

Infrasound from natural phenomena observed by infrasound observation network for study on early detection of tsunami

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At the time of the 2011 off the Pacific coast of Tohoku Earthquake, several microbarographs around focal region recorded pressure changes associated with atmospheric boundary wave excited by large scale sea-level change in tsunami source region (Arai et al., 2011). We have decided to study infrasound monitoring technique to detect large tsunami generation, then have started experimental infrasound observation using microbarographs in Ofunato city and Shima district since July 2013, June 2015 respectively. We are now planning to make those data available on the web to facilitate study on infrasound by any researchers.

Since a variety of phenomena can excite infrasound as well as large scale sea-level change, such infrasonic signals are frequently observed at the infrasound observation sites mentioned above. In this presentation, we will introduce some cases of detected signals traveling from known sources such as a volcanic eruption, a bolide and so on. Through the analysis on observed signals from a variety of phenomena, it is expected to accumulate useful information for application to source identification and propagation characteristics of signals.

Keywords: Infrasound, Tsunami, Volcanic eruption, Bolide, Microbarograph