

**Written Testimony of Susan Eisenhower
Before the Senate Committee on Commerce, Science, and Transportation
Subcommittee on Science and Space**

April 9, 2014

Mr. Chairman and Members of the Subcommittee, thank you for this opportunity to testify before you today. It is an honor to be here.

I hope today to address the geopolitical issues surrounding NASA's exploration efforts. I served on the NASA Advisory Council for eight years and was also a member of the International Space Station Management and Cost Evaluation Task Force. However, it was not until I wrote *Partners in Space: US-Russian Cooperation after the Cold War* that I fully understood the operational and geostrategic benefits of US-Russian cooperation in space. It is this point that I would like to examine with you today.

I would like to make it clear before I begin that it is essential, I think, for the United States and its allies to respond to the ongoing situation in Ukraine with appropriate and well-targeted sanctions on Russia, which will have a *direct* impact on President Putin's thinking. For reasons that I will outline, I do not believe, however, that disengaging in space cooperation is in our national interest.

Near and long-term goals

It has long been NASA's strategy to engage our international partners, who have diverse and valuable scientific and technological expertise. This is vital if missions of increasing complexity are on the international agenda.

This strategy has not only proven to be successful through cooperation on the International Space Station, I believe it will be the only way we can meet our long-term objectives of expanding mankind's presence in space. The issue then is not about long-term strategy, but about appropriate short-term measures—given the current geopolitical environment.

As you well know, strategy has to be informed by a simple calculus. Do the short-term and the long-term goals mesh? Or do short-term actions jeopardize or pose insurmountable road blocks to meeting one's overarching goal?

With those simple questions in mind, I was concerned to read NASA's announcement last week that, in light of the Crimean crisis, NASA will suspend "the majority of its ongoing engagements" with Russia, with the exception of continued US-Russian cooperation on the International Space Station. I believe that sweeping limitations of this kind are a mistake. A brief review of the past is instructive for understanding the vital role the scientific and technical communities have played and can continue to play in serving as a bridge between our two countries, especially during times of crisis.

With the dawn of the nuclear age and later the space age, the administration of President Dwight D. Eisenhower sought to avert the possibility of fostering an atmosphere of “paranoid uncertainty” between the United States and the Soviet Union. In 1953, in his Atoms for Peace speech, the president opened the way for the peaceful uses of the atom. As part of that proposal he initiated, with the scientific community, the Atoms for Peace conferences that brought countries together from across the globe to exchange papers on power generation, nuclear medicine and agriculture. These conferences, initiated first in 1955, survived the Soviet invasion of Hungary, Sputnik, the U-2 incident, the Cuban missile crisis – as well as the Soviet invasion of Czechoslovakia in 1968. As a result of that engagement, the Soviet Union declassified a whole field of nuclear science: fusion.

In 1955, the International Council of Scientific Unions spearheaded an international effort to study the earth. Scientists from the United States, the Soviet Union, and sixty-four other countries agreed that the International Geophysical Year would be marked in 1957-1958. Among its activities, it called for the Soviet Union and the United States to launch artificial satellites and it created a forum for international dialogue on science and the future of the Antarctic. This cooperation also survived those above mentioned crises. Despite this, the work of IGY continued and was augmented by US-Soviet negotiations that led the way for the Antarctic Treaty, signed by the United States, the Soviet Union and ten other countries in 1959. This assured in perpetuity the demilitarized status of an entire continent, preserving the Antarctic for international scientific research—a benefit for all of mankind. Had this US-Soviet cooperation been suddenly cut off, who knows what the impact would have been on Antarctica, then a contested continent.

Even though the 1950s/60s are considered to be, perhaps, the most perilous times of the Cold War, U.S.-Russian “engagement” was seen as a way to gauge the thinking of our adversaries, to understand how the other side approaches issues, and to build bonds among those who were not their country’s chief decision makers. In short: a way to mitigate the potential for “paranoid uncertainty” by achieving some level of transparency. At one point concern was such that there was not enough engagement, prompting the successful effort to sign a bilateral General Exchanges Agreement between the United States and the Soviet Union in 1958. Its role was to foster and, in some cases, mandate science, academic and cultural exchanges. This agreement remained in force until the collapse of the Soviet Union.

Space cooperation was a promising new avenue of engagement with the Apollo-Soyuz dock up in July 1975. But things began to change with the US boycott of the 1980 Olympics and the suspension of other cooperative activities in the aftermath of the Soviet invasion of Afghanistan. Until the Shuttle Mir programs (1992) very few people from the space community were schooled in the arts of East-West cooperation. If not for the end of the Cold War, the US and the Soviet/Russian programs might have been doomed to continue operating as rival entities.

With this history in mind, let me explain at least three reasons why US-Russian space cooperation should be continued without restriction.

First, decoupling could endanger safety.

Much has been said about our mutual dependency in space. It is not just our reliance on Russian crew transport that is at issue, Russia also relies on the United States for communications after launch and for ISS operations. The Russians also have scientific instruments integrated into our Martian and Lunar programs.

Even in day-to-day operations, it is logical and important to note that safety of human life requires international cooperation. Last week, NASA Associate Administrator Michael O'Brien wrote a memo to employees explaining the termination of many important relationships:

"This suspension includes NASA travel to Russia and visits by Russian government representatives to NASA facilities, bilateral meetings, email, and teleconferences or video conferences. At the present time, only operational International Space Station activities have been excepted."

But where does work on the ISS begin and where does it end? Continuous improvement and enhanced work on human safety and hardware investment is often made through tangential contacts and interaction. How easy will it be to draw the line between these baskets of activity if there cannot be visits between our two country's facilities or even email exchanges? This could be of major significance if there is an emergency in space that impacts the community beyond the operational side of the ISS.

Second, if the goal of suspending cooperation is designed to send a strong message to President Putin, we need be careful. It could backfire.

While it is true that NASA and its Russian counterpart, Roscosmos, have maintained a professional, beneficial, and collegial working relationship through the various ups and downs of the broader U.S.-Russia relationship, we are assuming that the ISS program will be unaffected by the current policy. In other words, we are presuming that Russian forbearance in this case is "a given." In recent days, however, there have been cries in the Russian Duma to respond to the cancellation of contacts with the US.

Of greatest concern to me, however, is the long-term impact. The Russian scientific community has traditionally been the most progressive of all political sectors in that country. People who are involved in international scientific cooperation are less likely to be nationalists. Rather than sending a strong message to President Putin, suspension of cooperation will strengthen hardliners who would prefer that Russia "go it alone" or work with countries more sympathetic to their views, such as China.

From a US perspective, we cannot afford to lose another generation of people who know how to cooperate with Russia on science and technology, especially with baby boomers retiring.

Finally, those who are aggressively pushing for using space as a way to “punish Russia” should be reminded that contact with countries that have such technical capabilities have, in the past, been a way to enhance transparency.

In my book, *Partners in Space: US-Russian Cooperation after the Cold War* (2004), our research revealed:

Cooperation has had a dramatically positive impact on the transformation of the Soviet hardliner aerospace industry, bringing unprecedented transparency and a move toward western best practices. Increased transparency has reinforced both expanded commercial cooperation and the political goals of civil space cooperation (e.g. nonproliferation).

Today, “Curiosity,” NASA’s Mars Science Laboratory, has a Russian instrument on it that uses adapted technology from the heart of the Russian nuclear weapons program. This is a perfect example of how space cooperation has aided in providing greater transparency on the Russian program.

Partners in Space also found that cooperation with Russia brought significant benefits, not only to our national security, but also to our technical knowledge—as Russians were at that time the leaders in long-duration space flight. Since then the lessons we have learned together have strengthened our overall performance in space and have provided an indispensable window into the workings of the Russian military-industrial establishment.

Conclusion

As we know from history, it is always easier to terminate scientific and technical cooperation than it is to get it started again. Before we codify this potential mistake, we must recall that there are ample historical precedents to support the value of science and technology cooperation, even in times of crisis. Space cooperation should be exempt from sanctions, just as Atoms of Peace and IGY survived the tumultuous ups and downs of the Cold War.

Space cooperation is the ultimate global bridge, and international space has unique capacities to serve the global community. It can be a force for preventive diplomacy, transparency and for sustaining and building bonds among those who are willing to put aside solely national pursuits. Like terrestrial cooperation, exemplified by the International Geophysical Year, space cooperation can serve as a stabilizing factor in space.

The lynchpin of this goal must be engagement. Through consistent interaction, larger goals can also be realized. This can only enhance America’s national security. We must be wary of any space policy that provides only short-term symbolic satisfaction, just as we should be cautious of those who might want to exploit this crisis for short-term commercial or political gain. They could, ultimately, undermine our long-term strategy in space and possibly jeopardize the enormous human and financial investment we have already made.

On March 27, 2014, former Senator Sam Nunn and former Secretary George Shultz wrote in a *Washington Post* op-ed, “A key to ending the Cold War was the Reagan

administration's rejection of the concept of linkage, which said that bad behavior by Moscow in one sphere had to lead to a freeze of cooperation in all spheres."

I would add that linkages between geopolitical crises and space should be avoided in favor of more direct ways to impose sanctions. Space can serve as at least one example of what it really means for the global community to set goals and see them through for the betterment of mankind.