

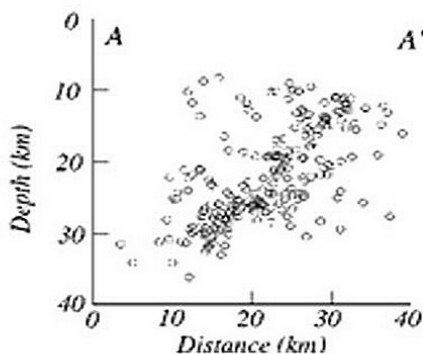
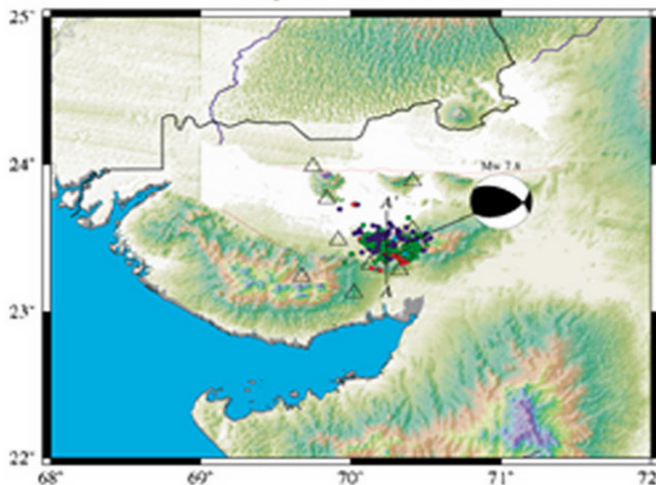
deployment: gujarat, india

In response to an invitation from the Institute of Science and Technology for Advanced Studies and Research, the NSF-funded Mid America Earthquake Center organized a cross-disciplinary team to assist the Indian government in post earthquake studies and assessments. The seismology team in India, led by CERI's director, Arch Johnston, deployed a solar charged array of seismic instruments to record aftershocks near the town of Bhuj and in the Rann of Kutch.

Post-earthquake studies of active faults and associated ground motions in the region provided scientific information and inputs for the formulation of appropriate building codes.

In this respect, aftershock studies may help mitigate losses from similar western Indian quakes in the future. Because aftershocks die out in a period of days to months and damaged buildings need to be cleared away, these types of research efforts must be carried out as quickly as possible after the main shock.

Gujarat Aftershocks



Liquefaction crater north of India Bridge, Gujarat, India.

The Republic Day earthquake offered a unique opportunity to study the closest thing to a New Madrid earthquake we are likely to see in our lifetimes, and advanced the usefulness of liquefaction features in Paleoseismology.

Although the geologic setting may not be an exact analog for the New Madrid seismic zone in the central U.S., there are similarities in seismic-wave attenuation, magnitude vs rupture area data, and earthquake occurrence rates between Gujarat and the eastern United States.

- Low seismicity rate does not mean low hazard.
- Seismic-wave attenuation in western India is similar to eastern North America attenuation.
- There is a greater likelihood for large ground motions, hence higher seismic hazard in India and North America's eastern U.S.

Liquefaction crater near Charleston South Carolina, 1895 (from the Dutton Report, USGS)

