

Crustal deformation at Iwo-jima by SAR interferometry

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Iwo-jima volcano is a active volcano island which generated small steam eruption over 15 times since 1889. It erupted at 9/21-22 and 10/10 in 2000, recently. Prior to the volcanic activity, GPS continuous observation network of GSI caught that crustal deformation have begun from August and deformation have been continuous to February, 2002. It is clear that such large crustal deformation is closely related to volcanic activity, and it is important to estimate source of deformation. However, estimation of deformation source is difficult because there are only 2 GPS observation stations of GEONET. In addition, GPS observation result is complex which can not be explained by a simple model.

We need data from many observation points for estimation of source. Then, we required the crustal deformation of Iwo-jima island by JERS-1 SAR interferometry.

We analyzed three pairs (1993/2/17-4/2, 1996/9/29-11/12, 1993/6/29- 1996/5/20). Two pairs of which the observation interval was short did not show crustal deformation. But the pair of the long interval show crustal deformation which are far from SAR satellite.