

## Geological Characteristics in shallow marine around Miyako-jima Island based on Sub-bottom profiles and bathymetric data

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National Institute of Advanced Industrial Science and Technology (AIST) carried out the marine geological survey around the Miyako-jima Island, Okinawa in 2016 using R/V Hakurei belonged to JOGMEC. We obtained the high-resolution data by Sub-Bottom Profiler (SBP) survey and Multi-Beam Echo Sounder (MBES) bathymetric survey. This presentation shows the geological characteristics in shallow area around the Miyako-jima Island based on SBP profiles and MBES bathymetric data.

Flat sea bottom shallower than 200 meters in depth widely spreads around the Miyako-jima and the coral reefs have developed in nearshore area. In this area, high-resolution profiles depicting surface geological structure under sea bottom were obtained by SBP. Sediment under sea bottom is divided into two units. Remarkable unconformity is recognized between upper stratified sedimentary unit and lower unit showing poor internal reflectors. Remarkable unconformity exposed from in the shallow area is indicating remarkable mound topography. Height of the mounds of remarkable unconformity is reaching to 8 meters from sea bottom. The projects are recognized only in shallow marine area than 100 meters in depth. Therefore we presume that these projects are submerged coral reefs developed accompanied by sea level rise since last glacial maximum.

Keywords: Sub-Bottom Profiler , Multi-Beam Echo Sounder bathymetric survey , Miyako-jima Island , coral reef, surface marine geology, shallow sea