Landslide model of the 1741 Oshima-Oshima eruption

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The 1741 tsunami occurred near Oshima-Oshima in Hokkaido caused great damage along the coast of Japan Sea in Oshima and Tsugaru peninsula. Assuming that the tsunami was generated by flowing a landslide into the sea with a sector collapse in Oshima-Oshima, the landslide was simulated. Distribution of debris deposits, topography before the sector collapse, and landslide volume were re-calculated from a bathymetry survey data (Satake and Kato, 2001) in the north part of Oshima-Oshima. Based on these data, the landslide was simulated using the integrated model of landslide and tsunami (Yanagisawa et al., 2014). As a result, distribution of computed debris deposits agree relatively well with the distribution of debris deposits made out from bathymetry. However, the computed debris deposits spread to north part than debris deposits made out from bathymetry and not reach to the east and west part compared to debris deposits made out from bathymetry in detail. The thickness of computed debris deposits was thicker to the north part than debris deposits made out from bathymetry. Further, model parameters and topography before the sector collapse are needed to be improved for more realistic tsunami simulation.

Keywords: landslide, tsunami, Oshima-Oshima

