[S-CG67_2AM2] Ocean Floor Geoscience
Convener: *Kyoko Okino (Ocean Research Institute, University of Tokyo), Keiichi Tadokoro (Research Center for Seismology, Volcanology and Earthquake and Volcano Research Center, Nagoya University), Osamu Ishizuka (Institute of Geoscience, Geological Survey of Japan/AIST), Tomohiro Toki (Faculty of Science, University of the Ryukyus), Narumi Takahashi (Earthquake and Tsunami Research Project for Disaster Prevention, Japan Agency for Marine-Earth Science and Technology), Chair: Tomohiro Toki (Faculty of Science, University of the Ryukyus), Kyoko Okino (Ocean Research Institute, University of Tokyo)
Fri. May 2, 2014 11:00 AM - 12:45 PM  418 (4F)
Ocean Floor Geoscience session covers a broad range of research on seafloor such as mid-ocean ridge process, subduction dynamics, arc magmatism, hot spot and LIPs, crustal movement and structure etc. Every field of researches and every approaches are welcomed. The session aims to encourage discussion among scientists from different study fields and to integrate our understanding of ocean floor.

12:00 PM - 12:15 PM
[SCG67-P17_PG] Detailed bathymetry and magnetic anomaly in Central Ryukyu: Implications on westward shift of volcanic front after 2.1Ma
3-min talk in an oral session
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Keywords: Ryukyu arc, Volcanic front, Okinawa Trough, magnetic anomaly, seafloor bathymetry

Detailed bathymetry and magnetic anomaly were obtained by GH12 cruise in 2012 using R/V Hakurei, in the southern part of Central Ryukyu. Volcanic structures such as caldera were observed on the southwestward extension of the present-day volcanic front, implying recent volcanic front of the Ryukyu arc. Furthermore, bathymetric highs which are sub-parallel to the recent volcanic front were observed and is located ~20 km east. These are accompanied by spotted magnetic anomalies, which continue to Kume-jima via Aguni-jima Islands to the south, suggesting an existence of an ancient volcanic front. The ages of volcanic rocks from these Islands suggest that the magmatic activity along the ancient volcanic front had been active at least until ~2.1 Ma. The magmatic anomalies connecting two volcanic fronts suggest that a volcanic front have moved gradually westward. This shift would be explained by the termination of asthenospheric upwelling and/or rapid retreat of Ryukyu Trench.