

# Estimation of fault model of the 1793 Miyagiken-Toho-Oki Earthquake by distributions of seismic intensities and tsunami heights

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In the recent years, several kinds of old documents about the 1793 Kansei Sanriku Earthquake-Tsunami have been found out. On the basis of these materials, we newly estimated the distribution of seismic intensity. The area of seismic intensity 5 covers the whole territory of Miyagi prefecture, and extends to the southern part of Iwate prefecture and to the northern part of Fukushima Prefecture, which suggests that the pattern of the seismic intensity is similar to that of the 1978 Miyagi-Oki earthquake. We also found out many descriptions of the tsunamis in the documents. On the basis of those descriptions about tsunami inundation, we made a field survey measuring tsunami run-up height at 11 points. We found out that tsunami run-up height was 5.9 meters at Toni in Kamaishi city. As we can not explain the generation of such a large tsunami by the fault model like the 1978 Miyagi-Oki earthquake, so we should consider additional fault offshore to explain the measured tsunami.