

New Exploration Vessel Starts Collecting Arctic Ocean Data with FerryBox Onboard



Seawater sensor and measuring system manufacturer -4H-JENA engineering's FerryBox, a multi-parameter water measurement system, is now being used to evaluate the role of global warming and glacial meltwater on the rising level of oxygen in the oceans aboard Ponant's *Le Commandant Charcot*, one of the world's few luxury icebreakers, a hybrid-electric vessel powered by liquified natural gas.

A unique concept with minimal environmental impact due to her green energy and propulsion systems, *Le Commandant Charcot* provides a luxurious environment for guests seeking adventure away from the traditional cruise destinations in addition to providing extensive facilities for scientific projects with two research laboratories, one of which is open to the sea.

Bioproductivity and the Concentration Distribution of CO₂

Installed this spring by [-4H-JENA](#) engineering technicians in Cherbourg, France, measurement parameters for *Le Commandant Charcot's* FerryBox include basics such as temperature, salinity and sound velocity, in addition to measurements that determine the concentration of dissolved oxygen and CO₂, which provides insight into bioproductivity and the concentration distribution of CO₂. The latter is especially important to the study of global warming, ocean acidification and the CO₂ absorption function of the oceans.

With her inaugural Arctic voyage starting early in June and a sell-out 2022 season ahead, *Le Commandant Charcot's* dual exploration voyage and scientific research approach is paying off. While guests get to reach the geographical North Pole and go kayaking on pristine waters, they can also participate through workshops and seminars hosted by the scientists onboard who are conducting important research, which in addition to projects using FerryBox data includes the study of ocean plastic pollution and analysis of humpback whale behaviour.

"There is relatively little ocean data from the Arctic and Antarctic available, but with FerryBox alongside the laboratory facilities and other scientific sensors and equipment aboard *Le Commandant Charcot*, we plan to change that," said [Ponant](#) science programme coordinator, Vladislav Sidorenkov-Duprez. "*Le Commandant Charcot's* itinerary takes FerryBox further north than the current highest FerryBox installation in Svalbard, allowing us to extend the geographical scope for autonomous water measurements even further using a solution that we can rely on to deliver accurate readings in any conditions."



Le Commandant Charcot. (Courtesy: Ponant, Mike Louagie)