

Geohazards Monitoring with ASTER Data

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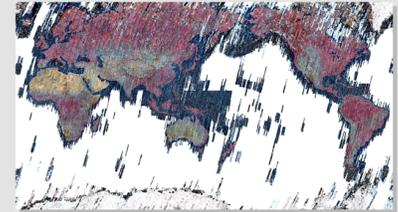
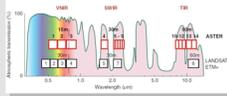


Advanced Spaceborne Thermal Emission and Reflection Radiometer

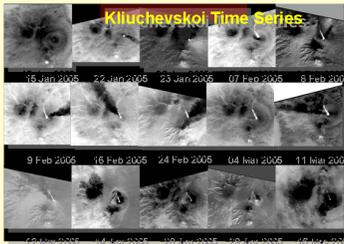
1,500,000 Images Acquired Since 2000



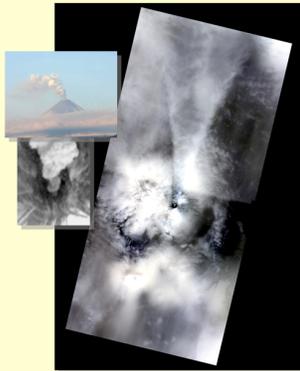
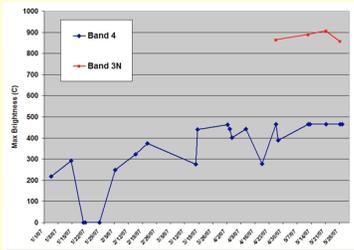
- Flies on NASA's Terra platform
- Built for METI in Japan
- Data processing in Japan and U.S.
- Instrument command and control by Japan and U.S.
- Joint Science Team



VOLCANOES



Monitoring Kluichevskoi volcano, Kamchatka, Russia. Six months of 2007 are shown at lower left with maximum temperatures from Bands 3 and 4. ASTER eruption information is fed in near-real time to Alaska Volcano Observatory and National Weather Service for aircraft hazard alerts.

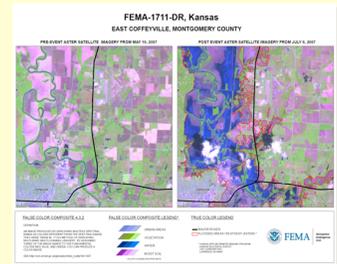


FLOODS



Hurricane Katrina caused massive flooding in New Orleans after canal levees failed. ASTER acquired 65 images along Gulf Coast for damage assessment. Data were used by dozens of agencies. A before and after pair at left shows flooding in northwest New Orleans.

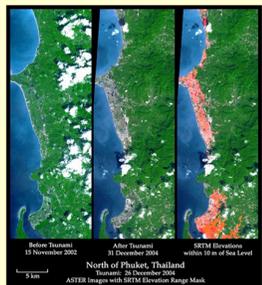
Flooding in central US, summer 2007. Federal Emergency Management Agency used ASTER data to map extent of river flooding along the Verdigris River.



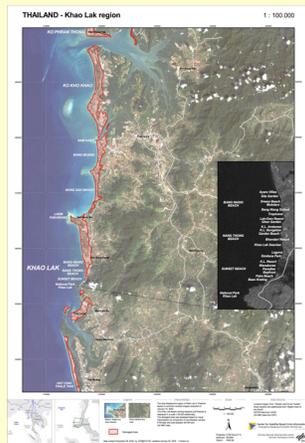
TSUNAMI



Banda Aceh, Sumatra before and after tsunami

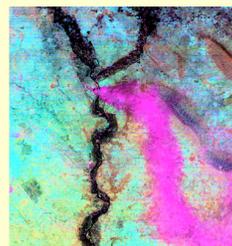


Before tsunami (left), after (center), and with SRTM 10m elevation (right)



Damage assessment map: Landsat background and ASTER damage areas in red; produced by DLR (Center for Satellite Based Crisis Information)

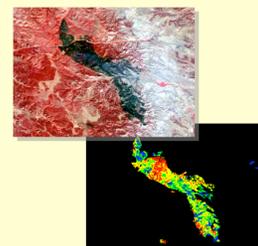
FIRES



SO2 plume from factory fire near Baghdad, multispectral TIR data



Day visible and night TIR images of active forest fire



Forest fire visible image and normalized burn index from IR data



Baghdad oil pipelines set ablaze to confuse US planes