



Science Evaluation Panel (SEP) Meeting January 11-13, 2022 – Virtual Meeting

Roster

Science Subgroup

Barbara Balestra*	American University
Chandranath Basak*	University of Delaware
Thorsten Bauersachs*	Kiel University
Christoph Beier	University of Helsinki
Clara Bolton	CEREGE
Anne Briaes	Institut Universitaire Européen de la Mer
Angelo Camerlenghi ⁺	OGS
Sue Debari ⁺	Western Washington University
Patrick Fulton	Cornell University
Karsten Gohl*	Alfred Wegener Institute
Yumiko Harigane	National Institute of Advanced Industrial Science & Technology
Yoshitaka Hashimoto	Kochi University
Barbara John	University of Wyoming
Mark Kendrick	University of Queensland
Yoon-Mi Kim	KIGAM
Mark Leckie	University of Massachusetts Amherst
Zhonghui Liu	University of Hong Kong
Kenji Matsuzaki	University of Tokyo
Lisa McNeill	University of Southampton
Rie Nakata	University of Tokyo
Jeremy Owens	Florida State University
Sandra Passchier	Montclair State University
Molly Patterson*	Binghamton University, SUNY
Stephen Pekar	Queens College - City University of New York
Charity Phillips-Lander	Southwest Research Institute
Julie Prytulak	University of Durham
Natascha Riedinger	Oklahoma State University
Rajeev Saraswat	National Institute of Oceanography
Niall Slowey*	Texas A&M University
Jason Sylvan	Texas A&M University
Paola Vannucchi	Università di Firenze
Antje Voelker	Centro de Ciencias do Mar
Kosei Yamaguchi	Toho University
Guoliang Zhang	Institute of Oceanology, Chinese Academy of Sciences

Site Subgroup

Brian Boston	Columbia University
Silvia Ceramicola*	Istituto Nazionale di Oceanografia e Geofisica Sperimentale
Jason Chaytor	U.S. Geological Survey
Davide Gamboa ⁺	Instituto Português do Mar e da Atmosfera
Jianhua Geng	Tongji University

Gilles Guerin⁺
Shuoshuo Han
Jess Hillman
Christian Hübscher
Gwang-Soo Lee
Beatrice Magnani*
Nisha Nair
Uisdean Nicholson
Patricia Persaud
Robert Pockalny
Tim Reston
Derek Sawyer
Tilmann Schwenk
Kazuya Shiraishi
Min Xu
Yuzuru Yamamoto
Natalia Zakharova

Columbia University
University of Texas at Austin
GNS
University of Hamburg
KIGAM
Southern Methodist University
National Centre for Polar and Ocean Research
Heriot-Watt University
Louisiana State University
University of Rhode Island
University of Birmingham
Ohio State University
University of Bremen
JAMSTEC
Chinese Academy of Sciences
Kobe University
Central Michigan University

Liaisons and Observers

James Allan
Peter Blum
Carl Brenner
Henk Brinkhuis
Gilbert Camoin
Gail Christeson
Dru Clark
Nobu Eguchi
Helen Evans
Nadine Hallmann
Katherina Hochmuth
Barry Katz
Larry Krissek
Leah LeVay
Yangyang Li
Kathleen Marsaglia
Charna Meth
Chris Olson
Katerina Petronotis
Marisa Rydzy
Sanny Saito
Angela Slagle
Karen Stocks
Souting Tuo
Gabriele Uenzelmann-Neben
Michiko Yamamoto
Alan Yang

National Science Foundation
JOIDES Resolution Science Operator
U.S. Science Support Program
IODP Forum Chair
European Managing Agency, CEREGE
National Science Foundation
IODP Science Support Office
MarE3, JAMSTEC
IODP Science Support Office
European Managing Agency, CEREGE
ECORD Science Operator
Environmental Protection and Safety Panel
JOIDES Resolution Facility Board
JOIDES Resolution Science Operator
IODP-China PMO
California State University, Northridge
IODP Science Support Office
IODP Science Support Office
JOIDES Resolution Science Operator
ECORD Science Operator
MarE3, JAMSTEC
U.S. Science Support Program
IODP Science Support Office
IODP-China PMO
ECORD Facility Board
IODP Science Support Office
IODP Science Support Office

*Unable to attend
+Attending as alternate

Meeting Notes

1. Welcome and Logistics

The Science Evaluation Panel (SEP) co-chairs Lisa McNeill and Tim Reston called the meeting to order with a welcome and asked attendees to perform self-introductions. Tim and Lisa reviewed the meeting format for Zoom and Slack, gave a presentation about the SEP’s proposal review procedures, and reminded those in attendance of their requirement to keep proposal content and discussions confidential.

2. Proposal Reviews

Over the course of the meeting, the SEP reviewed two pre-proposals, eight full proposals (two with addendums), and one ancillary planning letter. The review outcomes are in the table below. Lisa and Tim asked panel members to submit external reviewer suggestions for Proposals 941 and 990 and to submit co-chief recommendations for Proposals 885 and 971.

ID	Type	PI	Short Title	Recommendation
885	Add	Jangjun Bahk	Ulleung Basin Landslides	JRFB
941	Add	Yasuhiko Ohara	Godzilla Megamullion Lithosphere Architecture	External Review
969	Full	Guangfa Zhong	Huatung Basin Mesozoic Ocean Relics	Decline
971	Full2	Alessio Sanfilippo	Kane Megamullion Deep Drilling	JRFB
990	Full2	Rie Nakata	Hyuga-Nada Observatory	External Review
992	Full	Peter Haeussler	Prince William Sound Subduction and Climate	Revise
995	Full	Aaron Micallef	Canterbury Bight Offshore Freshened Groundwater	Decline
1003	Pre2	Ann Dunlea	N. CAVA Volcanic Ash	Full
1004	APL2	Uisdean Nicholson	Nadir K-Pg impact Crater	Revise
1005	Full	Peter Clift	Sunda Shelf Sea Level	Revise
1006	Pre	Wout Krijgsman	Mediterranean-Black Sea Gateway Exchange	Full

3. Agency Reports

National Science Foundation (NSF): Jamie Allan stated that the National Science Foundation (NSF) is committed to IODP through the end of FY24. NSF requires contributions from members for a full year of FY24 operations, but *JOIDES Resolution* Consortium Members in good standing will have their nominated scientists staffed for FY24 *JOIDES Resolution* expeditions. NSF is exploring if *JOIDES Resolution* operations can be extended beyond IODP to FY28, and they should have a decision on this by February 2023. If the *JOIDES Resolution* can continue, operations would not occur within the present IODP structure. Additional extensions of the ship would not be possible.

When the *JOIDES Resolution* is demobilized, NSF will continue to support the preservation of scientific ocean drilling cores and samples. NSF is engaging with the core repositories to determine the next steps of U.S.-owned material, and they remain committed to the LIMS database and migration of data to the Zenodo data repository for long-term archiving. NSF will not financially support the IODP proposal database after IODP, but there will be a need for similar functions in a new system.

NSF is exploring a new scientific ocean drilling program based on the Infrastructure, Partnerships, and Foster a Global S&E Community elements as described in the National Science Board's Vision 2030 report. In addition, a new U.S. drillship is widely supported by U.S. oceanographic institutions and the U.S. scientific community. The next step in planning for a new drillship is to define the Science Mission Requirements (SMRs). NSF has tasked USSSP to assist with the SMRs by (1) prioritizing the science objectives and initiatives of the U.S. scientific ocean drilling community, (2) prioritizing regions of operations for a new drillship, and (3) defining necessary vessel design characteristics to meet these priorities. Carl Brenner then described USSSP's task, requirements, and steering committee members for this process. The steering committee will gather input from the community through an online survey, virtual forums, in-person workshop, and open comment period on the draft report. The plan is to submit the SMR report to NSF in September 2022

Jamie explained that NSF-accepted SMRs would serve as the basis for conceptual design within the NSF Major Facility Design process, including influencing whether NSF would lease or build/buy a new drillship. SMRs, conceptual design, and new partnership would help outline a new U.S.-led drilling program, and NSF hopes there will be international interest. The U.S. community should be prepared to provide assistance, guidance, and pressure to NSF to keep this process moving forward. The total acquisition process could take up to a decade.

JOIDES Resolution Facility Board (JRFB): Larry Krissek reviewed the JRFB membership, the *JOIDES Resolution* schedule for FY23, and the timeline for scheduling FY24 expeditions. Larry anticipates that the FY24 schedule will be challenging due to uncertainty in the *JOIDES Resolution*'s mandatory 45-year drydock, possible extension of the *JOIDES Resolution*, and unknown financial contributions from IODP partners.

The minutes, consensus statements, and action items from the June 2021 JRFB meeting are available on the IODP website and include steps the JRFB is taking to plan for the next program. These steps include beginning to develop proposal guidelines for a future U.S. drillship, deciding that unimplemented proposals for the *JOIDES Resolution* will not be directly transferred to a future program, supporting the availability of SSO data beyond 2024, and exploring the possibility of virtual expeditions.

Larry emphasized the importance of community input in future planning through (1) the JRFB's request for information, which is still open to international submissions, and (2) development of the Science Mission Requirements for a new U.S. drilling vessel.

JOIDES Resolution Science Operator (JRSO): Katerina Petronotis presented the JRSO's response to the COVID-19 pandemic, which includes the development of their COVID Mitigation Protocols Established for Safe *JOIDES Resolution* Operations (COPE) and expedition adjustments due to travel and port restrictions. The JRSO was able to make operational progress with Expedition 390C and 395E (South Atlantic Transit) and Expedition 395C (Reykjanes Mantle Convection). Expedition 396 (Mid-Norwegian Continental Margin Magmatism) sailed with a reduced science complement and recovered over 2,000 meters of core. Expedition 391 (Walvis Ridge Hotspot) is currently operating but has experienced delays and reduced scope due to a COVID-19 outbreak. Katerina reiterated the requirement for a 45-year drydock and reported that Siem Offshore has formally stated interest in post-2024 operations of the *JOIDES Resolution*.

ECORD Facility Board (EFB)/ECORD Science Operator (ESO) Report: Gabriele Uenzelmann-Neben reviewed the EFB membership, the proposals residing at the EFB, and future MSP operational plans. EFB is planning for an MSP-only phase of scientific ocean drilling that will follow IODP. The EFB has agreed to transfer undrilled MSP proposals to this next program and has asked proponents to submit addendums linking their proposals to the 2050 Science Framework. The EFB is also discussing other aspects of a future program, including a science support office, facility boards, data and core management, and implementation organizations and approaches.

Katharina Hochmuth discussed that the onshore phase of Expedition 386 (Japan Trench Paleoseismology) will likely occur in a hybrid model due to COVID-19 travel restrictions. ESO is planning Expedition 377 (Arctic Ocean Paleoceanography) for the summer of 2022 in partnership with SPRS and Arctic Marine Solutions. The science party has been selected and a long-range helicopter service has been arranged for medical emergencies. Katharina reviewed the ESO operations team based at the British Geological Survey.

Chikyu and Chikyu IODP Board (CIB) Report: Sanny Saito reviewed the *Chikyu* operation plans through 2025 and the CIB membership. The CIB met in June 2021 and discussed Japan's commitment to the next phase of IODP, the value of JAMSTEC

vessels to scientific ocean drilling, the potential of *Chikyu* to implement riserless proposals, and the fate of unimplemented riser proposals.

IODP Science Support Office (SSO): Charna Meth described the roles of the SSO and recent SSO activities, including updates to the website, support for the JRFB Working Group on Science Framework Proposal Requirements and Assessments, and improvements to the Proposal Database (PDB) and Site Survey Databank (SSDB). Charna also provided statistics on proposals submitted to IODP.

IODP Forum Report: Henk Brinkhuis introduced himself as the new IODP Forum Chair and reviewed the functions of the IODP Forum. Henk presented the consensus statements from the IODP Forum meeting held in October 2021. The IODP Forum expressed appreciation to international partners for post-2024 planning, including NSF's efforts to acquire a new drilling vessel, ECORD's efforts to conduct MSP expeditions, and China's efforts to be a potential platform provider. Henk also honored Leanne Armand (ANZIC Director), who recently passed away, for her contributions to IODP and Antarctic research.

3. Next Meeting and Thank You

Lisa is planning to host the next SEP meeting at both the University of Southampton and virtually on June 28-30, 2022. The meeting may shift to 100% virtual depending on the state of the pandemic.

Lisa and Tim thanked Thorsten Bauersachs, Karsten Gohl, Julie Prytulak, Paola Vannucchi, Silvia Ceramicola, Christian Hübscher, and Tilmann Schwenk – who are all rotating off of SEP soon – for their hard work and contributions, the SSO for organizing the meeting, the full SEP membership their participation and flexibility, and the liaisons and operators for their insight.

The SEP membership also thanked Lisa and Gail Christeson for their excellent leadership as co-chairs. Gail stepped down from SEP recently for a new position at NSF, and Lisa's term will conclude before the next meeting. Gail was recognized for her insight, organization, contributions, and support of panel members, and Lisa was praised for being perceptive, encouraging, knowledgeable, and thoughtful. They will be missed!