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Credit: U.S. Space Force

U.S. Space Force Primer

BY CSIS Aerospace Security Project*

Founded on December 20, 2019, the United States Space Force (USSF) became the sixth branch of the armed services within the Department of Defense (DoD). Officially established by Congress in the Fiscal Year 2020 National Defense Authorization Act (NDAA), the Space Force garnered bipartisan support.

Organized within the Department of the Air Force, the USSF functions at an equal level as the U.S. Air Force, similar to how the Marine Corps is structured within the Department of the Navy. Under Title 10, Section 9081, of the U.S. Code, the Space Force has the responsibility to organize, train, and equip space-focused military forces. Specifically, the Space Force is responsible for space launch, satellite operations, surveillance of the space environment, satellite defense, and some missile defense functions. Previously, space forces and missions were scattered throughout the DoD. With the establishment of the Space Force, the DoD envisions consolidating all or many of these missions, forces, and authorities within the purview of the Space Force. The Space Force will then provide space support to other branches of the Armed Forces.

Authored by Kari A. Bingen, Kaitlyn Johnson, John Dylan Bustillo, and Marie Villarreal Dean.

The U.S. Space Force is continually evolving. This primer will be updated as necessary to reflect such changes.

Fast Facts

Mission: *"[T]he USSF is responsible for organizing, training, and equipping Guardians to conduct global space operations that enhance the way our joint and coalition forces fight, while also offering decision-makers military options to achieve national objectives."*[1]

Leadership: Chief of Space Operations, four-star general (General B. Chance Saltzman); Vice Chief of Space Operations, four-star general (General David D. Thompson): and Chief Master Sergeant (CMSSF Roger A. Towberman).[2]

Motto: *Sempra Supra*, or Always Above

Headquarters: The Pentagon, Washington D.C.

Size: The Space Force is the smallest U.S. armed service, consisting of 8,600 military personnel (4,286 enlisted and 4,314 officers), 4,927 civilian personnel, and operating over 100 satellites.[3] Its projected size is 16,000 personnel.[4]

FY 2023 Budget: $26.3 billion. The Space Force budget for FY 2023 includes $4 billion for operations and maintenance (O&M); $16.6 billion for research, development, test, and evaluation (RDT&E); $4.4 billion for procurement; and $1.1 billion for military personnel costs.[5]

Base Locations: Buckley Space Force Base in Aurora, Colorado; Los Angeles Air Force Base in El Segundo, California; Patrick Space Force Base near Satellite Beach, Florida; Peterson Space Force Base in Colorado Springs, Colorado; Schriever Space Force Base in Colorado Springs, Colorado; and Vandenberg Space Force Base near Lompoc, California.

History

Although U.S. military space capabilities have advanced remarkably since the 1950s, they were divided amongst the different services, with the Air Force, Army, and Navy all maintaining programs focused on space. Responding to a deepening dependence on space, concerns about this disparate structure began to emerge, inspiring discussions since the 1960s over the creation of a separate space-focused service in the military. Having gained the attention of Congress, the Rumsfeld (1999-2001) and the Allard commissions (2006-2008) were created to address the organizational structure of national security space.[6] However, despite concerning advances made by competitors in developing counterspace technology—culminating in the 2007 Chinese anti-satellite test—neither report brought about any significant reorganization.[7] While the House-passed FY 2018 NDAA introduced the creation of a Space Corps, which was not carried forward in the final bill, it was President Trump's 2019 directive to establish a separate military service for space that broke nearly twenty years of inaction. That proposal, which directed the standup of a Space Force within the Department of the Air Force, enjoyed bipartisan support and led to Congress passing the proposal as part of the FY 2020 NDAA.

What does the Space Force do?

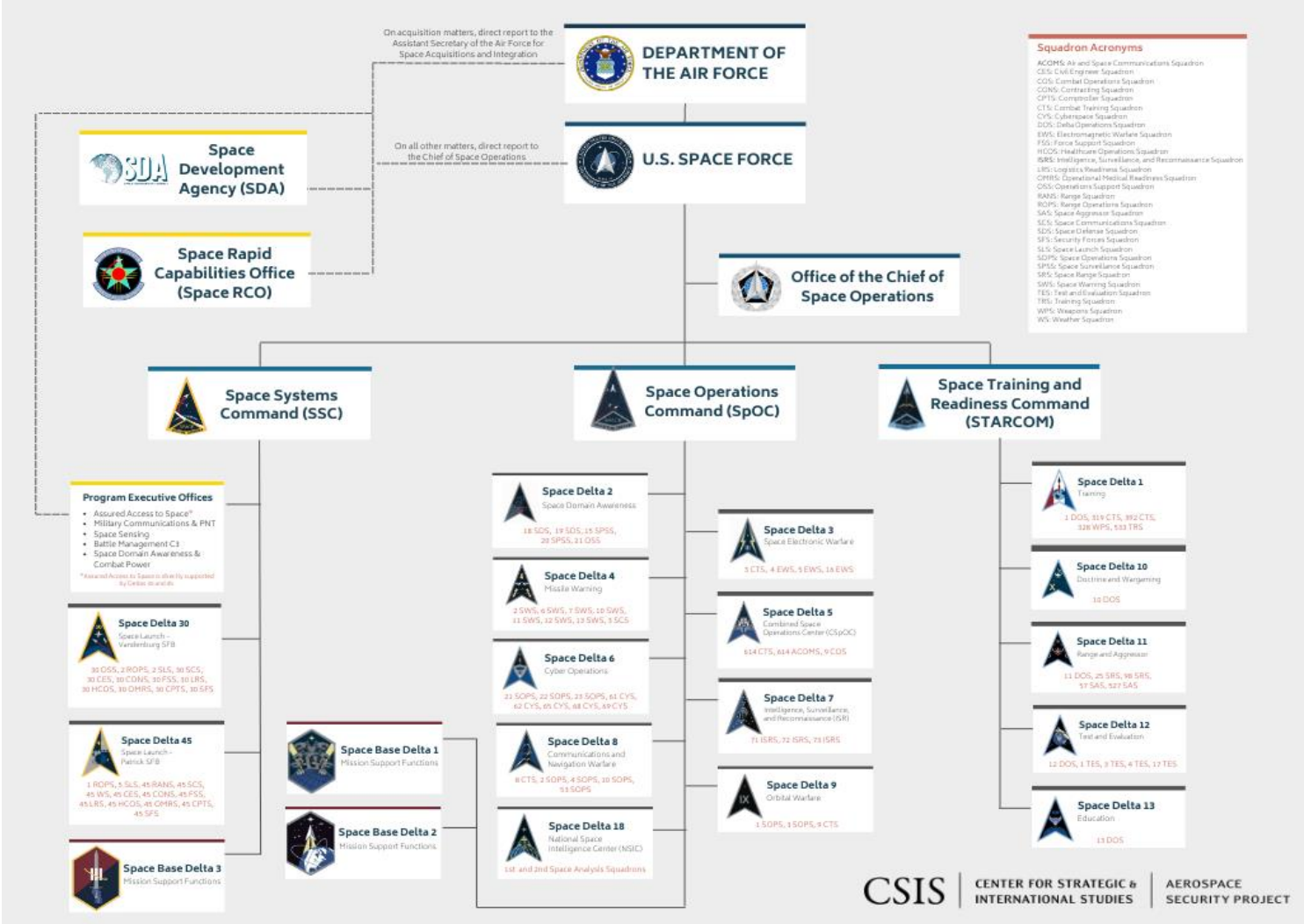
The Space Force was designed to create one organization responsible for the training, development, and acquisition of equipment to support the U.S. military's space capabilities and operations. Fielding over 100 satellites, USSF Guardians operate and maintain command and control of satellites that provide positioning, navigation, and timing (PNT), strategic and tactical communications, intelligence, surveillance, and reconnaissance (ISR), and weather. Guardians conduct space launches and operate the Nation's space launch ranges, while also maintaining an extensive network of satellites, ground-based telescopes and radars that provide early warning of missile launches and track spacecraft and orbital debris. They are called upon to provide space superiority, employing broad offensive and defensive capabilities to support U.S. military missions. The responsibilities of the Space Force include the cultivation of space professionals, the maturation of military doctrine, and the organization of combat-ready forces for use by Combatant Commands.

Internal Organization

The Secretary of the Air Force serves as the civilian leader of the Space Force and oversees both the Air Force and Space Force. For the military, the FY 2020 NDAA specified that a four-star general will serve as Chief of Space Operations (CSO) to lead the Space Force and be a member of the Joint Chiefs of Staff. The Chief Master Sergeant is the most senior enlisted advisor of the Space Force. This position "serves as the personal adviser to the Chief of Space Operations and the Secretary of the Air Force on all issues regarding the welfare, readiness, morale, proper utilization and development of the U.S. Space Force."[8]

The Space Force was intentionally designed to be a slim, agile, and mission-focused organization, and thus, its Guardian and staff numbers are significantly smaller than other military services in order to remove the traditional layers of bureaucracy. The Space Force relies on the Department of the Air Force to provide everyday support functions such as logistics, base operations and security, civilian personnel HR and hiring, IT support, audits and financial support, and more.

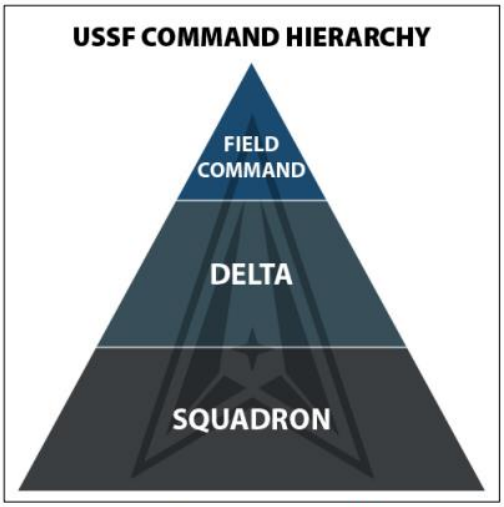
The Space Force is supported by three field commands, Space Operations Command (SpOC), Space Systems Command (SSC), and Space Training and Readiness Command (STARCOM), that are further separated into 16 mission Deltas (USSF organizational units) and three Base Deltas that provide mission support functions. Two acquisition organizations, the Space Development Agency (SDA) and the Space Rapid Capabilities Office (RCO), also support the Space Force and report directly to the Chief of Space Operations; and for acquisition matters to the Assistant Secretary of the Air Force for Space Acquisitions and Integrations.



(A larger version of this chart can be found on page 14)

A headquarters function, the Office of the Chief of Space Operations, supporting the CSO and SecAF comprises a mix of general officers and senior executive civilians in roles of deputy chiefs of space operations, including human capital; intelligence; operations, cyber, and nuclear; and strategy, plans, programs, and requirements; and technology and innovation.[9]

Out of the three field commands, the SpOC and SSC are led by three-star generals, and STARCOM is led by a two-star general. Each field command is supported by Deltas of around 400 personnel, each focusing on a specific mission area and containing supporting squadrons. Deltas are led by Colonels, while squadrons are led by Lieutenant Colonels.[10]



Source: Figure created by CRS using data from U.S. Space Force.

Space Operations Command (SpOC)

SpOC is responsible for operating space capabilities and presenting them to commanders for employment. SpOC is the primary force provider of space forces and capabilities for combatant commanders, coalition partners, the joint force, and the nation. Uniquely operating at the nexus of the USSF and U.S. Space Command (USSPACECOM), SpOC functions as both a field command for the USSF and a service command for USSPACECOM. Guiding SpOC are three priorities: preparing (a combat-ready, ISR-led, cyber-secure force), partnering (across the U.S. government, allies, and commercial partners), and projecting (combat power in, from, and to space). Furthermore, SpOC is supported by Space Base Deltas (SBDs) 1 and 2, which provide mission support functions on military installations, such as IT and medical support. SpOC is comprised of the following nine Deltas and two Base Deltas:

Space Delta 2 – Space Domain Awareness
Mission: "Prepare, present and, if necessary, fight to protect and defend the U.S. and our allies from attack in, through and from space."[11] Guardians operate, command and control ground-based optical and radar

systems that surveil objects in orbit and in deep space, including tracking spacecraft and debris, detecting maneuvering objects, and assessing conjunction risks.
Squadrons: The 18th Space Defense Squadron (SDS), the 19th (SDS), the 15th Space Surveillance Squadron (SPSS), the 20th SPSS, and the 21st Operations Support Squadron (OSS)
Headquarters: *Peterson Space Force Base, Colorado*

Space Delta 3 – Space Electronic Warfare
Mission: "Execute premiere Space Electronic Warfare through sustainable operations to dominate the space domain."[12] This encompasses training on, and employment of, space electronic warfare capabilities.
Squadrons: The 3rd Combat Training Squadron (CTS), the 4th Electromagnetic Warfare Squadron (EWS), the 5th EWS, and the 16th EWS
Headquarters: *Peterson Space Force Base, Colorado*

Space Delta 4 – Missile Warning
Mission: "To provide strategic and theater missile warning to the United States and our International Partners" through the operation of Overhead Persistent Infrared (OPIR) satellite constellations and globally positioned ground-based radars.[13]
Squadrons: The 2nd Space Warning Squadron (SWS), the 6th SWS, the 7th SWS, the 10th SWS, the 11th SWS, the 12th SWS, the 13th SWS, and the 3rd Space Communications Squadron (SCS)
Headquarters: *Buckley Space Force Base, Colorado*

Space Delta 5 – Command and Control / Combined Space Operations Center (CSpOC)
Mission: The CSpOC is the 24/7 operations center where "operational command and control of space forces [is executed] to achieve theater and global objectives."[14] The CSpOC is connected to other U.S. and allied space operations centers, including the National Reconnaissance Office (NRO) Operations Center (NOC), and hosts a Commercial Integration Cell (CIC) to interface with commercial satellite operators.
Squadrons: The 614th CTS, the 614th Air and Space Communications Squadron (ACOMS), and the 9th Combat Operations Squadron (COS)
Headquarters: *Vandenberg Space Force Base, California*

Space Delta 6 – Cyber Operations
Mission: "Provides assured access to space… and defensive cyberspace capabilities for space mission systems," including through the operation of the Air Force Satellite Control Network (AFSCN) that provides the space-ground interface for satellite telemetry, tracking and commanding (TT&C).[15]
Squadrons: The 21st Space Operations Squadron (SOPS), 22nd SOPS, the 23rd SOPS, the 61st Cyberspace Squadron (CYS), the 62nd (CYS), the 65th CYS, the 68th CYS, and the 69th CYS
Headquarters: *Schriever Space Force Base, Colorado*

Space Delta 7 – Intelligence, Surveillance, and Reconnaissance
Mission: "Execute global ISR operations to gain and maintain information dominance in the space domain." [16] Guardians employ fixed and mobile sensors across the globe that enable the characterization and targeting of adversary space capabilities.
Squadrons: The 71st Intelligence, Surveillance, and Reconnaissance Squadron (ISRS), the 72nd ISRS, and the 73rd ISRS
Headquarters: *Peterson Space Force Base, Colorado*

Space Delta 8 – Satellite Communications and Navigation Warfare
Mission: "[E]xecutes command and control of the nation's MILSATCOM and Global Positioning System (GPS) constellations, develops and trains space warfighters, and delivers capabilities through 24/7 crew operations."[17] This encompasses protected, narrowband, and wideband MILSATCOM systems that provide global, secure, survivable, strategic, and tactical communications from peacetime through conflict, including the MILSATCOM systems recently transferred to the USSF from the U.S. Navy.
Squadrons: The 8th CTS, the 2nd SOPS, the 4th SOPS, the 10th SOPS, and the 53rd SOPS
Headquarters: *Schriever Space Force Base, Colorado*

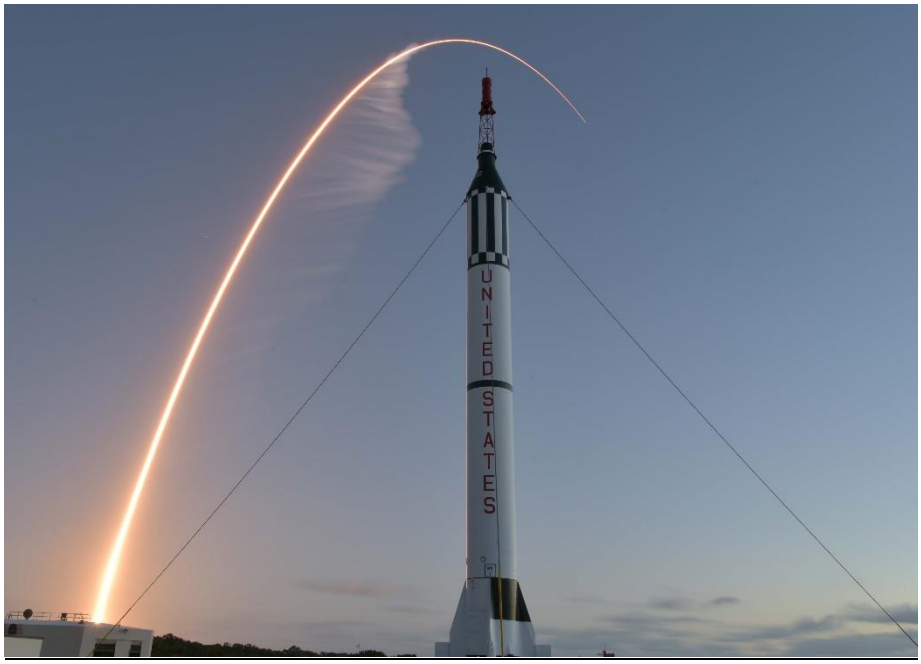
Space Delta 9 – Orbital Warfare
Mission: "[P]repare, present, and project assigned and attached forces for the purpose of conducting protect and defend operations and providing national decision authorities with response options to deter and, when necessary, defeat orbital threats." [18] This includes operating the Space Based Space Surveillance (SBSS) system, Geosynchronous Space Situational Awareness Program (GSSAP), and X-37B Orbital Test Vehicle.
Squadrons: The 1st SOPS, the 3rd SOPS, and the 9th CTS
Headquarters: *Schriever Space Force Base, Colorado*

Space Delta 18 – National Space Intelligence Center
Mission: "Deliver unparalleled technical expertise and game-changing Intelligence empowering national leaders, joint forces warfighters, and acquisition professionals," including foundational intelligence analysis on foreign space and counterspace capabilities.[19]
Squadrons: The 1st Space Analysis Squadron and the 2nd Space Analysis Squadron
Headquarters: *Wright-Patterson Air Force Base, Ohio*

Space Base Delta 1
Mission: "[E]nables U.S. Space Force operations for eight of the nine USSF space deltas and more than 100 other mission partners across 23 world-wide locations."[20] The SBD provides mission support functions to "Peterson [Space Force Base (SFB)], Schriever SFB, Thule Air Base, Cheyenne Mountain Space Force Station, New Boston [Security Forces Squadron, (SFS)], Ka'ena Point SFS, and the AFRL Maui Optical and Supercomputing Site (AMOS)."[21]

Squadrons: The 21st Dental Squadron, the 21st Healthcare Operations Squadron (HCOS), the 21st Operational Medical Readiness Squadron (OMRS), the 21st Medical Squadron, the 21st Civil Engineer Squadron (CES), the 21st Communications Squadron, the 21st Contracting Squadron (CONS), the 21st Force Support Squadron (FSS), the 21st Logistics Readiness Squadron (LRS), and the 21st Security Forces Squadron (SFS)
Headquarters: *Peterson Space Force Base, Colorado*

Space Base Delta 2
Mission: "[R]esponsible for day-to-day support to the operational mission of the Space Delta (DEL 4) Missile Warning Delta."[22] Formerly known as the 460th Mission Support Group at Buckley Air Force Base, the SBD provides mission support functions to Buckley SFB, as well as Cavalier SFS, Cape Cod SFS, and Clear SFS.
Squadrons: The 460th SFS, the 460th FSS, the 460th CES, the 460th LRS, the 460th OMRS, and the 460th HCOS
Headquarters: *Buckley Space Force Base, Colorado*



Source: U.S. Air Force photo by Senior Airman Dalton Williams[23]

Space Systems Command (SSC)

SSC is responsible for developing, acquiring, and fielding lethal and resilient space capabilities for warfighters. Additionally, SSC is responsible for the launch, developmental testing, on-orbit checkout, sustainment and maintenance of USSF space systems, and oversight of USSF science and technology activities. SSC is organized into five program executive offices: Assured Access to Space; Communications and Positioning, Navigation & Timing (PNT); Space Sensing; Battle Management Command, Control &

Communications (BMC3); and Space Domain Awareness and Combat Power. It also includes the Commercial Services Office (COMSO), focused on procuring commercially available space services.[24] SSC is comprised of the following two Deltas and one SBD:

Space Launch Delta 30

Mission: "Provide robust, relevant, and efficient range and spaceport capabilities for the nation."[25] The Delta launches satellites into polar orbit from the West Coast and supports DoD Intercontinental Ballistic Missile (ICBM) testing.

Squadrons: The 30th OSS, the 2nd Range Operations Squadron (ROPS), the 2nd Space Launch Squadron (SLS), the 30th SCS, the 30th CES, the 30th CONS, the 30th FSS, the 30th LRS, the 30th HCOS, the 30th OMRS, the 30th Comptroller Squadron (CPTS), and the 30th SFS

Headquarters: *Vandenberg Space Force Base, California*

Space Launch Delta 45

Mission: "One team… Deliver assured access to space for the warfighter and the nation." [26] The Delta operates the Eastern Range and launches space vehicles for DoD, NASA, and other U.S. and international commercial customers.

Squadrons: The 1st ROPS, the 5th SLS, the 45th Range Squadron (RANS), the 45th SCS, the 45th Weather Squadron (WS), the 45th CES, the 45th CONS, the 45th FSS, the 45th LRS, 45th HCOS, the 45th OMRS, the 45th CPTS, and the 45th SFS

Headquarters: *Patrick Space Force Base, Florida*

Space Base Delta 3

Mission: "[E]nsuring every Airman and Guardian has the necessary tools, infrastructure, and resources to fulfill their mission allows our personnel to focus on combatting threats in the space domain."[27] The Delta provides medical services, civil engineering, communications, chaplain, security, logistics, personnel, readiness, and quality-of-life services to SSC and Los Angeles Air Force Base.[28]

Squadrons: Not publicly found by time of publication.

Headquarters: *Los Angeles Air Force Base, California*

Space Training and Readiness Command (STARCOM)

STARCOM trains and educates space professionals and develops combat-ready space forces to address warfighting challenges in the space domain. As part of this mandate, STARCOM is also responsible for developing space warfighting doctrine, tactics, techniques, and procedures, as well as the testing and evaluation of USSF capabilities.[29] STARCOM is comprised of the following Deltas:

Space Delta 1 – Training
Mission: Developing Guardians to dominate in competition and conflict through a career-long continuum of innovative basic military, initial skills, and advanced training courses as well as Space Force and joint exercises."[30]
Squadrons: The 1st Delta Operations Squadron (DOS), the 319th CTS, the 328th Weapons Squadron (WPS), the 392nd CTS, and 533rd Training Squadron (TRS)
Headquarters: *Vandenberg Space Force Base, California*

Space Delta 10 – Doctrine and Wargaming
Mission: "[D]evelop USSF doctrine and tactics, conducts the USSF Lessons Program, and executes and supports wargames in order to posture USSF forces, and designated joint and allied partners, to prevail in a Contested, Degraded, Operationally-Limited (CDO), all-domain environment"[31]
Squadrons: The 10th DOS
Headquarters: *United States Air Force Academy, Colorado*

Space Delta 11 – Range and Aggressor
Mission- "Deliver realistic, threat-informed test and training environments through the provision of live, virtual, and constructive range and combat replication capability in order to prepare USSF, joint, and allied forces to prevail in a Contested, Degraded, and Operationally-Limited (CDO) environment."[32]
Squadrons: The 11th DOS, the 25th Space Range Squadron (SRS), the 57th Space Aggressor Squadron (SAS), the 98th SRS, the 527th SAS
Headquarters- *Schriever Space Force Base, Colorado*

Space Delta 12 – Test and Evaluation
Mission: "[I]ndependent test and evaluation of USSF capabilities and delivery of timely, accurate, and expert information in support of weapon system acquisition, operation acceptance, and readiness decisions."[33]
Squadrons: The 12th DOS, the 1st Test and Evaluation Squadron (TES), the 3rd TES, the 4th TES, and the 17th TES
Headquarters: *Schriever Space Force Base, Colorado*

Space Delta 13 – Education
Mission: "Educate and develop Guardian leaders in support of the National Defense Strategy who are prepared to dominate the space domain in today's complex global environment," including institutional education and advanced education programs.[34]
Squadrons: The 13th DOS
Headquarters: *Maxwell Air Force Base, Alabama*

Additional Organizations

Space Development Agency

Transferred to USSF from the oversight of the Under Secretary of Defense for Research and Engineering in October 2022, the Space Development Agency (SDA) is responsible for the rapid delivery of space-based capabilities to the joint warfighter to support terrestrial missions. It is building a proliferated low Earth orbit (LEO) constellation, initially focused on missile tracking and SATCOM connectivity to quickly relay data to a range of warfighter platforms.[35] Of note, SDA does not fall under the command of Space Systems Command. Instead, the SDA reports to the Assistant Secretary of the Air Force for Space Acquisitions and Integration for acquisition matters and to the Chief of Space Operations for all other matters.[36] It retains the authority to set its own policies and decide how to develop and buy its own systems.[37]

Space Rapid Capabilities Office

Established in the FY 18 NDAA, with further authorities granted under the FY 19 NDAA, the Space Rapid Capabilities Office (Space RCO) is a direct report to the Assistant Secretary of the Air Force for Space Acquisition and Integration for acquisition matters, and to the Chief of Space Operations for all other matters; similar to SDA.[38] Forming another component of the USSF's acquisition capabilities, the Space RCO is tasked with delivering "operationally dominant space capabilities at the speed of warfighting relevance."[39] Organized in a streamlined manner with agile decision-making authorities, a short chain-of-command, and integrated support functions like contracting, the Space RCO fills a niche within the USSF where it can take "measured risks" in developing and quickly delivering prototypes to the SSC.[40]

Service Component Commands

The USSF has activated three service components assigned to combatant commands to provide "service-specific administration and support functions," as outlined in Title 10, U.S. Code.[41] Service Component commands are personnel, units, organizations, or other support forces that belong to a distinct military service but are assigned to support a Combatant Commander. SpOC performs the service component function for U.S. Space Command (SPACECOM). As of December 2022, the USSF also supports two regional combatant commands and a sub-unified command, with component commands at U.S. Indo-Pacific Command (USINDOPACOM), U.S. Forces Korea (USFK), and U.S. Central Command (USCENTCOM). These service components will "integrate at the component level and provide combatant commanders a subordinate space commander, organic space planning and employment expertise, and space command and control that is focused on the joint force's operational warfighting priorities and requirements."[42] In the future, additional space component commands will likely emerge at many, if not all, of the other combatant commands.

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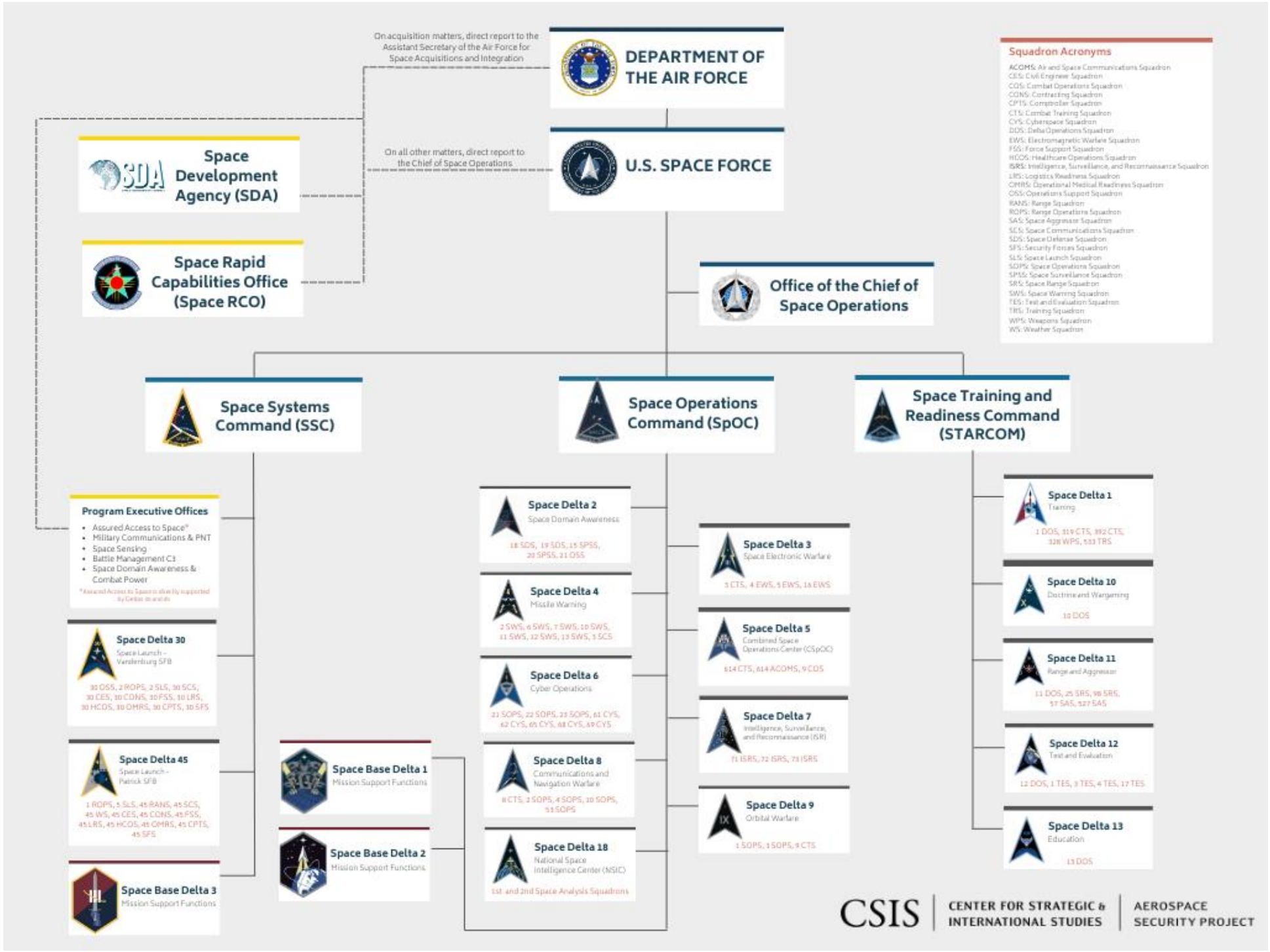
On acquisition matters, direct report to the Assistant Secretary of the Air Force for Space Acquisitions and Integration
On all other matters, direct report to the Chief of Space Operations
DEPARTMENT OF THE AIR FORCE
U.S. SPACE FORCE
Space Development Agency (SDA)
Space Rapid Capabilities Office (Space RCO)
Office of the Chief of Space Operations
Space Systems Command (SSC)
Space Operations Command (SpOC)
Space Training and Readiness Command (STARCOM)
Squadron Acronyms
ACOMS: Air and Space Communications Squadron
CES: Civil Engineer Squadron
COS: Combat Operations Squadron
CONS: Contracting Squadron
CPTS: Comptroller Squadron
CTS: Combat Training Squadron
CYS: Cyberspace Squadron
DOS: Delta Operations Squadron
EWS: Electromagnetic Warfare Squadron
FSS: Force Support Squadron
HCOS: Healthcare Operations Squadron
ISRS: Intelligence, Surveillance, and Reconnaissance Squadron
LRS: Logistics Readiness Squadron
OMRS: Operational Medical Readiness Squadron
OSS: Operations Support Squadron
RANS: Range Squadron
ROPS: Range Operations Squadron
SAS: Space Aggressor Squadron
SCS: Space Communications Squadron
SDS: Space Defense Squadron
SFS: Security Forces Squadron
SLS: Space Launch Squadron
SOPS: Space Operations Squadron
SPSS: Space Surveillance Squadron
SRS: Space Range Squadron
SWS: Space Warning Squadron
TES: Test and Evaluation Squadron
TRS: Training Squadron
WPS: Weapons Squadron
WS: Weather Squadron
Program Executive Offices
Assured Access to Space*
Military Communications & PNT
Space Sensing
Battle Management C3
Space Domain Awareness & Combat Power
*Assured Access to Space is directly supported by Cyber as an asset
Space Delta 30
Space Launch – Vandenburg SFB
30 OSS, 2 ROPS, 2 SLS, 30 SCS, 30 CES, 30 CONS, 30 FSS, 30 LRS, 30 HCOS, 30 OMRS, 30 CPTS, 30 SFS
Space Delta 45
Space Launch – Patrick SFB
1 ROPS, 5 SLS, 45 RANS, 45 SCS, 45 WS, 45 CES, 45 CONS, 45 FSS, 45 LRS, 45 HCOS, 45 OMRS, 45 CPTS, 45 SFS
Space Base Delta 3
Mission Support Functions
Space Base Delta 1
Mission Support Functions
Space Base Delta 2
Mission Support Functions
Space Delta 2
Space Domain Awareness
18 SDS, 19 SDS, 15 SPSS, 20 SPSS, 21 OSS
Space Delta 4
Missile Warning
2 SWS, 6 SWS, 7 SWS, 10 SWS, 11 SWS, 12 SWS, 13 SWS, 1 SCS
Space Delta 6
Cyber Operations
21 SOPS, 22 SOPS, 23 SOPS, 61 CYS, 62 CYS, 65 CYS, 68 CYS, 69 CYS
Space Delta 8
Communications and Navigation Warfare
8 CTS, 2 SOPS, 4 SOPS, 10 SOPS, 53 SOPS
Space Delta 18
National Space Intelligence Center (NSIC)
1st and 2nd Space Analysis Squadrons
Space Delta 3
Space Electronic Warfare
5 CTS, 4 EWS, 5 EWS, 16 EWS
Space Delta 5
Combined Space Operations Center (CSpOC)
614 CTS, 614 ACOMS, 9 COS
Space Delta 7
Intelligence, Surveillance, and Reconnaissance (ISR)
71 ISRS, 72 ISRS, 73 ISRS
Space Delta 9
Orbital Warfare
1 SOPS, 3 SOPS, 9 CTS
Space Delta 1
Training
1 DOS, 319 CTS, 392 CTS, 328 WPS, 533 TRS
Space Delta 10
Doctrine and Wargaming
10 DOS
Space Delta 11
Range and Aggressor
11 DOS, 25 SRS, 98 SRS, 57 SAS, 527 SAS
Space Delta 12
Test and Evaluation
12 DOS, 1 TES, 3 TES, 4 TES, 17 TES
Space Delta 13
Education
13 DOS
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Endnotes

[1] "United States Space Force Mission," U.S. Space Force, https://www.spaceforce.mil/About-Us/About-Space-Force/Mission/.

[2] "Leadership," U.S. Space Force, https://www.spaceforce.mil/About-Us/Leadership/.

[3] Operations of satellites are continuing to transition to the U.S. Space Force from other services or organizations over the course of 2022 and 2023. This number includes those that have been made public, but it is likely that there are more classified systems also under USSF purview. "Department of the Air Force FY 2023 Budget Overview," U.S. Air Force, 6, https://www.saffm.hq.af.mil/Portals/84/documents/FY23/SUPPORT_/BOB_28Mar_1125_LoRes.pdf?ver=5nrA8bBfhWoUSrvZ09CeHA%3d%3d; John Venable, "U.S. Space Force," The Heritage Foundation, October 18, 2022, https://www.heritage.org/military-strength/assessment-us-military-power/us-space-force.

[4] "What's the Space Force," U.S. Space Force, https://www.spaceforce.mil/About-Us/FAQs/Whats-the-Space-Force/.

[5] "Department of the Air Force FY 2023 Budget Overview," 5; Marcia Smith, "Appropriators Boost FY2023 Space Force Funding," Space Policy Online, December 20, 2022, https://spacepolicyonline.com/news/appropriators-boost-fy2023-space-force-funding/.

[6] "Commanding Space: The Story Behind the Space Force," Center for Strategic and International Studies, 2019, https://www.youtube.com/watch?v=b8SXT6-mr0M.

[7] Ibid.

[8] "Chief Master Sergeant of the Space Force Roger A. Towberman," U.S. Space Force, current as of May 2022, https://www.spaceforce.mil/SFB/Display/Article/2136021/chief-master-sergeant-of-the-space-force-roger-a-towberman/.
[9] "Leadership," U.S. Space Force, https://www.spaceforce.mil/About-Us/Leadership/.
[10] "Defense Primer: United States Space Force," Congressional Research Service, Updated November 16, 2022, https://crsreports.congress.gov/product/pdf/IF/IF11495

[11] "Space Delta 2 Fact Sheet," U.S. Space Force, July 24, 2020, https://www.spacebasedelta1.spaceforce.mil/Portals/15/Delta2_factsheet.pdf.

[12] "Space Delta 3 Fact Sheet," U.S. Space Force, July 24, 2020, https://www.spoc.spaceforce.mil/About-Us/Fact-Sheets/Display/Article/2334026/space-delta-3

[13] "Space Delta 4 Fact Sheet," U.S. Space Force, Current as of July, 2020, https://www.buckley.spaceforce.mil/About-Us/Fact-Sheets/Article/322395/space-delta-4-missile-warning/.

[14] "Combined Space Operations Center/Delta 5 Fact Sheet," US Space Force, Current as of July, 2020, https://www.vandenberg.spaceforce.mil/Portals/18/documents/CFSCC/CSpOC-Delta5-FactSheet.pdf?ver=2020-07-23-181257-343.

[15] "Space Delta 6 Fact Sheet," U.S. Space Force, Current as of July 2020, https://www.schriever.spaceforce.mil/About-Us/Fact-Sheets/Display/Article/275810/delta-6/.

[16] "Space Delta 7 Fact Sheet," U.S. Space Force, July 24, 2020, https://www.spacebasedelta1.spaceforce.mil/SpaceDelta7/.

[17] "Space Delta 8 Fact Sheet," U.S. Space Force, July 24, 2020, https://www.spoc.spaceforce.mil/About-Us/Fact-Sheets/Display/Article/2334040/space-delta-8.

[18] "Space Delta 9 Fact Sheet," U.S. Space Force, Current as of September 2020, https://www.schriever.spaceforce.mil/About-Us/Fact-Sheets/Display/Article/275817/delta-9/.

[19] "United States Space Force Space Operations Command Fact Sheet Delta 18," U.S. Space Force, Current as of June, 2022, https://media.defense.gov/2022/Jun/22/2003021948/-1/-1/1/DELTA%2018%20FACTSHEET%20-%20220621.PDF.

[20] "Space Base 1 Fact Sheet," U.S. Space Fact, Current as October 2022, https://www.spoc.spaceforce.mil/About-Us/Fact-Sheets/Display/Article/2401936/space-base-delta-1

[21] "About Us," Space Base Delta 1, https://www.spacebasedelta1.spaceforce.mil/About-Us/.

[22] "Buckley SFB In-depth Overview," Military Installations, https://installations.militaryonesource.mil/in-depth-overview/buckley-afb

[23] Photo by Airman 1st Class Dalton Williams, "191220-F-DJ189-1010," U.S. Space Force, December 20, 2019, https://www.spaceforce.mil/Multimedia/Photos/igphoto/2002314591/.

[24] Sandra Erwin, "New Space Force procurement shop subscribes to the space-as-a-service model," Space News, November 21, 2022, https://spacenews.com/fighting-fomo-with-comso/.

[25] "About Space Launch Delta 30," U.S. Space Force, https://www.vandenberg.spaceforce.mil/About-Us/.

[26] "Space Launch Delta 45 Fact Sheet," U.S. Space Force, May 2020, https://www.patrick.spaceforce.mil/About-Us/Fact-Sheets/Article/329833/space-launch-delta-45/.

[27] Space Base Delta 3 Public Affairs, "Los Angeles Welcomes New Base Commander to Lead Space Base Delta 3," U.S. Space Force, July 15, 2022, https://www.losangeles.spaceforce.mil/News/Article-Display/Article/3094905/los-angeles-welcomes-new-base-commander-to-lead-space-base-delta-3/.

[28] Space Base Delta 3 Public Affairs, "Los Angeles Welcomes New Base Commander to Lead Space Base Delta 3," Los Angeles Air Force Base, July 15, 2022, https://www.losangeles.spaceforce.mil/News/Article-Display/Article/3094905/los-angeles-welcomes-new-base-commander-to-lead-space-base-delta-3/.

[29] "Who We Are," Space Training and Readiness Command (STARCOM), accessed December 20 2022, https://www.starcom.spaceforce.mil/About-Us/Who-We-Are/.

[30] "Space Delta 1 Fact Sheet," U.S. Space Force, December 2022, https://www.starcom.spaceforce.mil/About-Us/How-We-Do-It/Space-Delta-1-Training/.

[31] "Space Delta 10 Fact Sheet," U.S. Space Force, October 2022, https://www.starcom.spaceforce.mil/About-Us/How-We-Do-It/Space-Delta-10-Doctrine-Wargaming/.

[32] "Space Delta 11 Fact Sheet," U.S. Space Force, September 2021, https://www.starcom.spaceforce.mil/About-Us/How-We-Do-It/Space-Delta-11-Range-Aggressors/.

[33] "Space Delta 12 Fact Sheet," U.S. Space Force, Current as of December, 2022, https://www.starcom.spaceforce.mil/About-Us/How-We-Do-It/Space-Delta-12-Test-and-Evaluation/.

[34] "Space Delta 13 Fact Sheet," U.S. Space Force, Current as of August, 2021, https://www.starcom.spaceforce.mil/About-Us/How-We-Do-It/Space-Delta-13-Education/.

[35] Rachel Zisk, "The National Defense Space Architecture (NDSA): An Explainer," Payload, December 5, 2022, https://www.sda.mil/the-national-defense-space-architecture-ndsa-an-explainer/.

[36] Sandra Erwin, "Space Development Agency is now officially part of the Space Force," Space News, October 1, 2022, https://spacenews.com/space-development-agency-is-now-officially-part-of-the-space-force/.

[37] Theresa Hitchens, "Space Development Agency chief clears up confusion about where his agency is going," Breaking Defense, September 22, 2022, https://breakingdefense.com/2022/09/space-development-agency-chief-clears-up-confusion-about-where-his-agency-is-going/.

[38] "Space Rapid Capabilities Office," U.S. Space Force, January 6, 2021, https://www.spaceforce.mil/About-Us/Fact-Sheets/Article/2464030/space-rapid-capabilities-office/.

[39] Ibid.

[40] "Space Rapid Capabilities Office;"; Courtney Albon, "US Space Force rapid capabilities office to deliver first project this year," C4ISRNET, July 7, 2022, https://www.c4isrnet.com/battlefield-tech/space/2022/07/07/us-space-force-rapid-capabilities-office-to-deliver-first-project-this-year/.

[41] Secretary of the Air Force Public Affairs," Space Force Presents Forces to U.S. Indo-Pacific Command," November 23, 2022, https://www.spoc.spaceforce.mil/News/Article-Display/Article/3229042/space-force-presents-forces-to-us-indo-pacific-command.

[42] Ibid, 12.