



Promoting Cooperative Solutions for Space Sustainability

Overview of Counterspace Threats

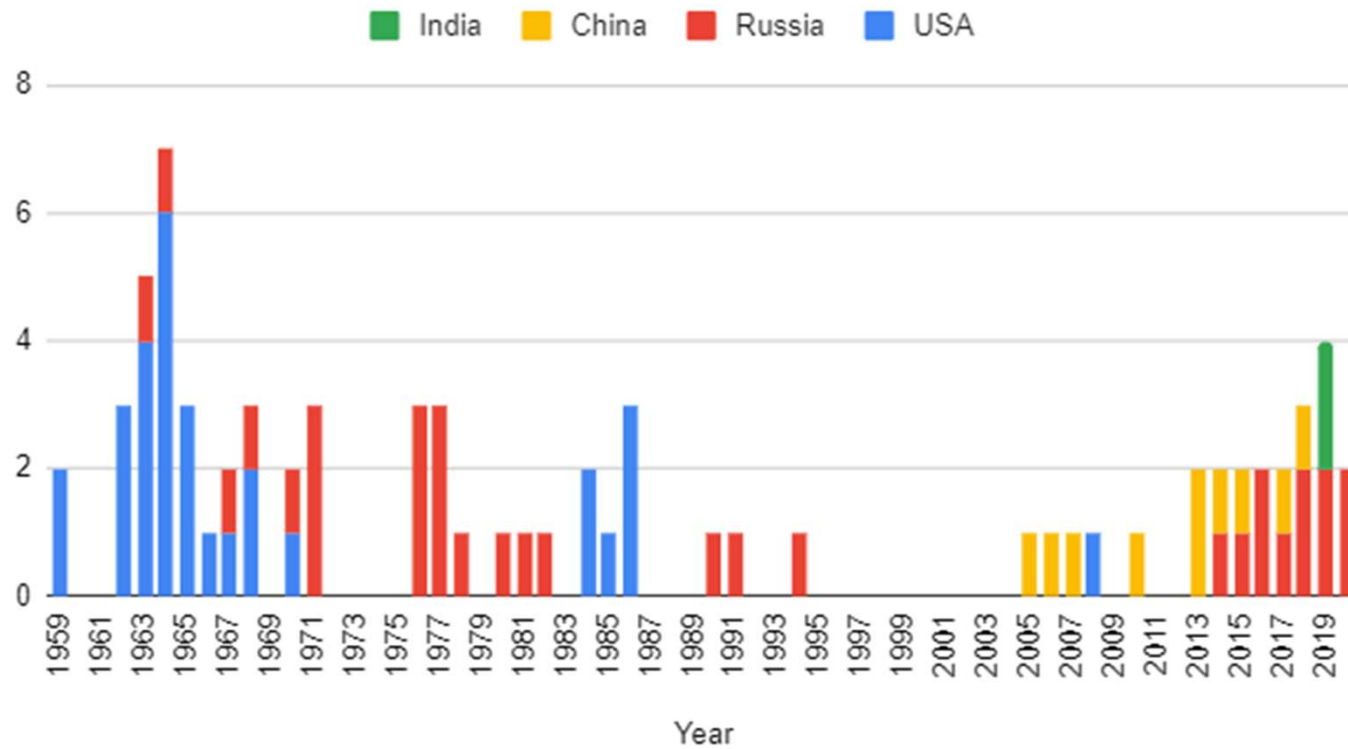
Brian Weeden, Ph.D.
Director of Program Planning
Secure World Foundation

ISU Alumni Conference 2021
July 30, 2021

swfound.org
@SWFoundation

History of ASAT Tests in Space

ASAT Tests By Country and Year



https://docs.google.com/spreadsheets/d/1e5GtZEzdo6xk41i2_ei3c8jRZDjvP4Xwz3BVuUHwi48/edit#gid=0



Promoting Cooperative Solutions for Space Sustainability

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/>



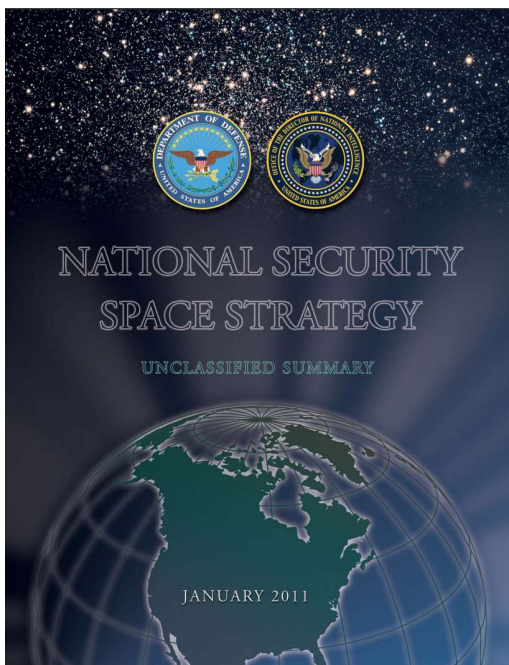
U.S. perspective

- 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

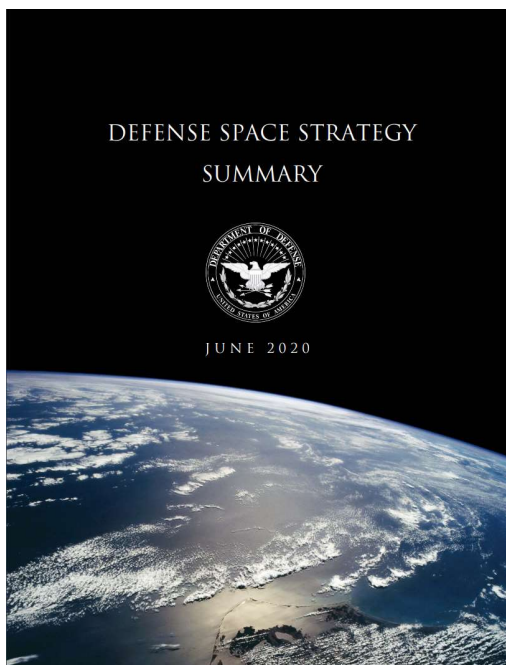


Promoting Cooperative Solutions for Space Sustainability

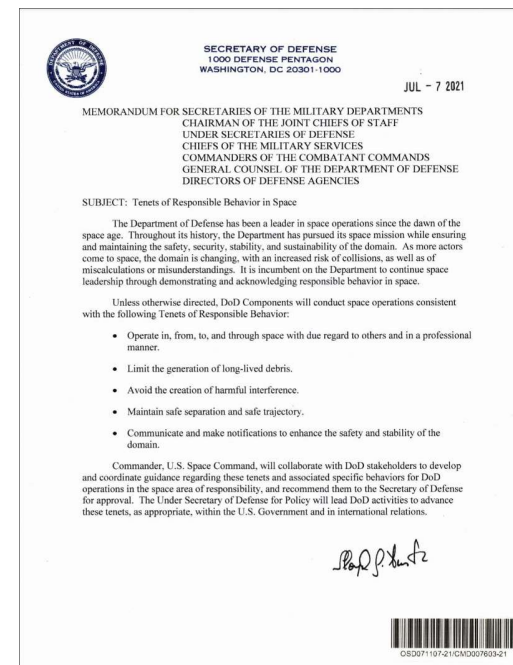
Relevant documents



https://www.dni.gov/files/documents/Newroom/Reports%20and%20Pubs/2011_nationalsecurityspacestrategy.pdf



https://media.defense.gov/2020/Jun/17/2002317391-1/-1/1/2020_DEFENSE_SPACE_STRATEGY_SUMMARY.PDF



<https://media.defense.gov/2021/Jul/23/202809598-1/-1/0/TENETS-OF-RESPONSIBLE-BEHAVIOR-IN-SPACE.PDF>