

United States Space Stamps

1948-1999
Volume 1



The following pages represent the stamps and stationery issued by the United States which touch in some way upon the subject of outer space and / or its exploration and use. Each is shown in unused condition along with an example canceled on the first day of use.

Since its beginning with the 3¢ Mount Palomar issue in 1948 depicting an astronomical observatory, this topic has traced developments of mankind's advances in space technology. The German V-2 missiles of World War II have led to increasingly more sophisticated vehicles, both manned and unmanned, designed to expand our knowledge of our neighborhood in the universe.

While honoring specific missions and personalities significant to the space program, it has also focused on the practical uses of space and possibilities for future achievements. What has been in the past deemed science fiction or pure fantasy has frequently become reality in an amazingly short period of time. The late Arthur C. Clarke, the respected author of "Space Odyssey 2001" and other speculative fiction, once commented that "mankind is too fragile to keep all its eggs in one basket." The dream expressed in that statement has since then become an achievable reality, with self-sufficient colonies orbiting in space, on the Moon, Mars or on the satellites of Jupiter or Saturn being more a matter of priorities and funding than yesteryear's wishful thinking.

In the future, our country's postal emissions may portray a species expanding throughout the solar system, our galaxy and the universe rather than one confined to Earth, the island of its birth.

UNITED STATES SPACE STAMPS

AUGUST 30, 1948

PALOMAR MOUNTAIN OBSERVATORY



*Palomar Mountain
Observatory*



200 INCH TELESCOPE DEDICATED
JUNE 3, 1948



FIRST DAY OF ISSUE

The Palomar Mountain Observatory was the first United States postage stamp with a theme related to the exploration or use of outer space. The observatory has two telescopes, the Hale, a 200 inch diameter reflecting type, and the Schmidt telescope, a combination reflecting / refracting type which takes in a much larger area of the sky. The Hale, with its narrower angle of view, provides much more detailed photographs.

UNITED STATES SPACE STAMPS

NOVEMBER 5, 1948

FORT BLISS CENTENNIAL



Fort Bliss, located near El Paso, Texas, was established to protect the wagon trains traveling to the California gold fields. Since World War II, it has been home to the U. S. Army Air Defense Center. Wehrner von Braun and a group of his wartime German colleagues were brought here after the war along with American scientists to continue development of missiles. They started with captured V-2 rockets, one of which is shown at lift-off in the stamp's central vignette. An interesting assortment of figures in very small size is engraved inside the triangle, all of which having some bearing on the fort's history, including, of all things, camels, which were used in the mid 1800s for desert transport.

UNITED STATES SPACE STAMPS

MAY 31, 1958

INTERNATIONAL GEOPHYSICAL YEAR



The International Geophysical Year was intended to foster world-wide research into the nature of the universe. However, the launch of the Soviet Sputnik 1 satellite in 1957 and the United States Vanguard program and Explorer 1 satellite in 1958 effectively focused its aims on artificial satellites, beginning the international "Space Race".

UNITED STATES SPACE STAMPS

DECEMBER 15, 1960

COMMUNICATIONS FOR PEACE



Echo 1 was the beginning of the use of orbital satellites for other than military purposes. It was simply a reflective mylar balloon about a hundred feet in diameter and had an orbital period of just under two hours. As a passive satellite, it could only be used to relay signals between ground stations which had Echo in sight at the same time, but was the forerunner of our modern communications satellites. It also served as a beacon for mapping purposes.

UNITED STATES SPACE STAMPS

FEBRUARY 20, 1962

PROJECT MERCURY

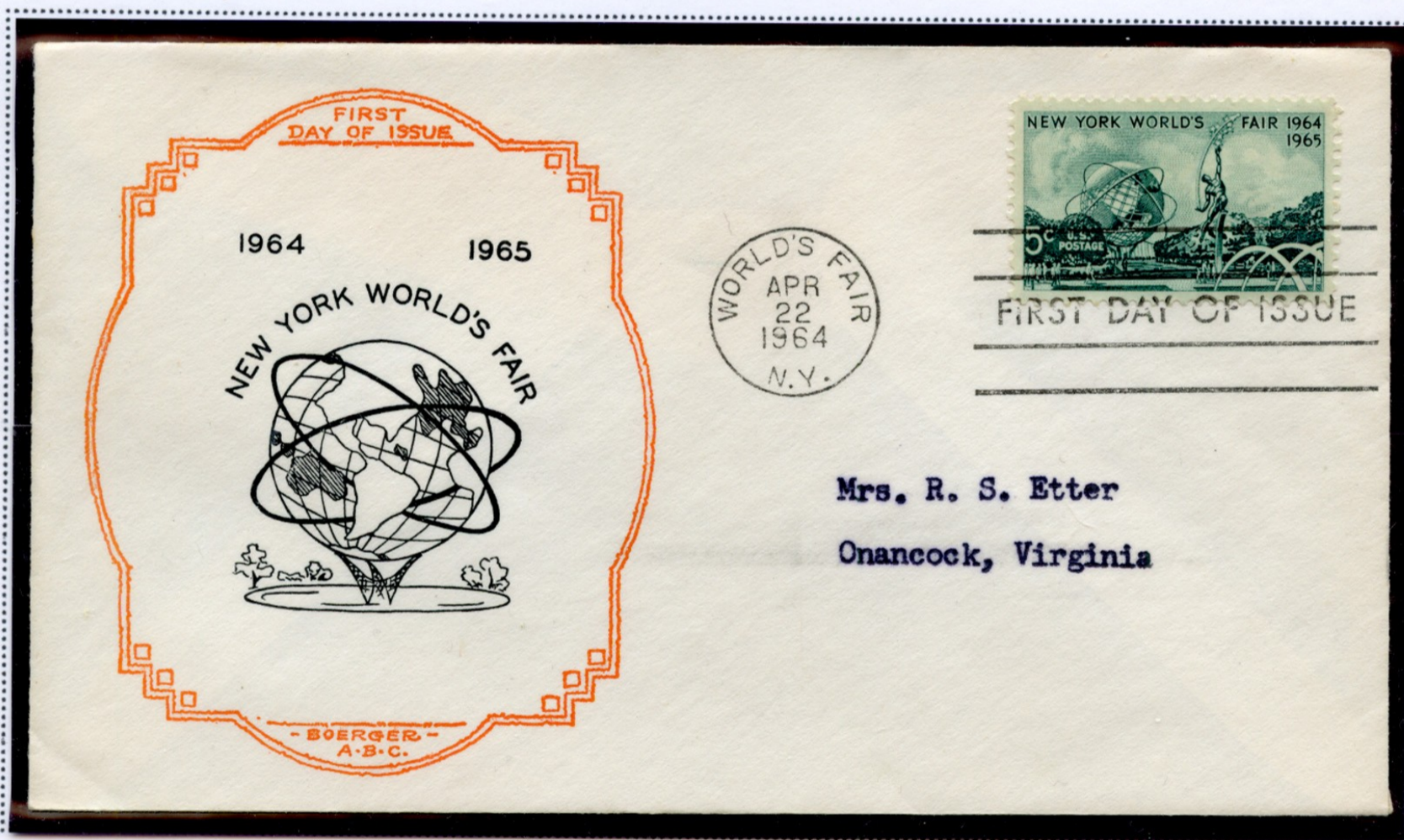


The Project Mercury program opened a new era in United States space exploration by providing the capability of placing a man in orbit and safely recovering him. Although the astronaut was primarily a passenger in Mercury rather than a pilot and John Glenn's orbital flight was preceded by several sub-orbital tests, placing the first American in orbit gave a big boost to NASA and national prestige after the shock of the Soviet cosmonaut Yuri Gagarin's earlier achievement of being the first human to orbit the Earth.

UNITED STATES SPACE STAMPS

APRIL 22, 1964

NEW YORK WORLD'S FAIR

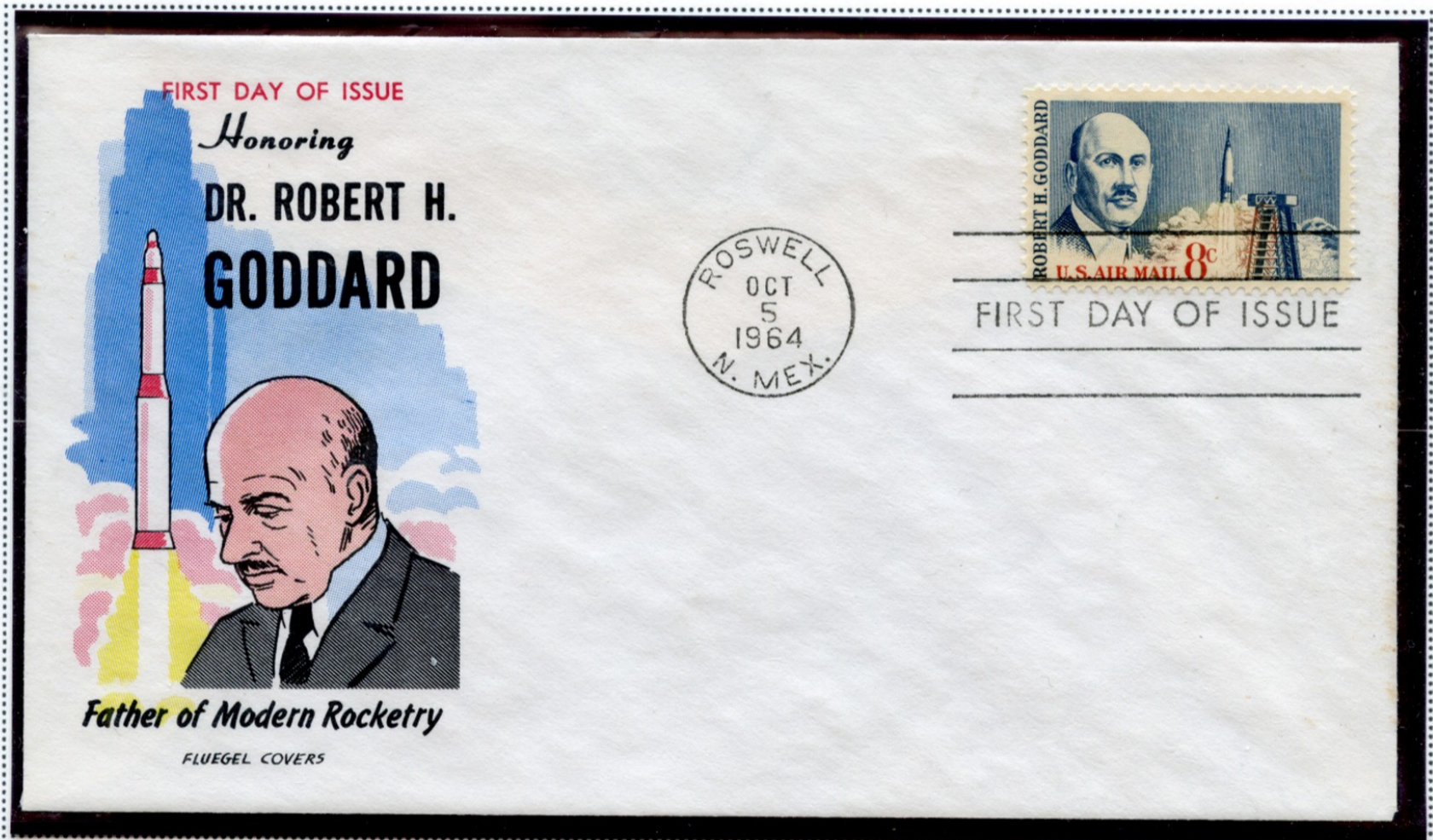


One of the primary themes of the 1964 - 1965 World's Fair in New York City was space exploration. Within a two-acre U.S. Space Park were the Court of Astronauts, Fountain of Planets, the sculpture *Rocket Thrower* and the main symbol of the fair, the Unisphere. The latter was a huge stainless steel model of the world, circled by three rings representing orbital satellite paths.

UNITED STATES SPACE STAMPS

OCTOBER 5, 1964

ROBERT GODDARD



Robert Goddard is considered to be the father of modern rocketry due to his research in the field of liquid-fueled rockets. The Soviet scientist Tsiolkovsky also did similar work in the same period and the issue of who was first is in doubt. He kept on with his work without government support despite early notoriety when newspapers ridiculed his failures. He died in 1945 without popular recognition for his achievements, but was referred to as "my boyhood hero" by Werner von Brau when the latter came to the United States a few months later to continue rocket development.

UNITED STATES SPACE STAMPS

SEPTEMBER 29, 1967

ACCOMPLISHMENTS IN SPACE



This se-tenant pair of stamps recognizes progress in all U.S. space programs, but the illustration focuses on the flight of Gemini 4, a two-man space capsule. The spacecraft itself is shown on the right half of each pair with its door open, with the umbilical cord emerging from it bleeding across the stamp margins to the left stamp, which illustrates Edward White performing the world's first "spacewalk". White was later killed in the tragic accident in which three astronauts were trapped in an Apollo vehicle fire, leading to the rejection of a pure oxygen atmosphere in all future space vehicle designs.

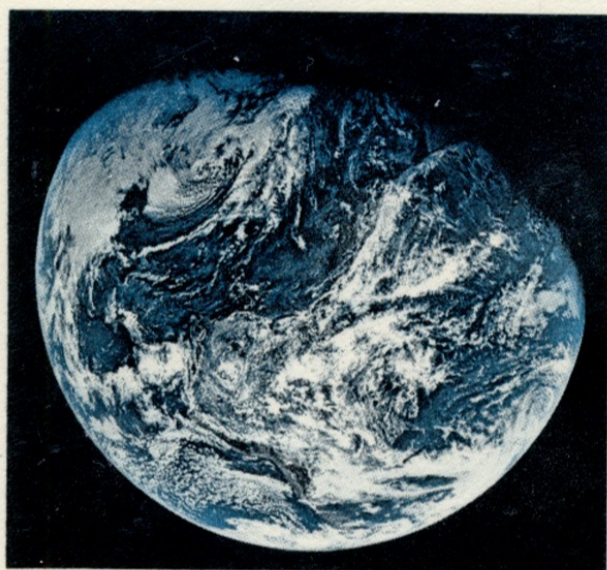
UNITED STATES SPACE STAMPS

MAY 5, 1969

FLIGHT OF APOLLO 8



"In the beginning God"



APOLLO 8

FIRST DAY OF ISSUE

Mary



FIRST DAY OF ISSUE

Apollo 8 was the first mission to put humans in orbit around the moon. Frank Borman, James Lovell and William Anders spent the period between December 21st and 27th, 1968 in orbit, and the stamp shows a striking photograph taken on the flight, with a close-up of the moon's surface in the foreground and Earth in the distance. The quotation from Genesis is part of Anders's reading from the Bible on Christmas day while circling the moon.

UNITED STATES SPACE STAMPS

SEPTEMBER 9, 1969
FIRST MOON LANDING

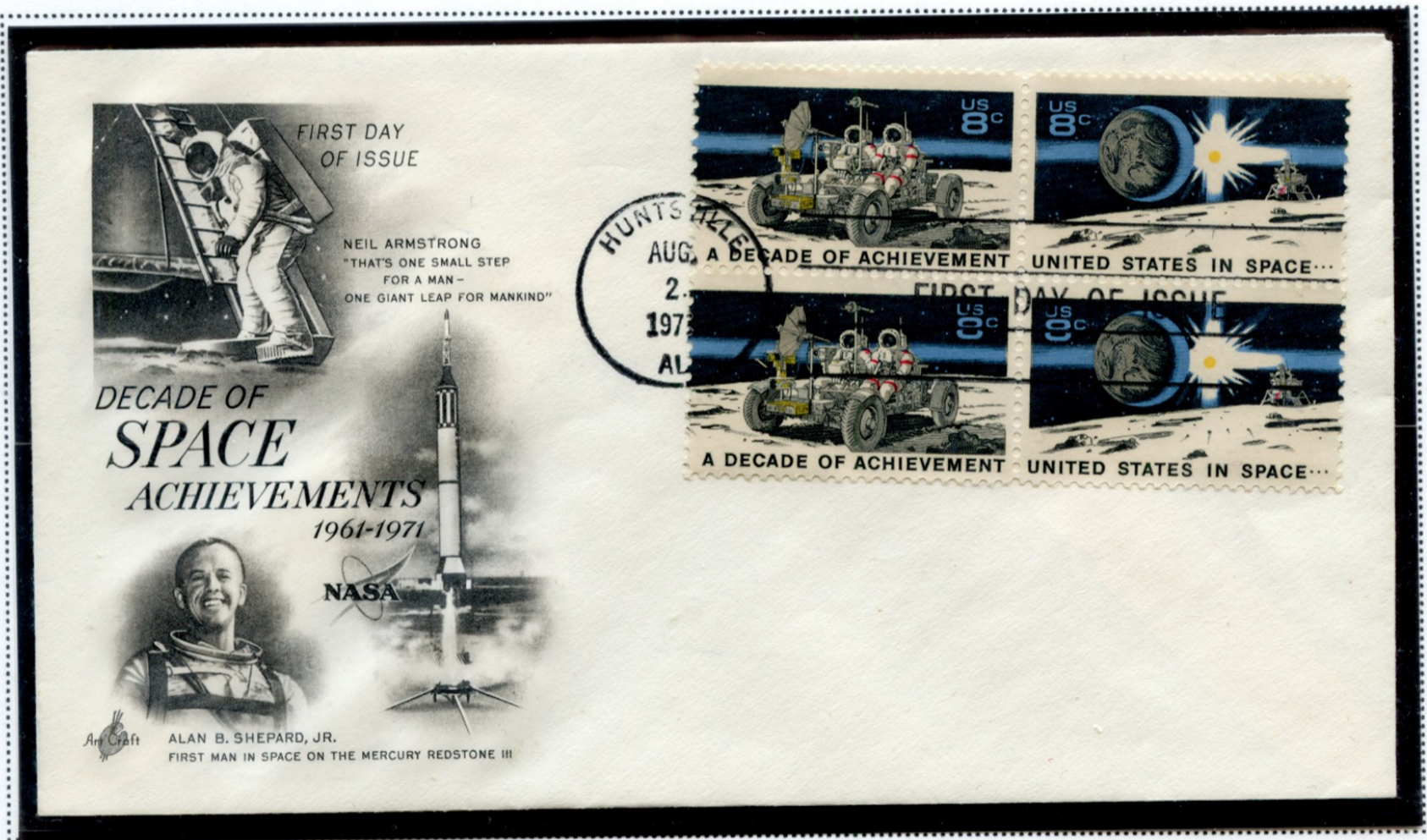


"That's one small step for a man, one giant leap for mankind," were the words uttered by astronaut Neil Armstrong as he made the first step on the lunar surface while descending from the lunar lander "Eagle." This historic moment is memorialized in the photo appearing on the stamp honoring Apollo 11's monumental achievement. The mission was televised live and had a huge audience glued to TV sets throughout it. Armstrong and Buzz Aldrin left mementos of their visit as well as an American flag and brought back many samples of moon rocks and soil for analysis. Michael Collins remained in orbit in the command module during the flight.

UNITED STATES SPACE STAMPS

AUGUST 2, 1971

A DECADE OF SPACE ACHIEVEMENT



America's space program had made stupendous strides after its shaky start with the Vanguard failures, with the Mercury, Gemini and Apollo programs leading to its crown jewel in July 1969, the first moon landing. Apollo 12's success in November was followed by an explosion aboard Apollo 13 in April 1970, with the mission aborted but the crew saved by ingenious modifications made by the crew and support team. Apollo 14 in January 1971 was followed by the illustrated mission, Apollo 15. David Scott and James Irwin are shown driving the Lunar Rover, the first wheeled vehicle on the moon, while their lander and a backlit Earth are in the distance.

UNITED STATES SPACE STAMPS

APRIL 23, 1973

NICOLAUS COPERNICUS



Born in 1473, Mikolaj Kopernik was one of the great polymaths of the Renaissance period. His book, *De revolutionibus orbium coelestium*, published shortly before his death in 1543, is regarded as the starting point of modern astronomy, as it discarded the notion of the Earth being the center of the universe for a heliocentric theory which explained the motions of celestial objects without the Earth as the center. He was a mathematician, astronomer, physician, quadrilingual polyglot, classical scholar, translator, artist, Catholic cleric, jurist, governor, military leader, diplomat and economist. Despite all these interests, astronomy was just a hobby with him, yet it is this which brought him world-wide renown.

UNITED STATES SPACE STAMPS

MAY 14, 1974

SKYLAB



Skylab was America's first space station, a mixture of home and laboratory. Placed into orbit in May 1973 by a Saturn V rocket, part of its thermal protection was ripped away at launch and was replaced by rigging an aluminized nylon shield as an umbrella. During 1973 and 1974, three separate crews conducted experiments aboard the station in its 270 mile high orbit. Determining the effects of long-term weightlessness was one of its primary objectives. Skylab remained in orbit until July 11, 1979, when it burned up upon reentry into Earth's atmosphere in a shower of sparks.

UNITED STATES SPACE STAMPS

FEBRUARY 28, 1975

PIONEER JUPITER



Pioneer 10 was the first spacecraft to fly beyond Mars, the first to traverse the asteroid belt, the first to pass Jupiter, and the first to leave our solar system entirely, where it is still travelling through interstellar space. With a transmitter using only milliwatts of power, it sent the first close-up pictures of Jupiter and three of its moons. This data took well over a year to correlate. By the use of a nuclear power generator and interstellar navigation to overcome the limits imposed on earlier vehicles, it far overreached the objectives of its initial mission.

UNITED STATES SPACE STAMPS

APRIL 4, 1975

MARINER 10



With Mariner 10, America turned its focus on space exploration toward the inner planets, Mercury and Venus, which had been almost ignored in the quest for knowledge about the huge planets at the outer limits of the solar system. Mariner reported conditions on both planets as it passed by in 1974, then made a return to Mercury in 1975. Mercury, as expected, has a surface hot enough to melt lead, while based on the data from this trip and the Russian space program, Venus was far from the moist, temperate environment expected, but an oven-like surface shrouded in dense clouds of sulfuric acid and carbon dioxide and an extremely high atmospheric pressure.

UNITED STATES SPACE STAMPS

JULY 15, 1975

APOLLO - SOYUZ



The Apollo-Soyuz joint mission was the most prominent event in international cooperation in space at the time. The Apollo spacecraft locked hatches with the Russian Soyuz module on July 17, 1975 138 miles above the Earth and astronaut Thomas Stafford reached out to shake the hand of cosmonaut Alexei Leonov. The crews were able to visit both spacecraft while docked, and conducted experiments. Interviews in English and Russian were televised. On July 15, both the U.S. and U.S.S.R issued se-tenant stamps with the same designs, with one of each pair by a designer from each country.

UNITED STATES SPACE STAMPS

SEPTEMBER 3, 1975

POSTAL SERVICE BICENTENNIAL



Part of a se-tenant block of four stamps celebrating the 200th anniversary of the Postal Service, this stamp depicts the most modern method of information transferral used by it. Satellites in orbit are used to transmit mailgrams almost instantaneously in order to remain competitive with private services based on high technology.

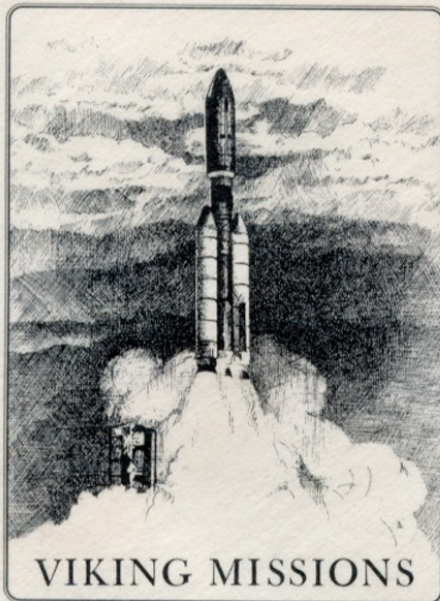
UNITED STATES SPACE STAMPS

JULY 20, 1978

VIKING MISSION TO MARS



FIRST DAY OF ISSUE



Viking missions to Mars



FIRST DAY OF ISSUE

The Viking Missions stamp was issued to bring attention to the success of the two Viking landers on Mars, nearly half a billion miles away. Viking I's approach showed many unexpected difficulties; tablelands, craters, deep valleys and boulders were exciting discoveries, but they presented additional hazards to touchdown on the surface. A safe landing was achieved on the seventh anniversary of Apollo 11's moon landing. Numerous dramatic pictures of the arid surface and fiery orange sky as well as much scientific data were transmitted from the two landers until the spring of 1978. Issued on the second anniversary of the landing, the stamp depicts the Viking spacecraft approaching Mars with a background of celestial objects.

UNITED STATES SPACE STAMPS

MAY 21, 1981

SPACE ACHIEVEMENTS



This se-tenant block of eight stamps was primarily issued to commemorate the first space shuttle mission, with John Young and Robert Crippen aboard *Columbia*. Touted as someday being as routine as an intercontinental jet flight, that promise is still a long way from coming true. Around a central block of larger stamps showing the shuttle are four others recalling the manned exploration of the moon and unmanned probes reaching both inward and outward in our solar system.

UNITED STATES SPACE STAMPS

AUGUST 14 to SEPTEMBER 5, 1983

FLOWN CHALLENGER COVER



This cover was carried aboard the space shuttle *Challenger* on flight STS-8. It is the first to have both the originating and return cancellations. The stamp itself was issued on August 12th at the Kennedy Space Center in Florida. It was cancelled aboard *Challenger* on August 14th, the original scheduled launch date.

However, the actual launch was on August 30th, after which it made 181 orbits of the Earth. The INSAT 1B communications satellite was placed in orbit, and tests were made on the mechanical arm in the payload area in preparation for the retrieval of the Orbiting Solar Observatory in order to return it to Earth for repairs.

Challenger then returned safely to Earth, landing at Edwards Air Force Base in California on September 5th, 1983.

UNITED STATES SPACE STAMPS

JANUARY 7, 1983

WORLD COMMUNICATIONS YEAR



AEROGramme • VIA AIRMAIL • PAR AVION

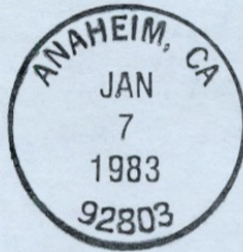
World Communications Year was meant to celebrate the world-wide availability of communications between any two points on the globe by means of reflection of electronic signals off satellites in geostationary orbit rather than depending on signals through the atmosphere. This meant that radio, television and cell phone conversations were available to all without interference from weather conditions or distance from a local transmitter. It also enabled satellite tracking and the availability of the Global Positioning Satellite system (GPS) for precise location by aircraft, ships, automobiles and individuals.

UNITED STATES SPACE STAMPS

JANUARY 7, 1983

WORLD COMMUNICATIONS YEAR

OFFICIAL FIRST DAY OF ISSUE



FIRST DAY OF ISSUE

*World Communications
Year-1983*

ArtCraft 30¢ AEROGRAMME

AEROGRAMME • VIA AIRMAIL • PAR AVION

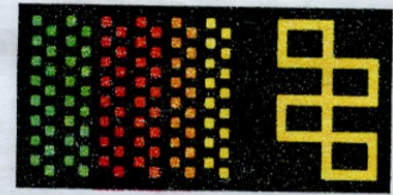
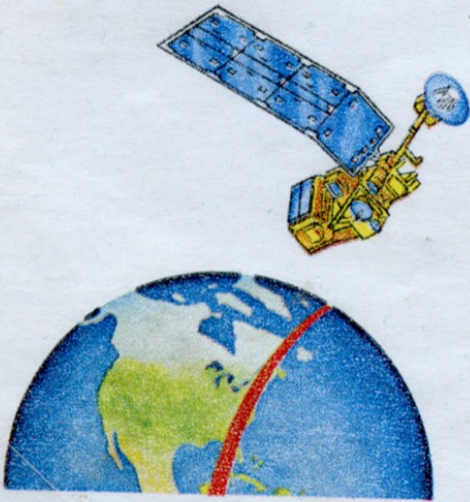


Illustration on Reverse Side

UNITED STATES SPACE STAMPS

FEBRUARY 14, 1985

WEATHER SATELLITES 25th ANNIVERSARY



USA 36

AEROGRAMME * VIA AIRMAIL * PAR AVION

The first successful satellite intended for weather observation was Tiros I, launched from Cape Canaveral in April 1960. Although Vanguard 2 made some observations in 1959, they were not the primary purpose of the flight.

Tiros was extremely successful at observing weather patterns and greatly increased the accuracy of forecasts, which were used by meteorologists worldwide. This was the forerunner of other types of satellites for determining ground level conditions. An example is the Landsat satellite shown on the first day cover, which reports agricultural, geological, forestry, weather conditions and urban development. The back of that cover has three images made by Landsat.

UNITED STATES SPACE STAMPS

FEBRUARY 14, 1985

WEATHER SATELLITES 25th ANNIVERSARY

OFFICIAL FIRST DAY OF ISSUE

Landsat Satellite



36¢ AEROGRAMME
1985

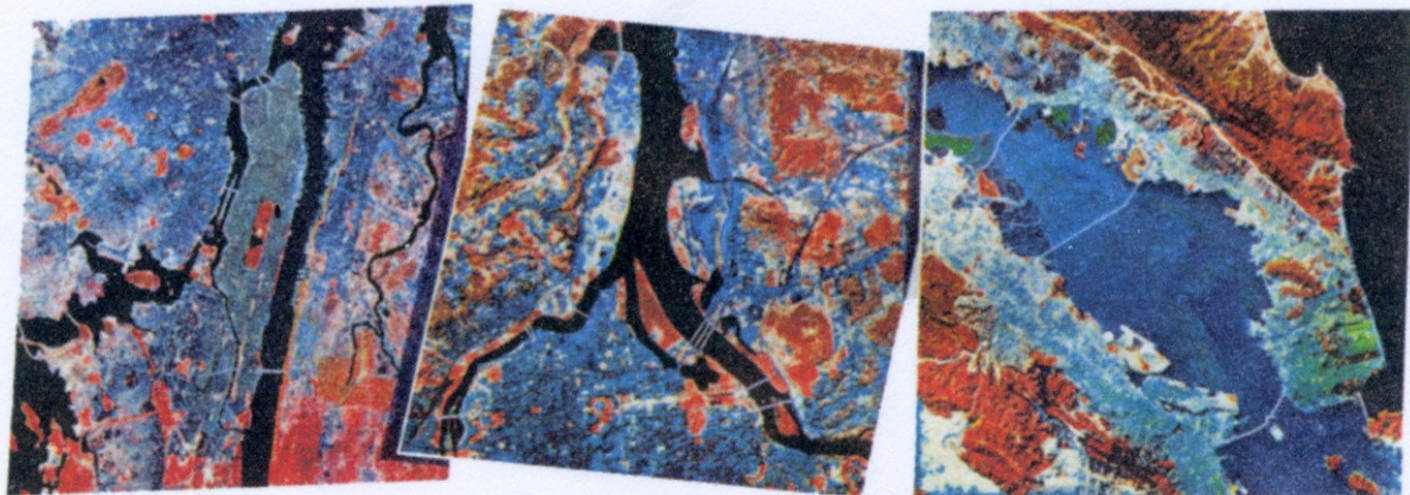


AEROGRAMME * VIA AIRMAIL * PAR AVION



USA 36

FIRST DAY OF ISSUE



UNITED STATES SPACE STAMPS

DECEMBER 4, 1985

HALLEY'S COMET - MARK TWAIN AEROGRAM

Additional message area



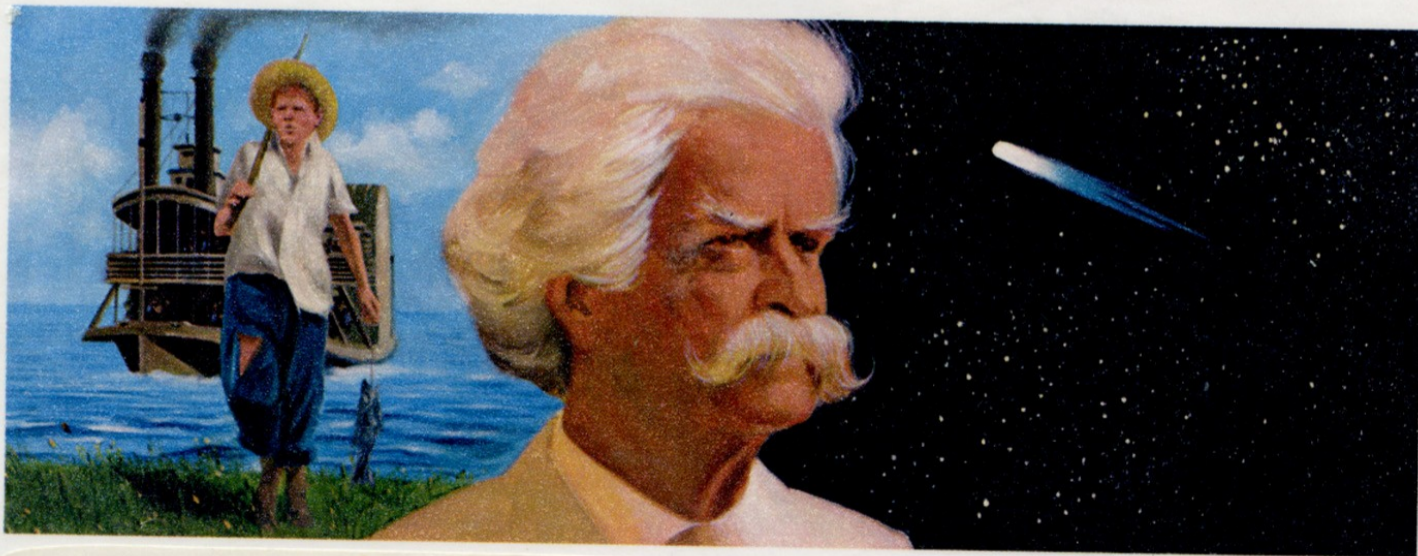
USA 36

“ I came in with Halley's Comet in 1835. It is coming again next year, and I expect to go out with it. It will be the greatest disappointment of my life if I don't go out with Halley's Comet. ”



AEROGRAMME * VIA AIRMAIL * PAR AVION

② Second fold



③ Seal top flap last

③ Seal top flap last

1835 · Mark Twain · 1910 · Halley's Comet · 1985

Issued to commemorate Mark Twain's (Samuel Clemens) death and the return of Halley's Comet. Clemens was born while the comet was visible, said he expected to die when it returned in 75 years, and did so.

UNITED STATES SPACE STAMPS

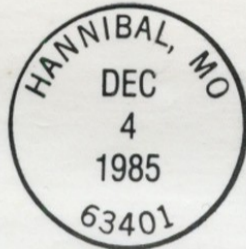
DECEMBER 4, 1985

HALLEY'S COMET - MARK TWAIN AEROGRAM

Additional message area



“ I came in with Halley's Comet in 1835. It is coming again next year, and I expect to go out with it. It will be the greatest disappointment of my life if I don't go out with Halley's Comet. ”



USA 36
FIRST DAY OF ISSUE

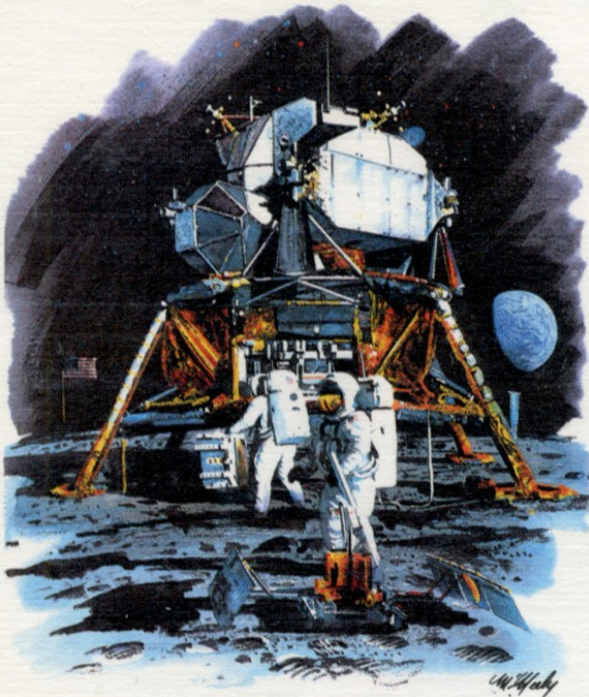
AEROGRAMME * VIA AIRMAIL * PAR AVION

Issued to commemorate Mark Twain's (Samuel Clemens) death and the return of Halley's Comet. Clemens was born while the comet was visible, said he expected to die when it returned in 75 years, and did so.

UNITED STATES SPACE STAMPS

JULY 20, 1989

MOON LANDING TWENTIETH ANNIVERSARY



First Moon Landing • 20 Years

Astronauts Neil Armstrong and Buzz Aldrin were the first men to leave their footprints on the moon.



FIRST DAY OF ISSUE

Issued twenty years to the day after Neil Armstrong and Edwin "Buzz" Aldrin successfully landed on the Moon, these two astronauts are shown as they plant an American flag in the lunar soil. An estimated five hundred million people watched them on live television during their historic first visit to the Moon. The stamp is in a large vertical format, and introduced the Postal Service's new Priority Mail service bearing a fee of \$2.40.

UNITED STATES SPACE STAMPS

NOVEMBER 27, 1989

TWENTIETH POSTAL UNION CONGRESS



20th Universal Postal Congress



A glimpse at several potential mail delivery methods of the future is the theme of these four stamps issued by the U.S. in commemoration of the convening of the 20th Universal Postal Congress in Washington, D.C. from November 13 through December 14, 1989. The United States, as host nation to the Congress for the first time in ninety-two years, welcomed more than 1,000 delegates from most of the member nations of the Universal Postal Union to the major international event.

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C126

The se-tenant block of four stamps and the imperforate souvenir sheet were issued during the twentieth Universal Postal Congress. Delivery of the mail is vitally dependent on transportation, and the Postal Service has been involved in the development of virtually all current means of transportation. The illustrations visualize some of the ways in which the Postal Service in the future as man reaches farther away from his home planet.

UNITED STATES SPACE STAMPS

NOVEMBER 28, 1989

TWENTIETH POSTAL UNION CONGRESS

*Official
First Day
Of Issue*

HYPERSONIC AIRLINER

MAIL VEHICLE

MID-SPACE MAIL TRANSFER

SURFACE ROVER

*20th
Universal
Postal
Congress*

*Future
Mail Transportation*

ArtCraft

FIRST DAY OF ISSUE

*Official
First Day
Of Issue*

HYPERSONIC AIRLINER

MAIL VEHICLE

MID-SPACE MAIL TRANSFER

SURFACE ROVER

*20th
Universal
Postal
Congress*

*Future
Mail Transportation*

ArtCraft

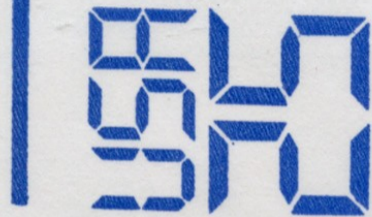
20th Universal Postal Congress

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© USPS 1988

FIRST DAY OF ISSUE

UNITED STATES SPACE STAMPS



DECEMBER 3, 1989

*SPACE STATION
HOLOGRAM ENVELOPE*

The outstanding feature of this issue of postal stationery is the illustration of a space station and attendant space shuttle rendered in the form of a hologram. The hologram is actually affixed to the inner side of the envelope and shows through a transparent window. This envelope was released only in the #9 size.

UNITED STATES SPACE STAMPS

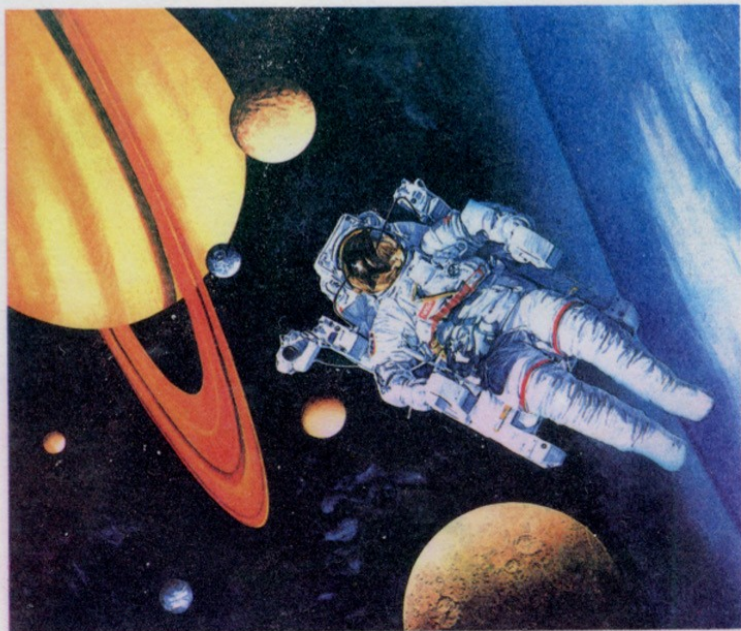
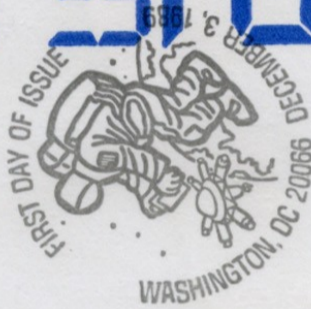
DECEMBER 3, 1989

SPACE STATION
HOLOGRAM ENVELOPE

FIRST DAY COVER



1989



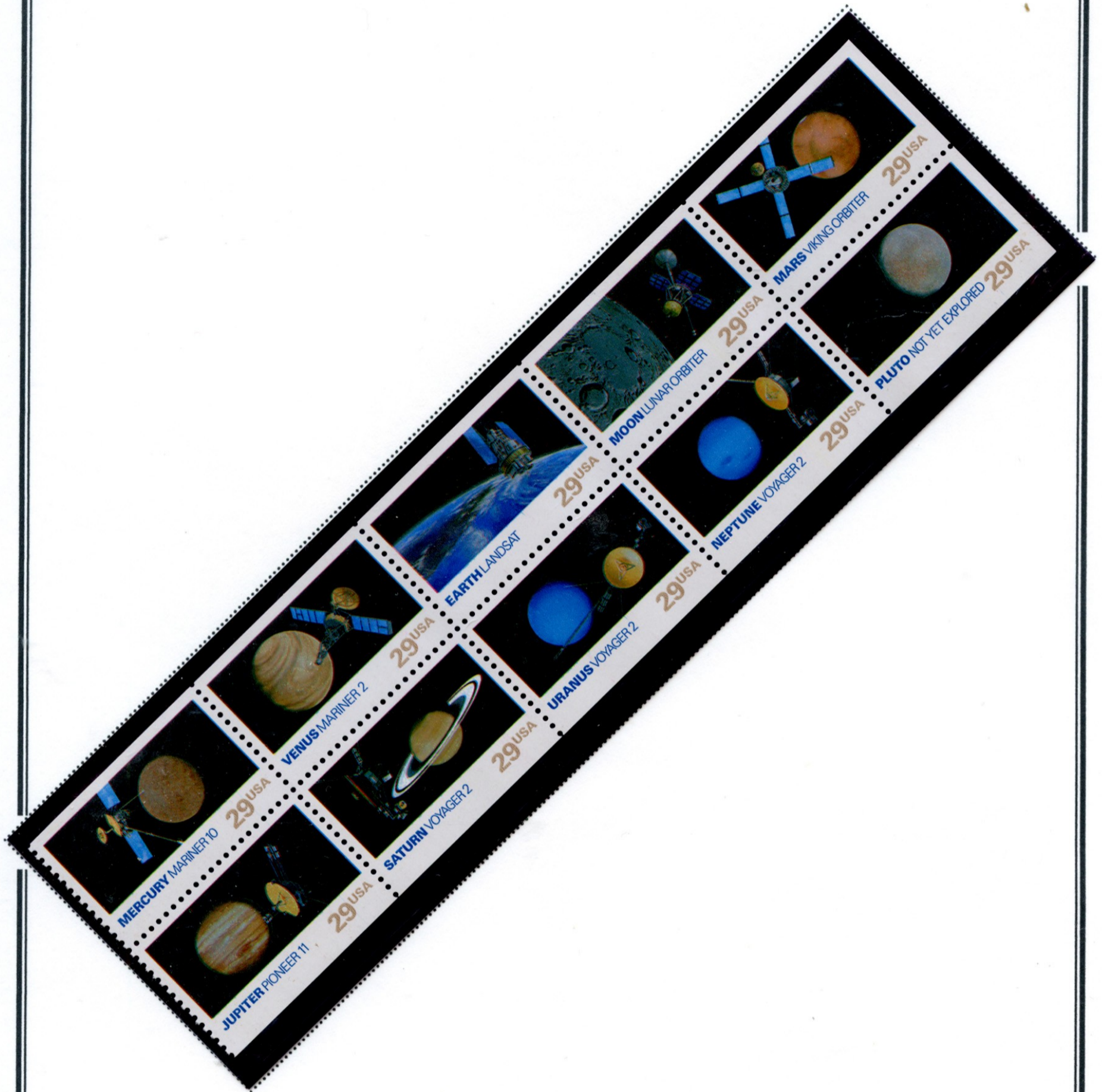
Hologram Space Envelope

The first of its kind issued
by the United States Postal Service.

UNITED STATES SPACE STAMPS

OCTOBER 1, 1991

SPACE EXPLORATION BOOKLET



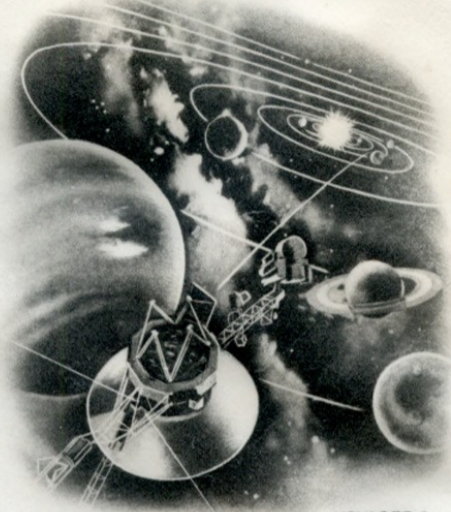
Since the dawn of the Space Age, America has publicized its achievements in the exploration of space with commemorative postage stamps. The booklet pane above shows each planet of our solar system plus the Moon in the order in which it is distant from the Sun. Each planet is shown with a spacecraft particularly associated with it. Only Pluto remained unvisited at the time. This issue is the first U.S. space-related issue to be produced in booklet form.

UNITED STATES SPACE STAMPS

OCTOBER 1, 1991

SPACE EXPLORATION BOOKLET

Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

**Space
Exploration**



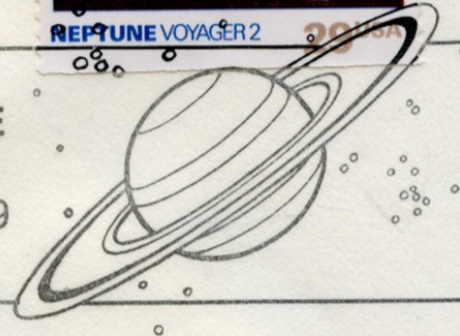
The Moon and Planets



NEPTUNE VOYAGER 2

29 USA

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



Official First Day of Issue

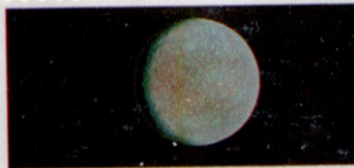


VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

**Space
Exploration**



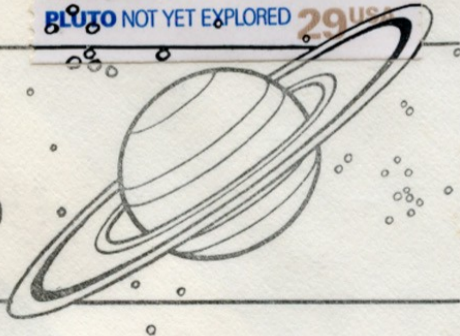
The Moon and Planets



PLUTO NOT YET EXPLORED

29 USA

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



UNITED STATES SPACE STAMPS

OCTOBER 1, 1991

SPACE EXPLORATION BOOKLET

Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

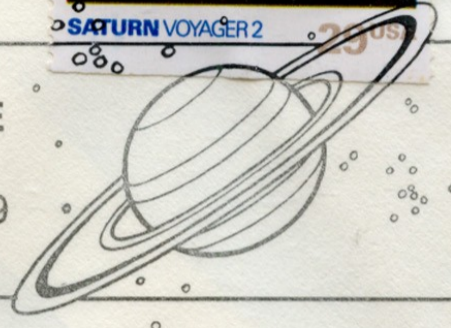
**Space
Exploration**
The Moon and Planets



SATURN VOYAGER 2

39 USA

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

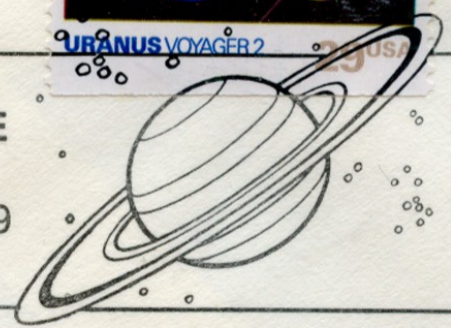
**Space
Exploration**
The Moon and Planets



URANUS VOYAGER 2

39 USA

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



UNITED STATES SPACE STAMPS

OCTOBER 1, 1991

SPACE EXPLORATION BOOKLET

Official First Day of Issue

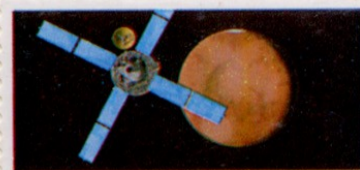


VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

*Space
Exploration*



The Moon and Planets



MARS VIKING ORBITER

25c

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

*Space
Exploration*



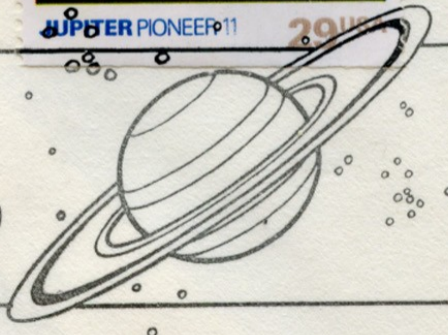
The Moon and Planets



JUPITER PIONEER 11

29c

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



UNITED STATES SPACE STAMPS

OCTOBER 1, 1991

SPACE EXPLORATION BOOKLET

Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

*Space
Exploration*

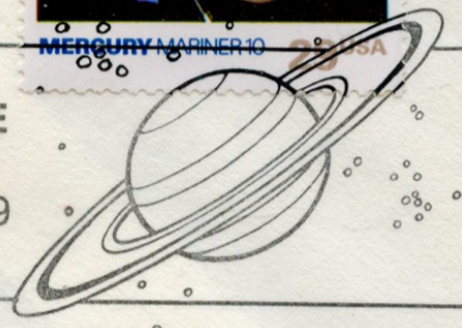


The Moon and Planets



MERCURY MARINER 10

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

*Space
Exploration*

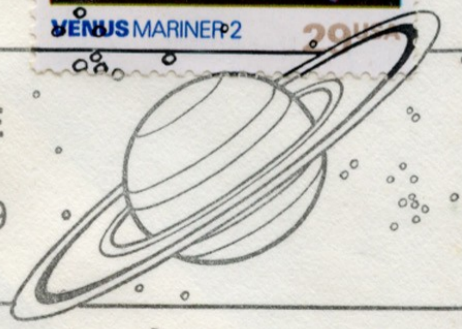


The Moon and Planets



VENUS MARINER 2

FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



UNITED STATES SPACE STAMPS

OCTOBER 1, 1991

SPACE EXPLORATION BOOKLET

Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
URANUS AND NEPTUNE

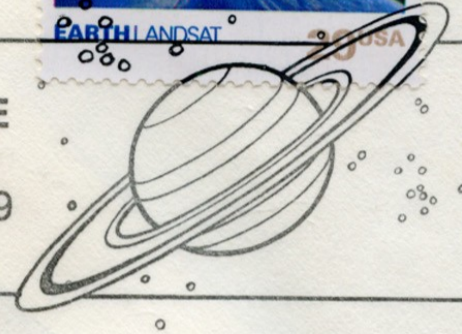
*Space
Exploration*



The Moon and Planets



FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



Official First Day of Issue



VOYAGER 2
EXAMINES SATURN,
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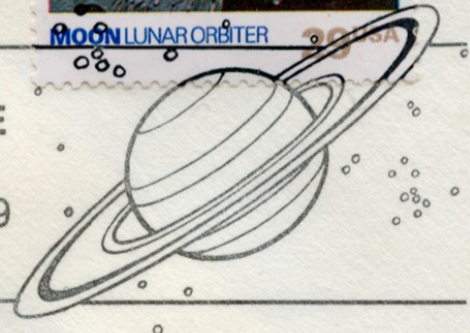
*Space
Exploration*



The Moon and Planets



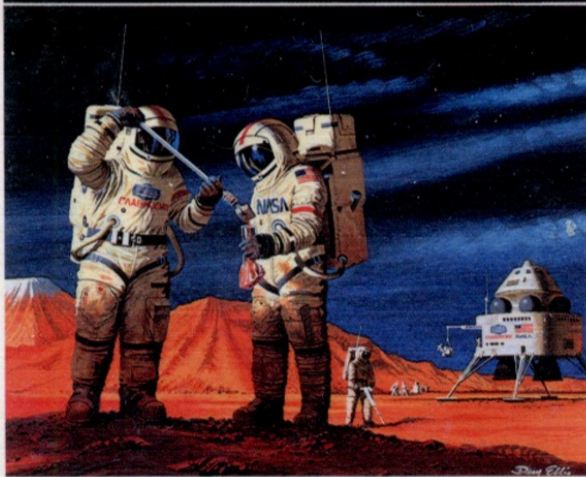
FIRST DAY OF ISSUE
OCTOBER 1, 1991
PASADENA, CA 91109



UNITED STATES SPACE STAMPS

MAY 29, 1992

SPACE EXPLORATION



Space Exploration

Astronauts and cosmonauts together,
new hope to the men of Earth.

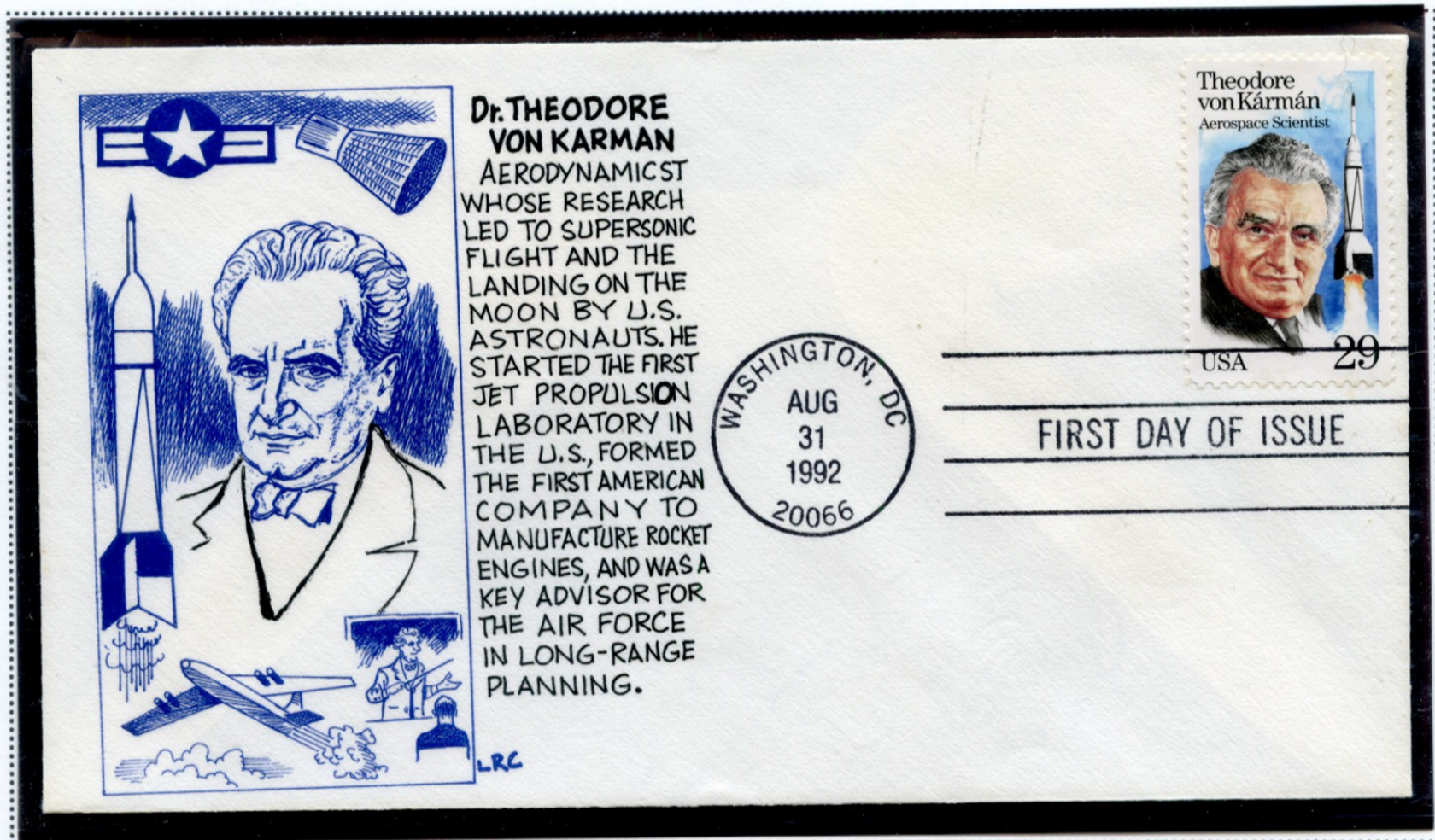


After five decades on the brink of armed conflict, the easing of international tensions led to joint efforts between Russia and the U.S. to send an expedition to Mars. The illustration shows astronauts and space vehicles of both nations against a trajectory leading from Earth past the Moon toward Mars. The United States stamps, along with their Russian counterparts, were released as a joint issue in Moscow and Chicago.

UNITED STATES SPACE STAMPS

AUGUST 31, 1992

THEODORE VON KARMAN

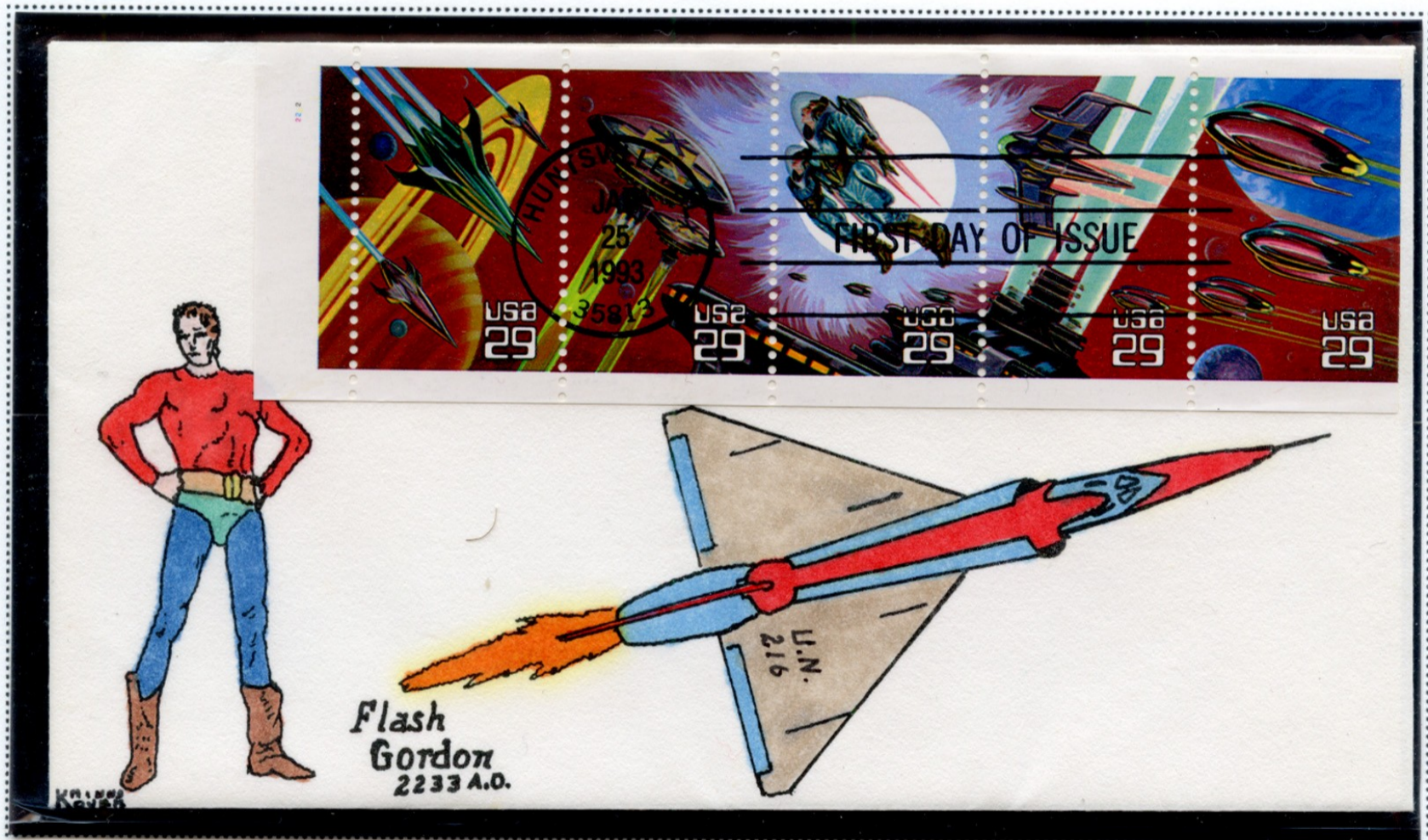


Theodore von Karman was born in Hungary in 1881 and was recognized as a mathematical genius in boyhood, but was steered toward engineering by his father. He became fascinated with aviation after witnessing one of Henri Farman's early flights, and in 1912 was the director of the Aeronautical Institute at Aachen, Germany. The spectre of Nazism led him to move to California in 1930 and he become a U.S. citizen in 1936. He pioneered rocket research, becoming one of the founders of the Jet Propulsion Laboratory. He helped develop the hypergolic fuels used in the Saturn and other rockets.

UNITED STATES SPACE STAMPS

JANUARY 25, 1993

SPACE FANTASY BOOKLET



This booklet pane of five se-tenant stamps supposedly represents the dreams of mankind reaching toward the stars, but the illustrations are more reminiscent of the Buck Rogers and Flash Gordon comic strips of the 1940's, and perhaps other science fiction subjects as well.

UNITED STATES SPACE STAMPS

JUNE 3, 1993

SPACE VEHICLE PRIORITY MAIL



\$2.90 Space Vehicle

Neither snow, nor rain, nor endless space,
words to inspire future postal workers.



FIRST DAY OF ISSUE

The second in the Postal Service's priority mail stamps carried the new \$2.90 rate and shows an artist's conception of a future space shuttle circling a satellite of what appears to be Jupiter in the background.

UNITED STATES SPACE STAMPS



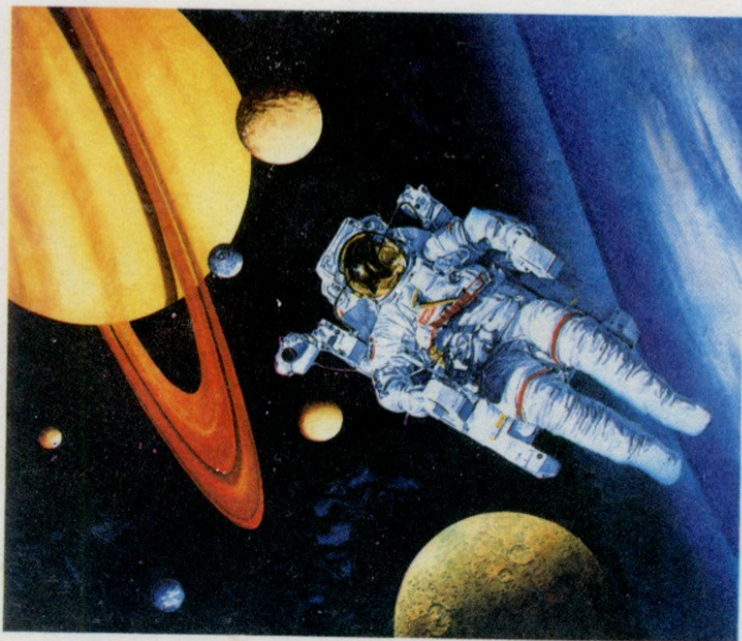
29

JANUARY 21, 1994

SPACE STATION
HOLOGRAM ENVELOPE

This stationery issue at the 29¢ rate reuses the illustration of a space station and attendant space shuttle from the earlier 25¢ envelope. As before, the hologram is actually affixed to the inside of the envelope and shows through a transparent window. This envelope was released only in the #10 size.

UNITED STATES SPACE STAMPS



Chirill

Hologram Space Envelope

Magically producing three dimensions from one, creating a multi-hued image of the final frontier.



FIRST DAY OF ISSUE

JANUARY 21, 1994

29¢ HOLOGRAM ENVELOPE

FIRST DAY COVER

UNITED STATES SPACE STAMPS

SEPTEMBER 30, 1994

MOON LANDING
TWENTY-FIFTH ANNIVERSARY

The cover mounted at the left was issued for the silver anniversary of the first manned landing on the moon, on July 20, 1969. It is franked with the 29¢ value of the stamps issued for the occasion, and encased in a window at the lower left is an unused copy of the \$9.95 Express Mail stamp. The latter was carried aboard the orbital mission of the space shuttle Endeavor, which was launched September 30, 1994, and the cover bears the special cancel of the Kennedy Space Center for that flight.



A TRIBUTE TO
SPACE
EXPLORATION



UNITED STATES SPACE STAMPS

JUNE 22, 1995

"CHALLENGER" PRIORITY MAIL



Space Shuttle Challenger

Transported first American Woman in space, veteran of nine successful NASA missions.

On January 28, 1986, the space shuttle *Challenger* was scheduled to carry its first private citizen as a passenger. This was Christa McAuliffe, a teacher. On its tenth flight, *Challenger* made what appeared to be a perfect takeoff, but 73 seconds into the flight the malfunction of an O-ring on the booster rocket ignited a fuel tank, causing the destruction of the shuttle and the deaths of the six crew members and McAuliffe. The resulting controversy over safety canceled flights until the launch of the shuttle *Discovery* on December 20, 1988.

UNITED STATES SPACE STAMPS

JULY 20, 1994

MOON LANDING TWENTY-FIFTH ANNIVERSARY



1969 • Moon Landing USA • 1994

Planting the American flag on another world,
proud banner waving over the lunar surface.



First Moon Landing, 1969

FIRST DAY OF ISSUE

The twenty-fifth anniversary of the first manned landing on the Moon has been commemorated by two separate stamp issues. The first of these, a 29¢ denomination, was issued in a miniature pane of fifteen stamps with a border showing Earth against a black sky with a portion of the lunar landscape at the bottom. On the stamp itself, an astronaut is shown saluting the American flag which has been planted on the Moon. This photo is from the Apollo 11 mission, and is a vignette from the picture on the jointly released \$9.95 Express Mail stamp.

UNITED STATES SPACE STAMPS

JULY 20, 1994

MOON LANDING TWENTY-FIFTH ANNIVERSARY



1969 • Moon Landing USA • 1994

A stirring salute to all Americans,
thrilling moment forever etched in history.



25th Anniversary First Moon Landing, 1969

FIRST DAY OF ISSUE



The second of the two stamps honoring the first manned moon landing has a face value of \$9.95 to cover the Express Mail rate. The larger photograph shown here includes both Armstrong and Aldrin saluting the flag with Eagle, the lunar lander and descent module, behind them to the left.

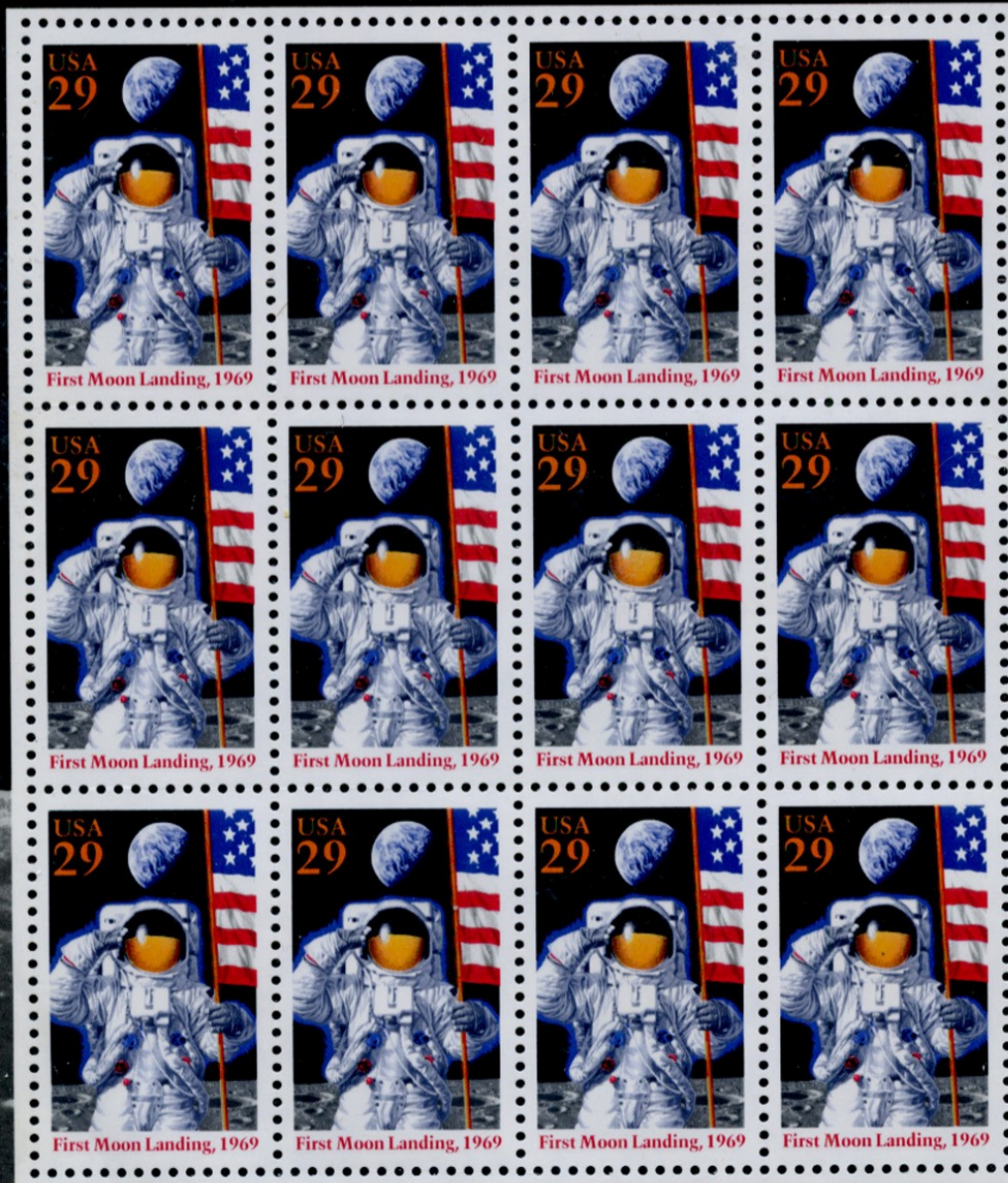
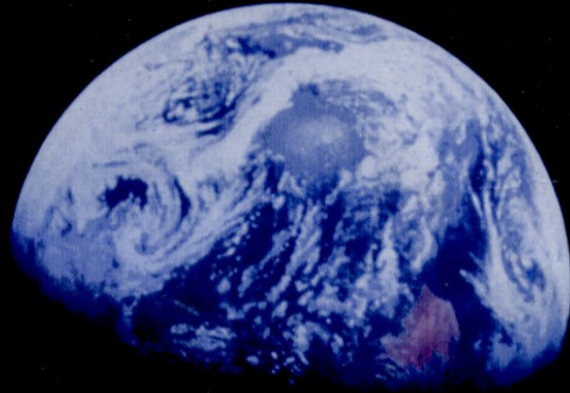
UNITED STATES SPACE STAMPS

JULY 20, 1994

MOON LANDING TWENTY-FIFTH ANNIVERSARY

COMMEMORATIVE EDITION

*25th Anniversary
of the First
Moon Landing*



*"That's one small
step for a man,
one giant leap
for mankind."*

*Neil Armstrong
July 20, 1969*

UNITED STATES SPACE STAMPS

AUGUST 4, 1995

"ENDEAVOR" EXPRESS MAIL ISSUE



Space Shuttle Endeavour

Devoted first crew,
remarkable maiden voyage.



FIRST DAY OF ISSUE

This stamp showing the shuttle *Endeavor* at lift-off from the Kennedy Space Center was issued to cover the new Express Mail rate of \$10.75. One of *Endeavor's* most important missions was to effect the repairs to the Hubble Space Telescope, which had previously been placed in orbit with a faulty mirror. The crew spent two days catching up to the telescope, then brought it into the cargo bay and installed a module to correct the focusing deficiencies. They then returned Hubble to a higher orbit on the ninth day of the mission and returned to Earth with a night landing on December 13, 1993.

UNITED STATES SPACE STAMPS

SEPTEMBER 22, 1995

32¢ HOLOGRAM ENVELOPE



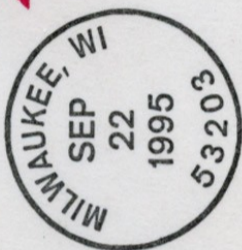
32

The increase in first class postage from 29¢ to 32¢ brought still a third type of hologram envelope. Still at the #10 size, the only change was the printing of the indicia in red rather than green.

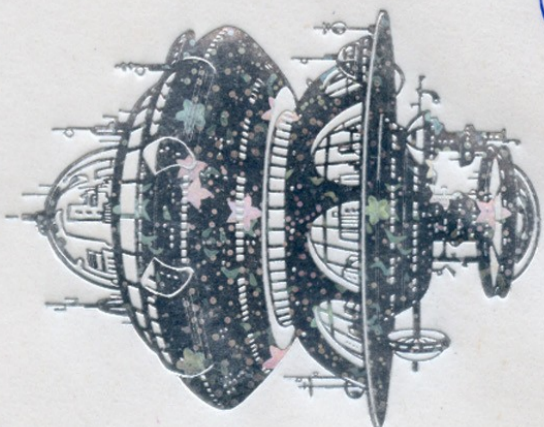
UNITED STATES SPACE STAMPS



USA



FIRST DAY OF ISSUE



Armajet

**1995 SPACE STATION
HOLOGRAM EMBOSSED ENVELOPE**

FIRST DAY OF ISSUE

SEPTEMBER 22, 1995

32¢ HOLOGRAM ENVELOPE

FIRST DAY COVER

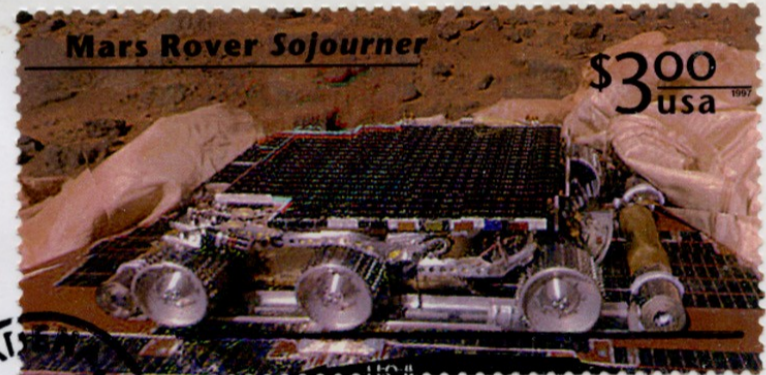
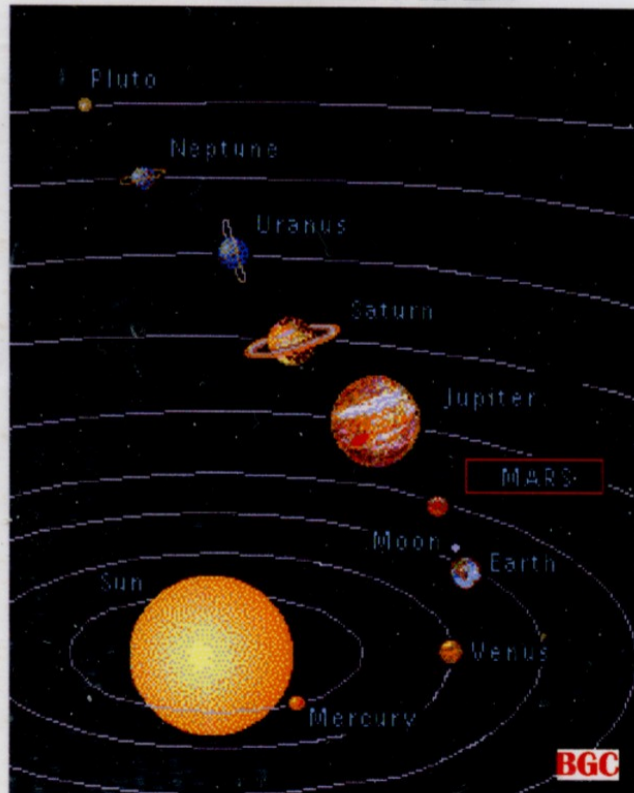
UNITED STATES SPACE STAMPS

DECEMBER 10, 1997

MARS PATHFINDER SOUVENIR SHEET



MARS PATHFINDER



FIRST DAY OF ISSUE

Pathfinder arrived at Mars on July 4, 1997, seven months after being launched from Earth. Its tiny robot *Sojourner*, then roamed about the surface, sending signals back to Earth. Up to 10 additional missions to Mars are planned by the year 2005.

Mars Pathfinder blazed through the Martian atmosphere on July 4, 1997, slowing to 20 mph before bouncing to a halt undamaged. Panels unfolded and *Sojourner*, a six-wheeled rover, proceeded to explore the terrain and reported its results until the fine Martian dust covered its solar panels in November 1997. Over 16,000 pictures were transmitted and weather patterns and chemical analysis of rocks resulted from this mission at a mere fraction of the cost of the Viking landers.

UNITED STATES SPACE STAMPS

DECEMBER 10, 1997

MARS PATHFINDER SOUVENIR SHEET

M A R S P A T H F I N D E R

JULY 4, 1997



Mars Pathfinder
Six-wheeled *Sojourner*,
explorer of the Red Planet.

UNITED STATES SPACE STAMPS

OCTOBER 1, 1998

SPACE COLONY MINIATURE SHEET



This miniature sheet of twenty stamps with five se-tenant designs is intended to stimulate the thrill of space exploration and colonization in the future. The futuristic diorama envisions a space colony, with many of the subjects derived from extension of present day designs.

UNITED STATES SPACE STAMPS

NOVEMBER 9, 1998

SPACE SHUTTLE PRIORITY MAIL



The shuttle *Discovery's* return to Earth November 7 provided an opportune moment to introduce the Priority Mail stamp for the \$3.20 rate. The illustration shows a head-on view of *Discovery* as it lands, with its deceleration parachute inflated and trailing behind. This, the 92nd shuttle mission, was *Discovery's* 25th flight, and though over eighty scientific experiments were conducted and two satellites were launched, the event which gained the most publicity was the return to space after 36 years of 77-year old Senator John Glenn, the first American in orbit.

UNITED STATES SPACE STAMPS

NOVEMBER 19, 1998

SPACE SHUTTLE EXPRESS MAIL



Issued to cover the new increase in the Express Mail rate to \$11.75, this stamp continues the recent theme of shuttle photographs for Express and Priority Mail stamps. No specific shuttle is named in this instance. An out-of-the-ordinary view is provided in that the shuttle is shown fastened to the top of the specially modified Boeing 747 that is used to transport it, usually from Edwards Air Force Base in California to the Kennedy Space Center in Florida.

UNITED STATES SPACE STAMPS

MAY 26, 1999

SATELLITE LAUNCHINGS



**Explorer 1 was launched January 31, 1958
and became the first successful U.S. Earth satellite.**

W11

The 1950s saw the world's entry into the Space Age when the Soviet Union electrified the world with its launch of *Sputnik*. After several spectacular failures in the Navy's *Vanguard* program, the Army succeeded in putting its own satellite, *Explorer 1*, into orbit with a converted ICBM. The pressures of the "space race" to the Moon led to rapid advances in technology, and manned space flight soon became a reality.

1950s

Celebrate The Century™

TECHNOLOGY • ENTERTAINMENT • SCIENCE

1950s



Family Fun, Suburbia, and Nuclear Threats

The 1950s were, for the most part, years of peace and prosperity. Millions of families moved to the suburbs. Americans liked Dwight D. Eisenhower, their kindly war-hero President.

Television became popular; *I Love Lucy* and *Gunsmoke* were hits. Teenagers chose their own fashions and music. Elvis Presley thrilled young people and shocked their elders.

The decade also had a serious side. The Korean War took more than 50,000 American lives. The first hydrogen bomb was detonated. In 1954 the U.S. Supreme Court declared racial segregation in public schools unconstitutional, and in 1955, in Montgomery, Alabama, Rosa Parks refused to give up her bus seat to a white man. But in 1957 President Eisenhower had to use the Arkansas National Guard and paratroopers to enforce integration at a Little Rock high school.

In January 1959 Alaska was admitted as the 49th state, and in August Hawaii became the 50th state.

New words: brainwashing, ballpoint, high-rise, centerfold



FIRST DAY OF ISSUE



UNITED STATES SPACE STAMPS

SEPTEMBER 17, 1999

STAR TREK



The television series created by Gene Roddenberry debuted in 1966. The show's popularity eventually gained cult status, and Captain Kirk and Mr. Spock became household names recognized everywhere. The show's space ship, the *Starship Enterprise*, lent its name to the first space shuttle.

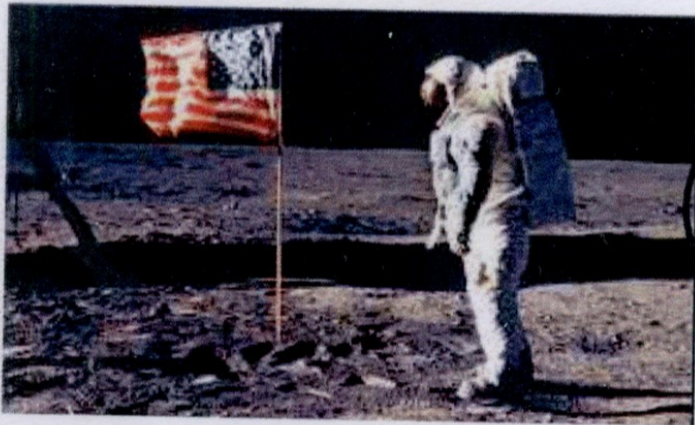
UNITED STATES SPACE STAMPS

SEPTEMBER 17, 1999

FOOTPRINT ON THE MOON



CELEBRATE THE CENTURY - 1960'S



FIRST DAY
OF ISSUE

1960'S



MAN WALKS ON THE MOON: Thirty years ago, three men - - Neil Armstrong, Edwin "Buzz" Aldrin Jr., and Michael Collins - - took humanity on an incredible voyage. On July 20, 1969, the world watched in awe as man, Neil Armstrong, became the first person to set foot on the moon.

alto

One of the most newsworthy events of the 1960's was the first manned landing on the moon. President John F. Kennedy committed the nation to this goal in 1961, allowing ten years for it. Only eight years later it was achieved, and we see Neil Armstrong's first footprint on the lunar surface reproduced here.

1960s

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TECHNOLOGY • ENTERTAINMENT • SCIENCE

HISTORICAL EVENTS

1960s

CELEBRATE THE CENTURY™



POLITICAL FIGURES

The Rebellious Sixties and Man on the Moon

A decade of extremes, the 1960s saw triumphs and demonstrations. President John F. Kennedy's commitment to put a man on the moon by the end of the decade was fulfilled. Young people questioned authority and rebelled against the status quo. Civil rights activists won a victory when Congress passed the Civil Rights Act of 1964. One of their most influential leaders, Dr. Martin Luther King, Jr., was assassinated in 1968. To promote international friendship, President Kennedy established the Peace Corps in 1961. His assassination in 1963 stunned the nation. In 1965 U.S. ground troops were deployed to active combat in Vietnam. Roger Maris hit 61 homers in one season, and the Green Bay Packers won the first two Super Bowls. The Beatles captivated the nation, and STAR TREK debuted. New words: hippie, workaholic, scam, skateboard



SPORTS



LIFESTYLE



UNITED STATES SPACE STAMPS

NOVEMBER 18, 1999

PIONEER 10



Launched in March 1972, *Pioneer 10* was the first spacecraft to reach Jupiter, where it sent back much data about the giant planet and three of its satellites in 1973. The mass of information including weather patterns and radiation took over a year to process after receipt on Earth. *Pioneer* continued its outward journey and became the first man-made object to leave the solar system.

1970s

Celebrate The Century™

TECHNOLOGY ■ ENTERTAINMENT ■ SCIENCE

1970s

CELEBRATE THE CENTURY™

Bicentennial, Watergate, and Earth Day

In the 1970s, the U.S. celebrated its 200-year history and made a commitment to protect the environment. The 26th Amendment lowered the voting age to 18 for all elections. Gender-based discrimination was prohibited, and a woman's right to have an abortion was defined. As a result of the Watergate scandal, Richard Nixon became the first U.S. President to resign from office.

Jumbo jets doubled airplane passenger capacity, and the first national speed limit, 55 mph, was instituted to conserve energy during an oil embargo. Fiber optics advanced communications technology, and international direct dial telephone calls became a reality. Ultrasound, CAT scans, and MRIs revolutionized medical imaging.

Sesame Street educated children, Monday Night Football entertained sports fans, and All in the Family introduced its audience to a new kind of TV series. Viewers taped TV shows with VCRs, and some Americans caught disco fever. New words: junk food, slam dunk, miniseries



HISTORICAL EVENTS
SPORTS
ART

POLITICAL FIGURES
LIFESTYLE



The End

Part 1