Buzz Aldrin proposes a future for space travel

Jason Wasfy, Class of 2001
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Apollo 11 astronaut Buzz Aldrin (PhD 1963) presented his vision for the future of space travel and planetary colonization at Mars Week, a student-run conference held at MIT on October 1-3.

Dr. Aldrin, who in 1969 was the second person to set foot on the moon, predicted that a new generation of reusable space vehicles would allow large-scale "space tourism," bringing more people into space at lower cost. Widely accessible space travel would rekindle public interest in space exploration and discovery, he said. This new public interest would bolster government funding for space programs. Large numbers of space tourists would lower the cost of space travel even further.

"Only a large-volume market like public space travel can attack the barrier of high costs," said Dr. Aldrin, who was one of two astronauts to make presentations at Mars Week, a conference organized by ThinkMars, a group of students writing a business plan for Mars travel.

He also underscored the importance of increasing the safety and reliability of space travel before large-scale space tourism could begin. A broad private consortium, he said, could fill in the role of large government spending in the development of newer, safer shuttle models.

Coordination between different sectors was a recurring theme in Dr. Aldrin's talk. He postulated that the private consortium could be joined by a variety of government agencies, including NASA and nontraditional federal players in the space race, such as the departments of transportation and commerce.

One of the first steps in space tourism will be suborbital tourist flights, which may begin in the early part of the next decade, Dr. Aldrin predicted. These flights would involve reusable spacecraft, each carrying 50-100 people plus a crew. Suborbital tourism would set the stage for "space hotels," modeled after the Skylab space station, that could be ready as early as 2015.

To safely and affordably transport tourists into deep space beyond the moon, space tourism would need to develop a reusable first-stage spacecraft that could shuttle people between Earth and orbiting stations. These would be about the size of a Boeing 737 jet and would be made of cost-saving aluminum.

Dr. Aldrin's vision culminates in the availability of a Mars launch vehicle in 2020 and permanent colonies established on the red planet around 2025.

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Another possibility is what he called "lunar orbiting tourism a la Aldrin" -- permanent space vehicles that would orbit around Mars and the moon before returning to Earth's orbit to exchange passengers.

The most important step on the road to Mars colonization, Aldrin reminded the crowd of exploration enthusiasts, is cooperation among different private groups. "We need to come together in these organizations and mutually support one another," he said.

Other speakers at the conference included NASA astronaut Franklin Chang-Diaz (ScD 1977); Jennifer Harris (SB 1990) of NASA's Jet Propulsion Lab; Professor Maria Zuber of earth, atmospheric and planetary sciences; Everett Gibson of the NASA Johnson Space Center; Chris McKay of the NASA Ames Research Center; and Robert Zubrin, author of The Case for Mars: The Plan to Settle the Red Planet. Student chairs of the event were ThinkMars members Justin Talbot-Stern, a graduate student in aeronautics and astronautics; freshman Margarita Marinova; and Vanessa Thomas, a senior in the writing and humanistic studies.

Saturday's presentations drew a handful of local TV crews as well as representatives from local newspapers and national science publications.

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