

# Low frequency seismic motion observed in the northern part of the Ishikari plain during the 2003 Tokachi-oki earthquake

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Our strong-motion observation records in the northern part of the Ishikari plain show that large amplifications of low frequency seismic motions in the plain during the 2003 Tokachi-oki earthquake. It seems that the amplified low-frequency motions caused sloshing of the oil tank, that was broken during the earthquake, in the Ishikari-bay port area.

A dense strong motion observation has performed in the northern part of the Ishikari plain, by us, NIED (K-NET, KiK-NET, F-Net), Hokkaido Regional Development Bureau (WISE), Sapporo municipality, Hokkaido government, and JMA. We calculated velocity responses of the observed data during the earthquake in the whole of Hokkaido at the frequency of 0.2 Hz. Amplitude of the velocity responses over 1 m/s are distributed in the Ishikari plain and in the Tokachi plain.

In the Ishikari plain, amplitude of the velocity response in the Ishikari-bay port area is over 2 m/s at the frequency around 0.2 Hz, that is as same level as the response of the record at Tomakomai area, even though the epicentral distance of the Ishikari-bay port is father than the one of the Tomakomai.

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