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An Integrated Study of Seismic and Infrasound for Detecting Non-Tectonic Earthquakes in Indonesia

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Indonesia is in an earthquake prone area, not only tectonic earthquakes but also non-tectonic earthquakes. Non-tectonic earthquakes are unique, because they rarely happen. However, in the last decade there have been many non-tectonic earthquakes recorded by seismic sensors due to volcanic activity. Therefore, we need to validate the earthquakes, whether they are caused by tectonic or non-tectonic activity. To distinguish between these earthquakes, we need to integrate parameters between seismic and non-seismic (infrasound) measurement. Tectonic and non-tectonic earthquakes have different frequencies. Non-tectonic earthquakes are dominated by a low frequency and well detected by infrasound measurement, because Infrasound is an acoustic wave with very low frequency less than 20 Hz (~0.01 – 20 Hz).

Promotional text

Seismic and non-seismic (Infrasound) measurement is a good combination to detect and validate non-tectonic earthquake. By studying these parameters, we want to learn specific characteristic of non-tectonic earthquake to give early warning to the society.

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