



**Statement before the
House Science, Space, and Technology Committee
Subcommittee on Space and Aeronautics**

***“NASA’s Future in Low Earth Orbit:
Considerations for International Space
Station Extension and Transition”***

Testimony by:

Todd Harrison

Senior Fellow and Director, Aerospace Security Project

CSIS

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Chairman Beyer, Ranking Member Babin, and distinguished members of the Subcommittee, thank you for the opportunity to testify on this important topic. The fundamental question we are addressing today is what the role of NASA should be in this transitional period from a focus on low Earth orbit (LEO) to farther reaching exploration goals on the Moon and beyond. When former NASA administrator Jim Bridenstine spoke at CSIS last year, he used the DIME framework of national power (diplomatic, information, military, and economic) to describe how he thinks about the role of NASA. As he noted, the “M” in DIME should really be lower case because by design NASA has only an indirect role when it comes to the military element of national power. I want to focus my testimony today on NASA’s diplomatic and economic roles and how that should impact our thinking about NASA’s future in LEO.

One of the most important but perhaps least appreciated roles NASA plays is in diplomacy. NASA has a rich history of building international partnerships around the globe, and it has agreements with more than 120 nations for science and exploration activities in LEO and beyond. While these partnerships are focused on activities in space, they have far reaching benefits on Earth as well. They help advance U.S. interests in areas such as the environment, human rights, and STEM education in less developed countries. Cooperation in space also increases transparency, builds confidence, and promotes responsible behavior in space.

For example, the coalition of 15 nations that signed the Intergovernmental Agreement that governs the ISS and all other nations that have partnered in different ways on the ISS in the past two decades have a tightly coupled and aligned set of interests in LEO. We all want to protect the investments we have made and the astronauts that serve aboard the ISS. Our mutual interests in LEO create a strong incentive for us to work together to establish basic norms of behavior, such as a prohibition on destructive anti-satellite testing and the deliberate creation of space debris. NASA’s continued leadership of the ISS coalition is critical to advancing this shared goal.

NASA’s role in advancing our economic interests is another factor policymakers must consider when planning for the future of the ISS. It is in our national interests for NASA to continue to be the world’s leader in pushing the limits of space technology in ways that create opportunities for the commercialization of space. To be clear, it is not NASA’s job to commercialize space technology and activities—that is a role best suited for the private sector. NASA’s role is to explore and take risks to improve our understanding of the space environment and to create the infrastructure that private companies can build upon.

Many new commercial space missions are currently be planned or explored by U.S. companies. Some of them have the potential to completely revolutionize the way we use space and operate in space. For example, commercial firms are exploring the potential of in-space mining and manufacturing. If successful, this technology would mean that large structures could be built in space using materials that are sourced in space, and propellant could be manufactured in space to

fuel and refuel other satellites. This would effectively break us free from having to launch everything we need in space from Earth and open up a whole new range of possible space missions. As another example, some commercial firms are exploring novel power and propulsion systems, such as new forms of nuclear thermal propulsion, that could revolutionize our ability to maneuver in space. NASA is an important enabler in the future space economy because it can take technical risks that private companies cannot afford or would otherwise not be willing to take, and it can lower the barriers to entry by providing enabling infrastructure to make more commercial missions feasible. NASA can both advance its science objectives and allow commercial firms to determine whether certain space missions are economically viable.

As we think about the diplomatic and economic roles of NASA in LEO, we must remember that we are not operating in a geopolitical vacuum. Other nations are competing with us in space, and perhaps our most formidable competitor is China.

The competition with China in space is multifaceted and includes an important security element that the Space Force and Intelligence Community encounter on a daily basis. But this competition also has a strong commercial and civil space element that some have called a new space race. Unlike the space race of the 1960s, however, the goal of this race is not a destination. It is not a race to see who can build the biggest space station, plant another flag on the Moon, or be the first to land humans on Mars. The real objective of this race is to see who can build the broadest and strongest international coalition in space. Whatever group of nations emerges as the leading coalition in space over the next decade will be the ones that set the de facto norms for the space commerce and exploration that follows. The Artemis program and the transition plan for the ISS are two of the main levers we control in this race. These programs are vital to maintaining our leadership role and the international coalition NASA has been building for decades.

But competition with China does not preclude cooperation. As the Members of this Subcommittee are well aware, we cooperated with the Soviet Union in space throughout the Cold War while we competed fiercely with them both in space and on Earth. That cooperation yielded many benefits, not just to our space exploration objectives and the safety of our astronauts but also in our diplomatic and military relationship with the Soviets. It opened new lines of communication between our governments that continue to benefit us today, and it provided greater transparency into parts of the Soviet space program that reduced some suspicions and tensions on both sides.

Since 2011, Congress has placed restrictions on NASA's ability to collaborate with China on civil space programs—a provision known as the Wolf Amendment. This provision was originally intended to pressure China to make human rights reforms and to stifle development of its space capabilities. After ten years it is clear that China has not improved its behavior when it comes to human rights, and China's space programs—both military and civil—have only accelerated. What is more concerning is that China is now reaching out to other nations—including some of our

closest allies and partners in space—and asking them to become partners in its space programs. China is actively building a coalition in space to rival our own.

In conclusion, I would urge the members of the body to think more holistically about the role of NASA in LEO and the transition plan for the ISS. A precipitous withdrawal of U.S. support for the ISS could create a diplomatic opening for China to expand its partnerships and ultimately its diplomatic and economic influence in LEO. Our goal should be to strengthen and expand the ISS coalition of nations while also building a new coalition to go to the Moon and beyond. It is my view that we should not let go of the ISS coalition before the Artemis coalition is fully assembled and operational.