



2023

USSPACECOM

FROM THE ULTIMATE HIGH GROUND TO THE LAST TACTICAL MILE





**NEVER A DAY
WITHOUT SPACE**



UNITED STATES SPACE COMMAND

U.S. Space Command, working with allies and partners, plans, executes and integrates military spacepower into multi-domain global operations in order to deter aggression, defend national interests and when necessary, defeat threats.

COMMANDER
GENERAL JAMES DICKINSON
UNITED STATES ARMY

DEPUTY COMMANDER
LIEUTENANT GENERAL JOHN E. SHAW
UNITED STATES SPACE FORCE

COMMAND SENIOR ENLISTED LEADER
MASTER GUNNERY SERGEANT SCOTT STALKER
UNITED STATES MARINE CORPS

CHIEF OF STAFF
REAR ADMIRAL WILL PENNINGTON
UNITED STATES NAVY

SOCIAL MEDIA



WEBSITE
WWW.USSPACECOM.MIL

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Col. Megan Schafer
Maj. AnnMarie Annicelli
John Ayre
Trevor Ihrke
Jane Weber

Editor-in-chief
Managing Editor
Visual Information Manager
Lead Graphic Designer
Editor

Contributors:

USSPACECOM Directorates, Component Commands, Lt. Col. Angela Webb, Lt. Col. Neil Alcaria, Master Sgt. Tsuyoshi Shinzato, Sean Castellano, Chris DeWitt and Mike Kucharek

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FROM THE COMMANDER

GENERAL JAMES DICKINSON

UNITED STATES SPACE COMMAND

Spacepower enables our way of life and is essential to our national security. The U.S. government is committed to retaining America's primacy in space. We must therefore maintain our position of advantage to assure a sustainable, safe, stable, and secure domain. To this end, my vision remains unchanged: we will out-think and out-maneuver our competitors to deter conflict in space and, if necessary, we will dominate through sustained, comprehensive spacepower.

Through your disciplined initiative, our headquarters achieved Initial Operational Capability in just two years, and we are on track to reach full operational capability later this year. The expertise, diversity, and creativity of our workforce underpin our strength and effectiveness. Of all the elements of military spacepower, our most valued asset is and will always be our people.

China, our pacing competitor, seeks to inhibit our access to and freedom of maneuver in space during crisis and conflict. At the same time, Russia remains our acute challenge. Given the rate at which China and Russia are developing and fielding space and counterspace capabilities, we must be prepared to win today.

The fight for space and from space is a joint, integrated, and all-domain effort. Space systems include the ground, link, and space segments – our freedom of maneuver in space is dependent upon access to each segment. Our mission also spans the spectrum of conflict and transcends regional boundaries. For example, the fusion of space, cyber, and special operations can generate unique, multi-domain solutions to counter adversary strategies designed to compete with the U.S. below and across the threshold of war.

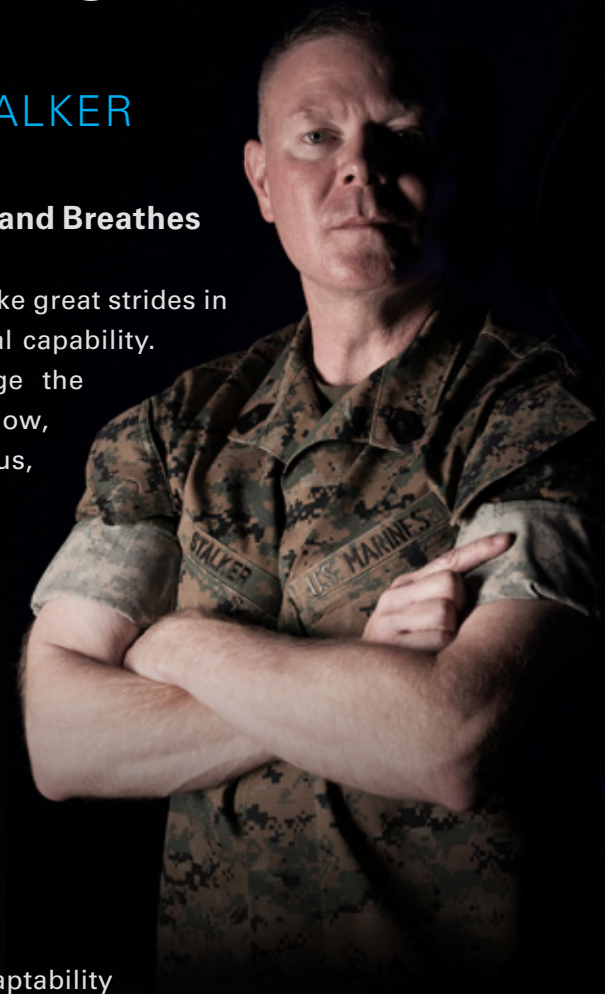
The rapidly evolving threat environment coupled by the scope and scale of our mission demands an innovative approach to operations. The threat will not wait. In this regard, we will leverage the full range of traditional and non-traditional capabilities across the Joint Force, our Allies, and Partners to get the most out of what we have today.

I am proud to lead such a talented and patriotic team of joint space professionals, who are driven by a warfighting ethos. USSPACECOM stands ready to ensure there is "Never a Day Without Space!"

FROM THE COMMAND SENIOR

ENLISTED LEADER

MASTER GUNNERY SERGEANT SCOTT STALKER



1st Space Truth: Our Most Important Weapon System Lives and Breathes

Since the stand up of U.S. Space Command, we have continued to make great strides in our warfighting readiness and in our progress toward full operational capability. The National Defense and National Space strategies acknowledge the important role of space in our national security. But as many of us know, it is our people that give us the strategic advantage of space and thus, my focus.

The first space truth reminds us of the critical role of our people, who guide the individuals managing, building, maintaining, training on and acquiring the systems and the families who support our people. The service warfighters, civilians and contractors comprising the command make the U.S. military distinct from other military forces around the world. And, they are a driving force behind the command's many accomplishments since its reestablishment in 2019. In the ever-evolving, increasingly competitive and strategic environment, USSPACECOM's warfighting mission success relies on them.

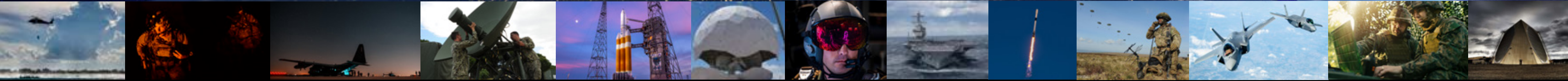
In such a dynamic operational environment, our strength lies in the adaptability and critical thinking of our people. Because of this, we prioritize their continuous education and development. Instead of training that focuses on a single task, we encourage our forces to think critically and, in doing so, we develop proactive, empowered leaders. As the command's senior enlisted leader, among my highest priorities are development and educational opportunities for our enlisted forces – the backbone of the Joint Force.

In such a complex operational environment like ours, USSPACECOM's diversity is its advantage. Our organization is strengthened by our versatile team hailing from different military branches, backgrounds, cultures, races and religions, all contributing their unique experiences and perspectives to make us all better. We pride ourselves on creating a culture that values diverse talents and varying viewpoints, which is necessary to building a professional environment in which people thrive, feel appreciated and are engaged and fulfilled in their roles. Because what makes USSPACECOM different from our competitors makes us better.

We must care for our teammates: the Soldiers, Marines, Sailors, Airmen, Guardians, Civilians and Contractors working side-by-side in operations critical to our nation's well-being. Our nation's way of life depends on our access to space and it is only with our primary, most sacred weapon system that USSPACECOM can accomplish its mission. It's because of our people and the support of their families we can ensure there is "Never A Day Without Space."

USSPACECOM OVERVIEW

KEY TASKS



For over half a century, space power has provided the U.S. with an important strategic advantage. Today, space enables nearly every facet of society and is central to our way of life. From commerce to meteorology to global communications, society not only relies on space capabilities, it expects the services they provide to always be present. Space enables our national security to preserve our way of life. From protecting the homeland and fighting our nation's wars alongside allies and partners, to providing humanitarian assistance, space makes the achievements of America's military possible.

The establishment of U.S. Space Command as the 11th combatant command demonstrates the critical importance America places on space. As the environment changes to reflect shifts in the geopolitical landscape, advances in technology and new threats, space will remain a critical component of our way of life and to our national security. Our space truths are principles that reflect this enduring relationship. They will guide our military space operations through an increasingly complex environment and into an uncertain future.

Our competitors have demonstrated their determination to hold our space capabilities at risk. Therefore, we will always defend our national interests, deter aggression and support our allies and partners. Should deterrence fail, the combat power generated by our combined and joint force will enable us to win.

Our competitors are not only challenging national security and prosperity in cyberspace, on land, at sea and in the air; they have turned space, a once peaceful environment, into a warfighting domain.

By developing, testing and deploying counterspace capabilities and evolving their military doctrines to extend into space, our competitors seek to prevent our unfettered access to space and deny our freedom to operate in space.

Space is no longer a sanctuary. Technological advances, changes in strategic guidance and new security challenges require USSPACECOM to innovate and adapt to ensure that space warfighters are prepared to accomplish future missions in, from and to space. USSPACECOM will protect and defend the American people and ensure there is never a day without space.



FROM THE ULTIMATE HIGH GROUND TO THE LAST TACTICAL MILE NEVER A DAY WITHOUT SPACE



1 UNDERSTANDING OUR COMPETITION

- Educating joint warfighters on threats and adversaries
- Training joint warfighters to outmaneuver our enemies
- Innovating through disruptive thinking



2 BUILDING THE COMMAND TO COMPETE & WIN

- Achieving full operational capability
- Sustaining a warfighting culture
- Adapting to a dynamic and changing strategic environment



3 MAINTAINING KEY RELATIONSHIPS

- Strengthening alliances and attracting new partners
- Enhancing interoperability
- Uniting around a compelling narrative



4 MAINTAINING DIGITAL SUPERIORITY

- Innovating for competitive advantage
- Evolving cyber operations for an agile and resilient posture
- Investing in game-changing technologies



5 INTEGRATING COMMERCIAL & INTERAGENCY ORGANIZATIONS

- Promoting responsible behaviors in space
- Advocating for greater space capabilities
- Collaborating to solve mutual challenges with all elements of national power

ORGANIZATIONAL STRUCTURE



Service Components

Functional Components



U.S. ARMY
SPACE &
MISSILE
DEFENSE
COMMAND



U.S. MARINE
CORPS FORCES-
SPACE
COMMAND



U.S. NAVY
SPACE
COMMAND



U.S. AIR
FORCES
SPACE



U.S. SPACE
FORCE SPACE
OPERATIONS
COMMAND



COMBINED
FORCE SPACE
COMPONENT
COMMAND



JOINT TASK
FORCE SPACE
DEFENSE



JOINT
NAVIGATION
WARFARE
CENTER



JOINT
OVERHEAD
PERSISTENT
INFRARED
CENTER



MISSILE
WARNING
CENTER



COMBINED
SPACE OPERATIONS
CENTER



NATIONAL
SPACE
DEFENSE
CENTER

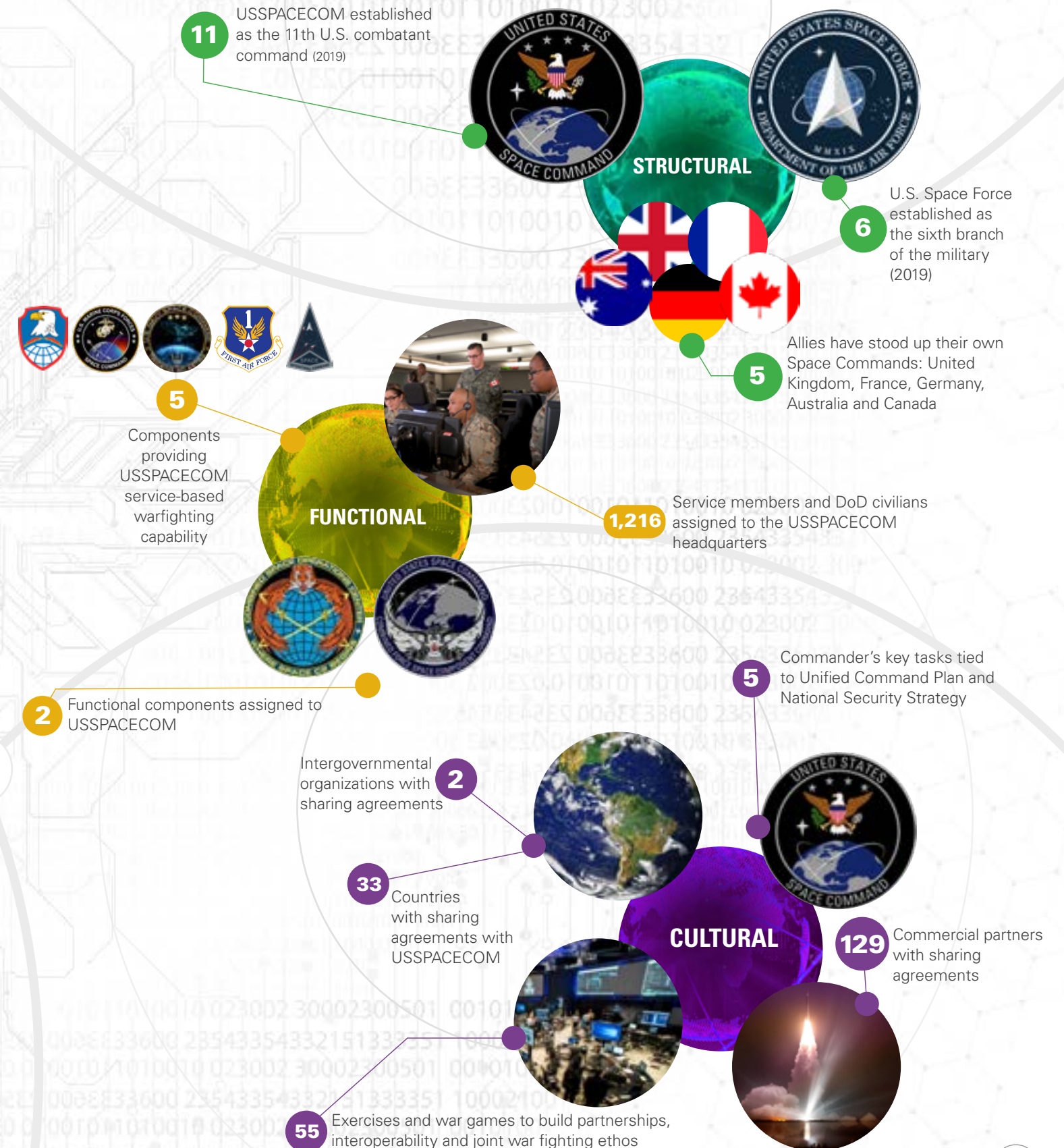
BY THE NUMBERS: THE CONTEXT

In 1957, Russia's tiny Sputnik satellite was the one and only human-made object gliding across Low Earth Orbit. Today, our way of life is inextricably tied to space-based capabilities. However, the space domain, which represents U.S. Space Command's astrographic area of responsibility, is no longer benign and is increasingly competitive, congested and contested.



BY THE NUMBERS: OUR RESPONSE

Given the growing risk to our ability to operate freely in the space domain, the U.S. and our allies have responded structurally, functionally and culturally in a joint, combined and partnered approach to space operations.



BUILDING THE COMMAND

MILESTONES



SPACE LIGHTNING 2022



INAUGURAL JOINT SPACE MEDICAL FORUM



JAPAN SPACE COOPERATION



GLOBAL SENTINEL MULTINATIONAL EXERCISE WITH 25 NATIONS



ARTEMIS LAUNCH



SPACE CONFERENCE OF THE AMERICAS



COMBINED SPACE OPERATIONS INITIATIVE PRINCIPLES MEETING



USSPACECOM 3RD BIRTHDAY

2022

2023

JAN MAR APR JUL AUG NOV DEC JAN



Commercial Integration Strategy Overview

U.S. and allied militaries use space systems to connect, warn, guide and inform decisions across the entire spectrum of conflict from space, to the last tactical mile.



COMMERCIAL INTEGRATION STRATEGY OVERVIEW RELEASED



SWEDEN ENHANCED SPACE COOPERATION MEMORANDUM OF UNDERSTANDING



UNITED STATES EUROPEAN COMMAND POLAND KEY LEADER ENGAGEMENT



UNITED KINGDOM ENHANCED SPACE COOPERATION MEMORANDUM OF UNDERSTANDING



HUMAN SPACE FLIGHT SUPPORT VALIDATION EXERCISE



AUSTRALIA SPACE COOPERATION



ARTEMIS I RETURN



dvidshub.net
Formal Establishment of Commander, Space Com...
Effective Jan. 1, 2023, Commander, Navy Space Command (NAVSPACECOM), Fort Meade, Maryla...

NAVY SPACE COMMAND STAND UP

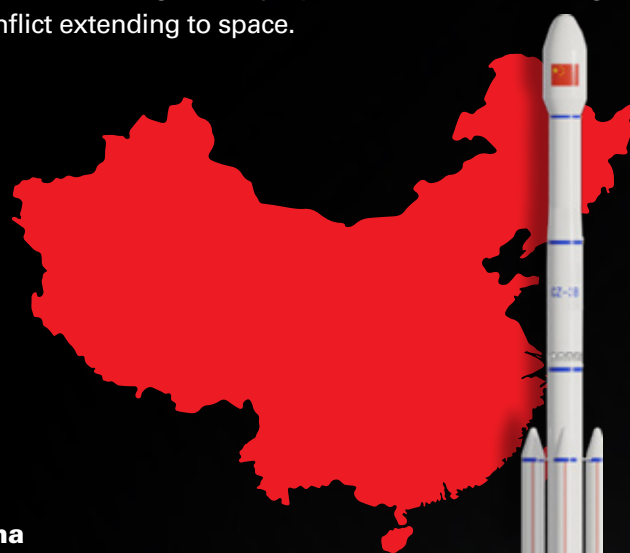
INTELLIGENCE OVERVIEW CHINA

Overview

In the U.S. and around the world, space sustains our modern way of life. As an indispensable component of our Nation's military and economic power, space-based capabilities are a source of security, prosperity and scientific achievement.

The unfettered access and freedom to operate within the space domain will remain a vital priority as we continue to seek the expansion of space's benefits to people. Space, however, is not a sanctuary. The space systems we rely on are potential targets throughout all levels of conflict.

The greatest strategic threat we face is that of China's and Russia's development, testing and deployment of their own counterspace capabilities and their respective military doctrines outlining the employment of these technologies in a conflict extending to space.



China

Since observing the U.S. military's performance during the 1991 Gulf War, the People's Liberation Army, led by the Chinese Communist Party, embarked on an effort to modernize weapons systems and update doctrine to focus on using and countering adversary information-enabled warfare. As part of the military reforms announced in 2015, PLA established the Strategic Support Force to integrate cyberspace, space and electronic warfare capabilities into joint military operations. The SSF forms the core of China's information warfare force, supports the entire PLA and reports directly to the Central Military Commission. The SSF likely is responsible for research and development of certain space and counterspace capabilities.



Counterspace operations will be integral to potential military campaigns launched by the PLA and the PLA has counterspace weapons capabilities intended to target U.S. and allied satellite operations.

Today's and tomorrow's PLA is being designed to be joint, power projecting, versatile and more professional and more lethal on the international stage. The space layer is critical to this build out. Collectively, China employs robust space-based Intelligence, Surveillance and Reconnaissance; Positioning, Navigation and Timing; and command and control capabilities designed to enhance its worldwide situational awareness, conduct of command and control and enhance military intelligence collection.

China has developed robust and capable space services, including space-based ISR. China's ISR satellites can provide electro-optical and synthetic aperture radar imagery, as well as electronic and signals intelligence data.

China is second only to the U.S. in the use of operational satellites. As a part of the national program, the PLA owns and operates about half of the Chinese ISR systems, most of which could support monitoring, tracking and targeting of U.S. and allied forces worldwide, especially throughout the Indo-Pacific region. These satellites also allow China and the PLA to maintain situational awareness of potential regional flashpoints, including the Korean Peninsula, Taiwan and the South China Sea.

China's navigational satellite system, Beidou, is now global and competing with the U.S. Global Positioning System. It is also fundamental for the PLA as a PNT of military systems.

- The PLA will likely continue to integrate space services such as satellite ISR and PNT and satellite communications into its weapons and command and control systems to erode the U.S. military's information advantage.
- The PLA continues to train its military space elements and field new destructive and nondestructive ground and space-based antisatellite weapons.
- The CCP has funded PLA-guided academic studies to develop new soft and hard kill methods to destroy U.S. commercial on-orbit satellites.
- The PLA has already fielded ground-based ASAT missiles intended to destroy adversary satellites in Low Earth Orbit and ground-based ASAT lasers likely intended to blind or damage sensitive space-based optical sensors on LEO satellites.
- Notable Chinese counterspace capabilities are the direct ascent ASAT DN-1 and DN-2. In 2021, the PLA continued development and testing activities to advance the DN-1 and DN-2 DA ASAT weapons to further refine their space attack capabilities.

» The 2007 destruction of a Chinese controlled satellite by a PLA ASAT hit-to-kill missile continues to litter LEO with 2,800 pieces of trackable debris and hundreds of thousands of smaller pieces, posing a threat to on-orbit space systems operated by other space faring nations; less well known is that China has multiple ground-based laser systems of varying power levels that could blind or damage satellite systems.



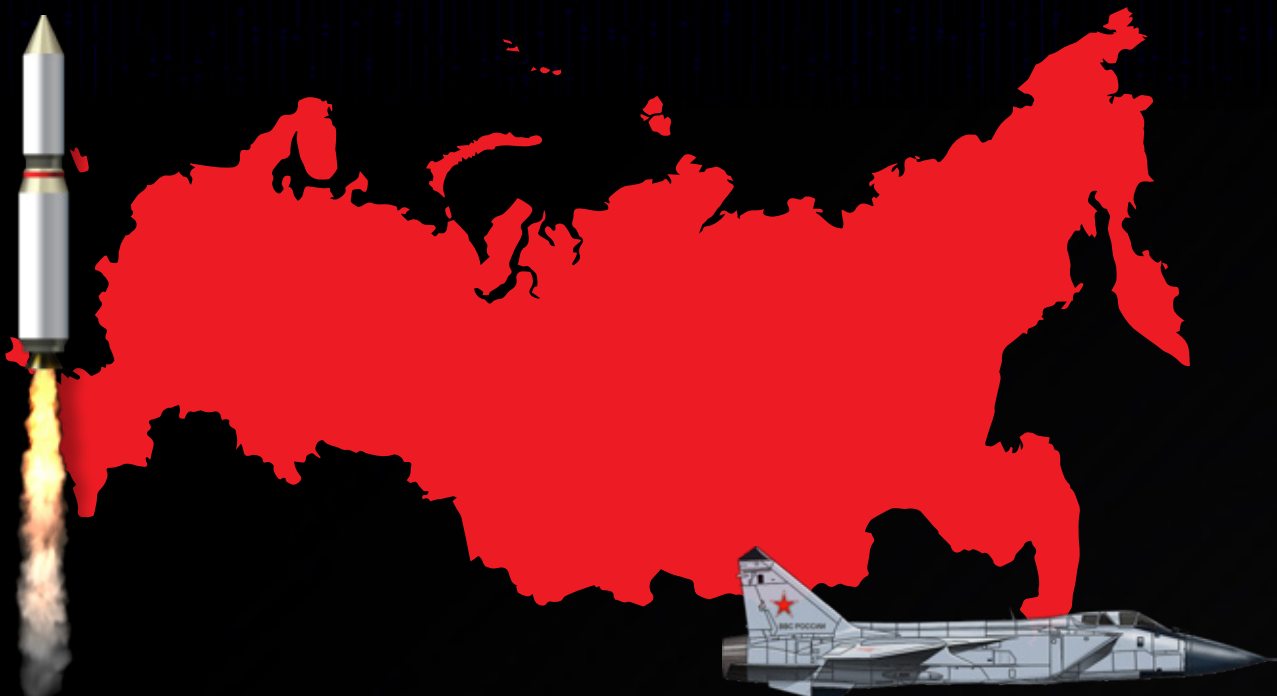
- » On July 27, 2021, China conducted the first fractional orbital launch of an ICBM with a hypersonic glide vehicle from within its borders. This demonstrated the greatest distance flown (~40,000 kilometers) and the longest flight time (~100+ minutes) of any PLA land attack weapons system to date.
- » Additionally, the Chinese-built Shijian-17 is a satellite with a robotic arm, a technology that could be used in a future system for grappling other on-orbit satellites with ill-intent.

According to the CCP's own documents, "The PLA Strategic Support Force has made active efforts to integrate into joint operations' systems. It has carried out confrontational training in the new domains and trained for emergencies and combat."

In October 2021, China launched the SJ-21, which China's Ministry of Defense described as a space debris mitigation technology; but its dual purpose capability could have military applications. In January 2022, SJ-21 maneuvered in close proximity with a non operational Beidou satellite and was observed towing the object out of its geosynchronous position before placing it into the graveyard belt.



INTELLIGENCE OVERVIEW RUSSIA



The Russian military remains a serious threat to the U.S., its allies and partners. Russia sees space as integral to winning modern wars and reorganized its Aerospace Force in 2015 to better incorporate space operations and counterspace capabilities. Russia remains a key space competitor, maintaining a large network of reconnaissance, communications and navigation satellites. Russia will focus on integrating space services—such as communications; PNT; geolocation; and ISR—into its weapons and command and control systems.

Russia considers U.S. dependency on space to enable military power projection as a vulnerability it can exploit in a crisis or conflict. Russia pursues space attack weapon systems that can deny, damage and defeat U.S. space-based systems to reduce U.S. military effectiveness and control conflict escalation if deterrence fails. Russia continues to train its military space elements and field new ASAT weapons to disrupt and degrade U.S. and allied space capabilities. It is developing, testing and fielding an array of nondestructive and destructive counterspace weapons—including jamming and cyberspace, on-orbit and ground-based ASAT capabilities, as well as directed energy weapons to target U.S. and allied satellites.

- Russia has several ground-based lasers that could jam and blind allied satellite sensors. It probably will field more capable lasers to damage satellites in the mid-to-late 2020s.
- COSMOS 2504 and COSMOS 2536 are prototype Russian ASAT weapons that could kinetically kill satellites in Low Earth Orbit. Additionally, COSMOS 2519 and COSMOS 2542 are Russian on-orbit weapons system designed to kinetically kill satellites in LEO.
- The Nudol is a Russian mobile ground-based missile designed to destroy satellites in LEO.

» On Nov. 15, 2021, Russia conducted a successful destructive test of its ASAT missile system. The missile destroyed Kosmos 1408, a defunct Soviet satellite in LEO, creating a significant debris field of over 1,500 new pieces of traceable debris fragments and posing a collision threat to space objects in LEO, including the International Space Station.

» Russia is reportedly developing an air launched ASAT weapon called Burevestnik targeting spacecraft in LEO. This system is based on the Soviet-era system called “Contact” that was designed for launching an ASAT missile from a MiG-31 fighter aircraft.

» Russia maintains a satellite communications fleet that provides resilient services to civil, government and military users within its borders and worldwide. Russia has taken steps to modernize its satellite communications systems but continues to lag other worldwide providers.

» Russia has sought to sustain its reconnaissance and remote sensing satellite fleet despite funding shortfalls, economic sanctions and technological setbacks since the end of the Cold War. This fleet contains at least 20 satellites, half reportedly owned and operated by the Russian Ministry of Defense.



OPERATIONS, TRAINING & FORCE DEVELOPMENT

Today, U.S. Space Command delivers strategic effects, providing the National Command Authority with space domain options for achieving national objectives. We are ready to address threats and take advantage of opportunities across the spectrum from competition to conflict.

USSPACECOM operates ground and space-based systems around the world that provide satellite communication, space domain awareness, offensive and defensive space control effects, and position, navigation, and timing services in support of the National Defense Strategy.

Scalable joint warfighting options and the underlying policies that allow for the strategic messaging of these capabilities are inherent across the competition spectrum. USSPACECOM, in collaboration with our mission partners, continues to pursue increased resources and capabilities that provide space domain awareness for warning, assessment, and attribution; provide space domain environmental monitoring, missile warning and tracking; and protects and defends U.S., allied, partnered, and commercial space capabilities in full compliance with our international legal obligations and commitments.

USSPACECOM integrates Joint Space Operations Training across the joint, interagency, intergovernmental, and multinational environments. As such, the command is integrating joint and combined space scenarios and training across the joint force, prioritizing those events focused on deterring and countering China. As USSPACECOM approaches full operational capability, the command has developed the capacity to synchronize effects with other combatant commands to achieve integrated operations in campaigning and contingency, a first for the command and the Department of Defense. In support of this effort, the command is building the first USSPACECOM-centric Tier 1 exercise to train against our contingency plans.

The exercise will emphasize the cognitive and physical actions required to deter conflict, and if necessary, set the conditions in the space domain necessary to preserve our combat edge from space and overcome adversary anti-access, area-denial strategies. To accomplish this, we will bring together all combatant commands, interagency, allies, and the commercial sector to practice the execution of authorities and relationships necessary to achieve space superiority through the global synchronization of effects. The command will have a phased approach to implementing this exercise series as we grow our exercise capability, with a tabletop exercise executing by the end of fiscal year 2023, two mission area focused events in fiscal year 2024 and a full scale Tier 1 in fiscal year 2025.



Joint Operations Center

The USSPACECOM Joint Operations Center is the commander's strategic-level command and control node. The JOC receives constant inputs from functional and service component operations centers, national government agencies, space partners, and additional world-wide data sources to assess the space domain, detect significant events, provide a unified operational picture and supervise execution of USSPACECOM's authorities, operations and capabilities.

The JOC ensures that the space enterprise accomplishes:

- Communications in accordance with Chairman Joint Chiefs of Staff Instructions
- Reporting on all events of interest to USSPACECOM Commander's Critical Information Requirements
- Command and control of USSPACECOM assigned forces

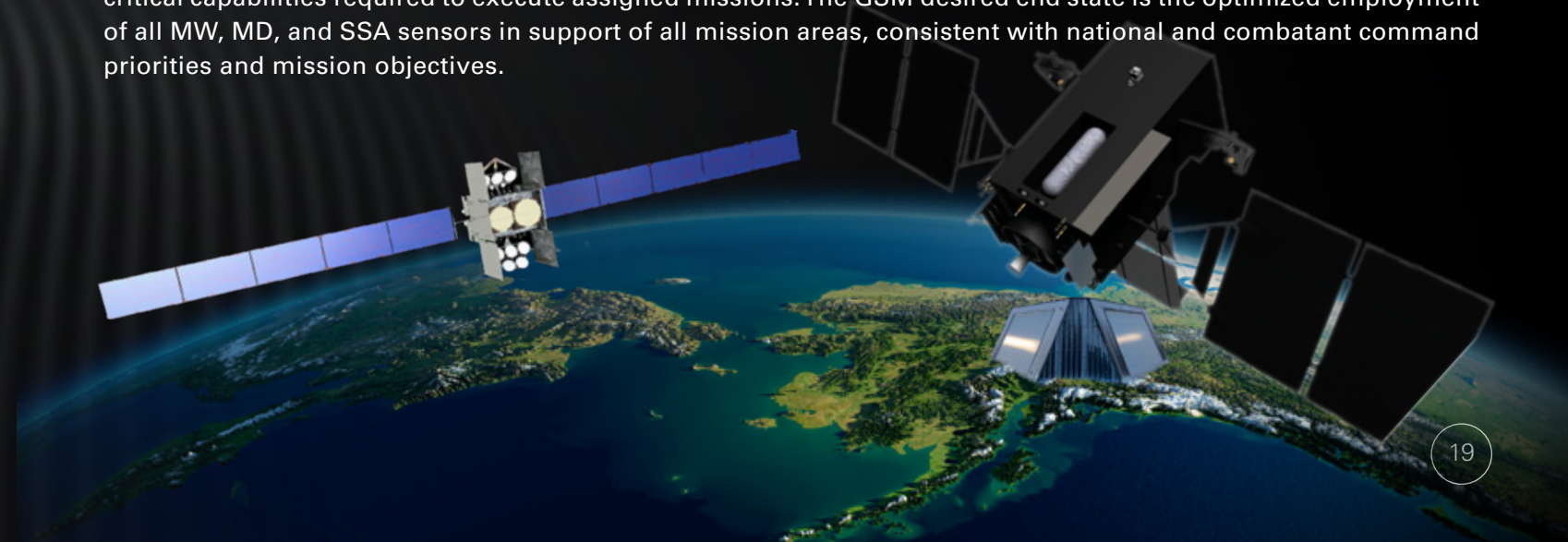
The USSPACECOM JOC is the primary command and control node that maintains uninterrupted situational awareness of the space domain and supervises execution of the USSPACECOM commander's authorities, operations, and capabilities in order to deter adversary aggression, protect vital space interests, and fight and win an armed conflict in the space domain.

Global SATCOM Manager

USSPACECOM is responsible for the planning, management, allocation, adjudication, and execution of DOD satellite communications (narrowband, wideband, protected, and leased commercial). This critical mission is in support of other combatant commands, U.S. government agencies, international partners, and other entities, as directed.

Global Sensor Manager

USSPACECOM is designated as the Global Sensor Manager. The GSM is tasked with making globally informed risk assessments, providing command and control of assigned sensors, prioritizing and recommending the optimal employment of sensors in support of national priorities and decision making. The GSM is responsible for providing missile warning, missile defense, and space domain awareness data to other combatant commands enabling critical capabilities required to execute assigned missions. The GSM desired end state is the optimized employment of all MW, MD, and SSA sensors in support of all mission areas, consistent with national and combatant command priorities and mission objectives.



STRENGTHENING ALLIANCES & INTERNATIONAL PARTNERSHIPS

Over recent months U.S. Space Command has significantly expanded its capacity and capability to work with allies and partners. Allies and partners represent an asymmetric advantage for USSPACECOM; they help us align norms of responsible behavior, share risks and costs, add resilience, increase capability and impose costs on adversaries.

USSPACECOM currently interacts with over 80 countries. The process that we use to manage our partnership is the Space Partnership Framework. Inspired by the Doric Temple, we work with countries from the foundations up. It's progressive and flexible by design and the more we do together the bigger and better the temple.

We start with the foundation – Space Sharing Agreements / Data sharing. This essentially means we have agreements in place to share Space Situational Awareness data. Partnering nations use a portal called Space Track that allows them to see what is happening on-orbit and conduct rudimentary space traffic management. We have over 160 SSA sharing agreements with academia, industry and government.

Next, we build the temple structure – pillars of capability and capacity building. These pillars are tailored to allies' and partners' ambitions, capability and resources. Activity in these pillars could include capability development and integration, training,



military personnel exchanges and commercial capacity building. A good example of this activity is participating in GLOBAL SENTINEL, our world class scenario based, security cooperation event - GLOBAL SENTINEL 2022 was supported by 150 delegates from 25 nations.

Finally, for the most space capable allies we put the roof on the temple - integrated combined space operations. To achieve this, we work bilaterally with countries to develop tailored and progressive plans and for our most advanced partners we sign an Enhanced Space Cooperation Memorandum of Understanding. These non-binding agreements expand information and intelligence sharing, improve interoperability and allow us to cohere multiple strands of activity into a single plan. We deliver multilateral space operations under the banner of a standing operation called Operation OLYMPIC DEFENDER. Work is on-going to expand the scope and scale of this operation to cater for the proliferation of like-minded, highly capable allies.

USSPACECOM is committed to working with our allies and partners across the globe to ensure space remains safe, stable, secure and sustainable. The Space Partnership Framework has allowed us to successfully partner bilaterally and multilaterally. USSPACECOM strives for broader and deeper cooperation – we are stronger together!



JOINT INTEGRATED SPACE TEAMS



In a recent move by U.S. Space Command, an emphasis on integrating and synchronizing global space operations led to the development and deployment of Joint Integrated Space Teams within the U.S. combatant commands. JIST members serve as the space experts for the combatant commands and advocate USSPACECOM priorities for CCMD planning, operations and exercises.

Other key JIST functions include planning that facilitates collaboration, deconfliction, integration and synchronization of USSPACECOM operations and activities into host CCMD campaign, operational and concept plans.

JIST members serve as forward extensions of USSPACECOM and these members provide designed support for global space operations and planning activities, for both supported and supporting efforts.

JIST members serve as subject matter experts who educate both USSPACECOM and CCMD staff personnel on space priorities and advocate for each CCMDs' required and requested support.

Key JIST functions in the operations environment include integrating, coordinating and deconflicting global space capabilities for those host combatant commanders. During exercising and wargaming, JIST members also support the host CCMDs with Joint Exercise Lifecycle planning activities to integrate global space capabilities. JISTs play a critical role in security cooperation efforts by integrating and coordinating execution of USSPACECOM's security cooperation strategy.

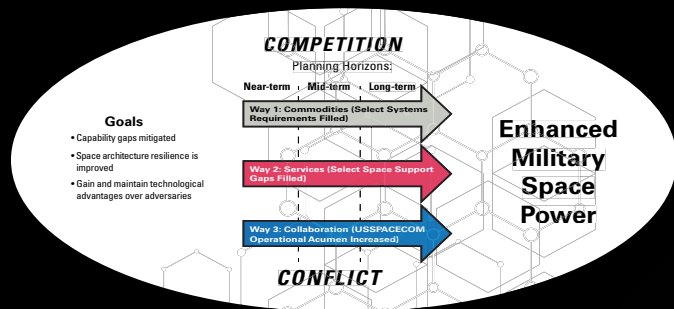
CCMD JIST organizations include:

JIST-Africa (AFRICOM), JIST-Central (CENTCOM), JIST-Cyber (CYBERCOM), JIST-Europe (EUCOM), JIST-Indo-Pacific (INDOPACOM), JIST-North (NORAD/NORTHCOM), JIST Special Operations (SOCOM), JIST-South (SOUTHCOM), JIST Strategic (STRATCOM) and JIST-Transportation (TRANSCOM).



PARTNERSHIPS WITH INDUSTRY

Enhancing Military Space Power



The U.S. commercial sector is driving technological advancements that provide our nation and allies a distinct advantage over competitors and their disruptive actions that intentionally challenge our military effectiveness. U.S. Space Command will continue to find ways to integrate innovative commercial capabilities into the command's warfighting architecture to fill operational gaps, increase enterprise resiliency and maintain the strategic advantage.

Defining The Need

While still relevant for the development of exquisite assets, the traditional acquisitions process is often too lengthy to keep up with the rapid pace of space. Therefore, as outlined in our 2022 Commercial Integration Strategy, USSPACECOM employs three strategic ways - Commodities, Services and Collaboration - to integrate commercial capabilities into the Command.

Way 1 – Commodities. USSPACECOM seeks to leverage commercial capabilities to mitigate operation plan / contingency plan capability gaps, prioritizing: command and control and battle management systems, information technology systems to include artificial intelligence / machine learning and big data management, modeling and simulation systems, space control systems and satellite communications satellites and terminals.

Way 2 – Services. The government may own licenses to an output (data, bandwidth, imagery, etc.) but does not own the capabilities or platforms. Where appropriate, USSPACECOM seeks to integrate commercial capabilities, prioritizing: operational intelligence, Space Domain Awareness, COMSATCOM bandwidth, remote sensing, modeling and simulation, AI / ML, quantum computing and encryption, environmental monitoring and alternate positioning, navigation and timing. Such services can be integrated into existing operations conducted by USSPACECOM.

Way 3 – Collaboration. Commercial partnerships enable information exchanges with industry partners so the warfighter can rapidly and accurately respond to on-orbit crises, fill gaps in the coverage of existing DoD sensors, share lessons learned, improve readiness and resiliency and provide a comprehensive threat picture for the National Command Authority and other strategic leaders. USSPACECOM benefits from the expertise found throughout the commercial space enterprise and consistently searches new ways to collaborate with industry partners. To synchronize commercial integration efforts across the command, USSPACECOM is working to establish the Combined Joint Commercial Integration Office. This new office (Spring CY23) will be tasked with operationalizing the CIS and bolstering collaborative opportunities between industry, USSPACECOM and its subordinate units.

USSPACECOM Priorities and Mission Needs include:

- Integrated Space Fires and Protection
- Resilient, Timely Space Command and Control
- Enhanced Battlespace Awareness
- Space Systems Cyber Defense
- Resilient Satellite C2 Architecture
- Global Sensor Management: Integrating Sensor Tasking and Data Retrieval
- Persistent and Resilient Intelligence, Surveillance and Reconnaissance
- Operational Intelligence
- Modernized, Agile EW Architecture
- Electromagnetic Battle Management

We invite industry to challenge and work with the Department of Defense towards building a truly effective team—with shared interests and goals—to preserve the space domain for the fight today and ensure access to and freedom to operate in space.

For information on how to engage with USSPACECOM on topics related to integration of commercial capabilities, please go to: <https://www.spacecom.mil/Partnerships-and-Outreach/Industry-Engagement-Portal/>



ACADEMIC ENGAGEMENT ENTERPRISE



U.S. Space Command's Academic Engagement Enterprise is a cooperative program promoting collaboration with academic institutions of higher learning to enhance space workforce professionalization and strengthen USSPACECOM's partnership in space education and research. As growing activity in the space domain introduces new threats and presents increasingly complex challenges, the AEE seeks opportunities across the entire space enterprise for USSPACECOM to collaboratively integrate and develop potential solutions. By building and strengthening these relationships, the AEE supports the advancement of U.S. security interests across the space domain, enables USSPACECOM to promote the responsible, peaceful and safe use of space by increasing its capacity to protect and defend the space domain.

The AEE achieves these collaborative goals by:

- Engaging the future workforce
- Expanding space-focused academic partnerships
- Increasing space-applied research and innovation
- Enriching strategic space-centric dialogue

The expansion of space-focused academic partnerships facilitates exchanges and directed research to foster forward thinking and improved space-related competencies and expertise. These academic partnerships generate an open dialogue, incorporating the diverse perspectives found across the U.S. space enterprise to create a more comprehensive understanding of the space domain for all and work toward achieving greater unity of effort across the nation and U.S. allies and partners.

The AEE's inaugural member, the University of Arizona, is joined by numerous learning institutions. These partnerships and several more anticipated partnerships with institutions of higher learning, champion USSPACECOM's national security and national defense mission and responsibilities.

Academic institutions partnering with USSPACECOM can expect a range of benefits such as:

1. Information about the space domain to benefit students, programs and research efforts
2. Invitations to events hosted by USSPACECOM
3. Access to guest lecturers from USSPACECOM, to include leaders and experts on space strategy, policy, law, innovation, exercises and workforce professionalization issues

USSPACECOM encourages academic institutions to reach out. More information about the AEE program and how to connect can be found on the AEE webpage (<https://www.spacecom.mil/Partnerships-and-Outreach/Academic-Engagement-Enterprise/>).





HUMAN CAPITAL

Building the Command to Compete and Win — One Person at a Time

The Command Senior Enlisted Leader has famously said that our most important weapons system lives and breathes. That astute observation informs every effort in the Directorate of Human Capital as we seek to rapidly recruit talent while enhancing processes that enable supervisors to better manage, develop and retain that talent. We ended FY22 with 57 percent of our FY25 authorized end strength in place. Including our contractor workforce, that number reaches 80 percent, a significant achievement in year three of the command's five year programmed manpower growth plan. The commander also garnered service and Department of Defense support to accelerate the funding of 95 military authorizations two years early, which has allowed the command to coordinate service assignments earlier than projected.

Perhaps the most significant human capital achievements occurred in the areas of civilian recruitment and civilian placement. The command's civilian workforce grew by 130 percent in 2022 due in large part to our enhanced classification team. We went from a single classifier to four, which greatly accelerated the pace at which we establish positions and recruit for those positions. We also gained hiring efficiencies through a robust partnership with our servicing civilian personnel offices and the Air Force Personnel Center, maintaining an average hiring timeline of 72 days from initial recruitment to onboarding, which is eight days below the Office of Personnel Management's standard.

Moreover, the Human Capital Directorate recruited college graduates for civilian internships and permanent job opportunities in the command. Visits to the University of Southern California and the University of North Dakota garnered the interest of over 300 people in STEM career fields. With more college visits scheduled in the future, we

hope to continue the rapid growth of USSPACECOM. With a dedicated focus on revitalizing talent management, we partnered with the Gartner Corporation to leverage the latest human capital research and best practices to inform the command's capabilities. We also established a USSPACECOM Operational Planning Team to incorporate these principles towards improvements to the overall personnel on-boarding experience, from deliberately connecting with new personnel to proactively enabling personnel success after in-processing.

In line with the commander's vision to grow the command to compete and win, the focus in 2023 will be on improving organizational culture through evidence-based solutions for supervisors at all levels. We recently hired a dedicated Equal Opportunity and Equal Employment Opportunity Coordinator for the headquarters, as well as dedicated civilian coordinators for Resiliency and Sexual Assault Prevention.

We will continue to work with the RAND corporation on the inaugural Organizational Resiliency study to find solutions that enhance employee well-being. Finally, we are working with a cross-command OPT to develop a new Human Capital Strategy that will guide the command's efforts to recruit, retain and develop personnel.

USSPACECOM has achieved remarkable success in its first three years, providing operational capability and deterrence for the nation. To accomplish this, the most vital weapons system must be ever at the ready to deliver space combat power, defend our vital interests and win in space. Never a day without space...never a day without people.



CYBER DEFENSE of SPACE SYSTEMS

Digital superiority is key to building and maintaining the U.S.' competitive advantage in the space domain and the other warfighting domains. China, Russia and other adversaries are working tirelessly to infiltrate cleared defense contractor, academic and military networks to monitor and exfiltrate data for various reasons ranging from competitive intelligence to espionage. These adversarial actors also intend to degrade and deny our ability to command, control, communicate and defend U.S., allied or partner on-orbit space assets and supporting ground systems. Loss or degradation of U.S., allied or partner commercial space systems negatively impacts our national security interests and reduces U.S. ability to effectively conduct space operations supporting all domain terrestrial operations around the globe.

Improving cybersecurity and cyber defense on space assets and supporting terrestrial facilities continues to be a top priority for U.S. Space Command. Given the age of some of our equipment and systems, updates to space supporting infrastructure are long term projects that are measured in years or potentially even decades. However, since our cyberspace security service provider under the Space Force Delta 6 has been active for over a year now, they've made monumental strides – increasing active monitoring capabilities, coverage and overall cyber defensive posture of our nation's most critical space infrastructure.

The USSPACECOM Joint Cyber Center has moved forward on identifying mission relevant terrain in cyberspace tied to our tasked critical assets, ensuring we are implementing detect and respond tools in the most critical areas. Our coordinated efforts with the embedded Cyber Integrated Planning Element from U.S. Cyber Command continues to be very successful. We were able to rapidly deploy Cyber Protection Teams to key terrestrial facilities supporting space missions during the initial Ukraine crisis, proving our ability to provide cyber defensive teams quickly and effectively to the right place at the right time.

Additionally, the USSPACECOM digital superiority directorate is actively engaged with DoD Chief Information Officer, Joint Staff Communications directorate, National Security Agency, U.S. Space Force and other pertinent mission partners on vulnerability mitigation and cryptographic modernization efforts for space mission systems in furtherance of the Joint All-Domain Command and Control and Joint Warfighter Concept 3.0 Visions.

Finally, USSPACECOM recently completed "Mission Resilience II," a year-long mission decomposition and mission level cyber risk assessment in conjunction with Office of the Under Secretary of Defense for Acquisition and Sustainment. The capstone event provided the command a much better understanding of our mission and cyber dependencies. Outcomes from this assessment and other USSPACECOM cyber defense efforts will help us close policy gaps, eliminate technology shortfalls, improve sensor alignment and better integrate cyber threat intelligence to effectively lower operational risk ultimately enhancing our Digital superiority.



TENETS OF RESPONSIBLE BEHAVIORS IN SPACE

TENET 1

OPERATE IN, FROM, TO, AND THROUGH SPACE WITH DUE REGARD TO OTHERS AND IN A PROFESSIONAL MANNER.

BEHAVIOR 1.1. WHEN CONDUCTING A RENDEZVOUS OR OPERATING IN PROXIMITY TO THE SPACE OBJECTS OWNED OR OPERATED BY NON-U.S. GOVERNMENT ENTITIES, AVOID ACTIONS

- (1) THAT MAY HARMFULLY INTERFERE WITH THE FUNCTION OF THE OTHER SPACE OBJECT, OR
- (2) WHERE THE EFFECT WILL CAUSE OR SIGNIFICANTLY INCREASE THE RISK OF A POTENTIAL COLLISION.



TENET 3

AVOID THE CREATION OF HARMFUL INTERFERENCE.

BEHAVIOR 3.1. TAKE ALL PRACTICABLE STEPS TO PREVENT AFFECTING THE COMMAND AND CONTROL OF SPACE OBJECTS IN A MANNER THAT INCREASES RISK OF LOSS, DAMAGE, OR DESTRUCTION OF A SPACE OBJECT.

BEHAVIOR 3.2. TAKE ALL PRACTICABLE STEPS TO PREVENT INTERFERENCE WITH CAPABILITIES THAT CONTRIBUTE TO STRATEGIC STABILITY, INCLUDING BUT NOT LIMITED TO: NATIONAL TECHNICAL MEANS OF VERIFICATION; STRATEGIC MISSILE WARNING SPACE SYSTEMS; AND NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS (NC3) SPACE SYSTEMS.



TENET 5

COMMUNICATE AND MAKE NOTIFICATIONS TO ENHANCE THE SAFETY AND STABILITY OF THE DOMAIN.

BEHAVIOR 5.1. PROVIDE NOTIFICATIONS TO AFFECTED PARTIES IF A POTENTIAL COLLISION IS PREDICTED, AND PROVIDE PUBLIC NOTIFICATION AS SOON AS PRACTICABLE IN THE EVENT OF AN UNCONTROLLED OR ANOMALOUS REENTRY.

BEHAVIOR 5.2. SHARE SPACE SITUATIONAL AWARENESS DATA, INCLUDING SPACE OBJECTS AND DEBRIS LOCATIONS, AS NECESSARY TO FACILITATE SPACEFLIGHT SAFETY, AVOID COLLISION, AND MINIMIZE LAUNCH AND REENTRY RISKS.

BEHAVIOR 5.3. AS SOON AS PRACTICABLE, PROVIDE NOTIFICATIONS TO AFFECTED PARTIES OF THE LOSS OF CONTROL OF A SPACE OBJECT, IF THAT LOSS OF CONTROL MAY RESULT IN A COLLISION, CAUSE INTERFERENCE WITH OTHER SPACE OBJECTS, OR CAUSE AN UNCONTROLLED REENTRY.

The CDRUSSPACECOM recommended responsible behaviors are an important addition to non-legally binding guidelines and best practices that the U.S. Government voluntarily follows, including the United States Government Orbital Debris Mitigation Standard Practices, the United Nations Long-Term Sustainability Guidelines, and the United States' commitment not to conduct destructive direct-ascent anti-satellite missile testing.

TENET 2

LIMIT THE GENERATION OF LONG-LIVED DEBRIS.

BEHAVIOR 2.1. DESIGN, OPERATE, AND MAINTAIN SPACE OBJECTS THROUGH END-OF-LIFE DISPOSAL IN WAYS THAT LIMIT THE GENERATION OF LONG-LIVED DEBRIS.



TENET 4

MAINTAIN SAFE SEPARATION AND SAFE TRAJECTORY.

BEHAVIOR 4.1. ENSURE SPACE OBJECTS DESIGNED TO CONDUCT RENDEZVOUS OR PROXIMITY OPERATIONS HAVE APPROPRIATE COLLISION-AVOIDANCE SYSTEMS AND FOLLOW TRAJECTORIES THAT ALLOW OTHER SPACE OBJECTS TO MANEUVER IN A SAFE MANNER.





COMBINED FORCE SPACE COMPONENT COMMAND

VANDENBERG SPACE FORCE BASE, CALIF.

CFSCC
EST. AUG. 2019

MISSION:

Plan, integrate, conduct and assess global space operations in order to deliver combat relevant space capabilities to combatant commanders, allied partners, the joint force and the nation.

CFSCC plans and executes space operations through four distinct and geographically dispersed operations centers, including: Combined Space Operations Center at Vandenberg Space Force Base, California; Missile Warning Center at Cheyenne Mountain Space Force Station, Colorado; Joint Overhead Persistent Infrared Planning Center at Buckley Space Force Base, Colorado; and Joint Navigation Warfare Center located at Kirtland Air Force Base, N.M.

Additionally, the CFSCC executes tactical control over globally dispersed Army, Navy and Air Force units that command ground-based space capabilities and satellites in every orbital regime. The CFSCC headquarters is co-located with the Combined Space Operations Center at Vandenberg SFB, Calif.

One of CFSCC's primary roles is to plan, task, direct, monitor and assess the execution of combined and joint space operations for theater effects on behalf of the commander, USSC in order to directly integrate with ongoing operations in other combatant commands.

The CFSCC also provides support to, and receives support from, coalition operations centers including the Australian Space Operations Center, Canadian Space Operations Center and United Kingdom Space Operations Center.

Additionally, the CFSCC builds capacity through relationships with partner nations' militaries and civil and commercial entities to achieve combined force objectives.

The CFSCC provides space capabilities such as space domain awareness, space electronic warfare,

BUILDING INTERNATIONAL PARTNERSHIPS



satellite communications, missile warning, nuclear detonation detection, environmental monitoring, intelligence, surveillance and reconnaissance, navigation warfare, command and control and positioning, navigation and timing in support of USSPACECOM and the other combatant commands.

CFSCC also executes command and control of assigned multinational forces in support of Operation OLYMPIC DEFENDER, as directed by USSPACECOM. The U.S. and partner nations recognize the strategic importance the space domain has on our economies, technology, national security and defense.

To that end, we collectively share the view that military cooperation concerning the space domain is vital to our countries' interests. Our respective nations are actively working together to address threats and shared interests in space; and to preserve access to the space domain for the defense of our nations and the future of humankind.



JOINT TASK FORCE SPACE DEFENSE

SCHRIEVER SPACE FORCE BASE, COLO.

JTF-SD
EST. AUG. 2019

MISSION:

The Joint Task Force-Space Defense, in unified action with mission partners, deters aggression, defends capabilities and defeats adversaries throughout the continuum of conflict in order to maintain space superiority in the U.S Space Command area of responsibility.

JTF-SD, located at Schriever Space Force Base, Colo., was formed as a functional component command under USSPACECOM Aug. 29, 2019, and recognized in an establishing ceremony Oct. 21, 2019. The JTF-SD executes its protect and defend mission in unity of effort with partners, through the National Space Defense Center, space domain awareness units and emerging space defense units.

HOW WE WIN

By providing America and her allies the most lethal and versatile space warfighting organization in the world, operated by the most formidable space warriors, armed with superior domain understanding and ready to employ space superiority capabilities at the time and place of our choosing.

UNITY OF EFFORT

Through the partnering of the Department of Defense, intelligence community and National Reconnaissance Office in the NSDC, JTF-SD brings to bear the full force of the U.S. government and synchronizes space superiority planning and operations.



THREE CORE FUNCTIONS

Space Domain Awareness. Effectively identify, characterize and understand any factor, passive or active, associated with the space domain that could affect space operations and thereby impact the security, economy or environment of our nation. This function includes generating an integrated sensor plan, high value asset clearing and pattern of life assessment among others. JTF-SD uses various ground and space-based systems to achieve the most accurate and timely space common operating picture. The Geosynchronous Space Situational Awareness Program is the command's primary operational system to conduct exquisite intelligence characterization of on orbit assets.

Indication and Warning. Conduct 24/7 space and counterspace systems monitoring, identifying threatening and non-threatening activities to issue timely warning to satellite owners and operators around the globe. JTF-SD warning and collection informs of adversary capabilities and intent, influences response options and course of action planning and supports USSPACECOM space attack assessment, operational posture and maintenance schedules.

Space Superiority. Protect and defend U.S. and allied interests in space permitting the conduct of operations at the time and place of our choosing.



Additionally, the JTF-SD executes supporting functions to include campaign and contingency planning; exercises, experiments and war games; and capability integration and on boarding of on-orbit assets.



U.S. ARMY SPACE AND MISSILE DEFENSE COMMAND

REDSTONE ARSENAL, ALA. | PETERSON SPACE FORCE BASE, COLO.

USASMDC
EST. AUG. 2020

MISSION:

The U.S. Army Space and Missile Defense Command is the Army's force modernization proponent and operational integrator for global space, missile defense and high-altitude capabilities. It occupies strategic key terrain that lies at the nexus of integrated deterrence between three combatant commands: U.S. Space Command, U.S. Strategic Command and U.S. Northern Command and it has a unique perspective on the convergence of space and missile defense in multi-domain operations and the role it plays in integrated deterrence.

USASMDC provides trained and ready space and missile defense forces and capabilities to the warfighter and nation. It builds future space and missile defense forces for tomorrow by researching, testing and integrating space, missile defense, cyber, directed energy, hypersonic and related technologies for the future. The common link uniting USASMDC's 2,600 Soldiers and civilians across 13 time zones and 19 dispersed locations is a commitment to defending the nation and its allies.

Along with the command's Technical Center and Space and Missile Defense Center of Excellence, it has two major subordinate military elements, the 100th Missile Defense Brigade (Ground-based Midcourse Defense) and the 1st Space Brigade. The missile defense brigade operates the Ground-based Midcourse Defense System and functions as the missile defense component of the missile defense enterprise of the command. Operating under the brigade are Soldiers of the 49th Missile Defense Battalion. These Soldiers not only operate the

GMDS but provide security for the Missile Defense Complex at Fort Greely, Alaska.

Leading the command in space operations is the 1st Space Brigade. The brigade consists of the 1st Space Battalion and 2nd Space Battalion, as well as the 117th Space Battalion under a direct support relationship. The 1st Space Brigade conducts continuous space force enhancement and space control operations in support of combatant commanders, enabling and shaping decisive operations.

The brigade also contains five Missile Defense Batteries that operate the AN/TPY-2 radars in forward-based mode conducting ballistic missile search, track and discrimination operations in support of regional and homeland defense. Additionally, the forward-based mode radar can enable space operations and conduct data collection.

SECURE THE HIGH GROUND

The Technical Center manages science and technology, research and development and conducts test programs for space, integrated air and missile defense, directed energy, hypersonic and related technologies. It develops and transitions space and missile defense technology to the warfighter to address current and future capability gaps in persistent communication; intelligence, surveillance and reconnaissance; force protection; and strike. It provides critical technologies that meet today's requirements and addresses future needs enabling warfighter effectiveness in the core competencies of directed energy, space, high altitude systems, cyberspace and missile defense.

The SMDCE is the command's architect for future force design. The team is charged to design, build, modernize, train and educate Army space and missile defense forces and is the Army's force modernization proponent responsible for managing Army change to doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy.

USASMDC is also the proponent for the Army astronaut program and provides support to NASA with an Army detachment assigned to Johnson Space Center in Houston, Texas.

The USASMDC commanding general also has several other responsibilities: he serves as the senior commander of both Fort Greely and U.S. Army Garrison – Kwajalein Atoll, Republic of the Marshall Islands, where he is responsible for the care of service members, families and civilians and to enable unit readiness; he is the Army's Air and Missile Defense Enterprise Integrator; and he serves as the commander of USSTRATCOM's Joint Functional Component Command for Integrated Missile Defense.





SPACE OPERATIONS COMMAND

PETERSON SPACE FORCE BASE, COLO.

SpOC
EST. OCT. 2020

MISSION:

Protect America and our allies in, from and to space...now and into the future.

Space Operations Command is the U.S. Space Force's service component for U.S. Space Command. As the service component, SpOC generates, presents and sustains combat-ready intelligence, cyber, space and combat support forces.

SpOC has nine space mission Deltas and two Space Base Deltas that fall underneath headquarters SpOC that enable SpOC's mission to protect America and our allies in, from and to space. Each of the Space Deltas have a specific mission set and each Space Base Delta supports specific Space Deltas. Each Delta and their mission are listed below.

Space Base Delta 1: SBD-1 Enables USSF operations for eight of the nine USSF space deltas and more than 100 other mission partners across 23 world-wide locations. SBD 1 consists of one medical group, one space base group and multiple mission support squadrons that provide health care, mission readiness support, communication and information technology, security, civil engineering, fire protection, environmental management, manpower, personnel, logistics, contracting, base services, housing, chaplains and a myriad of other base operating support functions. Headquartered at Peterson Space Force Base, Colo.

Delta 2: Space Domain Awareness-Integrates ISR, space observation and environmental monitoring to enable

space battle management and support headquartered at Peterson Space Force Base, Colo.

Delta 3: Space Electromagnetic Warfare-Operates electronic attack, protection and support capabilities to protect and defend the space domain headquartered at Peterson Space Force Base, Colo.

Delta 6: Cyber Operations-Executes cyber operations to protect space operations, networks and communications and operates the Satellite Control Network headquartered at Schriever Space Force Base, Colo.

Delta 7: Intelligence, Surveillance and Reconnaissance-Provides intelligence data to allow for the detection and characterization of adversary space capabilities headquartered at Peterson Space Force Base, Colo.

Delta 8: Position, Navigation and Timing-Provides PNT and satellite communications to U.S. military, coalition partners, interagency partners and commercial/civilian use headquartered at Schriever Space Force Base, Colo.

Delta 9: Orbital Warfare-Conducts protect and defend operations and provides national decision authorities with response options to deter and, when necessary, defeat orbital threats headquartered at Schriever Space Force Base, Colorado.

Space Base Delta 2: SBD-2 Delivers unrivaled combat support to our joint mission allies and partners, enabling uninterrupted missile warning, intelligence and cyber operations. SBD-2 is unique in that it supports more than 110+ base partners located both on base and in the local community. SBD-2 hosts six major base partners: Delta 4 (MW Delta), 140th Wing, Colorado Air National Guard; the Navy Operational Support Center; the Aerospace Data Facility-Colorado; the Army Aviation Support Facility and the Air Reserve Personnel Center. Headquartered at Buckley Space Force Base, Colo.

Delta 4: MW-Provides strategic and theater MW to the U.S. and our international partners headquartered at Buckley Space Force Base, Colo.

Delta 5: Command and Control - Maintains global awareness of operational environments and space forces to enable data driven decision headquartered at Vandenberg Space Force Base, Calif.

Delta 18: National Space Intelligence Center-Delivers unparalleled technical expertise and game-changing Intelligence-empowering national leaders, joint force warfighters and acquisition professionals to outwit, outreach and win in the space domain. As SpOC begins its third year, it continues to grow into the lean, agile and highly mission capable Field Command that it will be at its final fighting weight. Many historic events took place during year two including the stand up of Delta 18, NSIC and the satellite communication mission transfer.

The NSIC stood up in June 2022 as the 18th member of the intelligence community. NSIC works hand in hand with the National Air and Space Intelligence Center at Wright Patterson Air Force Base. The establishment of Delta 18/ NSIC allows the USSF to fulfill its service responsibilities by providing foundational and science and technology intelligence for the space domain. NSIC will further compliment the mission of the SpOC to generate, present and sustain combat-ready intelligence, cyber, space and combat support forces while still maintaining a lean and agile force.

The SATCOM mission transfers from the Army and Navy culminated in the Department of Defense's consolidation of all military satellite communication functions under a single military service for the first time. Taking on the historic task of maintaining the DoD's pivotal SATCOM mission set belongs to Delta 8.



MARINE CORPS FORCES

FORT GEORGE G. MEADE, MD.

MARFORSPACE

EST. NOV. 2020

SPACE COMMAND

MISSION:

Marine Corps Forces Space Command provides operational support to the Fleet Marine Force. It is a distributed force, integrated throughout the U.S. Space Command enterprise to increase warfighter lethality and provide domain-specific access to warfighting capabilities.

MARFORSPACE continued its growth this year as the Marine component to USSPACECOM, crossing a number of milestones. The headquarters relocated from Offutt Air Force Base, Neb., to Peterson Space Force Base, Colo., in October 2021. The unit reached Initial Operational Capability, conducted its first Marine Space Support Team deployments in support of U.S. European Command, the 31st Marine Expeditionary Unit, First Space Brigade and hosted the first ever Marine Corps Space Operational Advisory Group at Schriever Space Force Base.

As the nation's Naval Expeditionary Force in readiness, the Fleet Marine Force relies heavily on space-based capabilities to operate across all warfighting domains. The future operating environment demands that Marines fully leverage space capabilities, as access to reliable space-based communications, weather, indications, warning and positioning, navigation and timing is paramount to achieve naval objectives of battlespace awareness, assured command and control, maneuver and integrated fires.

Throughout 2022 the Marine Corps has invested in the continued professionalization of our space cadre with the creation of the 1706 (Maritime Space Officer primary military occupational specialty. Aligned with Talent Management modernization, the 17XX Information Maneuver Occupation Field formally manages the career path of Marines with highly specialized training required for space, electromagnetic spectrum operations, cyber warfare, civil affairs and psychological operations.

The 17XX Information Maneuver Occupation Field provides the Marine Corps with a deliberate, professionalized and sustainable workforce, enabling the Marine Corps to integrate information-related capabilities and operationalize information as the seventh warfighting function.

In the future, maritime space officers will be focused on the tactical integration of space effects and capabilities into FMF operations and dedicated to the space mission

Fleet Marine Force relies heavily on space-based capabilities to operate across all warfighting domains.

with career opportunities across the FMF, interagency and joint force. These space planners will evaluate both friendly and adversary capabilities; and develop, coordinate and execute approved offensive and defensive space control activities in support of naval stand-in force.

The Marine Corps' ability to integrate space capabilities of allies, partners, industry and other U.S. government departments and agencies enables maritime freedom of action and supports joint force fires, movement and maneuver using highly technical capabilities to create multiple dilemmas for strategic competitors across all domains. In order to achieve this, the service continues to invest in and integrate key technologies that modernize networks and increase resiliency.





AIR FORCES SPACE

TYNDALL AIR FORCE BASE, FLA.

AFSPACE

EST. MAY 2022

MISSION:

First Air Force's new designation as Air Forces Space is in addition to its existing roles as both the Continental U.S. geographical component of the binational North America Aerospace Defense Command and the Air Force Component to U.S. Northern Command. Collectively, the missions and functions of CONR-1AF encompasses homeland defense and resiliency, defense support to civil authorities, theater security cooperation, Civil Air Patrol oversight and global air component support for the nation's growing space capabilities in space.

On May 3, 2022, First Air Force, headquartered at Tyndall Air Force Base, Fla., received the official Secretary of Defense designation as the Air Component to U.S. Space Command. First Air Force is one of five Numbered Air Forces assigned to Air Combat Command and is responsible for ensuring the air sovereignty and air defense of the continental U.S., U.S. Virgin Islands and Puerto Rico.

First Air Force's new U.S. designation as Air Forces Space is in addition to its existing roles as both the Continental U.S. geographical component of the binational North America Aerospace Defense Command and the Air Force Component to U.S. Northern Command. Collectively, the missions and functions of CONR-1AF (AFNORTH and AFSPACE) encompasses homeland defense and resiliency, defense support to civil authorities, theater security cooperation, Civil Air Patrol oversight and global air component support for the Nation's growing space capabilities in space.

The new AFSPACE component relationship provides the USAF with another window into Space Domain Awareness, which can accelerate the decision-making cycle for missions in the air domain. "Stride-by-stride, First Air Force continues to increase its ability to integrate spacepower into the support of our command's homeland defense mission," said Lt. Gen. Kirk Pierce, commander, First Air Force. "As the U.S. Air Force develops new capabilities that affect the space environment, AFSPACE will help integrate them into the USSPACECOM mission sets." Leveraging and fostering synergies between USSPACECOM, NORAD and USNORTHCOM ensures that the warfighters are provided the best possible tools, equipment and support to accomplish assigned missions while minimizing the unknowns and maximizing the flow of information.

AFSPACE is also a critical contributor to USSPACECOM's role as the Department of Defense Manager for HSFS operations to NASA. The DoD has a long history of

providing search and rescue and recovery support to NASA's crewed space programs including Mercury, Gemini, Apollo and the Space Shuttle missions. Today, that support continues for NASA or NASA-sponsored astronauts traveling to and from space on Soyuz, Commercial Crew Program and Artemis vehicles. AFSPACE supports USSPACECOM's efforts to develop requirements, train DoD forces and conduct HSFS operations when requested by NASA. Through First Air Force's Detachment 3, located at Patrick Space Force Base, Fla., AFSPACE develops, tests, exercises and coordinates for the rescue of astronauts during off-nominal events.

AFSPACE also coordinates directly with NASA and combatant commands to ensure requirements are understood and tactics, techniques and procedures are disseminated throughout the DoD. In 2022, Detachment 3 supported two SpaceX CCP launches and landings, the CST-100 Starliner CCP orbital Flight Test and the Artemis I launch and recovery. In addition, AFSPACE worked closely with the U.S. Navy Fleet Forces Command to develop a joint USAF and USN search and rescue force to support the SpaceX Crew 5 launch. With an increase in scheduled NASA crewed missions this year, to include the first CST-100 Starliner crewed mission to the International Space Station, AFSPACE is prepared to increase its roles and responsibilities in support of this USSPACECOM partnership with NASA.





NAVY SPACE COMMAND

FORT GEORGE G. MEADE, MD.

NAVSPACECOM

EST. JAN. 2023

MISSION:

The mission of Navy Space Command is to plan, integrate and conduct full-spectrum space domain operations, in concert with joint, interagency, allied and other partners.

As a service, the Navy relies on the space domain as a vital link in our communications, intelligence, over the horizon domain awareness and tactical operations. Space is essential to resilient, flexible and dynamic operations and is an integral element of communications, navigation, surveillance, weather and oceanographic missions.

NAVSPACECOM provides the integration of space capabilities throughout the Fleet to enable distributed maritime operations. As we leverage the joint world to deliver space enabled functions, we focus on assuring access in dynamic, contested and degraded environments. NAVSPACECOM sets operational requirements within the space domain, issues guidance for Navy space operations and provides planning expertise to the maritime component and fleet commands around the world.

NAVSPACECOM also develops, integrates and conducts full-spectrum space domain operations as the Navy service component to U.S. Space Command, in concert with coalition, joint, inter-agency and other partners. NAVSPACECOM advocates on behalf of the

fleet to obtain space capabilities in support of maritime operations, establishes requirements for training and integration of space capabilities and provides space planning and operations expertise to the fleet.

Although this command is being established anew, there is a deep legacy of space commands within the Navy that have helped forge the way:

On Apr. 10, 1962, the Navy Astronautics Group, one of the first military space operations commands in history, was commissioned to operate and maintain the Navy Navigation Satellite System, also known commercially as Transit. NAG was located at Point Mugu, Calif. It operated the navigational satellite system that was developed by the Navy for the Department of Defense. The NAG maintained and operated astronautics systems that included spacecraft, ground-based components and subsystems.

On Oct. 1, 1983, NAG became part of the newly established Naval Space Command and in 1990, it was redesignated as the Naval Satellite Operations



NAVSPACECOM provides the integration of space capabilities throughout the Fleet to enable distributed maritime operations.

Center (NavSoc). In 2022, the Satellite operations center was formally transferred to U.S. Space Force and designated as the 10th Space Operations Squadron. The change was part of the consolidation of satellite control following the establishment of U.S. Space Force.

Establishing NAVSPACECOM is Navy's latest effort in maintaining maritime superiority from the sea floor to space with a core emphasis on lethality, readiness and capacity, conducting space-enabled targeting and protection of critical maritime assets. By working with USSPACECOM and service counterparts, NAVSPACECOM is able to provide the best integration possible of space capabilities throughout the fleet.



USSPACECOM

Maintaining Space Superiority to Achieve All Domain Dominance



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