



U.S. must stay committed to racing towards space


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Space scientists are buzzing. Capturing billions of cosmic ray "hits" on the International Space Station and the landing the Curiosity rover perfectly on Mars are just the latest achievements space exploration has produced. But to be successful, America must fully utilize the ISS and prepare to explore new regions of the universe. This balance is essential to maximize our investment dollars.


The last major equipment attached to the space station in 2011 records timing and intensity from cosmic rays for an experiment, led by Nobel laureate Samuel Ting. What is learned could rewrite the basic theories of the origins, composition and forces of the universe.


Benefits on Earth

Additional research  aboard the ISS is focused on the effects of long duration spaceflight and combating muscle and bone loss, results of which will be essential to continued human exploration of deep space. The unique microgravity environment present in space has allowed us to make advances in cancer treatment delivery, air purification systems and vaccine development, among other things. This utilization of low Earth orbit must remain a core focus, but it is also necessary to broaden our ambitions. Our true heritage is as a nation of pioneers and explorers.


From the beginning, the focus of the U.S. space program has been discovery. In fact, as Ting reminds us, the fundamental fact of research is that we cannot anticipate in advance what will be found and to what use it will be put. Most of the major particle physics experiments in our history resulted in findings completely different - and often more meaningful - than what was originally sought. Pursuing space exploration was itself a bold experiment. Continuing to go where no human has gone before should be a given.

Poor planning



Four years ago, as plans to retire the space shuttle moved forward, uncertainty about America's space program grew. In 2010, the Obama administration's budget  plan put development of a next-generation deep space exploration vehicle on hold for five years. Congress addressed the uncertainty with a plan to ensure full utilization of the ISS without delaying production of a deep space vehicle. We learned a painful lesson when the space shuttle retired without a follow-on capability to take U.S. astronaut researchers to the space station. The result is that we will pay \$55 million to \$70 million per seat on the Russian Soyuz spacecraft. In all, the flight will cost \$1.5 billion before a U.S. vehicle is operational.

Congress' 2010 law will avoid that gap from ever happening again. By ensuring coverage for present priorities and future planning, development of the new heavy launch vehicle has begun. If we maintain the 2010 plan, when the space station is decommissioned in 2020, we will be ready to pursue further exploitation of the moon, possibly Mars and beyond. Even in a time of tight budgets, policymakers recognized the need for planting seed corn. Fully utilizing the space station while allocating resources for the next deeper space pursuit are not opposing options.

For America to realize the benefits of its investment in space exploration, Congress must stay on the balanced course  it set in 2010. Or what our nation fails to do today will be done by others tomorrow.

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