



Kamchatkan Volcanoes Explosive Eruptions in 2014 and Danger to Aviation

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There are 30 active volcanoes in the Kamchatka, and several of them are continuously active. In 2014, three of the Kamchatkan volcanoes – Sheveluch, Karymsky and Zhupanovsky - had strong and moderate explosive eruptions. Moderate gas-steam activity was observing of Klyuchevskoy, Bezymianny, Avachinsky, Koryaksky, Gorely, Mutnovsky and other volcanoes.

Strong explosive eruption of volcanoes is the most dangerous for aircraft because in a few hours or days in the atmosphere and the stratosphere can produce about several cubic kilometers of volcanic ash and aerosols. Ash plumes and the clouds, depending on the power of the eruption, the strength and wind speed, can travel thousands of kilometers from the volcano for several days, remaining hazardous to aircraft, as the melting temperature of small particles of ash below the operating temperature of jet engines.

The eruptive activity of Sheveluch Volcano began since 1980 (growth of the lava dome) and is continuing at present. Strong explosive events of the volcano occurred in 2014: on January 08 and 12, May 12, September 24, October 02 and 28, November 16, 22 and 26, and December 05, 17, 26 and 29: ash plumes rose up to 9-12 km a.s.l. and extended more 900 km to the eastern and western directions of the volcano. Ashfalls occurred at Klyuchi Village (on January 12, June 11, and November 16). Activity of the volcano was dangerous to international and local aviation.

Karymsky volcano has been in a state of explosive eruption since 1996. The moderate ash explosions of this volcano were noting during 2014: from March 24 till April 02; and from September 03 till December 10. Ash plumes rose up to 5 km a.s.l. and extended more 300 km mainly to the eastern directions of the volcano. Activity of the volcano was dangerous to local aviation.

Explosive eruption of Zhupanovsky volcano began on June 06, 2014 and continues in January 2015 too. Ash explosions rose up to 8-10 km a.s.l. on June 19, September 05 and 07, October 11, November 07 and 22; in the other days – up to 5-6 km a.s.l. Ash plumes extended for about 1000 km mainly to the eastern directions of the volcano. Ashfalls occurred at Petropavlovsk-Kamchatsky on September 07. Activity of the volcano was dangerous to international and local aviation.