

## 2006 NEAR FIELD INFRASONIC RECORDS OF EXPLOSIVE ERUPTIONS AT TUNGURAHUA VOLCANO, ECUADOR

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Through the technical cooperation program of Japan International Cooperation Agency (JICA), infrasonic instrumentation along with broadband seismic networks were deployed at Tungurahua and Cotopaxi Volcanoes, Ecuador during the first seven months of 2006. Both are andesitic active volcanoes in Ecuadorian Andes. Tungurahua continues its eruptive activity since 1999, in which explosive eruptions accompanying pyroclastic flows occurred in July-August, 2006. The installed infrasonic sensors are ACO CO., LTD. type 7144/4144 instruments, with frequency range: 10s-100Hz, sensitivity (including preamplifier): 2.5V/hPa, dynamic range: 70~150dB SPL, detector: Ceramic type. Both infrasonic and seismic waveform data at each station are digitized by a Geotech Smart24D datalogger with a sampling frequency of 50 Hz, and transmitted by a digital telemetry system using 2.4 GHz Wireless LAN to the IG's central office in Quito. Infrasonic signals were useful to identify the events before, during and after both strombolian to vulcanian eruptions of July 14, 2006 and August 16, 2006. The signals detected by both networks were highly useful to understand volcanic processes beneath Tungurahua and contribute to improve the monitoring capability of these volcanoes and provide effective early warnings to the population.