Recent activity of Miyakejima Volcano (7)

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1.Introduction

Miyakejima volcano has been emitting a huge amount of volcanic gas(SO2) and all resident has still been forced to evacuate from the Island since September 2000. The recent several observations show the decline of volcanic activities. But the tendency of decline became less remarkable.

In this paper, we introduce on the recent observations obtained.

2.The current status of volcanic smoke and the volcanic gas

The periodical COSPEC SO2 measurements have been carried out getting supports from Japan Defense Agency, Japan Coast Guard, Metropolitan Police Department and Tokyo Fire Department. Although the amount of released SO2 was more than 70,000 ton/day at maximum in autumn 2000, it has been gradually decreasing since that time. The recent measurements show 3,000-10,000 ton/day.

3.The temperature of the crater

In February 2002, the temperature of the summit crater measured by infrared observation sometimes exceeded 450 degrees, reflected glows were sometimes observed from the foot of Miyakejima mounts during the end of year 2001.

But since the end of 2002, it is dropping gradually. The area of high temperature in the summit crater was reduced a little.

4.Seismicity, volcano tremor

The recent seismicity in and near Miyakejima volcano is going lower. The occurrence of high frequency earthquakes are decreasing and number of observed events are about 50 times/month since July 2002. On the other hand, that of intermediate low-frequency earthquakes have gradually increased from July 2002 and have showed more increase till January 2004. On the contrary, that of low-frequency earthquakes have decreased since October 2002 and it has hardly seen since winter 2002. The hypocenters of intermediate-low and low frequency earthquakes were located in the shallow depth just beneath the crater.

These locations of earthquakes were not changed.

The amplitudes of these intermediate low-frequency earthquakes were not significant changes but rather constant amplitudes.

The amplitudes of volcano tremors which are considered to be associated with the gas emission have been decreasing . These volcano tremors were hardly observed in July 2003. But after middle August, 2003, the amplitudes of volcano tremors have increased again, the amplitude of tremors continues in the almost same size till February, 2004.

5.Geodetic observation

According to the GPS geodetic observation, the ground deformation showing the deflation of Miyakejima had been observed since 2000. The deflation rate, however, became gradually lower.