

## NOTIFICATION OF PROPOSED RESEARCH CRUISE

### PART A: GENERAL

1. NAME OF RESEARCH SHIP : "Le Commandant Charcot"

2. DATES OF CRUISE: 11<sup>th</sup> September – 12<sup>th</sup> October 2023

3. OPERATING AUTHORITY: PONANT

TELEPHONE: +47 23411080 / +881 677 105 461

TELEFAX: N/A

TELEX: N/A

4. OWNER (if different from no. 3)

5. PARTICULARS OF SHIP:

Name: "Le Commandant Charcot"  
Nationality: French  
Overall length: 149.9 m  
Maximum draught: 10.2 m  
Net tonnage: 9384  
Propulsion e.g. diesel/steam: diesel - LNG  
Call sign: FMNB  
Registration port and number (if registered fishing vessel)

6. CREW

Name of master: Captain Etienne Garcia and/or Captain Patrick Marchesseau

Number of crew: 216

7. SCIENTIFIC PERSONNEL

Dr. Florian Koch  
Am Handelshafen 12  
27570 Bremerhaven  
Germany  
+49-471-4831-1136  
florian.koch@awi.de  
No. of scientists: 4

8. GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to latitude and longitude)

Waters west of Iceland (Faxaflói, Irminger Sea: 60 – 65°N, 23 – 34°W)

9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE

The project “Assessing Impacts of **Phytoplankton Community Changes** in two climate-sensitive **Arctic Ecosystems (PhytoChAOs)**” aims at the investigation of phycotoxins and their producers in the Arctic. Furthermore, the influence of melting glaciers and thawing permafrost on phytoplankton communities and the trophic transfer of phycotoxins are part of the study.

10. DATES AND NAMES OF INTENDED PORTS OF CALL

Reykjavik – Iceland September 11<sup>th</sup> 2023  
Nome – Alaska, USA on October 05<sup>th</sup> 2023  
Seattle – Washington, USA on October 12<sup>th</sup> 2023  
No calls in Greenland and Canada

11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL NOTIFICATION OF PROPOSED RESEARCH CRUISE

No

## PART B: DETAILS

1. NAME OF RESEARCH SHIP: "Le Commandant Charcot"  
CRUISE NO. CC110923

2. DATES OF CRUISE : 11<sup>th</sup> September – 12<sup>th</sup> October 2023

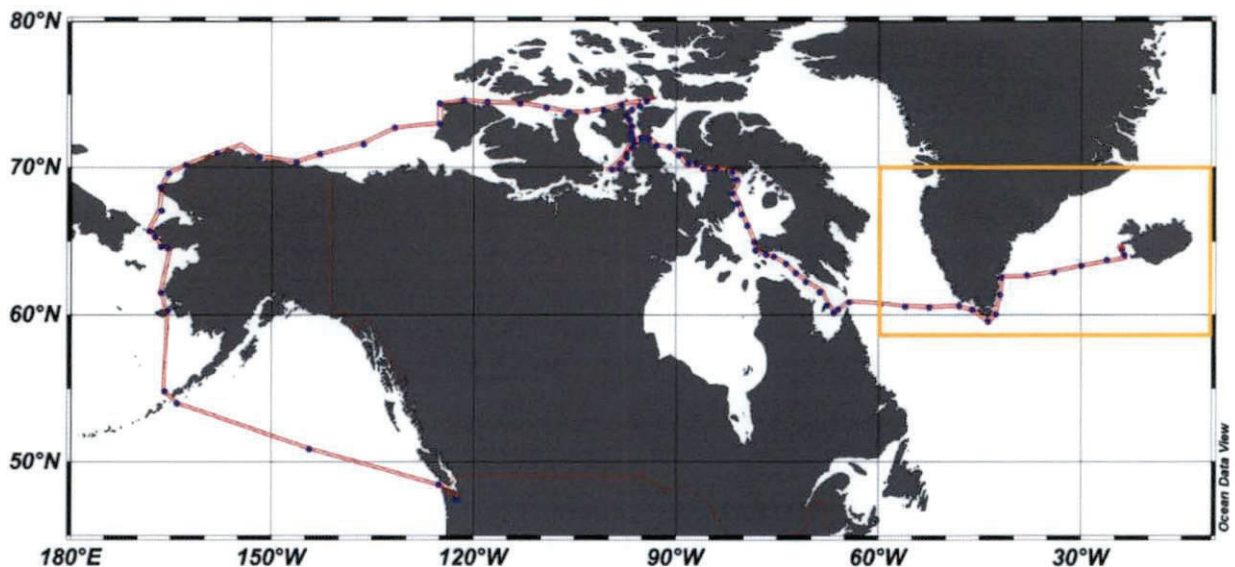
3. a) PURPOSE OF RESEARCH

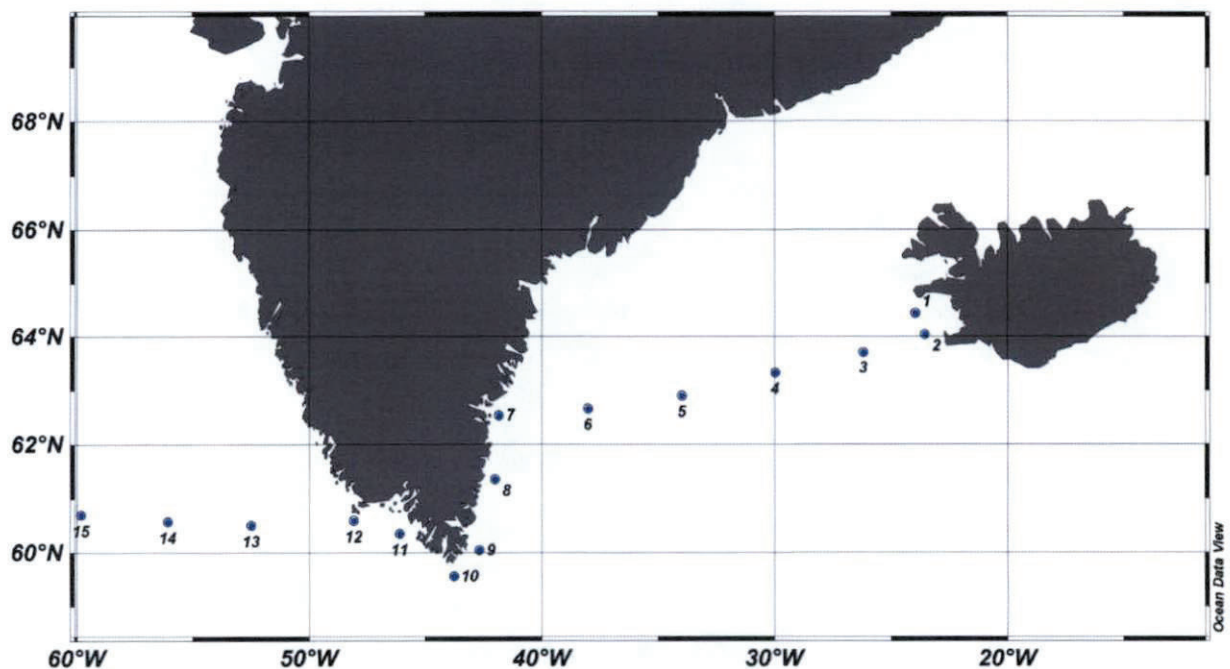
Sampling of phytoplankton for taxonomic and toxinological description, sampling of zooplankton for toxin-transfer analysis, collection of seawater and meltwater for on-board experiments, sampling of sea water for oceanographic parameters.

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

Phytoplankton sampling by phytoplankton net tows (40 cm diameter, 20 µm mesh), zooplankton sampling by zooplankton net tows (57 cm diameter, 200 µm mesh), water sampling by Niskin bottles (8 L), underway sampling for phytoplankton and associated toxins using Solid Phase Adsorption Toxin Tracking (SPATT) bags and the ships seawater system.

4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished





5. a) TYPES OF SAMPLES REQUIRE (e.g., geological/water/plankton/fish/radionuclide)

Seawater samples, phytoplankton samples, zooplankton samples, meltwater samples

b) METHODS OF OBTAINING SAMPLES (e.g., dredging/coring/drilling/fishing, etc.  
When using fishing gear, indicate fish stocks being worked, quantity of each species required, and quantity of fish to be retained- on board).

Phytoplankton samples by net tows (40 cm diameter, 20 µm mesh), zooplankton samples by net tows (57 cm diameter, 200 µm mesh), seawater samples by Niskin bottles (8 L), meltwater samples by bucket/bottle

6. DETAILS OF MOORED EQUIPMENT

N/A

7. ANY HAZARDOUS MATERIALS (chemicals/explosives/gasses/radioactives, etc.)  
(Use separate sheet if necessary)

N/A

a) Type and trade name

N/A

b) Chemical content (and formula)

N/A



c) IMO IMDG code (reference and UN no.)

N/A

d) Quantity and method of storage on board

N/A

e) If explosives give dates of detonation

- Method of detonation
- Position of detonation
- Position of detonation
- Frequency of detonation
- Depth of detonation
- Size of explosive charge in kg.

## 8. DETAIL AND REFERENCE OF

a) Any relevant previous/future cruises

2022: MV Le Commandant Charcot, cruise O030622 "ReHaDiCC"

b) Any previously published research data relating to the proposed cruise

Florian Koch, Amanda Burson, Ying Zhang Tang, Jackie L. Collier, Nicholas S. Fisher, Sergio Sañudo-Wilhelmy, and Christopher J. Gobler. 2014. "Alteration of Plankton Communities and Biogeochemical Cycles by Harmful *Cochlodinium Polykrikoides* (Dinophyceae) Blooms." *Harmful Algae* 33: 41–54.  
<https://doi.org/10.1016/j.hal.2014.01.003>.

Florian Koch, Maria Alejandra Marcoval, Caterina Panzeca, Kenneth W. Bruland, Sergio A. Sañudo-Wilhelmy, and Christopher J. Gobler. 2011. "The Effect of Vitamin B<sub>12</sub> on Phytoplankton Growth and Community Structure in the Gulf of Alaska." *Limnology and Oceanography* 56 (3): 1023–34. <https://doi.org/10.4319/llo.2011.56.3.1023>.

Florian Koch, Sergio A. Sañudo-Wilhelmy, Nicholas S. Fisher, and Christopher J. Gobler. 2013. "Effect of Vitamins B<sub>1</sub> and B<sub>12</sub> on Bloom Dynamics of the Harmful Brown Tide Alga, *Aureococcus Anophagefferens* (Pelagophyceae)." *Limnology and Oceanography* 58 (5): 1761–74. <https://doi.org/10.4319/llo.2013.58.5.1761>.

Bernd Krock, Fuat Dursun, Simon Tulatz. 2022. "Domoic Acid and its Isomers in Arctic and Sub-Arctic Areas" Conference poster at "The Future of Research Infrastructure in the Arctic", Brussels, Belgium, 27.10.2022

## 9. NAMES AND ADDRESSES OF SCIENTISTS OF THE COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE

Dr. Sara Harðardóttir

Researcher - Phytoplankton specialist  
Marine and Freshwater Research Institute  
Fornubúðum 5,  
220 Hafnarfjörður  
Iceland  
Telephone + 354 893 5909

## 10. STATE

a) Whether visits to the ship in port by scientists of the coastal state concerned will be acceptable

Yes

b) Participation of an observer from the coastal state for any part of the cruise together with the dates and the ports for embarkation and disembarkation

possible at port, but not possible during the cruises (no place available).

embarkation at Reykjavík (11/09/2023)

disembarkation at Seattle (12/10/2023)

c) When research data from the intended cruise are likely to be made available to the coastal state and by what means

If relevant, data and findings of the cruise will be published in international, scientific, peer-reviewed journals and at international conferences. As the project is part of a doctoral dissertation, results will be published within the next three years. Furthermore, all cruise data will be made available through the German research portal [www.pangaea.de](http://www.pangaea.de).

All generated data can be shared with the Marine and Freshwater Research institute of Iceland.

PART C. SCIENTIFIC EQUIPMENT

Complete the following table  
using a separate page for  
each coastal

state Coastal state: Iceland

Port of call: Reykjavik

Dates: 11/09/2023

Indicate "YES" or "NO"

|   |  |  |  | distance    | from the        | Coast             |
|---|--|--|--|-------------|-----------------|-------------------|
| <u>List scientific work by function</u><br>e.g.                       | Water column including sediment sampling of the seabed | Fisheries research within fishing limits | Research concerning the natural resources of the continental shelf or its physical characteristics | Within 3 nm | between 3-12 nm | between 12-200 nm |
| Phytoplankton sampling with net tows from 30 m depth to surface       | Yes  | No                                       | No   | Yes         | Yes             | Yes               |
| Zooplankton sampling with net tows from 30 m depth to surface         | Yes  | No                                       | No   | Yes         | Yes             | Yes               |
| Water sampling with Niskin bottles from 30, 10 and 0 m depths         | Yes  | No                                       | No   | Yes         | Yes             | Yes               |
| Meltwater sampling  | Yes  | No                                       | No   | Yes         | No              | No                |
| Underway measurements, pumping of surface water (thermosalinograph)   | Yes  | No                                       | No   | Yes         | Yes             | Yes               |
| Underway samples for phytoplankton and associated toxins (SPATT bags) | Yes  | No                                       | No   | Yes         | Yes             | Yes               |

Bjela König

Dated 08.03.2023

(on behalf of the Principal Scientist)



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Helmholtz-Zentrum für  
Polar- und Meeresforschung  
Logistik und Forschungsplattformen  
Am Alten Hafen 26  
27568 Bremerhaven

NB IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED, THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY