

Damages Report and Analytical Discussions of the 1993 Hokkaido Nansei Oki Earthquake-Tsunami

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A gigantic Earthquake with magnitude 7.8 occurred in the sea region of south west off the Hokkaido Island. A huge tsunami hit the coasts of Okushiri Island and the south-western part of Hokkaido Mainland.

Sea water climbed up to the height of 30.6m above mean sea level at a point on the western coast of Okushiri Island. More than half of whole the houses were swept away at several villages on the island. Mainly due to the tsunami, 202 persons were killed and 29 persons were lost. We made field survey along the coasts of Okushiri Island, the Hokkaido Mainland. In addition that we made field surveys on the coasts of the western part of the Japanese Island including Noto Peninsula and Oki Island, where slight damage of fishery boats and coastal residential areas took place.

We estimated that the earthquake consisted of the motions of dip-slip typed dislocation on the two fault planes. We made numerical simulations of two types as;

- a. Detailed calculation in the sea area close to the source area, and
- b. Total calculation covering whole the Japan Sea.

We obtained a fairly good numerical result for the tsunami height distribution along the coasts of Japan Sea.

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