ASTER: Joint NASA-METI Project

Advanced Spaceborne Thermal Emission and Reflection Radiometer
Jet Propulsion Laboratory/California Institute of Technology
Global Digital Elevation Model for the Earth’s land surface, covering 83N to 83S; 30 m postings, packaged in 1x1 degree tiles. GDEM is distributed at no cost from LPDAAC and Japan ERSDAC to all users, and is a contribution to GEO to serve societal benefits goals.
The September 2009 Station Fire north of Los Angeles. View is looking east towards JPL. The fire consumed 160,000 acres; the burned area appears grey. This perspective view is created by draping ASTER images over the ASTER GDEM topography.
In addition to retreat of glacier front, flow speed has dramatically increased in 5 year observation period.

100% flow speed acceleration
- ~6 km/yr in 2001
- ~12 km/yr in 2005

Courtesy G. Hamilton, U. Maine
Collaboration between Alaska Volcano Observatory and U. Pittsburgh to observe volcanic eruptions in North Pacific, and improve alerts to aviation traffic.

Kliuchevskoi Volcano, Kamchatka, Siberia

Courtesy M. ramsey, U. Pittsburgh
North Pacific Volcanoes: 5-month Observation Record of Kliuchevskoi

Kliuchevskoi Time Series

White areas are lava flows and, hot domes. Eruption plumes are gray to black.
Development and deforestation are dramatically illustrated around Iguazu National Park. All of the forest is gone in Paraguay, converted to agriculture and urbanization. Argentina has maintained most of the forest in this area. Brazil has saved the park, but a huge dam and reservoir have significantly modified land use.