



COUNTERSPACE OPERATIONS

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Counterspace is a mission, like counterair, that integrates offensive and defensive operations to attain and maintain the desired control and protection in and through space. These operations may be conducted across the tactical, operational, and strategic levels in all domains (air, space, land, maritime, and cyberspace), and are dependent on robust [space situational awareness](#) (SSA) and timely [command and control](#) (C2). Counterspace operations include both offensive counterspace (OCS) and defensive counterspace (DCS) operations.

Offensive Counterspace

OCS operations are undertaken to negate an adversary's use of space capabilities, reducing the effectiveness of adversary forces in all domains. These operations target an adversary's space capabilities (space, link, and ground segments, or services provided by third parties), using a variety of reversible and non-reversible means. These actions may include strikes against adversary counterspace capabilities before they are used against friendly forces. OCS operations may occur in multiple domains and may result in a variety of desired effects including deception, disruption, denial, degradation, or destruction.

- ★ **Deceive.** Measures designed to mislead an adversary by manipulation, distortion, or falsification of evidence or information into a system to induce the adversary to react in a manner prejudicial to their interests.
- ★ **Disrupt.** Measures designed to **temporarily impair** an adversary's use or access of a system for a period of time, usually without physical damage to the affected system.
- ★ **Deny.** Measures designed to **temporarily eliminate** an adversary's use, access, or operation of a system for a period of time, usually without physical damage to the affected system.
- ★ **Degrade.** Measures designed to **permanently impair** (either partially or totally) the adversary's use of a system, usually with some physical damage to the affected system.
- ★ **Destroy.** Measures designed to **permanently eliminate** the adversary's use of a system, usually with physical damage to the affected system.

Adversaries have access to a range of space capabilities that enhance the effectiveness

* Counterspace is referred to as "space control" in Joint Publication 3-14, [Space Operations](#).

of their military forces in all domains and increase the threat to US and allied forces and national interests. Even an adversary without indigenous space assets may exploit space through US, allied, commercial, or consortium provided space services. These services include precise [positioning, navigation and timing](#) (PNT); [intelligence, surveillance and reconnaissance](#); [environmental monitoring](#); [missile warning](#); and [satellite communications](#).

As adversaries become more reliant on space capabilities, counterspace operations have greater opportunity to reduce an adversary's ability and will to wage war effectively. Negating adversary space capabilities may hinder their ability to effectively organize, coordinate, and orchestrate a military campaign. For example, multi-domain offensive counterspace operations may be employed against an enemy's satellite communications capabilities, in conjunction with attacks on the enemy ground-based communications network (e.g., electronic attack, air strikes, long-range artillery combined with offensive cyberspace operations), could synergistically reduce or eliminate communication with and C2 of enemy fielded forces.

Defensive Counterspace

DCS operations protect friendly space capabilities from attack, interference, and unintentional hazards, in order to preserve US and friendly ability to exploit space for military advantage. Space capabilities include the space segment (e.g., on-orbit satellites), ground segment (e.g., space operations centers and telemetry, tracking, and commanding stations), and the link segment (the electromagnetic spectrum).

DCS operations protect and preserve friendly space capabilities before, during, and after an attack. When exercising self-defense, DCS operations may include the use of force in response to a hostile act or demonstrated hostile intent. DCS operations also safeguard space assets and capabilities from unintentional hazards such as space debris, radio frequency interference, and naturally occurring phenomenon such as radiation.

DCS operations also contribute to deterrence by demonstrating the ability to limit the anticipated advantages of hostile action against US and allied space capabilities. When incorporating international partner capabilities into an architecture, deterrence may be communicated in two additional ways. Partner capabilities increase both resilience and the perceived cost to an adversary, when an attack on one partner is seen as an attack on all. Finally, deterrence is dependent on timely attribution – the ability to quickly and definitively identify the actor responsible for the attack.

If deterrence fails, defense of US and friendly space capabilities from adversary attack is crucial to maintaining space superiority. This is accomplished via a combination of active and passive actions.

Navigation Warfare

[NAVWAR](#) contributes to counterspace operations by preventing adversary use of PNT information while protecting the unimpeded use of the information by forces and preserving peaceful use of this information outside the area of operations.
