

# How astronauts survive diplomatic tensions in space

March 22 2014, by Kerry Sheridan

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NASA photo shows on December 24, 2013, NASA astronaut Mike Hopkins, in the second of two spacewalks outside the International Space Station

While the United States and Russia traded sanctions this week in a burgeoning crisis over Crimea, astronauts from both nations rose above the discord in their sanctuary hundreds of miles from Earth.

Experts say mounting political and economic tensions between the old

Cold War foes are unlikely to upset cooperation in space at the moment—something which would be damaging to both sides.

Not that talking politics is taboo aboard the International Space Station (ISS), where Americans and Russians share close quarters, orbiting at an altitude of 248 miles (400 kilometers) over the Earth.

"We could talk about anything. We'd talk about politics," said retired US astronaut Leroy Chiao, who commanded the ISS for six months in 2004 and 2005.

"With something like this going on, I am sure the crew is talking about it, you know, in a friendly way."

American astronaut Mike Hopkins, upon returning from the ISS earlier this month after a half-year stay, said he considered his Russian counterparts "close friends" and described cooperation as "very strong."

Beyond the personal bonds forged in space, experts say the two lead nations in the 15-country collaboration have to get along because of the way the \$100 billion space station was designed.

## **'Like divorced couple'**

The Russian and US sections at the ISS have their own toilets and they have separate air-conditioning systems.

But many complex operations at the football-field-sized orbiting outpost require Russian and US cooperation, both in space and from control centers on the ground.

NASA mission control in Houston leads the effort, and the United States pays for the bulk of the yearly operating costs.

Howard McCurdy, an expert on space policy at American University, said it was not all marital bliss at the ISS.



US NASA astronaut Steven Swanson (L) sits together with Russian cosmonauts, Alexander Skvortsov (C) and Oleg Artemyev in front of a mock-up of a Soyuz TMA spacecraft in Star City centre outside Moscow, on March 5, 2014

"It is like a divorced couple trying to live in the same house," he said.

"You can do it, it is just not very easy. They both own the house. They both operate the house."

The United States needs Russia to transport astronauts to the space station, and currently pays an average of \$70.7 million per seat, according to a NASA spokesman.

The retirement of the US [space shuttle program](#) in 2011 left Americans without a vehicle for ferrying crew to low-Earth orbit, and a commercial replacement is not expected to be up and running before 2017.

Reliance on Russia's Soyuz spacecraft is a key reason why the United States cannot break off space ties.

However, the immediate future depends on how Russian President Vladimir Putin responds to US sanctions over Crimea, said John Logsdon, a member of the NASA Advisory Council.

"It is always in Russia's capability to cut off their service," said Logsdon, estimating the likelihood of such an action at 20-25 percent.

"It would be a catastrophe.

"There is mutual dependence and that provides a good motivation to isolate this from the broader issues."

Concerns have been raised about the US reliance on Russian engines to power Atlas V rockets which propel military satellites into space, in case Russia were to cut off supplies.

The Pentagon this week told the US Air Force to conduct a review of its use of the Russian-made RD-180 rocket motor in the Atlas V.



Photo taken on March 11, 2014, and released by NASA, shows US astronaut Michael Hopkins giving a thumbs up as he is helped from the Soyuz TMA-10M capsule shortly after its landing in the Kazakh steppe near the town of Zhezkazgan

But the Air Force already has a two-year stockpile on hand, so no drastic measures are imminent, a defense official told AFP.

## **Ready for blast-off**

The retired astronaut Chiao said it would take something much worse than the Crimea crisis to sever relations in space.

"I don't for a second think this is going to happen, but if we and Russia got into a shooting war, that would certainly disrupt operations aboard

the station," he said.

NASA also said it foresees no change to relations with Russia in space.

Representatives from Russia, the United States, Canada, Japan and Europe have lived continuously aboard the space station in rotating crews for more than 13 years, and the life of the station was recently extended to 2024.

"We are confident that our two space agencies will continue to work closely as they have throughout various ups and downs of the broader US-Russia relationship," NASA said in a statement to AFP.

On March 25 that relationship will be renewed once more, when one American astronaut climbs into a tightly packed Soyuz spacecraft alongside two Russian cosmonauts.

Together, they will blast off toward the [space station](#) to join the three men—one from Japan, one from America and one from Russia—who are already there.

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