

EARTH OBSERVATION SYMPOSIUM (B1)
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THE CHINESE L-SAR DOUBLE-STAR SYSTEM AND ITS APPLICATION IN EARTHQUAKE
MONITORING

Abstract

The L-SAR Double-Star system is the China first L-band Synthetic Aperture Radar (SAR) satellite with the target of ground surface deformation and high precision measuring in earthquake emergency and earthquake monitoring. The L-SAR has an advantage in capturing conditions of land deformation cause by an earthquake. The land deformation due to the Earthquake was clearly observed by the L-SAR. The topographic change and movement was drawn using a method called “interferometry” by observing one location multiple times and finding differences. It can grasp conditions of a disaster-stricken area, and also examine the health conditions of planet, which are a lifeline for us, and for the Earth. (a)Study L-SAR atmospheric error correction methods based on the external data sources and atmospheric model, such as MERIS and GPS. (b)Study how to get three dimensional coseismic deformation fields based on various processing methods. (c)Extract the weak signal from the interseismic or post-seismic deformation using L-SAR data.