ID: Type: **Oral**

# of seismic waveforms observed by co-located seismometer and barometer installed indoors

Surface vertical vibration arising from earthquake is considered to excite sound and it has been observed by barometer or microphone. Pressure change after earthquake is mainly generated by following three reasons. 1) Air vibration (compressional wave) is excited by earthquake ground motion around barograph. 2) Internal mechanical response is accelerated by earthquake. 3) Barograph itself moves vertically by earthquake and hydrostatic pressure is change. (However, the impact is small) We have started special observation with co-located seismometer and barometer in I30JP from Dec 2018. We installed two barometers, one of which port was close. The earthquake event of magnitude 5.1 (seismic intensity scale: 3) occurred near I30JP (40km northwards and depth is 38km) in May 2019. The port-closed barometer recorded pressure change and mechanical response was appeared when seismometer recorded S-wave. In the meanwhile, magnitude 4.5 (seismic intensity scale: 2) event occurred in Jan 2019 didn't make any pressure change to barometer.

Primary author: FUJII, Takanari (Japan Weather Association (JWA))

Presenter: FUJII, Takanari (Japan Weather Association (JWA))

Track Classification: Sources and Scientific applications