

ANNUAL REPORT ON GEOTRACES ACTIVITIES IN SWEDEN

May 1st, 2017 to March 30th, 2018

New scientific results

- Data on ^{232}Th , ^{230}Th and ^{231}Pa from the Arctic Ocean (*R/V Polarstern* 2015 cruise ARK XXIX/3, PS94) are evaluated and reported at meetings during 2017.

Intercalibration

- Participated in analyses of duplicate samples for Nd isotopes from the Arctic Ocean (*R/V Polarstern* 2015 cruise ARK XXIX/3, PS94).

New publications (published or in press)

- Gdaniec S., Roy-Barman M., Foliot L., Thil F., Dapoigny A., Burckel P., Garcia-Orellana J., Masque P., Mörth C.-M. and Andersson P.S. (2018) Thorium and Protactinium isotopes as tracers of marine particle fluxes and deep water circulation in the Mediterranean Sea. <https://doi.org/10.1016/j.marchem.2017.12.002> *Marine Chemistry*, 199, 12-23.
- Krall L., Trezzi G., Garcia-Orellana J., Rodellas V., Mörth C.-M. and Andersson P. (2017) Submarine groundwater discharge at Forsmark, Gulf of Bothnia, provided by Ra isotopes. <https://doi.org/10.1016/j.marchem.2017.09.003> *Marine Chemistry*, 196, 162-172. (*This is formally not GEOTRACES but is clearly linked*)

PhD theses

- Sandra Gdaniec, PhD student at NRM/SU and also working at LSCE in Paris defended her licentiate-thesis, 19 May, 2017, with the title “ ^{231}Pa and Th-isotopes as tracers of deep water ventilation and particle scavenging in the Mediterranean Sea”.

Meetings

Participation in the Goldschmidt Meeting in Paris, 13-18 August, 2017. Abstracts:

- Gdaniec S., Valk O., Rutgers van der Loeff M., Roy-Barman M., Andersson P.S. (2017). ^{231}Pa and ^{230}Th in the Barents Sea and the Nansen basin: implications for shelf-basin interactions and changes in particle flux Goldschmidt Conference, August 2017, Paris. Session: *Cycles of Trace Elements and Isotopes in the Ocean: GEOTRACES and Beyond*
- Roy-Barman M., Gdaniec S., Foliot L., Thil F., Burckel P., Andersson P., Mörth C.-M., Masque P. and Garcia-Orellana J. (2017) Influence of Deep Water Formation and Boundary Scavenging on ^{231}Pa and ^{230}Th Distribution in the Mediterranean Sea. Goldschmidt Meeting Paris, 13-18 August 2017.

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