

The 2008 eruption of Okmok volcano in Aleutian Islands observed by ALOS/PALSAR

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On July 12 (UTC), 2008, Okmok volcano in the Aleutian Islands began to erupt after a lapse of 11 years. Okmok volcano is located on Umnak Island in the Aleutian volcanic chain, and has erupted more than 10 times since 19th century. Although there are few habitans around Okmok volcano, ash from the eruption could lead to catastrophic airplane accidents because of the heavy air traffic over the Aleutian Islands. In the 2008 event, ash plumes were emitted up to 15,000m above sea level from the new vent located close to the caldera center, not the active vent. Fortunately, there was no accident but it influenced several flight schedules. JAXA performed several observations using ALOS/PALSAR before and after the eruption. PALSAR can observe the volcano surface even if it is emitting a smoke. Comparing images acquired before and after the eruption, we detected surface changes and could locate new vents in the area close to the caldera center. Using DInSAR technique of PALSAR data acquired after the eruption, we detected a deflation of the volcanic edifice for the period at least one and a half months after the beginning of the eruption.