



THE RACE TO THE MOON

(And Beyond)

The Apollo Program

The American Manned Spaceflight Program began with two low earth orbit programs, the Mercury Program and the Gemini Program.

The Apollo Program was conceived in early 1960 as a natural follow-on to the Mercury Program, but funding was not immediately provided under the Eisenhower administration. When John Kennedy was elected, he initially was more interested in the probability of a “missile gap” with the Soviet Union, so he did not push for the Apollo Program. However, in April 1961, when the Soviet Union became the first nation to launch and recover a man, Congress and the President began to think seriously about ‘catching up.’ In May 1961, Kennedy made a speech before a joint session of Congress in which he stated “we should commit to achieving the goal of landing a man on the moon and returning him safely to the Earth before the decade is out.”

The following commemorate some of the events that were pivotal in making the program successful:



AS-105 Saturn 1 Unmanned Launched 07/30/1965
 Carried Pegasus C satellite plus a Command Service Module (CSM) boilerplate.



AS-203 Saturn IB Unmanned Launched 07/05/1966

First orbital mission. It placed its second stage in orbit to test suitability of liquid hydrogen as a space fuel. Sometimes informally called **Apollo 2**.



AS-202 Saturn IB Unmanned Launched 08/25/1966
Sub-orbital test flight of the CSM. Sometimes called informally **Apollo 3**.



AS-204 Saturn IB Grissom, Chaffe, White Not launched No covers serviced.

Apollo 1 (Posthumously designated), on January 27, 1967, a fire erupted in the Apollo spacecraft during a test on the launch pad. All three astronauts were killed in the fire.

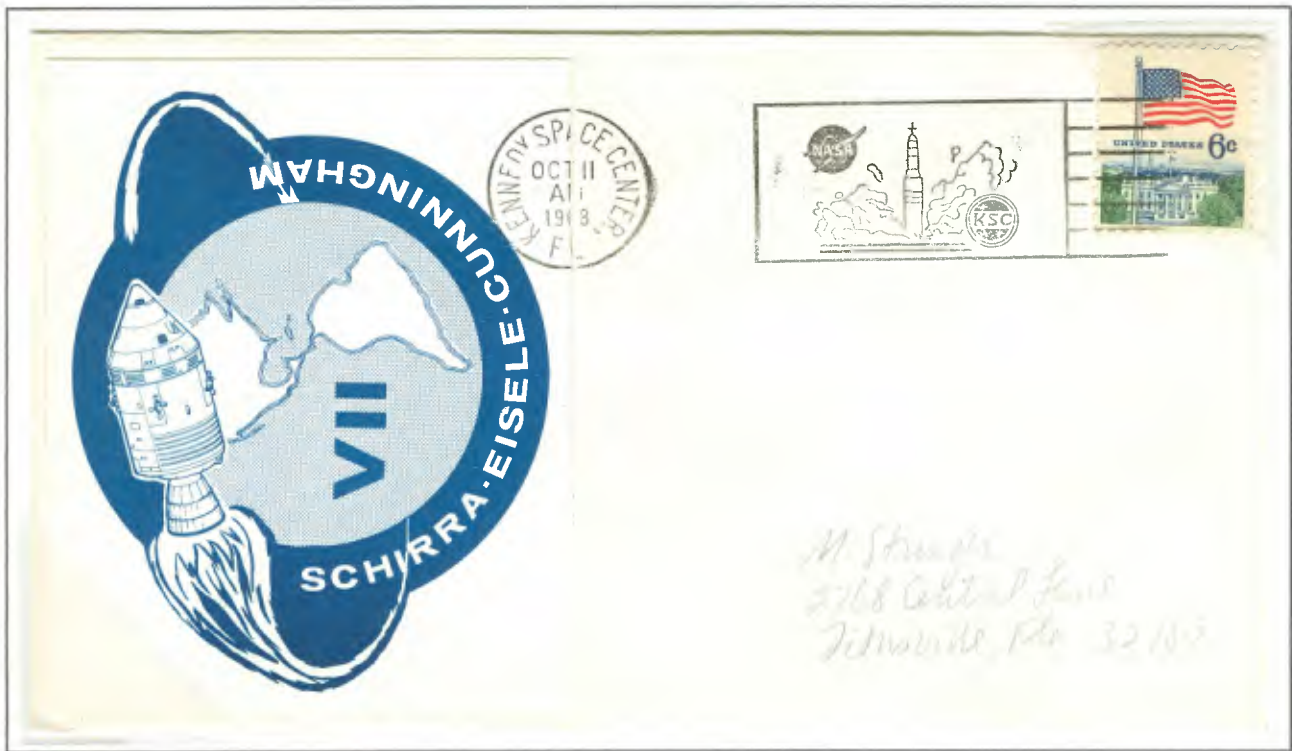
(AS-204 launched January 22, 1958 was also known as **Apollo 5**)



AS-501 Saturn V Unmanned Launched 11/09/1967
Apollo 4, first test of the Saturn V booster.



AS-502 Saturn V Unmanned Launched 04/04/1968
Apollo 6, second launch of Saturn V. It carried an unmanned Apollo spacecraft including the CSM and a simulated lunar landing module.



AS-205 Saturn IB Schirra, Eisle, Cunningham Launched 10/11/1968

Apollo 7, first manned mission in the program. It was an eleven-day Earth-orbital flight intended to test the CSM, redesigned after the disastrous **Apollo 1** fire. First live television broadcast to Earth.



AS-503 Saturn V Borman, Lovell, Anders Launched 12/21/1968

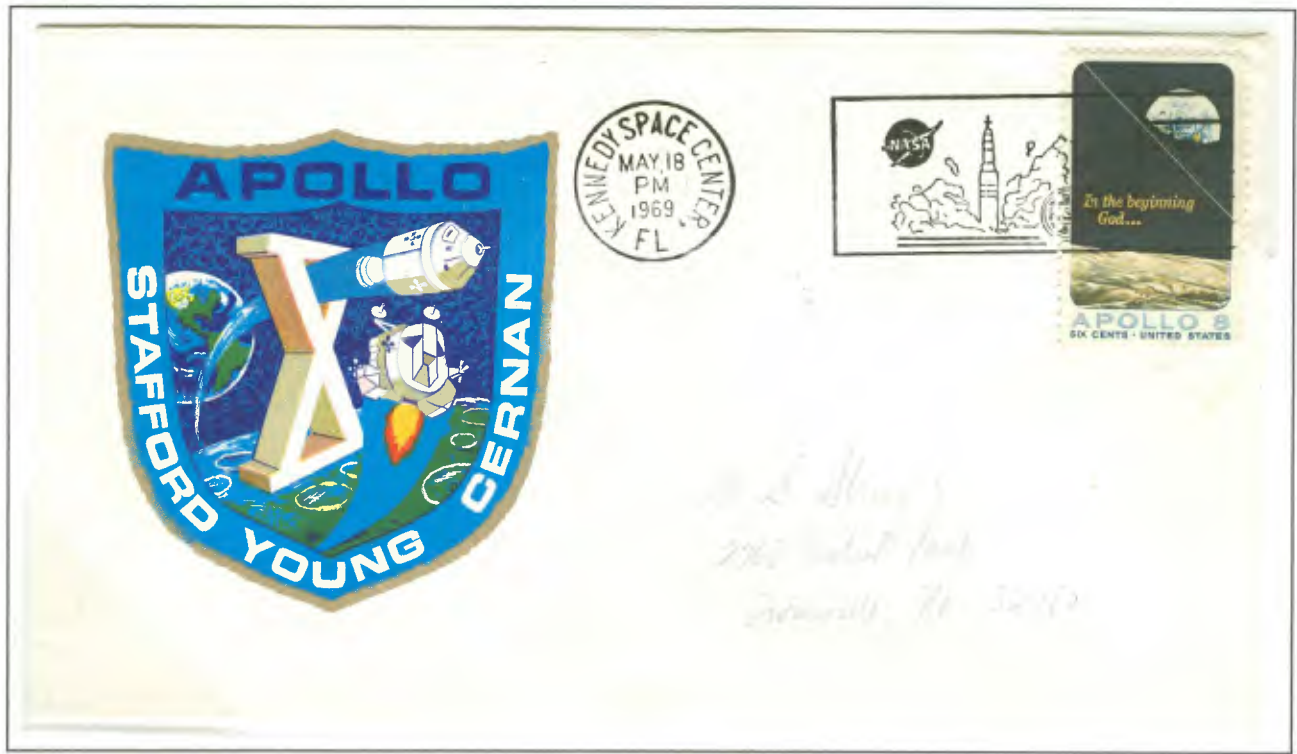
Apollo 8, first manned lunar flight, improvised because LM was not ready for first manned orbital test. Ten lunar orbits in twenty hours; first humans to see lunar farside and Earthrise with own eyes; live television broadcast to Earth.



AS-504 Saturn V McDivitt, Scott, Schweikart Launched 03/03/1969
Apollo 9, ten days in Earth orbit, demonstrated LM propulsion, rendezvous and docking with CSM. EVA tested lunar Portable Life Support System (PLSSM).



Launch of Apollo 9



AS-505 Saturn V Stafford, Young, Cernan Launched 05/18/1969
Apollo 10, dress rehearsal for lunar landing. LM descended to 8.4 nautical miles (15.6 km) above moon without landing. The lunar module on this flight was not equipped to land, however. "A lot of people thought about the kind of people we were: 'Don't give those guys an opportunity to land, 'cause they might!'" said Cernan. "So the ascent module, the part we lifted off the lunar surface with, was short-fueled. The fuel tanks weren't full. So had we literally tried to land on the moon, we couldn't have gotten off."



Apollo 10 Crew



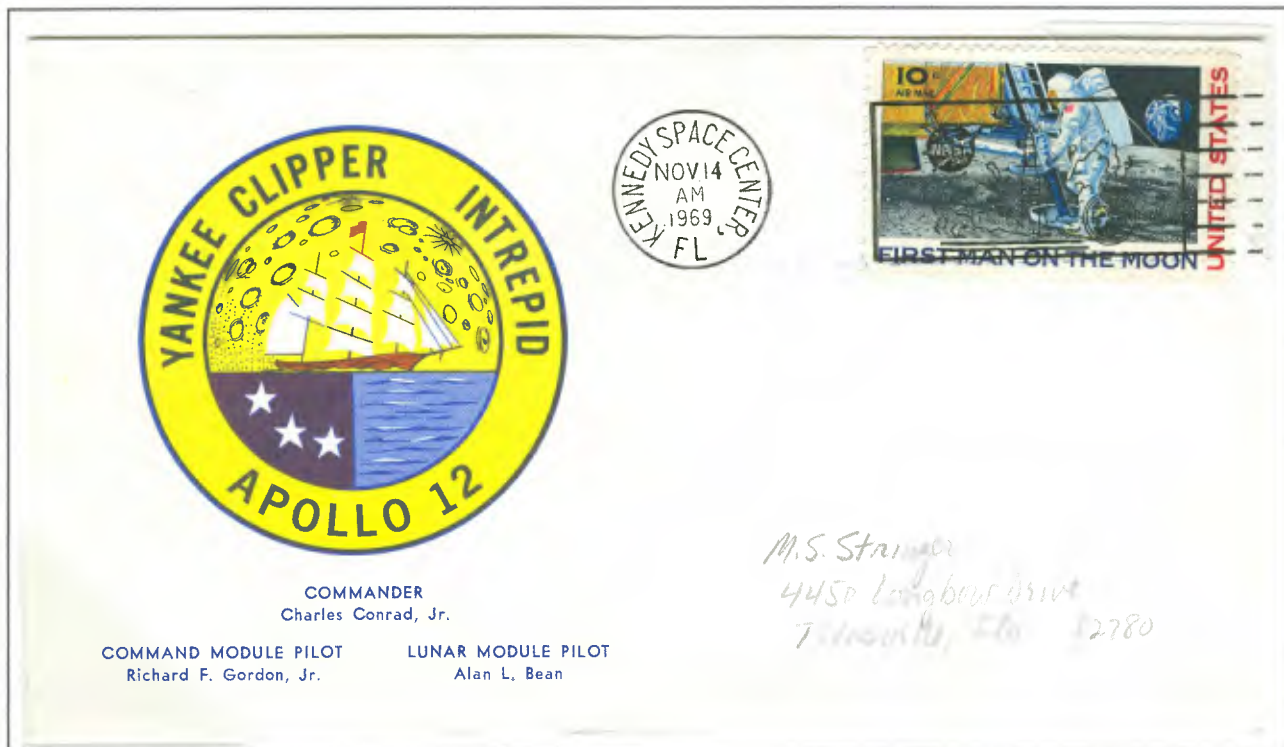
July 20, 1969

AS-506 Saturn V Armstrong, Collins, Aldrin Launched 07/16/1969
Apollo 11, first lunar landing; landed in the Sea of Tranquility; single EVA in direct vicinity of LM. Various navigation errors and computer alarms were overcome.



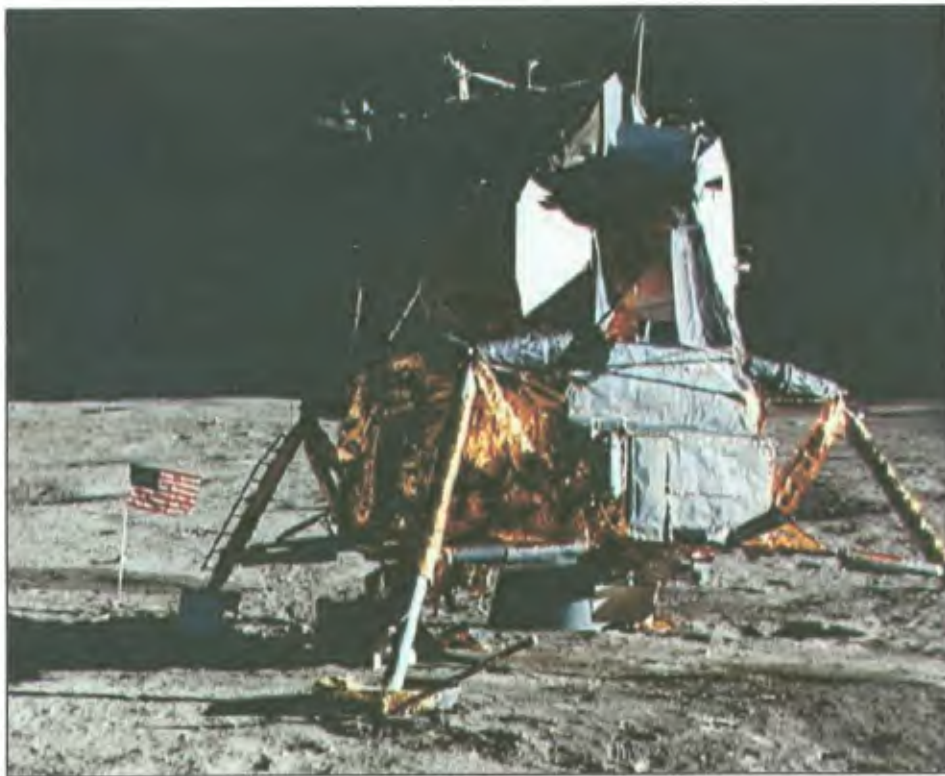
AS-507 Saturn V Conrad, Gordon, Bean Launched 11/14/1969

Apollo 12, Ocean of Storms; successful precision landing near Surveyor 3 probe; two EVAs, returned Surveyor parts to Earth; first controlled LM ascent stage impact after jettison; first use of deployable S-band antenna; two lightning strikes after liftoff from Earth with brief loss of fuel cells and telemetry; lunar TV cameras damaged by accidental exposure to sun.



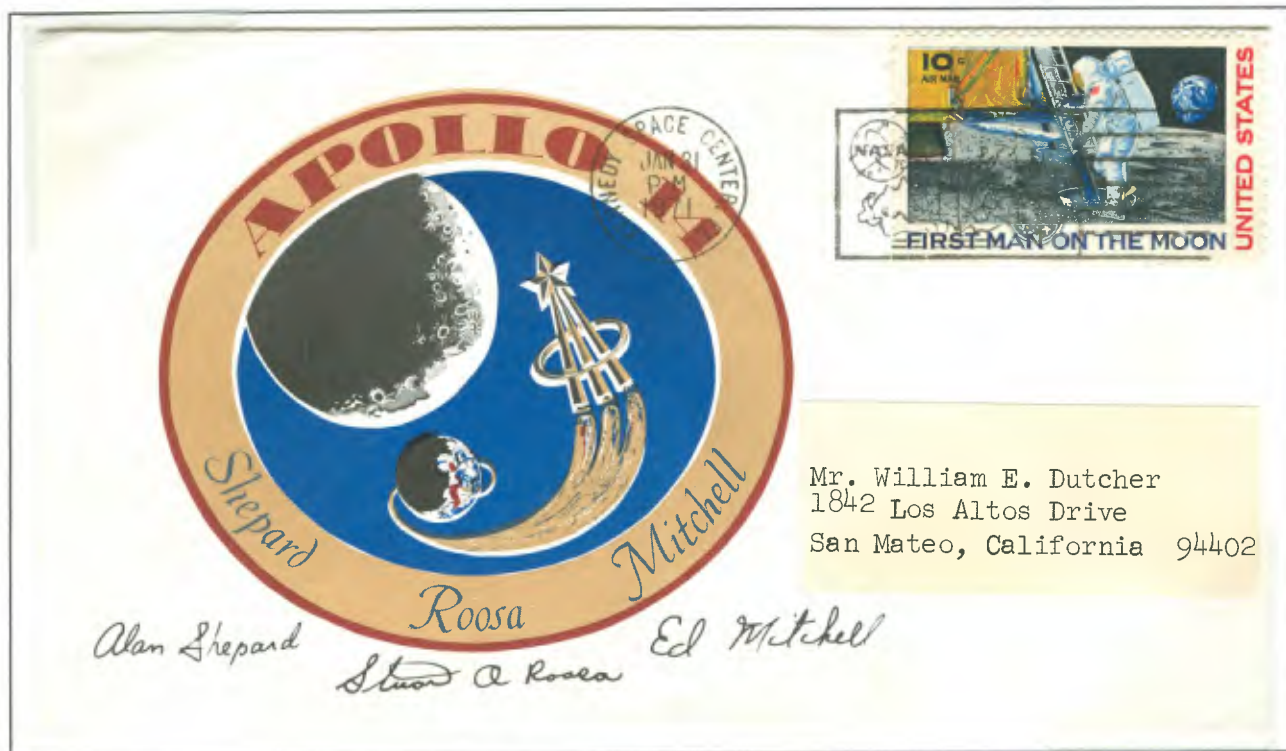
AS-508 Saturn V Lovell, Swigert, Haise Launched 04/11/1970

Apollo 13, planned Fra Mauro landing aborted after CSM oxygen tank explosion on outward leg; LM used as "lifeboat" for safe return, first S-IVB stage impact on moon as active seismic test.



AS-509 Saturn V Shepard, Roosa, Mitchell Launched 01/31/1971

Apollo 14, successful landing at Fra Mauro site intended for Apollo 13; mission overcame docking problems; faulty LM abort switch and delayed landing radar acquisition; first color video images from lunar surface; first materials science experiments in space; two EVAs.



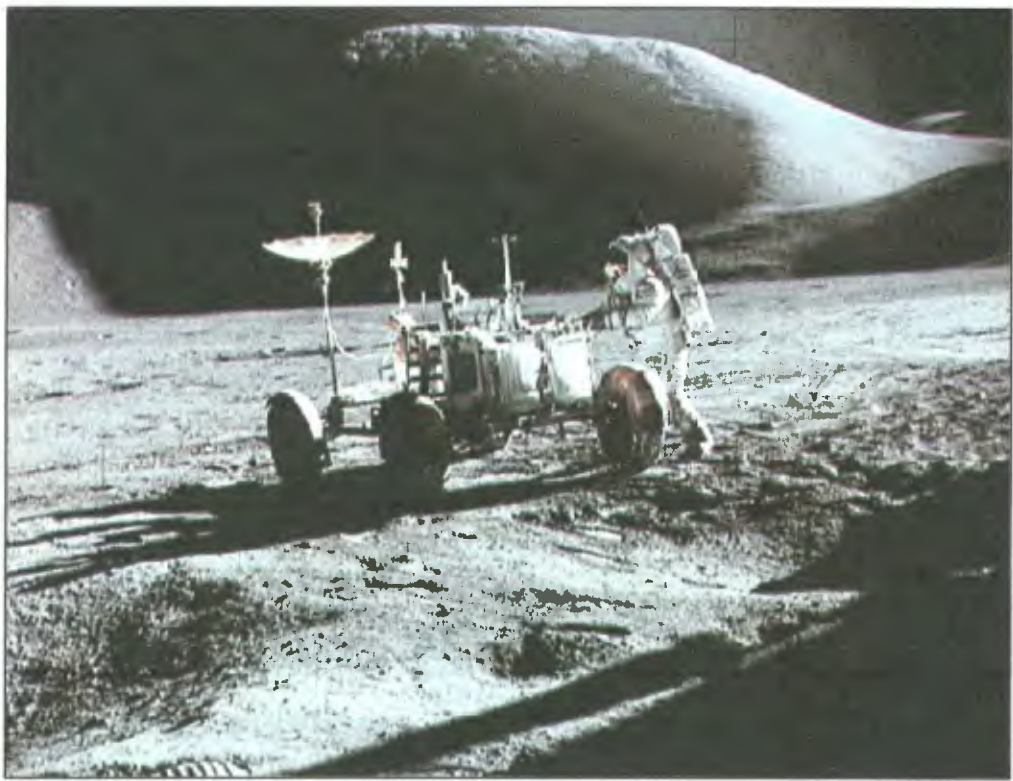
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AS-510 Saturn V Scott, Worden, Irwin Launched 07/26/1971

Apollo 15, First "J" series mission with 3-day lunar stay and extensive geology investigations; first use of lunar rover (17.25 miles [27.8 km] driven); one lunar "standup" EVA; three lunar surface EVAs, plus one deep space EVA on return to retrieve orbital camera film from CSM.





AS-511 Saturn V Young, Mattingly, Duke Launched 04/16/1972
Apollo 16, Only landing in lunar highlands; malfunction in a backup CSM yaw gimbel servo loop delayed landing and reduced stay in lunar orbit; no ascent stage de-orbit due to malfunctions; three lunar EVAs plus one deep space EVA.



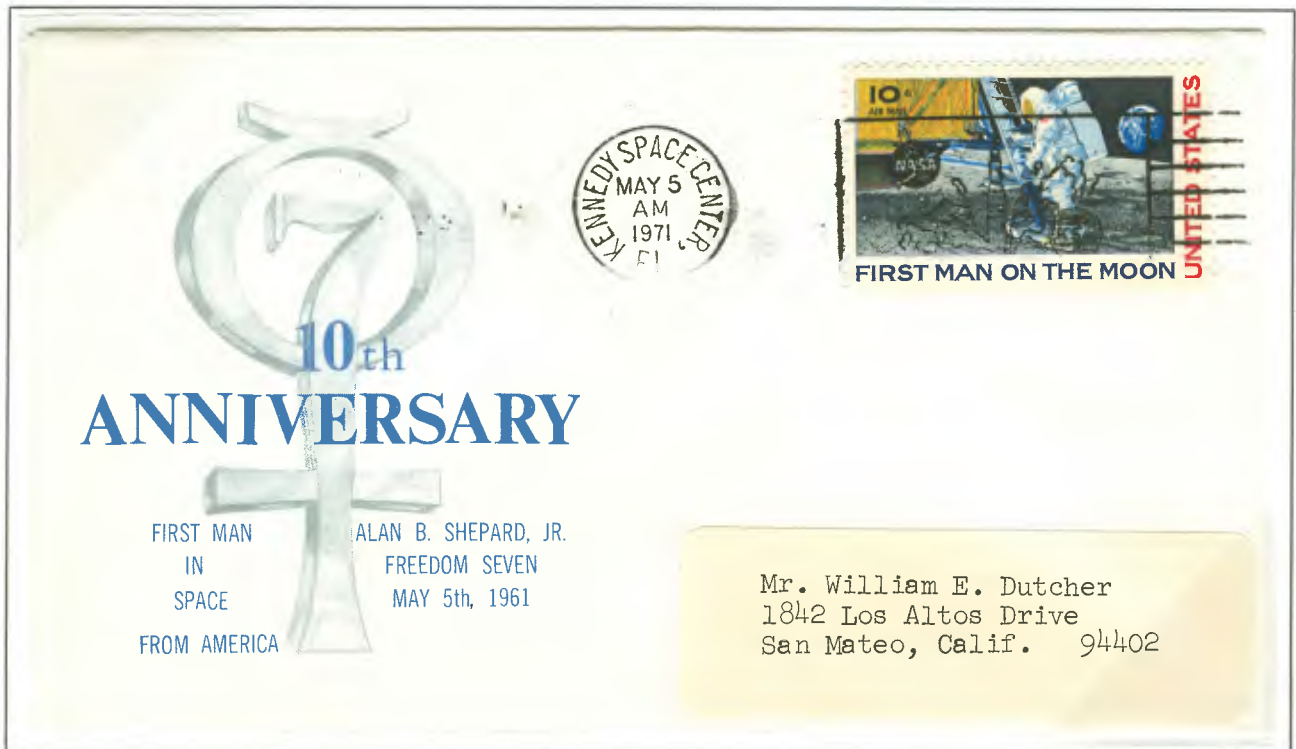


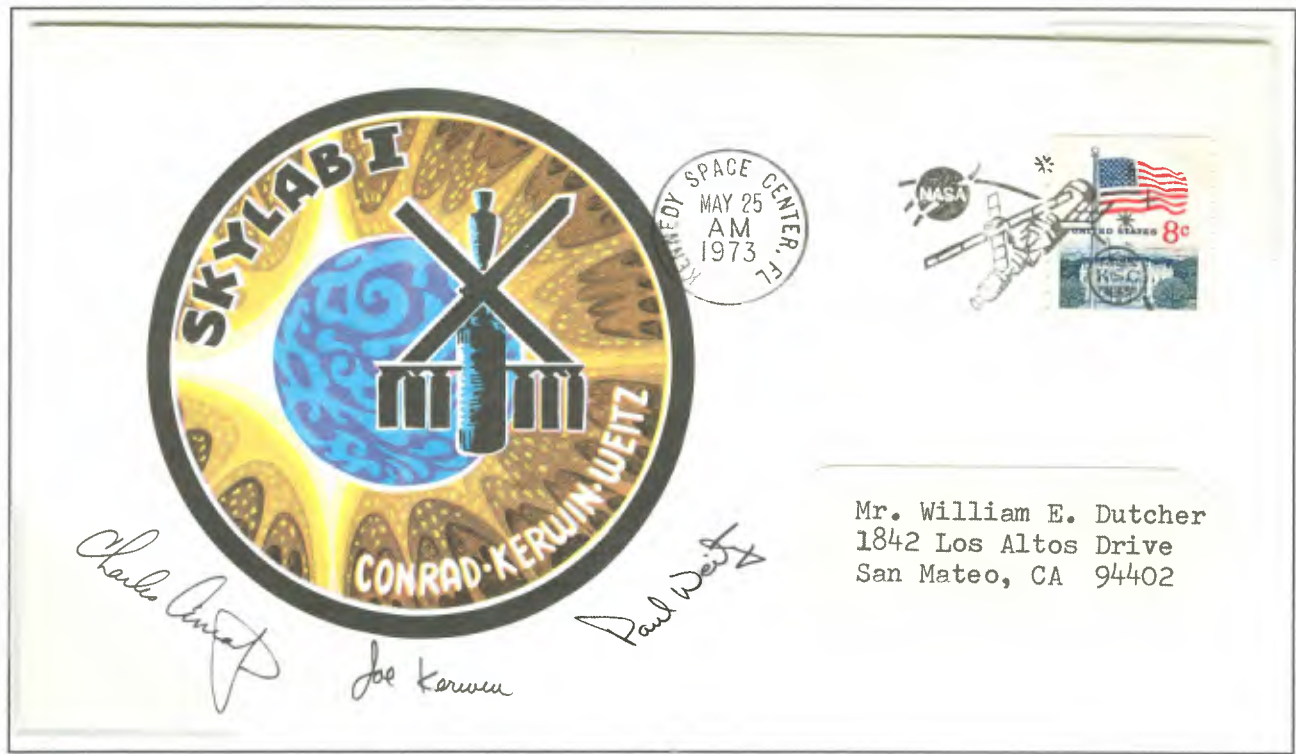
AS-512 Saturn V Cernan, Evans, Schmidt Launched 12/07/1972
Apollo 17, Last Apollo lunar landing; late (to date) human flight beyond Earth low orbit; only lunar mission with a scientist (geologist); three lunar EVAs plus one deep space EVA.





On May 5, 1961, Shepard piloted the Freedom 7 mission and became the second person, and the first American, to travel into space. He was launched by a Redstone rocket, and unlike Gagarin's 108 minute orbital flight, Shepard stayed on a ballistic trajectory suborbital flight—a flight which carried him to an altitude of 116 statute miles (187 km) and to a landing point 302 statute miles (486 km) down the Atlantic Missile Range. Unlike Gagarin, whose flight was strictly automatic, Shepard had some control of Freedom 7, spacecraft attitude in particular. The launch, return from space and subsequent collection by helicopter were seen live on television by millions.





Skylab

First manned mission. The crew rendezvoused with Skylab on the fifth orbit. After making substantial repairs, including deployment of a parasol sunshade which cooled the inside to a temperature to 23.8 degrees C (75 degrees F), by June 4 the workshop was in full operation. In orbit the crew conducted solar astronomy and Earth resources experiments, medical studies, and five student experiments; 404 orbits and 392 experiment hours were completed; three EVAs totaled six hours, 20 minutes.



The 10-cent Skylab commemorative stamp first day of release took place at Houston, Texas, on May 14, 1974. This issue commemorates the first anniversary of the launching of Skylab, and depicts the station as it was repaired, complete with "umbrella" and missing the lost solar panel.



Cooperation in Spaceflight

The Apollo–Soyuz Test Project (ASTP) entailed the docking of an American Apollo spacecraft with then-Soviet Soyuz spacecraft. Whilst the Soyuz was given a mission designation number (Soyuz 19) as part of the ongoing Soyuz program, it was referred to simply as "Soyuz" through the duration of the joint mission. The Apollo mission was officially not numbered, though some sources refer to it as "**Apollo 18**".



The US Postal Service issued this se-tenant pair of two 10-cent multicolored stamps on July 15, 1975, at Kennedy Space Center, Florida. Inexplicably, the circular program insignia on the left-hand stamp is rotated to the Soviet configuration, showing the red Soyuz section on the left. The Soviet Union also released stamps of similar design (Russia Scott 4339–4340) at the same time. This denomination paid the domestic first-class rate for letters weighing less than half ounce.

