New precise topographic map of the southwestern Ryukyu area off the eastern coast of Taiwan (new version)

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The southwestern Ryukyu area is the key to understanding the role of the arcuate-shaped trench-arc-backarc system towards the orogeny of Taiwan; with the viewpoint of the northwestern termination of subduction of the Philippine Sea Plate against the Eurasian Plate and the consequent collision against Taiwan from the eastern side. In 2010 we compiled the available multibeam bathymetric survey data in this area, including the northern part of the West Philippine Basin, Ryukyu (Nanseishoto) Trench, fore-arc basin, island-arc zone and Okinawa Trough and reported the precise topographic map at the JPGU2010 Assembly. Recently US NOAA/NGDC site provides the multibeam bathymetric database from which the debugged multibeam data in original format (with format ID in MB-SYSTEM) are downloadable. Then the new data from total 16 cruises (2 from R/V Marcus G. Langseth, 2 from R/V Melville, 7 from R/V Roger Revelle, 2 from R/V Kilo Moana, 3 from R/V Maurice Ewing) were added to the previous version in order to create a new version of the topographic map in this area. An en-echelon feature of Gagua Ridge, a meandering deep sea channel in the central area of the Huatung Basin, underwater landslides along the western rim of the basin (off the east coast of Taiwan) are depicted in the new map.

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