








2000 Headlines Archive







Join our growing list of subscribers - [sign up on our mailing list](#) and you will receive a mail message every time we post a new story!!



YEAR 2000 HEADLINES

Subject	December Articles Date & Title
Comets & Meteors	December 29: Millennium Meteors - One of the most intense annual meteor showers, the Quadrantids, will peak over North America on January 3, 2001. Sky watchers could see an impressive outburst numbering as many as 100 shooting stars per hour.
Jupiter	December 28: Galileo Looks for Auroras on Ganymede - NASA's durable Galileo spacecraft flew above the solar system's largest moon this morning in search of extraterrestrial Northern Lights.
Planet Earth	December 27: Retreat of the West Antarctic Ice Sheet - Scientists say that the West Antarctic Ice Sheet is retreating more slowly than they thought. In fact, it may have been growing just 8,000 years ago -- long after the end of the most recent Ice Age.
Space Weather	December 22: Watching the Angry Sun - As the Sun's stormy season approaches its zenith, scientists are using the largest coordinated fleet of spacecraft and ground observatories ever assembled to observe outbursts of solar radiation.
Astrobiology	December 20: Martian Micro-Magnets - The case for ancient life on Mars looks better than ever after scientists announced last week that they had discovered magnetic crystals inside a Martian meteorite -- crystals that, here on Earth, are produced only by microscopic life forms.
Comets & Meteors	December 18: Ursid Meteor Surprise - The normally meek Ursid meteor shower could surprise sky watchers with a powerful outburst on Dec 22nd when Earth passes through a dust stream from periodic comet Tuttle.
Planet Earth	December 17: Learning from Lightning - Little by little, lightning sensors in space are revealing the inner workings of severe storms. Scientists hope to use the technique to improve forecasts of deadly weather.
Looking Up	December 15: Christmas Eclipse - A solar eclipse is coming on Christmas Day, 2000. The winter landscape across parts of North America will assume an eerie cast, and cooler-than-usual winds might swirl, as the New Moon glides across the face of the Yuletide Sun.
Planet Earth	December 12: The Incredible Shrinking Ozone Hole - After reaching record-breaking proportions earlier this year the ozone hole over Antarctica has made a surprisingly hasty retreat.

Comets & Meteors	December 08: The Baffling Geminid Meteor Shower - Most  meteor showers are caused by comets, but the Geminid meteor shower, which peaks next Wednesday morning, seems to come from a curious near-Earth asteroid named 3200 Phaethon.
Planet Earth	December 06: A Disintegrating Glacier - Many processes that  shape the Earth's landscape happen too slowly to be witnessed in a human lifetime. But recent analysis of satellite imagery shows that a large glacier tongue on the coast of East Antarctica has disintegrated, changing the shape of the coastline almost overnight.
Water on Mars	December 04: Sedimentary Mars - New Mars Global Surveyor  images reveal sedimentary rock layers on the Red Planet that may have formed underwater in the distant martian past.
Planet Earth	December 04: EO-1: It's not just a good idea, it's the law! -  NASA's Earth Observing-1 satellite blasted off last week with a payload of new instruments that could revolutionize remote sensing. The work of the new satellite is regarded as so important it's actually required by law.
Looking Up	December 01: A New Star in Space - Something in the heavens is  growing brighter and it will soon become one of the most eye-catching stars in the night sky. No it's not a supernova. It's the International Space Station!











Subject	November Articles Date & Title
Living in Space	November 29: Far-out Housekeeping on the ISS - Life in space  is a daring adventure, but somebody still has to cook dinner and take out the trash. Science@NASA interviews two astronauts about the thrill and routine of daily life in orbit.
Living in Space	November 26: Microscopic Stowaways on the ISS - Wherever  humans go microbes will surely follow, and the Space Station is no exception. In this article, NASA scientists discuss how astronauts on the ISS will keep potentially bothersome microorganisms under control.
Space Weather	November 22: A Solar Flare Stuns Stardust - Earlier this month  one of the most intense solar radiation storms in decades temporarily blinded NASA's Stardust spacecraft, which is heading for a rendezvous with comet Wild-2.
Comets & Meteors	November 21: Leonids Galore - The art of predicting Leonid meteors  officially became a science this weekend as sky watchers around the globe enjoyed three predicted episodes of shooting stars. This story includes video and some unusual pictures of Leonid fireballs.
Materials Science	November 17: Flowing Sand in Space - NASA scientists are  sending sand into Earth orbit to learn more about how dirt behaves during earthquakes. Their results will help civil engineers build safer structures on Earth and someday on other planets, too.
	November 15: Lighting Up the Ecosphere - Using satellite images 

Planet Earth	of city lights at night, NASA scientists are mapping the spread of urban areas around the globe and monitoring their impact on our planet's ecosystem.
Living in Space	November 13: Breathing Easy on the Space Station - Life support systems on the International Space Station provide oxygen, absorb carbon dioxide, and manage vaporous emissions from the astronauts themselves. It's all part of breathing easy in our new home in space.
Comets & Meteors	November 09: Leonid Meteor Balloon Rises Again - A team of NASA scientists and ham radio amateurs will loft a weather balloon toward the stratosphere on Nov. 18th to record the sights and sounds of the 2000 Leonid meteor shower. Readers can follow the balloon flight thanks to a live webcast at LeonidsLive.com .
Asteroids	November 07: Much Ado about 2000 SG344 - Later this century a relic from NASA's earliest space exploration efforts might return to Earth, if current estimates are confirmed. The near-Earth object, which follows an orbit almost identical to our planet's, looks like an asteroid but may be an Apollo-era rocket booster.
Living in Space	November 02: Water on the Space Station - Rationing and recycling will be an essential part of life on the newly-populated International Space Station. In this article, the first of a series about the challenges of living in orbit, Science@NASA explores where the crew will get their water and how they will (re)use it.

Subject	October Articles Date & Title
Asteroids	October 31: Trick or Treat: It's Toutatis! - NASA scientists are monitoring a large near-Earth asteroid that tumbled past our planet on the morning of Halloween 2000. Amateur astronomers can spot it for themselves in telescopes later this month and through binoculars when it passes even closer to Earth in Sept. 2004.
Asteroids	October 26: A Close Encounter with Asteroid Eros - NASA's NEAR Shoemaker spacecraft swooped 5 kilometers above the surface of 433 Eros on Oct 26th, marking its closest-ever approach to the tumbling space rock. Scientists hope the flyby will uncover clues about extra boulders and missing craters on the near-Earth asteroid.
Comets & Meteors	October 26: Lunar Leonids 2000 - Next month the Moon will plow through a stream of debris from comet Tempel-Tuttle, the parent of the Leonid meteor shower. Meteoroids that strike the Moon don't cause shooting stars as they do on our planet. Instead, they hit the lunar terrain at high speed. Scientists will be watching for signs of impacts as the Moon heads for a close encounter with the Leonids.
Jupiter	October 24: Storms Collide on Jupiter - NASA's Hubble Space Telescope has captured dramatic images of two swirling storms on Jupiter as they collided to form a truly titanic tempest. The resulting storm may be second in size only to the Great Red Spot itself.
	October 20: Earth's Fidgeting Climate - Is human activity warming the Earth or do recent signs of climate change signal natural variations? In

Planet Earth	this feature article, scientists discuss the vexing ambiguities of our planet's complex and unwieldy climate.
Comets & Meteors	October 18: Weekend Meteors - On Friday the 13th of October a brilliant fireball startled stargazers in Texas and Kansas. But that was just a piece of space junk -- a real meteor shower arrives this weekend when Earth passes through a stream of debris from Halley's comet.
Gamma-ray Bursts	October 16: Backyard Gamma-ray Bursts - With the successful launch of NASA's HETE-2 satellite, amateur astronomers will soon be able to spot the most powerful explosions in the Universe from the comfort of their own back yards. Professionals are also looking forward to the new data, which they hope will unravel the mysteries of gamma-ray bursts.
Solar Physics	October 12: Sun Sample Return Mission Nears Launch - The science payload for NASA's Genesis spacecraft, which will collect samples of the solar wind and return them to Earth, is now complete. Genesis is primed for liftoff in February 2001. Samples will parachute back to Earth two years later.
Comets and Meteors	October 10: The Moonlit Leonids 2000 - Our planet is heading for a minefield of cosmic dust streams laid down by periodic comet Tempel-Tuttle. The result could be a series of three Leonid meteor outbursts on Nov. 17 and 18, 2000. The bright quarter Moon, which will lie in the constellation Leo, could overpower faint meteors.
Planet Earth	October 06: Continents in Collision: Pangea Ultima - Creeping more slowly than a human fingernail grows, Earth's massive continents are nonetheless on the move. Geologists say that in 250 million years the Atlantic Ocean could be just a distant memory while Earthlings will be able to walk from North America to Africa.
Space Transportation	October 04: Hitching a Ride on a Magnetic Bubble - NASA-funded scientists are experimenting with miniature magnetospheres as an innovative means of space transportation. If the group succeeds, next-generation spacecraft may come equipped with fuel-efficient magnetic bubbles that speed their occupants from planet to planet and ward off the worst solar flares.
Planet Earth	October 02: Peering into the Ozone Hole - Concentrations of ozone-destroying gases are down, but the Antarctic ozone hole is bigger than ever. It turns out there's more to ozone destruction than just CFCs. Stratospheric ice crystals, the Antarctic Vortex, and global warming play a role, too.

Subject	September Articles Date & Title
Looking Up	September 28: Bright Planets and Random Meteors - This week's new Moon sets the stage for a sporadic meteor show featuring a cast of eye-catching stars and planets. Random meteors are most numerous this time of year in the northern hemisphere.
	September 26: Square Craters - NASA's NEAR Shoemaker spacecraft has spotted square-shaped craters on asteroid Eros, a telltale sign of

Asteroids	mysterious goings-on in the asteroid belt long ago. Square craters add to accumulating evidence that the Eros is riddled with cracks and ridges that extend the entire 33 km length of the peanut-shaped space rock.
Seasons	September 22: Interplanetary Fall - Today Earth joins two other  worlds in the solar system where it is northern autumn. Read this story to learn more about Earth's September equinox and to ponder the bizarre seasons of other planets.
Near-Earth Asteroids	September 20: A Good Month for Asteroids - September has been  a good month for astronomers studying Near-Earth asteroids (NEAs). No fewer than five sizable minor planets have flown past our planet since the beginning of the month, affording astronomers a close-up look at these ever-scary space rocks.
Planet Earth	September 15: La Niña's Ghost - La Niña has faded away, but will  weather patterns change? Some scientists expect the Pacific Decadal Oscillation to pick up where La Niña left off.
Space Weather	September 13: A Surprising Coronal Mass Ejection - The  sunspot number has been remarkably low this week, but that didn't stop the Sun from unleashing an unusual type of solar flare yesterday. As a result of the explosion, a coronal mass ejection is heading toward our planet. It could trigger an auroral display when it hits Earth's magnetosphere around Sept. 14.
Looking Up	September 11: Watch Out for the Harvest Moon - The Harvest  Moon, arguably the most famous Full Moon of the year, arrives on Wednesday, Sept. 13th. Check out this story to discover what makes the Harvest Moon special and to ponder the possibility of Harvest Moons on another planet.
Planet Earth	September 11: What Lies Beneath A Hurricane - Two NASA  satellites are seeing things beneath the cloud tops of hurricanes that have been hidden from traditional weather satellites. The new data are helping scientists understand and predict dangerous storms.
Planet Earth	September 08: Record-setting Ozone Hole - Antarctica's ozone  hole now covers an area three times larger than the entire land mass of the United States - the largest such ozone-depleted region ever observed. Early spring conditions in the southern hemisphere and an unusually intense Antarctic vortex are contributing to the growth of the hole.
Space Transportation	September 07: Audacious & Outrageous: Space Elevators -  Science-fiction writer Arthur C. Clarke was once asked when the "space elevator," a notion he helped to popularize, would become a reality. Clarke answered, "Probably about 50 years after everybody quits laughing." Nowadays NASA scientists are taking the idea seriously.
Space Weather	September 05: Sunbathing at Solar Max - NASA scientists say that  Solar Maximum is now in full swing. Does that mean you're more likely to catch a sunburn at the beach? The answer is "no," and this story explains why.
Asteroids	September 01: A Close Encounter with a Space Rock - This  morning a half-kilometer wide asteroid is zooming past Earth barely 12 times farther from our planet than the Moon. In cosmic terms, it's a near miss, but there is absolutely no danger of a collision. Instead, the encounter offers astronomers an unusually good opportunity to study a near-Earth asteroid.

Subject	August Articles Date & Title
NASA Technology	<p>August 31: Evil-doers Beware! Space Scientists are on the Case - Two NASA scientists are working with the police and the FBI to track down criminals using out-of-this-world video technology. The new technique, called VISAR, is also expected to improve military reconnaissance, medical research and video on home computers.</p>
Climate	<p>August 29: Culprits of Climate Change - For many years, researchers agreed that climate change was triggered by "greenhouse gases," with carbon dioxide from burning of fossil playing the biggest role. However, NASA funded scientists suggest that climate change in recent decades has been mainly caused by air pollution containing non-carbon dioxide greenhouse gases.</p>
Comets & Meteors	<p>August 28: Comet Champion of the Solar System - Less than seven months after the Solar and Heliospheric Observatory registered its 100th comet discovery, amateur astronomers help SOHO double its record-setting total. Scientists think that most of SOHO's comets are fragments from the breakup of a single giant comet long ago.</p>
Moons of Jupiter	<p>August 28: New Evidence for an Alien Ocean - Fluctuations in the magnetic field surrounding Jupiter's moon Europa are a telltale sign of salty liquid water beneath the moon's icy crust. Europa could harbor the solar system's largest ocean.</p>
Microgravity Research	<p>August 25: Antibiotics in Orbit - Pilot studies indicate that microbial antibiotic production can be increased by up to 200 percent in space-grown cultures. Scientists who studied such antibiotics during the "John Glenn" shuttle mission in 1998 are looking forward to more low-gravity experiments on the International Space Station.</p>
Stars & Planets	<p>August 24: Counting Brown Dwarfs - Astronomers using NASA's Hubble Space Telescope have taken attendance in a class of brown dwarfs and found indications that these odd and elusive objects also tend to be loners. The Hubble census -- the most complete to date -- provides new and compelling evidence that stars and planets form in different ways.</p>
Comets & Meteors	<p>August 23: Hot X-rays from a Cold Comet - Normally, x-ray astronomers concern themselves with the most violent and fiery denizens of the Universe. But, last month researchers solved a cosmic mystery when they turned Chandra toward Comet LINEAR, a chilly snowball from the outer solar system.</p>
Planet Earth	<p>August 22: Arctic Ice Revealed - An orbiting radar has cut through clouds and dark of night to monitor the ebb and flow of Arctic ice. The Arctic is the smallest of the world's four oceans, but it may play an important role in helping scientists monitor Earth's climate shifts.</p>
Ham Radio	<p>August 21: Ham Radios in Space - Ham radio operators are notorious for their love of long-distance radio chats. Now, thanks to NASA's SAREX program, hams and students on Earth can enjoy the ultimate long-distance radio experience by contacting astronauts orbiting on board the Space Shuttle and, one day soon, on the International Space Station.</p>

Deep Space 1	August 17: The Indefatigable Ions of Deep Space 1 - NASA's Deep Space 1 probe, en route for an encounter with Comet Borrelly, has run its unique propulsion system for more than 200 days -- longer and more efficiently than anything ever launched. The ion engine is very slow to pick up speed, but over the long haul it can deliver 10 times as much thrust per pound of fuel as more traditional rockets.
Planet Earth	August 16: NASA goes on SAFARI - Southern Africa offers a unique climate sub-system where scientists can study the effects of industrial activity, biomass burning and changing patterns of land usage on the environment. Last weekend a international team of scientists launched an intensive campaign -- part of the SAFARI 2000 project -- to study this complex region from the ground, the air and from space.
Comets & Meteors	August 14: The Extraordinary Geomagnetic Perseid Meteor Shower - An interplanetary shock wave from the Sun struck Earth's magnetosphere just before the peak of the Perseid meteor shower on August 12, 2000, triggering a powerful geomagnetic storm. Stargazers across Canada and the United States were treated to the rare spectacle of a meteor shower seen against the backdrop of colorful Northern Lights.
Mars Exploration	August 10: Twin Rovers Headed for Mars - The traffic on Mars is expected to double in the near future. NASA today announced plans to launch two large scientific rovers to the red planet in 2003, rather than the original plan for just one. This story includes a striking new video of the planned Mars 2003 rover mission.
Comets & Meteors	August 08: Perseid Dawn - The Perseid meteor shower peaks on August 12, 2000. This year the bright, nearly-full Moon will outshine the Perseids most of the night, but for an hour between moonset and sunrise on Saturday morning, star gazers could witness a brief but beautiful meteor shower.
Comets & Meteors	August 07: Hubble Discovers Missing Pieces of Comet LINEAR - To the surprise and delight of astronomers, NASA's Hubble Space Telescope has discovered a small armada of "mini-comets" left behind by what seemed to be a total disintegration of the explosive comet LINEAR.
Planet Earth	August 04: Watching Wildfires from Space - NASA satellites are keeping a close eye on wildfires raging across the Western US. Every few hours, a global map of smoky aerosols is updated at the Total Ozone Mapping Spectrometer web site. Now, anyone with a connection to the Internet can share the same "bird's eye" view enjoyed by NASA scientists.
Space Station	August 02: Looking Forward to the Space Station - Scientists at a recent media forum said they are eager to begin using the International Space Station as an innovative orbiting research laboratory. "The Hubble Space Telescope is to astrophysicists as the International Space Station will be to other researchers -- a working science laboratory in space," noted one participant.

Subject	July Articles Date & Title
	July 31: Meltdown! - Comet LINEAR continued to blow itself apart this weekend as astronomers around the world monitored the action. The comet is

Comets and Meteors	still bright enough to see through amateur telescopes, but it's fading fast. This story compares the breakup of comet LINEAR with another famous fragmented comet, Shoemaker-Levy 9, that collided with Jupiter six years ago.
Space Dust	July 31: The Stuff Between the Stars - The cosmos is laced with tiny specks of dust that decide the fate of young stars and planets. Now, NASA scientists here on Earth can study the properties of far-flung space dust using special laboratory facilities at the Marshall Space Flight Center.
Mars Exploration	July 28: Back to the Future on Mars - In 2003, NASA plans to launch a relative of the now-famous 1997 Mars Pathfinder rover. Using drop, bounce, and roll technology, this larger cousin is expected to reach the surface of the Red Planet in January 2004 and begin the longest journey of scientific exploration ever undertaken across the surface of that alien world.
Comets and Meteors	July 28: Comet LINEAR Misbehaves - Although comet LINEAR was not bright enough to see with the unaided eye when it passed by Earth this week, the comet is grabbing the attention of astronomers with peculiar behavior, including orbit-altering jets and fragments breaking away from its nucleus.
Climate Research	July 27: A Lot Less Snow - An instrument on board NASA's Terra satellite recorded much less snow than usual over parts of North America during the winter of 1999-2000. This story includes a snow map of North America in March 2000 and sample pictures from Terra's snow-mapping "MODIS" instrument.
Looking Up	July 25: Camping Out with the Planets - Earth's slender crescent Moon will glide by two brilliant planets in the dawn sky this week as it heads for a close encounter with Mercury on July 29th. This story also reviews the discovery of a new moon around Jupiter, which was announced last week.
Looking Up	July 24: Station Sightings - Thanks to a new NASA web site, stargazers can track the progress of the growing International Space Station from their own backyards. Because it reflects sunlight down to Earth, the ISS often looks like a slow-moving star as it crosses the sky. It can even appear as bright as the star Sirius if you know when and where to look.
Climate Research	July 21: Contrary Thermometers - Scientists are working to understand why the lower atmosphere isn't heating up as fast as some global warming models predict. The atmosphere appears to be more complex than computer simulations that researchers use to understand our planet's climate.
Astronomy	July 20: Unveiling the Infrared Sky - Your home computer can become a portal to a wonderland of stars, thanks to a massive release of images from an infrared sky survey sponsored by NASA and the National Science Foundation. The current release is based on a volume of data several hundred times larger than that contained in the human genome!
Astrophysics	July 18: X-ray Star Stuff - Astronomers using the Chandra X-ray Observatory are seeing how supernovae spray the essential elements of rocky planets and life into interstellar space. New data include images of the supernova remnant Cassiopeia A at x-ray wavelengths emitted by ions of silicon, calcium and iron.
Space Weather	July 14: A Solar Radiation Storm - A powerful solar flare on July 14th triggered an intense radiation storm in the vicinity of Earth. The eruption was followed by a fast-moving coronal mass ejection that is expected to strike Earth's magnetosphere as early as Saturday. The impact could trigger Northern and Southern Lights bright enough to be seen in spite of this weekend's brilliant

	full Moon. Such a display is by no means guaranteed, but it is possible.
Lunar Eclipse	July 14: Pacific Lunar Eclipse - This weekend the Moon, the Sun and the Earth will align for the longest total lunar eclipse in 140 years. The best places to see the event are in and around the Pacific Ocean, including Hawaii and Australia. Observers along the west coast of North America will be able to see a partial eclipse just before the Moon sets on Sunday morning.
X-ray Astronomy	July 12: Brown Dwarf Solar Flare - The Chandra X-ray Observatory has detected the first-ever flare from what's known as a brown dwarf, or failed star. Scientists were surprised at the outburst, which unleashed an amount of energy comparable to a small solar flare.
Deep Space 1	July 11: Comet Borrelly or Bust - NASA's experimental Deep Space 1 probe --left for dead after a guidance system failure in late 1999 -- was revived last month in a thrilling cross-the-solar-system rescue conducted by JPL engineers. The craft set sail again on June 28, 2000, just in time for a planned rendezvous with periodic comet Borrelly in 2001.
Cosmic Rays	July 10: Cosmic Light Pollution - A series of unmanned balloon flights will measure the subtle ultraviolet glow of the night sky and help unravel one of the most perplexing mysteries of astrophysics -- the origin of ultra high-energy cosmic rays.
Comets & Meteors	July 07: Some Comets Like it Hot - Amateur astronomers are discovering pieces of a giant comet that broke apart in antiquity as the fragments zoom perilously close to the Sun. You can join the hunt, too. All you need is a computer and an internet connection to view realtime data from the orbiting ESA/NASA Solar and Heliospheric Observatory.
Comets & Meteors	July 05: Here Comes Comet Linear - Comet 1999 LINEAR S4, which can already be seen through binoculars, is expected to become a faint naked-eye object similar in appearance to the Andromeda Nebula as it glides by the Big Dipper this month. Maximum brightness is expected on July 23, 2000.

Subject	June Articles Date & Title
The Seasons	June 30: Aphelion Day - The Earth will reach its greatest distance from the Sun this year on the 4th of July, but don't expect a break from the heat of northern summer. This article discusses Earth's slightly elliptical orbit and the effects (some negligible, some substantial) that lopsided orbits have on planets around the solar system.
Water on Mars	June 29: Making a Splash on Mars - On a planet that's colder than Antarctica and where water boils at ten degrees above freezing, how could liquid water ever exist? The prospects for life on Mars, both human and martian, could hinge on the answer. In this story, experts discuss conditions on Mars and ways to keep water flowing on the red planet.
Space Transportation	June 28: Setting Sail for the Stars - Scientists met last month to discuss the latest developments in solar sail technology. A new mission, the Interstellar Probe, could carry a spacecraft beyond the edge of the solar system by 2018.

Looking Up	June 27: Giant Planet Power Breakfast - Jupiter and Saturn have spent much of the last two months hidden in the bright glare of the Sun. Now they are rising before dawn and are visible again with the naked eye. This week, the slender crescent moon will join the pair for a dazzling show in the sky before sunrise.
Weather & Climate	June 26: The Ups and Downs of Ozone - Scientists are watching carefully as the ozone layer, which protects animal and plant life from harmful solar ultraviolet radiation, begins an uncertain recovery. Ozone destroying chemicals in the atmosphere are on the decline, but the timing and nature of the expected recovery -- and even whether a recovery is occurring at all -- are controversial topics.
Mars Exploration	June 22: Mars Surprise - In what could turn out to be a landmark discovery in the history of Mars exploration, scientists using data from NASA's Mars Global Surveyor spacecraft have observed features that suggest current sources of liquid water at or near the surface of the red planet. NASA scientists compare the features to those left by flash floods on Earth.
Space Weather	June 22: Coming Soon: Better Space Storm Warnings - In the past, predicting the onset of a geomagnetic storm was difficult. Forecasters couldn't say with much precision how long it would take for a solar coronal mass ejection to reach Earth. Now scientists have created a model that reliably forecasts the arrival of these billion-ton gas clouds in the vicinity of our planet.
Asteroid Eros	June 21: Asteroids Have Seasons, Too - Earth isn't the only world where seasons are changing this week. Millions of miles from our planet, southern winter is giving way to spring on asteroid 433 Eros. As the Sun rises over the south pole of Eros, instruments on NASA's NEAR-Shoemaker spacecraft will catch a glimpse of never-before-seen terrain.
Interstellar Chemistry	June 20: Sugar in Space - Scientists have found a molecular cousin to table sugar in an interstellar molecular cloud. The discovery of this molecule in a cloud where new stars are forming means it is increasingly likely that chemical precursors to life are present in such clouds long before planets develop around the stars.
Weather and Climate	June 19: Space Lasers Take Aim at the Wind - NASA scientists are studying a type of radar that uses laser light instead of microwaves to provide snapshots of the winds that travel the globe. Knowing the wind's speed and direction over large areas could help meteorologists answer the riddle of tomorrow's weather and benefit many areas of the world's economy.
Space Transportation	June 16: The Incredible Ions of Space Propulsion - After nearly 40 years of development and the successful flight of Deep Space 1 in 1998-1999, ion propulsion has now entered the mainstream of propulsion options available for deep-space missions.
Earth and Moon	June 15: Ocean Tides Lost and Found - The Moon's gravity imparts tremendous energy to the Earth, raising tides throughout the global oceans. What happens to all this energy? After 200 years of debate, scientists using data from the orbiting TOPEX/Poseidon satellite may now have the answer.
Looking Up	June 14: Solstice Moon - This week's full Moon, which takes place just four days before the June solstice, will appear unusually big and colorful to observers in the northern hemisphere. The exaggerated size of the low-lying solstice Moon is an illusion, say scientists, but that won't detract from its beauty.

Space Science	June 13: From the Drawing Board to the Stars - In this scientific human interest story, Dr. Jim Burch describes what it's like to visualize a modern space mission and then, years later, to make it happen. Burch shares his experiences as a competitor for mission funding, as a coordinator of far-flung personnel, and as an onlooker during launch.
Space Transportation	June 09: A Little Physics and A Lot of String - One day space tethers may be used for boosting orbits, powering satellites, and even sending payloads to the Moon or Mars -- all without the expense of conventional propellants. Scientists discussed this innovative technology at the recent Advanced Space Propulsion Workshop held in Pasadena, CA.
Space Weather	June 07: Solar Storm Warning! - An interplanetary shock wave from a solar coronal mass ejection is expected to pass our planet this Thursday. The disturbance could trigger aurora at middle-latitudes. This story includes animations of the CME and associated solar flares, as well as observing tips for aurora borealis.
Comets and Meteors	June 06: June's Invisible Meteors - During the next week thousands of meteors will streak through the sky, but don't expect to see many. They are the Arietid and zeta Perseid meteors -- the most intense daytime meteor showers of the year. For many meteor enthusiasts, the best way to enjoy the show could be by listening to meteor echoes on a ham or common FM radio.
Space Weather	June 05: IMAGE First Light - NASA's IMAGE mission, a unique satellite dedicated to the study of space storms, has returned its first pictures of electrified gas surrounding our planet. Using antennas as large as the Empire State building, the satellite is taking an unprecedented look at Earth's magnetic environment and its response to fierce gusts of solar wind.
Planetary Astronomy	June 02: Mercury Rising - There are two really good times to see Mercury this year and next week is one of them. Good Mercury watching begins this Saturday evening, June 3, when a slender crescent Moon and the elusive planet appear together for stargazers just after sunset. Mercury's apparition as an evening star will continue through mid-June.
Comets and Meteors	June 01: Arctic Asteroid! - In January, 2000, a seven meter, 200 metric ton rock from space streaked across the skies of western Canada. The meteor was at least as bright as the Sun before it exploded over the Yukon Territory. Scientists have recovered fragments of the asteroid, which researchers say is the most valuable meteorite find in at least 30 years.

Subject	May Articles Date & Title
Space Transportation	May 31: Advanced Space Propulsion Workshop - Scientists and engineers are gathering in Pasadena today to discuss cutting-edge research in space transportation at a workshop sponsored by the NASA Marshall Space Flight Center and the Jet Propulsion Laboratory.
Space Weather	May 30: Solar S'Mores - As a result of the approaching solar maximum, Earth's atmosphere is puffed up like a marshmallow over a campfire. This leads to extra drag on Earth-orbiting satellites. Just last week, NASA astronauts boosted the International Space Station to a higher altitude to combat its orbit

	decay.
Physics	May 29: What's the Matter with Antimatter - Antimatter -- it may be the ultimate fuel for space travel, but right now it is fleeting, difficult to work with and measured in atoms instead of kilograms or pounds! In this two-part story we'll explore what antimatter is, and how it may be used for space propulsion.
Science History	May 26: Wheels in the Sky - The pioneering space station concepts of the mid-1950's don't look much like the erector-set habitat in orbit today. Read about rocket scientist Werner von Braun's early designs for an outpost in space and how he advocated his ideas to the public 50 years ago.
Space & Time	May 24: A Pop Quiz for Einstein - Crystal balls rarely have anything to do with science, but soon NASA researchers will be using a set of four to examine one of the last, untested portions of Einstein's General Theory of Relativity. The spheres are heading for Earth orbit on board the Gravity Probe B mission in 2002.
Moons of Jupiter	May 23: A Big Moon Close Up - On May 20, 2000, NASA's Galileo spacecraft flew 808 km above the surface of our solar system's largest moon, Ganymede.
Science Education	May 22: Radio JOVE - Jupiter is a source of powerful radio bursts that can produce exotic sounds on ham radio receivers. NASA scientists are helping students tune in to the giant planet as part of an innovative educational program called Radio JOVE. This story includes sample sounds from Jupiter and explains how to join the Radio JOVE observing network.
Moons of Jupiter	May 19: Great Ganymede! - This weekend the Galileo spacecraft will hunt for signs of mysterious "cryptovolcanoes" and collect new data on Ganymede's unique magnetic field.
Moons of Jupiter	May 19: The Secret Lives of Alien Volcanoes - Detailed analysis of Jupiter's moon Io reveals a colorful, active world full of surprises, according to five reports published in the May 19 issue of Science, and based on new results from NASA's Galileo spacecraft and the Hubble Space Telescope.
Global Weather	May 18: To Be or Not to Be, La Niña? - Just last month, scientists were predicting that current La Niña conditions would persist, but now data from Earth-orbiting satellites show that it may be on the decline. Is it too soon to revise the hurricane forecast? Find out here.
Mars Exploration	May 17: Heel FIDO, Heel! - Students from around the country will take control of a prototype Mars rover named FIDO as it explores a western Nevada desert. The FIDO rover is a testbed for future missions, including the proposed Mars Mobile Lander that is currently under study for a possible launch in 2003.
Astronomy	May 16: A Christmas Star for SOHO - The planets Venus and Jupiter will pass less than 42 arcseconds apart on May 17. Because the pair is so near to the Sun, only the Solar and Heliospheric Observatory will have a good view of the close encounter, which is similar to the
Astrophysics	May 15: The Humming Black Hole - A black hole binary star system called XTE J1550-564 has recently become one of the brightest sources in the sky at x-ray wavelengths. Astronomers are fascinated by fluctuations in the x-ray emission from this source, which if converted to sound waves would feel like the deep rumbling vibrations from a bass speaker at a rock 'n roll

	concert.
Astronomy	May 12: Not Just Another Old Flame - NASA scientists have discovered unexpected spiral-shaped flames on Earth. By studying these peculiar flames, researchers hope to mitigate fire hazards on spacecraft and gain new insights about complex systems in nature.
Astrophysics	May 11: Impact! - Images made by NASA's Chandra X-ray Observatory show for the first time the full impact of the actual blast wave from Supernova 1987A. The observations are the first time that X-rays from a shock wave have been imaged at such an early stage of a supernova explosion.
Space Weather	May 09: Solar Ups and Downs - The Sun appeared nearly featureless this weekend as the total sunspot area dropped ten times below its average value. It's all part of the normal "ups and downs" of the sunspot cycle, say scientists. Despite the low sunspot number in early May, the solar maximum is still on the way.
Asteroids	May 08: An Asteroid goes to the Dogs - NASA astronomers have collected the first-ever radar images of a "main belt" asteroid. It's a metallic, dog bone-shaped rock the size of New Jersey, apparently sculpted during an ancient, violent cosmic collision. The asteroid, named 216 Kleopatra, was discovered in 1880, but until now, its shape was unknown.
The Planets	May 04: Interplanetary Low Tide - Tidal forces on Earth caused by other planets in the solar system will be at a low point this week when Mercury, Venus, Mars, Jupiter and Saturn "line up" on the far side of the Sun. The alignment won't be visible to the naked-eye, but there will be a meteor shower that could produce a nice sky show.
Astrobiology	May 03: A Mid-summer's Microbe Hunt - - A team of explorers including astrobiologist Richard Hoover and astronauts Jim Lovell and Owen Garriott traveled to Antarctica in January 2000 to search for meteorites and extreme-loving microbes.
Comets and Meteors	May 02: 5/5/2000: The Meteor Shower - The eta Aquarid meteor shower, caused by bits of debris from Halley's Comet, will peak on May 5-6, 2000. Lunar observers will be watching the Moon on the nights after the shower for possible signs of meteorite impacts.
Severe Weather	May 01: Spotting Tornadoes from Space - One year ago this week killer tornadoes raged across Oklahoma. Now, NASA scientists are figuring out how to predict such storms using lightning data from Earth orbit. This story includes animations of space-based data obtained during the May 3, 1999, tornado outbreak.

Subject	April Articles Date & Title
Optical Computing	April 28: Now Just a Blinkin' Picosecond! - NASA scientists are working to solve the need for computer speed using light itself to accelerate calculations and increase data bandwidth. Research in optical computing technology is helping to fuel a worldwide boom in photonics development.
	April 27: Picture of the Early Universe - New images from an

Cosmology	Antarctic balloon flight in 1998 have brought the cosmic microwave background into sharper focus. Detailed analysis of the images is shedding light on some of cosmology's outstanding mysteries -- the nature of the matter and energy that dominate intergalactic space and whether space is "curved" or "flat."
Astrophysics	April 26: A New Cosmic Meter Stick - X-rays scattered by interstellar dust grains have led scientists to develop a new way of estimating distances to cosmic objects using data from NASA's Chandra X-ray Observatory. The new technique could help astronomers in their quest to understand the size and age of the universe.
Aurorae	April 25: Brushfires in the Sky - Stargazers around the globe were treated to an unexpected and rare display of red-colored aurora on April 6-7, 2000 after a vigorous interplanetary shock wave passed by Earth. This story includes a gallery of more than 40 images showing the northern lights over Europe and parts of the United States as far south as Florida.
Interstellar Matter	April 24: Interstellar Dust in the Wind - Like an excited kid hoping to snag a fly ball at a professional baseball game, NASA's Stardust spacecraft has extended its high-tech "catcher's mitt" to collect a valuable space souvenir -- a batch of interstellar dust particles.
Astrophysics	April 21: Amateurs Reach for the Stars - Amateur astronomers attended a unique meeting in mid-April to learn about high-energy astrophysics and how they can participate in it.
Astronauts	April 19: How to become an Astronaut 101 - To the average person, words and phrases like polymer synthesis and olefin metathesis reaction represent little more than good Scrabble scores. But to Lt. Col. Catherine G. "Cady" Coleman, they mean so much more, and her interest in what these words mean has led to an exciting career as a scientist and astronaut.
Comets & Meteors	April 18: Moonlit Meteors - The oldest known meteor shower peaks on the morning of April 22 just four days after the Full Moon. Bright moonlight will reduce the number of shooting stars that are easy to see, but many meteor enthusiasts will be watching anyway because it's been over 3 months since the last major meteor shower.
Cassini	April 17: Cassini Survives the Asteroid Belt - NASA's Cassini spacecraft, currently en route to Saturn, has successfully completed its passage through our solar system's asteroid belt between Mars and Jupiter.
Global Weather	April 14: Howling for Snow - The sled dogs of California's Eastern Sierra are unhappy. Why? A persistent La Niña condition in the Pacific has left the mountain range with less than its usual supply of snow. As data continue to flow in from Earth orbit, NASA scientists are working to understand how El Niño and La Niña affect our global climate.
Astrophysics	April 12: High Energy Astrophysics for Everybody - A group of volunteer scientists is converging on Huntsville for an out-of-this-world meeting -- the High Energy Astrophysics Workshop for Amateur Astronomers.
Propulsion	April 11: Where's the Edge? - Will humans always be confined to the Solar System? Not if NASA's Advanced Space Transportation Program has a say in the matter! Find out how scientists are working to turn science fiction into standard practice with new and innovative ways to reach the stars.
	April 10: Folding a Lincoln into a Volkswagen - On the heels of

Moon Buggy	NASA's 7th annual Great Moonbuggy Race, engineers from the Apollo program discuss the challenges of building the original Lunar Rover. This story includes RealVideo of one of the original rovers in action on the Moon.
Aurorae	April 07: Geomagnetic Storm - A major geomagnetic storm hit our planet on Thursday after an interplanetary shock wave passed by Earth on April 6, 2000. Displays of the northern lights were spotted in Europe, Asia, Canada, Alaska and in the continental US as far south as North Carolina. The storm appears to be subsiding, but forecasters note that more aurorae might be visible Friday night.
Comets & Meteors	April 06: Strangers in the Night - During an unplanned rendezvous, the Ulysses spacecraft found itself gliding through the immense tail of Comet Hyakutake, revealing that comet tails may be much longer than previously believed. Ulysses was hundreds of millions of kilometers away from Hyakutake when the unexpected encounter took place.
Space Weather	April 05: Sunspot Numerology - The Boulder sunspot number exceeded 300 this week as the sunspot cycle continued its march toward Solar Max. Do these high sunspot counts mean that the solar maximum will be bigger than expected?
Solar Physics	April 03: Sun's Got the Beat - Like blood pulsing in an artery, newly discovered currents of gas beat deep inside the Sun, speeding and slackening every 16 months. The solar "heartbeat" throbs in the same region of the Sun suspected of driving the 11-year cycle of solar eruptions. Scientists are hopeful that this pulse can help them unravel the origin and operation of the solar cycle.

Subject	March Articles Date & Title
Astronomy	March 30: Planets for Dessert - Next Thursday, April 6, three planets and the thin crescent Moon are going to put on a memorable sky show when the quartet converge inside a circle 9 degrees across. The grouping is just the prelude to a grander alignment of planets on May 5, 2000. Is doom at hand, as many mystics assert?
New Planets	March 29: Planet Hunters on Safari - With the discovery of extrasolar planets smaller than Saturn astronomers are increasingly convinced that other stars harbor planetary systems like our own. Of the 30 extrasolar planets around Sun-like stars detected previously, all have been the size of Jupiter or larger.
Space Weather	March 27: IMAGE Blasts Off - NASA's newest space weather satellite soared into space on a Delta II rocket this weekend.
Space Weather	March 24: The RADAR Cop in Space - NASA's IMAGE satellite, scheduled for launch on March 25, will revolutionize our understanding of Earth's magnetosphere. Space weather data from the innovative spacecraft will be freely available to the public on the web and elsewhere. NASA scientists are developing plans for down-to-earth listening stations that HAM radio operators can build to capture the data themselves.
	March 24: Farewell Compton - The Compton Gamma-ray Observatory is destined for a watery grave in the remote Pacific on June 3,

Gamma-Ray Astronomy	2000. At a press conference today, NASA officials cited human safety concerns in explaining their decision to de-orbit the satellite, which has revolutionized our understanding of the cosmos during a highly successful 9 year mission.
Astrophysics	March 23: Curiouser and Curiouser - The exotic world of gamma-ray astronomy has taken yet another surprising turn with the revelation that half the previously unidentified high-energy gamma ray sources in our own galaxy, the Milky Way, actually comprise a new class of mysterious objects. "These are objects we've never seen before," says one NASA scientist.
Space Weather	March 22: Solar Cycle Update - Is the real Y2K problem just starting? NASA scientists say not to worry. The solar cycle appears to be on schedule for a peak in mid-2000, but this year's Solar Max appears to be slightly smaller than peaks registered in 1978 and 1989. Check out this story for predictions and for a summary of recent solar activity.
Astrophysics	March 21: Black Hole Hide and Seek - Scientists using NASA's Chandra X-ray Observatory have found new evidence for black holes hiding inside the cores of normal-looking galaxies. The results strengthen the "unified model of quasars," which predicts that active galaxies look different depending on your point of view.
Moon Buggy Race	March 17: Four Wheeling on the Moon - The first interplanetary Sports Utility Vehicle makes a comeback at the 7th annual Great Moon Buggy Race in April 2000. Read this article to learn more about the history of the Lunar Rover and how kids today are solving some of the same engineering challenges
Climate Science	March 16: Here Comes Urban Heat - With summer just around the corner, NASA scientists are using space age technology to understand how characteristics of the urban environment create "urban heat islands.
Astrophysics	March 14: Amateurs Catch a Gamma-ray Burst - For the first time amateur astronomers, using a 40-yr old telescope and a homemade CCD camera, have detected the faint afterglow from a gamma-ray burst billions of light years away.
Solar Weather	March 09: SOHO Sees Through the Sun - Predicting solar activity can be tricky but now space weather forecasters have a way to predict the future. Researchers using the orbiting Solar and Heliospheric Observatory have developed a new method to see what's on the far side of our star before it rotates over the Sun's limb to face Earth.
Lightning	March 08: The Lightning of El Nino - Without El Nino to spice up life along the Gulf Coast, it's been "a boring year" for thunderstorm watchers, say scientists who have found an interesting correlation between El Nino and lightning. At any given moment there are 2,000 thunderstorms active around the world and 100 flashes of lightning per second. Monitoring lightning from space will help predict and track severe weather.
Microgravity	March 06: Planets in a Test Tube - What do the racing winds on Jupiter and the snail's pace circulation of molten rock inside the Earth have in common? They're all fluids whose movements were simulated in a "planet in a test tube" flown aboard the Space Shuttle in 1985 and 1995. Results from the Geophysical Fluid Flow Cell experiments were published last month in a NASA Technical Memorandum.
	March 02: Polar Substorm - Last week, an interplanetary wind storm hit our planet with a gale of energetic particles from the Sun. During the storm, a

Aurorae	strong gust of solar wind triggered aurora captured by the Ultraviolet Imager on NASA's Polar satellite.
Intergalactic Weather	March 01: Galaxies in Collision - Pictures of a colossal cosmic "weather system" produced by the collision of two giant clusters of galaxies have been captured by NASA's Chandra X-ray Observatory. For the first time, the pressure fronts in the system can be traced in detail.

Subject	February Articles Date & Title
Astrophysics	February 29: A Monster in the Middle - The Chandra X-ray Observatory may have spied a supermassive black hole in the center of our Milky Way galaxy, but it's a fainter x-ray source than astronomers expected.
Astrophysics	February 25: Waiting for Cynus X-3 - One of the brightest x-ray sources in the Milky Way seems about to erupt in a dazzling flare. By studying the explosion scientists hope to unravel an extragalactic mystery.
Space Weather	February 24: Space Weather Mission Nears Launch - An innovative satellite called IMAGE, slated for launch on March 15, 2000, will revolutionize our understanding of Earth's magnetosphere and improve space weather forecasting.
Asteroid Eros	February 22: Cosmic Bar Codes - The Chandra X-ray Observatory has peered into the nucleus of a distant galaxy and detected warm gas flowing away from a black hole. The spectrum of active galaxy NGC 5548 is the most precise of its kind ever made with an x-ray telescope.
Asteroid Eros	February 14: First Light from Eros Orbit - NEAR's first close-up pictures from Eros orbit have arrived at Earth. This story includes a beautiful image of a large crater on the asteroid and highlights from this afternoon's NASA press briefing.
Asteroid Eros	February 14: NEAR Orbit Insertion - NASA's NEAR spacecraft has entered orbit around asteroid 433 Eros.
Asteroid Eros	February 13: Guess Who's Coming to Breakfast? - The NEAR spacecraft is now less than 1000 km from asteroid 433 Eros. It is scheduled to enter orbit around the space rock at 10:33 EST on Monday morning. Critical science observations are slated to begin 11 hours earlier when the spacecraft passes directly between the Sun and Eros.
Comets	February 10: Kamikaze Comets - A surprising pattern emerges from satellite observations of lightning. Storms over the Great Plains States have significantly more lightning that never reaches the ground, an indicator of violent activity that can spawn hail and tornadoes.
Asteroid Eros	February 08: Eros or Bust - As any dinosaur can tell you, it's important to keep an eye on Near-Earth Asteroids. On February 14, 2000, NASA's NEAR spacecraft will go into orbit around 433 Eros for a year-long closeup look at a 21 mile long space rock. Data collected during the mission could revolutionize our understanding of the solar system's "minor planets."

Astrophysics	February 07: Colder than Space - The detector of an X-ray telescope slated for launch by Japan on Feb. 8 is colder than chilliest reaches of our universe. The "Astro-E" mission will target clusters of galaxies, supermassive black holes, neutron stars and more.
Space Weather	February 06: Small Sunspot, Big Flare - One of the biggest and brightest optical flares of the current sunspot cycle erupted this weekend. The flare was a whopper, but the sunspot group it came from wasn't.
Solar Weather	February 04: Solar Cycle Update - Nearly 400 years after they were first sighted by Galileo through a telescope, sunspots continue to perplex scientists.
Solar Weather	February 03: Solar Smoke Rings - The Sun put on a dynamic show this week with a series of swirling coronal mass ejections.
Planetary Astronomy	February 02: Red Moon Rising - Sky watchers from Europe to the Pacific were treated to a beautiful lunar eclipse last month.
Planetary Exploration	February 01: Listening for Mars Polar Lander - More telescopes have joined the search for Mars Polar Lander after Stanford scientists failed to confirm a radio signal from the missing spacecraft last week.

Subject	January Articles Date & Title
Planetary Exploration	January 27: Never Say Die - After receiving weak signals that may have come from Mars Polar Lander on Dec. 18 and Jan. 4, Stanford radio astronomers are again listening for murmurs from the missing spacecraft.
Black Holes	January 26: The Andromeda Drain - The Chandra X-ray Observatory has spied a peculiar black hole at the center of the Andromeda galaxy.
Meteors	January 25: Yukon Meteor Blast - A thunderous meteor streaked over the Yukon last week. Now a NASA airplane has flown through the debris cloud in search of extraterrestrial particles.
Astronomy	January 24: Hubble Opens for Business - Following the successful Space Shuttle servicing mission last December, NASA's Hubble Space Telescope is working better than ever.
Solar Weather	January 20: Solar Cinema - The Solar -Heliospheric Observatory recorded a beautiful solar prominence on January 18.
The Moon	January 19: Total Lunacy - Sky watchers in Western Europe and the Americas can enjoy the first total lunar eclipse of the year 2000 on Thursday night.
Io	January 17: Caught in the Act - In November 1999, astronomers photographed a large volcanic eruption on Io just as Galileo was flying by Jupiter's fiery satellite.
	January 14: Black Holes on the Loose - Astronomers have

Black Holes	discovered isolated black holes adrift among the stars in our galaxy.
Astronomy	January 13: One small step for Chandra ... -one giant leap for X-ray astronomy. NASA's newest Great Observatory solves a longstanding mystery.
Planetary Astronomy	January 10: Surf's Up on Europa? - Changes in Europa's magnetic field, detected during last week's flyby, point to a salty, subterranean ocean.
The Physics of Lightning	January 04: Lightning Strikes an Odd Pattern Over the Plains - A surprising pattern emerges from satellite observations of lightning. Storms over the Great Plains States have significantly more lightning that never reaches the ground, an indicator of violent activity that can spawn hail and tornadoes.
Planetary Exploration	January 03: Happy New Year, Europa - On the eve of another extended mission, NASA's Galileo spacecraft swooped past Jupiter's icy moon Europa today at an altitude of 351 kilometers. Another Io flyby is planned for February 22.

[**YEAR 2009 NEWS ARCHIVE**](#)

[**YEAR 2008 NEWS ARCHIVE**](#)

[**YEAR 2007 NEWS ARCHIVE**](#)

[**YEAR 2006 NEWS ARCHIVE**](#)

[**YEAR 2005 NEWS ARCHIVE**](#)

[**YEAR 2004 NEWS ARCHIVE**](#)

[**YEAR 2003 NEWS ARCHIVE**](#)

[**YEAR 2002 NEWS ARCHIVE**](#)

[**YEAR 2001 NEWS ARCHIVE**](#)

[**YEAR 2000 NEWS ARCHIVE**](#)

[**YEAR 1999 NEWS ARCHIVE**](#)

[YEAR 1998 NEWS ARCHIVE](#)

[YEAR 1997 NEWS ARCHIVE](#)

[YEAR 1996 NEWS ARCHIVE](#)

[return to top of page](#)

Production Editor: [Dr. Tony Phillips](#)

Curator: [Bryan Walls](#)

NASA Official: [John M. Horack](#)