Michael Krepon

Space: A Code of Conduct

THE CHALLENGE

Satellites are indispensable and vulnerable. Satellites perform essential military functions. They provide early warning of missile launches and offensive military preparations. They provide intelligence to monitor compliance with treaties, or the emergence of new security challenges. They help soldiers communicate and navigate in unfamiliar terrain. Satellites also guide weapons to their targets. They help many countries, rich and poor, to manage and develop their natural resources. Satellites provide early warning of disastrous storms, and help to pin-point relief efforts. They are essential for communication and global commerce. Emergency cell phone calls and pagers depend on satellites. Many essential services, including those provided by the medical and banking professions, would break down if satellites fail. Anti-satellite weapons have been tested recently by China and the United States, and many military technologies can be adapted to harm satellites. The challenge we face is how to best assure that US satellites will remain available to advance US national and economic security.

THE CONTEXT

The military potential of satellites was evident at the very dawn of the space age, with the launch of Sputnik in 1957, and became widely evident to military establishments during the first US war against Saddam Hussein. Many strategists have presumed that space would not just be used for military purposes, but that it would actually become "weaponized." The distinction is crucial: satellites have long served military purposes, but space has not yet become another domain where weapons are deployed that could be used to decide the outcome of battles. There were good reasons in the past why efforts to weaponize space failed to gain traction. During the Cold War, if one superpower decided to attack the other's satellites, it could expect a devastating response, perhaps by nuclear weapons that relied on satellites. Now that the Cold War is over, some in the United States wish to test and deploy space weapons because of American military superiority and our significant dependency on satellites. One way for weaker powers to fight the United States asymmetrically is to attack US satellites on which American forces depend.

China and the United States tested destructive anti-satellite weapons in 2007 and 2008. China and Russia have tabled a draft treaty banning space weapons, which the Bush administration has opposed. The forum where multilateral treaties are negotiated, the 65-nation Conference on

Disarmament in Geneva, requires consensus and has been tied up in knots for over a decade. The only prior attempt to negotiate a superpower ban on space weapons, during the Carter administration, failed because of difficulties in defining and verifying space weapons.

WHERE TO START

- **The US Army, Navy and Air Force all abide by codes of conduct when operating in close proximity to Russian forces. These "rules of the road" were established in executive agreements. (The Incidents at Sea Agreement (1972) and the Dangerous Military Practices Agreement (1989). A comparable code of conduct for responsible space-faring nations could reinforce international norms against interfering with satellites.**

  Executive agreements can be bilateral or multilateral. Only rarely are they voted on, with passage requiring simple majorities, in the House and the Senate. (The first strategic arms control agreement in 1972 was an executive agreement.) There are no more than a dozen major space-faring nations that can launch their own satellites. If most or all of these nations could agree on a code of conduct, they would strengthen international norms and make it less likely that outliers will act otherwise. If the Conference on Disarmament continues to be deadlocked, the United States could initiate negotiations among major space-faring nations to establish rules of the road. One key element of a code of conduct would be a pledge not to engage in harmful interference against space objects.

- **Diplomatic initiatives are only part of the answer to the dilemma of satellite vulnerability and indispensability. Sound military initiatives can also reduce satellite vulnerability.**

  In the past, the United States has relied heavily on a few, hugely expensive intelligence-gathering satellites. It makes good sense to put more eggs in more baskets, even if individual satellites have less capability than very expensive satellites. Marginal improvements can also be made to protect against some threats, such as jamming. But even with these initiatives, satellites will remain vulnerable to attack. Because the consequences of satellite warfare between major powers are so uncertain and dangerous, no satellites have been attacked in crises or in combat. A combination of diplomatic and defensive military measures can extend this record.

- **Propose a moratorium on further ASAT testing. A moratorium on new anti-satellite tests, whose extension is conditional on the absence of ASAT tests by other nations, can also help strengthen international norms against dangerous military practices in space.**

  ASAT tests have been very infrequent, especially tests that blow up satellites and create lethal fields of space debris. The Reagan administration carried out a destructive ASAT test in 1985, followed by the Chinese test in 2007, and the Bush administration's ASAT test in 2008. ASAT tests are the most visible piece of space warfare research and development programs. Since all space-faring nations stand to lose if satellites are targeted in crises and warfare, a moratorium on using satellites as target practice makes good sense. If another nation breaks this moratorium, the United States has the option of following suit. Because a number of weapon systems could be used to harm satellites, such as certain ballistic missiles and missile defense interceptors, the United States and other major space-faring nations already have the means to harm satellites, if this Pandora's Box is opened. Deterrence capabilities can serve as the backup to a moratorium on further ASAT tests.

WHAT'S ON THE LINE

Because of the recent Chinese and U.S. ASAT tests, other space-faring nations are likely to accelerate hedging strategies in the event of warfare in space. The continued flight testing of ASATs and their possible use will decrease space assurance – that is, that crucial satellites will be available when U.S. presidents, military forces, businesses, and citizens need to use them. Increased diplomatic efforts by the United States, together with more substantial measures that make it less likely that satellites can be "grounded" will increase space assurance. A treaty banning all conceivable space weapons is a bridge too far. A code of conduct can be concluded in the near term, and can increase space assurance.

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Michael Krepon is co-founder of the Stimson Center and the author or editor of thirteen books and over 350 articles. Prior to co-founding the Stimson Center, Krepon worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter Administration, and in the US House of Representatives, assisting Congressman Norm Dicks. He received a MA from the School of Advanced International Studies, Johns Hopkins University and a BA from Franklin & Marshall College. He also studied Arabic at the American University in Cairo, Egypt.

Krepon divides his time between Stimson's South Asia and Space Security projects. The South Asia project concentrates on escalation control, nuclear risk reduction, confidence-building, and peace-making between India and Pakistan. The Space Security project seeks to promote a code of Conduct for responsible space-faring nations and works toward stronger international norms for the peaceful uses of outer space.

ADDITIONAL ANALYSIS:

For additional original research on space security from Michael Krepon, please read these publications:

Better Safe than Sorry: The Ironies of Living with the Bomb (Stanford University Press, 2009)

Escalation Control and the Nuclear Option in South Asia (Stimson Center, 2004)

Nuclear Risk Reduction in South Asia (Palgrave, 2004)

Space Assurance or Space Dominance: The Case Against Weaponizing Space (Stimson Center, 2003)