

# Subsidence of Unzen volcano Pyroclastic Flow Deposits detected by Space-borne SAR Interferometry

# Satoshi Fujiwara[1]; Hiroyuki Nakai[1]; Mikio Tobita[1]; Hiroshi, P. Sato[1]

[1] GSI

<http://vldb.gsi.go.jp/sokuchi/sar/>

Unzen volcano in southwestern Japan erupted from 1990 and pyroclastic flow deposited in valleys. We detected the subsidence (deflation) of the pyroclastic flow deposits using space-borne Synthetic Aperture Radar interferometry. The subsidence occurred after its deposit for several years.

The main subsidence occurred along the major pyroclastic flow in the Mizunashi river and the depth of the deposits is from several dozen meters to one hundred and several dozen meters.

The area of the subsidence is about two kilometers (length) by several hundred meters (width) and it has the following features;

- (1)The subsidence exists along the pyroclastic flow
- (2)The largest subsidence is found in the center of the flow cross section (the deepest deposits)
- (3)The downstream part that has thinner deposit than the upstream part deflated earlier