



経済産業省

Ministry of Economy, Trade and Industry



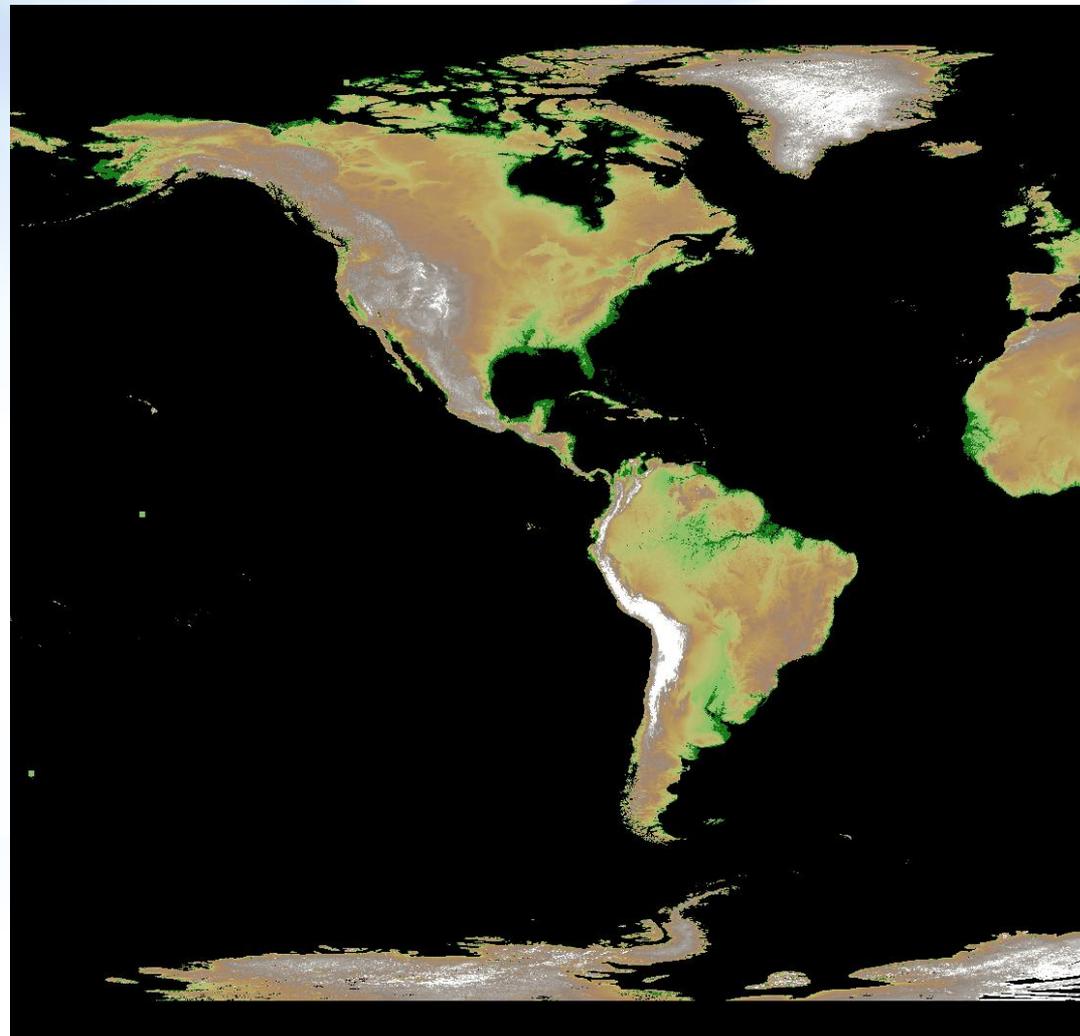
ASTER: Joint NASA-METI Project

Advanced Spaceborne Thermal Emission and Reflection Radiometer
Jet Propulsion Laboratory/California Institute of Technology

ASTER Global DEM



Global Digital Elevation Model for the Earth's land surface, covering 83N to 83S; 30 m postings, packaged in 1x1degree 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.



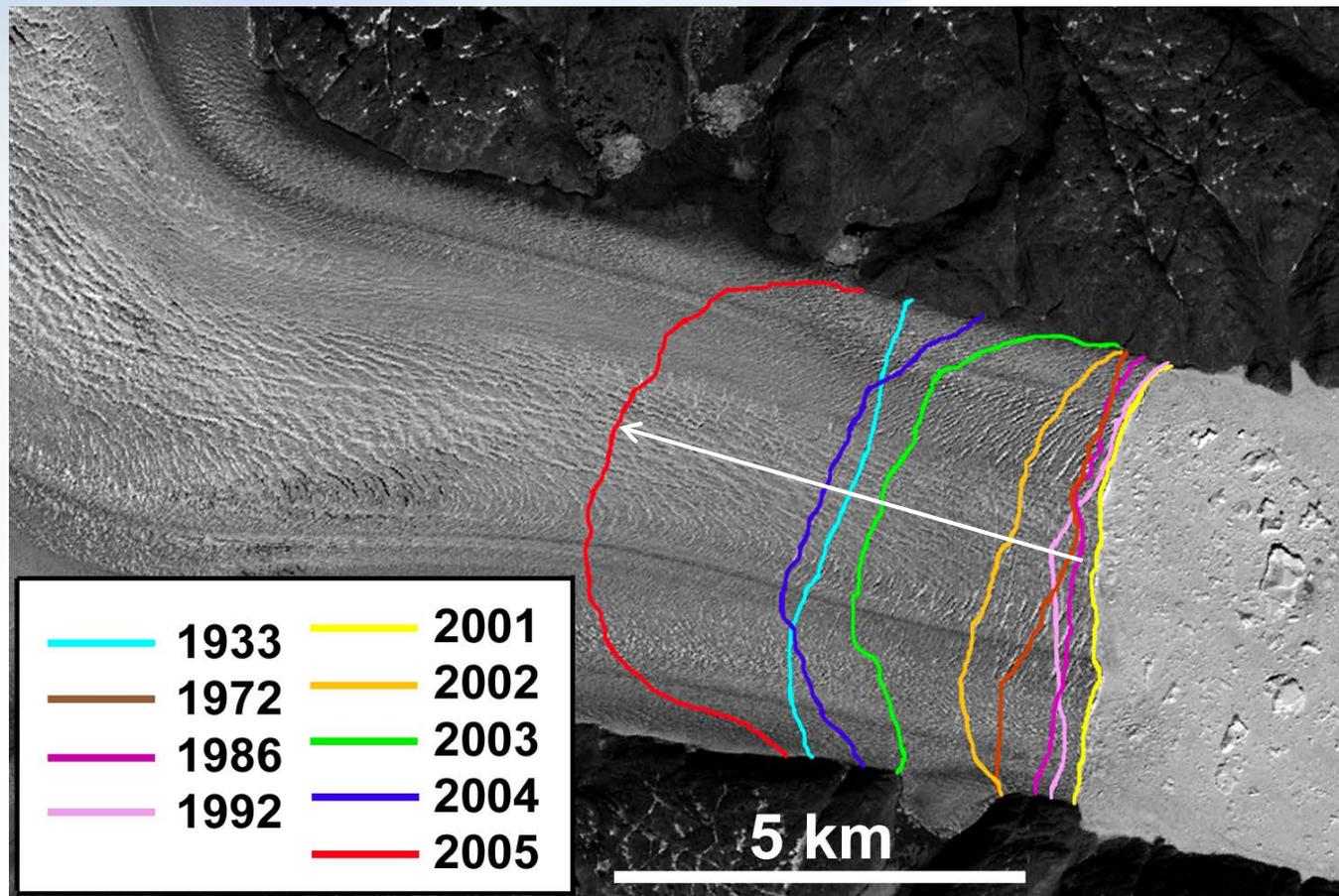
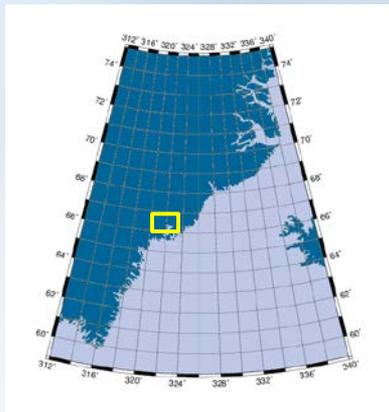
Example of ASTER GDEM



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.



Retreat of Helheim Glacier, Greenland

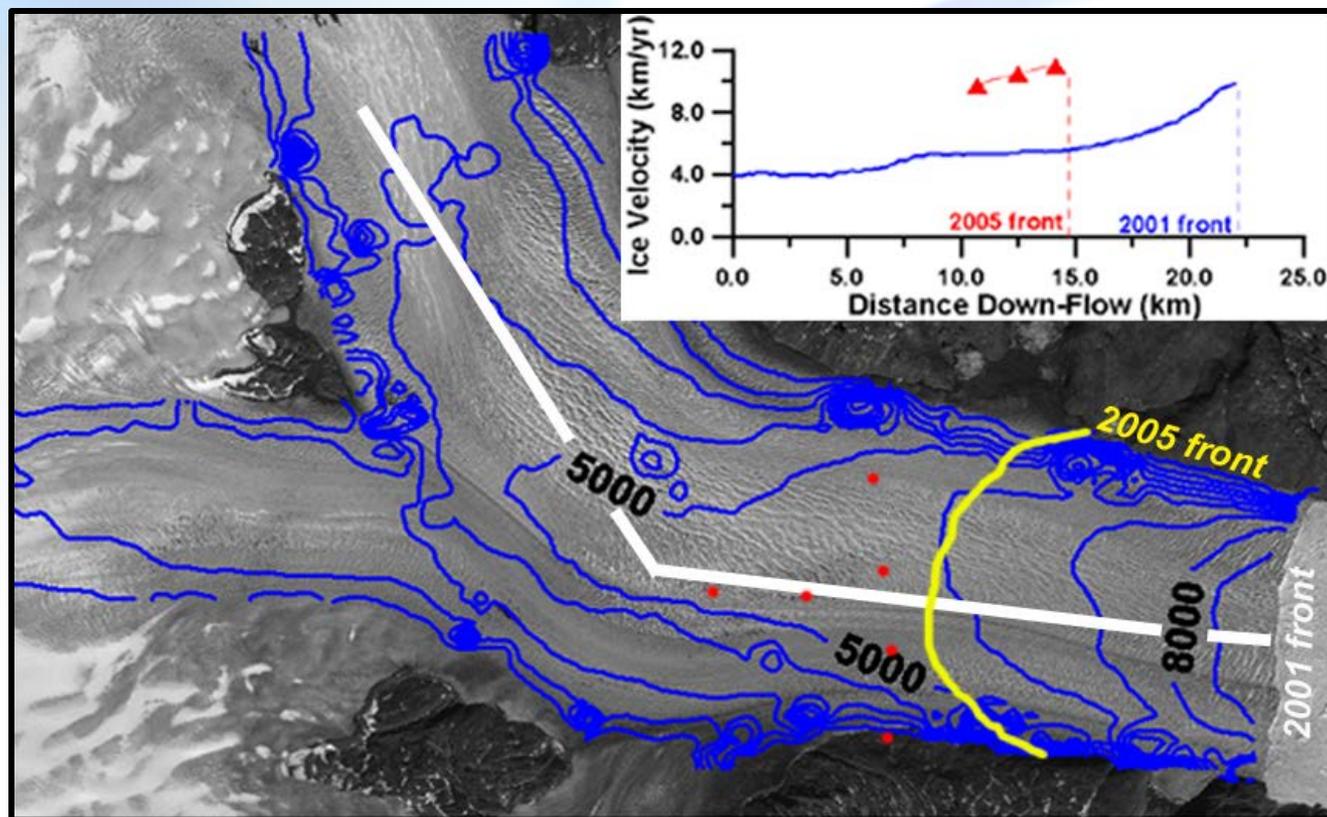


Courtesy G. Hamilton, U. Maine

Retreat of Helheim Glacier, Greenland



In addition to retreat of glacier front, flow speed has dramatically increased in 5 year observation period.



100% flow speed acceleration

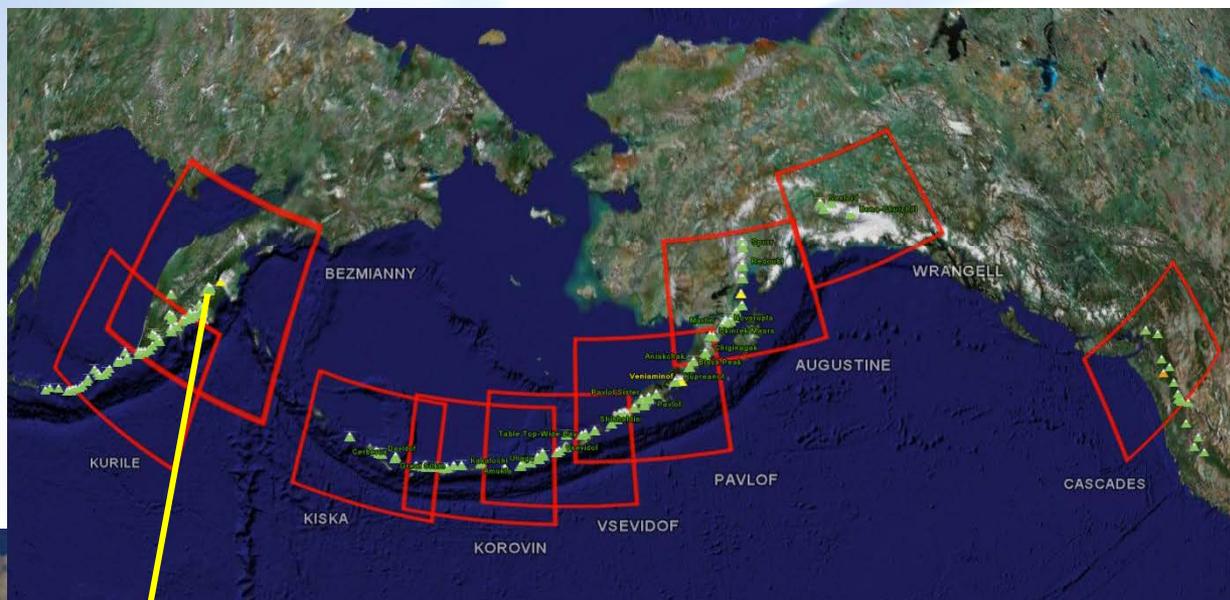
- ~6 km/yr in 2001
- ~12 km/yr in 2005

Courtesy G. Hamilton, U. Maine

ASTER Rapid Response Program: North Pacific Volcanoes



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.

Deforestation around Iguazu Falls



1972

Brazil

Paraguay

Argentina

Landsat MSS

2007

Iguazu Falls

ASTER

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.

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