



Department of Defense

DIRECTIVE

NUMBER 3100.10

October 18, 2012

Incorporating Change 1, Effective November 4, 2016

USD(P)

SUBJECT: Space Policy

References: See Enclosure 1

1. PURPOSE. This Directive reissues DoD Directive (DoDD) 3100.10 (Reference (a)) to update established DoD space policy and assigned DoD responsibilities for space-related activities in accordance with the National Space Policy, Presidential Policy Directive-4 (Reference (b)), and the National Security Space Strategy (Reference (c)). It addresses the need to deter aggression, promote stability and responsible use of space, integrate space capabilities, and improve space mission assurance.

2. APPLICABILITY. This Directive applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within DoD (hereinafter referred to collectively as the "DoD Components").

3. DEFINITIONS. See Glossary

4. POLICY. It is DoD policy that:

a. DoD space-related activities shall strengthen safety, sustainability, stability, and security in space; maintain and enhance the national security advantages afforded by the use of space; and energize the space industrial base that supports U.S. national security.

b. The sustainability and stability of the space environment, as well as free access to and use of space, are vital to U.S. national interests. Purposeful interference with U.S. space systems, including their supporting infrastructure, will be considered an infringement of U.S. rights. Such interference, or interference with other space systems upon which the United States relies, is

irresponsible in peacetime and may be escalatory during a crisis. The United States will retain the capabilities to respond at the time and place of our choosing.

c. In order to improve space mission assurance and deter attacks against U.S. or allied interests, DoD will:

(1) Shape the operational space environment through the normalization of DoD space activities and the integration of space-based capabilities into operational plans in a way that promotes the safety, stability, and security of the space domain.

(2) Contribute to stability by building coalitions that enhance collective security capabilities, preserving decision space, and supporting appropriate de-escalation options during crisis.

(3) Mitigate the benefits to an adversary of attacking U.S. or allied space systems by enhancing the resilience of DoD's space enterprise and by ensuring space capabilities are available to support and enable operations.

(4) Possess and integrate capabilities, not limited to space, to respond to an attack on U.S., allied, and partner space systems using all appropriate elements of national power.

d. DoD will promote the responsible, peaceful, and safe use of space, including following the U.S. Government (USG) Orbital Debris Mitigation Standard Practices (Reference (d)) in accordance with Reference (b).

e. DoD will cooperate with interagency, international, and commercial partners to define and promote safe and responsible space operations. This includes sharing space situational awareness (SSA) and flight-safety information, as well as supporting the development of transparency and confidence-building measures and behavioral norms promoting responsible space operations.

f. DoD will seek to expand space-related cooperation with international partners, building and sharing space capabilities with these partners to the extent practicable and leading and participating in combined space operations. DoD space-related international cooperation activities will be based on mutual interest and will be conducted to enhance collective security capabilities, forge closer security ties with allies and friends, and advance U.S. policy objectives. In its efforts to expand space-related cooperation and in accordance with appropriate regulatory and security guidance, DoD will:

(1) Proactively seek opportunities to cooperate with allies and selected international partners in developing space architectures and in designing, acquiring, and operating military space systems. DoD will pursue interoperable systems in which trusted participants share costs, benefits, and risks. DoD will pursue space capabilities and systems that can be cooperatively developed or shared with allies and partners.

(2) Extend the battlefield advantages that space systems can provide to allies and coalition partners, to the maximum practicable extent.

(3) Work with international partners to share relevant space capabilities while protecting mutual security interests related to dual-use technologies and services.

g. DoD will encourage commercial space operators to share their spaceflight safety data as well as relevant plans, schedules, and information on operational status. DoD, in coordination with other USG agencies, will establish agreements with other nations and commercial firms to maintain and improve space object databases and to disseminate orbital information to enhance spaceflight safety.

h. DoD will promote a robust U.S. defense space industrial base, to the extent consistent with defense objectives as well as DoD funding and authorities.

i. DoD will promote robust quality assurance of space systems, consistent with DoD authorities, policies, and objectives.

j. DoD will develop and integrate into an operational space force structure all appropriate space-related defense capabilities required to support national security objectives and policies established by the President and the Secretary of Defense and, as appropriate, support commercial, civil, and allied users in accordance with References (b) and (c) and consistent with DoDD 7045.20 (Reference (e)) as well as treaty obligations and Presidential policies. Specifically, the operational space force structure will integrate space activities with those from other operational domains to support deterrence and synchronize the conduct of military operations.

(1) SSA capabilities will support safe operations and protection of U.S. and allied interests in space by providing sufficient knowledge of space objects and activities, and by providing ample indications, warnings, and timely attribution of hostile and natural events.

(2) Battle management command and control will ensure accurate, timely, and reliable operational synchronization of space forces to enable effective integration of space planning and operations with joint and combined activities across all domains.

(3) Space service support activities will ensure access to, transport through, operations in, and, as appropriate, return from space through reliable, flexible, resilient, responsive, and safe launch and satellite operations.

(4) Space support to operations activities will focus on improving the integration and availability of space capabilities to increase the effectiveness of military operations and achieve national and homeland security objectives.

(5) Space control plans and activities will support deterrence and space mission assurance by protecting and defending U.S. space capabilities, as well as contributing to the defense of allied and partner space systems. These plans will also ensure the United States maintains capabilities to protect terrestrial forces and interests from adversary space-enabled attacks. Space control plans and capabilities will enable a broad range of response options and provide for the continued sustainable use of space.

k. Space force requirements generation, development, testing, evaluation, acquisition, training, exercise, planning, and operations activities must include mission assurance. Space mission assurance activities reduce both the probability of success and the benefits to an adversary of attacking U.S., allied, or partner space systems.

(1) The mission assurance of space capabilities, including associated information systems, networks, and other infrastructure required to support sustained operations, will be considered in all architecture planning and evaluation.

(2) Consideration of risks and threats, consequences of loss, and the availability of alternate means to achieve space mission assurance will be included in all system planning and development activities.

(a) Risks and threats to be considered include expected hazards, evolving threats, and known or expected system vulnerabilities.

(b) The means of accomplishing space mission assurance include resilience, reconstitution, and defensive operations.

(3) The required level of space mission assurance is based on the type of operation supported and must be consistent with the Assured Space Operations Framework:

(a) Tier 1. Endurable, survivable, and continuously available through all phases of conflict and levels of hostility.

(b) Tier 2. Present through all phases and levels of conflict with possible quality or quantity limitations and transient or localized outages; capable of reconstitution on tactical timelines.

(c) Tier 3. Restorable based on rear echelon and homeland security needs; could be lost during highest levels of conflict.

(4) These tiers must be used within the Joint Capabilities Integration Development System process to attribute space mission assurance levels to specific space mission capabilities.

(5) Consistent with national security requirements, commercial systems, services, and technologies will be used to the maximum practical extent, and commercial capabilities will be modified to meet those requirements when doing so is more cost-effective and timely for the USG, in accordance with References (b) and (c). Science and technology efforts, and research

and development investments, will focus on leading-edge technologies that address mission-area deficiencies.

l. DoD will serve as the launch agent for both the defense and intelligence space sectors, in accordance with Reference (b).

m. DoD will recruit and sustain a cadre of highly skilled military and civilian space professionals. A total force approach will be used in structuring space force capabilities and, as appropriate, ensuring interoperability among U.S., allied, and coalition forces.

n. Space forces, missions, and applications will be incorporated into joint and Service doctrine, professional military education, professional continuing education, and training. Space missions and capabilities, the ability to operate against an adversary enhanced by space capabilities, and the ability to compensate for loss of space capabilities will be integrated into joint and Military Department wargames, simulations, scenario development, experiments, and exercises.

o. Enhanced cooperation with the intelligence, civil, and commercial space sectors will be pursued to maximize assured access to mission capabilities, infrastructure protection, and interoperability, and to ensure all U.S. space sectors benefit from space technologies, facilities, and support services. DoD will pursue improved coordination and, as appropriate, integration of defense and intelligence space activities, including acquisition and research and development efforts.

p. Priority will be given to the integrated and synchronized tasking, collection, processing, exploitation, and dissemination of intelligence information to support SSA and space-related policy-making, requirements generation, research, development, testing, evaluation, acquisition, operations, protection, and employment. Requirements for such intelligence support will be identified, prioritized, and submitted through established processes to produce timely, useful intelligence products, in accordance with DoDD 5240.01 (Reference (f)) and DoDD 5105.21 (Reference (g)).

q. Public outreach and international engagement are essential to achieving DoD's space policy goals. Public affairs and public diplomacy activities will provide clear and consistent information to the public about space and space-related activities, consistent with the need to protect national security information in accordance with DoDD 5122.05 (Reference (h)).

5. RESPONSIBILITIES. See Enclosure 2.

6. RELEASABILITY. **Cleared for public release.** This Directive is available on the DoD Issuances Website at <http://www.esd.whs.mil/DD/>.

7. SUMMARY OF CHANGE 1. This change updates this issuance to refine policy consistent with the findings and recommendations from the 2015 Space Portfolio Review (Reference (z)) by highlighting the role of space in deterring aggression, the need for greater integration of space capabilities, increasing cooperative opportunities with allies and partners, and the importance of improving space mission assurance. This change also administratively updates references and organizational symbols for accuracy.

8. EFFECTIVE DATE. This Directive is effective October 18, 2012.



Ashton B. Carter
Deputy Secretary of Defense

Enclosures

1. References
2. Responsibilities

Glossary

ENCLOSURE 1

REFERENCES

- (a) DoD Directive 3100.10, "Space Policy," July 9, 1999 (hereby cancelled)
- (b) Presidential Policy Directive-4, "National Space Policy," June 29, 2010¹
- (c) National Security Space Strategy, January 2011²
- (d) U.S. Government Orbital Debris Mitigation Standard Practices
- (e) DoD Directive 7045.20, "Capability Portfolio Management," September 25, 2008
- (f) DoD Directive 5240.01, "DoD Intelligence Activities," August 27, 2007, as amended
- (g) DoD Directive 5105.21, "Defense Intelligence Agency (DIA)," March 18, 2008
- (h) DoD Directive 5122.05, "Assistant Secretary of Defense for Public Affairs (ASD(PA))," September 5, 2008
- (i) DoD Directive 5111.1, "Under Secretary of Defense for Policy (USD(P))," December 8, 1999
- (j) DoD Directive 5111.18, "Assistant Secretary of Defense for Global Strategic Affairs (ASD(GSA))," June 13, 2011
- (k) DoD Directive 5134.01, "Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))," December 9, 2005, as amended
- (l) DoD Instruction 5000.02, "Operation of the Defense Acquisition System," January 7, 2015
- (m) DoD Directive 5143.01, "Under Secretary of Defense for Intelligence (USD(I))," October 24, 2014, as amended
- (o) DoD Directive 5105.60, "National Geospatial-Intelligence Agency (NGA)," July 29, 2009
- (p) DoD Directive 5105.23, "National Reconnaissance Office (NRO)," June 28, 2011, as amended
- (q) DoD Directive 5100.20, "National Security Agency/Central Security Service (NSA/CSS)," January 26, 2010
- (r) DoD Directive 5144.02, "DoD Chief Information Officer (DoD CIO)," November 21, 2014
- (s) DoD Directive 5100.01, "Functions of the Department of Defense and Its Major Components," December 21, 2010
- (t) DoD Directive 5101.02E, "DoD Executive Agent (EA) for Space," January 25, 2013
- (u) Deputy Secretary of Defense Memorandum, "Designation of the Principal DoD Space Advisor," October 5, 2015
- (v) Unified Command Plan, September 12, 2011³
- (w) Joint Strategic Capabilities Plan, June 10, 2011⁴
- (x) Deputy Secretary of Defense Memorandum, "Designation of Joint Space Training and Education Lead," June 15, 2016
- (y) Joint Publication 1-02, "Department of Defense Dictionary of Military and Associated Terms," as amended

¹ Document is classified with limited distribution. Contact OSD Space Policy for additional information.

² Document is classified. Contact OSD Space Policy for additional information.

³ Document is "For Official Use Only." Contact Joint Staff, J-5, for additional information.

⁴ This document is classified with limited distribution. Contact Joint Staff, J-5, for additional information.

- (z) National Science Foundation Advisory Committee for Geosciences, “Investments in Critical Capabilities for Geospace Science 2016-2025: A Portfolio Review of the Geospace Section of the Division of Atmospheric and Geospace Science,” April 14, 2016

ENCLOSURE 2

RESPONSIBILITIES

1. UNDER SECRETARY OF DEFENSE FOR POLICY (USD(P)). The USD(P) shall carry out the space-related duties assigned in DoDD 5111.1 (Reference (i)), including:

a. Leading DoD efforts to form and coordinate space-related national security and Defense policy as well as to integrate and oversee space-related DoD policy and plans to achieve national security objectives.

b. Representing DoD, unless otherwise directed, on space matters involving the National Security Council, the Department of State, and other Federal departments, agencies, and interagency groups with responsibility for space-related national security policy.

c. Developing DoD policy on the conduct of alliances and defense relationships with foreign governments, their military establishments, and international organizations; integrating and overseeing plans and programs undertaken with those alliances or foreign defense establishments.

2. ASSISTANT SECRETARY OF DEFENSE FOR HOMELAND DEFENSE AND GLOBAL SECURITY (ASD(HD&GS)). The ASD(HD&GS), under the authority, direction, and control of the USD(P), shall carry out the space-related duties and responsibilities assigned in DoDD 5111.18 (Reference (j)), including serving as the DoD lead for developing, coordinating, and monitoring implementation of overarching DoD policy related to space.

3. UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS (USD(AT&L)). The USD(AT&L) shall carry out the space-related duties and responsibilities assigned in DoDD 5134.01 (Reference (k)) including:

a. Serving as the OSD focal point for DoD space acquisition programs, in coordination with other OSD stakeholders. In that capacity, collaborating with the Principal DoD Space Advisor (PDSA) in the operation of the Defense Space Council; providing oversight of the Space Major Force Program and architecture development; advocating DoD Space acquisition programs before Congress; and coordinating with the other OSD Principal Staff Assistants (PSAs) whose duties and responsibilities include space acquisition matters, in order to improve the coherence and efficiency of DoD space acquisition programs.

b. Promoting a robust space industrial base, in accordance with References (b) and (c).

c. Ensuring consideration of foreign cooperative opportunities in the development and procurement of space systems and the feasibility of existing domestic and foreign-made space

systems to satisfy DoD requirements, in accordance with DoD Instruction 5000.02 (Reference (l)).

4. UNDER SECRETARY OF DEFENSE FOR INTELLIGENCE (USD(I)). The USD(I) shall carry out the space-related duties and responsibilities assigned in DoDD 5143.01 (Reference (m)), including:

- a. Serving as the OSD PSA for Defense intelligence and intelligence-related space matters.
- b. Formulating and implementing intelligence and intelligence-related space policies and procedures that support national security objectives and policies.
- c. Coordinating intelligence and intelligence-related space matters with appropriate PSAs, capability portfolio managers (CPMs), the Office of the Director of National Intelligence, and others, as needed, to promote the integration of intelligence and intelligence-related space activities across the DoD and the Intelligence Community (IC), as well as to facilitate the integration of DoD and IC space capabilities, as appropriate.
- d. Representing the DoD on intelligence and intelligence-related space matters to the Office of the Director of National Intelligence and other members of the IC.

5. UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS (USD(P&R)). The USD(P&R) will oversee and, in coordination with USD(P), establish policy for the integration of space training into the training and exercises of the Military Departments and Combatant Commands, in accordance with DoDD 1322.18 (Reference (n)).

6. DIRECTOR OF THE DEFENSE INTELLIGENCE AGENCY. The Director of the Defense Intelligence Agency, under the authority, direction, and control of the USD(I), shall carry out the space-related duties and responsibilities assigned in Reference (g).

7. DIRECTOR OF THE NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY. The Director of the National Geospatial-Intelligence Agency, under the authority, direction, and control of the USD(I), shall carry out the space-related duties and responsibilities assigned in DoDD 5105.60 (Reference (o)).

8. DIRECTOR OF THE NATIONAL RECONNAISSANCE OFFICE. The Director of the National Reconnaissance Office, under the authority, direction, and control of the USD(I), shall carry out the duties and responsibilities assigned in DoDD 5105.23 (Reference (p)), including serving as the principal advisor on overhead reconnaissance.

9. DIRECTOR OF THE NATIONAL SECURITY AGENCY/CHIEF, CENTRAL SECURITY SERVICE. The Director of the National Security Agency/Chief, Central Security Service, under the authority, direction, and control of the USD(I), shall carry out the space-related duties and responsibilities assigned in DoDD 5100.20 (Reference (q)).

10. DoD CHIEF INFORMATION OFFICER (DoD CIO). The DoD CIO shall carry out the space-related duties and responsibilities assigned in DoDD 5144.02 (Reference (r)), including leading the development and coordination of DoD policy, oversight, and guidance for the DoD Information Enterprise. The DoD Information Enterprise includes: satellite communications; spectrum management; network policy and standards; information systems; cybersecurity; positioning, navigation, and timing policy; and support for DoD command and control.

11. SECRETARIES OF THE MILITARY DEPARTMENTS. The Secretaries of the Military Departments shall:

a. Formulate and implement Military Department-level space-related policies and programs that support national security objectives and policies established by the President and the Secretary of Defense and this Directive.

b. Integrate space capabilities and applications into appropriate facets of their Department's strategy, doctrine, education, training, exercises, wargames, experiments, and operations.

c. Organize, train, equip, and provide forces for space operations, including operating in a contested environment, in accordance with DoDD 5100.01 (Reference (s)).

12. SECRETARY OF THE AIR FORCE. The Secretary of the Air Force, in addition to the responsibilities in section 11 of this enclosure and in his or her capacity as the PDSA, shall:

a. Carry out the duties and responsibilities assigned in DoDD 5101.02E (Reference (t)).

b. Carry out the duties and responsibilities assigned in Deputy Secretary of Defense Memorandum (Reference (u)), including serving as the primary space advisor to the Deputy's Management Action Group, the Joint Requirements Oversight Council, and the Defense Acquisition Board.

c. Chair of the Defense Space Council, which shall serve as the principal advisory forum on all space matters for the PDSA, DoD Component Heads, and the OSD PSAs to facilitate the fulfillment of their collective space program functions and responsibilities.

13. CHAIRMAN OF THE JOINT CHIEFS OF STAFF. The Chairman of the Joint Chiefs of Staff shall, in coordination with the USD(P), collaborate with the Deputy Chief Management

Officer of the Department of Defense to reflect the integration of space-related activities into the responsibilities assigned in Reference (s).

14. COMBATANT COMMANDERS. The Combatant Commanders shall:

- a. Plan and implement space-related activities that support national security objectives and policies established by the President, the Secretary of Defense, and this Directive.
- b. Ensure space-related activities are considered and integrated when performing functions assigned in Reference (s) and the Unified Command Plan (Reference (v)).
- c. Provide baseline space capability needs and prioritized Combatant Commander space-based mission needs and effects based on operational/contingency plans in coordination with the Commander, United States Strategic Command (CDRUSSTRATCOM), to ensure effective advocacy.
- d. Integrate space capabilities and applications into training, exercises, wargames, experiments, contingency plans, and operations plans and plan for the employment of space capabilities within their areas of responsibility. Develop and exercise operational concepts as well as tactics, techniques, and procedures to continue operations and achieve assigned national security objectives in an environment in which space capabilities have been degraded or denied.
- e. Plan for and provide force protection, in coordination with the CDRUSSTRATCOM, for space forces assigned, deployed, and operating in their area of responsibility, in accordance with the Joint Strategic Capabilities Plan (Reference (w)).

15. CDRUSSTRATCOM. The CDRUSSTRATCOM, in addition to the responsibilities in section 14 of this enclosure, shall:

- a. Execute space-related responsibilities in accordance with Reference (w).
- b. Formulate, implement, and conduct space-related activities that support national security objectives and policies established by the President, the Secretary of Defense, and this Directive.
- c. Conduct SSA in support of the USG, U.S. commercial space entities, civil space capabilities and operations, and, as appropriate, other space entities in accordance with References (b) and (w).
- d. Conduct space control operations and serve as the focal point for space control requirements of the other Combatant Commanders. Coordinate indications, warning, and response to interference with U.S. space systems or the use of space for non-peaceful purposes.

e. In conjunction with the Chairman of the Joint Chiefs of Staff, coordinate space matters with appropriate PSAs, CPMs, and others, as needed, to promote integration of space activities across DoD and to ensure consistency with DoD and national space policy.

f. Establish specific requirements and standards for integrating joint training and education, coordinating inclusion of joint training and education into Military Service space programs of instruction, and identifying joint training gaps for resolution across and among all levels of operation, pursuant to Deputy Secretary of Defense Memorandum (Reference (x)).

g. Provide advocacy and propose requirements for joint space training and education topics in the appropriate Military Department venues, pursuant to Reference (x).

GLOSSARY

PART I. ABBREVIATIONS AND ACRONYMS

CDRUSSTRATCOM CPMs	Commander, United States Strategic Command capability portfolio managers
DoD CIO DoDD	DoD Chief Information Officer DoD Directive
IC	Intelligence Community
PDSA PSA	Principal DoD Space Advisor Principal Staff Assistant
SSA	space situational awareness
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics
USD(I)	Under Secretary of Defense for Intelligence
USD(P)	Under Secretary of Defense for Policy
USG	U.S. Government

PART II. DEFINITIONS

These terms and their definitions are for the purposes of this Directive.

defensive operations. Activities undertaken to neutralize or reduce the effectiveness of hostile action against U.S., allied, and partner space systems.

national security space. The space-related systems, services, capabilities, and associated information networks of DoD and the national intelligence community, or other space-related systems that the Secretary of Defense may designate as national security space systems in coordination with the system owner, that support U.S. national security and enable defense and intelligence operations during times of peace, crisis, or conflict. This term and its definition are proposed for inclusion in the next edition of Joint Publication 1-02 (Reference (y)).

reconstitution. Actions taken to restore functionality rapidly to an acceptable level for a particular mission, operation, or contingency after severe degradation.

resilience. The ability of an architecture to support the functions necessary for mission success with higher probability, shorter periods of reduced capability, and across a wider range of scenarios, conditions, and threats, in spite of hostile action or adverse conditions. Resilience may leverage cross-domain or alternative government, commercial, or international capabilities. This term and its definition are proposed for inclusion in the next edition of Reference (y).

space mission assurance. A combination of defensive operations, reconstitution, and resilience measures taken to protect and ensure the continued delivery of space services.

space service support. The essential functions and activities to position, maintain, and dispose space capabilities to enable mission accomplishment.

space support to operations. Activities of space forces to aid, protect, enhance, and complement the activities of other military forces as well as intelligence, civil, and commercial users.