

A fumarolic event in August 2017 observed at the Mt. Yake volcano, Hida mountain range, Central Japan, with the newly enhanced volcanic activity monitoring network.

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Volcanic activity monitoring network around Mt. Yake volcano, Hida mountain range, Central Japan, was enhanced in the vicinity of summit crater in 2015 and 2016 in order to investigate the prediction of its phreatic eruptions. We newly constructed three observation stations nearby the summit of Mt. Yake volcano which consist of seismic, tilt, GNSS, geomagnetic, and ground temperature observations. Preliminary results show (1) possible seismic activity in the volcanic edifice which are observable only at the stations in the summit area, and (2) high thermal activity around the summit crater revealed by temperature observations. In August 10, 2017, a fumarolic event took place at Kurodani crater associated with small seismic swarm activity. This crater is located in the western flank of the volcano, which first erupted in 1919 and has been dormant more than 85 years. Although both P and S wave onsets of these earthquakes are not clear and difficult to locate precisely, hypocenters of these events are possibly near the summit from their travel time analysis. Other than seismic data, no signal was detected in the GNSS, tiltmeter, geomagnetic, and temperature observations.

Keywords: Mt. Yake volcano, monitoring network, fumarolic event in 2017