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Current Missions



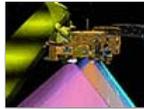
Advanced Composition Explorer (ACE) →

Major mission of the Explorer program.



AIM: Aeronomy of Ice in the Mesosphere

AIM's two-year mission is to study Polar Mesospheric Clouds, the Earth's highest clouds, which form an icy membrane 50 miles above the surface at the edge of space.



Aqua

Aqua, Latin for water, is a NASA Earth Science satellite mission named for the large amount of information that the mission will be collecting about the Earth's water cycle.



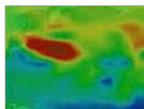
ARCTAS

Arctic Research of the Composition of the Troposphere from Aircraft and Satellites



Astro-E2/Suzaku

The Suzaku mission is a joint effort of JAXA and NASA designed to discover more about the x-ray universe.



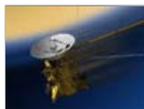
Aura Mission

A mission dedicated to the health of Earth's atmosphere.



CALIPSO

CALIPSO will provide the next generation of climate observations, drastically improving our ability to predict climate change and to study the air we breathe.



Cassini-Huygens Mission

Unlocking the secrets of Saturn.



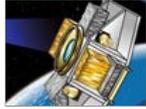
Chandra X-ray Observatory

NASA's Chandra X-Ray Observatory probes the mysteries of space with unprecedented x-ray images that help to unravel the structure and evolution of the universe.



CloudSat

CloudSat's cloud-profiling radar is 1,000 times more sensitive than typical weather radar and can detect clouds and distinguish between cloud particles and precipitation.



Cosmic Hot Interstellar Plasma Spectrometer (CHIPS) →

CHIPS uses an extreme ultraviolet spectrograph to study the "Local Bubble" surrounding our Solar System.



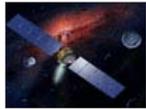
Constellation: NASA's Future

A new generation of spacecraft will carry humans to the moon, Mars and beyond.



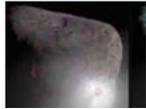
Cluster ESA/NASA Mission →

The four Cluster spacecraft carry out 3D measurements in the Earth's Magnetosphere.



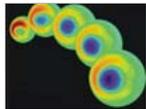
Dawn

Dawn launched in September, becoming the first spacecraft ever planned to orbit two different bodies after leaving Earth. The spacecraft will orbit Vesta and Ceres, two of the largest asteroids in the solar system.



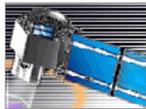
Deep Impact

Exploring Comet Tempel 1 to determine the origins of life in our Solar System.



Earth Probe Total Ozone Mapping Spectrometer (EP-TOMS) →

Earth Probe Total Ozone Mapping Spectrometer (EP-TOMS), along with the Ozone Monitoring Instrument onboard AURA, are currently the only NASA spacecraft on orbit specializing in ozone retrieval.



Earth Observing-1 →

As the first New Millennium Program Earth Observing Mission, EO-1 has validated advanced land imaging and unique spacecraft technologies.



EPOXI

EPOXI is a low-cost mission that will expand our knowledge of both cometary bodies and extrasolar planetary systems.



GALEX

Mapping the history of star formation in the universe.
 › [Galaxy Evolution Explorer](#)



Geostationary Operational Environmental Satellites (GOES)

GOES-N is the latest in a series of satellites that provide a constant vigil for the atmospheric "triggers" for severe weather conditions such as tornadoes and hurricanes.

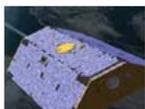
Geotail Mission →

A mission to study the tail of Earth's magnetosphere.



Gravity Probe B

This mission is the relativity gyroscope experiment developed by NASA and Stanford University to test two unverified predictions of Albert Einstein's general theory of relativity.



Gravity Recovery and Climate Experiment →

The twin satellites are making detailed measurements of Earth's gravity field to learn more about gravity and Earth's natural systems.



Hayabusa (MUSES-C) →

Hayabusa (MUSES-C) is Japan's asteroid sample return mission.



High Energy Transient Explorer-2 (HETE-2) Mission →

HETE-2 is a small scientific satellite designed to detect and localize gamma-ray bursts.



Hinode (Solar B)

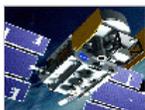
A collaboration between the space agencies of Japan, the United States, United Kingdom and Europe, Hinode's mission is to investigate the interaction between the sun's magnetic field and its corona.



Hubble Space Telescope

Learn how Hubble has expanded our knowledge of the cosmos.

- › [Hubble Section](#)
- › [Servicing Mission 4](#)



Ice Cloud and Land Elevation Satellite (ICESat) Mission →

The ICESat mission will provide multi-year elevation data regarding ice sheet mass balance as well as cloud property information, especially for stratospheric clouds common over polar areas.



International Gamma-Ray Astrophysics Laboratory (INTEGRAL) →

INTEGRAL is the most sensitive gamma-ray observatory ever launched.



International Space Station

Aboard the International Space Station, astronauts work to improve life on Earth and extend life beyond our home planet.



Jason →

Jason-1 is the first follow-on to the highly successful TOPEX/Poseidon mission that measured ocean surface topography.

Landsat →

The Landsat Program is a series of Earth-observing satellite missions jointly managed by NASA and the U.S. Geological Survey.



Mars Express →

Mission to search for subsurface water from orbit.



Mars Exploration Rovers

Rovers Spirit and Opportunity explore the Martian landscape.



Mars Odyssey →

This orbiter is mapping the mineralogy and morphology of the Martian surface.



Mars Reconnaissance Orbiter

The mission will determine whether long-standing bodies of water ever existed on Mars.

→ [MRO Site](#)



Mercury, Surface, Space Environment, Geochemistry and Ranging (MESSENGER) Mission

MESSENGER will study Mercury, the closest planet to the Sun.



New Horizons

New Horizons began its journey across the solar system to conduct flyby studies of Pluto and its moon.



NOAA Environmental Satellites

NOAA-N is the latest in a series of polar-orbiting satellites, that will collect information to improve weather prediction and climate research across the globe.



Phoenix Mars Lander

The Phoenix Mars Lander is headed for the Martian arctic.



Pioneer

A journey through our solar system and beyond.



Pioneer Venus

The mission's objective was to investigate the Venus's solar wind, map the planet's surface and study the upper atmosphere.

Polar Mission →

The Polar Mission is to obtain data from both high- and low-altitude perspectives of the polar region of geospace.



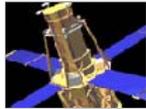
Polar Operational Environmental Satellite (POES) →

POES is a cooperative effort between NASA and the National Oceanic and Atmospheric Administration (NOAA), the United Kingdom and France.



QuikScat

The Quick Scatterometer, or QuikScat, replaces the NASA Scatterometer (NSCAT) instrument on Japan's Midori satellite.



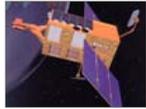
Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI) →

RHESSI's primary mission is to explore the basic physics of particle acceleration and explosive energy release in solar flares.



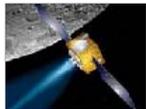
Rosetta Mission →

Rosetta will orbit comet 67P and accompany it on its journey to the Sun.



Rossi X-ray Timing Explorer (RXTE) Mission →

RXTE is a satellite that observes the fast-moving, high-energy worlds of black holes, neutron stars, X-ray pulsars and bursts of X-rays that light up the sky and then disappear forever.



SMART 1 →

SMART 1's two part mission will test new technologies and explore darker regions of the Moon's south pole for the first time.



SOFIA

The Stratospheric Observatory for Infrared Astronomy--or SOFIA--is an airborne observatory that will complement the Hubble, Spitzer, Herschel and James Webb space telescopes, as well as major Earth-based telescopes.



Solar and Heliospheric Observatory (SOHO)

SOHO, designed to study the sun, from its deep core to its outer corona, is a cooperative program between ESA and NASA.



Solar Radiation and Climate Experiment (SORCE) →

A NASA-sponsored satellite mission that will provide state-of-the-art measurements of incoming x-ray, ultraviolet, visible, near-infrared, and total solar radiation.



Solar TERrestrial Relations Observatory (STEREO)

STEREO continues its mission to capture 3D images of the sun.

› [STEREO Site](#)

Space Shuttle

The space shuttle is the most complex machine ever built and its capacity is instrumental in building the International Space Station.



Spitzer Space Telescope

NASA's Spitzer Space Telescope, studying the universe in infrared.



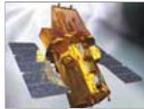
Stardust

Stardust returns samples from Comet Wild 2 to Earth.



Submillimeter Wave Astronomy Satellite (SWAS) →

A mission that was designed to study the chemical composition of interstellar gas clouds.



Swift

The Swift mission seeks to tell us more about gamma-ray bursts, the most powerful explosions in the universe.



TacSat-2

TacSat-2 features 11 onboard experiments, which will be conducted during the spacecraft's planned six to 12-month mission.



Terra

Terra is a multi-national, multi-disciplinary partnership between the U.S., Canada and Japan that is an important part of helping us better understand and protect our home planet.



THEMIS

The 2-year mission of Time History of Events and Macroscale Interactions During Substorms (THEMIS) is to track these violent, colorful eruptions near the North Pole.



Thermosphere Ionosphere Mesosphere Energetics and Dynamics Mission (TIMED) →

The TIMED mission is studying the influences of the Sun and humans on the least explored region of Earth's atmosphere.



Tracking and Data Relay Satellite (TDRS)

This system of satellites and ground stations makes up a portion of the Space Network and provides mission services for near Earth satellites and orbiting vehicles.



Transition Region and Coronal Explorer (TRACE) Mission →

TRACE enables solar physicists to study the connections between fine-scale magnetic fields and the associated plasma structures on the Sun.

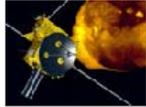
Tropical Composition, Cloud and Climate Coupling (TC4)

The TC4 study will tackle challenging questions about Earth's ozone layer and climate using coordinated observations from satellites and high-flying NASA airplanes.



Tropical Rainfall Measuring Mission (TRMM) →

TRMM is a joint mission between NASA and the Japan Aerospace Exploration Agency designed to monitor and study tropical rainfall.



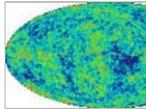
Ulysses Mission →

A mission to study the Sun at all latitudes.



Voyager - The Interstellar Mission

Voyager 1 and Voyager 2 journey to study the region in space where the Sun's influence ends and the dark recesses of interstellar space begin.



Wilkinson Microwave Anisotropy Probe (WMAP) →

A mission to take the first full sky picture of the early Universe.



Wind Mission →

A mission to investigate the solar wind and its impact on the near-Earth environment.



XMM-Newton →

The Mirror Modules on this x-ray observatory allow XMM-Newton to detect millions of sources, far more than any previous X-ray mission.

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