## Death of Russian Spaceflight Chief Highlights Russia Space Agency's Ties to China

Commentary by Yang Ning May 22, 2020, Updated May 22, 2020

The head of Russia's human spaceflight program, Yevgeny Mikrin, recently passed away at the age of 65 after contracting the CCP (Chinese Communist Party) virus, the national space agency Roscosmos announced on May 5. President Vladimir Putin offered his condolences to his family and friends.

Since 1981, Mikrin has worked for Energia, Russia's largest aerospace company. He helped to develop crewed and cargo spacecraft control systems, multimodule space complexes, and automatic spacecraft. His death is a significant loss for Russia's rocket and space industry.

Dmitry Rogozin, the director-general of Russian aerospace firm Roscosmos, tweeted on May 1: "Data on space and rocket industry workers infected with a new coronavirus infection (2019-NCOV) at 20:00 on 04/30/2020 TOTAL DISEASE – 173, RECOVERED – 16, DIED – 6."

As of May 22, Russia has 326,448 confirmed cases of the CCP virus, with 3,249 deaths, according to data collected by Johns Hopkins University.

Why are there so many COVID-19 cases within Russia's space and rocket industry? Countries, regions, and organizations that have close ties with the Chinese regime have been heavily affected by the CCP virus, which broke out in China in late 2019. What is the connection between the Russian space and rocket industry and the Chinese Communist Party?

The arms race between the United States and the Soviet Union during the Cold War intensified as the two powers raced to put man on the moon. After the disintegration of the Soviet Union, due to an economic downturn and lack of funds, Russia's aerospace program diminished as technology and talent lagged behind. The United States has also slowed down its space programs due to the lack of strong competitors.

On the contrary, the CCP has invested heavily in China's space program with strong capital accumulated after economic reforms in the 1980s, especially in launching satellites and carrier rockets. However, there is still a huge gap to fill in aerospace technology for China. The CCP

knew it would be impossible to collaborate with the United States. So it turned to Russia for technical support in exchange for economic benefits.

On Nov. 1, 2017, China and Russia agreed to work together on six space-related technologies for the period from 2018 to 2022. The deal was one of roughly 20 agreements signed by Chinese Premier Li Keqiang and his Russian counterpart Dmitry Medvedev in Beijing at the 22nd regular meeting between the two countries' heads of state.

According to a press release from Roscosmos space agency, the six sectors of cooperation are lunar, deep space, joint spacecraft development, space electronics, earth remote sensing data, and space debris monitoring.

"Cooperation in the field of space transport services could involve the launches of Chinese spacecraft on board Russian carrier rockets to deploy China's multi-satellite constellation, as well as possible deliveries of rocket engines," Russian state news agency Sputnik quoted Roscosmos director-general Rogozin as saying. "[From] China, it is the supply of microelectronics that we need." He also said satellite navigation was a potential area of cooperation, with China set to complete its BeiDou

Navigation Satellite System by next year, and Russia rolling out its GLONASS constellation.

Sergei Anatolyevich Gavrilov is deputy head of the lower chamber in Russia's legislature, representing the Communist Party. According to the Chinese regime's mouthpiece People's Daily, Gavrilov has said Chinese collaboration in space programs will bring tremendous benefits to Russia.

To the Chinese regime, collaboration with Russia would boost China's technical advancements, allowing it to potentially overtake the United States in satellite navigation, and to exert the CCP's influence around the world.

On Nov. 29, 2017, Russia approved an agreement with China to protect classified technologies used in space activities, signed on June 25, 2016 in Beijing during President Vladimir Putin's official visit to China.

Multiple collaborations have also taken place between Russian and Chinese research institutes and universities. In 2017, Shanghai Jiao Tong University School of Aeronautics and Moscow Aviation Institute launched a joint educational program. Samara State Aerospace University also collaborated with Nanjing University of Aeronautics and Astronautics, and conducted academic exchanges within the former's Institute of Engines and Power Plant Engineering created in 2014.

On March 3, 2018, Roscosmos and China's National Space Administration signed a deal to work together in the field of moon exploration and deep space, and the creation of a data center on lunar projects.

On June 12, 2019, the United Nations Office for Outer Space Affairs and the China Manned Space Agency announced the winners of their joint opportunity initiative to conduct experiments onboard the China Space Station. The China Manned Space Agency selected nine projects, which involved scientists from 17 nations. Among the projects was an Indian–Russian observatory.

At the 2019 International Aviation and Space Salon held from Aug. 27 to Sept. 1 in Zhukovsky, a small town near Moscow, China showcased its domestically-developed drones, carrier rockets, and amphibious planes. China was the country partner at the event that year.

In an interview with Chinese state-run media Xinhua, Alexander Zheleznyakov, a member of the Tsiolkovsky Russian Academy of Cosmonautics, said he was impressed by China's competitive edge in the international commercial launch market and the Chinese rockets' technical advantage.

Satellite navigation systems are known to have multiple applications for communications, military, and navigation. The United States developed the Global Positioning System (GPS) which has been used in large-scale combat operations, such as the Gulf War. Likewise, GLONASS is Russia's global navigation system. China's BeiDou will be the fourth global satellite navigation system to be created, after the U.S. GPS, Russia's GLONASS, and the European Union's Galileo.

Through collaboration with Russia, China developed its own advanced positioning, navigation, and timing system, known as PNT, for the BeiDou navigation system. China plans to expand BeiDou with a military-driven objective. Now, the BeiDou system has moved to its third phase of development, which will feature middle-earth orbit satellites, three geostationary satellites, and three inclined geosynchronous orbits. The system currently has 33

satellites in orbit. The plan is to finalize the program in 2020 with 35 satellites in orbit.

China is marketing BeiDou to countries that are part of its Belt and Road Initiative (BRI, also known as One Belt, One Road) by offering them incentives. Through this initiative, Beijing invests in countries' infrastructure projects while building up geopolitical clout.

According to Spaceflight Now, when the system is complete, BeiDou will have eight satellites in geosynchronous orbit, being the only country to do so.

A 2017 report by the U.S. China Economic and Security Review Commission (USCC) details the implications the BeiDou system will have on the United States global positioning system. "BeiDou could pose a security risk by allowing China's government to track users of the system by deploying malware transmitted through either its navigation signal or messaging function (via a satellite communication channel), once the technology is in widespread use," according to the report.

It is no doubt the speedy development and advancement of China's aerospace programs and projects were supported by Russian experts and research institutes. Shall we say that the real factor behind the virus outbreak among many Russian aerospace experts is the space agency's lucrative and political ties to the Chinese Communist Party?

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