

## ASTER Satellite Imagery

ASTER is a Japanese instrument on NASA's TERRA satellite - see home page (Fig. 1) for more details.

Figure 2 (next page) is a map showing the distribution of ASTER scenes over the Antarctic region that have been processed to Level 1B as of 31 May 2002. I can also provide an Excel workbook version or Arcview Shapefile with this information. The information contained in these files was extracted from databases at the EOS Data Gateway at USGS-EROS Data Center.

There is no assessment of cloud cover included in the files. My estimate is that about 50+% are badly affected by cloud. There have been approximately 11,000 acquisitions of ASTER scenes represented by the number of Level 1A products.

There are about 2200 Level 1B products. Data has been processed to Level 1B from Level 1A at the ASTER Data Centre in Japan on the basis of an automated cloud assessment algorithm but that algorithm [in my opinion] is not providing reliable assessments.

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# ASTER



ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) is an imaging instrument that is flying on [Terra](#), a satellite launched in December 1999 as part of NASA's [Earth Observing System \(EOS\)](#). ASTER will be used to obtain detailed maps of land surface temperature, emissivity, reflectance and elevation. The EOS platforms are part of NASA's [Earth Science Enterprise](#), whose goal is to obtain a better understanding of the interactions between the biosphere, hydrosphere, lithosphere and atmosphere.

ASTER is the only high spatial resolution instrument on the Terra platform. It will be used with [MODIS](#), [MOPITT](#), [MISR](#) and [CERES](#) which monitor the Earth at moderate to coarse spatial resolutions. ASTER's ability to serve as a 'zoom' lens for the other instruments will be particularly important for change detection, calibration/validation and land surface studies.

The ASTER instrument was built in Japan for the Ministry of Economy Trade and Industry (METI) formerly known as Ministry of International Trade and Industry (MITI). A Joint US/Japan Science Team is responsible for instrument design, calibration, and validation.

**The primary objective for the ASTER mission is to:**

- Obtain **high spatial resolution** global, regional and local images of the Earth in 14 colors (spectral bands)

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