

Development of Automatic Ash Observation System

FURUKAWA, Ryuta^{1*} ; OIKAWA, Teruki¹

¹Geological Survey of Japan, AIST

We developed an automatic ash observation system with 2011 eruption of Kirishima Shinmoedake volcano as an opportunity. Our goal is to develop a method to obtain the semi-real time information of pyroclastic fall phenomena to contribute eruption forecasting and to advance high precision reconstruction of the sequence of the past eruption. Our equipment contains sensors of particle counter, load cell, and network camera, suppliers of 12V battery, solar panel, and wind power generator, and their controller. We newly deploy advanced equipment of ultra-sonic distance meter to measure the thickness of pyroclastic fall deposits. We tested each equipment in Kirishima and Sakurajima volcanoes and made sure to continuously observe and detect the eruption with acquiring data of weight and image of deposits. Particle counter and internet router are troublesome with volcanic gas rich environment.

Keywords: volcanic ash, observation equipment, pollen sensor, load cell, internet