

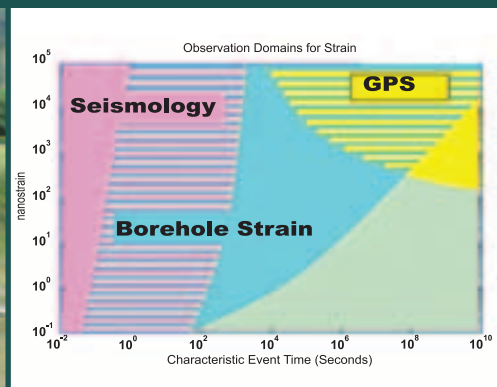
# GEODYNAMIC STUDIES

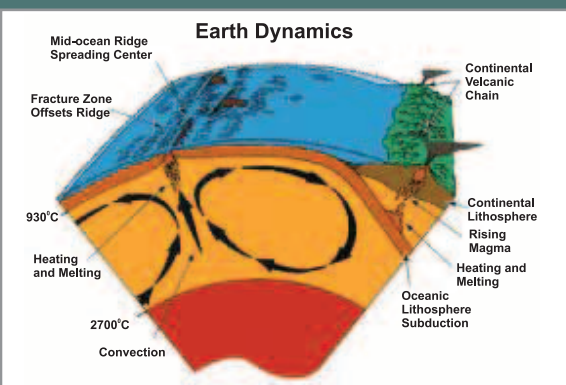
We help understanding the processes leading to deformation of planetary mantle and crust and the related earthquakes and volcanism that shape the structure of the earth.



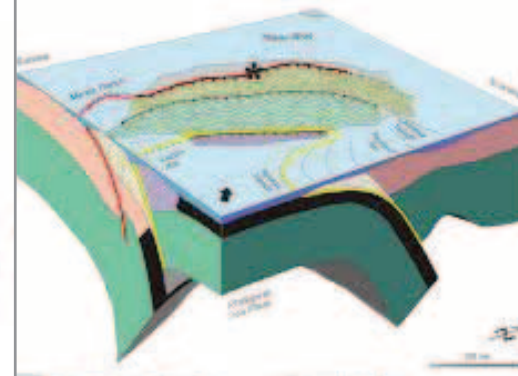
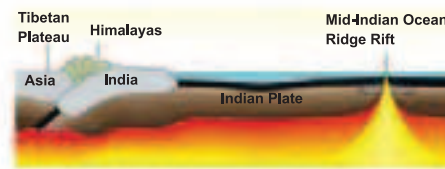
We at Complete Instrumentation Solutions provide comprehensive solutions in terms of equipment & services for understanding the processes leading to deformation of planetary mantle and crust and the related earthquakes and volcanism that shape the structure of the Earth. Till date the deformation studies have been conducted using GPS, which has a limitation in measuring the vertical deformation.

In the case of the Earth in its current stage of evolution, plate tectonics describes how the surface behaves: large, cold, relatively rigid plates move





### Continent-Continent Convergent Boundary



laterally across the surface while the deeper mantle flows by creep. In the cold plates, deformation is largely confined to boundary faults between the plates. Faults slip with a stick-slip behaviour, giving rise to large earthquakes that occur primarily on the plate boundaries. Given the difficulty of direct observation and the wide range of scales involved in phenomena of interest, multiple approaches are needed to understand geodynamic processes.

The Gladwin Tensor Strain Monitoring (GTSM) Borehole Instruments, being promoted by us, are since 1980's being used for earthquake studies. GTSM borehole tensor strain instruments provide data which strongly complement seismic and GPS array studies of earth deformation. Combined with these other data sets, the full range of earth deformation (amplitudes over the range of 0.1 nanostrain to 100 microstrain) over a very wide range of time scales can be observed and documented. Over the critical range of periods from 1 Hz to months, the system can provide, in real time, sensitivities which are a few orders of magnitude more sensitive than GPS equivalent strains, and in a form which is available in real time for direct interpretation.

GEODYNAMIC STUDIES

GTSM Borehole tensor strain instruments being supplied by us provide data which strongly complement seismic and GPS array studies of earth deformation.