Geophysical Research Abstracts
Vol. 14, EGU2012-3500-1, 2012
EGU General Assembly 2012

Kamchatkan Volcanic Eruption Response Team (KVERT), Russia: preventing the danger of volcanic eruptions to aviation.

O. Girina (1) and Ch. Neal (2)

(1) Institute of Volcanology and Seismology FEB RAS, KVERT, Petropavlovsk-Kamchatsky, Russian Federation (girina@kscnet.ru), (2) US Geological Survey, Alaska Science Center, Alaska Volcano Observatory USGS, USA

The Kamchatkan Volcanic Eruption Response Team (KVERT) has been a collaborative project of scientists from the Institute of Volcanology and Seismology, the Kamchatka Branch of Geophysical Surveys, and the Alaska Volcano Observatory (IVS, KB GS and AVO).
The purpose of KVERT is to reduce the risk of costly, damaging, and possibly deadly encounters of aircraft with volcanic ash clouds. To reduce this risk, KVERT collects all possible volcanic information and issues eruption alerts to aviation and other emergency officials.
KVERT was founded by Institute of Volcanic Geology and Geochemistry FED RAS in 1993 (in 2004, IVGG merged with the Institute of Volcanology to become IVS). KVERT analyzes volcano monitoring data (seismic, satellite, visual and video, and pilot reports), assigns the Aviation Color Code, and issues reports on eruptive activity and unrest at Kamchatkan (since 1993) and Northern Kurile (since 2003) volcanoes.
KVERT receives seismic monitoring data from KB GS (the Laboratory for Seismic and Volcanic Activity). KB GS maintains telemetered seismic stations to investigate 11 of the most active volcanoes in Kamchatka. Data are received around the clock and analysts evaluate data each day for every monitored volcano.
Satellite data are provided from several sources to KVERT. AVO conducts satellite analysis of the Kuriles, Kamchatka, and Alaska as part of it daily monitoring and sends the interpretation to KVERT staff. KVERT interprets MODIS and MTSAT images and processes AVHRR data to look for evidence of volcanic ash and thermal anomalies. KVERT obtains visual volcanic information from volcanologist's field trips, web-cameras that monitor Klyuchevskoy (established in 2000), Sheveluch (2002), Bezymianny (2003), Koryaksky (2009), Avachinsky (2009), Kizimen (2011), and Gorely (2011) volcanoes, and pilots.
KVERT staff work closely with staff of AVO, AMC (Airport Meteorological Center) at Yelizovo Airport and the Tokyo Volcanic Ash Advisory Center (VAAC), the Anchorage VAAC, the Washington VAAC, the Montreal VAAC, and the Darwin VAAC to release timely eruption warnings. Urgent information is sent by email to government agencies, aviation services, and scientists (>300 users) located throughout the North Pacific region. KVERT staff also notify AMC and other emergency agencies in Kamchatka by telephone. VONA/KVERT Information Releases (VONA – Volcano Observatory Notice for Aviation) are formal written notifications that are sent by email to these same users to announce Aviation Color Code changes and significant changes in activity. These statements are posted on the KVERT (http://www.kscnet.ru/ivs/kvert/) and the AVO (http://www.avo.alaska.edu) web site.
During the period of 2009–2011, eruptions of 6 of Kamchatkan volcanoes were potentially dangerous for aviation: three significant events occurred at Bezymianny (2009, 2010 and 2011), one protracted eruption at Klyuchevskoy (from 2009 till 2010), three short events at Koryaksky (2009) and an ongoing explosive-effusive eruption at Kizimen (2010-2012). Eruptions of Karymsky and Sheveluch volcanoes have continued essentially uninterrupted throughout the period 2009-2011 and have also posed a hazard to aviation intermittently. Very strong explosive eruption of Sheveluch occurred on October 27-28, 2010.