

Overview of Counterspace Threats

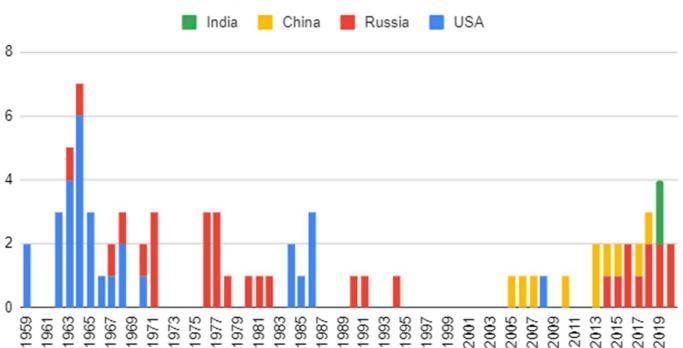
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History of ASAT Tests in Space

ASAT Tests By Country and Year



Year

https://docs.google.com/spreadsheets/d/1e5GtZEzdo6xk41i2_ei3c8jRZDjvP4Xwz3BVsUHwi48/edit#gid=0

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2021 Global Counterspace Assessment

	China	Russia	U.S.	France	India	Iran	Japan	North Korea
LEO Co-Orbital	Y	G	Y	R	R	R	R	R
MEO/GEO Co-Orbital	Y	Y	Y	R	R	R	R	R
LEO Direct Ascent	G	Y	Y	R	Y	R	R	R
MEO/GEO Direct Ascent	Y	Y	Y	R	R	R	R	R
Directed Energy	Y	Y	Y	Y	R	R	R	R
Electronic Warfare	G	G	G	Y	Y	Y	R	Y
Space Situational Awareness	G	G	G	Y	Y	Y	Y	R
Legend: none R some Y significant G								

https://swfound.org/counterspace/



U.S. perspective

- Very concerned about the vulnerability of US spacepower, particularly in future conflicts with other Great Powers (Russia, China)
- National policy since 2011 has been to *increase the resilience* of US space capabilities to *deter attacks by denying benefits* while retaining ability to *fight and win conflict* that does extend into space
 - Where possible, shift from small numbers of large, expensive satellites to many smaller/cheaper satellites
 - Otherwise, add more survivability features to satellites (better maneuvering, threat detection, countermeasures)
 - Leverage commercial services and allied capabilities to complement US capabilities
 - Establish norms of behavior to help identify abnormal behavior/threats and shape international pressure
 - (?) Develop offensive capabilities to counter adversaries space systems during a conflict

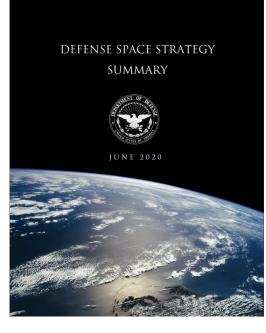
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NATIONAL SECURITY SPACE STRATEGY

https://www.dni.gov/files/documents/New sroom/Reports%20and%20Pubs/2011 n ationalsecurityspacestrategy.pdf

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https://media.defense.gov/2020/Jun/17/2 002317391/-1/-1/1/2020 DEFENSE SPACE STRATE GY SUMMARY.PDF

Relevant documents



SECRETARY OF DEFENSE 1000 DEFENSE PENTAGON WASHINGTON, DC 20301-100

JUL - 7 2021

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS C SECRETARIES OF THE MILITARY DEPARTMENTS CHAIRMAN OF THE JOINT CHIEFS OF STAFF UNDER SECRETARIES OF DEFENSE CHIEFS OF THE MILITARY SERVICES COMMANDERS OF THE COMBATANT COMMANDS GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Tenets of Responsible Behavior in Space

The Department of Defense has been a leader in space operations since the dawn of the space age. Throughout its history, the Department has pursued its space mission while ensuring and maintaining the safety, security, subtiliv, and sustainability of the domain. As more actors come to space, the domain is changing, with an increased risk of collisions, as well as of miscalculations or misunderstandings. It is incumbent on the Department to continue space leadership through demonstrating and acknowledging responsible behavior in space.

Unless otherwise directed, DoD Components will conduct space operations consistent with the following Tenets of Responsible Behavior:

· Operate in, from, to, and through space with due regard to others and in a professional

· Limit the generation of long-lived debris.

- · Avoid the creation of harmful interference. · Maintain safe separation and safe trajectory.
- Communicate and make notifications to enhance the safety and stability of the domain.

Commander, U.S. Space Command, will collaborate with DoD stakeholders to develop and coordinate guidance regarding these tenets and associated specific behaviors for DoD operations in the space area of responsibility, and recommend them to the Secretary of Defense for approval. The Under Secretary of Defense for Policy will lead DoD activities to advance these tenets, as appropriate, within the U.S. Government and in international relations.

Stop P. Suntz



https://media.defense.gov/2021/Jul/23/20 02809598/-1/-1/0/TENETS-OF-**RESPONSIBLE-BEHAVIOR-IN-**SPACE.PDF