

Hypocenter distribution of volcanic earthquakes observed at Asama volcano, Japan: Nov. 1996 - May. 1999

Jun Oikawa[1]; Yoshiaki Ida[2]; Hiroshi Tsuji[3]

[1] ERI, Univ. of Tokyo; [2] School of Life Sci., U. of Hyogo; [3] KOVC, VRC, ERI Univ. of Tokyo

In Asama volcano, additional four seismic stations were recently installed near the summit crater in order to obtain the high quality records in closer distances to the hypocenter regions just below the crater. Using the new data, the hypocenters of the volcanic earthquakes were determined much more accurately, particularly in depth. High frequency earthquakes and low frequency events are concentrated into a shallow zone above the depths of 1 km underneath the crater. Some high frequency events are also observed below 3 km and there is a seismic gap between the two zones. The seismic gap agrees with the location of the pressure source which is estimated from the ground deformation. It is inferred that the gap zone corresponds to a magma reservoir and that shallower seismic events occur in and around the conduit to the summit crater.