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THE EVOLUTION OF JAPAN'S SPACE STRATEGY AND THE JAPAN-US ALLIANCE

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In July 2020, the Japanese government signed a Joint Exploration Declaration of Intent (JEDI) with NASA to join the Artemis Program led by the United States, symbolizing a new level of bilateral space cooperation. In recent years Japan has come to be considered something of a "space power," with its technological advancements in key areas such as robotics a key contributing factor. Since 2008, the Japanese government has sought to develop its space policy as part of its national strategy. Its outer space aspirations are defined within the framework of "peaceful uses of outer space," in accordance with the 1967 Outer Space Treaty that stipulates exploration and use of outer space for "peaceful purposes."

Japan's space policy has long been restricted by the influence of its "peace clause," article 9 of the Japanese constitution. Owing to the influence of the peace clause as well as the so-called culture of "antimilitarism," a "resolution on the development of outer space and its basic use" was adopted in the Plenary Session of the House of Representatives in May 1969.

Japan's "Non-Military" Space Policy and the 1969 Diet Resolution

Japan's space policy was both motivated and influenced, not only by its interest in the development of space industry and technology, but also by the so-called 1957 Sputnik shock as well as the Apollo Program amid the Cold War period. Based on the 1969 resolution, Japan's space policy on the development and launch of rockets was limited to a "non-military" nature and of a "peaceful purpose" contributing to the advance of research, improvement of the lives of citizens, the welfare of humanity, the development of industrial technology, and international cooperation. Based on the 1969 resolution as a "principle of peaceful use of space," it was decided that the Japanese Self-Defense Forces (SDF) was forbidden to research and develop its own satellites.

In the budget committee of the House of Representatives in February 1985, the Japanese government explained that the "peaceful purpose" clause in the 1969 resolution meant a "non-military" purpose and the SDF was not allowed to possess satellites for lethal and destructive purposes, let alone acts of aggression. However, the government also argued that use of general satellites, such as Inmarsat and Intelsat, by the SDF should not be restricted by the 1969 resolution. The 1985 official view by the Japanese government confirmed that the SDF would be able to utilize satellites for peaceful purposes, but the Japan Defense Agency (JDA) was not allowed to research and develop its own satellites.

The Basic Space Law and the Dual-Use Nature of Japan's Space Technologies

In January 2007, China conducted an "anti-satellite test" (ASAT) and destroyed its aging weather satellite, demonstrating its military capabilities in space warfare. China's ASAT stimulated the development of Japan's space technology and facilitated the reconsideration of its non-military space policy. In this context, Kawamura Takeo, a Liberal Democratic Party (LDP) legislator and former minister of Education, Culture, Sports, Science, and Technology (MEXT) played a leading role in deliberating the

necessity of a legal framework to modify the 1969 Diet resolution. As a result, the Basic Space Law was created on May 21, 2008, promulgated on May 28, and entered into effect on August 27 of that year. The Basic Space Law modified the conventional Japanese space policy. It stipulates that Japan's space policy needs to contribute to international peace and security as well as the security of Japan, based on the Japanese constitution and international agreements.

Importantly, the Basic Space Law was supported by the Democratic Party of Japan (DPJ), then the largest opposition party, demonstrating the supportive national mood of the public. The Basic Space Law does not limit the use and development of outer space to "non-military purposes" and allows the Japanese government to conduct research and development of satellites for the defense of Japan as well as the maintenance of international peace and security. Since then, the dual-use nature of space technologies has facilitated the evolution of Japan's space policy both in the civilian and defense fields.

On May 18 of this year the Ministry of Defense (MOD) established the Space Operations Squadron as part of the Air Self-Defense Force (ASDF), with 20 personnel from the Fuchu Base in Tokyo. The mission of the Space Operations Squadron is to monitor space debris and suspicious satellites so that they do not collide with Japanese satellites. The Defense Ministry plans to expand the Space Operations Squadron into a unit with 100 personnel and to cooperate with the US as well as the Japan Aerospace Exploration Agency (JAXA) for establishing a space monitoring system in 2023. According to NASA, more than 500,000 pieces of space debris between one and 10 centimeters in diameter exist in outer space. Moreover, there are 5,000 satellites orbiting the earth and only 3,000 of them are active, so it is important to prevent space debris from colliding with each other. The squadron is also designed to "monitor the activities of satellites of countries that may seek to disrupt Japanese and/or US satellite operations through, for instance, the use of anti-satellite missiles, laser irradiation, communication jamming, or so-called 'killer satellites.'"

Advancing Japan's Space Strategy in the Japan-US Alliance System

The establishment of the Space Operations Squadron has strategic implications not only for Japan's space strategy but also for the Japan-US military alliance. The unit will cooperate with the US Space Command established by the Trump administration in 2019, due to the "growing Japanese concern that China and Russia are seeking ways to interfere (with), disable or destroy satellites." At a launch ceremony for the squadron, Defense Minister Kono Taro stated that "It is important that we gain superiority in the space domain as well … We must adapt to the new security environment as soon as possible." As mentioned before, China succeeded in its anti-satellite weapons test in 2007, and therefore it can be inferred that closer cooperation between Japan and the US will facilitate a more effective defense of outer space assets amid challenges presented by China and Russia.

From the perspective of military technology, modern weapons systems are dependent upon the military use of outer space. In particular, the global positioning system (GPS) satellites of the United States are essential to control military drones and support military units. Since both Russia and China have demonstrated their military capabilities to destroy satellites in outer space, it is considered critical for the US Space Command to defend its military and commercial satellites from possible attacks. Therefore, the Japanese government anticipates providing a supporting role as an alliance partner in defending US GPS satellites.

In this sense, Japan's space policy has been developed by the occurrence of "new threats and uncertainties" in East Asia, and by the development of more symmetrical alliance relationship**.** Since Japan has relied on "defense support program" (DSP) satellites from the US capable of detecting when ballistic missiles are launched, the protection of the DSP satellites has become vital to the defense of Japan, and especially, its ballistic missile defense (BMD) system. Japan's space policy has been continually evolving and it is speculated that Japan and the US could be the first military alliance to conduct defense cooperation in outer space, which could have

profound strategic implications for the Japan-US military alliance. In addition to the enhancement of the bilateral alliance, Japan's space strategy intends to strengthen its emerging "multi-domain defense force" in order to conduct cross-domain operations, especially including cyber, space, and electromagnetic aspects in which the US government has had strategic interests amid a changing global security environment.

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