

SCG088-07

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## What we Learned from Historical Earthquake Research on the Eastern Margin of Japan Sea -1833 Tenpo off-Shonai EQ-

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What did we learn from the historical earthquake research on the eastern margin of Japan Sea?  
We examined carefully the 1833 Tenpo off-Shonai earthquake, which is the largest offshore event of the zone in Edo Era.

Since 17th century, there were 46 destructive earthquakes in the eastern margin of Japan Sea area. Among them, we have already examined 70% of historical earthquakes in order to help evaluation activity of long-term earthquake occurrences in the Earthquake Research Committee of HERP. For the research project on High strain rate zone, which started in 2008, we contribute to reveal the details of the past events in this area.

The 1833 Tenpo off-Shonai earthquake was believed as the previous event of 1964 Niigata earthquake. However, our re-examination of historical materials shows that the source area of this event is farther north-western from where the previous models assigned. In the eastern margin of Japan Sea, a few seismogenic zones run parallel in the north-south strike. Even this margin is the plate boundary between the North American plate and the Eurasian plate, the dip direction is not always eastward, and the dip angle is sometimes high.

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Keywords: high strain rate zone, the eastern margin of Japan Sea, 1833 Tenpo off-Shonai earthquake, Historical Earthquake