



A seascape by the latest comprehensive compilation of bathymetry around Japan makes a stunning diorama of tectonic processes

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Japanese ECS submission made in 2008 to the CLCS is heavily based on the swath bathymetric data. Japan Coast Guard and other seagoing institutions in Japan have been intensively engaged in swath mapping at and around Japanese waters for more than 25 years. As a result of intensive survey activities for the ECS submission over the past several years, many geological and geophysical data in the region have been also accumulated and compiled. Among those bathymetric data are most fundamental and basic in all earth sciences. Geologically Japan is located at very active place on earth, i.e. tectonically active zone. To better understand and visualize the tectonic processes around Japan, newly compiled bathymetric data have been combined with geological and geophysical data in three dimensional images, or dioramas of tectonic processes. Japan is a place of beautiful showcase of tectonic phenomena, such as subduction, collision, eruption, earthquake and so on. Different types of subductions are recognized not only from the seismicity but also are manifested by detailed topography. Marine geology maps should be reinterpreted and revised with new bathymetric data. Gravity anomaly data are recalculated as a new DEM becomes available. Our poster will visualize the greatly enhanced quality of the DEM of Japan.

Specification of the DEM of Japan we used for the presentation:

Datum: WGS84

Land Area: STRM3

Wet Area (deep sea): Quality controlled (selection of good navigation data and removal of bad/loose pings) then gridded into more than one size of spatial resolution for users' convenience sake.

Wet Area (void, or area with no swath data): Filled with ETOPO2 (version2).

Wet Area (coastal to shallow): Conventional method, or manual editing by experts.