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Natural Hazards Monitoring with ASTER data

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The Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) has been operating on NASA's Terra platform since late 1999. ASTER provides 60 x 60 km images in 14 spectral bands, from the visible to the thermal infrared, with 15-90 m spatial resolution. Data are archived and distributed by the EROS Data Center Distributed Active Archive Center, and are available for searching and ordering through a web-based interface. This presentation will illustrate the applications of ASTER data to natural hazards monitoring, including forest fires, volcanic eruptions, floods and tornadoes. As part of the Wildfire Response Team, the ASTER project is providing near-real time images to the US Forest Service for fire fighting logistics, and post-fire remediation. A large number of potentially active volcanoes are being monitored to look for possible premonitory phenomena that might be related to future eruptions, including changes in SO2 emissions, and changes in thermal behavior of lava lakes, domes, and fumaroles. Images of floods and tornadoes are being used for post-event damage assessment.