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## Identification of Active Faults in the Western Seto Inland Sea

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There are little seismic surveys on active faults in some areas of Suo-nada Sea and Iyo-nada Sea, which are the part of the Western Seto Inland Sea. We tried The Multi-Channel Seismic Survey in this sea area. The purpose of the survey is to reveal the geological structure, and clarify the formations of active faults in the Sea. The survey was conducted by high-resolution sonic method using boomer source, deep seismic reflection profiling using water gun and air gun.

As the result of this survey, we could find some faults which strikes NE-SW same as the Median Tectonic Line (MTL) active fault system in this sea area. Some fault displacements including pull-apart basin and depression with negative flower structure were figured out on the obtained seismic reflection profiling. These displacements are a little but represent the geological features of the movement of right lateral strike-slip fault. These faults action continues after Pleistocene.

In addition, the width of the active faults seem to become wide with disperse toward offshore. At present, we think that we can divide these faults into geometrical segment which is based on the extensional jog.

Although the relationship between these active faults and the MTL active fault system has not been clarified completely, the result of this survey implies their formation under the same tectonic situation.

Keywords: western seto inland sea, active fault, acoustic exploration, lateral fault