

## Activity monitoring of the volcano Kizimen using remote methods, eruption in 2010–2012

Irina Nuzhdina

Kamchatkan Branch of Geophysical Survey RAS, Russia

E-mail: irina@emsd.ru

Kizimen is one of the poorly known active volcanoes in Kamchatka. The volcano is similar to Unzen in Japan according to their characteristics. Tephrochronological study shows several catastrophic eruptions in evolution of Kizimen volcano. Thus there is a hypothesis, that it has the potential to produce a Mount St. Helens style eruption. There is very few information about previous weak and moderate eruptions of Kizimen. The last known one was in 1927-1928. Three seismic stations were installed in the vicinity of the Kizimen volcano in 2003-2011. Nearest station KZV is located 2.6 km from top at the slope of volcano. Video observation of volcano began in July 2011. Kamchatkan Branch of Geophysical Survey monitors a volcanic activity of Kizimen volcano using three remote methods:

- 1) Seismic monitoring is a leading method. Processing and interpretation of the data from automatic telemetric seismic stations.
- 2) Video observation.
- 3) Satellite observation. Data from AVO (Alaska Volcano Observatory).

It is very important to prevent the population and administration, ministry of the emergency situation about the possible eruption in proper time. The purpose of this work is a reducing the risk from volcano hazards and providing safety of air travel across the North Pacific.

Last seismic activity at the volcano began in April 2009. Successful short-term prediction (time and size) of strong explosive eruption was made using seismic data. First strong explosive event with 10 km ash plume height was on December 12, 2010. Eruption of Kizimen with ash plumes, pyroclastic and lava flows continues till present time.