



SPACE THREAT FACT SHEET

ANNEX

HEADQUARTERS SPACE FORCE INTELLIGENCE

CHINA

ISR Satellites

- ▶ In December 2023, China launched the Yaogan-41 remote sensing satellite into geosynchronous Earth orbit (GEO). The satellite could allow China to persistently monitor U.S. and allied forces in the region.

Beidou

- ▶ China's version of GPS, BeiDou, provides global, 24-hour, all-weather, high-accuracy positioning, navigation, and timing services. The PLA uses BeiDou to enable force movements and precision attack.

Hypersonic Glide Vehicle

- ▶ In July 2021, China conducted the world's first fractional orbital launch of an ICBM with a hypersonic glide vehicle. This marked the greatest distance flown (~40,000 km) and longest flight time (100+ minutes) of any PLA-developed land attack weapon system to date.

RUSSIA

Electronic Warfare

- ▶ Russia views electronic warfare as essential to gaining and maintaining information superiority and has fielded a wide range of ground-based EW systems to counter U.S. GPS, communications, and radars.

Nuclear Detonation in Space

An accidental or purposeful nuclear detonation in outer space could cause devastating consequences for the world and for the global economy. Such a detonation could affect all countries' national security and commercial satellites and infrastructure, including all States' ability to use space as a driver for development. Every UN Sustainable Development Goal includes an element that relies on satellites, and all of those satellites would be at risk of destruction.

People worldwide rely on space-based services daily for communications, financial, weather, energy, transportation, agriculture, emergency and disaster response, and national security services. Rapid and sudden loss or degradation of thousands of satellites operated by countries and companies around the world could have cascading, adverse global effects including:

- The life of astronauts in space would be at risk
- Communications, including broadband TV, data, and cellular services will be less reliable or unavailable due to significant and abrupt loss of satellite bandwidth.
- Civil unrest could erupt due to panic and fear regarding the disruption of basic goods and services, including financial services.

- Delayed emergency and law enforcement services due to response systems that are currently heavily reliant on space-enabled services.
- Delayed/Decline of sea, ground, and air travel and goods shipment, due to reduced safety and efficiency.
- Possible interruptions of energy services worldwide.
- Diminished ability to provide accurate weather forecasting and advanced warning for major events like hurricanes, typhoons, and wildfires, and degraded climate change monitoring.
- Agriculture impacts limiting the efficiency of any planting and harvest which would reduce crop input and yields.
- International trade will fall precipitously without space-enabled services due to reduced efficiency of systems, supply chain disruptions, and reduced confidence.
- Commercial space firms will lose almost all profitability, losing communications with their assets that will face exponentially increased risk for collisions with space debris.

Based on commercially available information, China was able to conduct a series of proximity operations in 2024 involving three Shiyang-24C experimental satellites (SY-24C 01/02/03) and two Chinese experimental space objects, the Shijian-6 05A/B (SJ-6 05A/B). The three SY-24C satellites were initially inserted into an orbit co-planar with the SJ-6 05A/B pair at time of launch in December 2023. Beginning in the middle of March 2024 and ending in late April 2024, the five-satellite cluster performed a multitude of proximity operations with under 1 km separation, including two simultaneous proximity events at the same time. In September 2024, the SY-24C 02 and SY-24C 03 performed three separate approaches within 1 km, two of which were multi-day events. In early December, during another multi-day sequence, SY-24C 03 and SJ6 5A were separated by 10's of meters on five occasions with associated relative velocities less than 10 cm/s. After this event all five satellites re-established a maneuver pattern to maintain separation of more than 100 km; similar to holding patterns between proxops activity over the last year. These operations demonstrate that, when necessary, the Chinese can efficiently and consistently execute close proximity operations in low Earth orbit which have a variety of military applications, to include intelligence collection and co-orbital antisatellite operations.