

**COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY**  
**Subcommittee on Space and Aeronautics**  
Congresswoman Donna Edwards

*Exploring Mars and Beyond: What's Next for U.S. Planetary Science?*

**Tuesday, November 15, 2011**  
**10:00 AM to 12:00 PM**  
**2318 Rayburn House Office Building**

Chairman Palazzo, thank you for holding today's hearing to receive testimony on the prospects for future exploration of Mars and the implications of the current fiscal environment on the future of U.S. planetary science.

Over the past 15 years, NASA has carried out a systematic exploration of Mars using orbiting spacecraft, landers, and rovers. These missions have resulted in dramatic changes in our understanding of the planet, its potential to harbor life, and our ability to eventually carry out human exploration of Mars. They have also established the United States as the undisputed leader in Mars exploration. The United States is the only nation in the world that is capable of successfully landing and operating a spacecraft on Mars. Our Mars exploration program has been a scientific success story, is the envy of the world, and has inspired countless young people to pursue education and careers in science and technology.

What we don't know is whether or how that story of success will continue, and especially whether the U.S. will retain its leadership role. While the Mars Science Laboratory rover, Curiosity, is set to launch in less than two weeks, the future of the U.S. Mars exploration program is very unclear.

Given the extremely difficult fiscal challenges facing our nation, international collaboration, as recommended by the National Academy of Sciences' planetary science decadal survey, would seem to be a sensible path forward that will allow the U.S. to sustain systematic exploration and pursue the top priority large mission—Mars Sample Return. Indeed, the President's national space policy also calls for such international collaborations in space activities. Building on their long-standing international partnership in space science, NASA and ESA planned a joint initiative to collaborate on a series of future Mars missions. However, the status of that initiative now appears to be in question.

In order to keep the vitally important James Webb Space Telescope on track, NASA will need to find an additional \$1.2 billion over the next five years from within its science and agency operations budgets. Decisions on how those science budget offsets will be made have significant implications for the future of the Mars program. Reportedly, OMB officials are overruling the scientific experts at NASA on how those offsets should best be allocated across the agency's science programs, with the result that NASA's long-planned joint NASA-ESA Mars program appears to be in serious jeopardy. This action by OMB is a serious cause for concern.

This subcommittee needs to find out whether those reports are accurate. And if they are not, we need to find out what is holding up NASA's plans to move forward with ESA. I certainly want to make sure that NASA works vigorously to make sure that costs are kept under control as the agency embarks on the joint Mars program. Strategies to instill cost discipline on expensive missions can certainly be put into place. We must be careful to avoid short-sighted, bureaucratic decisions that can end up dismantling a highly successful program and skilled workforce, jeopardizing U.S. leadership, and retreating from a carefully constructed international partnership. The results of ill-conceived decisions cannot be easily recovered from at some later date.

So I hope to hear from each of our witnesses today on the following:

1. Has NASA's Science program developed a credible plan to accommodate the cost growth on James Webb that will enable NASA to pursue the long-planned joint Mars initiative with ESA?
2. What is preventing NASA from being able to move forward and commit to the partnership with ESA on the 2016 and 2018 joint Mars missions, and what is needed to get things moving?
3. What's at stake if the U.S. doesn't commit to moving forward with ESA on Mars?

I look forward to hearing the responses to these questions and the testimonies of our witnesses today.