

An exploration of temporal changes of seismic velocity at Iwate volcano

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We conducted artificial seismic explorations at Iwate volcano on June 25, 1999 and on September 30, 1999, to detect temporal variations of the seismic velocity during undergoing volcanic activities. We set about 60 seismic stations around the volcano. Artificial shots of 200 kg dynamite were detonated at the same point in the north-eastern side of the volcano. The estimated velocity variations along the northern profile were within -0.1 %, while those along southern profile reached -0.3 % at maximum at western stations. Seismic ray that arrives at the stations are crossing through the area with fumarolic and shallowest seismic activity. These results imply that estimated temporal velocity variation reflects possible change of the internal state of the volcano.