

Application guidelines for research and observation proposal from Early Career Scientists using R/V Mirai 2023 Arctic cruise

1. Overview of the application process

In accordance with the objectives of the [Arctic Challenge for Sustainability II \(ArCS II\) project](https://www.nipr.ac.jp/arcs2/e/); <https://www.nipr.ac.jp/arcs2/e/>), especially for Priority Subject 1. “Capacity Building and Research Promotion”, **Early Career Scientists (ECS) from not only Japan but also other countries are invited to apply for a research and observation plan using the research vessel MIRAI (R/V Mirai) Arctic cruise to be conducted from August to October 2023.**

- Tentative cruise plan of R/V Mirai 2023 Arctic cruise
 - ✓ Target area: Pacific Arctic region (PAR)
(Beaufort, Chukchi, and northern Bering seas)
 - ✓ Tentative cruise plan:
 - Aug. 25, 2023 Departure from Shimizu, Japan
 - Sept. 03, 2023 Arrival at Dutch Harbor (DH), AK, USA
 - Sept. 05, 2023 Departure from DH
(Research and observation in the PAR)
 - Oct. 04, 2023 Arrival and Disembarkation at DH,
 - ✓ This call for ECS’s proposal will provide **beds for approximately 20 people**. In addition, we will accept your proposal which is **non-boarding observation** during the cruise.
 - ✓ Note that the details of this cruise are described in [Appendix 1](#).

2. Application Requirements

- **Graduate students** affiliated with a university in Japan or other countries.
- **Early Career scientists** affiliated with universities or research institutes in Japan or other countries. Note that research scientists should be within 7 years of obtaining their Ph.D. or younger than 40 years old (as of April 1, 2023).

3. Application process

- **Fill out the following Google Form**, <https://forms.gle/pkw5TecuffnYEybG9>

Kindly note that the following items must be completed on the form.

< Information about the applicant >

- Name of the applicant
- Age (as of April 1, 2023)
- Position and affiliation of the applicant
- Title of Doctoral Dissertation (If you are a graduate student, please indicate the title of the research you are now conducting.)
- Previous experiences on-board R/V Mirai or other research vessels/icebreakers (up to 3)
- What kinds of observation/research did you conduct on the previous cruises?
- Name of reference person (name, affiliation, e-mail address) who can be asked about your thesis or postdoctoral research theme.

< Proposed research and observation plan for R/V Mirai 2023 Arctic cruise >

- Title of the proposal
- To be On-board or Off-board
- Desired number of persons on board for your proposed observation

- Minimum number of persons on board for your proposed observation
- **Finally, please upload your completed application form to the above Google form.**

The application form (WORD document file) can be downloaded from the following site,

https://fbox.jamstec.go.jp/public/LndwwAEOmYAAoiABRtWCCcf755THFnzo8aiYei_7j1Xh

Kindly note that the following items must be completed on the application form (WORD document).

- Name of the applicant
- Age (as of April 1, 2023)
- To be On-board or Off-board
- The number of persons on board (desired number and minimum number)
- Name, Affiliation, and embarkation place on board
- Research background
- The scientific purpose of this proposal
- Proposed research activities and method on R/V Mirai
- Expected scientific outputs and outcomes
- Laboratory and instruments available on R/V Mirai, which you wish to use
- Observation instruments you wish to bring on board
- Which port would you like to bring your observation instruments to?
- References

Also, note that all descriptions of your proposal document should be no longer than two pages.

4. Deadline for the application

12:00 UT on October 20, 2022 (21:00 JST on Oct. 20, 2022)

5. Review of the application and cruise planning meeting

- Review process

The application will be reviewed by members of the review committee which consists of the principal investigator of this cruise and some of the researchers who have experience with the Arctic Ocean cruise. The review will be conducted from the perspectives of 1) the scientific importance of the plan, 2) the feasibility of the observation plan, 3) expected results/outcomes, 4) national and international collaboration, etc. Note that, even if the research plan is appropriate, it may be rejected or the R/V Mirai 2024 Arctic cruise may be considered for implementation due to conflicts with other research applications, the number of people on board, or the spread of infectious diseases such as COVID-19.

** Kindly note that personal information provided in the applications will be treated with the utmost care. The submitted applications will not be disclosed and will be used only for this review.*

- Notification of Review Results

Applicants will be notified of the review results by late-October 2022. With respect to the successful applicants, their names, affiliations, and titles of the proposal will be made public in the ArCS II website.

- The first cruise planning meeting

The first cruise planning meeting (hybrid style: on-site and zoom meetings) will be scheduled in early November for the applicants and related persons involved in the implementation of this cruise. At the meeting, all of the accepted applicants will introduce the observation plan.

Note that we will confirm some of the necessary processes to be onboard or to use R/V Mirai, such as required submitted documents to be onboard, data management pledges, etc.

6. Contact

JAMSTEC ArCS II support office (e-mail: arcs2_jamstec@jamstec.go.jp)
at the Institute of Arctic Climate and Environment research, Research Institute for Global Change,
Japan Agency for Marine-Earth Science and Technology (IACE/RIGC/JAMSTEC)

7. Remarks

- ✓ The details of a tentative cruise schedule and planned main missions of this cruise are described in Appendix 1. This Call for Proposals invites proposals for embarkation that can be conducted jointly or in collaboration with the main mission activities, or new embarkation/non-embarkation proposals that can be implemented.
- ✓ Kindly note that R/V Mirai is not an ice-breaker so observations cannot be made within the sea ice area. We plan to have observations 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 detailed information in your application.
- ✓ No bottom sediment sampling using piston corer will be conducted during this cruise.
- ✓ Accepted applicants will be responsible for their own expenses (travel, transportation, meals and linens on board, etc.). At this moment, the estimated costs of meals and lines for the cruise are about 66,000 Japanese yen from Shimizu (Aug.24) to Dutch Harbor (Oct.4) and about 46,000 Japanese yen (approximately 330 USD/EURO) from Dutch Harbor (Sept.4) to Dutch Harbor (Oct. 4) (Here, we assume the exchange ratio of Japanese yen to USD (EURO) to be 140 Japanese yen per 1 USD (EURO)).
Kindly note that we plan to apply to the IASC budget and other sources to support travel expenses for a few researchers. The results will be informed later.
Participants under this call will not be asked to bear any expenses related to the operation of R/V MIRAI.
- ✓ Please find Appendix 2 for the laboratories and instruments available/prepared for use onboard R/V Mirai. Please feel free to contact us for details of these instruments.
- ✓ Kindly note that the plan of the R/V Mirai 2023 Arctic cruise may be changed, shortened, or cancelled due to unavoidable circumstances such as the COVID-19 infection situation, rising costs associated with changes in social conditions, weather and sea conditions, etc.
- ✓ Upon embarkation, all participants are required to comply with the COVID-19 Criteria for Embarkation and Visiting Vessels (Appendix 3-6) for avoiding the spread of COVID-19 infection, including usual health care before embarkation. Note that the requirements are subject to change depending on the infection situation.
- ✓ Regarding the handling of data and samples and the results obtained from them, the "Handling of Data and Samples from Joint-Use Research Voyages" or the "Handbook for Handling Data and Samples (JAMSTEC's Research Voyages)" will be applied. Details will be presented at the first cruise planning meeting. Those who are accepted for this call will be asked to submit a written pledge regarding the handling of data and samples at a later date.

- ✓ Please do not hesitate to contact us (e-mail: arcs2_jamstec@jamstec.go.jp), if you have any further questions.

8. List of the appendices

- Appendix 1: A tentative cruise schedule and planned main missions of R/V Mirai 2023 Arctic cruise ([Appendix 1.pdf](#))
- Appendix 2: List of laboratories and instruments available/prepared for use onboard R/V Mirai ([Appendix 2.pdf](#))
- The latest COVID-19 Criteria for Embarkation and Visiting Vessels of JAMSTEC
 - Appendix 3: JAMSTEC/MarE3 Criteria for Boarding Ships for Prevention of COVID-19 Outbreak for Non-Mariner Personnel (Mar.22, 2022) ([Appendix 3_jyousen_kijyun_E.pdf](#))
 - Appendix 4: Supplement for JAMSTEC/MarE3 Criteria for Boarding Ships for Prevention of COVID-19 (Aug.9, 2022) ([Appendix 4_Supplement for Boarding criteria_Rev1.pdf](#))
 - Appendix 5: JAMSTEC/MarE3 Criteria for Visiting Ships for Prevention of COVID-19 Outbreak (Apr. 1, 2022) ([Appendix 5_housen_kijyun_E.pdf](#))
 - Appendix 6: Policies for the JAMSTEC/MarE3's Responses to the COVID-19 during the Cruises (Mar. 22, 2022) ([Appendix 6_koukaichu_taiou_houshin_E.pdf](#))

** Kindly note that the attached requirements (Appendix 3-6) are subject to change according to future circumstances, so please follow the latest version at the time of the R/V Mirai 2023 Arctic cruise.*