Introduction to SAR (Synthetic Aperture Radar) of Earth Obervation Satellite

Kyoichi Ito[1]

[1] RESTEC

http://www.restec.or.jp

In recent years, disasters by unusual weather that seems to be caused by global warming have highly occurred worldwide. A lot of researchers are working with utilization of Satellite data on interpreting and taking steps for featured phenomea on the earth's surface such as earthquake, volcanic activity, subsidence, landslide, flood, environmental change, and utilization of the data for disaster management and mitigation.The Interferometry by SAR onboard Earth Observation Satellite is capable to detect crustal deformation in sentimeters and going to be used for the management and mitigation of disaster such as volcanic eruption, earthquake and so on.SAR is an active type microwave sensor which can carry our observations day and night regardless of weather conditions and is usefule for disaster prevention, management and mitigation by observing the poin at a constant frequency, and its wide swath.

I would like to introduce the currently-operated SAR satellites and these data distribution in this presentation.

SAR Satellites

1. Japanese Advanced Land Observing Satellite (Daichi : ALOS)
2. European SAR Satellite (ENVISAT)
3. German SAR Satellite (TerraSAR-X)
4. Italian SAR Satellite (CosmoSkyMed-1, 2)
5. Canadian SAR Satellite (RADARSAT-1, 2)