

# National panel urges 'putting human boots' on Mars

June 11 2014, by Blaine Friedlander

---



After 18 months of research and deliberation, the Committee on Human Spaceflight – a diverse national group of scientists and professionals convened by Congressional request, and co-led by a Cornell professor – issued a 285-page report June 4 on whether Earth-bound humans should continue exploring space.

The conclusion: Let's go red – proceed toward the red planet, Mars.

"Among this small set of plausible goals, the most distant and difficult is putting human boots on the surface of Mars; thus that is the horizon goal for [human space exploration](#)," said Jonathan Lunine, Cornell's David C. Duncan Professor of Physical Sciences and co-chair of the Committee

on Human Spaceflight of the National Research Council (NRC). "All long-range space programs by our potential partners converge on this goal."

In relative terms, the committee – co-chaired by Mitchell E. Daniels Jr., president of Purdue University and former governor of Indiana – urged remaining in the solar neighborhood, as Mars is the next planet over. The committee called for achievable, stepping-stone and intermediate missions prior to Mars. "The only feasible destinations for human exploration are the moon, asteroids, Mars and the moons of Mars," Lunine said.

In the report, the group provided rationale for continuing human spaceflight. In these discussions, NASA has always cited economic benefits, national security, and inspiration for science and engineering education. At a Washington, D.C., press conference announcing the new report, Lunine highlighted humanity's innate craving to discover. "[It is a] seemingly almost-universal desire of humankind to move outward and explore unknown realms," he said.

Contained within the report are strategies and suggestions on how the U.S. could lead the decadeslong effort. For humanity's hike to Mars – aimed for the 2030s but likely to occur in the 2050s – the committee says NASA must work with an international team, including the Chinese.

The report suggests three distinct, example technical pathways that could culminate in landing on the surface of Mars. Completing any of them requires the development of a number of mission elements and technological capabilities, including Mars entry, descent, landing, radiation safety and in-space propulsion, according to the report. These capabilities will be the most difficult to develop in terms of costs and technical challenges, the [report](#) says.

"Any human exploration program will only succeed if it is appropriately funded and receives a sustained commitment on the part of those who govern our nation," Daniels said. "That commitment cannot change direction election after election. Our elected leaders are the critical enablers of the nation's investment in [human spaceflight](#), and only they can assure that the leadership, personnel, governance and resources are in place in our [human exploration](#) program."

Congress requested the study in the 2010 NASA Authorization Act. That legislation directed the space agency to contract the NRC to conduct the study, which officially got underway in December 2012.

Provided by Cornell University

Citation: National panel urges 'putting human boots' on Mars (2014, June 11) retrieved 24 April 2024 from <https://phys.org/news/2014-06-national-panel-urges-human-boots.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.