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SSS34-P20 Room:Poster Time:April 29 18:15-19:30

Offshore active fault survey ”Mikata fault and Nosaka fault zones”. Result of high-resolution stratigraphic survey.

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The 26km long Mikata fault zone is extending from Kaminaka to Wakasa Bay. The fault zone consists of fault A, Hiruga fault, Mikata fault and Kuramitouge fault. The fault zone is estimated to cause M7.2 earthquakes (The Headquarters for Earthquake Research Promotion, 2002).

The 31km long Nosaka fault zone is extending from Nosaka Mountains to the Wakasa Bay. This fault zone consists of fault B, Nosaka fault and Nosaka southern fault. FaultB displaced the Holocene deposits and the vertical displacement rate is estimated to be about 0.8m/thousand years which are proposed by The Headquarters for Earthquake Research Promotion, 2002. Mikata fault and Nosaka fault zones show horizontal converges a single fault in the continental shelf.

Tokai University performed high-resolution stratigraphic survey to confirm a formation, distribution, and displacement of crust around the coastal area of the Mikata fault and Nosaka fault zones at Wakasa Bay in 2013. Transparent layer with poor internal reflection was observed as the surface layer in this survey area. This transparent layer is defined to as layer A. Layer A is ranges in thickness between 8 and 0 meter generally increase toward west. Displacement of the layer A is about 10m in most. Below layer A, sediments characterized by several reflections. First, we confirmed tilted reflection toward the Nosaka fault in the faults horizontal convergence section. Second, we confirmed progradation pattern reflection inclines to the offshore in the around Mikata fault.

Mikata fault and Nosaka fault are represented as a significant step in the seabed. The west side layer A is thicker than others. In the layer A, faults have not displaced surface sediments in this region. But several characteristic formations are which shows activities of fault has confirmed in sediments below layer A. The analysis still going on, the studies including the boring data will show more detail.

Keywords: Wakasa Bay, Mikata fault zone, Nosaka fault zone