

Analysis of visible image of volcanic plume

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Volcanic plume has a certain kind of time variation according to the volcanic activity. In recent years, acquisition and processing techniques for a continuous infrared or visible image has been developed to examine a variation of volcanic plume easily. Kagiyaama et al. (2006) examined volcanic plumes of the 2004 Eruption of Asama Volcano, and found a movement of the period of volcanic plume from 400 seconds to 310 seconds according to the eruptive activity. It is very interesting if such a rhythm commonly exists or not in other volcanoes. From this viewpoint, visible images were taken in Aso Volcano. We make differential images of brightness value from successive visible images. We set up a certain vertical line in these imageries, and examined the maximum value of the differentials. By tracking the height which has the maximum value for all imageries, we got time series data of the height of the plume. As a result of spectral analysis, some peaks were confirmed at the multiple of 1 Hz.