

CHARLES F. BOLDEN JR.

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June 6, 2006

The Honorable Ted Stevens
United States Senate
Committee on Commerce, Science, and Transportation
Washington, DC 20510-6125

Dear Senator Stevens:

I am honored to receive your invitation to appear before the Senate Committee on Commerce, Science, and Transportation Subcommittee on Science and Space to discuss the "NASA Budget and Programs: Outside Perspectives". It was my privilege to serve for fourteen years as a part of the NASA astronaut corps from 1980 to 1994 to include a brief period, 1992-93, as the NASA Assistant Deputy Administrator at NASA Headquarters, Washington, DC.

Enclosed is my formal written statement in submission for the record. I look forward to participating in the hearing of the Subcommittee on Science and Space this coming Wednesday afternoon, June 7, 2006.

Respectfully,

s//CF Bolden Jr.

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Enclosure

**STATEMENT BEFORE THE SENATE COMMITTEE ON
COMMERCE, SCIENCE, AND TRANSPORTATION
SUBCOMMITTEE ON SCIENCE AND SPACE**

June 7, 2006

Madam Chairman and distinguished members of this subcommittee: I am honored to be afforded the opportunity to address you this afternoon on the very critical issue of budget and programs for the National Aeronautics and Space Administration (NASA). A quick review of my background and qualifications to be here might be appropriate. I am a career officer of the United States Marine Corps, now retired after 34 ½ years of active service, fourteen of which were spent assigned to the NASA Astronaut Office at the Lyndon B. Johnson Space Center in Houston, Texas as a pilot astronaut. At the time of my retirement, I was completing my service as Commanding General of the Third Marine Aircraft Wing headquartered at the Marine Corps Air Station Miramar, San Diego, California. During my tenure in the Astronaut Office, I flew four space shuttle missions – two as a shuttle pilot and two as mission commander. On my first flight it was my honor to serve as a crew mate with a member of this subcommittee, Senator Bill Nelson, an experience that established a bond of friendship with him and his family – Grace, Nan Ellen, and Billy - that my family and I cherish to this day. Between my third and fourth flights on the shuttle, I served as the Assistant Deputy Administrator of NASA here in Washington under then NASA Administrator, Dan Goldin. My primary responsibilities involved spearheading a review of the NASA's budget and its primary programs and projects and formulation of recommendations for program restructuring to fit within the budget constraints established by the Administration and the Congress of the United States. I left the Space Agency and active involvement in our space program in June of 1994, so I feel that it is appropriate that I be classified as an outsider in offering my perspectives on the issues before this subcommittee.

As was the case in 1992 when I came to Washington to assist with Administrator Goldin's efforts to redefine and streamline the Agency, NASA today finds itself faced with the challenges of redefining and reorganizing in order to support and carry out the President's Space Exploration Initiative and enable us to maintain our scientific and technological leadership in the world while we progress in a timely manner in our efforts to return humans to the lunar surface and on to Mars. At this time some of us are beginning to understand fully the statement credited to the late Dr. Bob Gilruth, director of the Johnson Space Center in what may be called the golden age of human space flight, when he said "People will realize how difficult it was to go to the Moon when we try to return." While we have a pretty good grasp on the technology to accomplish this mission, I'm not certain we have the national will power or determination. I do not mean to insult anyone's intelligence today, but I do wish to remind all of us that exploration of any sort is risky, expensive, and unpredictable. While we may be able to continue many of the science and exploration programs on which we have been embarked over the past forty plus years, we cannot do them on the cheap and we cannot do them in series. Human exploration and science experimentation and research are necessarily parallel

endeavors that are mutually supportive if we are to realize success in either. While the NASA Administrator, Dr. Mike Griffin, is making a very commendable effort to fit it all into today's NASA budget, it's like trying to fit fifteen pounds of stuff into a five pound sack. From my perspective, you in the Congress and the President must see your way to expanding the funding for the NASA by some marginal amount that will enable Dr. Griffin to retain emphasis on many of the science and aeronautics programs that are being reduced or cut. As an example, building a vehicle or set of vehicles to take humans to the Moon and on to Mars without continued emphasis on the life science research to understand more fully the environmental and human factors challenges that must be overcome to successfully allow humans to survive these journeys is a certain recipe for disaster and ultimate failure. Similarly, funding increased science exploration and experimentation through employment of robotic vehicles and remote sensing and satellite data gathering without continued improvement in our ability to safely send humans beyond Earth's bounds and on to other heavenly bodies literally defeats our innate human drive and curiosity to explore the unknown and venture from this planet in search of ways to improve our lives here at home. In the very simplistic and perhaps somewhat naïve words scribbled on a rough space exploration drawing by a young third grader in 1992, Samantha Aignier, "We'll never know if we don't go!"

Perhaps the greatest casualty of NASA's failure to adequately fund a balanced program of human exploration and science and aeronautics research will be the continued deterioration in interest in science and math among our elementary and secondary school students, not to mention the college and post graduate students who see no value in pursuing the fields of science and engineering where each year brings less and less funding for research to the university campuses. Where once students in elementary school responded with enthusiasm in large numbers that they wanted to be astronauts when they grow up, most no longer hold this aspiration when I visit the campuses around the U.S. to talk about my exploits as a test pilot and astronaut. Many of today's students don't even know that we still have Americans in space every single day on the International Space Station. They want to know when we're going to return to space and go to the Moon and Mars.

I'd like to offer a closing thought on what I believe continues to be one of the greatest benefits of human space exploration – the incredible opportunity for international engagement and cooperation in a common goal of furthering our understanding of this universe in which we live. Experts site all kinds of reasons for the peaceful cooperation of Russia and the United States today, but I feel that a primary reason that Russia even exists today in relative peace and prosperity is due to the continued support and cooperation we gave to them from the days of the Apollo-Soyuz Test Project in 1975 through the fall of the Soviet Union continuing to today. We have an opportunity to forge the same kind of alliance with the people of China by fully welcoming them into the family of space-faring nations and opening opportunities to them to join with us in the peaceful human and robotic exploration of space. As is a common practice in our military, peaceful engagement with potential adversaries frequently makes them long-term partners in pursuit of the common goal of international peace and stability. Likewise in science and technology research as well as human space exploration,

engagement with our potential adversaries has the great advantage of focusing our efforts on common, peaceful pursuits and advancing the cause of humankind here on Earth. We already know how difficult it is to get humans safely into space and back home to Earth. We needn't make it even more difficult by holding the NASA budget down to a level where we are forced to make the choice between scientific and technological research and human exploration thus decreasing our chances of successfully pursuing either.

Thank you again for this opportunity to share some of my thoughts with you today. Best wishes in your deliberations on the future of our national space program and the legacies it will leave to future generations.

Charles F. Bolden Jr.
Major General U.S. Marine Corps (Ret)
June 6, 2006