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**Ukraine and the decoupling of space cooperation with Russia**

BY Philip citowicki

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The imposition of wide-reaching sanctions against Russia in response to the invasion of Ukraine will have long-lasting effects on the space industry, academia, and government cooperation.

International cooperation with Russia, principally from Western countries, will likely take a similar path to the ongoing bifurcation in supply chains and academic cooperation between China and the United States and its allies and partner countries. This ongoing competition for both market and academic dominance in high-technology is the most poignant manifestation of a new geopolitical era marked by growing economic fragmentation and the retreat of globalization.

Australia’s Director General of the Office of National Intelligence Andrew Shearer [told](https://www.afr.com/business-summit/putin-s-tactics-will-become-even-more-brutal-intelligence-adviser-20220309-p5a30n) the *Australian Financial Review*’s Business Summit this month: “Technology is the center of gravity in this new geopolitical contest, and we are going to see increasing maneuvering between the great powers in particular for pre-eminence in critical technology.” Space falls squarely into this technological contest with far-reaching implications for cooperation between Russia and the West.

In February, five days before Russia’s invasion of Ukraine, a Northrop Grumman Antares rocket launched a Cygnus cargo spacecraft to the International Space Station (ISS). The rocket’s first stage was built in Ukraine, but other parts came from the United States and featured components from many European nations, plus it was powered by a Russian engine. This exemplified how space cooperation has until now transcended geopolitical tensions. The continuation of such cooperation now looks unlikely.

Speaking to the Chinese media, Dmitry Rogzin, the head of Roscosmos, [stated](https://www.reuters.com/business/aerospace-defense/russian-space-chief-says-rocket-launches-europe-will-be-replaced-2022-03-24/) that the “European Space Agency and the whole European Union have taken a frenzied position on the conduct of Russia,” making cooperation “impossible.” Russia had already begun turning to China for greater space ties after the West imposed sanctions in response to Moscow’s annexation of Crimea in 2014. The latest spate of sanctions will further limit space cooperation with Russia and further push Moscow into Beijing’s orbit. Agreements on a number of missions have already been struck, including on the [Chang’e-6](https://nssdc.gsfc.nasa.gov/planetary/lunar/cnsa_moon_future.html), which seeks to return lunar samples from the far side of the moon, and the [Chang’e 7](https://www.space.com/china-moon-mission-change-7-targeting-water), which looks for water at the lunar south pole. Last year, Moscow and Beijing also released an ambitious [roadmap](https://spacenews.com/china-russia-reveal-roadmap-for-international-moon-base/) to construct a joint lunar base, the International Lunar Research Station.

Roscosmos’ future does not appear rosy, however. Russia’s space program has already come up against severe [cash shortages](https://arstechnica.com/science/2021/10/putin-slashes-russias-space-budget-and-says-he-expects-better-results/) and the Russian economy, barely bigger than Australia’s, faces significant contractions due to sanctions. Its ambitions and forecasted projects, including the development of its own space station, will likely face significant delays. “Roscomos is in for some very tough years,” David Burbach of the US Naval War College recently told [media](https://fortune.com/2022/03/19/ukraine-conflict-reshaping-space-geopolitics/).

The hiatuses on joint projects, including the [Venera-D](https://eurasiantimes.com/russia-suspends-cooperation-with-nasa-on-venus-exploration/) mission with NASA and the [ExoMars](https://spacenews.com/esa-suspends-work-with-russia-on-exomars-mission/) mission with the European Space Agency, represent some of the most immediately recognizable casualties for the space industry. But [OneWeb’s](https://oneweb.net/resources/oneweb-resume-satellite-launches-through-agreement-spacex) pivot to Elon Musk’s SpaceX to provide launch services, after the tearing up of its contract with Russia, most clearly indicates Russia’s accelerating decline. While a major space player that has developed, and is developing, some world-leading space technology, Russia amounts to less than a central player today and will face considerable financial constraints going forward.

The dilution of dependence on Russian space services continues. NASA, for instance, no longer relies on purchasing seats on the Russian Soyuz spacecraft, at around $80 million a seat; SpaceX now launches astronauts via the Commercial Crew Program. As a result, the United States and other space powers have less need to maintain strong ties with Roscosmos, as seen in SpaceX’s [offer](https://www.cnet.com/science/space/elon-musk-says-spacex-can-keep-the-iss-flying-if-russia-wont/) to boost the altitude of the ISS. Besides, Russia’s bluff and bluster around [deorbiting](https://www.politico.com/news/2022/03/02/russia-crisis-international-space-station-00013000) the space station already indicate an empire in decline.

By future-proofing access to facilities in orbit, NASA supports a number of private companies in funding the development of private stations that will replace the ISS. As Phil McAlister, director of commercial space at NASA [said](https://www.nasa.gov/feature/nasa-provides-updated-international-space-station-transition-plan), “The private sector is technically and financially capable of developing and operating commercial low-Earth orbit destinations, with NASA’s assistance.”

Even if joint projects, academic or commercial, included Russian expertise, the current geopolitical climate will likely place hard limits on such projects. A significant [collapse](https://www.france24.com/en/live-news/20220326-russia-west-scientific-collaboration-a-casualty-of-ukraine-war) in scientific collaboration has already occurred and, following Russia’s annexation of Crimea in 2014, Congress [banned](https://www.reuters.com/world/us-russian-cooperation-space-abides-despite-tensions-over-ukraine-2022-02-23/) US companies from using Russian rocket engineers for national security launches after 2022. “We need to completely reconceptualize and recognize that security and economics are completely integrated and interdependent,” Shearer pointed out in his speech to the business elite gathered in Sydney.

Some [argue](https://theconversation.com/russias-invasion-of-ukraine-threatens-space-cooperation-business-and-security-178397) that cooperation with Russia can continue, noting that Moscow remains committed to supporting the ISS and just [launched](https://www.washingtonpost.com/technology/2022/03/18/russia-soyuz-launch-iss-ukraine/) three cosmonauts to the station. However, Roscosmos continues to [express doubt](https://www.wsj.com/articles/russia-casts-doubt-on-future-participation-in-international-space-station-11646226056) over its future involvement with the ISS beyond 2024 as it continues to advance plans to build its own private space station. Roscosmos head Dmitry Rogozin states that the plan is to be ready by 2025, but the difficulty in meeting this timing would likely result in Russia requesting access to the [Tiangong space station](https://spacenews.com/china-to-open-space-station-to-commercial-activity/) that China hopes to complete this year.

Just as COVID-19 accelerated pre-existing trends around the bifurcation of the West and China, Russia’s invasion of Ukraine has fast-tracked divisions already underway. Geopolitics extend beyond Earth and the blurring between civil and military spheres of space will only intensify competition. The deepening cracks and heightening geopolitical tensions negatively impact the critical work on establishing rules, norms, and principles for responsible behaviors in space necessary to ensure that the space domain remains free, open, and safe for everyone.

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