Next Generation Space Defense

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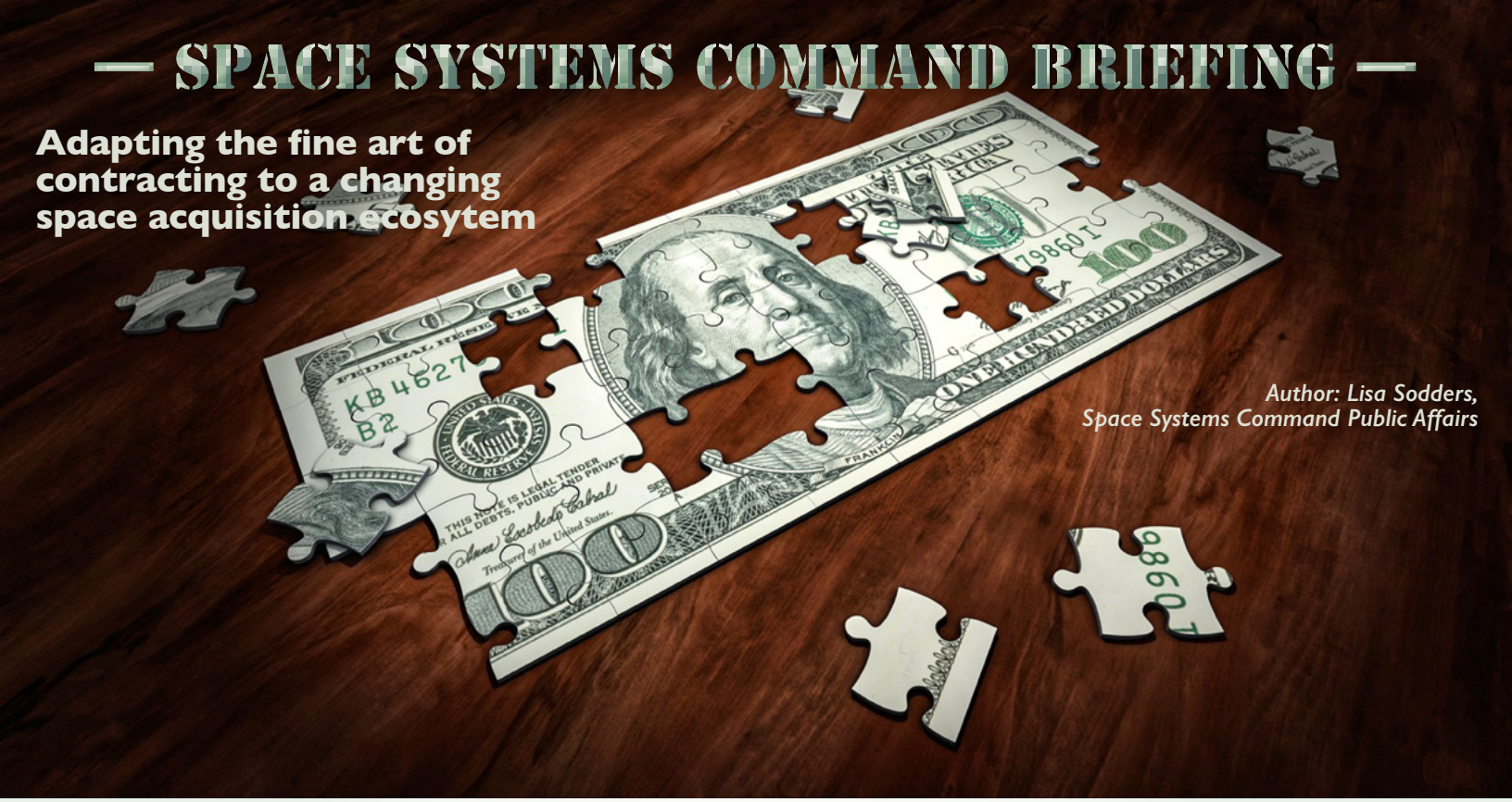
— SPACE SYSTEMS COMMAND BRIEFING —

Adapting the fine art of contracting to a changing space acquisition ecosytem



Author: Lisa Sodders, Space Systems Command Public Affairs

At Space Systems Command, the art of contracting is every bit as much "rocket science" as designing and launching the space systems themselves.

Natalie Riedel

> *"Contracting is very complex," said* ***Natalie Riedel****, SSC director of contracting. "Starting with the requirements to become a contracting officer, it takes, on average, about seven years to train an unlimited contracting officer. That's by design: contracting is inherently governmental, so we cannot outsource this. This is not a function where we can bring in contractors to supplement the team.*
>
> *"We're buying space systems that are delivered directly into space operations and they're very complex systems," Riedel said. "We must fully understand the requirement, fully understand what we're buying before we can write the contract. Contracting is also constantly changing and evolving. Just when we think we've got it and we know it all, regulations and authorities change."*

Years ago, space acquisitions mainly revolved around a few large "*Prime*" defense companies. However, recent years have seen revolutionary changes in technology, business models and partnerships.

Launch costs have dramatically reduced, aided in part by the ability to launch multiple payloads at once with ridesharing programs. Government space programs—once solely the domain of the United States and Russia—are springing up all over the globe, creating new collaboration opportunities with international allies.

Military-specific, extremely expensive and large "*exquisite*" satellites in higher orbits, built to last a decade or more, are giving way to commercial buses and ***proliferated Low Earth Orbit*** **(pLEO)** constellations that are launched in *tranches* every few months with new technological improvements included in every iteration.

Small businesses, new to government contracting processes, are quickly learning that the ***U.S. Space Force*** is willing to work with them and is eager to do so.

> *"We don't have just one or two providers in the space ecosystem," Riedel said. "Oftentimes, in our market research, we'll have 15 or 20 potential providers, which is fantastic, and they've used their own capital, their own funding to get up to a level to bring us this technology that demonstrates the maturity of the system.*
>
> *"The idea that the government is going to fund a requirement from Day One of the concept all the way through fielding is antiquated,"* Riedel *said. "We are getting away from big behemoth programs that don't deliver capability for decades and moving to a smaller, minimum viable product (MVP) and a more iterative approach to acquiring systems.*
>
> *"We're in unprecedented times right now," Riedel continued. "Prior to the early 2000s, the government wrote general requirements, money was thrown at a contractor, and some varying level of capability came in on the back end. Throughout the 2000s, up until the mid-2010s, the government would define requirements to the 'T,' but the lengthy acquisition processes slowed us down.*
>
> *"When OTAs (Other Transaction Authority) were expanded in 2016, the government drove contractors to produce MVPs and prototypes on shorter timelines," Riedel said. "This also allowed new entrants to join the space industrial base and bring new and fresh ideas. This has changed the way we, the U.S. government, does business."*

Alphabet Soup

When it comes to doing business with the government, commercial space industry companies can face a bewildering list of acronyms: **SBIR**, **STTR**, **STRATFI**, **TACFI**, **IDIQ**, and *OTA*.

Fortunately...

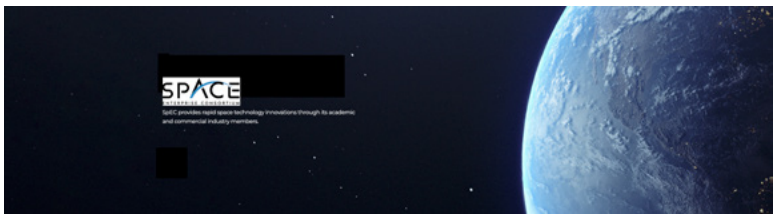
SSC's Front Door

SSC's Commercial Space Office (COMSO)

SpaceWERX

AFWERX

Space Enterprise Consortium (SpEC)



and other entities are available to help guide companies through the process. Multiple funding mechanisms mean even a small company has opportunities to help warfighters get the innovative technology they need.

> *"Typically, the process starts with a prototype and, once that passes, a company moves into the demonstration phase and then on to the actual fielding of the capability," Riedel said.*

SSC's Program Executive Offices (PEOs), as well as COMSO, sponsor industry days and reverse industry days to connect with commercial space vendors and find out what the market has to offer, or to present "*challenges*" or specific problem sets to see which companies have the solutions.

USSF Capt. Andrew Ermitano, SpaceWERX Ventures military deputy, said SpaceWERX has shifted its investment strategy to focus more on delivering the specific, mission-driven solutions that SSC's PEOs are after.

> *"We have two main roles in the ecosystem," Ermitano said. "The first part is discovery – how many new entrants are we finding in the commercial space industry? At the same time, we also have our responsibility to the PEOs who are looking for specific ways to fill their capability gaps, such as* **TacRS** *(**Tactically Responsive Space**) in support of Space Safari and Assured Access to Space (**AATS**.)*
>
> *"Sharpening the focus has not limited the number of companies entering the space ecosystem. In fact, it has significantly broadened competition, Ermitano said. Since October 1, 2023, SpaceWERX awarded 562 contracts to 416 unique companies that totaled $673 million.*

When looking at which companies to invest in, SpaceWERX takes into account the technical merits and feasibility of the product but also considers the commercial potential, Ermitano said. If a technology also has commercial applications, that makes it easier to sustain than just a purpose-built technology for a solely military application. By investing in dual-use technology, the rest of society benefits as well."

Small Business Innovation Research (SBIR) programs are also known as "***America's Seed Fund***," Riedel said. Focused on companies with fewer than 500 employees, SBIR grants are focused on early-stage technology funding. Phase I awards go up to $180K, and a Phase II can go as high as $1.9 million. Phase III—the final stage in the program—focuses on the commercialization phase. Funding comes directly from the program offices rather than from the SBIR program or private sector capital.

Small Business Technology Transfers (STTR) are designed to foster technology transfer through cooperative research and development between small businesses and research institutions. STTRs have the added requirement that the small business partner with a college/university or ***Federally Funded Research and Development Center (FFRDC)***.

> *"The goal is to inject some of that funding into these new companies and get them from concept development to the actual production of their idea," Riedel said. "To receive an SBIR award is not easy; it's extremely competitive. You must have a good idea and you must have some data proving that, one, we need it, and two, the product can actually be developed and delivered on schedule.*
>
> *"Companies that win a SBIR or STTR must prove throughout that they are meeting the milestones and are making progress towards achieving the capabilities and proving that they can mature those capabilities and scale them for use," Riedel added.*

Since 2023, SpaceWerx has awarded 918 SBIR/STTR contracts valued at $1.03 billion to more than 510 different companies.

Strategic Funding Increase (STRATFI) and Tactical Funding Increase (TACFI) programs are available to companies that have completed a SBIR Phase II. These mechanisms bring together government funding, as well as private investor funding and are designed to help bridge the "*Valley of Death*," ***Riedel*** said.

> ***"A big gap often happens after Phase II and few companies are selected for a Phase III, because Phase III is 100% funded by a government program office," Riedel said. "In order to move from Phase II to an actual operational system in Phase III, there may need to be something in between."***

Of the two programs, TACFI is the smaller: $375,000 to $2 million, with a shorter period of performance, typically 24 months. STRATFI is larger—$3 million to $15 million—and could go as long as 48 months.

Other Transaction Authorities (OTAs) were designed to provide a more flexible contracting structure to enable non-traditional defense contractor participation. OTAs can be for research, prototyping, or production. The OTAs managed by ***SSC's Space Enterprise Consortium (SpEC)*** are focused on prototypes. These prototypes can include systems, subsystems, components, materials, methodology, technology, or processes.

At least one, non-traditional defense contractor or nonprofit research organization must participate to a significant extent in the prototype project, or at least 1/3 of the total cost of the project must come from funds other than the federal government.

SpEC has 650 member companies, of which 68 percent are non-traditional defense contractors. Since its inception in 2017, SpEC has made 140 awards of a total negotiated value of $4.5 billion.

The ***U.S. Department of War (DoW) Quick Start*** funding is another rapid-acquisition program, allowing the DoW to start the engineering and design process for new programs without waiting for the annual budget approval process and allows the DoW to shift up to $100 million annually from existing service budgets to fund these programs.

SSC last year awarded four of these agreements to produce design concepts for Lite Evolving Augmented Proliferation, part of the ***Resilient Global Positioning System (R-GPS) program***. The awards, granted under SpEC's OTA, will produce eight R-GPS satellites.

After receiving a recommendation for an additional proliferated fleet of small GPS satellites, the USSF recognized that they required updated resilient GPS technologies and tasked SSC with the R-GPS effort, said ***Adrian Torres***, SSC SpEC program manager.

Following the project request, R-GPS was selected for the "***Quick Start***" authority, allowing the project to move into solicitation, Torres said. As a high-priority project requiring substantial participation from mission-ready commercial innovators, SSC needed a rapid contracting vehicle that had access to a large membership network inclusive of small, ***non-traditional defense contractors*** (**NTDCs**). The SpEC OTA was selected by SSC to construct agile contracts for R-GPS.

Understanding the government's desire to quickly engage as many innovators as possible, the SpEC team executed an in-person ***Industry Day*** in Los Angeles, just four days after the "***Quick Start***" authority was signed. R-GPS moved from solicitation to award in just 71 work days. After evaluation, SSC selected ***Astranis***, ***L3 Harris*** and ***Sierra Space*** as the prime awardees, one of which is an NTDC. The primes are supported by 16 NTDC sub-contractors, which is five times the average of non-traditional participation.


Adrian Torres

> ***"Innovative contract awarding mechanisms, such as SpEC, are what is needed to stay ahead of the competition in today's race for space superiority," Torres said. "Maj. Gen. Purdy (tri-hatted Military Deputy, Acting Assistant Secretary of the Air Force, and Service Acquisition Executive for Space within the Office of the Assistant Secretary of the Air Force for Space Acquisition and Integration) has stated, 'R-GPS timelines are the new norm. Beat those timelines.' SpEC is setting the pace for the future, transforming space acquisition with unprecedented speed and agility and delivering space capabilities at the speed of need."***

> ***Indefinite Delivery / Indefinite Quantity (IDIQ) contracts are popular for their flexibility, Riedel said. "IDIQs are intended for when we know essentially what we're going to buy, but we are just not sure how much or when," Riedel explained.***
>
> ***At SSC, "it's essentially a vehicle where we can have an award to multiple contractors. We have our competition, we award to qualified contractors, and then we compete all of the delivery orders. We can do it on a rolling basis, we can do it on a yearly basis, we can even add contractors to it later—we call that on-boarding. These contracts require more resources to manage, due to the multiple vendors, but they allow for continued competition," Riedel said.***
>
> ***"We could announce a requirement to have a minimum amount of a viable product delivered in 18 months and award it to two vendors," Riedel posed. "If one delivers and the other doesn't, we can open the competition back up. Then we may have four or five different vendors to select from for the next round. The multiple-award IDIQ allows us to have on-going competitions as requirements are developed and matured through to the end."***

One recent example of an IDIQ is the ***Proliferated Low Earth Orbit*** contract for satellite-based services. In 2023, ***DISA (Defense Information Systems Agency)***, on behalf of SSC, awarded 16 vendors IDIQ contracts; the award ceiling was initially set at $900

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million but increased a year later to $13 billion and 20 vendors. SSC now manages the contract, which could cover a range of areas, including high-speed broadband, synthetic aperture radar imaging, space domain awareness, and alternative positioning, navigation, and timing.

Clare Hopper, chief of SSC's Commercial Satellite Communications office, said the pLEO contract is ground-breaking for SSC because the services provided are new.

Clare Hopper

"It's the first-of-its-kind contract that aggregates demand across the DoD and enables our office to monitor trends so that we can enter into better pricing over time," Hopper said.

"The IDIQ vehicle is very flexible for our mission because we support a range of transactions. The structure of the IDIQ lets us action requirements that are really efficiently when funding materializes—compared to a general fee-type contract where you have to really have your requirements understood up front with a sufficient level of detail. That structure is just an enabler for efficiency."

"Competition seems to be the 'secret sauce' to a lot of the advances we've had in the last five years," Riedel shared. "Instead of just two or three major primes doing all the work and the industry stagnating somewhat, there are many smaller companies stepping up and advancing technology and capabilities so that they can have a shot at landing government contracts.

"The goal is not to lock ourselves into a sole-source relationship with one vendor through all the production and then to sustain it. I think that's a thing of the past. We're doing things smarter and maintaining competition, especially in the sustainment piece."

Space Systems Command is the U.S. Space Force field command responsible for acquiring, developing, and delivering resilient capabilities to outpace emerging threats and protect our Nation's strategic advantage in, from, and to space. SSC manages a $15.6 billion annual space acquisition budget for the Department of Defense, working with joint forces, industry partners, government agencies, academia, and allied nations.

For more information, visit ***ssc.spaceforce.mil*** and follow ***@USSF-SSC*** on ***LinkedIn***.

Filling the Gap

How warfighter needs are identified and met

By Lisa Sodders, Space Systems Command Public Affairs

As the newest military service, the ***U.S. Space Force*** has been constantly evolving since the organization's creation in 2019. That includes identifying warfighter needs and gaps in capabilities to enable greater defense of America's space assets and the nation.

How do those needs and gaps get identified?
and...
How does the USSF work to fill them?

Mike "Ringo" Lezaun, Space Systems Command's Warfighting Integration Office liaison to ***SPACECENT*** headquarters and ***CENTCOM*** headquarters, said it usually starts with national security interests and priorities.

Mike "Ringo" Lezaun

"The Commander in Chief, along with his staff and advisors, establish the security interests and priorities which evolve into the mission. To keep it simple, for example, the mission to secure a certain area," Lezaun said. "The combatant command—such as CENTCOM, NORTHCOM and so on—would go ahead and assess what's needed to accomplish that mission—the mission analysis—they'll determine if there are any gaps associated with that mission, and they'll submit those gaps as requirements through the Joint Staff or the individual services via their service component (e.g. SPACECENT, ARCENT)."

The gap might be something such as the inability to monitor enemy activity in the area that needs to be secured, ***Lezaun*** added. The combatant command is relying on several team-of-teams inputs to analyze the problem, determine how to proceed and identify the gaps.

"It's leveraging capabilities from the whole of government, such as diplomacy, information, military, economic, financial, intelligence, and law enforcement (DIME-FIL). Everything we know about the threat, the goals that support national interest, and the whole of government options goes into that mission analysis," Lezaun said.

"The entire government is part of that calculus; it is important for all to understand that the military, U.S. Department of War, is another medium that can be used to execute national interests.

The gap is sent to ***Joint Staff*** or, if it is part of a specific military service mission area, it is sent to that service via the component command.

For example, CENTCOM might relay the gap to USSF via SPACECENT, if the gap is part of the Space Force mission, to "*secure our Nation's interests in, from, and to space.*" If a joint solution is required, such as acting in concert with the U.S. Navy or the U.S. Marines, then the gap would go through Joint Staff.

> *"The combatant commands are agnostic on who provides the capability," Lezaun said. "They just want the capability to close the gap.*
>
> *"If the gap is identified as something USSF does not have right now, or is working on, then it goes to the Chief Strategy and Resourcing Officer (CSRO), leveraging all of Space Force enterprise to see what can bridge the gap. Space Systems Command (**SSC**), all of the labs, such as AFRL, SpaceWERX, TAP Labs (Tools, Applications, Processing) and the national space security enterprise, to include commercial industry."*

If there's an existing technology or process that can be fielded in less than two years, there's a DoD codified process called ***(J)UON***—***(Joint) Urgent Operational Need***—which is funded from existing funds.

JUON is the joint process that goes through the Joint Staff, and UON is internal to the services. If the solution is something that will require more than two years to acquire or develop, it goes through the ***Joint Capabilities Integration and Development System (JCIDS)***, *Lezaun* said.

> *"At SSC, we are enabling closer coordination between the combatant commands and the acquisition community by placing Liaison Officers within each Space Force Components," said USAF Col. Minpo "Po" Shiue, director of SSC's Warfighting Integration Office. "Currently we have SSC Warfighting Integration Office Liaisons deployed out to the Space Force components in **INDOPACOM**, **CENTCOM**, **SOCOM**, **EUCOM/AFRICOM, SOUTHCOM**, **USSPACECOM** and **SpOC**," Shiue added. "The LNO's job is to assist the components with integrating new capabilities into day-to-day operations and to facilitate dialog between the components and SSC during the acquisition process to ensure the right capabilities are being delivered.*
>
> *"SSC Liaisons also help shepherd the JUON/JEON process and notify SSC PEOs of any potential JUON/JEON that are being submitted," Shiue said. "By working with our acquisition professionals early in the process, we can help shape the requirements so they are feasible and executable and potentially can meet the needs of the combatant commands with existing capabilities through modifications or upgrades.*
>
> *"These processes are complex because our world is far from simple," Lezaun said. "A lot of the problems that we're trying to solve—and their solutions—are extremely complex and we want to make sure that we get it right or as close to right as possible. We do our due diligence to get it as close as possible to right, so we don't create unforeseen mistakes, errors, second—or third-—order effects that we can't handle."*

The ***Global Positioning System (GPS)*** we enjoy today was decades in development, Lezaun noted. In order to stay ahead of the competitors and adversaries, USSF needs to be planning five to 20 years in the future.

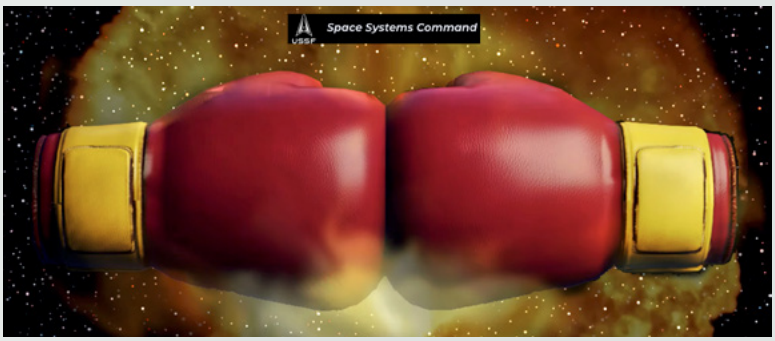
Identifying and filling capability gaps isn't just from the top down. Through SSC's ***Commercial Space Office*** (**COMSO**), Industry and Reverse Industry Days, highlighting a particular need or capability gap, offer unique opportunities for the commercial space industry to let the Space Force know what they have to offer in those fields.

If a USSF Guardian has an idea for a way to meet a capabilities gap or a more efficient way of doing things, there are several avenues to get those ideas in front of leadership for decision.

SSC's annual "***Fight Tonight***" competition—now in its fourth year—allows military and civilian employees to identify and submit proposals for technologies that bridge capability gaps. In this year's competition, SSC has teamed with SpaceWERX to rapidly accelerate novel technology adoption by leveraging the TACFI funding pathway.

Submitters will be competing for a total potential funding pool of up to $24 million for eligible SBIR Phase II initiatives, with SSC putting forward up to $12 million in funding and SpaceWERX matching up to $2 million per project.

Now, more than ever, innovative solutions are required by the Space Force to deliver new and needed capabilities in this era of rising global competition, said *Capt. Erin Lindsey*, chief of business innovation for SSC's ***Atlas X***.



> *"The easiest way to put it is that it takes a village," Lezaun said. "To meet these goals, you can't just have one organization or one person. The Space Force has so many ways to accomplish capability solutions, whether within the force, with our space industry commercial partners or our international allies. That worldwide network of common goals allows us to be diverse and dynamic."*

FY 2026 DEFENSE SPACE BUDGET: EMERGENCE OF GOLDEN DOME

Author: Robert S. Wilson, Director of Strategy and National Security, Center for Space Policy and Strategy, The Aerospace Corporation, the Cengter for Space Policy and Srategy

The fiscal year (FY) 2026 budget process reveals large-scale changes in the Trump administration's top-line budget and priorities for defense space activities.[1] ***Collectively, the president's FY 2026 budget submission ($26.3 billion for the Space Force) and the reconciliation act recently passed by Congress ($21.6 billion for space-focused projects within the Department of Defense) would amount to a nearly 40 percent increase for the Space Force from the FY 2025-enacted budget. Driving these changes: Golden Dome, the missile defense-focused project that is a core national security priority for the administration.***

Introduction

Within one week of taking office, the Trump administration issued an executive order titled, "***The Iron Dome for America***."[2] Likening the effort to former *President Ronald Reagan*'s Strategic Defense Initiative, the order directs the ***Department of War*** (**DoW**) to submit a plan for developing the "next-generation missile defense shield."[3] The project, the name of which later changed to ***Golden Dome***, would be a program of programs, comprising multiple terrestrial and space capabilities.

On May 19, 2025, President Donald Trump held a press conference about Golden Dome, during which he announced the selection of a design to include "*state-of-the-art systems that will deploy next-generation technologies across the land, sea, and space, including space-based sensors and interceptors*."[4]

The introduction of Golden Dome is arguably the most important development affecting the defense space budget since the inception of the Space Force. The project's primacy within the administration, anticipated scale, and heavy focus on space all suggest that it will considerably alter the level of resources allocated for defense space activities.

General *Michael A. Guetlein*, the ***U.S. Space Force*** (**USSF**) vice chief of space operations, will serve as the "*direct reporting program manager*" for Golden Dome, emphasizing the space-centric nature of the initiative.[5]

The reconciliation law passed in July 2025, titled the "***One Big Beautiful Bill Act***," contains the initial budget for Golden Dome, authorizing funding for $15.7 billion in space-focused Golden Dome projects.[6] This money is distinct from the appropriations process, for which the administration submitted its FY 2026 budget request in June 2025.[7]

In addition to including some of the first details on Golden Dome, the budget request and reconciliation act offer insights into the administration's plans for acquiring moving-target-indication spacecraft, proliferated networks of communications satellites, and commercial services. Collectively, these efforts are not only central developments for space but could also play a pivotal role in the administration's broader approach to security and defense.

Budget At A Glance

Two parallel legislative processes are shaping U.S. defense space spending for FY 2026—one is the annual appropriations process.

In June of 2025, the administration released its presidential budget submission, requesting $26.3 billion for the Space Force.[8] The request would represent a 9 percent (*or $2.6 billion*) reduction from the enacted amount in the FY 2025 appropriations (*$28.9 billion*), which was the first budget enacted for the Space Force that fell from the prior year.[9]

This is the sixth budget submission since the establishment of the Space Force; as shown in ***Figure 1***, the service's appropriations rose

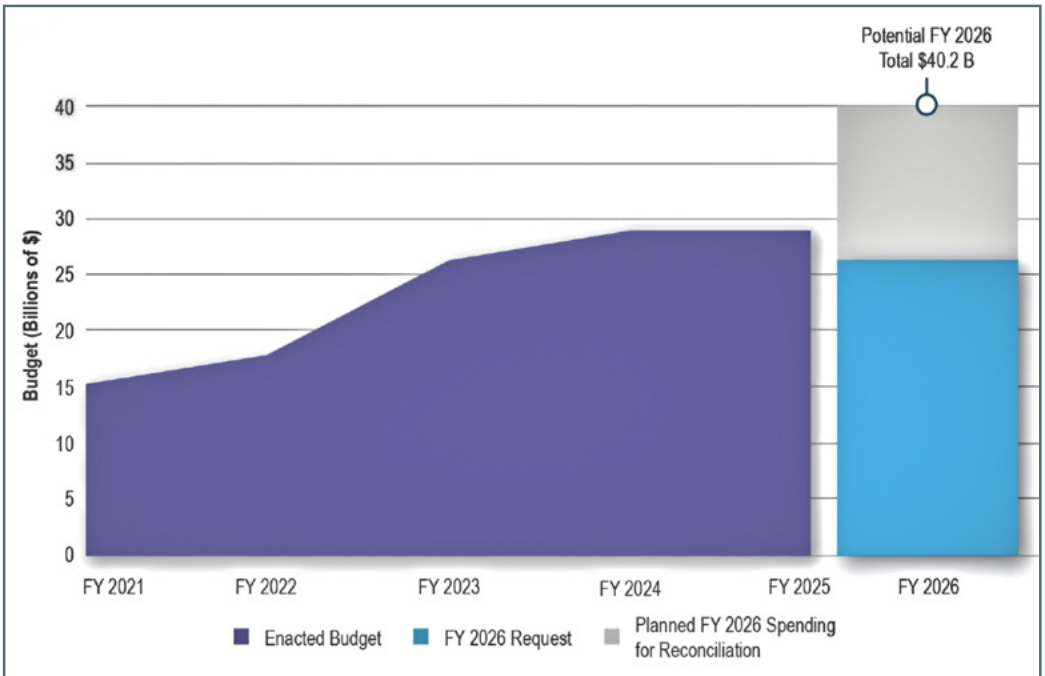


Figure 1. Space Force enacted and proposed budget, FY 2021 through FY 2026.

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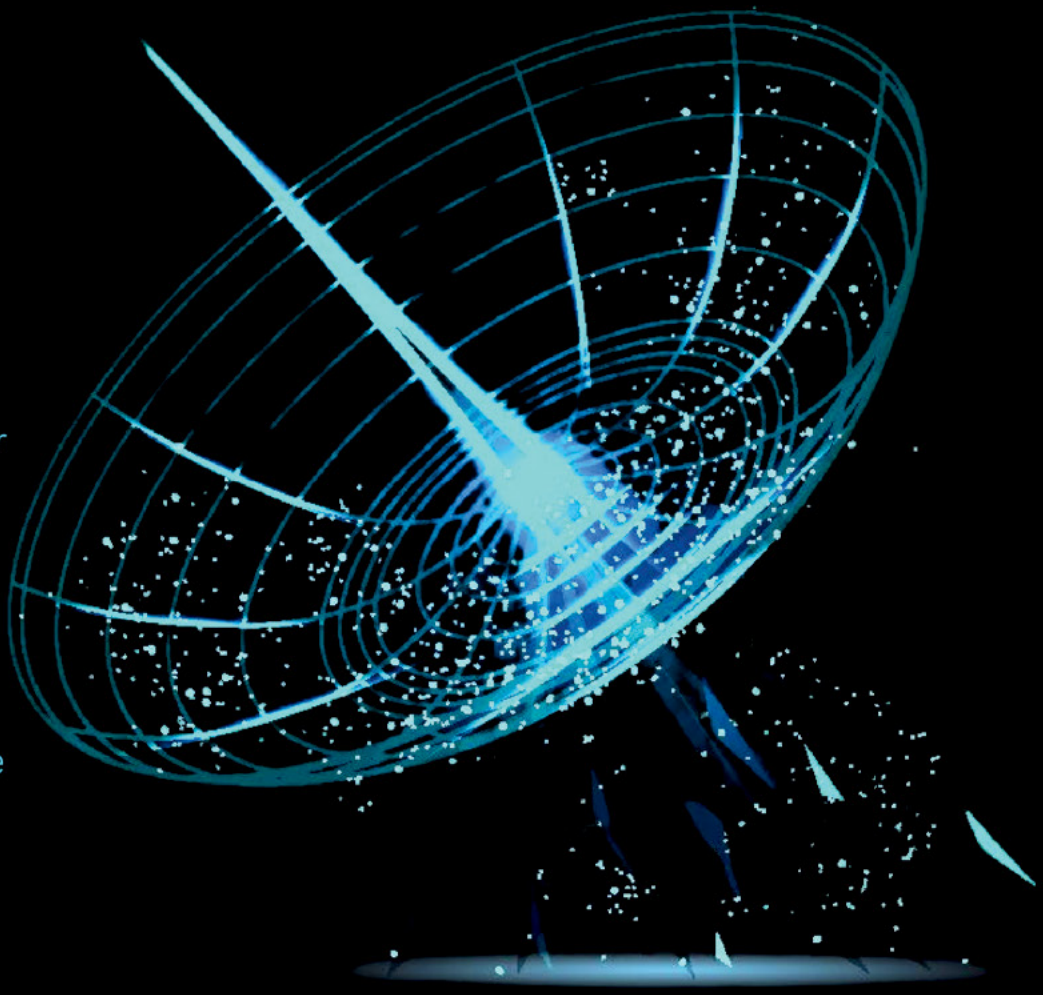

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consistently from FY 2021 to FY 2024 and have flattened since.[10] ***Figure 1*** also reflects the other legislative process affecting Space Force spending—*reconciliation*.[11]

In April of 2025, Congress passed a budget resolution that instructed congressional committees to write reconciliation legislation.[12] Reconciliation is an expedited legislative process to modify spending, revenue, and debt limits that is sometimes used to advance a new administration's priorities.[13] Unlike appropriations bills, which require 60 votes to pass in the Senate, a reconciliation bill needs only a majority in the Senate and House to pass.

On July 4, 2025, the process culminated in the signing and passage of the reconciliation legislation known as the ***One Big Beautiful Bill Act***.[14] The act authorizes $153.4 billion in national security funding from FY 2025 through FY 2029, about 14 percent of which (*$21.6 billion*) is for the Space Force and other Department of War space activities.[15]

Although the reconciliation funding is not limited to a specific year, the administration has indicated it is planning to spend most of it in FY 2026. Of the $153.4 billion authorized for national security funding, the budget request notes that the administration assumes it will spend $113.3 billion in FY 2026 for the DoW (*however, some experts have pointed out that spending such a large quantity so quickly may be overly ambitious*).[16]

Within the $113.3 billion, the administration has designated $13.8 billion as planned Space Force spending for FY 2026.17 This $13.8 billion in reconciliation funds, combined with the $26.3 billion requested as part of the appropriations process, would total $40.2 billion for FY 2026.[18]

Using the total from the budget request and reconciliation act, ***Figure 2*** shows the budget distribution for the Space Force by capability area, comparing the levels under the FY 2025 appropriations with the potential FY 2026 totals.

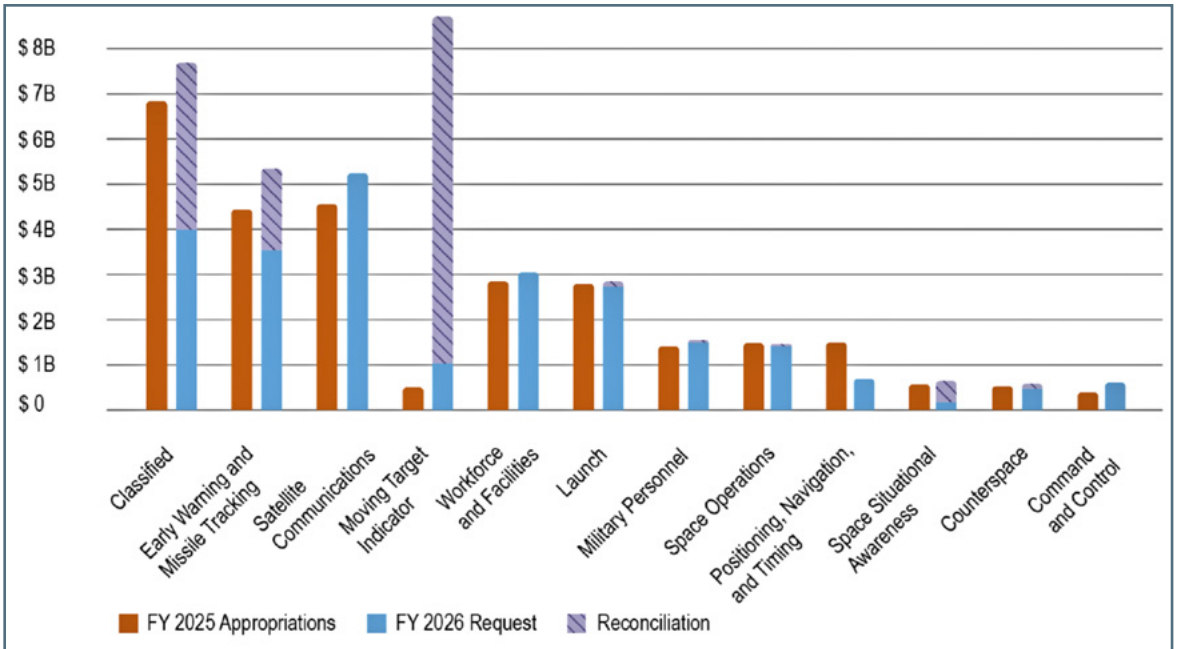

Figure 2. Budget distribution by capability, comparing FY 2025 appropriations with potential FY 2026 totals.

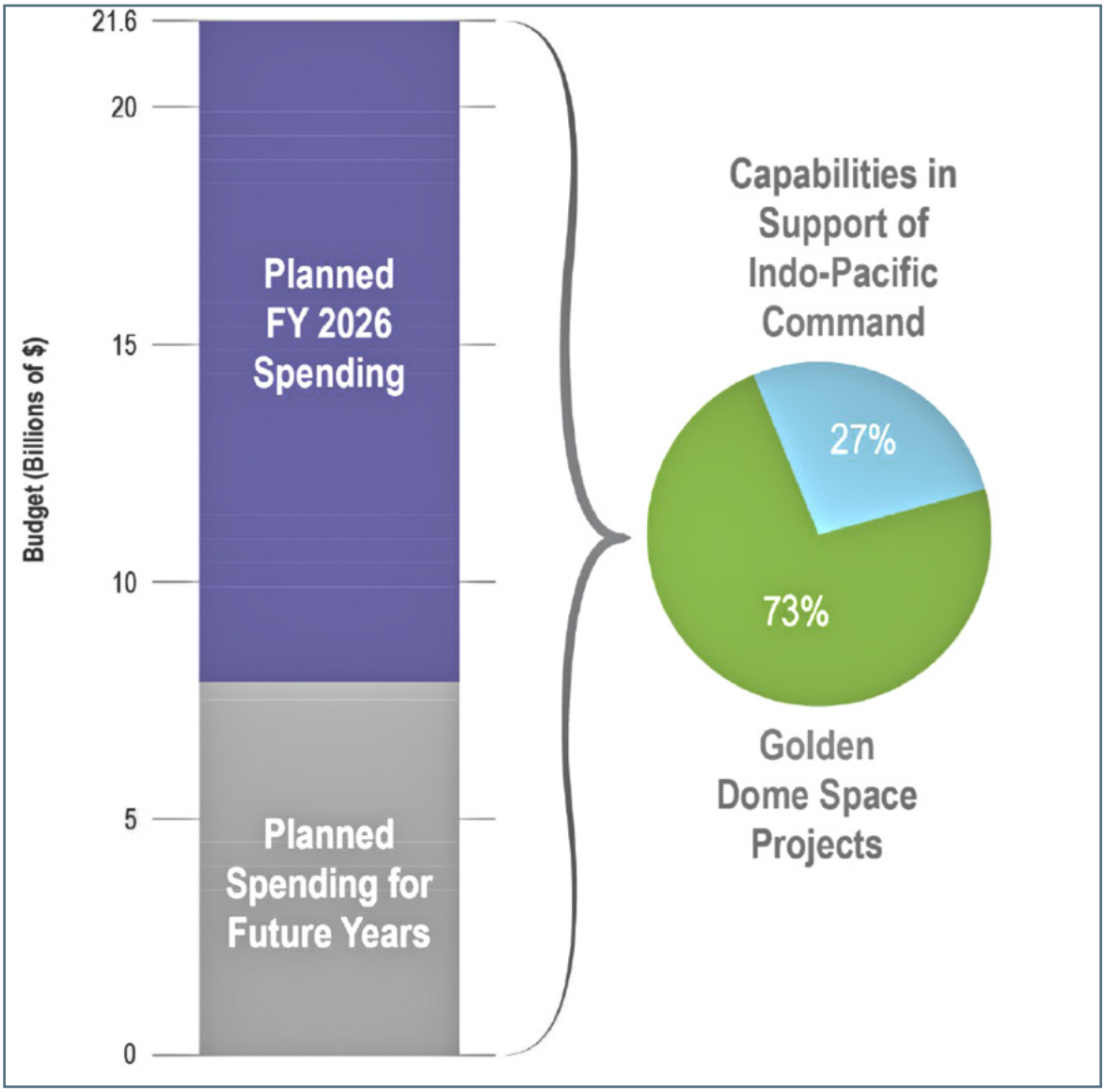

Figure 3. Reconcilliaton funding for defense space projects, FY 2025 to FY 2029

In addition to the $13.8 billion in spending planned for FY 2026, the reconciliation act includes $7.7 billion in additional defense space funding authorized from FY 2025 through FY 2029.

Collectively, this $21.6 billion mostly falls into two categories. About one-fourth of the defense space funding is labeled as projects that will improve the capabilities of ***U.S. Indo-Pacific Command***. These include added investments for the development and protection of U.S. military satellites, the **X-37b** orbital test vehicle, and space situational awareness programs.[19]

About three-fourths is for "*integrated air and missile defense*," which the administration and the armed services committees have specified is in support of Golden Dome.[20]

Figure 3, *(shown on the preceeding page)* breaks out the space funding as part of the national security portion of the reconciliation act.

Golden Dome

Although many of the details of Golden Dome have not been publicly disclosed, the executive order, reconciliation act, press conference, and the budget request offer some indications of the anticipated scale and intent of the project.

The administration and the congressional armed services committees have referenced $24.4 billion in the reconciliation act as funding for Golden Dome. Secretary of Defense ***Pete Hegseth*** has said that some components of the system are already in place and that it will be fielded in phases, "*prioritizing defense where the threat is greatest.*"[21]

Figure 4 shows the Golden Dome funding as a share of the national security portion of the reconciliation act, divided into the following three space-focused categories and one non-space focused category:

- ***Tracking threats from space, before and after launch.*** *Totaling $9.2 billion, this category comprises spending for military space-based sensors and moving-target-indicator satellites. These funds support efforts to track (1) potential threats before they have been launched and (2) an adversary's weapons after they have launched.*

  As identified in the budget request and executive order, some of this funding would go toward existing programs, such as polar and Low Earth Orbit (LEO) missile warning and tracking satellites, and some would support new programs, such as air-moving-target-indicator satellites.

- ***Space-based missile interceptors.*** *The reconciliation act contains $5.6 billion for space-based interceptors. As discussed in the executive order and press conference, these capabilities would aim to shoot down adversarial missiles during the initial phase of a missile's launch.22 Although the department deploys theater and national-level ground-based interceptors—and has tested air-based boost-phase interceptors—it has not had a public program dedicated to space-based interceptors since former President Reagan's Strategic Defense Initiative.*[23] *President Trump said in his press conference that the United States would be "completing the job that President Reagan started 40 years ago, forever ending the missile threat to the American homeland."*[24]

- ***Launch and test range infrastructure.*** *Covering approximately $910 million, this category includes new and existing efforts that support launch and test range infrastructure, including added resources for the national security space launch program.*

- ***Terrestrial (non-space-based) elements.*** *The remaining Golden Dome items in the reconciliation bill are not space-based elements, even if they are integrated with space capabilities. These include hypersonic and intercontinental ballistic missile defense systems and ground-based missile defense radars.*

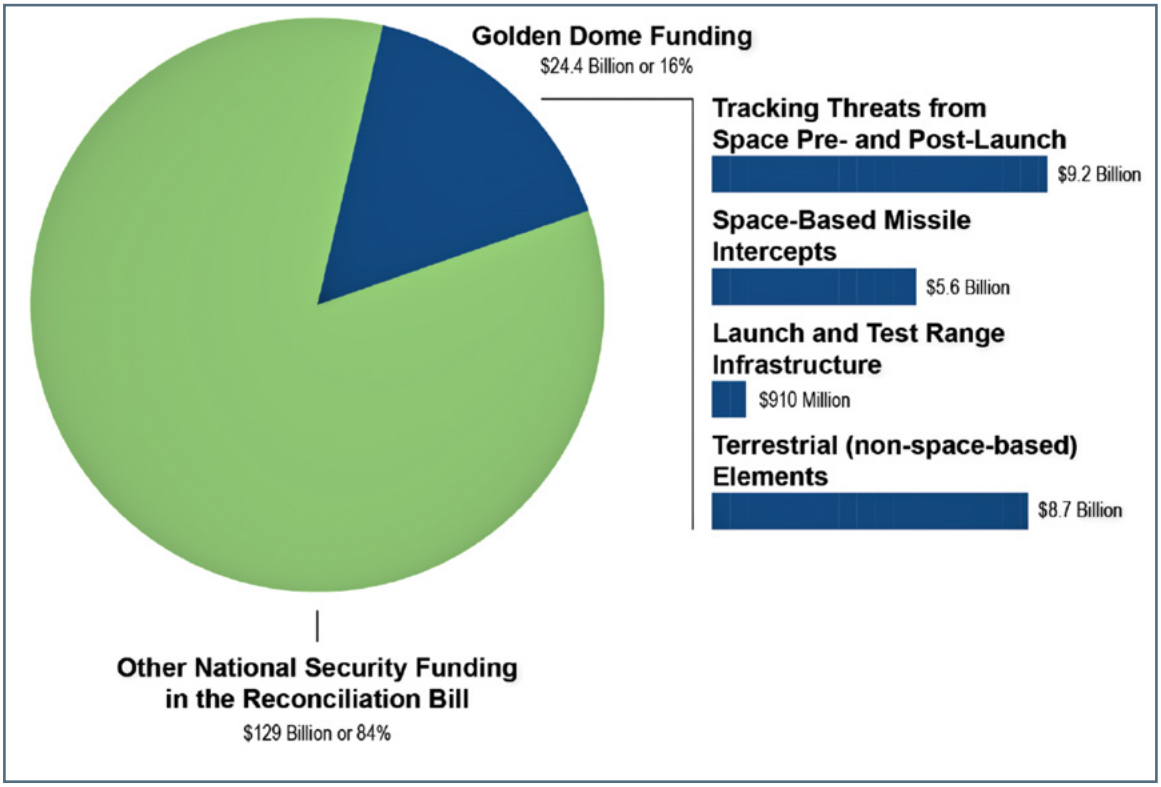

Figure 4. Golden Dome funding as a share of the national security portion of the reconcilliaation bill, divided into four categories.

As noted, Golden Dome looks set to dramatically affect the budget for defense space activities. In his press conference, President Trump stated that the project would cost about $175 billion and would initially be fielded in around three years.[25] However, he did not clarify how much of that amount would be part of already-planned spending, such as for existing missile warning and tracking programs, and how much would be allocated to new spending.

Prior to the press conference, the ***Congressional Budget Office*** (**CBO**) released updated cost projections of space-based interceptors that reflect today's lower space-launch costs, estimating 20-year costs ranging from $161 billion to $542 billion based on constellations sized to counter one or two intercontinental ballistic missiles fired by a regional adversary, such as North Korea.[26]

The executive order notes that Golden Dome will defend against "*peer, near-peer, and rogue adversaries*," indicating that the administration's constellation of space-based interceptors would have to be much larger than the constellations used in the CBO's estimate.[27]

As a historical example, from FY 1986 through FY 1990, the ***Strategic Defense Initiative*** made up about 1.3 percent of the DoW's total appropriations. For context, the entire Space Force appropriations in FY 2025 amounted to about 3.4 percent of the DoW's total.[28]

Moving-Target-Indicator Programs

One of the biggest Golden Dome-related adds in the reconciliation act was for space-based moving-target-indicator programs. As shown in ***Figure 2***, this category of programs would grow from $500 million in FY 2025 to $8.8 billion, based on the requested and planned totals for FY 2026.29 Collectively, the reconciliation act and budget request identify two moving-target-indication capabilities.

One is ground-moving-target-indicator satellites. First appearing in the FY 2024 Space Force budget request, the ground-moving-target-indicator satellite program aims to provide "*actionable intelligence on adversary surface targets*," a mission that ***E-8C Joint Surveillance Target Attack Radar System*** (**JSTARS**) aircraft had performed from 1991 to 2023.30 The budget documents notes that the space capability "*will be critical to tracking surface targets…which will be accomplished from space, instead of from JSTARS aircraft which will not be capable of operating in a contested/non-permissive environment.*"[31]

The other capability is air-moving-target-indicator satellites. Similar to ground-moving-target indication, this is a mission that has been carried out in the air domain: since the 1970s, the U.S. Air Force (**USAF**) has used crewed ***E-3 Sentry*** aircraft to identify, detect, and track airborne and maritime threats.32 These aircraft were to be replaced with the ***E-7 Wedgetail*** aircraft; however, the FY 2026 request cancelled the E-7 program.[33]

The department's background briefing on the budget request says the program cancellation is due to "*significant delays*," "*cost increases*," and "*survivability concerns in a contested environment*," adding that the department is "*investing in alternate solutions, including space-based capabilities*."[34]

The transfer of these airborne missions (*or at least portions of them*) to outer space has generated mixed reactions from the congressional defense committees. The ***FY 2025 National Defense Authorization Act*** directed the USAF to appoint a program executive officer for the "*acquisition of space-based ground- and air-moving-target-indication systems*," reflecting some support for these programs.[35]

However, the FY 2026 House Appropriations Committee report and the FY 2026 House and Senate Armed Services Committee reports propose reinstating the E-7 program, which suggests that the committees do not yet want to rely entirely on spacecraft for the mission.[36]

Proliferation and Commercial Services

Over the last several years, the central story of the defense space budget has been the transition to proliferated sets of spacecraft and ground infrastructure for missions that had previously been carried out with a small number of expensive, exquisite satellites. For example, the ***Space Development Agency (SDA)***, charged with developing "*layers*" of proliferated satellites in LEO, was established in 2019 and now comprises about one-fifth of the service's procurement and research, development, testing and evaluation spending.[37] Not simply a budgetary trend, the push toward proliferated assets for space has been emphasized in USSF strategic documents and in talking points among thatorganization's leadership.[38]

The transition away from traditional satellite programs continues with this year's request, but it takes a different form. As well as acquiring proliferated sets of spacecraft and ground infrastructure for certain missions, such as missile warning and tracking, the budget request proposes increased funding for commercial services.

This year's request contains new budget lines for commercial spending, including $190 million for ***proliferated LEO*** (**pLEO**) satellite communications, which the USSF would be providing for the rest of the military.[39]

Outside of launch, this would be the largest commercial space services program in the budget. The growing emphasis on commercial space capabilities aligns with broader acquisition reforms the administration has been pursuing to favor nontraditional defense firms, as indicated in the administration's executive order titled, "***Modernizing Defense Acquisitions and Spurring Innovation in the Defense Industrial Base***."[40]

Similarly, recent legislative proposals from both the ***House and Senate Armed Services Committees*** seek to drive better adherence to the existing statutory requirement to prefer commercial goods and services in federal procurement.[41]

As the department proposes increasing the budget for commercially owned proliferated LEO satellite communications, it is also proposing decreasing the budget for DoW-owned pLEO satellite communications. Specifically, the FY 2026 request would cut the SDA's transport layer by 20 percent (*or $340 million*) from the FY 2025 appropriations.[42]

Envisioned as the lead proliferated constellation with 300 to 500 data transport satellites in LEO, the transport layer has been described in the budget documents as providing the "*space-based connectivity backbone*" for ***Joint All Domain Command and Control***.[43]

Since its inception, the transport layer has benefited from bicameral and bipartisan congressional support.[44] In fact, from FY 2022 through FY 2025, Congress has, in total, appropriated more for the transport layer than the department has requested.

For FY 2026, in contrast with the request, the ***House Appropriations Committee*** report funds the transport layer at the same level as in FY 2025.45 Although not an appropriator, the Senate Armed Services Committee report also restores most of the cut funding (*$280 million*) for the transport layer, which was the Senate report's single-biggest add for the Space Force.[46]

The House Armed Services Committee, however, retains the cut proposed in the request.[47]

Table 1: Transport Layer Proposed Funding for FY 2025 and FY 2026				
FY 2025 Enacted Budget	FY 2026 Request	House Appropriations Committee	House Armed Services Committee	Senate Armed Services Committee
$1.6 Billion	$1.3 Billion (-$300 Million)	$1.6 Billion	$1.3 Billion (-$300 Million)	$1.6 Billion

Table 1 compares these different proposed funding amounts. The eventual appropriations will be telling for how this program, emblematic of the transition toward proliferated constellations, will look in the years to come.

Conclusion

This year's budget process is particularly complex, with important implications for the USSF. Although the president's budget request would signify a 9 percent cut from the FY 2025 appropriations for the service, the amount in the request plus the reconciliation funding would result in a nearly 40 percent increase, albeit after the only flat budget year in the nearly six-year history of the Space Force.

The reconciliation act has significant bearing for defense space activities, given the relatively high percentage of space spending (*14 percent*) in the national security portion of the law compared to the relatively low percentage of defense space funding (*less than 4 percent*) in the budget request.

The reconciliation act and budget request reveal some of the trades the administration and Congress will weigh regarding the transition from traditional space programs and the shift to projects that support Golden Dome. They also offer insight into foundational changes for U.S. national security investments and acquisitions.

The increased use of commercial space capabilities could serve as a forerunner for defense acquisition reforms and greater use of nontraditional defense providers; Golden Dome appears to be a signature program not just for outer space but for the new administration's broader approach to national security.

Since the beginning of President Trump's second term, no other military capability has been the subject of both a presidential press conference and executive order. The defense space budget materials, both in the request and the reconciliation act, provide some of the first details of these efforts that will likely be central to the administration's defense and security policy.

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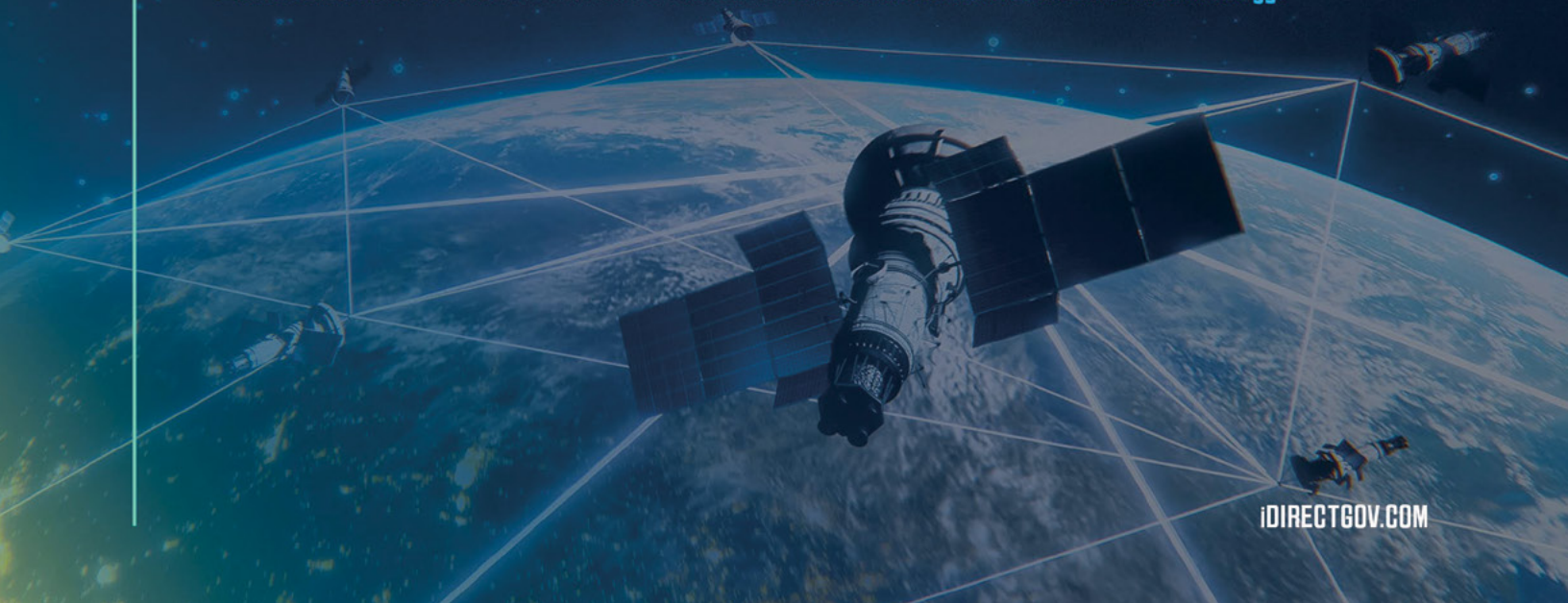

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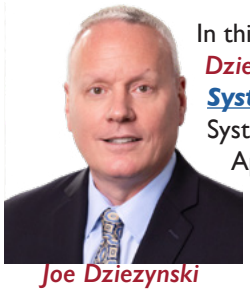
COMMAND CENTER
JOE DZIEZYNSKI

Vice President, Space Systems
BAE Systems Electronic Systems Sector

The final frontier: The innovative, rad-hard space technologies that are taking us to new heights

From the first satellite, space shuttle launch, moon landing, international space station, and beyond—space has become an ever more important domain. Today, space missions have evolved to include planetary exploration, communications, national security, surveillance, and weather missions. One constant through it all is the need for reliable and resilient technologies to ensure operational excellence and mission assurance across defense and commercial sectors.



Joe Dziezynski

In this ***Command Center*** discussion with *Joe Dziezynski*, who leads Space Systems for ***BAE Systems' Electronic Systems*** sector, BAE Systems' history of radiation hardening, from Apollo to Mars rovers, is discussed as well as the technologies that enable missions and the trends and demand signals that are shaping the industry.

How has BAE Systems' expertise in radiation-hardened solutions contributed to missions that go back to the "space race" days?

Joe Dziezynski

You may not realize it, but our space products help hundreds of millions of people each day with GPS, satellite radio, weather data, and other services across the defense and commercial sectors.

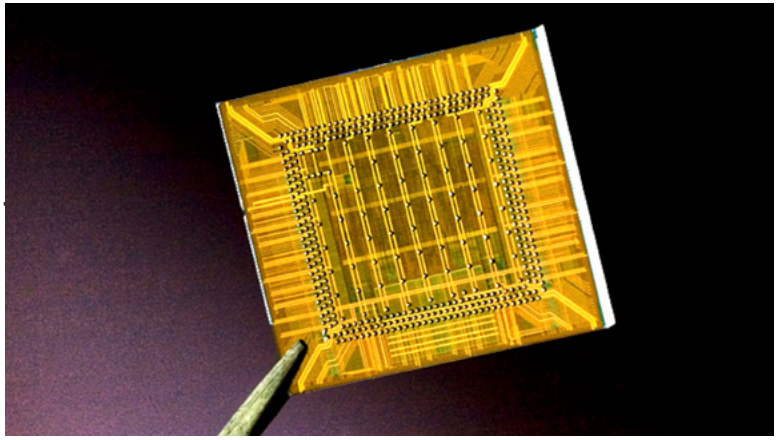
Our heritage spans everything from the earliest days of the space program to planetary exploration as well as commercial and Department of Defense missions.

With contributions to iconic missions such as **Apollo 11**, the **Cassini** space probe and four generations of **Mars rovers**, our *radiation-hardened* (**rad-hard**) solutions have played a critical role in extending the operational lives of electronic systems, enabling space agencies to achieve their mission objectives and push the boundaries of space exploration. Rad-hard electronics at the component, card, and unit levels specifically designed for high-reliability demands are required to withstand the harsh space environment and perform long-term missions.

As a merchant supplier, we develop and produce high-reliability space products, from standard components and *single-board computers* (**SBCs**) to complete system payloads. We have flown more than 1,100 SBCs, with a cumulative total of over 13,000 years of successful operations in space.

Our RAD750® SBC has been the workhorse of the industry and has been manufactured in 250 nanometer (nm), 180nm, and 150nm technology. Those systems powered more than 100 satellites for the last 20 years, including playing a key role in the navigation payload on ***GPS III*** satellite constellation. Today, it provides the computing power for ***NASA's Curiosity*** rover that landed on Mars in 2012, and, of course, the ***James Webb Space Telescope***.

GPS III satellite launched with BAE Systems' RAD750 single board computers. Photo courtesy of the company.



Our ***RH45***® technology enables customers to develop their own solutions with a library of advanced capabilities and proven ***application-specific integrated circuit*** (**ASIC**) design and manufacturing methods.

RH45 chips offer exceptional radiation performance in natural and manmade environments and are based on commercial 45nm ***Partially Depleted Silicon-on-Insulator*** (**PD-SOI**) technology. We will reestablish our RH45 Storefront in 2025 for new designs and production runs.

The next step in speed and surety is our ***RH12***™ technology. Ten times denser than RH45 technology, RH12 allows users to build rad-hard chips using a suite of qualified ***intellectual property*** (**IP**) blocks compatible with industry-standard design tools. Each IP block is radiation-hardened, tested, and qualified for space applications.

The RH12 technology provides a proven, low-risk ASIC development capability for demanding space applications.

Our latest computer product, the ***Endura™ SBC***, uses RH45 technology to deliver three times the performance capability of our industry standard ***RAD750 microprocessor***. It requires less power and offers exceptional radiation hardness.

Available to space agencies and spacecraft manufacturers, Endura uses software compatible with the RAD750 SBC making it a flexible solution for current and future applications. To support customer insertion of the Endura SBC, a ***software development unit*** (**SDU**) is available for immediate delivery.

The SDU enables users to develop, integrate, and test their applications on an inexpensive lab asset equipped with the exact same chipset as our flight hardware. The approach mitigates risk and enables easier adoption of the new solution.

The Endura SBC will launch in industry-standard 3U form factor.

We are developing rapid prototype 6U Endura SBCs with enhanced capabilities such as rad-hard memory, ***SpaceVPX***, ***field-programmable gate array*** (**FPGA**) resources, cybersecurity, and Ethernet to address customer needs. Rapid prototyping gets developmental hardware to our users faster, which allows them to test earlier, resulting in reduced design cycle time and cost.

With the introduction of Endura, we are transforming our business model to provide a more responsive and cost-effective experience for our customers. By harnessing the power of economies of scale and optimizing processes, we are able to offer it at a lower price point and with faster delivery times.

We are now accepting orders as we prepare to launch our family of products to the market in the coming months.

What shifts are you seeing toward small satellites and radiation-tolerant solutions?

Joe Dziezynski

We continue to see the demand for advanced. rad-hard electronics, even while there is also a trend toward small satellites in ***proliferated Low Earth Orbit*** (**pLEO**) constellations. This is creating a new market for radiation-tolerant solutions that balance performance and cost.

These satellites are for shorter duration missions and don't require the level of surety and radiation-hardness that we provide for a Mars rover.

As small, LEO satellites don't have the extreme surety requirements that we've historically served, we can back off on some mission assurance requirements related to parts selection, materials, and processes.

There are two advantages worth highlighting. **First**, we can use advanced organic packaging techniques to more affordably enclose our chips. **Second**, we can use automotive and aviation components which provide additional performance at a lower power threshold to implement capabilities, such as high-speed Ethernet.

We see a best-value product as a hybrid approach, using rad-had technology for core component,s such as processors, surrounded by lower-grade components with suitable radiation-mitigation technologies.

From the owner-operator side, that frees up customers to affordably do things that they couldn't do with exclusively radiation-hardened components, at surety levels that are appropriate for the environment, and with the "*always on*" performance that is expected from BAE Systems.

How can you use ASICs and still have a flexible design?

Joe Dziezynski

Design flexibility is crucial in supporting space missions, as it allows us to tailor our solutions to specific mission requirements and constraints.

Rad-hard ASICs design services, for example, provide customers with a competitive advantage. RH45 and RH12 ASICs not only resist radiation damage and upset, but they have 10-to-1 power and performance advantages over FPGAs in the same technology.

Ethernet switching, channelization, and non-uniformity correction are examples of functions on spacecraft that don't change from system to system. These functions are prime candidates for committing to ASIC to capitalize on power and performance advantages, all without loss in flexibility of the overall system.

This is opening the design trade space to have lower cost points and more capable processing that lets you conduct different missions from LEO constellations compared to a large single satellite in another orbit. Looking forward and aligning with today's need for speed, we've pivoted our design and production process to provide rapid prototype circuit cards and boxes for early integration by our customers.

We are able to get an affordable SBC product variant into the lab in six months or less, dramatically accelerating design and fielding cycles.

ASIC technologies are also compatible with a wide variety of commercially available design tools. Compared to designs using off-the-shelf hardware, ASICs provide unique processing capabilities with lower size, mass, power consumption, and recurring cost while allowing our customers to implement their own unique algorithms and architectures. They are true force multipliers in spacecraft design.

What emerging technologies are expected to have a significant impact in the coming years?

Joe Dziezynski

Emerging technologies like advanced radiation-hardened processors, ***software-defined radios*** (**SDR**), modular payloads, and autonomy are expected to have a significant impact on the space industry.

These technologies will enable more capable and flexible space systems that can support a wide range of missions.

BAE Systems is known as a capability provider in the air, land, and maritime domains as well. What this allows us to do now is take the operating capabilities that we have in those domains and push them up into pLEO orbits to provide more capability for our customers.

We are demonstrating the latest, state-of-the-art, software-based waveforms capable of communicating from land to space and back. The significance of this is increased resiliency for the warfighter. Many of our waveforms are developed with a combination of software, firmware, and hardware.

As this this is a software-only based waveform, configured and developed quite rapidly, we've been able to integrate and test it quickly to meet mission needs.

We are developing modular open system architecture SDR systems that are suitable and affordable for every orbit from LEO to ***Geostationary Earth orbit*** (**GEO**).

Autonomy is a new paradigm, where the spacecraft makes intelligent decisions on what to do next based on available information.

Autonomy requires advanced processing, much of which is done today in data centers. We will not be flying a data center in space any time soon, but we are working to develop autonomous recovery tools and techniques that allow us to fly state of the art processors with mission appropriate radiation mitigation.

How do you see the space community changing in terms of collaboration between government, defense companies, and commercial providers?

Joe Dziezynski

The last 20 years has brought a flurry of activity from new organizations, like **U.S. Space Force**, **SpaceX**, and **Planet**, to new objectives, such as **Joint All-Domain Operations**. In essence, space is new again.

However, what hasn't changed is that customers want their mission delivered when it counts... **every time.** Defense requirements for control, resilience, and security will provide a ceiling on what commercial alone can do. Warfighters will continue to demand "*always on*" military capabilities.

For low-density constellations, radiation-hardened solutions are required for foundational spacecraft services such as avionics, security, and networking to deliver that level of availability.

With a focus on speed, affordability, and new technologies, we're seeing increased collaboration across industry and sectors. You can advance commercial capabilities by applying rad-hard techniques to bring them to space.

We're advancing space capabilities by adding ***Radiation-Hardened By Design*** (**RHBD**) to the commercial market. We're working with commercial companies to bring cutting-edge capabilities to space.

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OPERATING IN CONTESTED SPACE

A PRACTITIONER'S VIEW

Author: Clinton Clark, Chief Growth Officer, Vice President of First Impressions, ExoAnalytic Solutions

The authors of Contested Space are correct to sound the alarm—the space domain is dynamic, deceptive, and increasingly deliberate in how it's being shaped by peer competitors.

Their message, that the U.S. must act with urgency to protect its freedom of action in orbit, is not abstract—it's observable.

From where I sit, their insights don't just resonate, they echo what's already happening. Whether it's ambiguous maneuvers in GEO, unexpected repositioning of high-value assets, or deliberate gray-zone activity, the environment is already contested. And it is being contested in ways that demand more than passive awareness.

These realities demand capabilities that support resilience, survivability, denial of benefit, and credible attribution—exactly the deterrence posture *Contested Space* outlines.

Persistence Is the Prerequisite for Freedom of Action

The book opens with a simple premise: "*Freedom of action in space is a vital national interest.*" **General B. Chance Saltzman** has stated it more operationally: "*We must be able to secure the domain, survive threats, and fight back if necessary.*"

But securing the domain starts with persistent awareness, not episodic coverage or forensic reconstruction, but a sustained ability to observe and interpret activity as it unfolds.

China's ***Shijian21*** (**SJ21**) launched in late October of 2021 to test debris-removal capabilities. The satellite first practiced ***rendezvous and proximity operations*** (**RPO**) with its ***apogee kick motor*** (**AKM**) before capturing the target and removing it to the graveyard.

Artistic rendition of the Shijian21 on-orbit.
Photo is courtesy of ***Asia Markets****.*

Then, in January of 2022, the Chinese spacecraft executed a complex capture of the defunct, tumbling ***CompassG2*** (**Beidou2**). The relocation used a ~60 m/s maneuver and occurred during a period of solar exclusion. This provided a real-world test of the ability to maintain custody under constrained conditions.

Notably, SJ21 has exhibited renewed activity in the past few weeks by maneuvering into an RPO with SJ25. Many consider this a possible refueling mission (***wired.com/story/china-jumps-ahead-in-the-race-to-achieve-a-new-kind-of-reuse-in-space/***), a move that could enable SJ21 to pursue additional removal or relocation missions.

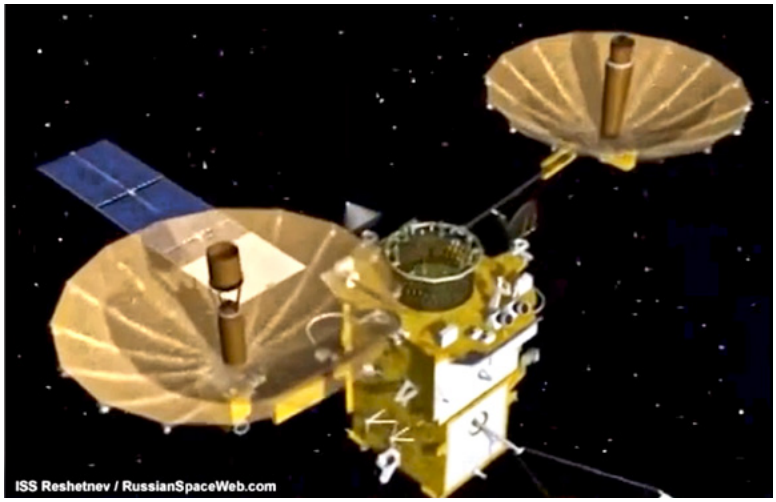
These events embody the kind of ambiguous, dual-use behavior Contested Space flags as a growing concern: technically impressive, strategically subtle, and difficult to interpret in real time.

Deterrence Requires Speed and Attribution

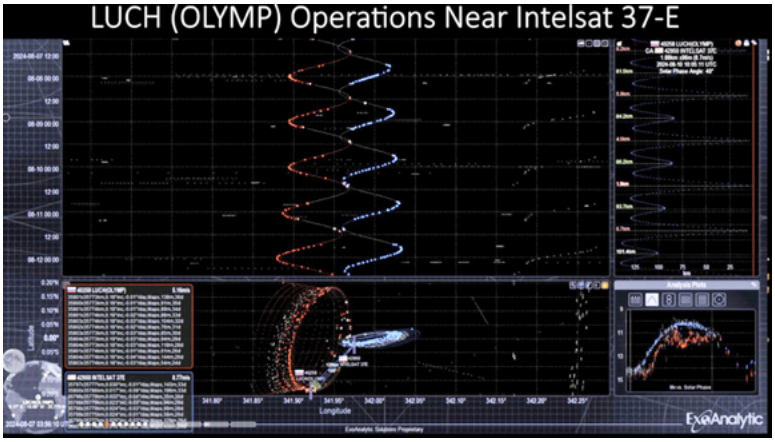
Contested Space makes the case clearly: "*Deterrence in space must be based on resilience, survivability, denial of benefit, and attribution.*" That last piece—attribution—is too often treated as a policy problem. In practice, it's a tempo problem.

If attribution is slow, adversaries learn they can act and reset before that move is identified. They learn the fidelity to call them out without ambiguity is seriously lacking—that ambiguity becomes their sanctuary.

Russia's ***LUCH*** (**OLYMP**) satellites exemplify this challenge. The original LUCH (OLYMP), launched in 2014, spent years maneuvering near high-value commercial satellites, particularly those operated by ***Intelsat***, maintaining uncoordinated formations as close as 10 kilometers.



Artistic rendition of Russia's LUCH satellite on-orbit.



These prolonged behaviors weren't acknowledged and weren't benign. They raised alarms across the commercial space community and among allied governments (***aerospace.csis.org/data/unusual-behavior-in-geo-olymp-k/***).

In August of 2024, the original LUCH (OLYMP) closed to within 2 kilometers of ***Intelsat-37E***. In December, LUCH (OLYMP) 2, launched in March of 2023, employed an identical maneuver with ***Intelsat 1002***, coming within 3 kilometers.

These are not fleeting encounters. They are deliberate, prolonged formations that raise the prospect of surveillance, signals collection, or prepositioning for counterspace missions.

These actions reflect precisely the gray-zone, reversible behavior ***Contested Space*** identifies as destabilizing: operationally ambiguous, politically deniable, and technically difficult to characterize without persistent, high-accuracy ***Space Domain Awareness*** (**SDA**).

SDA Is What Enables Decision Advantage

General Stephen Whiting has said, "*SDA is foundational to every mission we conduct in, from, and to space.*" ***Contested Space*** extends that by emphasizing that strategic advantage flows from the ability to decide faster and more confidently than the adversary.

That doesn't just mean knowing where things are. It means understanding what they're doing, what they've done, and what might come next.

We've seen that when awareness is sustained and responsive, decision-makers can operate with tempo. They can respond to maneuvers within hours—not days. They can characterize intent, not just location.

When decisions are informed by persistent, real-time, and reliable data, the fog begins to lift. Strategic ambiguity gives way to operational clarity. That's how you generate decision advantage, by staying inside the adversary's *OODA* (**observe, orient, decide, act**) loop and forcing them to operate at a tempo they can't match.

Intelsat-33E: A Live-Fire Test for SDA in the GEO Belt

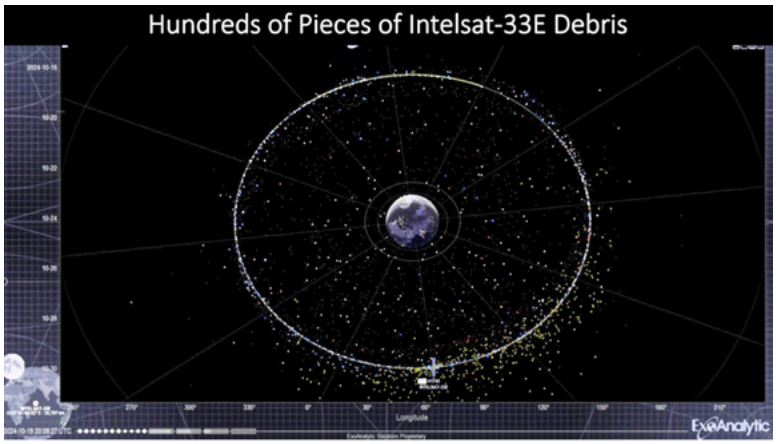
In October of 2024, ***Intelsat 33E*** suffered a catastrophic on-orbit anomaly in ***geostationary orbit*** (**GEO**). Previous GEO events—**AMC9**, **TELKOM1**, and **Intelsat 29E**—produced debris, but IS33E was different. It released hundreds of trackable fragments—an unprecedented scale of debris for a single satellite in GEO.

Resolving the full scope of the debris field required coordinated multi-site observations, fused tracking data, and days of sustained analysis to confirm object separations and safeguard nearby assets.

That incident crystallizes the lesson from ***Contested Space***: "*In the absence of verifiable attribution, escalation risks rise.*" The ability to maintain persistent, credible observation isn't academic—it's a shield against misjudgment.

As General B. Chance Saltzman, Chief of Space Operations, warned earlier this year: "*The first shots in a future conflict could be in or through space.*"

Major General Paul Tedman, Commander of ***UK Space Command***, echoed the same concern, stating, "*Britain's next war is 'highly likely' to begin in space.*" Events such as IS33E show what those opening moments might look like—and why we must be ready to interpret them before the world reacts.



Norms and Legitimacy Depend on What You Can See and Prove

Scott Pace's chapter reminds us that international law still governs space, and that escalation control depends on distinguishing hostile intent from incidental behavior. But that distinction only exists if you can prove it.

Norms only stabilize behavior when violations are visible. Legitimacy only restrains escalation when attribution is credible. SDA isn't just a military tool—SDA is a strategic stabilizer. In this sense, SDA enables both deterrence and diplomacy.

Commercial Integration Is Already Happening It Needs Recognition, Not Reinvention

The call in ***Contested Space*** for deeper commercial integration is welcome—and accurate. But from the inside, it's also incomplete.

Commercial systems are not waiting to be invited—they're already operating. The challenge is not introducing commercial capability but institutionalizing it.

Too often, operationally proven capabilities exist outside programmatic pathways. They support national security missions, but without the same visibility or recognition. That creates risk. Because in a future crisis, we'll depend on what's already fielded—not what's still in planning.

Hybrid architectures are not a policy preference—they're an operational reality. The sooner we normalize that reality across acquisition, resourcing, and planning, the better prepared we'll be.

Conclusion: Aligning Insight with Action

The strategic picture in ***Contested Space*** is clear. Its diagnosis is urgent. What's needed now is the operational continuity to carry that urgency forward—through integration, readiness, and persistent awareness.

From the operator's perspective, contested space is not an emerging condition. It is the daily baseline. The behaviors described in the book—RPOs, gray-zone activity, capability signaling through maneuver—aren't future threats. ***They're recent events***.

Space domain awareness is not an accessory to Space Power. It is what allows freedom of action to exist at all. And, as the space environment continues to evolve (often in quiet, subtle ways), our ability to detect, interpret, and respond will determine ***not*** only what we can do in orbit, **but whether we can act at all**.

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Clinton Clark

Clinton Clark serves as Chief Growth Officer and vice president of First Impressions at ExoAnalytic Solutions. He is responsible for communicating Exo's vision and values to the world while driving the sales and growth of the company. His passion is the creative application of technology to address critical national security space issues including space domain awareness, missile defense, missile warning, and position, navigation, and timing. His responsibilities at ExoAnalytic also include product and service development, operations research and analysis support to multiple customers, and the evaluation of operational utility of advanced technology solutions.

Mr. Clark is a customer-focused operations researcher with deep expertise in the application of structured decision-making techniques, multivariate statistics, and modeling and simulation to a variety of problem areas. Clinton holds degrees from Lamar University, Rice University, and the Air Force Institute of Technology.