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Submarine active fault map of the eastern part of Sea of Japan

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We executed tectonic geomorphological research on the submarine topography in the eastern part of Sea of Japan. It is essential to examine submarine active faults in order to make an accurate estimate of future large earthquake and tsunami in this seismically active region. We investigated feature of active structures in this region based on 3D anaglyph images, which have 250 m resolution. There are extensive long active faults trending in NNW-SSE direction in the northern part of the region. In the southern part, high-density active faults in NNE-SSW direction are dominant. Several active fault cut the deep sea floor north of Awashima Island forming a clear antecedent valley of the deep sea channel. The source fault of the large earthquake in 1983 is exactly mapped. However, the active faults originated the 1993 earthquake has gone missing.

Keywords: anaglyph, submarine active fault, large historical earthquake, tsunami, eastern part of Sea of Japan