

## Project Endorsement Form

### 1. PROJECT TITLE

Full title	GO-SHIP observation of sections I8N and I7S by R/V Mirai
Acronym	(n/a)
Website	(n/a)
Keywords (up to 10, describing the project research)	Repeat hydrography, GO-SHIP, climate change, anthropogenic carbon, meridional overturning circulation, Southern Ocean
New initiative or continuing programme?	GO-SHIP itself is an on-going project, but I7S observation is a new section which have never been visited by WOCE Hydrography Program.

### 2. APPLICANTS

#### Lead applicant / Project Leader / key research contact person:

First name	Katsuro
Last name	Katsumata
Affiliation	RCGC, JAMSTEC
Postal address	2-15 Natsushima Yokosuka Kanagawa 2370061
Country	Japan
Telephone	+81-46-867-9849
Email address	k.katsumata@jamstec.go.jp
Institutional or personal website	<a href="http://www.jamstec.go.jp/rcgc/e/gcpog/">http://www.jamstec.go.jp/rcgc/e/gcpog/</a>

#### Other key participants / research team leaders: *(repeat as needed)*

First name	
Last name	
Role in the project	
Affiliation	
Country	
Email address	
Institutional or personal website	

*N.B.: Please note that all these names and contact details will be added to the IIOE-2 membership database.*

### IIOE-2 Joint Project Office (JPO)

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c/o Commonwealth Bureau of Meteorology  
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<http://www.iioe-2.incois.gov.in>

Hyderabad India Node  
Indian National Centre for Ocean Information Services  
(INCOIS)  
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Hyderabad, Telangana 500 090, India.  
Phone: +91-40-2388 6142  
Email: [iioe-2@incois.gov.in](mailto:iioe-2@incois.gov.in)

### 3. ABSTRACT– Brief description of the project: (1/4 page maximum)

*This will be placed on the IIOE-2 Website after endorsement.*

Indian Ocean is a logistically challenging place for large scale ship observation despite its large amplitude variability with intraseasonal to decadal time scales owing to the complicated wind system and topography. After IIOE-1, World Ocean Circulation Experiment (WOCE) established a number of hydrographic sections to monitor this important ocean. As JAMSTEC contribution towards the Global Ocean Ship-based Hydrographic Investigation Program (GO-SHIP), decadal reoccupation of the WOCE section I8N (nominally along 80°E, 6°N to 24°S, previously occupied in 1995) and new occupation of the section I7S (nominally along 57.5°E, 28°S to ice edge) are proposed. All GO-SHIP [level 1](#) and some [level 2](#) water samples will be collected from the surface to near the bottom along with continuous CTD observation. In addition to providing baseline hydrographic data to describe the ocean circulation in this relatively unknown part of the Indian Ocean, the data will contribute to clarify subsurface decadal changes in water properties associated with climate change and to improve the carbon budget by measuring the subsurface carbon distribution in this mode/intermediate water source region. Other items including ocean-atmosphere fluxes and biogeochemical parameters will also be measured.

### 4. LINKS TO IIOE-2 SCIENCE PLAN:(1/2 page maximum)

How do you anticipate your project to contribute to the IIOE-2 strategy and science delivery, with reference to which (either one or more) of the six IIOE-2 Science Plan themes that your project responds. Please state the specific issues and questions addressed by your project in the context of the IIOE-2 Science Plan themes and key issues.

The cruise will contribute to the following IIOE-2 Scientific Themes; Theme 1 (*Human Impacts*) through measuring anthropogenic tracers including carbon, CFCs, and SF<sub>6</sub>; Theme 4 (*Circulation, Climate Variability, and Change*) through hydrographic monitoring of watermasses over full water column, particularly *Change* through decadal repeat hydrography of the I8N section since 1995. Measurements of such biogeochemical parameters as nutrients and dissolved oxygen will also indirectly contribute to Themes 1 (*Human Impacts*), 3 (*Ecosystem Response Background*), 6 (*Unique Biogeochemical and Ecological Features*).

### 5. REGION(S) OF STUDY

Provide a description of ‘where’ the research is to be conducted (for field based activities) and/or the region or regions to which the research pertains (you are encouraged to consider providing a figure as an addendum to your proposal).

See Figure attached at the end of the proposal. Red dots are CTD/sampling stations.

### 6. TIMETABLE OF THE PROJECT

Start date: Nov. to Dec. 2019 to leave Japan

End date: Mar. to Apr. back to Japan

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## 7. LINKAGES WITH OTHER PROJECTS / PROGRAMMES / INITIATIVES

Is the project part of a related national or multi-national activity?

If yes, provide the related activity title and website for reference, if available:

This is a GO-SHIP project (<http://www.go-ship.org>). We also plan to deploy some SOCCOM floats en route (<https://socom.princeton.edu/>)

Is your project part of, or affiliated to, another SCOR, IOC or IOGOOS activity or project?

If “yes”, please indicate which activity or project:

Certified Reference Material as recommended by SCOR Working Group 147 ([http://www.scor-int.org/SCOR\\_WGs\\_WG147.htm](http://www.scor-int.org/SCOR_WGs_WG147.htm)) will be used. GO-SHIP is part of [GCOS/GOOS](#).

## 8. DATA MANAGEMENT

1. Will new data be collected as part of this project (yes or no?)

Yes.

2. Contact information if any, of the person in charge of the data management from whom the metadata can be accessed by interested IIOE-2 stakeholders.

*Please note that for all IIOE-2-endorsed projects, IIOE-2 will have developed its own metadata portal. Once the project is endorsed, the project leader will be asked to provide the metadata information of the project.*

After the moratorium period, the data will become publicly available from the JAMSTEC data centre (<http://www.godac.jamstec.go.jp/darwin/e>) as well as from the CCHDO (<https://cchdo.ucsd.edu/>).

## 9. FUNDING

*Please note that IIOE-2 strongly encourages funded/resourced projects. However, IIOE-2 may endorse projects yet to receive funding/resourcing if IIOE-2 endorsement can be clearly shown to significantly aid in prospects for funding/resourcing.*

Has funding and resources to successfully achieve and undertake the project been obtained? Indicate the sources of funding and resources that have been approached and/or secured.

The cruise will be funded by JAMSTEC inhouse funding. Some piggy-back project will be funded externally.

## 10. BENEFITS FROM IIOE-2 ENDORSEMENT (1/4 page maximum)

Specify why you are seeking endorsement and how the activity would benefit from endorsement, and how the IIOE-2 SC could assist in the implementation of your project.

IIOE-2 endorsement will strengthen international presence of the cruise which will help securing the

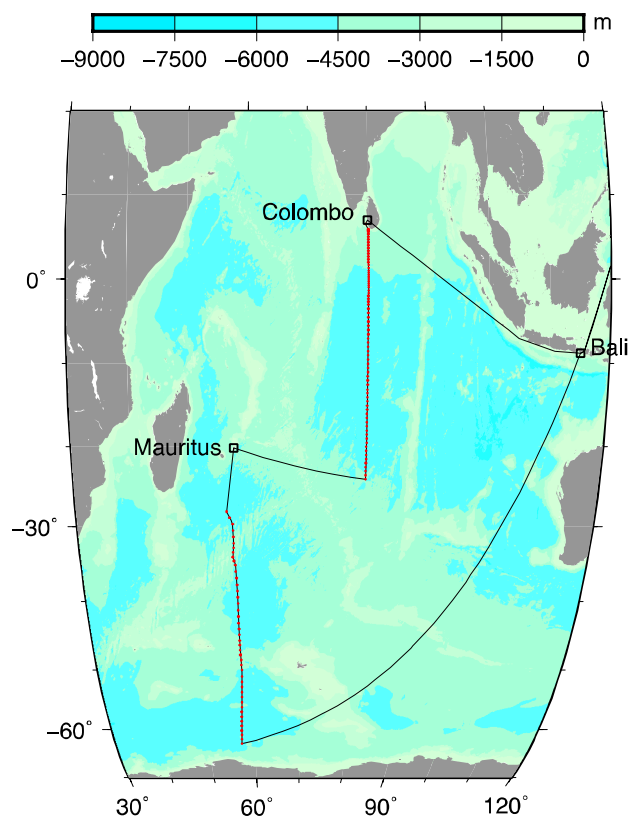
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JAMSTEC inhouse funding. It will also attract potential collaborators including piggy-back projects. IIOE-2 is an excellent platform for communication to the local oceanographic communities.

**11. OPTIONAL: OTHER COMMENTS/INFORMATION/MATERIAL** (*length and detail may be at the discretion of and as deemed necessary by the applicant*)

Please feel free to provide any other comments, information or materials that you feel relevant to your proposal for the IIOE-2 Steering Committee's information and benefit. You may provide this as general information or provide the additional comments/information/materials as relevant to any of the specific Sections above.

The formal selection process for onboard piggy-back projects will start in 2018. International applicants should contact the Project Leader well before the formal selection process to discuss feasibility of their projects.



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