Preliminary report on the geology of 2000AD caldera wall in Miyakejima Volcano.

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A vertical cross section of basaltic-andesitic stratovolcano is exposed on the inner wall of Miyakejima 2000 AD caldera. The northern inner-wall of 2000 AD caldera is composed of the thick pyroclastic fall deposit with subordinate agglutinates which filled up the Kuwanokidaira caldera (Ofunato stage). The southern inner- wall is composed of the lava flow with subordinate thin pyroclastic deposit which filled up the Hachodaira caldera (Oyama stage). Based on these observations, explosive eruption, such as sub-Plinian eruption is dominant in the Ofunato stage; whereas effusive eruption, such as lava flow eruption is dominant in Oyama stage.

The vertical section of many vents is exposed on the inner-wall. Based on vent system structure and its related pyroclastic cone, the vents are divided into 3 types; phreatomagmatic eruption vent, sub- Plinian eruption vent, Strombolian eruption vent. Phreatomagmatic eruption vent, such as Soana has the characteristic of the subsidence structure in its root and the low H/L pyroclastic cone around the crater. Sub- Plinian eruption vent has the characteristic of the thick pyroclastic deposit with subordinate agglutinates and the low H/L pyroclastic cone around the crater. The root structure is composed of the flower (funnel) -shaped pyroclastic pipe and the dikes intrusion in the pipe. Strombolian eruption vent has characteristic of the high H/L pyroclastic cone and the dike.