



National Space Society

NSS POSITION PAPER The Next Steps for Human Space Exploration

In light of the recent loss of the Space Shuttle Columbia and her crew, many people have asked, “Why send humans into space?” The National Space Society (NSS) has identified many fundamental reasons why humans should travel beyond the confines of Earth orbit (to the Moon, Mars, asteroids, and beyond), including the long term survival of humanity and life on Earth, unlimited room for expansion of human civilization, virtually limitless resources providing benefits to Earth, economic opportunities for enterprising individuals, and a wealth of new knowledge and technologies for our society. NSS therefore recommends the following:

1. **REVITALIZED POLICY.** The U.S. should strengthen its leadership in human space exploration by building on the principles in the 1988 National Space Policy¹. Accordingly, the U.S. government should once again direct federal departments and agencies to permanently open the space frontier to enable the U.S. and humanity to receive the enormous benefits from the exploration, development, and settlement of space.
2. **LOW COST SPACE ACCESS.** Low cost, robust, and reliable access to space is the single largest barrier to further advancement in space exploration and development. Therefore, NASA and the Departments of Defense and Transportation should be directed to place a priority on work to develop the technology and regulations for affordable, reliable, and frequent human access to and from space. Wherever possible, these technologies should share a common architecture and engage the private sector – ranging from entrepreneurs to existing aerospace companies – to ensure that a broad range of approaches are considered. Included in this recommendation is clarification of regulations and policies related to suborbital launch activities.
3. **PERMANENT LUNAR BASE.** NASA should be assigned the task of preparing for and, immediately after completion of the International Space Station (ISS), establishing a permanent human presence on the Moon. A lunar base would enable the long-term exploration of the Moon, utilization of lunar resources (including energy, oxygen, and metals) to reduce the cost of space operations, and development of infrastructure and test facilities to support the industrialization/commercialization of space and exploration of the solar system. A permanent lunar facility also provides a low gravity, isolated, stable, magnetic-field free, vacuum environment to perform cutting-edge physics, medical research, astronomy, sensitive biological/genetic investigations, and industrial research that could lead to major breakthroughs. A focused but incremental effort to return to the Moon would also give the ISS a renewed objective for testing new hardware, software, human operations, logistics, assembly, and medical safety protocols. This effort would also help drive design and operations choices for the Orbital Space Plane and next generation launch vehicle programs; the use of common architecture in these efforts will save time and money in the long-term.
4. **PLANETARY PROTECTION.** The Department of Defense should be assigned the task of developing protections for American space assets and the nation from terrestrial and extra-terrestrial threats, including orbital debris and Earth-crossing asteroids and comets.

For more information, contact Brian Chase at (202) 543-1900 or brian@nss.org
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¹ The 1988 National Space Policy is archived at www.hq.nasa.gov/office/pao/History/policy88.html