Comparison of seismic waveforms observed by co-located seismometer and barometer installed indoors 2nd report

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Surface vertical vibration due to earthquake is considered to excite sound, and it has been observed by barometer or microphone. Recorded pressure change response to seismic ground motion is considered to be due to difference of gravitational pressure observed by barograph moving up and down, air vibration (compressional wave) excited by earthquake ground motion around barograph, and internal mechanical response to acceleration by earthquake.

We started observation with co-located seismometer and barometer in Isumi, Chiba-prefecture (I30JP in The IMS Infrasound Network of CTBTO). This time one of barometer's port is close. A magnitude 4.5 earthquake occurred off south of Chiba-prefecture at a depth 44km. The seismic intensity scale in Isumi was 2. The port open barometer recorded pressure change due to the earthquake. Whereas, the port close barometer did not record pressure change due to the earthquake. It seems that the gravitational pressure change and barometer's internal mechanical response is very little at the seismic intensity 2 earthquake.

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