

Geological Evolution of JAMSTEC DARWIN Database

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Introduction: Japan Agency for Marine-Earth Science and Technology (JAMSTEC) archives data and samples obtained by its research vessels and submersibles. JAMSTEC archive is open for public users with scientific/educational purposes, as a common property of the human society [1]. For publicizing its data and samples online, JAMSTEC is operating NUUNKUI data sites, a group of several databases for various data and sample types [2]. JAMSTEC DARWIN database takes a central role of these data sites [3].

Database integration: DARWIN was originally designed for disseminating information for JAMSTEC cruises, submersible dives, and their observation data. Geosample information had been publicized at different databases; GANSEKI, deep sea rock sample database and COEDO, sediment core sample database. In 2017, these databases were integrated into a single system, the new DARWIN (sometimes referred to as DARWIN⁺). This upgrade includes newly implemented features, such as an interactive map-search function and expanded data-type flexibilities for geological sample associated data.

User-side usability: Besides the database integration reduced costs and labor for the server maintenance, it also provided several merits to users. Now they can search geological sample and cruise/dive information in a single data site. Some new datasets, such as onboard sample photos and surface close-up photos are already added to rock samples of several cruises. Geochemical data of sediment core samples will supposedly be added in the near future. The map-search function offers interactive map and sample thumbnail views in a single browser window. Major functions of previous systems are also still useful; users can perform the complex metadata search, by thumbnail browsing, map area, keyword filtering, and metadata constraints.

Future plans: The 2017 upgrade created a drastic change for geosample data management and JAMSTEC data & sample team has been dealing with numerous minor issues for geosample data operation and reform of individual sample data. On the other hand, it is also working for upcoming 2018 upgrade that will include the implementations of online geosample request system and DOI (Data Object Identifier) related functions, and numerous minor improvements.

Reference: [1] http://www.jamstec.go.jp/e/database/data_policy.html

[2] <http://www.godac.jamstec.go.jp/jmedia/portal/e/>

[3] <http://www.godac.jamstec.go.jp/darwin/e/>

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