



1999 Headlines Archive

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YEAR 1999 HEADLINES

No.	Field	Date & Title
235.	Auroral Physics	December 29: The Warp and Woof of a Geomagnetic Storm - Using a team of three satellites, scientists are studying what happens when a solar coronal mass ejection strikes the Earth. This story includes a new Quicktime animation of a coronal mass ejection and the aurora borealis.
234.	Comets & Meteors	December 28: Y2K Meteor Burst - One of the most intense and least observed annual meteor showers peaks on the morning of Jan. 4, 2000. The Quadrantids will be the first major meteor display of the New Year. Follow the shower at Quadrantids.com .
233.	Astronomy	December 24: Interplanetary Christmas - In an exclusive interview with Science@NASA, Santa discusses his plans for Christmas on future space colonies. The prospect of delivering presents throughout the solar system is, well, turning Santa's hair white.
232.	Gamma-ray Astronomy	December 22: Astronomers get a special star for their Christmas tree - Gamma-ray burst located, and viewed by several instruments simultaneously.
231.	X-ray Astronomy	December 21: Prospecting inside a Supernova - Chandra x-ray data from stellar explosions.
230.	Looking Up	December 19: A Whale of A Full Moon - A bigger, brighter Moon will herald the beginning of northern winter on Dec. 22, 1999 as lunar perigee, the winter solstice, and the full Moon all happen within a 10 hour period.
229.	Cosmic Ray Astrophysics, Planetary exploration	December 17: Balloon flight will help scientists understand how to shield Mars crews - A 10-day balloon flight this month will include two small detectors designed to improve our understanding of the radiation hazards that will be faced by astronauts on extended missions such as Mars exploration.
228.	Solar Physics	December 16: Solar cycle ups and downs continues to mystify scientists - Solar activity is picking up, but not as much as one team of scientists had predicted. "The sun is a variable object and there are going to be some ups and downs," says NASA's David Hathaway. One 'up' he doesn't expect is a large eruption predicted nowhere except in the rumor mill.

227.	X-Ray Astrophysics	December 15: The End of Days - Alerted by a supernova patrol, scientists have used NASA's Chandra X-ray Observatory to capture a rare glimpse of X-radiation from the early phases of a supernova. Although more than a thousand supernovae have been observed by optical astronomers, the early X-ray glow from the explosions has been detected in less than a dozen cases.
226.	Comets & Meteors	December 15: Making up for Lost Leonids - The 1999 Geminids dazzled observers in North America, making up for a weak display of Leonids one month earlier. Another meteor shower is just 3 weeks away.
225.	Exobiology	December 14: Meet Conan the Bacterium - A radiation-resistant microbe could play a major role in Martian exploration. First, it can help scientists determine the best locations to seek life on Mars. Later, it may help keep astronauts healthy and then reshape Mars for colonists.
224.	Solar Physics	December 13: The Day the Solar Wind Disappeared - For two days in May, 1999, the solar wind that blows constantly from the Sun virtually disappeared -- the most drastic and longest-lasting decrease ever observed.
223.	Astrobiology	December 10: Exotic microbes discovered near Lake Vostok - Scientists have uncovered a microbial world hidden deep beneath the frozen Antarctic ice that could help them learn more about how life can survive under extreme conditions on other planets or moons.
222.	Astrophysics	December 10: Even the "soft" stars have a "hard" side - Soft-gamma repeaters have a hard side. It's hard enough that they could almost be mistaken for the hard gamma-ray bursts that come from deep in the observable universe.
221.	Astrophysics	December 8: "1,000 Shares of Magnetar at 12-1/2!" - Here's a hot stock tip: the market, earthquakes, traffic jams, and magnetars follow the same power law. This oddity of the universe won't make you rich; it certainly can't be used to predict where the market is headed. But it follows a recent theory called self-organizing criticality.
220.	Comets & Meteors	December 7: Great Geminids! - On December 13 and 14, 1999, fragments of the mysterious asteroid 3200 Phaethon will strike Earth's atmosphere and produce a beautiful sky show. The Geminids offer the last chance in 1999 for skywatchers to view a dazzling meteor shower. Follow the action at Geminids.com .
219.	Mars Polar Lander	December 6: Odds diminish for Polar Lander contact - "We're nearing the point where we've used up our final silver bullets," said the mission's project manager, Richard Cook of JPL.
218.	Mars Polar Lander	December 3: Mars Polar Lander nears touchdown - Polar Lander is scheduled to land shortly after noon Pacific time on Friday, December 3.
217.	Comets & Meteors	December 2: What next, Leonids? - The Leonids of 1999 provided skywatchers in Europe and the Middle East with a tremendous show of over 1500 meteors per hour at the peak. What lies in store for stargazers next year and in the early 21st century? Read what the experts say!

No.	Field	Date & Title
216.	Mars Polar Lander	November 30: Polar Lander Mission Overview - The latest Mars lander will look for water and study martian climate.
215.	Plasma Physics	November 30: Learning how to make a clean sweep in space - How do you clean dust in space where a vacuum cleaner won't work? A solution starts with understanding how a single grain of dust - in this case, like that from rocket motors - behaves in space.
214.	Planetary Physics	November 28: Galileo's No Turkey - NASA's Galileo spacecraft survived another daring encounter with Io on Thanksgiving Day, but not before giving ground controllers something to worry about.
213.	Astrophysics	November 24: BATSE Finds Most Distant Quasar Yet Seen in Soft Gamma Rays - Once upon a time, in a galaxy far, far away, a supermassive black hole burped and sent a flash of gamma rays that arrived at Earth 11 billion years later. Observations by the Burst and Transient Source Experiment will help give insight into the birth and life of quasars.
212.	Astrophysics	November 23: Scientists mourn loss of gifted colleague - Astrophysicists in Huntsville and around the world are mourning the death on Nov. 2 of Dr. Johannes "Jan" van Paradijs, one of the world's leading astrophysicists.
211.	Comets & Meteors	November 22: A Leonid on the Moon? - The first recorded impact of a meteorite on the Moon may have been captured on video during the 1999 Leonids meteor storm. Astronomers call for confirming data.
210.	The Planets	November 19: A Volcanic Flashback - With another Io flyby less than a week away, JPL has released new data showing towering mountains, sizzling hot spots, and enormous lava lakes on Jupiter's fiery moon.
209.	Comets & Meteors	November 18: Leonids Rain in Spain - An outburst of over 1500 Leonid meteors per hour dazzled observers in Europe and the Middle East.
208.	Comets & Meteors	November 17: Huge Fireball Dazzles Midwest - Tuesday night an unusual Earth-grazing fireball attracted stares in over a half-dozen US states. Could it be a taste of things to come when the Leonids peak Thursday morning?
207.	Comets & Meteors	November 16: Leonids Control Center monitors meteor activity - International team will provide meteor counts for satellite operators

206.	New Planets	November 14: It's Real! - By observing the transit of a planet across the face of a distant star, astronomers prove that planets exist outside our solar system. The amount of dimming of the star's light also gives the first-ever estimate of the size and density of an extrasolar planet.
205.	Looking Up	November 12: Look at that Sunspot Go! - On Monday afternoon, November 15, the planet Mercury will pass in front of the Sun creating a speedy dark spot on our star that can be seen through properly filtered telescopes.
204.	Comets & Meteors	November 10: Heads Up! - The upcoming Leonids meteor shower (Nov. 17-18) is expected to be the biggest in decades and perhaps for the next century. While we are safe on the ground, satellite operators are concerned that even small impacts could short-circuit satellites. NASA will coordinate a team that helps track changes in the shower that could be a storm.
203.	Earth Science	November 8: NASA applying space technology to help farmers diagnose fields - An eye in the sky and instruments in the dirt are teamed to help scientists and farmers figure out the best way to nurture crops. At least one preliminary result shows a striking correlation between an image and, two months later, crop yield.
202.	The Planets	November 5: A Hawaiian-Style Volcano on Io - New images from Galileo reveal unexpected details of the Prometheus volcano on Io including a caldera and lava flowing through fields of sulfur dioxide snow.
201.	Comets & Meteors	November 5: A Surprise November Meteor Shower? - On November 11, 1999 Earth will pass close to the orbit of newly-discovered Comet LINEAR C/1999J3. The result could be a new meteor shower -- the Linearids. This article includes tips for visual and ham radio observing.
200.	Astrophysics	November 4: Ham operators will get to help NASA with space experiment - Ham radio operators can help NASA collect and analyze data from a satellite scheduled for launch Nov. 19. Data from the Plasma Experiment Satellite Test will be used in designing an advanced propulsion system that plugs into the Earth's magnetosphere.
199.	Comets & Meteors	November 3: Leonids on the Moon - When the Leonid meteor shower strikes on November 18, Earth won't be the only place in the cross hairs. The Moon will also pass very close to the debris stream of comet Tempel-Tuttle. Leonid meteorite impacts on the Moon might be visible from Earth and provide a means for long-distance lunar prospecting.
198.	Astronomy	November 2: Taking a ringside seat for a gamma-ray burst - Supercomputers are giving scientists a ringside seat for one of the most violent events in nature, the heart of a gamma ray burst. The "collapsar" model simulates a star that is too heavy to go supernova, and thus turns itself inside out.
		November 1: NASA Meteor Balloon Rises Again - NASA

197.	Comets & Meteors	scientists and ham radio amateurs are teaming up for a weather balloon flight to the stratosphere during the Leonid meteor shower on November 18, 1999. The balloon will transmit a live webcast of the shower from an altitude of 100,000 ft or more, far above any bad weather or obscuring clouds.
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196.	Astrophysics	October 29: A Swift Look at the Biggest Explosions in the Universe - Spurred by the thousands of gamma-ray bursts recorded over the last three decades, NASA is planning missions dedicated to discovering the causes of what had been an oddity and now has become a primary mystery in astronomy.
195.	Comets & Meteors	October 27: Leonids in the Crystal Ball - Most experts agree that 1999 is a likely year for a full-fledged Leonids meteor storm. Other forecasters think that better displays could be in store for 2000 - 2002. Whatever the case, the place to be before dawn on November 18, 1999 is outdoors and looking up!
194.	Astronomy	October 26: Chandra Spies Structure of Huge X-Ray Jets - A new image of the Centaurus A galaxy shows x-ray jets as long as our whole galaxy is wide. The image helps give new insight into what happens when galaxies collide.
193.	Astrophysics	October 25: Postmortems in the Sky - To say they are ghoulish may be going too far, but like ghouls those studying Gamma Ray Bursts gleefully seek the moldering remains, and never see the living victim. But they are very much interested in both the victim and the cause.
192.	Aurorae	October 22: Aurora Alert - A blast of solar wind from the Sun on October 21 is creating strong geomagnetic storm conditions a day later. The Ultraviolet Imager onboard the POLAR spacecraft has captured dramatic images of the storm as seen from Earth orbit.
191.	Astronomy	October 22: A Close Encounter with Jupiter - This weekend the Solar System's largest planet will be brighter and nearer to Earth than at any time in the past 12 years. It's easy to see with a telescope or binoculars, or even with the naked eye!
190.	Astrophysics	October 21: Dodging pitfalls in the hunt for the cause of gamma-ray bursts - At the GRB conference this week, scientists discuss how to avoid making mistakes while searching for the solution to a big astrophysical mystery - What causes gamma-ray bursts?
189.	Astrophysics	October 20: Outbursts Result in Controversy - Scientists have different ideas to explain the behavior of Soft Gamma Repeaters (SGRs). SGR's irregularly give off short blasts of radiation in the gamma ray frequencies. Magnetar theory gives an explanation, but other theories depend on the surrounding stellar environment as well as a central neutron star.
188.	Astrophysics	October 18: After three decades of study, gamma-ray bursts still mystify - Over the last three decades, gamma-ray bursts have been one of the most mysterious phenomena in astrophysics. In preparation for next week's 5th biennial Huntsville

		Gamma Ray Burst Symposium, Science@NASA caught up with Dr. Gerald Fishman for an interview about bursts and the symposium.
187.	The Sun	October 15: Solar Déjà Vu - When Yogi Berra made his famous remark about "déjà vu all over again," he probably didn't have solar eruptions in mind. But this week solar physicists did a double take, and then a triple take, as the sun produced a rapid-fire series of coronal mass ejections. Even Yogi would have been impressed.
186.	The Sun	October 14: Solar Cycle Update - Updated predictions from NASA scientists place the solar maximum in mid-2000. As activity on the Sun begins to increase toward this broad maximum, we can expect more auroral displays, radio disruptions and power fluctuations.
185.	The Moon	October 13: Moon Water Remains a Mystery - The July 31, 1999 crash of Lunar Prospector into the Moon did not liberate detectable signs of water, say scientists. The possibility of water-ice in shadowed lunar craters remains open.
184.	Physics	October 12: French Nobel Laureate turns back clock - At any given spot along its path, the Aug. 11, 1999, total eclipse offered up to 2-1/2 spectacular minutes of total lunar coverage of the sun. But for two NASA researchers, the show's not over. They're just getting started probing a 50-year-old mystery.
183.	Planetary Physics	October 11: Galileo survives volcanic flyby - NASA's Galileo spacecraft has successfully zipped past Jupiter's moon Io, the most volcanic body in our solar system. This was the closest look at Io by any spacecraft, and Galileo's cameras were poised to capture the brief encounter.
182.	Astrophysics	October 11: Gamma-ray bursts to take center stage at international meeting - More than 200 astronomers will gather to talk about gamma-ray bursts, one of the most mysterious and increasingly watched-for phenomena in the universe. The 5th Huntsville Gamma Ray Burst Symposium, to be held Oct 18-22 in Huntsville, Alabama, will have a wealth of new observations for discussions of bursts and how to study them.
181.	The Planets	October 8: Galileo has a hot date with Io - On October 10 NASA's Galileo spacecraft will execute a daring flyby of Jupiter's volcanic moon. This story includes newly released images of Io and information about the flyby.
180.	Astronomy	October 8: Chandra Takes X-ray Image of Repeat Offender - NASA's Chandra X-ray Observatory has imaged Eta Carinae, the Milky Way's most luminous star. This exploding star, which also has been imaged by the Hubble Space Telescope, is huffing and puffing its way to eventual self-destruction.
179.	Earth Science	October 6: New Antarctic Ozone Data Released - A NASA satellite has shown that the area of ozone depletion over the Antarctic is still large, but a bit less in 1999 than it was last year.
178.	Medical Science	October 5: Scientists grow heart tissue in Bioreactor - MIT scientists use a NASA-developed device in a first step towards tissue engineering. The cell constructs are less than 1/5-inch across, but represent a significant step in developing replacement parts for damaged organs.

177.	Planetary Physics	October 4: Io's Alien Volcanoes - Scientists are eager for a closer look at the solar system's strangest and most active volcanoes when Galileo flies by Io on October 11. This article explores what we know about volcanism on Io and what researchers hope to learn from next week's daring encounter.
176.	Astronomy	October 1: Planetary Power Breakfast - With the advent of northern autumn, the dark morning sky is a sparkling showcase of bright planets and stars. Early October offers a special treat featuring the slender crescent Moon, brilliant Venus and blue-white Regulus.

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175.	Planetary Physics	September 30: Sulfuric Acid Found on Europa - Sulfur from fiery volcanoes on Io may be responsible for a battery acid chemical on Europa with implications for astrobiology.
174.	Astronomy	September 29: Chandra image shows a powerful connection in the Crab Nebula - Another fabulous discovery from Chandra X-ray Observatory shows a bright ring of fire around the pulsar at the heart of the Crab Nebula. Scientists believe this is a link between the Crab's powerhouse and its light show.
173.	Astronomy	September 28: Peering into the heart of a Crab - A brilliant ring around a cosmic powerhouse at the heart of the Crab Nebula will be revealed today in new images to be released from the Chandra X-ray Observatory. The Crab is one of the most beautiful - and most studied - bodies in the skies, and serves as a Rosetta Stone for modern astrophysics.
172.	Cosmology	September 27: The Bouncing Baby Universe - New research by astronomers using the Hubble Space Telescope indicates that the Universe is only 12 billion years old. This could revive the old paradox in astrophysics that the Universe appears younger than some of the stars in it.
171.	Astronomy	September 23: Sunrise at the South Pole - Today's autumnal equinox heralds the dawn of a new day at the South Pole as Earth joins three other planets in the solar system where it is autumn in the northern hemisphere.
170.	Astronomy	September 22: Now you see it - now you don't - A prodigious eruption of X-rays from near the center of our Milky Way announces the latest round of activity in a binary star system containing a variable star and a compact object. It's put astronomers and observatories on the ground and in space hot on the trail of an object known as GM Sgr.
169.	X-Ray Astronomy	September 21: New Chandra Images Released - X-ray pictures from NASA's Chandra X-ray Observatory reveal previously unobserved features in the remnants of three different supernova explosions.
168.	The Planets	September 21: Weather Satellite Nears Mars - Mars Climate Orbiter is set to enter orbit around the Red Planet this week. It will become the first interplanetary weather satellite and a

		communications relay for the next lander mission to explore Mars.
167.	Biotechnology	September 20: You have to break a few (hundred) eggs to make a good crystal - Scientists find that even when conditions are ideal, nature puts protein crystal quality "on the curve." But that discovery could become a tool for choosing the best proteins for space-based studies.
166.	Astrophysics	September 17: Is the 2-in-1 burster a masquerade? - A NASA scientist finds a peculiar rapidly rotating neutron star - a pulsar - is acting quite a bit differently than it did in 1995, and is trying to understand why.
165.	Plasma Physics	September 16: Io or Bust - NASA's Galileo spacecraft flies by Callisto today in an orbital maneuver designed to send the craft hurtling towards an encounter with the volcanic moon Io. Getting there won't be easy. The spacecraft has to survive extreme radiation from Jupiter's inner magnetosphere before it can rendezvous with Io later this year.
164.	Microgravity Science	September 15: Materials Science 101 - So you're a PhD scientist or a top gun pilot, and you've just been selected to be an astronaut, and now you have to learn to be a generalist to help run experiments on the International Space Station (ISS). So it's back to school for astronaut trainees, too.
163.	Microgravity Science	September 14: Space station glovebox ready for scientists to start designing experiments - A versatile experiment facility for the International Space Station moved closer to flight recently with delivery of the ground-test model to NASA's Marshall Space Flight Center.
162.	Astrophysics	September 13: Chandra peers into the Large Magellanic Cloud - The X-ray Observatory's <i>High Resolution Camera</i> catches its first light - resulting in extraordinary pictures of a distant supernova remnant.
161.	Looking up	September 13: Mars meets anti-Mars - The red planet Mars and the brilliant red star Antares pass less than three degrees apart this week. The pair are easy to find in the night sky just after sunset. Stargazers with dark skies can catch a glimpse of the Galactic Center region at the same time.
160.	Astronomy	September 10: Fading embers hold clues to puzzle of gamma-ray bursts - Sometimes the big fireworks aren't the whole show. Watching the embers fade away can help you understand what was hidden by a blinding flash of light - or gamma rays. In a paper accepted for publication in <i>Astrophysical Journal Letters</i> , astrophysicists report that an afterglow can start during a gamma-ray burst, thus suggesting that more than one activity is causing what appears to be a chaotic explosion.

159.	The Planets	September 9: Divining Water on Europa -Circumstantial evidence for water on Europa continues to mount as JPL scientists try an ingenious experiment to find hexagonal water-ice crystals on the frigid surface of Jupiter's 4th moon.
158.	Space Plasma Physics	September 7: Plasma, Plasma, Everywhere -A NASA scientist has created a new model of the plasmasphere surrounding our world, building on the work of previous models. Earth's complicated plasma environment directly affects our life on Earth - from radio transmissions and power grids to satellite safety.
157.	The Moon	September 3: The Case of the Missing Moon Water - Lunar Prospector failed to kick up a visible dust cloud when it crashed into the Moon, but researchers are still sifting through their data for elusive signatures of water.
156.	Solar Physics	September 2: The Sun's Sizzling Corona - Scientists continue to ponder one of our star's most closely guarded secrets - why does the solar corona get hotter farther from the Sun's surface?
155.	Earth Science	September 1: Adios, Hurricanes - El Niño gets blamed -- rightly or wrongly -- for everything strange in the weather. One NASA scientist has found a relationship: El Niño apparently is related to a reduction in Atlantic hurricane severity.

No.	Field	Date & Title
154.	Space Weather	August 31: Solar Activity Heats Up - A series of major solar flares and a coronal mass ejection this past weekend could trigger geomagnetic storms and auroral displays visible at high latitudes.
153.	Physics	August 30: North by Northwest to Catch A Neutrino in the Act - A century-old radiation detection tool may be pressed into service to see if neutrinos change flavor. The answer may change our models of subatomic particles and the universe.
152.	Planetary Science	August 27: Galileo Takes a Closer Look at Io - NASA has released new high resolution pictures of Jupiter's volcanic moon captured during Galileo's closest flyby since 1995.
151.	Astronomy	August 26: Studying the Mysteries of the Titanium Star - When the Chandra X-ray Observatory took its "first light" image, it wasn't looking at just another star shining in the darkness. It was watching a foundry distribute its wares to the rest of the galaxy.
		August 25: NASA Announces Mars Landing Site - Mars

150.	Planetary Science	Polar Lander heads for a touch down near the Red Planet's south pole to study the history of martian climate.
149.	Earth Science -- Weather	August 24: If it Rains in the Pacific Will Kansas Have a Drought? - Who cares if it rains and the fish get wet? A Pacific Ocean rainfall experiment will have implications for global weather studies.
148.	Propulsion	August 19: Dashing and Coasting to the Interstellar Finish Line - A race to the edge of the solar system and into interstellar space could come out of a contract awarded recently by NASA for the University of Washington to develop an innovative space propulsion concept. The Mini-Magnetospheric Plasma Propulsion - M2P2 - would use the solar wind to push on a small imitation of the Earth's magnetosphere and accelerate the spacecraft to overtake the Pioneers and Voyagers and become the first manmade object to leave the solar system.
147.	Astronomy	August 18: Just Passing By Earth - The Cassini spacecraft has completed a highly accurate flyby of Earth, giving the spacecraft a velocity boost for its journey to distant Saturn.
146.	Astronomy	August 17: Cassini & Polar Join Forces to Study Earth - A bit of interplanetary luck allowed two separate space missions take advantage of each other's instruments Tuesday evening for coordinated measurements of Earth's magnetosphere.
145.	Climate Science	August 16: Planet 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 studied in a "planet in a test tube" experiment flown aboard the Space Shuttle.
144.	Astronomy	August 13: Pop! Ping! Perseids! - The <i>PerseidsLive!</i> meteor balloon ruptured prematurely on its way to the stratosphere. Nevertheless, many observers on the ground were able to see and listen to Perseid meteors. This story includes RealVideo of the meteor balloon popping and an audio recording of a Perseid meteor radar "ping."
143.	Astronomy	August 12: This Eclipse is History - A NASA scientist views the eclipse from the foothills of Transylvania, home of ancient legends and modern science. Includes video replays from NASA TV and an audio account of the eclipse as seen from Romania.
142.	Astronomy	August 11: Here Come the Perseids! - The 1999 Perseid meteor shower peaks on August 12th and 13th under the dark skies of a nearly new moon.
141.	Astronomy	August 10: Don't Forget the Partial Eclipse! - North Americans could experience unusual shadow effects near sunrise on Aug. 11.

140.	Astronomy	August 10: Scientists drawn to midday darkness near Transylvania - Serious eclipse science is planned near home of legendary monster.
139.	Astronomy	August 6: Snagging a High Fly Ball - On a balloon flight, scientists will attempt to capture particles from the stratosphere during the Perseids meteor shower, some possibly from the Perseids themselves.
138.	Physics	August 6: Decrypting the Eclipse - On August 11, scientists around the world will attempt to solve a 45 year mystery: Does a solar eclipse somehow affect the Foucault pendulum?
137.	Astronomy	August 5: There Goes the Sun - On the verge of solar maximum, the August 11, 1999 solar eclipse promises to dazzle millions in the path of totality.
136.	Astronomy	August 4: Audio Eclipse May Fill the Sky - As the eclipse turns day into night over Europe on August 11, radio transmissions from near the path of totality may spread across the globe, due to ionospheric changes caused by the Moon's shadow. As a result, ham radio operators around the world can track the August 11, 1999 total solar eclipse by monitoring changes in atmospheric radio propagation.
135.	Science Communications	August 3: Turning blueprints into watercolors - A Science@NASA writer shares notes from a science writing workshop, where writers honed their skills at turning scientific facts into readable prose.

No.	Field	Date & Title
134.	The Moon	July 31: Farewell, Lunar Prospector -NASA's lunar orbiter collided with the Moon Saturday morning, July 31, 1999, at 0952 GMT
133.	The Moon	July 30: Amateur astronomers target Lunar Prospector - While professionals watch for a nearly transparent cloud of water vapor, amateurs will monitor the Moon's south pole for visible signs of Lunar Prospector's crash.
132.	Asteroids and spacecraft	July 29: Face-to-face with asteroid Braille - Using an experimental autopilot system, NASA's exotic Deep Space 1 spacecraft has completed the closest-ever flyby of an asteroid.
131.	The Moon	July 28: A Stay of Execution for Lunar Prospector - Lunar Prospector has survived the July 28 partial lunar eclipse and is on track for a planned collision with the Moon on July 31. This story includes a video clip of the eclipse as seen from Australia and new

		simulations of the July 31 impact.
130.	Astrobiology	July 27: Astrobiologists To Hunt Small Game in Siberia - NASA and Russian scientists are setting out to Siberia to hunt small game, microbes whose life styles may hold clues to the possibilities for life elsewhere in the solar system. Their trek is part of NASA's Astrobiology program.
129.	Planetary Science	July 26: Lunar Prospector in Eclipse - This Wednesday's partial lunar eclipse poses a last-minute threat to Lunar Prospector, which is scheduled three days later to crash into the Moon in search of water.
128.	Astrophysics	July 23: Why launch Chandra at night? - Blame Newton and Kepler: Chandra's beautiful early morning launch will place it into an orbit unlike that of NASA's other Great Observatories.
127.	Astrophysics	July 22: A Richter Scale for Cosmic Collisions - Planetary scientists have developed the Torino Scale, a new means of conveying the risks associated with asteroids and comets that might collide with the Earth.
126.	The Sun	July 22: Seasons of the Sun - By comparing several techniques and combining aspects of a couple of the best, scientists better predict the Sun's weather. Solar weather affects our weather, satellites in orbit, electrical power systems, and radio and television communications.
125.	The Moon	July 21: Bracing for Impact - Professional and amateur astronomers are preparing to observe the Moon on July 31st when Lunar Prospector plunges into a permanently shadowed crater in
124.	Astronomy	July 20: Chandra has a busy observing schedule - Dying magnetars, supernovae, and the future of the universe are on tap for NASA's Chandra X-ray Observatory, scheduled for launch July 20, 12:39 a.m. EDT.
123.	Astronomy	July 19: "Braking glitch" may point to massive starquake - Scientists believe a sudden slowdown of a spinning neutron star is due to a massive starquake and a huge release of gamma-ray energy.
122.	Astronomy	July 16: The Great Leonid Meteor Stormlet of 1997 - Newly released video shows a flurry of Leonids in 1997 that briefly rivaled the great meteor storm of 1966.
121.	Astronomy	July 15: Galaxies in Collision - New images from the Hubble Space Telescope reveal an unprecedented number of colliding galaxies in a distant cluster 8 billion light years away.

120.	Astronomy	July 15: Ode to a Grecian Conference - Black holes, neutron stars and other high energy phenomena were the focus of a NATO Institute held in Crete in June, 1999.
119.	X-ray Astronomy	July 14: Countdown to Discovery - Martin Weisskopf, Project Scientist for NASA's newest Great Observatory - the Chandra X-ray Observatory - talks about the upcoming July 20 launch, astronomy, cosmology, and our beautiful and surprising universe.
118.	Astronomy	July 9: Why Wait for the 4th of July? - With the discovery of a bright optical flash during a gamma-ray burst in January 1999, and the advancement of observing technologies, it is now possible that amateur astronomers can make meaningful scientific contributions to the study of these enigmatic events. Find out how you can help in the quest to understand these distant objects, from the confines of your own back yard.
117.	Astronomy	July 8: Surfing Magnetic Waves in the Solar Atmosphere - NASA Scientists announced today the results of dual-observations from the SOHO and Spartan satellites, describing how the solar wind achieves its high-speed of up to 500 miles per second - by "surfing" magnetic waves in the Sun's outer atmosphere.
116.	Astronomy	July 8: HERO will provide new view of X-ray universe - A new method for making high-energy x-ray optics may open the door for a new era of astrophysical observations.
115.	Weather research	July 2: Learning how to make better "nowcasts" of weather - Weather researchers and forecasters meet to discuss closer ties to improve "nowcasts" - or forecasts of what the weather will do in the next few hours.
114.	The Planets	July 1: New Hubble images of the Red Planet - NASA and the Hubble Space Telescope Institute have released new images of Mars to commemorate the landing of Mars Pathfinder on July 4, 1997.

No.	Field	Date & Title
113.	The Planets	June 30: Taking the Scenic Route to Io - What's happening to the small craters on Callisto? That's the mystery scientists were contemplating as Galileo zoomed past Jupiter's pockmarked moon this morning in an orbit-changing maneuver designed to bring the spacecraft closer to volcanic Io.
112.	Astrobiology	June 29: Life on the Edge Update - A team of sled dogs has braved spring storms and wily marmots to recover microbes from a California mountain top. Yeast samples exposed to extreme conditions near the White Mountain summit will be distributed to

		classrooms as part of NASA's <i>Life on the Edge</i> education initiative.
111.	Comets & Meteors	June 28: Radio Meteor Alert - Earth may be headed into two meteoroid swarms that could produce shooting stars for the next week. Radio observations reported yesterday indicate that meteor activity may already be underway.
110.	The Planets	June 24: Venus Lends a Hand - En route to Saturn, Cassini flew less than 400 miles above Venus today, gaining a boost in speed from that planet's gravity.
109.	Solar Physics	June 23: SOHO Spies the Far Side of the Sun - An ingenious new technique for viewing the previously hidden side of the Sun could improve space weather forecasting.
108.	Meteors	June 22: Leonids on the Horizon - Experts make their predictions for the 1999 Leonid meteor shower.
107.	Meteors - history	June 22: The Great Meteor Storm of 1833 - Read a charming, first-hand account of the meteor shower that marked the discovery of the Leonids and created a new branch of astronomy.
106.	Astronomy	June 21: High Noon at the North Pole - View images of this year's June solstice from both ends of the Earth.
105.	Earth Science	June 20: El Nino Watcher Blasts Off - NASA's QuickScat ocean winds satellite was successfully launched on June 19. It will provide scientists crucial data for monitoring and understanding global weather anomalies like El Nino and La Nina.
104.	Earth Science - Lightning	June 18: Human Voltage - From the International Conference on Atmospheric Electricity, scientists review what happens when people and lightning converge.
103.	Astronomy	June 17: Peering through a Hole in the Sky - A team of NASA/Marshall scientists plan to investigate an unlikely 50-year old mystery during the August 11, 1999 total solar eclipse.
102.	Earth Science - Lightning	June 16: More lightning news from inside hurricanes and tornadoes - 3D lightning imaging; Hurricanes suppress lightning; Getting up close and personal with a tornado.
101.	Earth Science - Lightning	June 15: Soaking in atmospheric electricity - Although lightning is the visible, dramatic event of atmospheric electricity, currents flow all around us every day. Such "fair weather" electricity is the return part of the circuitry for all the lightning in the world, and could be an indicator of other global phenomena as well.
100.	Astronomy	June 14: Just Passing By Venus - The Moon will skim by Venus for a dazzling sky show on June 16th.

99.	Astrobiology	June 11: Unearthing Clues to Martian Fossils - The hunt for ancient life on Mars has led scientists to an other-worldly place on Earth called Mono Lake.
98.	Earth Science - Lightning	June 11: Lightning position in storm may circle strongest updrafts -Much of the lightning in a storm is inside the clouds, but new findings show it surrounds the most intense areas, rather than bunching at the heart. Better detection and better knowledge will lead to better prediction and more accurate warnings.
97.	Earth Science - Lightning	June 10: Spirits of Another Sort - Dave Sentman, who originally dubbed the mysterious red flickers of light above thunderclouds Sprites, works to move them from the realm of mystery into scientific knowledge.
96.	Earth Science - Lightning	June 10: Lightning follows the Sun -Tantalizing findings show patterns of lightning vary with the Sun, El Niño, and other phenomena. Such correlations could provide a way to monitor global changes.
95.	Earth Science - Lightning	June 9: Getting a solid view of lightning -At the International Conference on Atmospheric Electricity this week, a New Mexico research team reports they have developed a system to depict lightning in three dimensions.
94.	Astrophysics	June 8: Relics of the Big Bang - When NASA's FUSE spacecraft launches later this month, scientists will gain a new tool to use in the search for the "fossil record" of cosmology.
93.	Earth Science - Lightning	June 8: Learning how to diagnose bad flying weather - Scientists discuss what they know about lightning's effects on spacecraft and aircraft.
92.	Earth Science - Lightning	June 8: Three bolts from the blue - Does lightning affect the ozone layer? What causes "sprites?" And why does "messy" lightning follow a simple lightning model? Hoping to stimulate further thought about the physics of lightning, Martin Uman of the University of Florida posed these fundamental questions to atmospheric scientists attending a scientific conference this week.
91.	Astronomy	June 7: Mars & Spica -This week the Red Planet and the blue-white star Spica are shining in the night sky just 1 3/4 degrees apart. It's a show that star gazers won't want to miss.
90.	The Moon	June 3: Destined for a watery grave? -NASA's first mission to the Moon in 25 years could end with a splash next month when ground controllers deliberately crash Lunar Prospector into a crater in search of water.
		June 3: Now you see it, now you don't - Amateur astronomers

89.	Astronomy	around North America captured striking videos of the Moon as it eclipsed the bright star Regulus on May 21.
88.	Solar Physics	June 2: Solar flares show their true colors -New research points to a common mechanism for spectral behavior in Solar Flares.
87.	Auroral Physics	June 1: How do gusts in solar wind stir the aurora? - NASA Scientist studies data from 3 satellites to figure out what stirs up Earth's Northern Lights.

No.	Field	Date & Title
86.	Solar Physics	May 31: "Cool" microflares could be solar hot spots - One longstanding mystery of the sun is why its outer atmosphere - the corona - is 200 times hotter than its surface. Now, a trio of scientists says it's because the corona is heated by a constant series of mini-explosions, called microflares.
85.	Astrobiology	May 28: Who wrote the Book of Life? - NASA scientists are using neural networks to teach a computer how to recognize life when it sees it. By practicing first on images of terrestrial life, remote instruments someday may be able to identify life forms elsewhere in the solar system.
84.	The Planets	May 27: The Red Planet in 3D - New data from Mars Global Surveyor reveals the topography of Mars better than many continental regions on Earth.
83.	Astrobiology	May 27: The search for life on Mars will begin in Siberia - Russian and Marshall scientists will look for life forms in the inhospitable realm of Siberian permafrost. The scientists hope to broaden our understanding of "extremophiles" - forms of life that exist under extreme conditions - which will help in the search for life on other planets.
82.	Earth Science	May 26: What Comes Out of the Top of a Thunderstorm - Scientists studying powerful gamma-ray bursts in deep space accidentally discovered a closer source of gamma energy -- thunderclouds on Earth.
81.	Astronomy	May 25: Hubble measures the expanding Universe - Scientists using the Hubble Space Telescope today announced that they have completed measurements needed to determine the age, size and fate of the Universe.
80.	Astronomy	May 25: Lifting the veil on Hubble's Constant - This story places today's HST measurements in context with history and background information about "Hubble's Constant," along with a primer on modern cosmology.

79.	Earth Science	May 24: Lightning Leaders Converge in Alabama - Topics slated for the upcoming 11th International Conference on Atmospheric Electricity include space-based lightning detection, purple sprites, lightning as a precursor of severe weather, and more.
78.	Astrobiology	May 23: ET, phone SETI@home - In only one week since the release of free SETI@home software, nearly 300,000 computers have contributed 1100 years of CPU time to the search for extraterrestrial life.
77.	Astrobiology	May 21: Astrobiology's Most Wanted: Giordano Bruno - The story of Giordano Bruno, a man who lived 400 years ago, who believed in other stars, other planets, other life on those planets, and who died for his heresy.
76.	Astrobiology	May 21: The Sagan Criteria for Life Revisited -Would we know life if we saw it? What is essential to life, and what is just characteristic of life as we know it? Organic compounds seem to be a key, and they are turning out to be more common than was once expected.
75.	The Moon	May 20: The Phantom Moonace - This weekend sky watchers in North America will be treated to a rare naked-eye lunar occultation of a bright star. Astronomers are asking amateurs to video tape the event for a precision topographical survey of the Moon's limb
74.	The Planets	May 19: Stormy Weather on Mars -During the recent close approach of Mars to Earth, NASA's Hubble Space Telescope spotted a gigantic storm swirling near the Red Planet's north pole.
73.	NASA research	May 19: Star Wars technology, coming soon to a planet near you -Although technology you see in a Star Wars movie may seem like futuristic fantasy, check out some research NASA is doing today to turn some of that fantasy into fact.
72.	Astrophysics	May 18: Scientists catch another gamma-ray burster in visible light -Several southern hemisphere telescopes observe the latest optical counterpart to a gamma-ray burst reported by BATSE and Beppo-Sax. Scientists estimate the burst originated 10 billion light years away.
71.	Microgravity Science	May 18: Pushing the Limits of Computer Technology - Optical computers will be much faster than today's electronic computers. Scientists at Marshall Space Flight Center are conducting space research to build components needed for the next step: hybrid electro-optic computers.

70.	Astrophysics	May 14: Through the Looking Glass - NASA's Hubble Space Telescope has discovered exotic rings, arcs and crosses that are optical mirages produced by gigantic gravitational lenses in deep space.
69.	The Planets	May 12: Star Wars by Moonlight - Venus and the Moon will put on a dazzling show for moviegoers May 17 through May 19.
68.	Biology and Microgravity Science	May 10: Powerful plants have changed the world - Biologists conducting Space Shuttle experiments may be one step closer to shedding light on the biggest power booster on the planet: a protein in green plants called Photosystem I.
67.	Comets & Meteors	May 7: Hunting for Halley's Comet - This weekend, a high-flying weather balloon takes off from Kansas in search of meteoroids from comet Halley.
66.	Satellite Tracking	May 6: Sightings - New software from NASA, called "J-Pass," can tell you when and where to spot satellites passing overhead - from your own backyard.
65.	The Planets	May 5: Turn left at Callisto - This morning NASA's Galileo spacecraft zoomed past Jupiter's moon Callisto. The maneuver was designed to bring Galileo closer to Jupiter in preparation for a daring encounter with a volcano on Io.
64.	Image Technology	May 4: Shake, Rattle, and Zoom - Two NASA scientists developed VISAR, a new imaging technology, to help the FBI with a crime scene video. VISAR eliminates jitter, adjusts for inadvertent zoom, and brightens dark shots. VISAR will soon be available to help anyone improve their home, or professional video.
63.	Comets & Meteors	May 3: Meteors Down Under - On May 6th debris from Halley's comet will strike Earth's atmosphere and put on a sky show for southern observers. The eta Aquarid meteor display is the first of two upcoming annual showers caused by the famous comet.

No.	Field	Date & Title
62.	The Planets	Apr 29: Plate Tectonics on Mars? - NASA's Mars Global Surveyor has discovered surprising new evidence of past movement of the Martian crust, suggesting that ancient Mars was a more dynamic, Earth-like planet than it is today.
61.	Earth Science	Apr 28: Landsat 7 starts viewing the the world - First images, with twice as much detail as previous Landsat satellites, show Florida's panhandle, South Dakota, and a startlingly clear image of a jet contrail and its shadow on the ground.

60.	Climate Science/Earth Day	Apr 28: Earth Day Education - Students in the Huntsville, Ala. area used a "ray gun" to measure temperature and launched a weather balloon to measure stratospheric ozone, getting a hands-on experience in how climate scientists monitor changes in our atmosphere.
59.	Comets & Meteors	Apr 27: Tuning in to April meteor showers - Last week's Lyrid meteor shower was a bit of a disappointment visually, but it put on quite a show for radio observers. In this story you can learn about the basics of radio meteors and listen to radar echoes from a bright shooting star.
58.	Climate Science	Apr 26: Welcome to the Thunder Dome - Climate scientists report that urbanization has altered weather patterns over Atlanta, Georgia. Data collected for the last 25 years link deforestation and the use of heat-absorbing materials with oddities such as severe morning weather.
57.	Planets	Apr 23: A close encounter with Mars - The Red Planet makes its nearest approach to Earth in 1999 during the next two weeks. It's a great opportunity to view Mars through a telescope or simply with the naked eye.
56.	Earth Science	Apr 21: Stepping back to get a closer view - Scientists at the Global Hydrology and Climate Center will use Landsat 7 images along with other data to better understand the phenomenon of urban heat islands.
55.	Earth Day	Apr 21: Students to learn what's hot at Earth Day celebration - Open house at Global Hydrology and Climate Center on April 22 will have 5th graders learning from 2nd graders and everyone learning something new about planet Earth.
54.	Astrophysics	Apr 21: April's Lyrid Meteor Shower - The oldest known meteor shower peaks this week on Thursday morning, breaking a 3 month lull in meteor activity.
53.	Space Propulsion	Apr 16: Riding the Highways of Light - Science mimics science fiction as a Rensselaer Professor builds and tests a working model flying disc. The disc, or "Lightcraft," is an early prototype for Earth-friendly spacecraft of the future.
52.	Astrophysics	Apr 15: A Family of Giants - Astronomers from four institutions are announcing today their discovery of the first system of planets found orbiting a sun-like star in Andromeda.
51.	Comets & Meteors	Apr 14: A Wild Ride in Search of Meteors - On April 11, NASA scientists successfully launched a weather balloon designed to capture meteoroids in the stratosphere. Video highlights from the flight include the sunset as seen from 80,000 ft. and eerie gurgling sounds caused by high altitude winds.

50.	Astrophysics	Apr 13: A New Class of Black Holes? - Astronomers may have discovered a new type of middle-weight black hole in the centers of some nearby galaxies.
49.	Space Propulsion	Apr 12: Reaching for the Stars - At the 1999 Advanced Propulsion Research Workshop, fusion and antimatter take center stage as rocket fuels of the future.
48.5	Meteors	Apr 9: Meteor balloon set for launch - This weekend scientists will launch a weather balloon designed to capture meteoroids in the stratosphere. The flight will be broadcast live on the web from a video camera carried aloft to 100,000 ft.
48.	Space Propulsion	Apr 8: Setting Sail for the Stars - Cracking the whip and unfurling gray sails are among new space transportation techniques under discussion at the 1999 Advanced Propulsion Research Workshop.
47.	Space Propulsion	Apr 7: Darwinian Design - Survival of the fittest spacecraft - NASA scientists plan to 'breed' better spacecraft using artificial intelligence. Such a strategy mimics nature, and may be one of the most efficient methods of future spacecraft design.
46.	Space Propulsion	Apr 7: Coach-class tickets for space? - Scientists discuss new ideas in high-performance, low-cost space transportation
45.	Space Propulsion	Apr 6: Far Out Space Propulsion Conference Blasts Off - Atoms locked in snow, a teaspoon from the heart of the sun, and the stuff that drives a starship will be on the agenda of an advanced space propulsion conference that opens today in Huntsville.
46.	Space Propulsion	Apr 6: Ion Propulsion -- 50 Years in the Making - The concept of ion propulsion, currently being demonstrated on the Deep Space 1 mission, goes back to the very beginning of NASA and beyond. The path from concept to reality has not been short or direct, but it has been interesting.
44.	Gamma-Ray Bursts	Apr 5: Answer to gamma-ray bursts remains elusive - Eight years ago today NASA launched the Compton Gamma Ray Observatory. While the CGRO has revolutionized our understanding of cosmic gamma ray bursts, these distant explosions remain one of the biggest mysteries of modern astrophysics.
43.	Balloon flight/ meteors	Apr 1: Leonids Sample Return Mission Update - Scientists will describe initial results from a program to catch meteoroids in

		flight at the NASA/Ames Leonids Workshop April 12-15, 1999.
No.	Field	Date & Title
42.	Astronomy and you	Mar 30: Here Comes the Blue Moon - The second Blue Moon of 1999 takes place this Wednesday night. This article explains how to see it and explores the history of the expression "Blue Moon."
41.	Planets - Uranus	Mar 29: Huge springtime storms hit the planet Uranus - A dramatic new time-lapse movie from NASA's Hubble Space Telescope shows for the first time seasonal changes and raging storms on the planet Uranus.
40.	Gamma-ray bursts	Mar 26: Autopsy of an explosion - Scientists may be closer to unravelling the mystery of gamma-ray bursts thanks to one of the most powerful cosmic explosions ever recorded.
39.	Physics and technology	Mar 24: Old photographic technique applied to future energy research - Specially made photographic emulsions, made by NASA scientists, assist in advanced studies of fusion research at Lawrence Livermore Laboratory.
38.	Space Processing	Mar 22: Three-in-One Furnace Readied for Possible Space Flight - The Universal Multi-Zone Crystallizator is a precision furnace from Hungary which may finally get a chance to fly due to collaboration between scientists at NASA and Hungarian Universities.
37.	Astrophysics	Mar 22: Leftover Instruments Will Pave Way for New Propulsion Test - Well understood and well used scientific instruments will help verify a new instrument as they all fly on JAWSAT.
36.	General	Mar 19: Science@NASA Awarded prestigious People's Voice Award - - Thank you all for your support! Last night at the 1999 Webby Awards, this site was awarded the People's Voice Award for best Science site on the Web!
35.	Life on the Edge	Mar 16: Planets in a Bottle - NASA/Marshall's Life on the Edge program is barely a month old but it's already producing results in grade school classrooms. Students experimenting with "Planets in a Bottle" are learning about extremophiles and the prospects for life elsewhere in the solar system.
		Mar 15: Spacelab joined diverse scientists and disciplines on 28 Shuttle missions - Spacelab, an integral part of science in

34.	Microgravity Science	space from 1982 through 1998, had some remarkable achievements. Scientists met at the National Academy of Sciences last week to present their - and Spacelab's - accomplishments.
33.	Life on the Edge	Mar 11: Sled dogs carry astrobiology to dizzying heights - NASA/Marshall's "Life on the Edge" program began in earnest last month when a dog sled team delivered 50 lb. of yeast and other microbes to a 13,000 ft summit in California's White Mountains.
32.	Solar Physics	Mar 9: Finding the 'smoking gun' before it fires - Scientists discover a new tool for predicting solar explosions, improving space weather predictions for storms that may affect Earth.
31.	Microgravity science	Mar 8: NASA selects new biotechnology projects for development - Principal areas of research include protein crystal growth and cell science in microgravity.
30.	Astrophysics	March 5: Happy birthday, Magnetars - 20 years ago today, the first blast of gamma-rays from these enigmatic objects was first observed. Ever since, scientists have been unraveling what happened - and discovering radical new members of the cosmos.
29.	Planetary Colonization technology	March 3: Bringing Mars into the Iron Age - NASA scientists are developing ways to mine and process iron ore for energy production on Mars, creating technologies needed to support a human colony.
28.	Solar Physics	March 2: Future telescope could shatter solar high-resolution barrier - Scientists look ahead at a new telescope which could lead to observations of violent magnetic fields on the sun with resolution 10 times better than the best solar instrument today.

No.	Field	Date & Title
27.	Astronomy	Feb 26: Once in a Blue Moon - As February winds down with no full moon at all, sky watchers are looking forward to two full moons in March and the second Blue Moon of 1999.
26.	Astrophysics	Feb 22: Chandra will target the age of the Universe - Astronomers plan to combine radio images of galaxy clusters with new data from the Chandra X-ray Observatory and open a new window on the history of the Universe.
25.	Microgravity	Feb 19: A low-gravity "Gift for the future" - Scientists discuss results from the US Microgravity Payload 4, which flew on

		the space shuttle last year. Highlights include microgravity crystal growth experiments and low-gravity fluid dynamics.
24.	Planetary Science	Feb 17: Much ado about Pluto - Recent discoveries of Pluto-like objects in the outer solar system have sparked debate about the nature of the tiniest "planet."
23.	Space Weather	Feb 16: Space weather camera set for launch in 2000 - A unique camera that will take some of the first pictures of Earth's invisible magnetic shield is being prepared for flight.
22.	Astrophysics	Feb 12: Next stop: the stars - NASA's next Great Observatory, the Chandra x-ray telescope, moved one step closer to launch this week after being installed in a clean room for final tests and other work at the Kennedy Space Center.
21.	Astrophysics	Feb 10: Fuzzy blobs hold the secret of gamma-ray bursts - Astronomers have released a new Hubble photograph of a gamma-ray burst's fading optical counterpart. The relic fireball appears to be embedded in a faint, irregular galaxy.
20.	Astrophysics	Feb 9: Stellar nurseries for baby planets - Dramatic new Hubble images show vast stellar disks where planets are born.
19.	Gamma-ray astronomy / telescopes	Feb 9: Peering into the violent universe - Tests prove approach for a new gamma-ray telescope. The design will compete against others in Washington today.
18.	Microgravity & Aerogel	Feb 5: Aerogel Rides Again - Aerogel will take its next ride into space on Stardust, launching this weekend. With aerogel, scientists hope to capture dust samples from comet Wild and return them to Earth. However, aerogel has many more applications, from super insulation to computing.
17.	Comets	Feb 4: Going Comet Wild - The Stardust spacecraft is poised to blast off on a rendezvous with a comet - and set to bring back pieces of the comet's coma to Earth.
16.	Planetary Exploration	Feb 2: Galileo buzzes Europa - The Galileo spacecraft executed a close flyby of Jupiter's moon Europa this weekend. Recent images strengthen the evidence for a liquid ocean beneath Europa's frozen crust and reveal new surface features in 3D.
No.	Field	Date & Title
15.	Astrophysics	Jan 29: This week's gamma-ray blast is the latest in a 30-year tale of cosmic discovery - With new discoveries coming at an ever-quickenning pace, scientists review the history of this new branch of astrophysics and its implications for understanding our

		universe.
14.	Astrophysics	Jan 27: GOTCHA! The Big One That Didn't Get Away - For the first time, images of visible light from a cosmic explosion are captured by a robotic telescope while spectacular gamma-ray data are captured by orbiting satellites.
13.	Spacecraft Propulsion	Jan 22: Spacecraft may fly on "empty" - Using a propulsive tether concept, spacecraft may be able to brake or boost their orbits without using onboard fuel. A NASA/Marshall project, named "ProSEDS," is slated to demonstrate braking, by accelerating an expended rocket toward re-entry.
12.	Auroral Physics	Jan 21: Up, Up, and away to the Magnetosphere- A space weather rocket blasted off from a launch pad in Norway, early this morning. During its successful 20 minute flight, its instruments gathered valuable data on the auroral fountain, where solar wind directly interacts with Earth's atmosphere.
11.	General	Jan 19: Science@NASA nominated for a 1999 Webby Award - NASA/Marshall Space Science News joins 4 other web sites as nominees for the Internet's most prestigious science award.
10.	Auroral Physics	Jan 19: Space weather rocket ready for launch - A NASA rocket is poised to blast off from Norway to study space weather high above the Arctic circle.
9.	Astrophysics	Jan 15: Astrophysicists puzzle over intergalactic coincidence - Discovery of a new supernova and a gamma-ray burst at the same time and apparent location are not related, says astrophysicist.
8.	Hurricanes	Jan 15: Scientists analyzing immense data haul from hurricanes - The Convection and Moisture Experiment collected the most comprehensive data ever on individual storms of the 1998 season, and will provide new insight on killer storms leading to better predictions.
7.	Astrophysics and X-rays	Jan 14: X-ray concentrator will expand window on high-energy universe - Capillary optics promise a range of applications, from aiding our understanding of mysterious violent explosions in the cosmos, to helping with early tumor detection in people.
6.	Astrobiology & Education	Jan 13: Life on the Edge - NASA and educators join for a hands-on experiment designed for students of all ages to investigate life in extreme environments and to learn about the possibilities for life elsewhere in the Solar System. The program, called "Life on the Edge," begins later this month when a dogsled team will transport a

		collection of extreme-loving microorganisms to the summit of one of the highest mountain peaks in North America.
5.	Atmospheric Science	Jan 12: Scientists Present 1998 Earth-Temperature Trends - An updated 20-year trend in atmospheric temperatures is unveiled at 1999 American Meteorological Society Meeting this week. These new results are corrected for orbital decay and drift of the nine satellites used to obtain the temperature measurements.
4.	Auroral Physics	Jan 12: Arctic CAPER ready for countdown - A rocket set to study space weather effects will launch from above the arctic circle very soon if all goes well.
3.	Astrophysics	Jan 8: The enigmatic fingerprints of gamma-ray bursts - A new method of analyzing gamma-ray bursts by plotting color-color diagrams shows that there could be as many as five different kinds of these cosmic explosions.
2.	Auroral Physics	Jan 7: Rocket will study space weather effects - Scientists plan a CAPER to study the solar wind high above the arctic circle, in Norway. They hope to find out how atoms from Earth's upper atmosphere have escaped to become part of Earth's "auroral fountain."
1.	Meteors	Jan 5: Meteors by Moonlight - Meteor watching in 1999 began with a whimper, but it could end with a bang. Prospects for viewing "falling stars" in 1999.
'98	Space Exploration	Dec 28: January's chilly meteors - The Quadrantid meteor shower peaks on Jan. 3 1999
'98	Comets & Meteors	Dec 24: Interplanetary Christmas - Santa discusses his plans for Christmas on future space colonies.
'98	Comets & Meteors	Dec 22: The Ghost of Fireballs Past - Amateur radio operators capture eerie-sounding radar echos from Geminid and Leonid meteors.

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