

## GANSEKI as an educational material: Application of JAMSTEC deep seafloor rock sample database

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On the basis of Data-Sample Handling Policies of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC)[1], data and samples obtained during research cruises of JAMSTEC vessels are treated as common properties of the human community; data and samples are stored and publicized to the public for second-hand uses with research/educational purposes. After two-years of moratorium period during which on-board researchers and colleagues have a priority to use data and samples, information on data and samples are disclosed through JAMSTEC data sites, and are utilized for foreign/domestic activities of research, education, press report and public relation.

JAMSTEC vessels collect several hundreds of rocks from the deep seafloor each year. These rock samples and associated data are also subject to be publicized. Sampling information and associated data of rock samples are accessible from the website "Deep Seafloor Rock Sample Database (GANSEKI)[2]". Currently, GANSEKI exhibits information of more than 19,800 entries of JAMSTEC rock samples including inventory information of ~9,000 actually available samples, and geochemical data and literature information of JAMSTEC/non-JAMSTEC rock samples.

After the major update in 2013, minor system tuning and data maintenances have been applied to GANSEKI. Now GANSEKI is attracting general educators and students, as well as limited number of research specialists. New GANSEKI search system allows complex filters for screening samples to support various users with different purposes. Improvements on sample/thin-section photo view allow users to effective data handling using visual information.

JAMSTEC maintains several data sites other than GANSEKI. Some of these data sites are linked together so that users can utilize data more effectively. Users can come-and-go between GANSEKI and "Data Research System for Whole Cruise Information of JAMSTEC (DARWIN)[3]" to pick up rock sample information in GANSEKI and associated information in DARWIN, such as cruise/dive information, geophysical observation data, cruise reports and literature information. Rock sample information in GANSEKI is also linked to dive movies/photos in "JAMSTEC E-library of Deep-sea Images (J-EDI)[4]", and users can comfortably look into sampling scenes of interested rock samples and surrounding geology.

GANSEKI users can now access to massive online data, which are almost comparable to those provided to onboard researchers. Disadvantages for second-hand users are getting smaller and these users can perform more practical research/educational activities. GANSEKI can be utilized not only for mineralogical/petrological purposes, but also for other various purposes, such as surveys of contemporary activities in ocean geology, case studies for observation data handling or online database system, and so on.

**References:** [1] "JAMSTEC Basic Policies on the Handling of Data and Samples" [http://www.jamstec.go.jp/e/database/data\\_policy.html](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>.

Keywords: rock sample, curation, on-line database, outreach, marine geology