INTERNATIONAL OCEAN DRILLING PROGRAMME

CALL FOR APPLICATIONS

SCIENCE COMMUNICATORS

for IODP^3 Expeditions onboard the D/V *Chikyu* in 2025

Deadline: 5 September 2025

12 August 2025

Call for Participation of Science Communicators in the following IODP^3 Expeditions onboard the D/V *Chikyu* in 2025

- **Expedition 502E: Extended Monitoring and Resurveying of Japan Trench Borehole Observatories**
- **Expedition 502: Impact of Petit-Spot Magmatism on Subduction Zone Seismicity and the Global Geochemical Cycle**
- **Expedition 503: Hadal Trench Tsunamigenic Slip History – Buried in Trench**

The Japan Agency for Marine-Earth Science and Technology (JAMSTEC) & the Institute for Marine-Earth Exploration and Engineering (MarE3) plan to implement three International Ocean Drilling Programme (IODP^3) Expeditions in late 2025. These expeditions will operate sequentially, with port stops in either Shimizu or Sendai, Japan.

Who Should Apply?

We are seeking applications for Science Communicators (formerly “Outreach Officers”) to take part in the above scientific ocean drilling expeditions. We are looking for enthusiastic individuals with an interest in Earth Science to develop outreach projects related to these expeditions on board the Drilling Vessel *Chikyu*. Science communication specialists from all backgrounds are welcome to apply, including artists, videographers, teachers, media specialists, journalists etc., including those with skills in storytelling, infographics, photography, video production, podcasting, and other media. Successful applicants will work and learn alongside a team of international scientists and technicians on board the D/V *Chikyu* during the expedition(s) they are selected for. Science Communicators will need to be creative, flexible, friendly, and collaborative. They will operate under the Expedition Co-Chief Scientists, Expedition Project Managers (EPMs) and MarE3 staff.

Science Communicators should create plans that will promote at least three of the following areas:

- Public understanding of scientific ocean drilling
- Use of scientific ocean drilling data and samples by researchers, students, and interested members of public
- The nature of international cooperative research
- D/V *Chikyu* and other scientific ocean drilling platforms
- Promoting public interest in natural hazard research
- Earth Science & STEM learning

Application Requirements

The following documents should be combined into a single PDF file for submission.

- One-page A4 draft outreach plan that aligns with at least three of the areas listed above as targets for promotion
- Curriculum Vitae (CV)
- Letter of recommendation
- Contact information for references

In addition, applicants should prepare a brief 5-minute presentation of their plans, in a format of their choice, to be presented and discussed during a brief video interview.

Responsibilities

Science Communicators must obey all rules and regulations regarding conduct on board the D/V *Chikyu*. They will work closely with the Expedition Science Teams and report to the Co-Chief Scientists and EPMs. Regular updates on project progress and milestones will be shared with them and with MarE3. All materials and outcomes will be held under the copyright of JAMSTEC/IODP^3, and will require a release from MarE3.

Summaries of Expedition Scientific Objectives

IODP^3 Expedition 502E:

IODP^3 Expedition 502E aims to test key hypotheses about the long-term hydrogeologic and mechanical evolution of the Japan Trench megathrust by retrieving and redeploying temperature sensor strings in observatory Holes C0019D and C0019Q and conducting surveys of downhole deformation. Specifically, we hypothesize that permeability within the fault damage zone remains elevated relative to the plate boundary fault core and that hydrogeologic properties continue to evolve due to healing processes. Redeployed temperature sensors will allow us to assess changes over time by capturing thermal anomalies associated with fluid migration and hydrogeologic transients. We further hypothesize that horizontal fluid flow past the borehole varies with depth, reflecting structural heterogeneities within the fault zone. A Thermal Response Test will quantify background flow rates past the borehole casing, providing direct constraints on lateral fluid migration and its role in pressure redistribution. These data will be integrated with geochemical observations and temperature time-series analysis to assess the role of fluids in modulating fault strength.

See also:
https://iodp3.org/expedition/502e/

IODP^3 Expedition 502:

IODP^3 Expedition 502 plans to drill the outer rise area of the Japan Trench, where the sediment layer above the acoustic basement is unusually thin. There is a hypothesis that this thin sediment is caused by basalt intrusions or lava flows related to a type of volcanic activity called petit-spot magmatism. The goal of this expedition is to determine if this volcanic activity is more widespread than previously thought. If confirmed, it could significantly influence how subduction zones work, including earthquake processes, volcanic activity, and global chemical cycles. This research will help understand the role of petit-spot magmatism and its impact on the Earth's systems.

See also:
https://iodp3.org/expedition/502/

IODP^3 Expedition 503:

The 2011 – Mw 9.0 – Tohoku-oki earthquake and tsunami was a catastrophic geological event with major societal consequences. Unexpected shallow and large coseismic slip contributed to the large tsunami. Short historical and even shorter instrumental records limit our perspective of earthquake maximum magnitude and recurrence, and thus are insufficient to fully characterise Earth’s complex and multiscale seismic behaviour and its consequences. The geological record is a reliable tool for reconstructing the history of giant earthquakes with long recurrence intervals and to help reduce epistemic uncertainties in seismic-hazard assessment. Results of previous research based on up to 40-m long piston cores suggested that megathrust earthquakes have been recorded as thick turbidites in the central Japan Trench. This research has also documented that the Japan Trench basins, which are part of the hadal ocean and thus among the deepest places on our planet, act as terminal sinks for sediment and carbon, stimulating highly active subseafloor microbial communities and potentially efficiently sequestering carbon.

See also:
https://iodp3.org/expedition/503/

Secondary science objectives for each expedition include carrying out other geological, geochemical, and microbiological observations to the greatest extent possible during drilling in accordance with the IODP^3 Standard Measurements Policy (https://iodp3.org/documents/standard-measurements-policy/).

Applicants are strongly encouraged to read the Scientific Prospectuses for expeditions they are interested in joining, available via the iodp3.org links provided above.

Expedition Offshore Operations Schedule

Expedition	Schedule	Leadership	Science Team / Science Communicator Numbers
Expedition 502E "Extended Monitoring and Resurveying of Japan Trench Borehole Observatories"	**Starts**: 17 October 2025, Port of Shimizu **Ends**: 30 October 2025, Port of Sendai (14 days duration)	**Co-Chief Scientists:** Patrick Fulton & Jamie Kirkpatrick **Expedition Project Manager:** Sean Toczko	2/2
Expedition 502 "Impact of Petit-Spot Magmatism on Global Geochemical Cycles and Subduction Zone Seismicity"	**Starts**: 31 October 2025, Port of Sendai **Ends**: 24 November 2025, Port of Sendai (26 days duration)	**Co-Chief Scientists:** Asuka Yamaguchi & Hiroko Kitajima **Expedition Project Manager:** Natsumi Okutsu	25/2
Expedition 503 "Hadal Trench Tsunamigenic Slip History"	**Starts**: 24 November 2025, Port of Sendai **Ends**: 11 December 2025, Port of Shimizu (18 days duration)	**Co-Chief Scientists:** Michi Strasser & Ken Ikehara **Expedition Project Manager:** Lena Maeda	27/2

Note: all expedition schedules are subject to change based on financial year budgetary situations and site conditions. Updates and the latest information on each expedition can be found on the MarE3 website, **https://www.jamstec.go.jp/mare3/e/**.

Science Communicators are an integral part of expedition Science Teams. They will be on board the D/V *Chikyu* for the full duration of the expedition(s) they are invited to join. **Science**

Communicators may apply to participate in more than one of the expeditions, but with the understanding that this will increase their time at sea if successful.

Funding

JAMSTEC/MarE3 will cover the full shipboard costs of the Science Communicators (meals, Personal Protective Equipment, etc.). This does not include the cost of travel to/from the D/V *Chikyu* at the start and end of expeditions.

Applicants from IODP^3 member nations may potentially be able to receive some financial support via their Programme Member Offices (PMOs), which may include travel to/from the vessel and other ancillary costs. **However, support levels vary between PMOs, and so applicants are encouraged to contact their PMO directly prior to submitting an application to discuss this using the following email addresses**:

J-DESC (for Japan): **jdesc@jamstec.go.jp**

ESSAC (for the 14 ECORD nations[*]): **essac@ogs.it**

ANZIC (for Australia and New Zealand): **anzic.coordinator@anu.edu.au**

Applicants from outside of the IODP^3 member nations will need to cover all travel and ancillary (non-shipboard) costs, either in person or by seeking external funding.

In addition, applicants may need to provide any additional funding that their project requires if this is not provided by their PMOs or by externally-sourced funding.

Submitting Your Application

Please email a **single PDF file** containing your combined application documents to **chikyu.expedition@jamstec.go.jp** by the deadline of **Midnight JST on 5 September 2025** (15:00 UTC).

In your email submission, please indicate your **availability for a brief 15-minute video interview during the period 9 – 12 September 2025**, inclusive, specifying the times you are available on each of these days between 09.00 – 18.00 Japan Standard Time (JST). Interviews will provide an opportunity for you to give your pre-prepared 5-minute presentation on your outreach plans, followed by an informal 10-minute discussion with members of the expedition leadership teams.

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[*] The 14 ECORD member nations are: Austria, Canada, Denmark, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom

All applications received will be evaluated and reviewed for creativity, interest, scope, and practicality. Applicants will be notified of the outcome of their submissions by MarE3 no later than 15 September 2025.

The D/V *Chikyu*

- For enquiries about this call, please email: **chikyu.expedition@jamstec.go.jp**
- For information on potential funding, please contact the IODP[3] Programme Member Offices:
    - J-DESC (for Japan): **jdesc@jamstec.go.jp**
    - ESSAC (for the 14 ECORD nations[*]): **essac@ogs.it**
    - ANZIC (for Australia and New Zealand): **anzic.coordinator@anu.edu.au**