Proximal deposits of the 2000 Miyakejima eruption

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In the eruption activities of the Miyakejima volcano mhich continues from June,2000, the eruption activities which make emission of volcanic ashes from the caldera formed in Mt.Oyama. This paper describes the feature of the proximal deposits which became clear by the geological survay in July to August, 2000, and Augsut to November, 2001.

The deposit of the eruption on July 8 was lapilli layer of singke fall unit. The deposit of July 14-15 eruption consists of alternation of volcanic silt, sand and lapilli layer.The deposit of Aug 10 eruption consists of alternation of volcanic silt and sand. The deposit of the eruption of Aug 18 consists of 1. coarse lapilli layer contains abundant blocks,2. alternation of coarse lapilli layer and thin silty layer, 3. normally graded scoria falllayer, 4. pyroclastic surge deposit and 5. thin fine ash layer, in an order from the bottom. the deposit of Aug 29 consists of alternation of volcanic silt and sand in the north and east section. On the other hand in the southwest section, including mixture of ballistic block and pyroclastic surge deposit.

For the most part, the deposits corresponding to horizontally moving ash cloud observed by the eruption at Aug 10,29,and etc. are cosidered to be alternation of volcanic silt and sand. In view of particle size lithofacies, it is presumed that there were low speed current at the proximal area. Some ash cloud flowed SW section at Aug 29 were more viorent.

From interpretation of Aug 18 deposit, the eruption sequence developed 1.vent-opening explosion, 2. intermittent phreatmagmatic explosion, 3. shift to the magmatic eruption by reduction in groundwater,and 4. generation of pyroclastic surge by rapid attenuation of eruption column.