

Ocean-Bottom Seismograph Instrumentation Center (OBSIC)

- OBSIC provides Ocean-Bottom Seismographic sensor systems for community use in NSF-supported experiments.
- First created by NSF in 1999, the current OBSIC facility was established at Woods Hole Oceanographic Institution (WHO) in August 2018, and is now in the first year of a second 5-year Cooperative Agreement between WHOI and NSF-OCE.
- Provides and operates OBS to support NSF-sponsored investigators, and to investigators at other research or educational institutions with government, private, or industry funding.
- Base Budget: \$2M/year (OBS Maintenance; OBS Mobilization/De-Mobilization; Data Archiving; Baseline at-sea time (1st 8 hours)). Flat funded. ~90-100 man-months/year.
- Experiment Support: Expendables (batteries etc.); Shipping; Travel, O/T or “sea-time” for sea-going personnel.
- Data Support: Archiving of experiment seismic data in appropriate US national data center(s) (currently IRIS Data Management Center); development of data quality metrics and tools; secondary data products
- WHOI/USGS Coastal & Marine Sci. Center Cooperative Agreement: ~\$70K/year for facility support.
- <https://obsic.who.edu/>

Ocean-Bottom Seismograph Instrumentation Center (OBSIC) Operations Sub-Committee

- Community Governance for OBSIC Program
 - Sub-Committee of the Marine Seismic Research Operations Committee (MSROC)
- Members:
 - Jim Gaherty, Chair (Northern Arizona University)
 - Anne Bécel (LDEO)
 - Emilie Hooft (U. Oregon)
 - Helen Janiszewski (U. Hawaii)*
 - Ross Parnell-Turner (SIO)
 - Susan Schwartz (UCSC)
 - Matt Wei (URI)
- Nominal three-year terms
- Meets twice a year (one virtual, one in person) plus calls as needed
- Terms of Reference at:
<https://www.unols.org/committee/ocean-bottom-seismometer-instrument-center-operations-sub-committee-obsic-os>
- Operates with guidance and support from NSF (Gail Christesen, OBSIC Program Manager)

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Primary areas of OBSIC-OS focus:

- Maintaining guidelines for the use of the equipment and services of the OBSIC facility;
- Supporting facility assessment for experiment planning and operations, and data management and quality;
- Promoting and supporting community outreach and engagement within the marine and terrestrial seismic communities as well as the broader scientific community;
- Monitoring the current and future health of the facility, including procurement and management of resources for equipment testing, maintenance, development, and recapitalization;
- Advocating for technical capacity building and training of future personnel including engineers;
- Facilitating cooperation with the larger (non-OBS) marine-seismic community through interaction with MSROC;
- Supporting open distribution, discoverability, and usability of OBSIC data and data products through a national data archive;
- Facilitating coordination and cooperation with the research community to support a broad range of objectives, including global-scale and shoreline-crossing studies;
- Developing and responding to new initiatives to enhance the effectiveness of the OBSIC program.

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Recent Activities

- Jan 2023: Published white paper to support enhancements to short-period active-source instrumentation. ***Remains a critical issue for broader US marine-seismic community.***
- July 2023: 0.5-day zoom meeting
 - Update on facility activities (field, lab, data)
- Oct 2023: 1.5-day in person meeting and lab visit at WHOI
 - Brainstorming on ideas for replacing and enhancing active-source fleet
 - Developing new community enhancement activities, including webinars and workshops
 - Improving guidelines and support for experiment planning, in particular for new PIs

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Short-Period White Paper

- Provide justification for investment in new active-source fleet
 - Existing science plans in EAR and OCE require active-source imaging
 - Current fleet inadequate for addressing modern scientific needs
 - New industry-driven technology could provide enhanced performance and lower cost
- Provide community support for proposal(s) to funding opportunities