



VOLInSAR-PF, the InSAR Volcano Observatory Service at Piton de la Fournaise Volcano (La Reunion Island).

Jean-Luc Froger, Valérie Cayol, Aurélien Augier, and Thierry Souriot

Lab. Magmas et Volcans, Université Blaise Pascal, 63038 Clermont-Fd Cedex, France (J.L.Froger@opgc.univ-bpclermont.fr)

Since 2003, we carry out a systematic InSAR survey of the Piton de la Fournaise volcano, Reunion Island, in the framework of an AO-ENVISAT project. Since 2005 this activity gets the status of Observatory Service of the Observatoire de Physique du Globe de Clermont-Ferrand (OPGC). From 375 ASAR images acquired between 2003 and 2010, we have produced more than 2100 interferograms that allowed us to map the deformations related to 21 eruptions and thus to better understand the internal processes acting during each eruption. In the same time, we have developed an automatic procedure to provide full resolution interferograms, through a dedicated WEB site, to the Volcano Observatory of Piton de la Fournaise (OVPF), and our other partners, within a few hours after receiving the ASAR images. In this way, our work is a first step toward an operational system of InSAR monitoring of volcanic activity. Since the beginning of 2010, the VOLInSAR-PF database is also open to the entire community, through an anonymous login that gives access to slightly reduced resolution interferograms. We will present the VOLInSAR-PF database, the main results it provides concerning the way Piton de la Fournaise is deforming, and the main perspectives for monitoring provided by the new InSAR data (PALSAR-ALOS, TerraSAR-X, RADARSAT-2, COSMO-SkyMed) we are beginning to integrate in the database.