

New Seismological Tools for Evaluating Volcanic Activity

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I present two new seismological tools for evaluating volcanic activity. To detect temporal variations of the structure of volcanoes, it is very useful to apply a cross-spectrum analysis for seismic waves excited by artificial explosions that are conducted at the same location but at different periods. I also propose a new simple method to quantitatively classify the eruption type such as explosions and continuous effusions of ash or lava. These eruption type show different relations between the seismic magnitude and the vent radius of the volcano, therefore, we may classify the eruption type by using the two values.