The Shuttle Radar Topography Mission

Tom G. Farr, Mike Kobrick
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, CA USA
tom.farr@jpl.nasa.gov

The Shuttle Radar Topography Mission (SRTM), is a cooperative project between NASA and the National Imagery and Mapping Agency of the U.S. Department of Defense. A formal memorandum of understanding to develop and conduct the mission was finalized on July 8, 1996. The mission is designed to use a single-pass radar interferometer to produce a digital elevation model of the Earth’s land surface between about 60 degrees north and south latitude. The DEM will have 30 m horizontal resolution and about 10 m vertical errors. SRTM will use the same radar instrument that comprised the Spaceborne Imaging Radar-C/X-band Synthetic Aperture Radar (SIR-C/X-SAR) that flew twice on the Shuttle Endeavour in 1994. To collect the interferometric data, a 60 m mast, additional C-band imaging antenna, and improved tracking and navigation devices will be added. A second X-band antenna is also planned to be added, which will produce higher resolution topographic measurements in strips nested within the full, C-band coverage.

* Work performed under contract to NASA.

12th Conference on Applied Geologic Remote Sensing
   New Data Sources
   DEM Generation and Analysis