

Tsunami hazards induced by the oceanic impact

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Because two-thirds of the Earth's surface is covered by the ocean, many meteorite impacts should have occurred in the ocean. However, very rare examples of the oceanic impacts were reported even through the 4.6-billion-years Earth's history. This is because recognition of the traces of oceanic impacts from the geologic strata is still difficult. Depending on the meteorite size, small impact events should be occurred frequently. Such events would be the potential hazard to the human communities as was occurred at Russia on February 2013. In case of the oceanic impact, large tsunami may be generated so that the impact-tsunami risk should be evaluated as a low-frequency disaster. However, it is still ongoing debate whether the oceanic impacts generate devastating tsunamis that may affect to the human communities (Ward and Asphaug, 2000; Gisler et al., 2011). In this presentation, we review the current understanding of the tsunami hazards induced by the oceanic impact. We will further show our preliminary numerical results of the tsunami propagation and inundation toward Japan and estimate the potential effect to the Japanese coast.

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