

Sample archive and data management in International Ocean Discovery Program (IODP)

*Saneatsu Saito¹

1. Japan Agency for Marine-Earth Science and Technology

The International Ocean Discovery Program (IODP, 2013-2023) is an international marine research collaboration that explores Earth's history and dynamics using ocean-going research platforms to recover data recorded in seafloor sediments and rocks and to monitor subseafloor environments. IODP depends on facilities funded by three platform providers (Japan, US, and European Consortium for Ocean Research Drilling) with financial contributions from additional partner agencies. Together, these entities represent 23 nations whose scientists are selected to staff IODP research expeditions conducted throughout the world's oceans. This program was evolved from the early phases of scientific ocean drilling, Deep Sea Drilling Project (DSDP, 1966-1983), Ocean Drilling Program (ODP, 1983-2003), and Integrated Ocean Drilling Program (IODP, 2003-2013).

A total of ~430 km of IODP, ODP and DSDP cores (physical samples drilled from the seafloor) are archived and curated at core repositories funded by the platform providers. Cores are geographically assigned to specific repositories based on their ocean of origin. After the expedition moratorium period (12 months post-expedition), core samples may be requested for scientific research. Sample requests for all DSDP, ODP, and IODP cores are submitted using the Sample and Data Requests Database. By receiving samples, researchers implicitly agree to comply with the IODP Sample, Data, and Obligation Policy.

Data from IODP expeditions can be accessed via databases managed by the expedition's Science Operators. After the expedition moratorium period all shipboard data are open to the public. The Site Survey Data Bank (SSDB) is a repository for digital site survey data submitted in support of IODP proposals, expeditions and related activities. Many files are freely available, but proprietary holds requested by proponents are strictly maintained. The SSDB also contains older site survey data for some ODP proposals and legs. Analog site survey data (e.g., paper plots) submitted in support of IODP, ODP and DSDP proposals and expeditions/legs are stored on site at the SSDB.

Keywords: Scientific ocean drilling, IODP, Sample archive, Open data access