

Laboratory of Seismology and Volcanology

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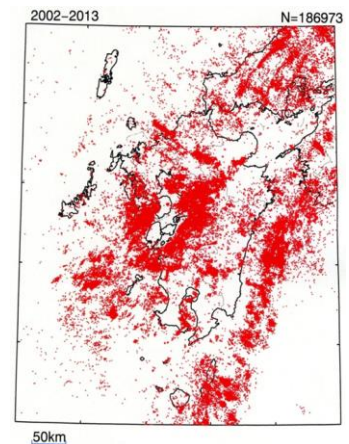
Outline of research

The laboratory of Seismology and Volcanology performs research involving both tectonic and volcanic earthquakes. We also investigate different approaches for utilizing geothermal energy in areas with hot springs throughout Japan.

Research theme

➤ Seismic activity in Kyushu

There are several seismically active zones in Kyushu. We investigate seismic activity and tectonic stress in Kyushu using data from Japanese earthquake data circulation systems.



Epicenter distribution (2002-2013, JMA).

➤ Volcanic earthquakes in Unzen Volcano

Unzen Volcano began to erupt on November 17, 1990, and a dacite lava dome formed between May 20, 1991 and February 1995. During the eruption, numerous earthquakes occurred beneath the volcano. We are developing methods to evaluate volcanic activity using data from these earthquakes.



Aerial view of Unzen volcano.

➤ Utilization of geothermal energy

The Obama Hot Spring (Obama-onsen), located in Unzen City, Nagasaki Prefecture, produces approximately 15,000 tons of 100°C water per day. Since 2011, our lab has been engaged in discussions with local governments, industries, and communities regarding the utilization of geothermal energy. In March 2013, a trial run of binary cycle power generation in Obama-onsen using three 72-kW dynamos commenced, supported by a subsidy provided by the Ministry of the Environment.



A complete view of the Obama-Onsen Binary-Cycle Power Station.