

July 31, 2009



NASA Administrator Charles Bolden and Deputy NASA Administrator Lori Garver during their confirmation hearing on July 8, 2009.

Photo: Getty Images.

Secure World Foundation Advisory Committee Undergoes Changes

Sincere congratulations and best wishes to Lori Garver and George Whitesides, who recently stepped down from SWF's Advisory Committee to fill posts with the [National Aeronautics and Space Administration \(NASA\)](#). Garver was nominated and recently confirmed as Deputy NASA Administrator, and Whitesides is Chief of Staff to NASA Administrator Charles Bolden.

Meanwhile, SWF welcomed General [Jim Armor](#) (ret.), Colonel [Phil Meek](#) (ret.), and Dr. [Art Morrissey](#) to its [Advisory Committee](#) during the months of June and July.

General Armor is founder and consultant with [The Armor Group, LLC](#) based in Virginia. He was Director, [National Security Space Office](#), Office of the Under Secretary of the [Air Force](#) until his retirement in 2008. He also advised the Office of the Secretary of Defense and the [Office of the Director, National Intelligence](#), on matters affecting national security space capabilities. Armor was commissioned in 1973 through the [Reserve Office Training Corps \(ROTC\)](#) program at [Lehigh University](#) in Bethlehem, Pennsylvania. He has served as a combat crew missile launch officer, a laser signal intelligence analyst, and a satellite launch system integrator. In addition, he trained as a Space Shuttle payload specialist, and was first to study information warfare while a research fellow at the [National War College](#). He served in the Air Force Office of the Deputy Chief of Staff for Plans and Operations, and in the Office of the Secretary of the Air Force for Acquisition where he worked various special access programs. Armor has held several program management positions, including Program Director of the [Global Positioning System](#). The general also served as Vice Commander of the [Warner Robins Air Logistics Center](#) at Robins AFB, Georgia. Prior to assuming his current position, he was Director, Signals Intelligence Systems Acquisition and Operations at the [National Reconnaissance Office](#).



Armor.

Colonel Meek has a general law practice in Austin, Texas, and focuses primarily on space law and policy matters. Prior to moving to Austin in September 2008, Meek served for 13 years as [Associate General Counsel for International Affairs](#) with the Department of the Air Force. His primary portfolio consisted of space law and policy, space arms control, information warfare, and the law of armed conflict. Meek also served as an [Air Force Judge Advocate](#) for 25 years, with senior JAG assignments including Director of International and Operations Law and a "triple-hatted" position as Staff Judge Advocate for three commands concurrently, specifically, [Air Force Space Command](#), United States Space Command, and [North American Aerospace Defense Command](#), Peterson Air Force Base, Colorado. He retired with the rank of colonel.

Dr. Morrissey, an aerospace consultant, was previously on the executive staff of [Ball Aerospace & Technologies Corporation](#) as Vice President of Corporate Business Development. Dr. Morrissey was involved in the company's strategic market planning and analysis activities, as well as coordinate business development across the company's three strategic business areas - civil space, commercial space and defense. Dr. Morrissey also worked for [Lockheed Martin Corporation](#) where he held a variety of business development and program management positions. Dr. Morrissey has held senior positions in the [White House, Office of Science and Technology Policy](#), the [U.S. Department of State](#) and the [Central Intelligence Agency](#), where he was responsible for space, advanced technology and intelligence

News Bits



► Secure World Foundation and the Space Foundation co-sponsored a highly successful panel in Washington, DC for Congressional staffers and aerospace industry leaders that discussed a variety of technical, policy, geo-political, and legal considerations regarding space weapons. This included the need for "rules of the road" for space operators and for a solid verification mechanism for arms control agreements.

According to the Space Foundation's website, "The audience comprised primarily Congressional staff, representing the House and the Senate at both an office and a committee level. Other attendees included representatives from a number of major aerospace companies. Space Foundation Vice President - Washington Operations and Government Affairs Brendan Curry moderated a panel featuring: **Brian Weeden**, SWF Technical Advisor (pictured above, at right); **Bruce MacDonald**, senior director with the Congressional Commission on the Strategic Posture of the United States; and **Eric Sterner**, a fellow with the George C. Marshall Institute. *Photo: Space Foundation.*

► The 2010 [International Space University \(ISU\) Symposium](#), to be held in Strasbourg, France February 16-18, 2010 will address space education and outreach. According to the ISU website, "Space can function as an excellent

matters. He holds a bachelor's degree and a doctorate in chemistry from [Washington and Jefferson College](#) and [University of South Carolina](#) respectively. He has served on numerous prestigious boards and panels, and is currently a member of the [Council on Foreign Relations](#).

Call for Leadership in Global Space Activities

During the week of July 20, 2009, when the world saluted the 40th anniversary of Apollo 11's mission that achieved the first human landing on the Moon, Secure World Foundation (SWF) called attention to several key findings in a newly issued report by the prestigious [National Research Council](#): *America's Future in Space: Aligning the Civil Space Program with National Needs*.

"This report recognizes the fundamental nature of outer space as a global commons that will take robust efforts in international cooperation to assure the sustainability of space activities over the long term," said SWF [Dr. Ray Williamson](#), Executive Director. Williamson noted the new report recognizes "strategic leadership will be achieved not by dominance...but by example and in cooperation with other nations."

"This recognition is an important step forward in true U.S. leadership in global space activities. Together, the nations of the world can make enormous progress in expanding our knowledge and use of the space environment. As this report emphasizes, we should find ways to work more effectively with others in those pursuits," Williamson explained.

New opportunities for space-based endeavors

[Phil Smith](#), SWF's Communications Director, also points to several key items that are underscored in the new study. "Beyond international cooperation on civil space programs, the report goes on to recommend that the President of the United States should find a way to streamline government space projects, find out where U.S. space policies come up short, and identify new opportunities for space-based endeavors," Smith said.

Specific recommendations in the report include several that fall under what SWF calls "space governance" - or the use of effective systems of governance to ensure sustainable activities in outer space. Smith added that there is no reason to limit the recommendations to domestic policy alone; indeed, the nature of space activities generally means international cooperation and coordination is required. "The report also highlights the need to integrate civil and national security space objectives according to one strategy, clearly a space governance pursuit that would have significant impact on international efforts," Smith concluded.

Purposeful, strategic U.S. space program

The National Research Council assessment, issued by a blue-ribbon panel of experts under the chairmanship of Lester Lyles, U.S. Air Force (retired) and now consultant, came to a central recommendation: The U.S. space program should align with broader U.S. national goals. Indeed, bringing into line the nation's space agenda with pressing issues - environmental, economic, and strategic - is a national imperative, and will continue to grow in importance, the report notes.

Coordination across federal agencies, combined with a competent technical work force, effective infrastructure, and investment in technology and innovation, the report observes, would lay the foundation for a purposeful, strategic U.S. space program that would serve national interests.

Lost in space: Collision of satellites in February demonstrates need for new system

By [Brian Weeden](#), reprinted from [The Durango Herald](#)

The most distressing aspect of the February 2009 collision of an active Iridium satellite with a derelict Cosmos satellite is it could have been avoided. The positions of both objects were well known to the U.S. military through the network of radars and optical telescopes that make up the Space Surveillance Network. They also have existing procedures to screen satellites for possible collisions and provide advance

educational thrust, not only to understand the world around us but also as a tool to lay the foundations of knowledge in training the younger generation. In this sense education serves in developing the full human potential of the broader population, not just attracting young people into studying mathematics and science for the nation's technical and economic benefit." ISU issued a call for papers on July 24, with a deadline for abstracts due by October 2, 2009. Notification to authors will be issued on October 28, 2009.

The Month Ahead

August 4-6
(Superior, Colorado)

Secure World Foundation Advisory Committee annual meeting.

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August 13
(Vancouver, Canada)

[Brian Weeden](#), SWF Technical Advisor, to participate in *China, Space and Strategy IV* meeting.

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August 15
(Boulder, Colorado)

[Dr. Suzanne Metlay](#), SWF Operations Director, to present on "Your Eyes on the Sky—NEO's Satellites and More" to Boulder Astronomy and Space Society.

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August 26
(Denver, Colorado)

[Phil Smith](#), SWF Communications Director, to attend Colorado Space Business Roundtable event.

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August 31-September 5
(Maui, Hawaii)

[Weeden](#) to participate in annual AMOS Conference.

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Weeden.

warning to the satellite's owner-operator. However, because of resource limitations, this screening is only done for a limited list of important objects such as the International Space Station and critical U.S. national security spacecraft. Iridium was also well aware of the risk of collision to its satellites, and had been working with the U.S. military to detect potential collisions until it stopped in 2008, saying there were just too many close approaches to handle cost effectively.

The good news is that there are a variety of options that could help prevent scenarios like this in the future. One would be for the U.S. government to release its high-precision tracking data to all satellite owner-operators, allowing them to perform their own collision-warning analyses. To be useful, though, this data would have to be more precise than the low-accuracy data the U.S. government already releases publicly.

A second option is to continue to keep the high-accuracy data private, and for the U.S. government to perform collision warning for all owner-operators. This is entirely possible, but would require a significant increase in the resources currently allocated, primarily in the number of trained analysts.

It also would require a policy debate about whether the military is the right department to be performing this task, as well as what the inherent liability and legal issues are.

The third option is for the U.S. government to allow, and preferably support, the creation of an international civil space situational awareness system. This system would have the goal of providing the basic tools necessary to enable all space actors to predict possible collisions and take avoidance measures. This includes positional data on objects in orbit, space weather data, and atmospheric density, plus the analytical tools to make decisions this data. It would also involve contributions of data on precise positions and possibly future maneuvers by commercial owner-operators.

Any of these three options would go a long way toward preventing future collisions such as this one. However, they cannot prevent collisions between objects that are not under control. Of the more than 19,000 objects tracked by the U.S. military, fewer than 1,000 are active satellites, and less than half of those are thought to have any maneuvering capability.

This is why collision warning and avoidance needs to be combined with continued emphasis on minimizing the creation of new debris and research into eventually being able to remove debris from orbit.

All three efforts are critical to ensuring the long term sustainability of space for all.