

Image analysis of bubbling in the Naka-Dake Crater, Aso Volcano

Tsuneomi Kagiama[1]; Yoshikazu Tanaka[2]; shinichiro ikebe[3]

[1] Graduate School of Science, Kyoto University; [2] Aso Volcanological Laboratory Kyoto Univ.; [3] Aso Muse.

The Naka-Dake Crater of Aso Volcano bewilderingly changes the appearance by the situation of the volcanic activity. Recently, bubbling phenomenon often occurs within the crater lake. Visible images of the bubbling have been taken in Aso Volcano, and regularity of this phenomenon was examined by analyzing the video image. On April 6, 2006, bubbling is generated in the center part of the hot pool, and it is recognized in bright on the image. This fact indicates that temporal change of the brightness on the bubbling correspond a temporal change of the bubbling activity. The power spectrum of this variation has peaks in 0.35Hz and 0.7Hz. It was shown that the bubble generation had occurred regularly by this new analysis. After analyzing power spectrum in other periods, it was found that the regularity of the bubbling seems to depend on the water level or activity level of volcanic tremor.