

A tentative cruise schedule and planned main missions of R/V Mirai 2023 Arctic cruise

Target area: Pacific Arctic Region (Beaufort, Chukchi, and northern Bering seas) (Figure 1)

Tentative cruise plan:	August 24, 2023	<u>Embarkation #1 at Shimizu, JAPAN</u>
	August 25, 2023	Departure from Shimizu, JAPAN
	September 03, 2023	Arrival at Dutch Harbor (DH), AK, USA
	September 04, 2023	<u>Embarkation #2 at DH</u>
	September 05, 2023	Departure from DH
	October 04	Arrival and <u>disembarkation</u> at DH

* Note that you can choose embarkation port, Shimzu (JAPAN) or DH (AK, USA).

* All participants are to disembark at DH.

Main mission of R/V Mirai 2023 Arctic cruise:

- The purpose of the main missions are 1) hydrographic observation and monitoring in the Pacific Arctic Region (PAR: Beaufort, Chukchi, and northern Bering seas) including DBO observation lines, 2) recovery and deployment of sediment trap mooring to understand the changes in the marine environment and ecosystems associated with seasonal/interannual changes of sea ice and 3) sea trial in the Arctic Ocean for a development of under-ice drone. For the above purposes, we will conduct,
 - CTD/water sampling (for temperature, salinity, DO, nutrients, and so on),
 - Surface water monitoring (for temperature, salinity, DO, nutrients, and so on)
 - General meteorological observation for the cruise,
 - Recovery and deployment of sediment trap mooring at Beaufort Sea
 - Field trial of under-ice drone at ice-edge area

- ✓ This Call for Proposals invites proposals for embarkation that can be conducted jointly or in collaboration with the above-mentioned activities, or new embarkation/non-embarkation proposals that can be implemented.
- ✓ Kindly note that R/V Mirai is not ice-breaker, so that observations cannot be made within the sea ice area. We plan to have observation in ice-free and ice-edge areas.
- ✓ Kindly note that deployments of gliders, moorings, buoys, and any other equipment to be deployed in the sea or at sea are basically possible but must be discussed with us. Please be sure to include the detailed information in your application.
- ✓ No bottom sediment sampling using piston corer will be conducted during this cruise.

Principal investigator: Dr. Amane Fujiwara (JAMSTEC)

Research scientists to be onboard for the main mission:

Drs. Mariko Hatta, Jonaotaro Onodera, and totally 24 members
(Including ice pilot, bear watcher, and observation support staffs)

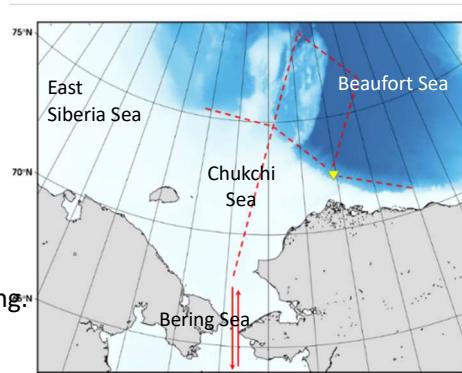


Figure 1. Tentative cruise plan (red dotted line)

Note that yellow triangle shows the location of sediment trap mooring.