

Transarctic 2024: 20 Scientists on Board *Le Commandant Charcot* to Study Climate Change



11 December 2024 | As part of the PONANT Science programme, the project embarked 20 researchers from seven nationalities for the first ever crossing of the Arctic Ocean from west to east. Aboard *Le Commandant Charcot*, multi-disciplinary missions were undertaken to study the impacts of global warming on this polar region which is changing rapidly alongside cruise guests.

Through the PONANT Science programme, six research teams embarked alongside guests on the high polar exploration vessel *Le Commandant Charcot*. Researchers from several scientific institutions including IPS¹, AWI² and JAMSTEC³ came together in September for the first ever west to east crossing of the Arctic Ocean, a journey of 6,400 km between Alaska and Spitsbergen as part of the CHARCOT⁴ project.

Specifically designed for expeditions to extreme environments, *Le Commandant Charcot*, the world's only luxury icebreaker, has a Polar Class 2 hull that enables the ship to navigate in polar regions, while her hybrid electric propulsion powered by

¹ Institute of Polar Science (Italy)

² Alfred Wegener Institute (Germany)

³ Japan Agency for Marine-Earth Science and Technology

⁴ CHanging ARctic passing thrOUGH The North Pole

liquefied natural gas (LNG) helps minimise her impact on the environment. The vessel has two laboratories (dry and wet) equipped to collect and analyse water, ice and air samples. A new SIMS (Sea Ice Monitoring Station) antenna is constantly measuring the thickness of the ice.

“This large-scale multi-disciplinary operation brought together 20 scientists of seven nationalities from 11 universities and institutes, leading six missions in fields such as the carbon cycle, the physics and biogeochemistry of the Arctic Ocean, ecosystem functions and microplastics. It was a real challenge to coordinate all the different types of samples, at all times of the day and night, and adapt to unknown ice conditions,” explains Daniel Cron, Scientific Coordinator of the PONANT Science programme.

On board, scientists shared their knowledge and experience during talks and podcasts organised as part of the "Science Talks". Those enriching exchanges allowed the guests to actively participate, in particular by witnessing samples being taken from the ice pack. The programme included seven scientific talks translated in English, French and Chinese, five round tables, and two film projections followed by questions and answers sessions.



**TRANSARCTIC
EXPEDITION,
STUDYING CLIMATE CHANGE**

AT THE EDGE OF THE WORLD

The goal of this specific transect is to get through

Discover the PONANT Science’s CHARCOT project in images

PONANT Science programme expands itself.

The PONANT EXPLORATIONS Group is committed to eventually making all its ships accessible for scientific research. In 2024, three more ships embarked research teams: *L'Austral* and *Le Soléal* in the Antarctic and the *m/s Paul Gauguin* in Polynesia. In 2025, a total of five ships will welcome researchers and provide them with suitable spaces and equipment. In addition, three research projects will be directly financed by PONANT Science. The Group makes the data that is continuously being recorded available in open source for research centres that request it. An independent committee of scientific experts from scientific consortia assesses all applications and recommends the most appropriate projects.

The scientific research project in polar environments continues with POLARIN⁵. Established as a broader initiative, with transnational access to polar research infrastructures, *Le Commandant Charcot* has been made available until 2029 to facilitate interdisciplinary research into complex processes.

More details on the PONANT Science programme and the selection process are available in the Group's [activity report](#).

ABOUT PONANT EXPLORATIONS GROUP

Explore to Inspire: explore to better understand, learn, share and protect. PONANT EXPLORATIONS Group has been committed to more responsible tourism, and purposeful voyages of exploration for over 35 years. Aboard a fleet of 14 French-flagged small ships, fitted with the latest environmental technologies, the journey of exploration is always elegant, authentic and inspiring. For more information www.ponant.com

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⁵ Polar Research Infrastructure Network