



GEOTRACES Workshop

Stable isotopes of biologically important trace metals

Department of Earth Science and Engineering, Imperial College London, UK

13-14 September 2012

Organising committee: Mark Rehkämper, Tina van de Flierdt, Dominik Weiss,
Gideon Henderson, Hein de Baar

Thursday, 13 September, 2012

- 09:30 Registration and Coffee (*RSM 3.01 – third floor, Royal School of Mines*)
10:00 Jan Cilliers (HoD), Mark Rehkämper, Tina van de Flierdt - Welcome and Logistics
10:20 Gideon Henderson (U Oxford, UK) – Significance of micronutrient isotopes and GEOTRACES

Research talks on cadmium and zinc isotopes in seawater (RSM G41)

- 10:40 Claudine Stirling (U Otago, NZ) – Cd isotopes in seawater
11:00 Mark Rehkämper (Imperial College London, UK) – Cd isotopes in seawater
11:20 Stephen Galer (MPI, Mainz, Germany) – Cd isotopes in seawater
11:40 Derek Vance (U Bristol/UK, ETH Zürich/Switzerland) – Zn isotopes in seawater

12:00 – 13:00 *Sandwich lunch (RSM 3.01)*

Research talks on iron isotopes in seawater and marine particles (RSM G41)

- 13:00 Tim Conway (U South Carolina, USA) – A new method for determination of Fe, Cd and Zn isotope ratios in seawater and new data from the East North Atlantic
13:20 Francois Lacan (LEGOS, Toulouse, France) – Iron isotopes in the dissolved and particulate phases of seawater: sources and processes
13:40 Jeroen de Jong (NIOZ, Netherlands) – Dissolved and particulate Fe and Zn isotopes in the Bellingshausen Sea, Antarctica
14:00 Olivier Rouxel (Ifremer, France) – Fe isotopes in seawater
14:20 Jessica Klar (NOCS, UK) – Fe isotopes in seawater

14:40 – 15:40 *Tea/coffee and Break out groups (RSM 3.01)*

Discuss analytical issues for various groups of trace metal isotopes (e.g., sampling at sea, laboratory methods, standards, spikes, intercalibration, cross-over stations).

15:40 *Plenary discussion (RSM G41)*

16:30 – 18:00 *Poster session and drinks (RSM 3.01)*

19:30 Group dinner (*location TBA*)

Friday, 14 September, 2012

Research talks on methodology and intercalibration (RSM G41)

09:00 Hein de Baar (NIOZ, Netherlands) – Trace metal cross over stations and reference samples

09:20 Seth John (U South Carolina, USA) – Approaching theoretical limits for accuracy and precision in ICP-MS

Research talks on lead isotopes in seawater (RSM G41)

09:40 Jason McAlister (UBC, Canada) – Stable Pb isotope time series in the North Pacific analysed from small volume seawater samples

10:00 Ed Boyle (MIT, USA) – Pb isotope analysis of seawater: methods and results

10:20 discussion on analytical issues / report back from breakout session on Thursday

10:50 *Tea/coffee (RSM G41)*

Research talks on metal isotopes in various archives (RSM G41)

11:10 Tristan Horner (U Oxford, UK) – Subcellular isotopic evidence on oceanic Cd cycling

11:30 Morten Andersen (U Bristol, UK) – Zn isotopes in diatoms

11:50 William Homoky (NOCS, UK) – A closer look at Fe isotope processing during early diagenesis

12:10 Bikina Srinivas (Physical Research Laboratory, Ahmedabad, India) - Source apportionment of aerosol iron (based on Stable Fe isotopes) over the tropical Indian Ocean: Role of Combustion sources vis-à-vis Mineral Dust.

12:30 *Sandwich lunch (RSM 3.01)*

Research talks on metal isotopes in various archives and modelling (RSM G41)

13:30 Helene Planquette (NOCS, UK) – Cr isotopic signature of marine sediments deposited in the S1 Mediterranean sapropel

13:50 Sophie Dixon (OU, UK) – Adsorption of Cr onto Fe and Mn oxy(hydr)oxides: an EXAFS study with implication for using Cr isotopes as a redox proxy

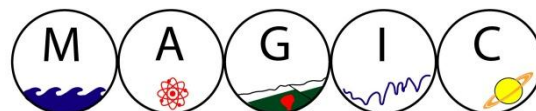
14:10 Jean-Claude Dutay (LSCE, France) – NEMO/PISCES model

14:30 *Plenary discussion (RSM G41)*

Thoughts on where we should go from here: What are the big research questions? Do we get all the samples we need from planned GEOTRACES cruises? What analytical issues need addressing by the community? Anything else?



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Mass Spectrometry and Isotope Geochemistry at Imperial College London

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