

**Statement for Joint Committee Hearing
Subcommittees on
Strategic Forces and Seapower and Projection Forces
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Chairman Rogers, Chairman Forbes, Ranking Member McIntyre, and Ranking Member Cooper:

Thank you for convening this hearing. We need a lot more attention to this problem to help shape our judgments about what to do. The topic is very important, the facts of the matter at hand are debated, and the consequences of the various approaches before us are neither clear nor guaranteed.

China's Need for Counterspace

China is a large, growing, militarily and economically strong, assertive power, and it has gone to war to expand its control over contiguous regions at least four times since the Korean War.¹ It might well have done so again in its recent disputes with Vietnam, Korea, Japan, the Philippines, and Taiwan, except that its demands now involve a region of national security interest to the United States and US allies. China is not yet ready for a military confrontation with the United States.

If things go well that confrontation may never occur. But China does seem determined to prepare for one as it seeks to exert unilateral authority over an ever-expanding neighborhood. A bellwether here is China's experimentation with counterspace operations. Deprived of reliable and timely space support, US force movements would be slower and less coordinated, its longer-range weapons less responsive and less accurate, its tactical operations in general less focused and more costly, and its global awareness more myopic and less timely.

China's counterspace efforts leaped to world attention in January 2007 with its notorious demonstration of direct ascent/hit-to-kill technology. It is surely looking at other approaches, too, including other kinetic energy weapons, lasers, jammers, and cyber tools to attack data and command and control systems. For the near term, at least, it will probably favor systems to achieve a mission kill by attacking US satellites directly, from orbit or from the ground. The effects of other attacks, on ground stations and data streams, for example, at present seem less assured, owing for example to redundant communications pathways, mobile facilities for command and control, direct downlink options, cyber defenses, and advanced inertial guidance devices in terrestrial weapons.

Developing a means to attack a satellite is one effort; discovering which satellite to attack is another. Trying to link specific satellites to particular military effects can be challenging. (The US faces the same problem itself in deciding what kind of

protection to provide for which satellites.) Few satellites are single function, and terrestrial forces might find effective substitutes for lost space support.

I expect targeting is a problem, perhaps *the* problem, that will be addressed using the sort of capabilities for precision orbital and proximity operations that China demonstrated a few months ago. Such operations could help China characterize the US space architecture, as part of China's intelligence preparation of the battlefield, and sensors placed close to US satellites could provide clues about the how, what, and when of the satellites' use for military operations. If so, more extensive examination and operational probes can be expected.

US Planning

The United States, meanwhile, seems still to be without a strategic view of how to help China become a constructive partner in the world community. Was the debris-generating ASAT shot the warning of a bully? A plea for a space arms control agreement? Evidence of a rogue PLA? Is the assertion of control over previously open international airspace (and now backed with military threats) an appeal for the just recognition of legitimate claims? Would acceding to China's actions nourish peace or invite further international extortion?

The perspective offered here is that the US and China are in a long-term military competition which includes a significant effort in space. This competition is not a policy of momentary advantage or transient appeal, and it creates a core issue of national security between China and the United States. It is about, and will require, real capabilities. Finding ways to negate the US military space advantage is a compelling strategic requirement for China, the pursuit of which shows no signs of being moderated by the Defense Department's proselytizing of space "norms" or "deterrence by demarche" or the European Union's struggle to write a Code of Conduct for good guys in space.

Further, the competition is less about space as such than about advantage in the joint fight, the contribution of space to US combat capability. The US National Space Policy issued in 2010 recognized this element, emphasizing the need to assure that functions essential to military operations were provided across the conflict spectrum. Those capabilities might be found in new weapons, tactics, or cyber operations, as well as in space protection. (It appears from public documents that the Space Protection Program of the Defense and Intelligence Community would determine priorities on a different basis. The caution here is that trying to protect most satellites from most threats is a quick path to the wrong side of a cost-imposing strategy.)

The United States has much to do if it is to compete effectively. We need experiments, demonstrations, and exercises that more realistically test our forces' abilities to detect, attribute, and respond to attacks on our space systems. We need to develop, execute, and repeatedly test plans for operations when space is contested, particularly for power projection. We need to coordinate developing and planning for space defenses. We need to assess the cost-effectiveness of selected alternatives to space support. And I hope that we can further integrate space into

the joint fight by coupling space programs more closely with other force development activities, including advanced development programs and “lessons learned” reviews.

At the same time we need to ensure that essential space-based support for US military operations will be sustained as long as needed. In previous decades space protection confronted the argument that a dollar spent on protection was a dollar lost to mission performance. Today it seems likely that without protection there will be no mission performance. We might complicate China’s targeting problems by exploiting deficiencies in its Space Object Surveillance and Identification (SOSI) capabilities, the sensors used on earth and in orbit to detect and track potential targets. We might do more to harden satellite subsystems to resist thermal and electronic attacks. And we might find ways to engage and defeat an attacker’s weapons before they engage their target, our satellite.

Conclusion

None of this is meant to suggest that war with China is inevitable. It does suggest that a good way to help China join and strengthen the existing international order is to be prepared to maintain American principles militarily, including in space.

ⁱ Channel Islands, 1958; Indian Border, 1962; Ussuri River, 1969; Vietnam, 1979.