

**O135-001**

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## **Simulation of tsunami generation by dynamic coseismic behavior of seafloor due to seismic fault**

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At the 2003 Tokachi-oki earthquake of M8, seafloor phenomena such as a generation process of tsunami, seafloor uplifts, etc., were observed using a cabled observatory installed on the seafloor. Pressure fluctuations that took place co-seismically showed about 100 times in amplitude to those observed as the uplifts. It has been already studied that the uplift of seafloor generated not only tsunami but high amplitude acoustic waves which reflects the compressibility of seawater.

In our study, we try to carry out 3-D numerical tsunami and acoustic wave simulation due to seafloor movement by the seismic fault. We found that the movement of the sea surface near the epicenter by our dynamic model is different from the static model conventionally practiced, but the height of tsunami wave far from the epicenter is not so different between the two models. We also found that the acoustic wave could be generated by the Rayleigh wave. Our simulation indicates that dynamic simulation is necessary in order to develop more accurate tsunami warnings systems.