

GANSEKI: Utilize fieldwork information for studying JAMSTEC rock samples

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Japan Agency for Marine-Earth Science and Technology (JAMSTEC) carries out several tens to more than a hundred of observation cruises each year, using research vessels e.g. "Mirai," "Kairei," "Kaiyo," "Yokosuka," and "Natsushima". Activities during each cruise differ depending on individual research projects, and more than ten of these cruises involve rock collecting activities. Rock samples are recovered using deep-sea submersibles such as "Shinkai 6500", "Hyper-Dolphin", "Kaiko 7000II" and "Deep Tow", and dredgers. These activities yield tens to more than a hundred of rock samples each year.

JAMSTEC considers its rock sample collection as a common property of human community [1], which can be a resource for research and education of earth-ocean sciences. After up to 2 years of moratorium period during which only on-board researchers can access to samples, JAMSTEC makes the rock samples accessible to second-hand users with research/educational purposes. The information of JAMSTEC rock samples is published through the "GANSEKI" database [2]. Using GANSEKI, users can access to the various information such as basic information (metadata) of 20,663 sampling activities, archive information (inventory data) of 12,243 physical samples, geochemistry data of 19,508 analyses, thin-section photos, publication, and links for associated databases. JAMSTEC rock sample collection includes not only relatively new samples, which were collected after the establishment of curatorial handling in 2008, but also old samples from '80s or '90s, which were donated by researchers.

After the major update of GANSEKI in 2013, which improved the searchability and visibility of user interfaces, the curatorial team has been maintaining inter-database network around GANSEKI. In addition to the cruise and dive information in the DARWIN database[3], GANSEKI users can now access to the abundant field information such as sampling processes, geological and geometrical information, which can be recognized through watching dive photos/movies in the "J-EDI" database [4] and tracing 3D dive tracks on the "JDIVES" data viewer [5]. It is not easy even for experienced researchers to organize and utilize huge data obtained during individual cruises or dives. The inter-database networking among GANSEKI and associated databases are advantageous not only for second-hand users, but also for on-board researchers themselves.

References: [1] "Basic Policies on the Handling of Data and Samples" http://www.jamstec.go.jp/e/database/data_policy.html. [2] "Geochemistry and Archives of Ocean Floor Rocks on Networks for Solid Earth Knowledge Information (GANSEKI)" <http://www.godac.jamstec.go.jp/ganseki/e>. [3] "Data Research System for Whole Cruise Information in JAMSTEC (DARWIN)" <http://www.godac.jamstec.go.jp/darwin/e>. [4] "JAMSTEC E-library of Deep-sea Images (J-EDI)" <http://www.godac.jamstec.go.jp/jedi/e>. [5] "JAMSTEC deep-sea Data-Image Virtual Exploration System (JDIVES)" <http://www.godac.jamstec.go.jp/jdives/e>.

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