

**PECULIARITIES OF VOLCANIC EARTHQUAKES SPECTRAL COMPONENTS
FOR KIZIMEN, KORIAKSKY, MUTNOVSKY AND GORELY VOLCANOES**

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The article presents a technique for formalized separation of volcano-tectonic earthquakes and low-frequency seismic events which occurred on volcanoes. The technique was used as a case study for four episodes of volcanic activity in Kamchatka based on data from seismic stations located near volcanoes: explosive eruption of Kizimen Volcano (2010-2011), activation of Gorely Volcano (2009-2011), activation of Koriaksky Volcano (2008-2009), long-term intense hydrothermal activity of Mutnovsky Volcano. For visualization of hidden correlation in waveform spectral characteristics we use the triangle diagram. We have targeted a trend in volcano investigation which supposes study of possible relation between types of volcano activity and distribution of spectral components in seismic records.

Keywords: earthquake, volcano, Kizimen, Koriaksky, Mutnovsky, Gorely, formalized typification.