Satsuma-Iwojima volcano has been continuously active for this 1,000 years and has emitted 17 ton volcanic gas in a year [Kazahaya and Shinahara, 1994]. In July 2001, continuous volcanic tremor event has started with continuous ash emission. An active vent at the summit had increased its size rapidly in July, 2001 and has emitted pure white ash from silica stone around the vent. Explosive sound was observed every several ten minutes and most of them has no seismic signal. Some periodical seismic signal with low-frequency acoustic wave was also observed.