



April 2015

See You in Southampton!



Meet us at Ocean Business (14-16 April) and let us help you with your scientific instrument needs. We

will be in Stand A23 with a live demonstration of an Imaging FlowCytobot (**IFCB**) and will showcase a continuous stream of IFCB images from local water. Director of Special Projects Ivory Engstrom and our UK sales representative Ocean Instruments can answer your questions about recent **ESP** and **IFCB** deployments and other news on our **profilers**, **samplers**, and **flotation**.

We will also display a **RAS-500**, and share details about the new **WTSLV Dual Filter** sampler. We hope you will visit and tell us about your recent deployments. **Contact us** for more details.

Sediment Traps in Iron Fertilization Study

National Oceanography Centre (NOC) Southampton, and a collaborative research team, deployed three **Sediment Traps** in the Southern Ocean to

Come and see us at:



See our live **IFCB** demonstration in Stand A23 and view streaming data collected from a local water sample. Our team will also have a **RAS-500** on display and can answer your questions throughout the conference.

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capture and store sinking phytoplankton and shelled organisms following a phytoplankton bloom. The deployment was part of CROZEX, a North American Electric Reliability Corporation (NERC) funded core research program.



Photo: R. Lampitt, NOC

Samples from the one year deployment allowed a team of international collaborators to quantify production and sinking of calcium carbonate shells. Through this data, scientists discovered that iron fertilization significantly promotes the growth of shelled organisms that feed on phytoplankton.

The recently published study in Nature Geoscience revealed that iron fertilization of the Southern Ocean might be less efficient for deep-ocean carbon dioxide than previously believed. According to the study's lead author Dr. Ian Salter, a biogeochemist, "In our samples from iron fertilized areas, we found more species that produce larger calcium carbonate shells and in turn produce more carbon dioxide per individual".

The Sediment Trap collects the flux of settling particles in 21 or 13 individual samples of 500mL and 250mL. Sampling is pre-programmed or triggered from an on-shore device.

ESP Samples Show Temporal Dynamics of Microbial Populations



ESP on the Deck

Environmental Sample Processor (ESP) sampling techniques are making it possible to analyze not only the individual activities of microbial populations but also the temporal dynamics that define their ecological niches. Through the ESP in situ collection, the

dynamics of these microbial assemblies can be further studied. Study results, including those published in PNAS February 2015, suggest that a variety of biogeochemical transformations may be temporally predictable and governed by structured ecological determinants.

The ESP is an in situ laboratory that collects and concentrates microorganisms of particulates from discrete water samples and automates the application of molecular probes to identify target species or toxins. See our website for more information about the ESP and other McLane profilers, samplers, or flotation.



WTS-LV Training

Sam Vohsen of Pennsylvania State University gets ready for a spring cruise with WTS-LV training. The sampler will be deployed in the Gulf of Mexico in collaboration with MPI-Breman, Germany.

Prepare for your upcoming cruise with instrument training at McLane. Training at our facility is included with an instrument purchase.

Contact us if we can help with your training needs.

Prepare for Summer Deployments

The summer deployment season is coming! Plan now for your flotation needs. Our glass flotation modules are reliable and durable provided they receive regular maintenance. Replacement protective hard hats and padding are available. Let us know if you have questions about re-deploying glass. Our experts can tell you how to inspect your spheres to ensure a successful deployment.



G8800 Flotation Module

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