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# T2.3-P05. Broadband hydro-pressure variations recorded by DONET at tsunamigenic earthquakes

Cabled offshore observatories have been deployed since the 1970s in Japan, which traditionally consist of ocean-bottom seismometers (OBSs) and pressure gauges (PGs) with high sampling dataset. This kind of observatory allowed us to examine the mechanism of tsunami generation directly in the tsunami source. In the conventional offshore observatory, however, OBS and PG are located a few kilometers away, and moreover there are some uncertainties with orientation of OBS. These difficulties complicate quantitative analysis of OBS and PG records. Recently developed DONET has superior advantages, in which OBS and PG are deployed at the same location, broadband observation is performed by various geophysical sensors, and vertical component of OBS is mechanically controlled by gimbals after the deployment. This study aims to evaluate the hydro-pressure variations during the tsunamigenic earthquakes in terms of the in-situ measurements. Our present targets are the 2011 Tohoku earthquake and its related large aftershock, which were approximately 800 km away from the DONET stations. We analyzed the hydro-pressure variations recorded by differential pressure gauges (DPGs) and hydrophones in addition to PGs. As a result, OBS records suggested that dominant and long-lasting hydro-pressure fluctuations recorded by DONET were 'forced oscillations' rather than 'hydro-acoustic waves'.

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