

# Lost moon: the future of u.s. manned spaceflight



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Lost Moon: The future of U. S. Manned Spaceflight The National Aeronautics and Space Administration, more commonly known as NASA, was founded in the midst of war. During the infamous Cold War, two global superpowers, the United States and the Soviet Union, competed for dominance over the other. No such area of competition was as fierce as outer space. Success in the 1960's was determined largely through technological advances, and manned spaceflight was viewed as the pinnacle of technological and political superiority. Finally, in 1969, NASA landed Neil Armstrong and Edwin Aldrin on the lunar surface. In 1972, after six lunar landings, Congress decided that NASA needed a budget cut. Before long, however, the U. S. was back in space aboard the space shuttle. The shuttle was reusable and promised low operating costs, high turnaround times, and frequent launches. Having served NASA diligently for thirty years, the shuttle fleet was retired from service in 2011. Since then, NASA has struggled to determine its next step. Eager to cut spending wherever possible, Washington has proposed the privatization of U. S. manned spaceflight, and still has not directed NASA on exactly what it should be focused on doing next. Even though manned spaceflight does cost money, the costs are insignificant in regards to the numerous benefits that are gained from a government-funded manned program. The end of the shuttle program in 2011 began a period of uncertainty within NASA. Since a 2004 address by President George W. Bush, it had been under the impression that after the shuttle's retirement, funds and research would be put in to return to the moon by 2020 and then proceed on to other destinations, most notably, Mars (Logsdon). The effort became known as Project Constellation. In 2009, however, a review board known as the Augustine Committee calculated that the Constellation

program could not be executed without substantial increases in funding. President Barack Obama then announced a proposal on February 1, 2010 to cancel the program (Amos). The President described Constellation as “ over budget, behind schedule, and lacking in innovation” (Achenbach). Instead, Obama announced support for private vehicles to ferry U. S. astronauts to the International Space Station and developing, by 2015, a heavy lift launch vehicle capable of exploration in deep space (Weaver, and Braukus). Perhaps the most notable difference between the Bush and Obama plans is the exclusion of a lunar flight from the NASA Authorization Act of 2010.

Numerous astronauts have stressed the importance of a set mission to the moon, including Neil Armstrong. Before his death in 2012, the notoriously private Armstrong was startlingly vocal in his disapproval of the federal plan. The first moonwalker asserted that Earth-moon flights would be critical stepping stones for expeditions to Mars. He even pointed out that over 14 million miles of the lunar surface has yet to be explored, lending to the possibility of further experiments and study (Cavanaugh). The National Space Society regards a lunar return as a high priority for NASA in order to extend human colonization, pursue scientific interests, test new technologies, unite nations in peaceful activity, expand the global economic sphere, and engage the public and students in high level mathematics and sciences (Loff). The current exclusion of a lunar flight from Obama’s vision for space exploration leaves a gaping hole in NASA’s side; one that may ultimately never heal unless a much needed change to the plan is made. Many opponents of government funded manned spaceflight insist that it is too dangerous and too costly. The benefits of manned spaceflight, however, far outweigh the risks. Technology developed in the manned spaceflight

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program has saved countless lives all over the world. Certain medicines can only be developed in a weightless environment, and the production of these new medicines will save and prolong many lives. Some critics claim that a machine can do a better job than a human can in space and that astronauts, and a manned program, are not necessary. History, however, provides numerous examples as to the value of human innovation. The antibiotic penicillin was discovered as a mold contaminating a sample of laboratory bacteria. If not for the curiosity and capacity of a human mind, a robot may have simply regarded the sample as contaminated and subsequently discarded it. An astronaut can weigh technical and analytical skills, reacting intelligently to the unexpected, something machines are not able to do (Baxter). Still, others claim that manned spaceflight itself is not the problem; it's funding manned spaceflight that presents difficulties. The main reason for cancelling Constellation, after all, was due to concerns about the project being over budget. The Department of Defense, however, spends \$20 billion air conditioning field encampments for the military, \$1 billion more than NASA's entire annual budget (Opam). Better yet, the cost for the mortgage bailout in 2008 totaled \$4 trillion, far more than NASA's total budget. If the U. S. budget was represented as one dollar, NASA's portion of it — all of the research, engineering, testing, training, facilities, employees, contractors, fuel, and flights— would be less than one penny of that dollar (Plait). There just isn't a good reason manned spaceflight shouldn't be funded at the government level. It doesn't cost taxpayers hardly anything and allows for exciting advances in several fields of study. Where is manned spaceflight heading? With the gridlock that is modern day Washington, it's hard to tell. Washington says that as much as NASA's manned program means to the

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nation, the money just isn't there. NASA's total cost, from its inception in 1958 until 2008, was \$850 billion (Plait). Though a substantial amount of money, it's only about one fifth of the 2008 bailout — and that's for fifty years of space exploration, one of the costliest endeavors ever undertaken by man. All that NASA has done: gone to the moon, launched countless satellites, built a space station, visited every planet in the solar system, and launched thirty years of space shuttle flights amount to far less than the bailout enacted by the very administration who proposes its conclusion.