

# ANNUAL REPORT ON GEOTRACES ACTIVITIES IN FRANCE

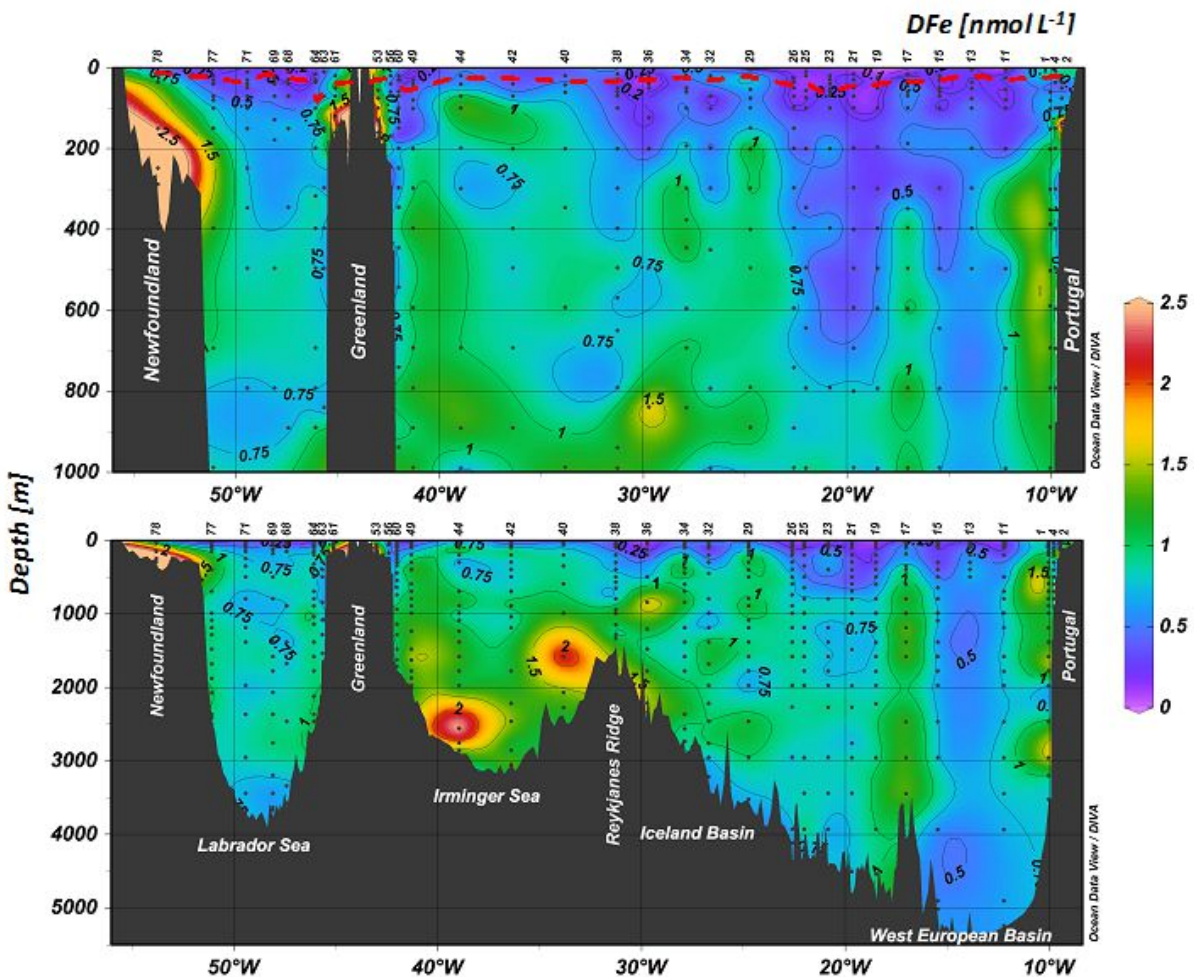
May 1st, 2017 to March 30th, 2018

## New scientific results

- 1. Dissolved element distribution along GEOVIDE section (GA01) in the North Atlantic

- 1.1 Dissolved Fe (DFe): [Tonnard et al. \(2018\)](#)

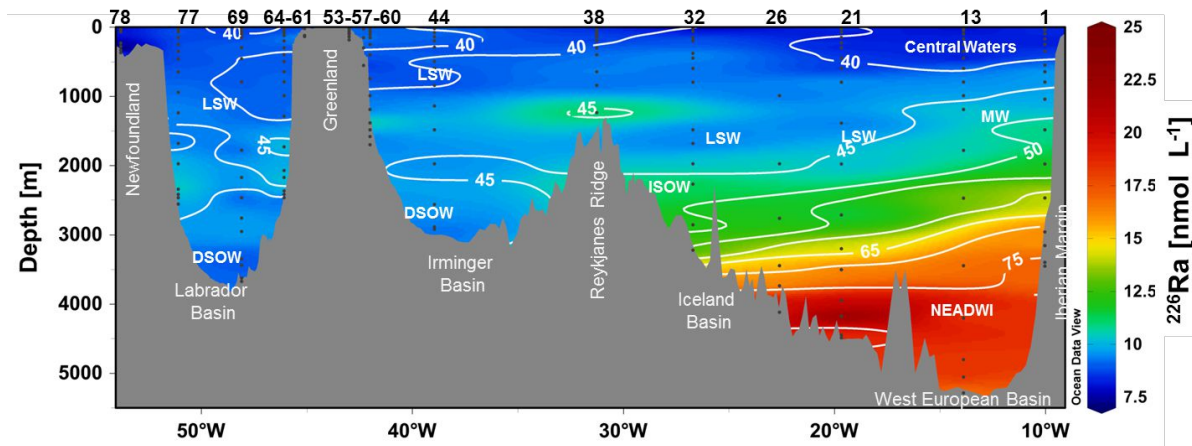
Elevated DFe concentrations were observed above the Iberian, Greenland and Newfoundland Margins likely due to riverine inputs from the Tagus River, meteoric water inputs and sedimentary inputs (Figure 3). Increasing DFe concentrations along the flow path of the Labrador Sea Water were attributed to sedimentary inputs from the Newfoundland Margin. Bottom waters from the Irminger Sea displayed high DFe concentrations likely due to the dissolution of Fe-rich particles from the Denmark Strait Overflow Water and the Polar Intermediate Water.



**Figure 3.** DFe concentrations along the GA01 transect: upper 1000 m (top) and full depth range (bottom). The red dashed line indicates the depth of the Surface Mixed Layer (SML). Small black dots represent collected water samples at each sampling station. (Ocean Data View (ODV) software, version 4.7.6, R. Schlitzer, <http://odv.awi.de>, 2016).

- 1.2. <sup>226</sup>Ra: [Le Roy et al. \(2017\)](#)

Dissolved  $^{226}\text{Ra}$  and Ba are strongly correlated along the GA01 section, a pattern that may reflect their similar chemical behavior (Figure 4). Results show that the measured  $^{226}\text{Ra}$  and Ba concentrations can be explained by conservative mixing, notably at intermediate depth, away from the ocean interfaces. Decoupled behaviors were identified, mostly at the ocean boundaries (seafloor, continental margins, and surface waters).



**Figure 4.** Distribution of dissolved  $^{226}\text{Ra}$  activities and dissolved Ba concentrations (nmol/L white contour lines) along the GA01 section. Station numbers are found on top of the panel. The sampling depths for  $^{226}\text{Ra}$  are shown for each vertical profile (black dots). (Ocean Data View (ODV) software, version 4.7.6, R. Schlitzer, <http://odv.awi.de>, 2016).

- 2. Atmospheric inputs to North Atlantic and Mediterranean Sea

2.1. Regional trends in the fractional solubility of Fe and other metals from North Atlantic aerosols: [Shelley et al. \(2018\)](#)

The fractional solubility of a suite of aerosol elements (Al, Ti, Fe, Mn, Co, Ni, Cu, Zn, Cd and Pb) was investigated on samples collected during three GEOTRACES cruises to the North Atlantic Ocean using a two-stage leaching (ultra high-purity water and 25% acetic acid). Results show that 1) the aerosols from the North Africa were always the least soluble, and the most homogeneous, 2) aerosols from the most remote locations were generally the most soluble and 3) primarily pollution-derived TEs (Ni, Cu, Zn, Cd and Pb) were significantly enriched above crustal values in aerosols. The same leaching technique can be used to estimate trace element solubility from suspended particulate matter (SPM), which facilitates direct comparison of soluble fractions between SPM and aerosols.

2.2. Release of Fe, N and P from Saharan dust to the Mediterranean Sea under future pH conditions: [Louis et al. \(2017a\)](#)

To evaluate potential influence of ocean acidification on partial dust dissolution, minicosms experiments were carried out by adding Saharan dust to Mediterranean Sea water under lower pH conditions. Results indicate that Fe, N and P release is not sensitive to examined pH range.

### **Cruises**

- GEOTRACES **PEACETIME** process study took place in the Western/Central Mediterranean Sea May 10–June 11, 2017 cruise onboard the R/V ‘*Pourquoi Pas?*’ (Chief and co-chief Scientists C. Guieu and K. Desboeufs).

<http://peacetime-project.org/>

<https://twitter.com/peacetimecruise> and [vimeo.com/channels/peacetime](https://vimeo.com/channels/peacetime)

- Participation to UK Fridge cruise GEOTRACES section (PhD students L. Artigue and D. Gonzalez-Santana, PIs M. Lohan and A. Tagliabue)

### **New projects and/or funding**

- GEOTRACES **TONGA** process study aims at studying the control of ocean productivity and carbon sequestration by micronutrients of hydrothermal origin (PIs S. Bonnet and C. Guieu). The cruise proposal was ranked Priority 1 by the National Fleet Commission and the cruise is likely to be scheduled in Nov-Dec 2019. Several projects for funding (included preselected project to the ANR) are currently under evaluation and one letter of intent were submitted to the French programs LEFE and TELLUS for submission of proposal for the next call.
- **SWINGS** (South West Indian Geotraces Section) cruise proposal was submitted (PIs C. Jeandel and H. Planquette). The National scientific committee which attributes the ship time gave the highest priority to SWINGS on the R/V Marion-Dufresne for 2019-2020. CJ and HP are presently seeking funds to pay the research related to SWINGS.

### **GEOTRACES workshops and meetings**

- Participation to the **27th Goldschmidt Conference** in Paris, Aug 27: presentation of works related to KEOPS (Geotraces process study), PANDORA and GEOVIDE (Geotraces Fr Section) and analytical developments.
- GEOVIDE meeting 2017: 17 oral presentations,  
<http://www.geovide.obs-vlfr.fr/post-cruise-meeting-18-19-december-2017/>

### **Outreach activities**

- Contribution to the realization of the **Geotraces video** “21 questions and answers about GEOTRACES” published in 2017 on the Geotraces website (C. Jeandel and E. Masferrer Dodas)  
<http://www.geotraces.org/outreach/other-outreach-materials/videos/1468-21-questions-and-answers>

### **Other activities**

- Organization of the **first GEOTRACES Summer School**. 60 participants from 18 countries and 26 international lecturers (<https://geotraceschool.sciencesconf.org/>). Participation of C. Jeandel and F. Lacan as lecturer.
- **Special issue** related to the **GEOVIDE project** in Biogeosciences. [https://www.biogeosciences.net/special\\_issue900.html](https://www.biogeosciences.net/special_issue900.html). Guest editor: G. Henderson, M. Lohan, L. Bopp, C. Jeandel, and G. Reverdin. 2 published, 3 accepted, 5 submitted, 11 to be submitted.
- A 2-week full course to 16 master students and miscellaneous professional colleagues from Rio

and Sao Paolo about oceanic cycles of TEIs and more specifically REEs & Nd isotopes by C. Jeandel (following an invitation of Pr V. Hatje (UFBahia, Brazil) and a SCOR travel support).

- Participation to the Salvador DMC & SSC meetings (C. Jeandel).
- Presentation EXploring the role of PARticles in Trace Element cycling in the central Arctic Ocean (Transarctic cruise, GEOTRACES GN04) during French programme LEFE meeting 2018, Bordeaux by Planquette et al.

### ***New publications (published or in press)***

Publications of which French investigators are leading authors or co-authors.

- Abadie, C., Lacan, F., Radic, A., Pradoux, C., and Poitrasson, F., 2017. Iron isotopes reveal distinct dissolved iron sources and pathways in the intermediate versus deep Southern Ocean. *Proceedings of the National Academy of Sciences* 114, 858-863.
- Bejannin, S., van Beek, P., Stieglitz, T., Souhaut, M., and Tamborski, J., 2017. Combining airborne thermal infrared images and radium isotopes to study submarine groundwater discharge along the French Mediterranean coastline. *Journal of Hydrology: Regional Studies* 13, 72-90.
- Benetti, M., Reverdin, G., Lique, C., Yashayaev, I., Holliday, N. P., Tynan, E., Torres-Valdes, S., Lherminier, P., Tréguer, P., and Sarthou, G., 2017. Composition of freshwater in the spring of 2014 on the southern Labrador shelf and slope. *Journal of Geophysical Research: Oceans* 122, 1102-1121.
- Cossa, D., Heimbürger, L. E., Pérez, F. F., García-Ibáñez, M. I., Sonke, J. E., Planquette, H., Lherminier, P., Boutorh, J., Cheize, M., Menzel Barraqueta, J. L., Shelley, R., and Sarthou, G., 2018a. Mercury distribution and transport in the North Atlantic Ocean along the GEOTRACES-GA01 transect. *Biogeosciences* 15, 2309-2323.
- Cossa, D., Heimbürger, L. E., Sonke, J. E., Planquette, H., Lherminier, P., García-Ibáñez, M. I., Pérez, F. F., and Sarthou, G., 2018b. Sources, cycling and transfer of mercury in the Labrador Sea (Geotraces-Geovide cruise). *Marine Chemistry* 198, 64-69.
- Ganachaud, A., Cravatte, S., Sprintall, J., Germineaud, C., Albery, M., Jeandel, C., Eldin, G., Metzl, N., Bonnet, S., Benavides, M., Heimbürger, L.-E., Lefèvre, J., Michael, S., Resing, J., Quérroué, F., Sarthou, G., M., R., Berthelot, H., Baurand, F., Grelet, J., Hasegawa, T., Kessler, W., Kilepak, M., Lacan, F., Privat, E., Send, U., Van Beek, P., Souhaut, M., and Sonke, J., 2017. The Solomon Sea: its circulation, chemistry, geochemistry and biology explored during two oceanographic cruises. *Elementa Science of the Anthropocene* doi.org/10.1525/elementa.221.
- Kipp, L. E., Sanial, V., Henderson, P. B., van Beek, P., Reyss, J.-L., Hammond, D. E., Moore, W. S., and Charette, M. A., 2018. Radium isotopes as tracers of hydrothermal inputs and neutrally buoyant plume dynamics in the deep ocean. *Marine Chemistry GEOTRACES Special Issue* 201, 51-65.
- Le Gland, G., Mémerly, L., Aumont, O., and Resplandy, L., 2017. Improving the inverse modeling of a trace isotope: how precisely can radium-228 fluxes toward the ocean and submarine groundwater discharge be estimated? *Biogeosciences* 14, 3171-3189.
- Le Roy, E., Sanial, V., Charette, M. A., van Beek, P., Lacan, F., Jacquet, S. H. M., Henderson, P. B., Souhaut, M., García-Ibáñez, M. I., Jeandel, C., Pérez, F. F., and Sarthou, G., 2017. The <sup>226</sup>Ra-Ba relationship in the North Atlantic during GEOTRACES-GA01. *Biogeosciences Discuss (Geovide Special Issue)*. 2017, 1-36.

- Lemaitre, N., Planquette, H., Planchon, F., Sarthou, G., Jacquet, S., García-Ibáñez, M. I., Gourain, A., Cheize, M., Monin, L., André, L., Laha, P., Terryn, H., and Dehairs, F., 2018. Particulate barium tracing of significant mesopelagic carbon remineralisation in the North Atlantic. *Biogeosciences* 15, 2289-2307.
- Louis, J., Gazeau, F., and Guieu, C., 2017a. Atmospheric nutrients in seawater under current and high pCO<sub>2</sub> conditions after Saharan dust deposition: Results from three minicosm experiments. *Prog. Oceanogr.* <https://doi.org/10.1016/j.pocean.2017.10.011>
- Louis, J., Guieu, C., and Gazeau, F., 2017b. Nutrient dynamics under different ocean acidification scenarios in a low nutrient low chlorophyll system: The Northwestern Mediterranean Sea. *Estuar. Coast. Shelf Sci.* 186, 30-44.
- Menzel Barraqueta, J. L., Schlosser, C., Planquette, H., Gourain, A., Cheize, M., Boutorh, J., Shelley, R., Pereira Contreira, L., Gledhill, M., Hopwood, M. J., Lherminier, P., Sarthou, G., and Achterberg, E. P., 2018. Aluminium in the North Atlantic Ocean and the Labrador Sea (GEOTRACES GA01 section): roles of continental inputs and biogenic particle removal. *Biogeosciences Discuss.* 2018, 1-28.
- Prestes, Y. O., Silva, A. C., and Jeandel, C., in press. Amazon water lenses and the influence of the North Brazil Current on the continental shelf. *Estuarine & Continental Shelf Research.*
- Sanial, V., Kipp, L. E., Henderson, P. B., van Beek, P., Reyss, J. L., Hammond, D. E., Hawco, N. J., Saito, M. A., Resing, J. A., Sedwick, P., Moore, W. S., and Charette, M. A., 2018. Radium-228 as a tracer of dissolved trace element inputs from the Peruvian continental margin. *Marine Chemistry GEOTRACES Special Issue* 201, 20-34.
- Shelley, R. U., Landing, W. M., Ussher, S. J., Planquette, H., and Sarthou, G., 2018. Regional trends in the fractional solubility of Fe and other metals from North Atlantic aerosols (GEOTRACES cruises GA01 and GA03) following a two-stage leach. *Biogeosciences* 15, 2271-2288.
- Shelley, R. U., Roca-Martí, M., Castrillejo, M., Sanial, V., Masqué, P., Landing, W. M., van Beek, P., Planquette, H., and Sarthou, G., 2017. Quantification of trace element atmospheric deposition fluxes to the Atlantic Ocean (>40°N; GEOVIDE, GEOTRACES GA01) during spring 2014. *Deep Sea Research Part I: Oceanographic Research Papers* 119, 34-49.
- Tonnard, M., Planquette, H., Bowie, A. R., van der Merwe, P., Gallinari, M., Desprez de Gésincourt, F., Germain, Y., Gourain, A., Benetti, M., Reverdin, G., Tréguer, P., Boutorh, J., Cheize, M., Menzel Barraqueta, J. L., Pereira-Contreira, L., Shelley, R., Lherminier, P., and Sarthou, G., 2018. Dissolved iron in the North Atlantic Ocean and Labrador Sea along the GEOVIDE section (GEOTRACES section GA01). *Biogeosciences Discuss.* 2018, 1-53.
- Zurbrick, C. M., Boyle, E. A., Kayser, R., Reuer, M. K., Wu, J., Planquette, H., Shelley, R., Boutorh, J., Cheize, M., Contreira, L., Menzel Barraqueta, J. L., and Sarthou, G., 2018. Dissolved Pb and Pb isotopes in the North Atlantic from the GEOVIDE transect (GEOTRACES GA-01) and their decadal evolution. *Biogeosciences Discuss.* 2018, 1-34.

### **PhD theses**

- Viet Pham (2017-2020) REE and Nd isotopes collected as part of PANDORA (GP12), LEGOS.
- Lise Artigue (2016-2019): Biogeochemical cycles in the Austral and Southern Ocean, studied with iron isotopes, LEGOS

- Emilie Le Roy (2016-Dec 2018) The distribution of natural radionuclides along the GA01-GEOTRACES section (GEOVIDE) in the N. Atlantic, LEGOS.
- Simon Bejannin (2016-2018) The fluxes of chemical elements associated with SGD (Submarine Groundwater Discharge) and transferred to the coastal seas, LEGOS.
- Houda Beghoura (2016-2019) Modelling the role of sedimentary particulate Fe, LOPS and LEMAR.
- Guillaume Le Gland (2014-2018) GEONAM (GEOtraces North Atlantic Modeling) <sup>228</sup>Ra and <sup>234</sup>Th, LEMAR and LOCEAN.
- Manon Tonnard, Iron biogeochemical cycle: distribution, speciation and co-impact on the phytoplankton growth in the North Atlantic and Southern Oceans, started in October 2015 (defense on 6 July 2018), LEMAR/UBO (Brest) and UTAS (Tasmania, Australia)
- David Gonzalez Santana, Impact des sources hydrothermales sur les cycles biogéochimiques des métaux traces (2017-2020), LEMAR
- Natasha Van Horsten, Seasonal characterization of Fe speciation in the Southern Ocean (Atlantic sector) (2017-2020), LEMAR and Stellenbosch University.

### ***Presentations in international conferences***

Presentation of which French investigators are leading authors or co-authors. |

- Artigue L., Lacan F., C. Pradoux. Iron isotopic fractionation by phytoplankton uptake off Kerguelen Islands. Goldschmidt Conference, Paris (France), Poster, August 2017.
- Artigue L., Lacan F., Pradoux C., Sarthou G., Iron isotopic insights into the iron cycle around the Kerguelen Islands, 2018, Ocean Sciences Meeting, 11-16 February.
- Benetti M., Reverdin G., Holliday N., Olafsdottir S., Lherminier P., Sarthou G., de Steur L., Sveinbjörnsdóttir A., Olafsson J., Freshwater fluxes between the Arctic Ocean and the North Atlantic from water stable isotopes: study of coastal currents and interior of the subpolar gyre, 2018, Ocean Sciences Meeting, 11-16 February
- Baker A., Sarin M, Duce R, Jickells T, Kanakidou M, Myriokefalitakis S., Ito A., Turner D, Mahowald N, Middag R, Guieu C, Gao Y, Croot P, Shelley R, Perron M, Changing Atmospheric Acidity and the Oceanic Solubility of Nutrients, EGU General Assembly Conference, 2017
- Bejannin S., Tamborski J., Souhaut M., Radakovitch O., Claude C., Stieglitz T., Crispi O., Pujo-Pay M., Conan P., Caparros J., Heimbürger L.-E., Petrova M., Le Roy E., Lacan F., van Beek P. Combining airborne thermal infrared images, radium isotopes and radon to study Submarine Groundwater Discharge along the French Mediterranean coastline (Cote Bleue). EGU, Vienna, Austria. Oral, April 2017.
- Boutorh J., G. Sarthou, A.G. Gonzalez, M. Cheize, H. Planquette, E. Bucciarelli, Mickaël Vaïtilingom, Laurent Deguillaume, Virginie Vinatier, Anne-Marie Delort, G. Mailhot, Iron Organic Complexation In Cloud Water Samples From The Puy De Dôme Station (France). ATMOCHEMPIO meeting (19-June 2017, Clermont-Ferrand)
- Bressac M., MJ Ellwood, M Fourquez, P Masqué, V Puigcorbé, S Jacquet, P G Stratton, T W Trull, T Wagener, C Guieu, P W Boyd, Mesopelagic Iron Remineralization Patterns in High-Latitude, Low-Iron and Low-Latitude, High-Iron Oceanic Regions, AGU, ASLO, Ocean Sciences Meeting, 11-16 Feb, 2018, Portland, USA (oral presentation)

- Cheize M., H. Planquette, D. Gonzalez-Santa, H. Whitby, A. Gourain, T. Holmes, V. Guyader, Y. Germain, M. Roudaut, C. Cathalot, G. Sarthou, E. Pelleter, Y. Fouquet, High resolution particulate trace metals dispersion from the TAG hydrothermal vent (Mid-Atlantic Ridge), 2018, Goldschmidt conference, Boston, August 12-17.
- Cheize M., A.C. Baudoux, E. Bucciarelli, A. Tagliabue, K. Desboeufs, A.R. Baker, G. Sarthou, A potential source of Fe binding organic ligands to the surface ocean from wet deposition. ATMOCHEMPIO meeting (19-June 2017, Clermont-Ferrand)
- Cheize M, Baudoux A-C, Bucciarelli E, Tagliabue A, Desboeufs K, Baker AR, Gonzalez GA, & Sarthou G, A Potential Source of Fe Binding Organic Ligands to the Surface Ocean from Wet Deposition, 2017, Goldschmidt conference, Paris, 13-18 August
- Desboeufs K, Doussin JF, Giorio C, Triquet S, Fu Y, Riffault V, Dulac F, Féron A, Formenti P, Maisonneuve F, Siour G, Zapf P and Guieu C, Overview of atmospheric composition in Western Mediterranean during PEACETIME cruise, EGU2018, General Assembly Conference Vienna (poster)
- Estrade N., S. Fabre, C. Cloquet, A. Probst and C. Jeandel Isotopic and modelling constraints on experimental dissolution of lithogenic material Intl Goldschmidt Conf. Paris, 2017 POSTER
- Fabre, S., Zambardi, T., Roustan, M., Almar, R. and Jeandel, C. (2017) Clastic coasts: an overlooked term of the geochemical Si cycle? Intl Goldschmidt Conf. Paris, 2017 POSTER.
- Gonzalez-Santana D., A. Lough, N. J. Wyatt, L. Artigue, M. C. Lohan, H. Planquette, G. Sarthou, dFe(II) variability across hydrothermal vents in the Mid Atlantic Ridge, 2018, Goldschmidt conference, Boston, August 12-17.
- Gonzalez AG, Sarthou G, Chever F, Bowie A, van der Merwe P, Cheize M, Sirois M, Bucciarelli E, Obernosterer I, Catala P & Blain S, The Impact of Fe and Cu on the Natural Phytoplankton Communities and on the Complexing Organic Ligand Pool Through Incubation Experiments at the Vicinity of Kerguelen Islands (Southern Ocean), 2017, Goldschmidt conference, Paris, 13-18 August
- Gourain A., P Salaun, A Tagliabue, S. van den Berg, J. Boutorh, M. Cheize, L. Pereira Contreira, P. Lherminier, J.-L. M. Barraqueta, H. Planquette, G. Sarthou and R. Shelley, Speciation of dissolved copper in North Atlantic along the GEOTRACES GA01 section, 2018, Ocean Sciences Meeting, 11-16 February
- Gourain A, Salaun P, Tagliabue A, Vanden Berg C, Boutorh J, Cheize M, Contreira-Pereira L, Lherminier P, Menzel J-L, Sarthou G & Shelley R, Organic Complexation of Copper along the GEOTRACES GA01 Section, 2017, Goldschmidt conference, Paris, 13-18 August
- Guieu C., Desboeufs K. and the PEACETIME team, ProcEss studies at the Air-sEa Interface after dust deposition in the MEditerranean sea: results from the PEAcEtIME project, EGU General Assembly Conference 2018, Vienna (oral presentation)
- Jeandel, C. Revisiting the land-ocean fluxes (REE and Nd isotope contribution) Invited Seminar at Univ. Federal do Bahia, July 6th, 2017, invited
- Jeandel, C. Which oceanic tracers are the Rare Earths and the Nd isotopes? Invited talk (opening session) at the IUPAC Intl Conf., Sao Paolo, July 10th, 2017, invited
- Lacan F., Pradoux C., Chmeleff J. Interferences and matrix effects during  $^{57}\text{Fe}$ - $^{58}\text{Fe}$  double spike iron isotope MC-ICPMS measurements. Goldschmidt Conference, Paris (France), Poster, August 2017.

- Le Roy E., Sanial V., Charette M., Henderson P., Jacquet S., Garcia-Ibanez M., Perez F., Lherminier P., Souhaut M., Jeandel C., Lacan F., van Beek P. Radium-226 and barium as tracers of water masses in the North Atlantic (GA01-GEOTRACES). EGU, Vienna, Austria. Poster, April 2017.
- Le Roy E., Sanial V., Charette M.A., Henderson P.B., Lacan F., Garcíal-ibáñez M.I., Pérez F.F., Jacquet S.H.M., Lherminier P., Souhaut M., Jeandel C. & van Beek P. Distribution of radium-226 along the GA01-GEOTRACES section in the North Atlantic, Goldschmidt Conference, Paris (France), Oral, August 2017.
- Lemaitre N, Planquette H, Dehairs F, Sarthou G, Bollinger C, Jeandel C, Castrillejo M & Planchon F, Particulate Trace Element Export in the North Atlantic (GA01 Transect), 2017, Goldschmidt conference, Paris, 13-18 August
- Michael S., Resing J., Lacan F., Pradoux C., Jeandel C. Using Aluminum and Manganese to Constrain the Contribution of the Solomon Sea to the Equatorial Undercurrent Trace Metal Pool. Goldschmidt Conference, Paris (France), Oral, August 2017.
- Nicosia A., D. Picard, P. Villani, R. Dupuy, B. D'Anna, M. D. Mallet, S. Mas, M. Peltola, M. Bloss, E. Freney, P. Amato, F. Belosi, G. Santachiara, M. Rinaldi, D. Lefevre, K. Desboeufs, C. Guieu, K. Sellegri, Ice nucleating properties of primary marine aerosols observed from an Arctic and a Mediterranean field campaign, EGU2018, General Assembly Conference Vienna (oral presentation)
- Nicholas S. L, D. Ceburnis, M. Marcus, M. Iris Heller, H. Planquette, G. Sarthou, and P. L Croot,  $\mu$ XAS Speciation of Iron in Anthropogenic and Natural Aerosol Particles Entering the Irish Shelf at Mace Head, 2018, Ocean Sciences Meeting, 11-16 February
- Pham V, Jeandel C., Belhadj M, Nachez Y & Grenier M. Land-Ocean Processes Traced by Rare Earth Elements in the Solomon Seas (Pandora, GEOTRACES Cruise GP#12) 2017, Goldschmidt conference, Paris, 13-18 August
- Tachikawa, K., 2017. The large-scale evolution of neodymium isotopic composition in the global modern and Holocene ocean revealed from seawater and archive data. PAGES-OSM ID: 01984, 12, Zaragoza, Spain, 9-13 May 2017. Invited talk.
- Tonnard M, Gonzalez AG, Whitby H, Bowie AR, van der Merwe P, Planquette H, Boutorh J, Cheize M, Menzel J-L, Pereira Contreira L, Shelley R & Sarthou G, Iron-Binding Ligands in the North Atlantic Ocean and Labrador Sea along the GEOVIDE Section (GEOTRACES GA01), 2017, Goldschmidt conference, Paris, 13-18 August
- van Beek P, Tamborski J, Bejannin S, Petrova M, Souhaut M, Lacan F, Stieglitz T, Radakovitch O, Claude C, Pujo-Pay M, Conan P, Crispi O, Garcia-Orellana J & Heimbürger L-E. Study of the Chemical Fluxes Associated with SGD in Several Hotspots along the French Mediterranean Coastline. Goldschmidt Conference, Paris (France), Poster, August 2017.
- van Beek P., Tamborski J., Bejannin S., Souhaut M., Garcia-Orellana J., Stieglitz T., Claude C., Olivier R., Lacan F., Crispi O., Pujo-Pay M., Conan P., Caparros J., Guéneuguès A., Monnin C., Seidel J.-L., Anschutz P. Estimating groundwater discharge in the coastal lagoons of La Palme and Salses-Leucate along the French Mediterranean coastline by using radium isotopes. EGU, Vienna, Austria. Poster, April 2017.
- Whitby H., H. Planquette, M. Cheize, J.-L. Menzel-Barraquetta, R. Shelley, J. boutorh, L. Pereira, A. Gonzalez, M. Tonnard, E. Bucciarelli, G. Sarthou, Iron-binding humic substances along the GEOVIDE transect in the North Atlantic (GEOTRACES, GA01, 2014), 2018, Ocean Sciences Meeting, 11-16 February



- Yeghicheyan D, Aubert D, Bouhnik-Le Coz M, Chmeleff J, Delpoux S, Djouraev I, Granier G, Lacan F, Piro J-L, Rousseau T, Cloquet C, Marquet A, Menniti C, Pradoux C, Freydier R, Vieira da Silva-Filho E & Suchorski K. A New Compilation of Element Concentrations in the Natural River Water Standard SLRS-6 (NRC-Cnrc). Goldschmidt Conference, Paris (France), Poster, August 2017.
- Yinghe Fu, Triquet S, Doussin JF, Giorio C, Dulac F, Maisonneuve F, Zapf P, Feron A, Tovar-Sánchez A, Bressac M, Guieu C, and Desboeufs K, Trace metals and nutrients fluxes and solubility during the PEACETIME cruise of May-June 2017 in the western and central Mediterranean, EGU2018, General Assembly Conference Vienna Vienna (poster)

Submitted by Kazuyo Tachikawa (kazuyo@cerege.fr).