

The New Geo-Observing Satellite DAICHI (ALOS); A Frontier Leading to the Innovative Ideas to Understand Evolving Earth.

Makoto Murakami[1]

[1] Geography and Geodynamics Research Center, The GSI

A new earth-observing satellite, which formerly was called ALOS, was launched at Uchinoura, Japan and named DAICHI on January 26, 2006. After several flight maneuvers DAICHI was put into the earth-circulating orbit for the routine operation successfully. It will be on the task to monitor the change of the surface of the earth for coming years. As of the end of February, it is going through the data validating and calibrating processes to test its functions; it has already used for disaster responding actions by producing images over land slide area, that killed hundreds of people in Philippines Leyte Island in middle of February, 2006. The satellite is equipped with high-resolution optical sensors (PRISM) and a synthetic aperture radar (PALSAR) to observe earth surface. The PRISM is a three-line optical scanner to produce stereo images, whereas the PALSAR is an off-nadir angle changeable L-band SAR designed to facilitate interferometric SAR (InSAR) observations. PALSAR InSAR is capable of mapping of strain fields over tectonic regions of the world including seismic and volcanic regions. InSAR will play an important role in monitoring crustal deformations leading to disastrous earthquakes and volcanic eruptions in the regions uncovered by ground based modern observation networks of seismometers or GPS.