

MULTI SENSOR SATELLITE DATA FOR EARLY INFORMATION OF CRUSTAL DEFORMATION

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Multi sensor data are now capable in providing land, ocean, atmosphere and meteorological parameters over the globe. These satellite sensors use broad band of shorter wavelength radiations. The analysis of multi sensor data from the active tectonic and seismic zones show anomalous change in gravity regime, surface and air temperature, relative humidity and atmospheric greenhouse gases. These anomalous change are found to show complementary nature which are likely to be associated with the change in crustal stress regime that lead to the changes in near surface hydrological regime in some of the active tectonic and seismically active zones. Detailed analysis of multi sensor data show complementary nature prior to the main seismic (earthquakes, volcanoes) and tectonic events (subsidence, formation of fractures). The integrated parameters from the multi sensor data prove to be of great potential in providing early information about the anomalous changes in satellite derived parameters about the crustal deformation. Examples from the major earthquake, active volcanic and tectonic active regions will be presented that clearly show changes in crustal deformation.

Satellite data, Crustal deformation, Early information

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