# NASA Facts

National Aeronautics and Space Administration

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# NASA Earth Science Enterprise Images and Video via the World Wide Web

**Beginner** Overview with a broad sampling of images from various NASA programs

NASA Image Exchange (NIX): Web-based search engine for simultaneously searching one or more of NASA's online image and photo collections. *http://nix.nasa.gov* 

**Earth from Space:** A dataset of astronaut acquired imagery of Earth. *http://earth.jsc.nasa.gov/* 

NASA's Earth Science Enterprise Image Gallery: A collection of Earth Science images related highlighting NASA's Earth Science Enterprise efforts. http://www.hq.nasa.gov/office/mtpe/gallery/

index.html

**NASA Johnson Space Center Digital Image Collection:** Images of Earth from NASA crewed missions. *http://images.jsc.nasa.gov* 

Earth Science Pictures: Press Release imagery from the Goddard Space Flight Center. http://pao.gsfc.nasa.gov/gsfc/earth/pictures/ earthpic.htm Images of Earth and Space: The Role of Visualization in NASA Science. http://sdcd.gsfc.nasa.gov/ESS/images/images.html

Jet Propulsion Laboratory Public Image Archive: Collections of Earth-Observing planetary and astronomical missions. http://www.jpl.nasa.gov/pictures/

**Public Use of Remote Sensing Data:** Imagery and data made available for public use. Includes environmental and astronomical data. *http://rsd.gsfc.nasa.gov/rsd* 

**For Kids Only - NASA's Earth Science Enterprise:** A collection of K-12 lessons on hot science topics such as El Niño and hurricanes. Includes Teacher's Guides too. *http://kids.mtpe.hq.nasa.gov* 

NASA Observatorium: Remote sensing & Space Science exhibits for the general public. *http://observe.ivv.nasa.gov* 

#### Intermediate

NASA program specific pages which contain images/video on a specific research topic

The Earth Observing System (EOS) Educators' Visual Materials: A variety of remote sensing images comprising a collection for teacher' use. http://eospso.gsfc.nasa.gov/eos\_edu.pack/toc.html

**GLOBE Visualization Home Page:** Maps and time plots of GLOBE data, including El Niño. *http://preview.gsfc.nasa.gov* 

NASA's Total Ozone Mapping Spectrometers (TOMS): Ozone information, images, and animations from the instruments that brought us the first space views of the Antarctic ozone hole. *http://jwocky.gsfc.nasa.gov/* 

**TOMS Volcanic SO<sub>2</sub> and Ash Homepage:** This Home Page describes research performed by the TOMS SO<sub>2</sub> and Ash Group at the NASA Goddard Space Flight Center to detect, track and measure volcanic eruption plumes from space. The group uses satellite data from Total Ozone Mapping Spectrometer (TOMS) instruments to detect sulfur dioxide gas (SO<sub>2</sub>) and ash fallout produced by volcanoes.

http://skye.gsfc.nasa.gov/index.html

Sea-viewing Wide Field-of-View Sensor (SeaWiFS) Project Image Archive: An archive of ocean-related images and animations from the SeaWiFS satellite, including links to other interactive sites of interest. http://seawifs.gsfc.nasa.gov/SEAWIFS/IMAGES/ IMAGES.html

**SeaWiFS Project Ocean Color Gallery:** General-use images of phytoplankton concentrations from Nimbus-7's Coastal Zone Color Scanner. Some images have been combined with land-surface data to create images of "The Living Earth."

http://seawifs.gsfc.nasa.gov/SEAWIFS/IMAGES/ GALLERY.html

SeaWiFS Project Movie Gallery: A collection of rotating Earths, showing land cover, temperature, cloud cover and a variety of other environmental aspects. http://seawifs.gsfc.nasa.gov/SEAWIFS/IMAGES/ MOVIES.html Tropical Rainfall Measuring Mission (TRMM): An

archive of tropical rainfall related images and animations from TRMM.

#### http://trmm.gsfc.nasa.gov/archive.html

**Hurricanes:** Several QuickTime and MPEG videos of satellite views of recent hurricanes and thunderstorms, plus a clip of a Space Shuttle launch from 22,000 miles in space.

http://rsd.gsfc.nasa.gov/rsd/movies/movies.html

Weather Satellite Imagery and Video: The latest from the NASA-built, NOAA-operated GOES spacecraft. http://rsd.gsfc.nasa.gov/goesb/chesters/web/ goesproject.html

**Global Hydrology and Climate Center:** Interactive Geostationary Weather Satellite Data. *http://wwwghcc.msfc.nasa.gov/GOES/* 

**Global Hydrology and Climate Center:** Interactive global temperature anomaly maps. *http://wwwghcc.msfc.nasa.gov/temperature/* 

Global Tropospheric and Stratospheric Temperatures: Interactive Microwave Sounding Unit data selection page. http://wwwghcc.msfc.nasa.gov/MSU/msu.html

Jet Propulsion Lab Imaging Radar Home Page: See the Earth's surface, and below it in places, with orbiting radar. Primarily used for environmental research, the data are also useful in archaeological studies. *http://southport.jpl.nasa.gov* 

**SIR-C/X-SAR:** Space Radar Images of the Earth from the Space Shuttle. *http://www.jpl.nasa.gov/radar/sircxsar/* 

**A Global View from Space:** Today, there are many satellites orbiting the Earth which make their data available for public use. This page is an interactive and intuitive web-based display of actual satellite imagery from around the globe.

http://sdcd.gsfc.nasa.gov/ISTO/dro/global/

### **Intermediate (continued)**

NASA program specific pages which contain images/video on a specific research topic

Jet Propulsion Lab's El Niño/La Niña Watch: This page presents images and news releases based on observations of the El Niño/La Niña phenomenon in the Pacific Ocean by the U.S./French TOPEX/Poseidon and other NASA/JPL satellites and instruments. http://www.jpl.nasa.gov/elnino/

**El Niño 1997/98:** TOPEX/Poseidon's El Niño Index 1997 - 98 show hows the volume of displaced warm surface water in the eastern tropical Pacific has changed through time.

http://topex-www.jpl.nasa.gov/enso97/ el\_nino\_1997.html

**HOTSPOTS** - **University of Hawaii:** Selected westernhemisphere sites updated every 10 to 30 minutes. Data is collected by geostationary GOES 8 and GOES 10 satellites in 15 minute intervals. *http://volcano1.pgd.hawaii.edu/*  **El Niño Visualizations:** The animations and images below show a combined perspective of the El Niño induced change in the sea surface topography as viewed from space by the NASA TOPEX radar altimetry satellite and sea surface temperature observed by NOAA's AVHRR sensor.

http://nsipp.gsfc.nasa.gov/enso/nino\_update/

**Fire Monitoring by Satellite:** This Web site is a rapid prototype effort to explain and illustrate current and future global fire monitoring capabilities. *http://modarch.gsfc.nasa.gov/fire\_atlas/fires.html* 

## Advanced

## Detailed pages on specific data sets, intended for the research community and advanced user

**Global Land Biosphere Data and Information Web Site at the Goddard Space Flight Center's Distributed Active Archive Center (DAAC):** This site provides information on what Land Biosphere Data are, how to get it, how to understand it, and who has been involved in bringing it to you.

http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ LAND\_BIO/GLBDST\_main.html

**Oceanography from the Space Shutle:** A pictorial survey of oceanic phenomenon visible to the naked eye from space.

http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ OCDST/shuttle\_oceanography\_web/oss\_cover.html

**Ocean Color Data, Information and Resources:** Links to ocean color data, images, software and educational resources.

http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ OCDST/OB\_main.html **Monsoons:** Two- and three-dimensional animations of a monsoon over Asia.

http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ atmospheric\_dynamics/ ad\_images\_dao\_animations.html

**Atmospheric Chemistry Data, Information and Resources:** Provides information about UARS (Upper Atmosphere Research Satellite), TOMS (Total Ozone Mapping Spectrometer), SSBUV (Shuttle Solar Background Ultraviolet), and other atmospheric chemistry related data.

http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ ATM\_CHEM/ac\_main.html

**Geomorphology from Space:** An out-of-print 1986 NASA publication edited by Nicholas M. Short, Sr. and Robert W. Blair, Jr. designed for use by the remote sensing science and educational communities to study landforms and landscapes.

http://daac.gsfc.nasa.gov/DAAC\_DOCS/geomorphology/GEO\_HOME\_PAGE.html

#### **Advanced** (continued)

#### Detailed pages on specific data sets, intended for the research community and advanced user

**Goddard DAAC's Interactive Coastal Zone Color** Scanner Browser: Research-quality imagery available from the CZCS archive at the Goddard Space Flight Center.

http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ BRS\_SRVR/czcsbrs\_main.html

**General Interest Coastal Zone Color Scanner** 

(CZCS) Scenes: Striking examples of ocean color data obtained by remote sensing from space. http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ OCDST/classic\_scenes/00\_classics\_index.html

**Atmospheric Dynamics, Data, and Information** 

**Resources:** Provides information about TOVS data, Data Assimilation Office (DAO) products and the CPC/ ACDB 4D dataset, and other related data. http://daac.gsfc.nasa.gov/CAMPAIGN\_DOCS/ atmospheric\_dynamics/ad\_main.html

The Remote Sensing Tutorial: A detailed understanding of the utility of satellite data including fundamental principles of electromagnetic energy, especially as they relate to sensor design and function.

http://code935.gsfc.nasa.gov/Tutorial/TofC/ Coverpage.html

Urban Sprawl: An MPEG animation, using topographic and demographic data, of urban growth around San Francisco Bay, 1850-1990.

http://geo.arc.nasa.gov/esdstaff/william/ urban.html

**TOPEX/POSEIDON Quick Look & 10-Day Browse** Images Data: Images and video clips from the U.S.-French mission to study ocean dynamics and their effects on global climate.

http://podaac.jpl.nasa.gov/topex/