

Morphological features of offshore extension of the Futagawa-Hinagu fault zone

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Futagawa-Hinagu fault zone (mainly right -lateral strike-slip faults) extends from Aso volcano to the Yatsushiro-sea (The Headquarters for Earthquake Research Promotion, 2002). A number of sub-aerial faults exist in the Yatsushiro-sea.

In acroteric part of strike-slip fault annihilation mechanism, develop complex structures (e.g. Kakimi and Kato, 1994). To comprehend these structures, it is necessary construct the research technique with three-dimensionally and high precision (Abe and Aoyanagi, 2004).

We have carried out the high-resolution seismic surveys with a series of cross sectional observations at the Yatsushiro-sea. Survey area divided into two sub-areas 1) North eastern area, and 2) South western area. We describe results for each sub-area as follow:

Sub-area 1

Main fault (MA fault) with NE-SW trending is distributed in this area. In-cross-sections, sub-vertical fault deformed the seafloor and sediments. Also, observed the flower structure. And displacement of faults becomes smaller to the south.

Sub-area 2

MA fault splayed off here. Almost these faults had normal components and forming a graben structure.

As described above, we have captured the features of the deformation structures, three-dimensionally.

Keywords: Futagawa-Hinagu fault zone, right-lateral strike-slip fault, flower structure