

## Seafloor topography of Amami Sumiyo Bay -Visualization of Seafloor derived from multibeam bathymetric survey-

\*Miho Tanaka<sup>1</sup>, Ken Toguchi<sup>2</sup>, Nobuyuki Hori<sup>3</sup>, Hayate Kimura<sup>4</sup>, Yukihiro Imai<sup>5</sup>, Yosuke Nakashima<sup>6</sup>, Yayoi Najima<sup>7</sup>, Hironobu Kan<sup>8</sup>

1. Graduate School of Integrated Sciences for Global Society, 2. University of the Ryukyus, 3. Tokyo Metropolitan University, 4. School of Engineering, Kyushu University, 5. Faculty of science, Okayama University, 6. National Institute of Technology, Ariake College, 7. The Graduate University for Advanced Studies, 8. Kyushu University

The shallow water area is a very important area to reveal the sea level change during the last glacial period. In this study, we conducted multibeam bathymetric survey at Amami Sumiyo Bay and created a seafloor topographic map with high accuracy of 1 m grid.

Sumiyo Bay is located on the eastern coast of Amami Island. The Kawauchi River and the Sumiyo River are flowing into that bay. Multibeam bathymetric survey was conducted from August 20th to September 2nd, 2018 by using R2SONIC 2022 Broadband Multibeam Echosounder. Also, we measured the reflection intensity to discriminate sediment by using the side scan sonar function (TruePix / Snippets) installed in that device.

As a result of this survey, the topography distribution of the seafloor was revealed. Terrace scarp can be confirmed near the water depth of 100m in the central part of Sumiyo Bay, and it is thought that it was formed by erosion at the low sea level of the glacial period.

In this study, I integrated 10m DEM data of terrestrial area provided by Geographical Survey Institute to the highly accurate seafloor topographic map created by us and consider about geomorphology.

Keywords: multibeam bathymetry, seafloor topography, last glacial stage, sea level, Digital Elevation Model (DEM)