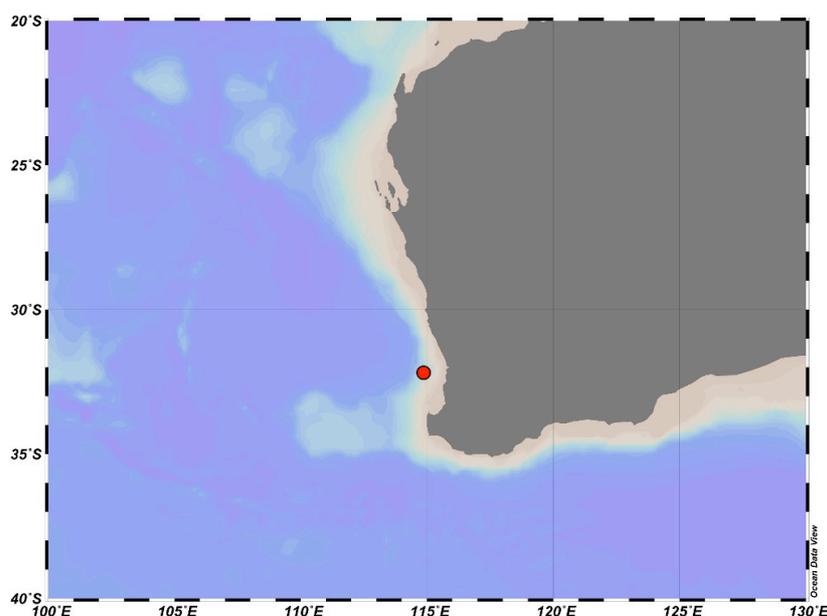
ANNUAL REPORT ON GEOTRACES ACTIVITIES IN ITALY  
MAY 2014 – JUNE 2015

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***Cruises***

Seven seawater samples were collected in March 2015 in the canyon of Perth on board R/V Falkor during the FK150301 cruise led by Prof Malcolm McCulloch (UWA, Australia). The cruise was primarily devoted to surveying the canyon using a Remotely Operated Vehicle (ROV) and sampling biogenic carbonates and seawater for proxy calibration. The samples were collected along a depth profile, from the surface down to 2000 m. Ten litres filtered (AcroPak 500 cartridge) seawater samples were drawn into pre-cleaned carboys from 12L Niskin bottles attached to the ship's rosette, acidified to pH = 2, sealed with parafilm and stored with double bag before sending to the laboratory.

The seawater samples will be analysed at the University of Western Australia. Neodymium isotopes will be measured on a MC-ICPMS Neptune<sup>Plus</sup> after Nd pre-concentration with ferric hydroxide and extraction using Eichrom TRU-spec and LN-spec resins.



*Figure 1: Map of the western coast of Australia. Red circle represents the location of the seawater samples collected during the FK150301 cruise (March 2015).*

***Abstracts***

Tachikawa K., Arsouze T., Bayon G., Bory A., Colin C., Dutay J-C., Frank N., Gurlan A. T., Hillaire-Marcel C., Jeandel C., Lacan F., Meynadier L., Montagna P., Pucéat E., Roy-Barman M., Waelbroeck C. Comparison between seawater and archive Nd isotope compositions using multi-scatter plots: a new global data compilation. Goldschmidt 2015, 16-21 August, Prague, Czech Republic.

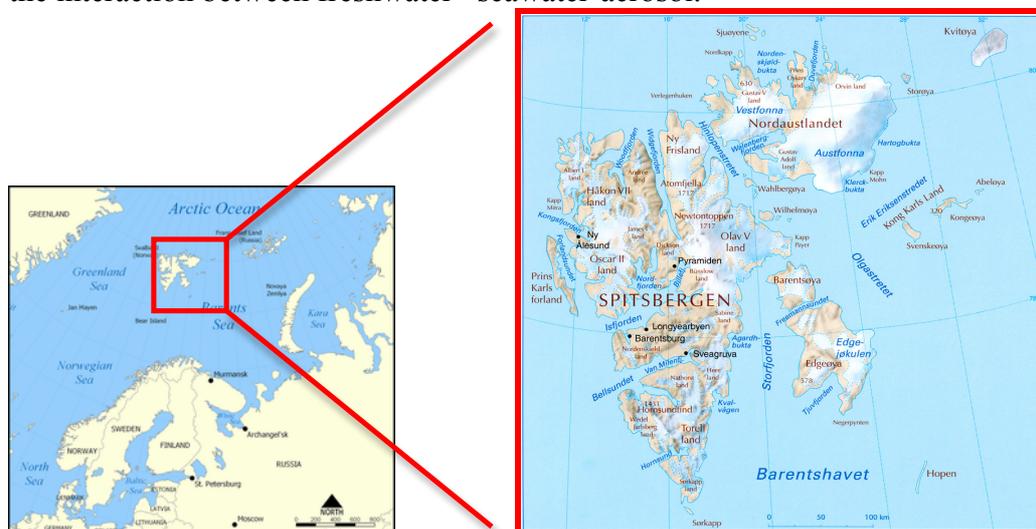
Clara Turetta (IDPA-CNR, Venezia)

Elena Barbaro (DAIS-Ca' Foscari University, Venezia)

### ***Sampling campaign***

Fifty seawater samples were collected from March to June 2015 in the Kongsfjorden, Svalbard Island (N). The release of large volumes of cold and fresh water from melting of ice caps will be studied both from paleoclimatic point of view and from processes of interaction air-sea-ice. The samples were collected along the coast (from west to east approximately, till the glacier) and along a depth profile in the centre of the fjord down to 100 m. An aliquot of each sample was filtered and stored, with unfiltered samples, at -20°C before sending to Italy. Also aerosol and snow sampling were performed during arctic campaign.

The samples will be analysed at laboratory of IDPA-CNR and Ca' Foscari University to determine rare earth elements, trace element and organic compounds content to understand the interaction between freshwater –seawater-aerosol.



Map of Svalbard Island

### ***Abstracts***

C. Turetta, E. Barbaro, R. Zangrando, A. Gambaro and C. Barbante, “Water-soluble trace elements in Arctic aerosol: possible indicators of extreme events?”. EAC 2015, Milan (Italy) September 6-11, 2015

E. Barbaro, A. Spolaor, T. Kirchgeorg, R. Zangrando, C. Turetta, C. Barbante, A. Gambaro. “Exchange of Water Soluble Organic Compounds (WSOC) between aerosol and snow layers: a preliminary study to investigate new climate change markers”. SSF workshop on: “Taking the next step in Svalbard snow research”, 1-4 September 2015, Polish Polar Consortium and University of Silesia, Poland.

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