



National Aeronautics and  
Space Administration

Goddard Space Flight Center

Japan



MODIS True-Color Composite  
Composite Period: June-September 2001  
1 kilometer resolution



## About this Image

This spectacular Moderate Resolution Imaging Spectroradiometer (MODIS) image of Japan, eastern North and South Korea, northeast China, and southeast Russia is based on the most detailed true-color image of the entire Earth to date. Using a collection of satellite-based observations, scientists and visualizers stitched together months of observations of the land surface, oceans, sea ice, and clouds into a seamless, true-color mosaic of every square kilometer of our planet.

Much of the information contained in this image came from MODIS, illustrating its outstanding capacity to act as an integral tool for observing a variety of terrestrial, oceanic, and atmospheric features of the Earth. Flying over 700 km above the Earth onboard NASA's Earth Observing System (EOS) Terra and Aqua satellites, MODIS is capable of imaging the Earth at resolutions ranging from 250 meters to 1 kilometer in 36 discreet spectral bands. These data improve our understanding of global dynamics and processes occurring on the land, in the oceans, and in the lower atmosphere. The land and coastal ocean portions of this image are based on surface observations collected from June through September 2001 and combined, or composited, every eight days to compensate for clouds that might block the sensor's view of the surface on any single day. Shallow water true-color data was used to simulate the ocean surface. MODIS doesn't measure 3-D features of the Earth, so the surface observations were draped over the GTOPO 30 elevation dataset compiled by the U.S. Geological Survey's EROS Data Center.

A large collection of imagery is freely available to educators, scientists, and the public in a variety of sizes and formats, including animations and the full (1 km) resolution imagery, is available at the following website: [earthobservatory.nasa.gov/Newsroom/BlueMarble](http://earthobservatory.nasa.gov/Newsroom/BlueMarble)

Additional information on the MODIS instrument can be found at: [modis.gsfc.nasa.gov](http://modis.gsfc.nasa.gov)

## Selected NASA Earth Science Images and Visualization Websites

Earth Observatory  
[earthobservatory.nasa.gov](http://earthobservatory.nasa.gov)

Visible Earth  
[visibleearth.nasa.gov](http://visibleearth.nasa.gov)

NASA Goddard Space Flight Center Scientific Visualization Studio  
[svs.gsfc.nasa.gov](http://svs.gsfc.nasa.gov)

Jet Propulsion Laboratory Planetary Photojournal  
[photojournal.jpl.nasa.gov](http://photojournal.jpl.nasa.gov)

NASA Johnson Space Center Gateway to Astronaut Photography of Earth  
[eol.jsc.nasa.gov](http://eol.jsc.nasa.gov)