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on the importance of IMS-like infrasound stations in volcanologically active areas

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With global increases in population and air traffic, our ability to forecast when and where a hazard will occur is of prime importance. In the case of volcanic eruptions, forecasting is not limited to when and where an eruption will take place, but also when and where the impact of such an eruption will be felt. Cross-boundary volcanic ash from explosive volcanic eruptions is hazardous. The dispersal of volcanic ash could be modeled, however the level of uncertainty drastically depends on our knowledge of the eruption itself. Critical parameters are the duration of the eruption as well as the height of the associated eruptive column. With those 2 parameters you can simulate a range of plausible ash dispersal scenarios. Such parameters could be retrieved by monitoring, research sensors or an array deployed on the flank of the volcanoes. However, in a region with hundreds of active or potentially active volcanoes this is not always possible. We would like to demonstrate a few recent examples for which the IMS and IMS-like (installed in Singapore) infrasound stations were used to extract eruption source parameters.

Promotional text

This presentation aims to demonstrate how useful IMS and IMS-like infrasound stations are in mitigating volcanic impact.

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