

6.1 Offensive Realism Speaks: Troubling Future

This study has thus far attempted to describe and explain developments in China's militarization of space and the U.S. response (or lack thereof) to those PRC developments and actions. In this chapter we turn to the implications of the deeper militarization of space, and discuss ways in which China's ASAT weapons development could impact upon U.S.-Chinese relations in the years ahead. Naturally, this is a somewhat speculative endeavor to undertake given the uncertainty of the future, and the inherent difficulty (some might say impossibility) of predicting it. However, within the limits of the framework laid out in this study, it should be possible to discuss the broad contours of what one might expect to see transpire between the U.S. and the PRC in the years ahead.

If we start with the theory of offensive realism, a theory which predicts a natural and unavoidable great power competition between the U.S. and the PRC in the years ahead as each state attempts to increase its own power at the expense of the other, we get a rather bleak picture. The anarchy inherent in the international system as it exists today and is likely to continue for many years ahead, will force the U.S. and the PRC into a security dilemma, wherein each state will not only seek to actively deter the other from gaining power at its expense, but will also aggressively seek out opportunities to trump the other in order to gain

power. This intellectual rubric is not nearly as appealing its alternatives, integrationism for example, however, the nature of the international system makes it a powerful predictive force. The PRC's long development, testing and, it now appears, operational deployment of counter-space weaponry to augment its asymmetrical anti-access strategies aimed at the U.S. reinforces this reality.

From the perspective of the PRC, which as a rational state actor in an uncertain world must plan for a power competition with the U.S. and is faced with currently limited capabilities relative to its powerful adversary, counter-space assets and space weapons represent an overwhelming strategic imperative. If one assumes that the PLA is responsibly conducting its duty to actively prepare for the defense of China's core national interests, which in some cases are sharply incongruent with the core national interests of the U.S., one must assume that the PLA will continue to develop and deploy counter-space and space weapons systems as rapidly as possible. For indeed, counter-space platforms are a key component of China's asymmetric strategy to deter and defeat the U.S.; and, at the same time, space platforms also provide domestic legitimacy and international prestige for the CCP government, which thirsts deeply for both. Strategically speaking, ASAT weapons therefore represent a double bonus for the PRC. Conversely, for the U.S., which relies tremendously upon its military space infrastructure and is highly vulnerable to asymmetric space threats, Chinese ASAT weapons testing and deployments represent a highly negative development.

6.2 Implications: Chinese ASAT Threat a Reality

In many ways China's counter-space platforms, such as its already operational directed-energy, ground-based lasers and its direct-ascent, solid-fueled (and therefore rapidly deployable) ASAT missiles that can be launched from any of China's hundreds of road-mobile, SRBM and MRMB launchers, already represent a real threat to U.S. forces. This threat will only grow and ramify with time, perhaps geometrically so, as the PRC continues to grow its young stock of operational *Dong Feng-31* (DF-31) road-mobile ICBMs, which while generally thought to be tipped with 400 kiloton nuclear warheads,²³⁵ could be modified to attack U.S. national security satellites in GEO with KKV's or future co-orbital killer satellites, EMP weapons and high-powered microwave weapons, all of which are under development. In the interim, General Cartwright's statement, mentioned previously, that the PRC would be able to destroy all the U.S. reconnaissance satellites in LEO by 2010 appears to be correct.²³⁶ According to Desmond Ball, it would require approximately 20 ASAT missiles of the type that destroyed FY-1C last year to destroy 6-7 LEO satellites, which is the number of current U.S. Crystal and Lacrosse space vehicles currently believed to be in orbit. Assuming they passed over or near the PRC, U.S. spy satellites would indeed be

²³⁵ Wendell Minnick, "China Speeds ICBM Plans," *Defense News*, July 10, 2006. Accessed on the Center for International Security and Cooperation website on May 7, 2008, <http://cisac.stanford.edu/News/837/>

²³⁶ Allowing, of course, for the Misty stealth satellite, which the PRC would presumably not be able to destroy in anything short of a HAND (high altitude nuclear detonation) attack. This may be why General Cartwright added the caveat "basically" to his reported statements.

vulnerable to China's ASAT weapons by 2010, as 20 operational, direct-ascent ASAT missiles would presumably be easy enough to field by that time given that the PRC is already mass-producing well over a hundred similar missile platforms a year. All one would need to modify would be the warhead and guidance package, both of which have been already been proven and have been operational as of January 11, 2007.²³⁷ The PLA can be expected to continue to develop its ASAT guidance package (which is reportedly radar based and therefore highly vulnerable to jamming) in order to overcome U.S. defense satellites' built-in counter-measures, which are thought to be quite technologically impressive.²³⁸ Therefore the PRC already has an operational ASAT capability, and one that is likely to grow in sophistication and capability. This will add to the U.S. imperative to counter and deter the Chinese counter-space weapons, and further fuel the U.S.-Sino cold war style build-up in space mentioned previously. In the near-term China is unlikely to be able to compete directly with the U.S., and therefore will continue its asymmetric efforts to exploit the U.S. vulnerability in space. Looking more distantly, however, one can forecast a situation where

²³⁷ The former Soviet Union's co-orbital satellite killer program and the U.S. direct-ascent miniature-homing vehicle program, both show that after several unarmed test fires, only one successful test hit is needed for an ASAT program to be operational.

²³⁸ In an interview the author conducted with Mark Stokes on April 28, Mr. Stokes suggested that the key reason NRO (National Reconnaissance Office) satellites are so highly classified is that they have such advanced counter-measures. Otherwise, they are just giant mirrors, with little to hide. In terms of counter counter-measures, Mr. Stokes suggested that the Chinese could develop ASAT guidance packages that combined radar, electrical and heat-seeking tracking devices so that if one was jammed, the other could take over. The former Soviet Union used similar technology (combined with over the horizon radar) to track U.S. Carriers, and the PRC is already working on such technology in order to track and target U.S. carriers with SRBMs and MRBMs.

China is competing with the U.S. in space (and on terra firma) as more of a peer-competitor. In such a situation, whereby there is a relative balance of power and mutual reliance upon orbital space, one could foresee increased stability and something akin to the *détente* that characterized the later stages of the cold war and led to U.S.-Soviet cooperation in outer space. However, as noted by a recent study, it will be a long time before the PRC can be considered a true peer competitor of the U.S. in space.²³⁹ In the interim, there is a strong possibility that the relationship between the two powers will be unstable, with potential global repercussions. China's irresponsible actions in space only underscore that growing trend, and point to a disturbing strategic environment in the years ahead. That said, the likely U.S. response to any ASAT attack on an American government satellite, which would be viewed much in the same way that an attack on U.S. terrestrial forces would be (i.e. an act of war), probably rule it out barring a massive miscalculation on the part of the Chinese leadership or a Chinese decision to engage in a Pearl Harbor style sneak attack. The danger lies in the fact that as the PRC's counter-space capabilities grow and become more subtle with the development of micro-satellites, nano-satellites and other less conspicuous ASAT platforms which could potentially interfere with U.S. satellites without going so far as destroying them, the U.S.-Sino relationship in space may become more unstable because the potential Chinese menu of options would be increasingly tempting, offering as it would ever more possibilities at a time when the U.S. reliance upon

²³⁹ Pollpeter, 3.

satellites was ever greater. To offset this scenario, which would mix a dangerous brew of Chinese capabilities with U.S. vulnerabilities in a situation that could escalate rapidly to general war, the U.S. can be expected to not only diversify and strengthen its orbital assets, but also to develop better air-breathing reconnaissance platforms, such as smaller, stealthier Unmanned Aerial Vehicles (UAV) with longer dwell times in order to have the ability to rapidly restore lost satellite coverage in a crisis. This U.S. diversification and multiplication of reconnaissance assets would thereby both strengthen the durability of its C4ISR network and force the PRC to plan for more targets, thus making it a less tempting option and creating an environment for better deterrence. Let us now conclude this chapter with a summation and a brief policy suggestion.

6.3 Offensive Realist Policy Prediction

The successful Chinese ASAT test the world witnessed in the January of 2007 was not a diplomatic anomaly caused by a PRC desire to force the issue of space arms control nor the result of inter-bureaucracy miscommunication, rather, it was the natural progression of the Chinese governments unique party-military relationship and the PLA's strategic thinking. Despite its rhetoric of peace and shared prosperity, China is aggressively seeking to defeat the Taiwanese people psychologically and trump the U.S. militarily through the use of counter-space weapons. It would be a great folly for the U.S. to limit itself in space because not only does it enjoy a great advantage there, any treaty limiting the

weaponization of outer space would be impossible to verify given that China's space program is opaque and military-controlled. It seems clear that American policymakers understand the importance of outer space to U.S. national security, and for that reason one can expect an increase (albeit a covert one) in the build-up of space control assets, especially those that would provide for better space awareness, in conjunction with terrestrial elements such as UAVs to provide a measure of redundancy in case orbital assets were to become disabled or destroyed. For the reasons illustrated in this study, China can be expected to continue down the road of space weaponization that it has already traveled for years, and space will ever more deeply become the realm of a cold-war-style strategic competition between the U.S. and the PRC. This is undesirable given the current level of international cooperation enjoyed in outer space, however, the anarchic nature of international relations makes it unavoidable that great powers hedge against each other, and one can hardly think of two great powers with a greater need to hedge than the U.S. and the PRC.