GROUP ON EARTH OBSERVATIONS

Rome, July 2013

ASI continues its contribution to the Hawaii Supersites

The Italian Space Agency has strengthened its participation in the international GEOHAZARD SUPERSITE initiative, opening the entire COSMO-SkyMed archive for the Hawaiian volcanoes Kilauea and Manua Loa.

The main objective of the GSNL initiative is to make sets of geophysical data, as complete as possible, available to the international scientific community in some selected areas of the globe to better understand major geophysical hazards such as earthquakes and volcanoes.

In 2012 ASI joined this initiative, providing COSMO-SkyMed data from Kilauea and Manua Loa Volcanoes.

After almost 1 year from the start of the COSMO-SkyMed data supply, Michael Poland, USGS, Principal Investigator of the Hawaii Supersite, on behalf of the Hawaii GEO Supersite scientists has expressed his appreciation to ASI for contributing COSMO-SkyMed data acquired over Kīlauea and Mauna Loa volcanoes to the Supersite.

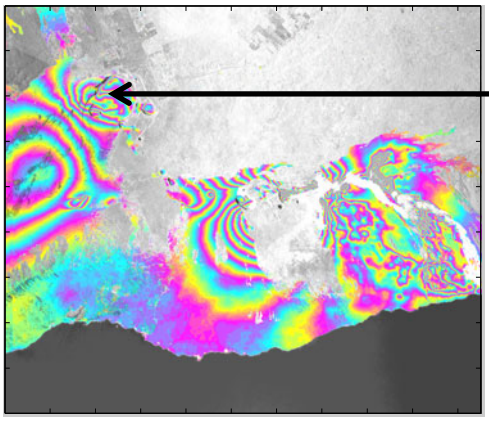
“The data have proven invaluable for tracking ground deformation and surface change, especially at Kīlauea, over the past year. In fact, COSMO-SkyMed is providing the only consistent SAR coverage of Hawaiian volcanoes. Without these SAR images, our scientific studies into magma accumulation, transport, and eruption, as well as investigations of earthquake processes, would not be possible. In addition, we would not be able to track deformation as it is occurring at Kīlauea—one of the most active volcanoes on Earth. The frequent overpasses and rapid availability of COSMO-SkyMed data allow us to be proactive about our studies and anticipate volcanic events, rather than reactive, by which time much of the scientifically valuable information may have been lost.” -said M. Poland.

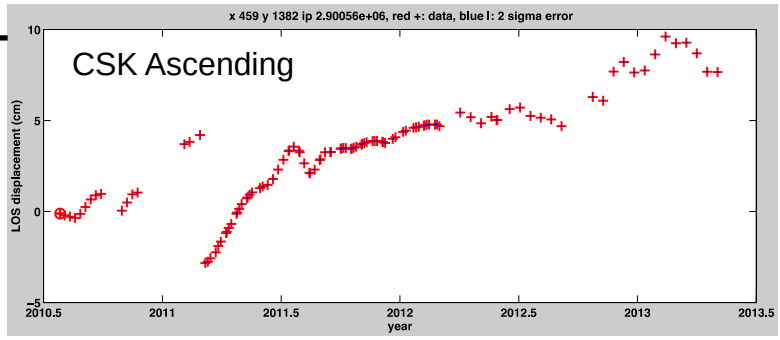
To expand the work of researchers that are studying Kīlauea and Mauna Loa, international Hawaii supersite scientists requested to ASI that COSMO-SkyMed data acquired prior to March 2012 be included as part of the Supersite. That time period includes the most significant fissure eruption (in March 2011) to have occurred at Kīlauea since 1983.

These data will permit Supersite users to build a complete time series of surface displacements stretching back several years, allowing for more thorough investigations of volcanism, earthquakes, and magma-tectonic interactions in Hawai‘i.

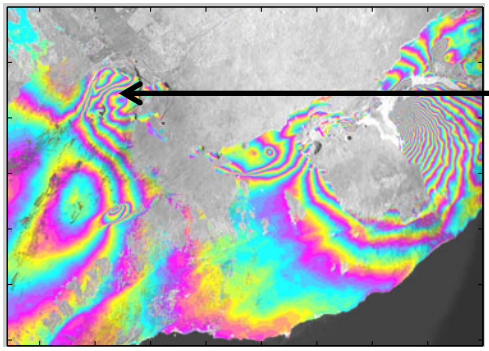
More information is available on the supersite web page http://supersites.earthobservations.org/

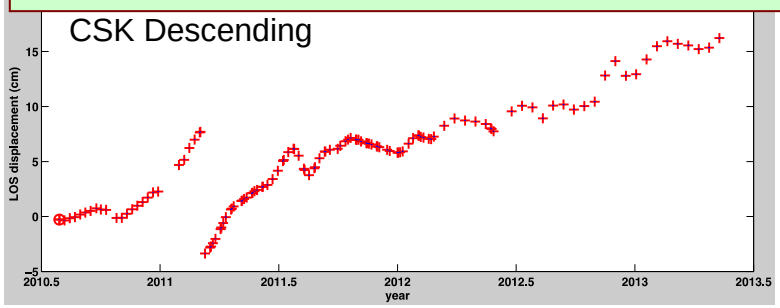
Kilauea caldera time series





COSMO-SkyMed Kilauea archive data have dense temporal sampling that improves transient deformation detection and span the March 2011 Kamoamoa fissure eruption.





The pictures show surface deformation time series for Kilauea for both the ascending and descending tracks from 2010.5 through mid-May 2013., with evidence of the March 2011 Kamoamoa fissure eruption. Images have been kindly provided by P. Lundgren (JPL), one of the most active scientists on Hawaiian Supersite.

(Simona Zoffoli, ASI)