



SPACE FORCE ASSOCIATION

MAGAZINE

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SPACEPOWER

CONFERENCE

SPECIAL EDITION

**CHIEF MASTER SERGEANT
BENTIVEGNA GIVES
KEYNOTE ADDRESS**

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TECHNOLOGIES PREPARES
FOR 2025 LAUNCH OF SPACE
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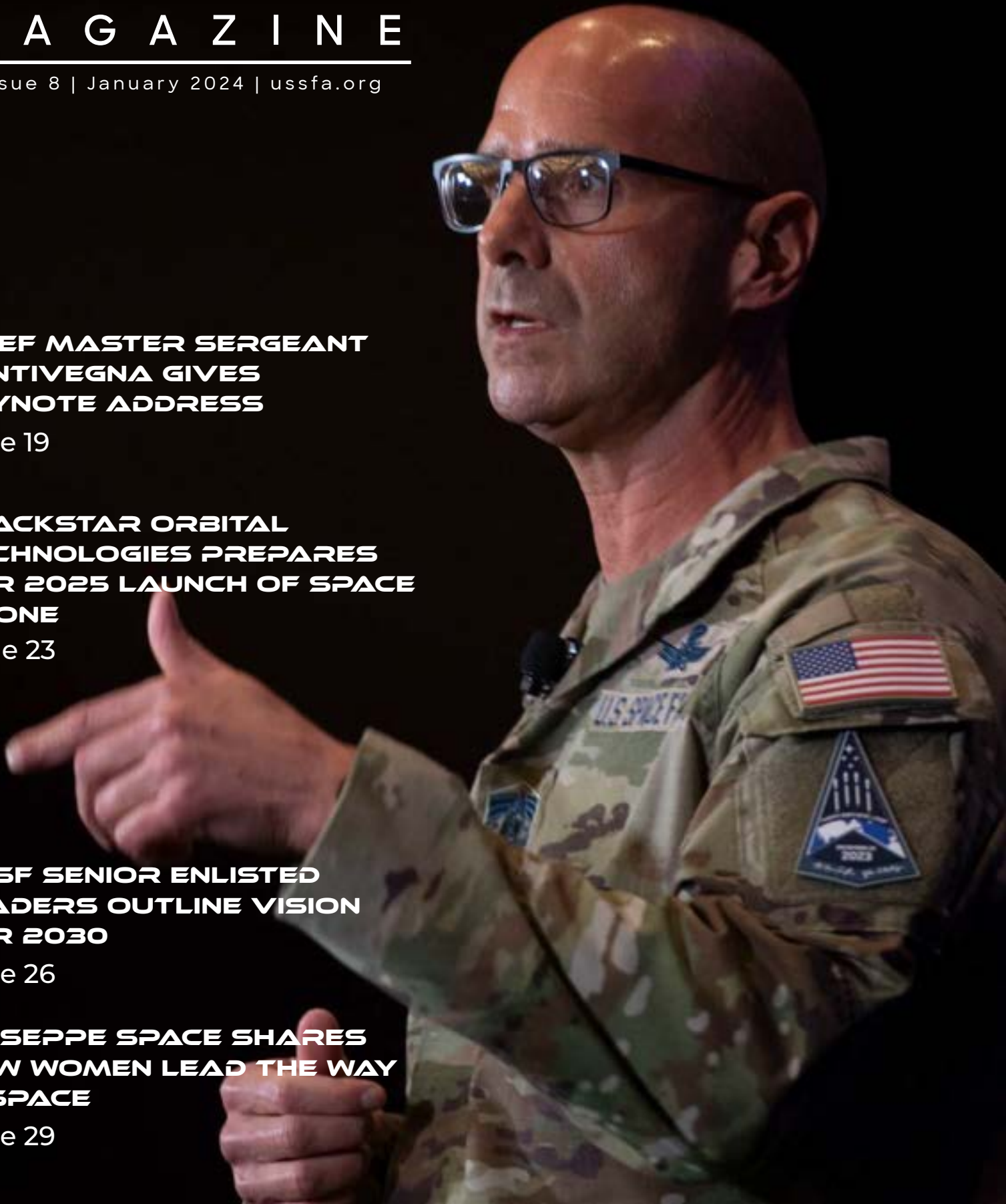
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SPACEPOWER CONFERENCE

**THANK YOU FOR COMING!
SEE YOU NEXT TIME!**

December 2024 | Orlando, FL

We Cannot Risk A Day Without Space.

Imagine a world where the sky goes dark from the loss of our space assets. Every facet of our lives—military operations, global commerce, emergency response—depends on space. Lose GPS, and we're blindfolded; lose satellites, and our world plunges into chaos. Financial markets freeze, weather forecasts vanish, and emergency services are crippled. This isn't science fiction; it's a looming reality.

Right now, adversaries are crafting weapons to sever the lifelines that space provides. We're at a crossroads, and the stakes

couldn't be higher. That's why the inaugural Spacepower Conference isn't just another event—it's a call to arms.

We're tackling the most pressing challenges facing our nation and our planet, and this is your invite to not just be part of the conversation—but to be part of the solution.

Because the hard truth remains...

There's no day without space, and there's no future without safeguarding it.



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FEATURES. EDITORIALS. THOUGHTS.



THE SPACEPOWER TEAM.



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LETTER FROM THE EDITOR



SPACE FORCE ASSOCIATION

December 2023 marked the beginning of a new tradition for the U.S. Space Force Association – a well-planned and enriching annual event specifically catering to Guardians, their needs, and their mission. Dolores Lowe, Committee Chair, 2023 SFA Spacepower Conference and Gregg Walsh, SFA National Events Director, did a spectacular job designing and developing a world-class experience reflective of the elite talent pool and technology that populate the space industry, academia, government, and the USSF. SFA Founder and President, Bill “Hippie” Woolf, was a stellar host and emcee, setting the tone for the conference and the “family business” SFA is building to service the new force.

Industry partners large and small successfully built new relationships and deepened old ones. Innovative tech startups showcased their new technologies and filled their sales pipelines. Friendships were made. Media was invited and welcomed the opportunity to cover this inaugural event. Volunteers gained valuable experience. All those

who attended the conference agreed – the event was a huge success!

What I found most interesting was feedback about the caliber of people in attendance and the vibe of the space defense community. The consensus was clear – everyone was “really nice.”

The conference was filled with mission-focused professionals dedicated to operational excellence, gaining an advantage in great power competition, and promoting U.S. space superiority in perpetuity.

In this issue of SFA Magazine, you will be able to relive the conference and gain insights and perspectives from the USSF, industry partners, and volunteers.

We look forward to seeing you at the next conference in Orlando in December 2024!

Enjoy!



FELICIA S. C. GOODEN
SFA MAGAZINE
EDITOR



Roundtable Discussion with General Saltzman: Gratitude, Growth, and Innovation



DR. CHERISA JEREZ
SPACEPOWER VOLUNTEER
CO-FOUNDER/ VICE PRESIDENT OF
OPERATIONS,
ASHIRE TECHNOLOGIES

The CSO of the U.S. Space Force sat down with the media and shared intimate details about what he envisions for the future of U.S. space operations and the new force. Between cross-sector collaboration, enhanced intelligence operations, and well-supported military operations, Saltzman looks forward to a journey that is Semper Supra!

The Space Force Association was proud to host General B. Chance Saltzman in an intimate, roundtable setting, where he highlighted the Space Force's key priorities, the approach to a combined mission for both the intelligence and warfighting efforts, and the essential core competencies that drive Guardian success.

Earning his fourth star in November 2022, General Saltzman was promoted to Chief of Space Operations, United States Space Force, where he serves as the senior uniformed Space Force officer,

responsible for the organization, training, and equipping of all organic and assigned space forces serving in the United States and overseas. As a member of the Joint Chiefs of Staff, General Saltzman also serves as a military adviser to the Secretary of Defense, the National Security Council, and the President.

The roundtable session began with questions about the focus of dynamic space operations, a term used by U.S. Space Command to describe a growing need for satellites to be able to maneuver



U.S. Space Force Chief of Space Operations Gen. Chance Saltzman gives a keynote address at the Space Force Association's inaugural Spacepower Conference in Orlando, Fla., Dec. 12, 2023. Saltzman discussed the Space Force's accomplishments in 2023 and the key role every Guardian played in those achievements. (U.S. Air Force photo by Staff Sgt. Adam R. Shanks)

away from threats like debris or toward objects that the U.S. may want to observe more closely. When asked about the contextual approaches toward a high-level concept, General Saltzman easily answered, "Fuel limitations in orbit are always a concern and an area of focus." He also went on to highlight the criticality of the Simulation and Training (S&T) community as an integral partner on the journey to advancement.

As the conversation shifted to the General's point of view on the Space Force's capabilities and new technologies, he easily listed the importance of rapid

maneuvers. "This isn't just as simple as get it done," he stated. "We need to consider all the factors that go into deploying a satellite into orbit. Items such as environmental assessments, deconflicting launches, parts management, and even the administrative requirement of executing contracts, all have to be taken into account and optimized alongside the satellite effort."

When asked about the priorities surrounding the intelligence versus the warfighting effort, the Space Force leader was quick to point out that the collaboration with the National Reconnaissance

sance Office (NRO) is world-class. He highlighted that it was this type of support initiative between the Intelligence Community and the Department of Defense working in tandem that makes the mission of the Space Force a success. “At the end of the day,” General Saltzman highlighted, “it isn’t about focusing solely on the jurisdictional statutes that govern the data. In order to achieve success, we rely on information; therefore, we must operate cohesively. In essence, the cross-over in mission capabilities must ensure that data availability drives the mission.” Saltzman’s high-level examples offered a message summarized as follows: The combination of the Space Force’s focus on the concept of the operation and the NRO’s focus on the development of technologies align to create a synergy of joint focus. This, in turn, meets the requirements for both the intelligence and the warfighting aspects of the Space Force’s mission.

The conversation touched on the criticality and importance of data transfer and global networks that support the layers necessary for data transport and then turned to the Space Force’s most valued asset—its people. The question was posed regarding the core competencies necessary to maintain a strong and competitive Guardian force. General Saltzman looked over at the Guardians in the room and answered proudly. “This is a technical endeavor and what we need are critical thinkers. Our Guardians are required to both aggregate and deconstruct and not

only tackle the elements of a problem, but then formulate an answer. So, what we need are strong problem solvers that can operate under remarkably challenging circumstances and arrive at solutions.”

The session concluded with a reflection on what the organizational future looks like for the Space Force, specifically with support elements such as the Public Affairs and Legislative support teams. General Saltzman was very gracious in his praise of the Air Force’s existing support in these areas, highlighting that the future growth and maturation of the Space Force may dictate dedicated support, but in present time the Air Force “does a great job supporting us.” He went on to add that the value derived by separating the Space Force from the Air Force resulted in an increased focus on space operations. In its existing format, the Guardians can leverage the support and infrastructure from the Air Force in areas like logistics, maintenance, and weapon systems support.

As the Space Force celebrated its fourth anniversary since the inauguration on December 20, 2019, General Saltzman expressed his gratitude at the appetite for growth and innovation continuing to drive the Space Force forward.

CYBER AND INTEL INTEGRATION UNDERScoreD BY SPOC COMMANDERS

Matthew Ebarb, USSF Public Affairs

Space Deltas are elite teams of operators specializing in cybersecurity and intelligence operations. The Spacepower Conference hosted a panel of Space Delta Commanders who shared the unique synthesis of cyber and intelligence capabilities critical to delivering mission success.



U.S. Space Force Lt. Gen. Stephen Whiting, Commander, Space Operations Command moderated an overview panel at the inaugural Space Force Association Spacepower Conference, Dec. 12, in Orlando, Fla. The panel of Space Delta commanders, moderated by Lt. Gen. Stephen Whiting, Commander, Space Operations Command, provided a detailed look at the organizational structure and strategies of the United States Space Force’s operational and warfighting arm. (U.S. Space Force Photo by John Ayre)

Space Operations Command presented an overview panel at the inaugural Space Force Association Spacepower Conference in Orlando, Fla. The panel of Space Delta commanders, moderated by Lt. Gen. Stephen Whiting, Commander, Space Operations Command, provided a detailed look at the organizational structure and strategies of the United States Space Force’s operational and warfighting arm.

Whiting opened by underscoring SpOC's commitment to being intelligence-led, cyber-secure, and combat-credible.

"We all show up every day to protect America and our allies in, from, and to space, now and into the future," said Whiting. "Our number 1 priority is to present combat-ready forces to the combatant command, the joint force, and the Nation."



Space Operations Command presented an overview panel at the inaugural Space Force Association Spacepower Conference, Dec. 12, in Orlando, Fla. The panel of Space Delta commanders, moderated by Lt. Gen. Stephen Whiting, Commander, Space Operations Command, provided a detailed look at the organizational structure and strategies of the United States Space Force's operational and warfighting arm. (U.S. Space Force Photo by John Ayre)

The panel featured three Space Delta commanders: U.S. Space Force Colonels Christopher Kennedy of Space Delta 6 - Cyber, Brett Swigert of Space Delta 7 - Intelligence, and Mark Bigley of Space Delta 9 - Orbital Warfare. Each commander took the opportunity to delve into their respective Delta's missions and explain the importance of intelligence and cyber, and how they integrate into every SpOC mission set.

Swigert spoke of the advances made with intelligence op-

erations within SpOC, including embedded intel detachments in numerous Space Deltas. He clarified that his Guardians do more than meets the eye alongside their peers.

"We have Guardians integrated with the units, in some instances sitting on the ops floor with operators. They're the face of intel," said Swigert. "What they don't see are those collecting the intelligence that operators specifically need to perform their missions; analyzing and reporting that intelligence in minutes to hours, and turning it around in real time."

Kennedy highlighted the significance of both cyber security and cyber defense, with Space Delta 6 specializing in providing both capabilities for space mission systems. He also emphasized the Delta's training program, which is training Guardians to think like attackers and gain a deeper understanding of threats and how to counter them.

"The biggest strength of Delta 6 is our ability to recruit, train and retain talent. The force we're creating in-house, with specialized skillset, are prepared to protect and defend our networks," said Kennedy. "There is no space without cyber and so we need to ensure that we continually invest and be diligent in that domain."

Bigley showcased how cyber and intelligence are integrated into his unit, collectively keeping a watchful eye on what is happening in the space domain.

"The integration of cyber and intel capabilities embedded across the mission has been instrumental to our Delta's success," said Bigley. "Cyber provides capabilities to secure and defend our key cyber terrain. Our Intel team brings second-to-none intel analysis, tools, and programs to the operations floor. We've been able to bring together the units, personnel, and training to really master that vision of mission success."

When asked by Whiting, Bigley further expounded on other partnerships vital to his mission. Bigley, who operates out of Schriever Space Force Base in Colorado, used his working relationship with Space Base Delta 1 as an example.

"I have the luxury of only worrying about the operations. Since SBD1 takes care of everything else on the base, like the security forces, civil engineers, and contracting ... I can focus my resources, personnel, and on meeting the mission."

Whiting concluded the panel by reiterating how the SpOC warfighters are working together to enhance combat capabilities across the Space Force.

"Our Guardians have a steadfast commitment to keeping us the most preeminent force in Space," said Whiting. "We appreciate all of our teammates across SpOC, and the Space Force, who help us get after our mission."

Join The SFA Community!



Collaborate with USSF leaders and space industry professionals while advocating for our place in space.

The Space Force Association is a way to get involved in the space community, inform policy, network with military, industry, and academic leaders, and create lasting partnerships for both individual and organizational benefit. The Space Force Association combines the expertise of senior leaders, operators, seasoned professionals, young people with fresh ideas, and anyone else on the space spectrum to create an organization that is committed to sustaining US dominance in space.

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- **Direct access to our network of government, industry, and educational partners**
- **Vocational education and unique job opportunities from our corporate members**
- **A chance to amplify your voice in the debate over the future of the national space enterprise!**

JOIN TODAY!



Innovating To Overcome The Challenges Of Space Domain Awareness

SFA STAFF



International cooperation is critical to USSF mission success. An Australian space startup has developed the first-of-its-kind space domain awareness (SDA) solution that serves as a strategic complement to existing SDA capabilities, reflecting the spirit of public-private partnerships and allied cooperation in the AUKUS program!

At the Space Force Association's inaugural Spacepower Conference, Quasar Satellite Technologies launched Quasar Sense, a multibeam phased array ground station that will change space domain awareness based on its unique ability

to effectively track and characterize over 30 satellites 'of interest' in real-time using a single compact antenna.

Felicia Gooden, Space Force Association Magazine Editor sat down with Phil Ridley, CEO of Quasar Satellite Technologies to discuss space domain awareness (SDA), the American market, and the challenges of multi-orbit tracking.

Felicia Gooden: What are the current limitations in multi-orbit tracking?

Phil Ridley: Typically ground-based satellite tracking is achieved with radar, electro-optical sensors, or radio frequency sensors like parabolic satellite dishes. There are two key challenges with each of these technologies. One is that satellites in low

Earth orbit (LEO) and those in geostationary (GEO) orbit can't be tracked on the same sensor. A parabolic dish suitable for GEO is too large and slow for LEO, and a dish suitable for LEO is often not sensitive and accurate enough for GEO. The second is that for all three types of sensors above, tracking can be defeated by maneuvering a satellite outside of its

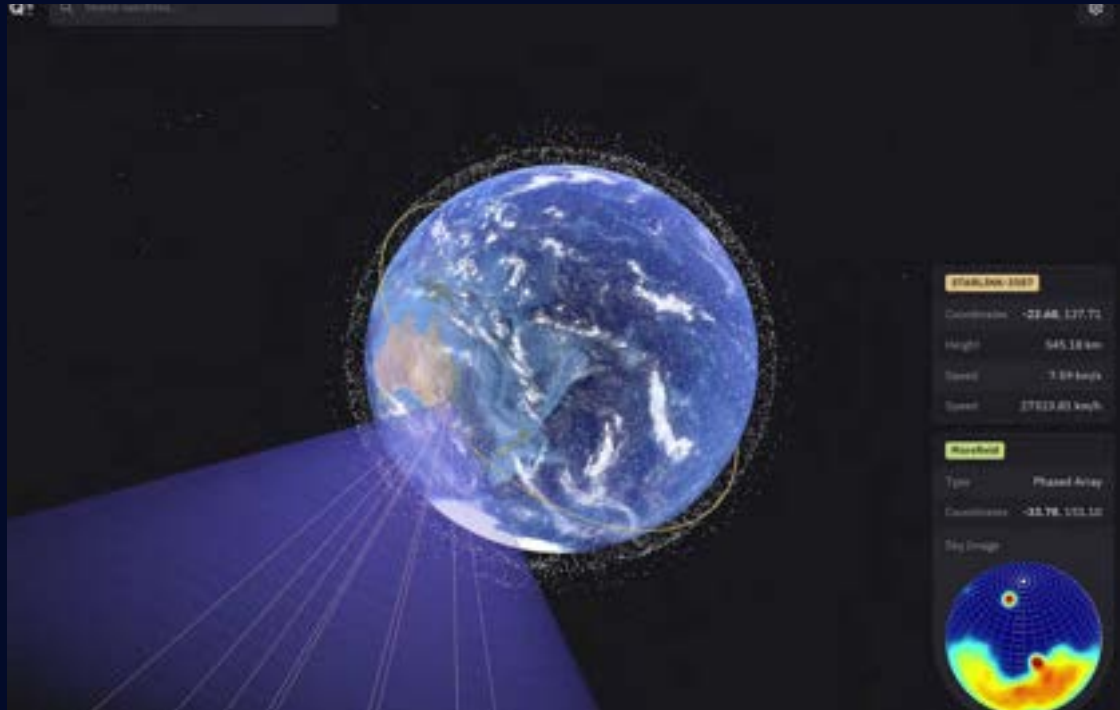
predicted orbit just enough for these sensors to 'miss the mark' and either miss a pass entirely or detect something without knowing what the object was.

Felicia Gooden: What risks do these limitations pose to the USA?

Phil Ridley: It is well known that several adversarial nation-states possess the ability to maneuver their spy satellites at will, transition between different types of orbit, and use a broad range of techniques to evade or complicate detection. This creates a high workload for Guardians whose task it is to have a complete picture of what is happening in space.

Felicia Gooden: You've shared in other interviews that your satellites can track data transmitted outside of legal bands. Why is this capability important?

Phil Ridley: One of the key techniques implemented to complicate space domain awareness is to use RF channels that are not normally used by satellites and are therefore infrequently monitored. By intentionally moving transmissions slightly outside official bands, it is possible to evade a sensor that is listening to normal traffic even if it is accurately tracking a satellite. Quasar Sense's capabilities 'listen' to outer band frequencies and enhance space domain awareness by making the undetectable detectable.



Felicia Gooden: What types of threats is the USA facing from a space and satellite perspective?

Phil Ridley: Generally speaking, there are two key threats facing the USA. Firstly, there is the ongoing targeting of this country's space assets by adversarial states. Secondly, as an early global leader in space, there are many legacy systems still in use. While these systems have served the US well for decades, it is important to realize that the current threat scenario and capabilities of our enemies are completely different and bring a new dimension of threats and a sense of urgency to counter them.

Felicia Gooden: What threats does adversarial activity in the space domain pose to the USA, the West, and Five Eye member nations?

Phil Ridley: Adversarial states with

advanced satellite capabilities are constantly conducting surveillance on allied space assets to find weaknesses and potential vectors for 'grey zone' and potential degradation and denial scenarios. The US and its allies must have the most complete SDA capability possible to combat this particularly because our enemies are constantly growing their space and satellite intelligence and warfare capabilities.

Felicia Gooden: Based on these current and developing threats, what was the impetus to develop a digitally defined phased array antenna solution?

Phil Ridley: There were numerous factors. It was evident that a multi-beam fully digital phased array was needed that could scan and 'see' large parts of the sky simultaneously and detect transmitting satellites, whether tracked or untracked. There also had to be a move away from the limitations posed by legacy mechanical steering sensors. The requirement to detect both in- and out-of-band transmissions using a phased array with a broad RF frequency range was also evident. Finally, a

system with very high sensitivity and fast slewing ability to track objects from suborbital to GEO had to be developed based on how our adversaries were using space and satellites. With these aspects on the 'radar screen,' the Quasar phased array was designed using a completely different engineering approach to that used in 'typical' arrays.



Felicia Gooden: What benefits would the US Space Force derive from these capabilities?

Phil Ridley: Having a broad sky, sensitive, multi-orbit, broadband RF SDA capability can benefit the USSF in several ways. Firstly, high fidelity and pattern-of-life information can be provided for tracked and untracked objects, and attempts to degrade or deny access to the RF spectrum can be detected quickly. Secondly, with the right automation, accurate transmission signature data can be gathered on all objects in the sky, reducing manual iden-

tification workload for guardians. Finally, overall, the USSF would be able to better manage its space risks and enhance its intelligence capabilities.

Felicia Gooden: How will Quasar become a complementary technology or capability to radar based SIGINT companies?

Phil Ridley: Quasar's digital phased array technology brings a new dimension of visibility to passive RF SDA and signals intelligence (SIGINT). Instead of relying on distributed RF sensors across the globe with varying accessibility and capabilities requiring significant manual work to identify and track satellites using evasive techniques, one Quasar system can provide rich information on identification and intent. It not only complements radar and other sensors that do not cover the satellite communication environment but is also able to defeat several evasion techniques.

Felicia Gooden: Why is the USA a core target market for this capability?

Phil Ridley: The US is a key ally of Australia, a leader of the free world, and has a sophisticated and large space force and SIGINT capability. It is imperative that the USSF has access to the best technologies available to be a step ahead of its adversaries from an offensive, defensive, and intelligence perspective.

Felicia Gooden: What collaboration opportunities are there in the future, including expansion to the USA?

Phil Ridley: Quasar is setting up a US office in 2024. There are many opportunities envisaged for collaboration at multiple levels including research, operations and manufacturing. Under the AUKUS Pillar II, critical technologies and new capabilities can be shared amongst key allies for the benefit of all.



CMSSF HIGHLIGHTS SPACE FORCE ACHIEVEMENTS AND FUTURE VISION AT SPACEPOWER CONFERENCE

USSF Public Affairs

Amplifying the Guardian spirit ranges from healthy competition and skills development to quality recruitment and workforce development. The U.S. Space Force synthesizes intelligence analysis, cybersecurity, and space knowledge and skillsets to carefully cultivate an elite force of warfighters prepared to face unprecedented threats in multiple domains.



Chief Master Sgt. of the Space Force John F. Bentivegna boasts the accomplishments of Guardians during his keynote address at the Space Force Association's two-day, inaugural Spacepower Conference in Orlando, Fla., Dec. 13, 2023. Bentivegna provided a glimpse into the intricacies of the U.S. Space Force's recruitment, training and the unique character of its members. (U.S. Air Force photo by Tech. Sgt. William O'Brien)

Chief Master Sgt. of the Space Force John F. Bentivegna highlighted the accomplishments of Guardians during his keynote address, concluding the Space

Force Association’s two-day, inaugural Spacepower Conference. Framing his keynote through the lens of Guardians’ journey, Bentivegna provided a glimpse into the intricacies of the USSF’s recruitment, training, and the unique character of its members. “It is vitally important that we get the story out about who we are, what we do as a service and what it means to be a Guardian,” he said.

Bentivegna commended the Space Force’s recruitment efforts, underscoring their success in meeting the goals set for bringing in new talent. He highlighted the distinct demographic of individuals joining the Space Force, with an average age of just over 22 years and 8% falling between 28 and 40 years old. Notably, more than 38.9% already possess some college education, showcasing a highly educated pool of recruits.

“That’s the character of the Guardians we are bringing in today,” he said.

Bentivegna emphasized the importance of character and passion in potential Guardians. He expressed confidence in the ability of the USSF to train individuals who embody the heart and character required to join the team. The challenge, as he described it, lies in how to measure and identify those with the right character across diverse communities and backgrounds.

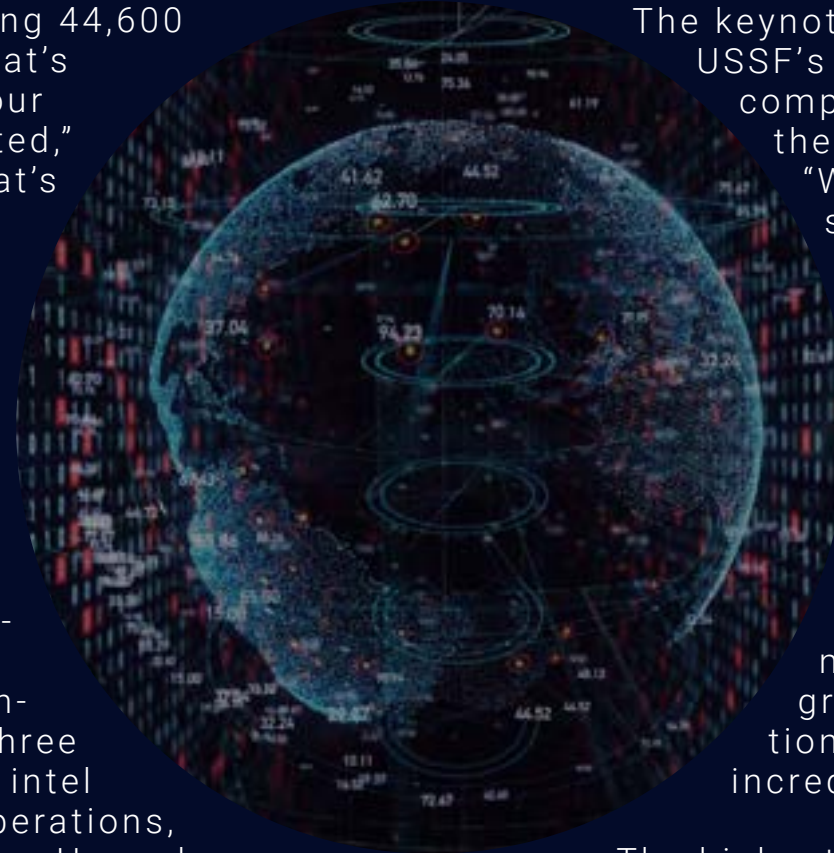
Addressing the unique nature of

Space Force training, Bentivegna spoke about the early exposure to the USSF culture during basic military training. He outlined the critical need for recruits to comprehend the significance of the space domain, emphasizing the historical context and the evolving threats that make the USSF’s role crucial in national defense.

“Since the Space Force has existed, we have been tracking 44,600 objects in space—that’s a 76% increase in four years since we started,” he emphasized. “That’s the domain we are operating in. That’s how fast it’s evolving. Which is why we have to evolve what we expect out of our Guardians and how we train our Guardians.”

Delving into the specialized training areas, Bentivegna highlighted the USSF’s three primary specialties: intel operations, cyber operations, and space operations. He underscored the comprehensive training that each Guardian undergoes, from intelligence analysis to offensive cyber operations and space-related expertise.

The chief recognized some individual Guardians, showcasing their diverse talents and passions. From a cyber operations specialist fluent in Spanish and English to a space op-



erator with a knack for woodworking and photography, their stories aimed to humanize the Guardians and highlight their multifaceted skills.

“We as Space Force, as Guardians, never forget we’re human beings,” Bentivegna said. “We are not resources, we’re not spreadsheets. You see a human being.”

The keynote touched upon the USSF’s role in great power competition, aligning with the broader joint fight.

“We are a warfighting service,” he emphasized. “We are arming Guardians with the right training, the right mindset... the men and women who are sitting in ops floors are being presented to service components and combatant commands to get after great power competition and be part of the incredible joint fight.”

The highest-ranking enlisted Guardian explored the USSF’s efforts to manage and reward talent within its ranks. This included discussions on promotions, performance measurement, compensation for responsibilities, and initiatives like the Supra Coder program, which creates homegrown coding capabilities for Guardians. Bentivegna also called for the continuous amplification of the Guard-

ian Spirit, urging Guardians to carry the sense of pride and camaraderie experienced at events like the first-ever Guardian Arena, which was held at Cape Canaveral Space Force Station, Fla., Dec. 10-11.

Guardian Arena is designed to challenge Guardians in the skills of problem solving, knowledge, and physical strength, with a goal of improving camaraderie, instilling esprit de corps, and providing an opportunity to operationalize the Guardian Ideal and Guardian Spirit in a healthy competition.

“Amplifying the Guardian Spirit cannot happen once a year. It doesn’t stop on the beaches of Cape Canaveral,” Bentivegna said. “You have to bring that back to your organizations. The pride and joy you felt... has to be the pride and joy you have every single day you walk into the office. That is amplifying the Guardian Spirit.”

He concluded by urging Guardians to share their experiences and the service’s vision with industry partners, communities, Congress, and the American people.

“At the end of the day, that Guardian experience in addition to all the training, all the investment, all the opportunities in the talent management is what can allow us a service to successfully compete in competitive endurance,” he said. “We’ve got to keep the talent; we have to stay strong together. That’s what it’s about.”



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BLACKSTAR SPACE DRONES: A NEW CLASS OF SATELLITES IN A NEWLY CONTESTED DOMAIN



Kit Carson

Co-Founder and CTO, BlackStar Orbital

The Spacepower Conference provided an avenue for new space to build relationships with the new force. Innovative satellite ride-share technologies can promote a more efficient and secure space domain through hosted payloads and curbed proliferation of orbital debris.



BlackStar Orbital, a pioneering space startup in reusable satellite technology, attended SFA's inaugural Spacepower Conference to introduce a new class of eponymously named spacecraft. I met with industry peers to build bridges between our emerging startup and the newest branch of the military, the U.S. Space Force. Referred to internally as a "Space Drone," BlackStar's innovative technol-

ogy boasts unique use cases inherent to fielding the world's first commercialized satellite/spaceplane hybrid system. The spacecraft is a versatile new class of satellite that brings a large number of capabilities in a small package, redefining what a satellite can do by redefining what a satellite can be. The BlackStar Space Drone was designed for the government customer with rapid-response capabilities, unique density/volume characteristics, and rapid reusability at the forefront.

The conference's significance and its role in forging connections between the Space Warfighter and the Space Industry is laudable. In the context of a new era marked by great power competition and near-peer threats, the exchange of ideas and synergies cannot be emphasized enough. BlackStar's planned inaugural flight, scheduled for Q4 2025, will be a vital milestone



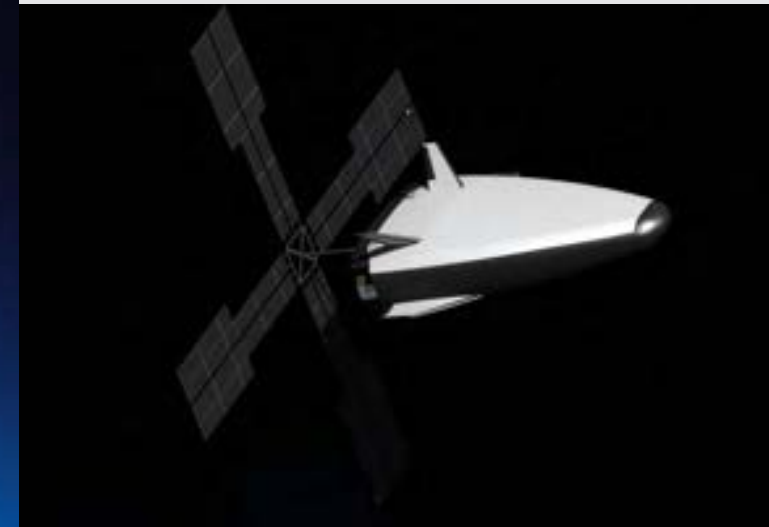
allowing the Space Force to witness the BlackStar-C Space Drone embark on its first space-faring mission, propelling into orbit on a Phantom Space Daytona Launch Vehicle.

The work done at this conference was important work that had to be done. I cannot say enough good things about the SFA for putting this together. Nowhere else on the globe in the history of space exploration has there ever been this type of exchange on this scale.

This initiative provided an unprecedented exchange on space warfare and strategies for safeguarding national security.

One major space security risk is orbital debris, which BlackStar has a "No Trash" policy for. Reusability became the new price of admission to the market as soon as SpaceX started landing rockets like Buck Rogers. In more recent years, we've seen orbital debris data match up with Donald Kessler's statistical predictions, not to mention the unknown environmental effects of turning tens of thousands of satellites into

Aluminum-fueled plasma inside of the upper atmosphere. We have a responsibility to be good stewards of our planet and space.



BlackStar's platform offers an exceptional value proposition for the rapid capabilities portion of the national security mission. This power-dense system is a scalable, modular, launch-agnostic spacecraft that can rapidly deploy payloads to 'interesting orbits.'

This new capability can be used for a variety of mission profiles including Rapid Unplanned ISR, hosted/deployed payloads, material science, and zero-G manufacturing, all leading to a rapid return system. These tactically responsive solutions in very low earth orbit are not readily available to the extent that BlackStar offers, and as the threat profile evolves so will BlackStar and its industry peers' ability to evolve with it.



Top USSF Leaders Discuss the Space Force of 2030

STAFF SGT. ADAM R. SHANKS, USSF PUBLIC AFFAIRS

The U.S. Space Force must move at the speed of adversarial threats to gain ground in strategic competition with Russia and China. USSF leaders discussed their vision and strategic plan for an agile and fast-moving force. Through workforce development and a culture of innovation, the Space Force can fulfill the goal of building a more secure and sustainable world by 2030.

A trio of Department of the Air Force senior leaders discussed their views on the Space Force of 2030 during the inaugural Spacepower Conference. The panel included Maj. Gen. Shawn Bratton, currently the special assistant to the Chief of Space Operations; Lt. Gen. Stephen Whiting, commander of Space Operations Command; and Chief Master Sgt. Jacob Simmons, the command senior enlisted leader of U.S. Space Command.

The Space Force celebrated its

fourth anniversary Dec. 20 and has been laser-focused on building its structures and organizations while continuing to bolster security in the space domain – something the panel emphasized is needed to maintain momentum to project power into the future.

Additionally, the trio discussed ways the force will continue to organize, train, and equip Guardians for an uncertain future warfighting landscape. The concerns with ever-present and consistent advancement of space-

based capabilities by strategic competitors have existed since before the U.S. established a Space Force. To meet these challenges, Simmons urged Guardians to keep moving fast but to move with “a sense of purpose with that speed.”



Whiting added that the Space Force must move at the “speed of the threats it faces.”

Throughout the panel, the three leaders recognized that Guardians should collaborate with industry partners and allies to be postured to win.

The resounding tone of the discussion was that the future remains uncertain due to how quickly the space domain evolves and new capabilities are introduced, fielded, and utilized globally. To combat this, Bratton explained that there’s a need to develop imagination and curiosity to aid in forecasting the future of the space domain.

“If there were a fifth ‘C’ in our Guardian Values, I would lobby for ‘curiosity,’” Bratton said. “When we talk about thinking outside the box, curiosity is the thing that is going to get the Space Force through all these unknowns.”

While 2030 is only six years away, the panel assured the crowd of Guardians that the Space Force will continue to adapt, defend, and strengthen capabilities in the space domain.

Write for Us!

SFA Magazine is always looking for compelling content to drive the discussion around the future of the national space enterprise! Our standards are high, our guidelines are thorough, and our quarterly themes are unique and compelling.

Reach out to our Editor-in-Chief, Felicia S. C. Gooden to grab details on the theme for the next issue and a copy of our editorial guidelines!

REACH OUT NOW!

From Milspouse to Space Support, Trust Will Lead the Way Forward



KAREN LAWRIE

**SPACEPOWER VOLUNTEER,
DIRECTOR OF MARKETING AND
COMMUNICATIONS, GIUSEPPE SPACE**

The U.S. Space Force faces unique challenges that require careful cultivation and nurturing of strategic partnerships and relationships built on a bedrock of trust. Milspouses and women in space have a strategic advantage in facilitating the successful development of these relationships while driving results.

The Dec. 15, 2023 headline was triumphant... “USSPACECOM commander declares Full Operational Capability.” This announcement came on the heels of one of the most thrilling events I have had the opportunity to experience! I never imagined that I would have the honor to volunteer at the Space Force Association’s inaugural Spacepower Conference in Orlando, Florida, much less get involved in the space industry at all. Being in the presence of and listening to today’s visionaries such as Generals Chance Saltzman and Stephen Whiting was

a privilege as a relatively new member and fan of the space community. The knowledge and expertise of the thousands of space professionals in the room were inspiring, but it was made clear that there are many trials ahead. From Giuseppe Space’s own Brigadier General (Ret) Ron Huntley, who remains a cherished and respected leader in the space industry, to the myriad of Guardians and space professionals working together to advance the interests of our nation, its partners, and allies, we are part of a team forging the path of our nation’s defense,

ensuring a brighter future.

As the Director of Marketing and Communication for Giuseppe Space, I have deep respect and appreciation for the immense challenges facing the space industry and its leaders. As the mother of two USAFA Astro Engineers, I admire the difficulties of the space domain through their hard work and dedication in a challenging degree program. Greater exposure has allowed me to appreciate the immense strides we have taken as a nation in advancing our capabilities in this harsh and unforgiving environment, and specifically, the role women have played in this critical field. As Isaac Newton famously alluded to, "We stand on the shoulders of Giants." From Katherine Johnson to Sally Ride, women have had an indelible role in the advancement of the understanding of the space domain. I know from my 26 years as a military spouse, that I have a critical role to play.

My experience has taught me that relationships built on trust and shared experience are powerful. A willingness to serve and sacrifice are unifying traits that are common in the space and defense communities. As a former military spouse, I have been in the trenches with families during some dark and difficult times. The ability to identify ar-

reas where I could support a military family in need or crisis led to small sacrifices that often resulted in stronger relationships built on trust. Relationships built on trust will be required to tackle the challenges facing our nation in the space domain. At the Spacepower Conference, it was made apparent that the Space Force is facing a multitude of challenges that demand collaborative efforts. Some challenges may resemble an "all-hands" approach to ensure our dominance. My role, as part of a team with decades of experience in space systems engineering and space domain operations, is to connect and bridge the gap to support technical needs, remove hurdles, and resolve immediate warfighting requirements, so our nation's future will be stronger.



SPACE NECESSITIES: PARTNERING TO WIN

USSF Public Affairs

Part of the U.S. Space Force's core mission is to help humanity become a spacefaring species and protect the peaceful uses of outer space. SPACEFOREUR-AF and USSPACEFOR-INDOPAC are two component commands bringing the vision to life.



Lt. Col. Tony Puleo, U.S. Space Forces - Central Command Resources and Requirements chief, Col. Max Lantz, U.S. Space Forces - Europe and Africa commander, Brig. Gen. Anthony Mastalir, U.S. Space Forces Indo-Pacific commander, Lt. Gen. Douglas Schiess, U.S. Space Forces - Space commander, and Deanna Ryals, Space Systems Command International Affairs director, discuss how U.S. Space Force components interact with their counterparts in allied countries during the partner to win panel at the first Space Force Association's Spacepower Conference in Orlando, Fla. Dec. 12-13, 2023. (U.S. Air Force photo by William A. O'Brien)

During the first Space Force Association's Spacepower Conference, representatives from four U.S. Space Force component commands discussed how USSF components interact with their counterparts in allied countries.

The panel, moderated by Deanna Ryals, Space Systems Command Interna-

tional Affairs director, included Lt. Gen. Douglas Schiess, U.S. Space Forces - Space commander, Brig. Gen. Anthony Mastalir, U.S. Space Forces Indo-Pacific commander, Col. Max Lantz, U.S. Space Forces - Europe and Africa commander, and Lt. Col. Tony Puleo, U.S. Space Forces - Central Command chief of Resources and Requirements. "Our collective mission in space requires a multifaceted understanding of the USSF's and our allies' needs and capabilities - and where both meet, overlap and synergize," Ryals said during her introductory remarks. "The ability to leverage allies and partnerships for integrated deterrence is an asymmetrical advantage our adversaries don't have."

During the past year, the Space Force has been activating USSF service components to combatant commands to integrate at the component level and provide every combatant commander an organic space planning and employment expertise that can collaborate with allies and partners and provide space command and control focused on the war-fighting needs of the joint force commander.

This organizational change provides clarity to command relationships, roles, and responsibilities to better prepare the Space Force to respond to threats

around the world. "We know that there are rising threats from other national players around the world,"



Schiess said. "As the space domain becomes more competitive, we need to continue to meet and work with our allies so that our adversaries wake up every day and say, 'today is not the day.'"

The stand up of space component commands to geographic combatant commands also gives Space Forces the opportunity to be deliberate in building new partnerships.

"In our AOR [area of responsibility], many of our partners want to be space-faring nations, and we want SPACECENT to be the

organization helping them do that," Puleo said. "We want to avoid a gap because we know who will fill it. Engagement is one of our primary goals."

Although space component commands only started standing up about a year ago, there is a long history of space support to these theaters. "We just leveled up," Lantz said. "The U.S. has been very successful for decades on strategic space capabilities and now we're sig-

naling to our adversaries that we are investing in operational space capability into the theaters."

Throughout the discussion, the panel members all emphasized the importance of space in the face of increased global threats. "Managing competition and preserving a free and open Indo-Pacific requires close attention every single day," Mastalir said. "The sense of urgency to make sure that we're ready and that space is ready is at an all-time high."

Space readiness is not something that the U.S. can do alone. It is a combined effort that includes our allied nations, commercial partners, and joint force. "By continuing to increase our joint integration within the operations centers with our partners and allies, we will have the advantage that we need to maintain a peaceful footprint in space operations," Schiess said. "It's not just how we work together; it's how we work with our commercial partners and how we work with our joint partners."



Call for Volunteers!



BY DIANE WARD

The SFA is a success because of its formidable volunteers. Our non-profit organization is appreciative of every volunteer as our combined expertise is a quilt of excellence and dedication.

If you would like to be part of the Space Force Association's volunteer network, please email Diane Ward, Director of Volunteer Support at Diane.Ward@ussfa.org to discuss how your unique skills can help propel SFA forward. We need volunteers with all types of skills: contact us today to begin a rewarding volunteer opportunity!



The Spacepower Conference: Where Research and Defense Combine

The Spacepower Conference offered multitudes of opportunities for connection and collaboration, setting the tone for a series of fortunate events that are nothing less than cosmically aligned. Research institutions were present, ready to collaborate with Guardians on the future of safeguarding Earth from space-based threats.

“The Johns Hopkins University Applied Physics Laboratory was thrilled to be a part of the inaugural Space Power Conference to share technology ideas, space operations, and other successes with top Space Force leadership and individual enlisted Guardians in a way that doesn’t exist at any other conference,” said Dr. Patrick Binning, National Security Space Mission Area Executive at APL. “What we are talking about here are the critical challenges we are all facing in the space domain— which is something APL is working on every day with the Space Force.”

“What really stuck out to me was the level of excitement and crowds that engaged with us at our booth,” explained Binning, who is also the Program Chair of Space Systems Engineering in JHU’s Whiting School of Engineering. “We had the opportunity to speak directly with young Guardians about the Space Force partnership with JHU’s School of Advanced International Studies for their USSF Professional Military Education program. That program, along with the JHU Space Systems Engineering master’s degree are critical education opportunities with our Space Force partners and Johns Hopkins University is proud to support them.”



STEP INTO THE GUARDIAN ARENA

John E. Ayre, USSF Public Affairs

Healthy competition builds character, strength, and fortitude. The Guardian Arena challenged Guardians and civilians alike to engage in teamwork and develop personal perseverance to achieve a common goal.



U.S. Space Force Chief of Space Operations Gen. Chance Saltzman and Chief Master Sgt. of the Space Force John Bentivegna pose with the Guardian Arena winning team, Team Great Eight from Delta 8, at the Space Force Association Spacepower Conference in Orlando, Fla., Dec. 12. From left: Saltzman, 1st Lt. Stephen Brown, Royal Australian Navy Lt. Angus Gaudry, 1st Lt. Sara Burton, Dillan Paschall, Capt. Alexander Colla and Bentivegna. (U.S. Air Force photo by Staff Sgt. Adam Shanks)

One hundred Guardians, Airmen, civilians, and international partners took one small step and one giant leap during the inaugural Guardian Arena at Cape Canaveral Space Force Station, Fla.

Guardian Arena is a history making, two-day event, consisting of 11 stations that challenge participants, who were broken up into teams, in the skills of problem solving, knowledge, and physical strength to improve camaraderie, instill esprit de corps, and provide an opportunity to operationalize the Guardian Ideal and Guardian Spirit in a healthy competition.

“Today as you step onto the field of play, it’s going to be difficult; it’s going to be tough. Guardian Arena was meant to challenge you as a team,” said Chief Master Sgt. of the Space Force John F. Bentivegna during opening remarks. “Understand the strengths you each have, think critically, and amplify the Guardian Spirit.”

Twenty teams representing individual field commands, space base deltas, space launch deltas, and space deltas pushed head-to-head to see their team come out on top.

The winners:
1st – Delta 8 “The Great Eight”
2nd – Delta 13 “The Lucky 13s”
3rd – Delta 4 “Oculus Mundi”

Guardians rely on their character and connection with fellow Guardians in pursuit of the Space Force mission with commitment and courage. “When you were faced with the challenges you were committed to finishing all 11 grueling stations.” said Bentivegna “You made connections every step of the way, which underpins everything we do. You amplify the character of the Guardian Spirit.”



“As a brand-new service, we’re making history” said Bentivegna. “Make no mistake about it, today you are making history. You are setting a foundation for Guardian Arenas that will come year after year.”

Chief of Space Operations U.S. Space Force Gen. Chance Saltzman along with Bentivegna announced the Guardian Arena winning teams during a keynote speech at the Space Force Association Spacepower Conference.

As the Space Force continues to grow and evolve, building its unique culture and identity in the process, Guardian Arena reflects that evolution and serves as a platform to build a bond in the pursuit of security in the space domain.

The Creator League Learn. Create. Compete.



The Creator League is a workforce development program and competition for DoD personnel, veterans and their families. The initiative offers an online training curriculum for novice and advanced software developers. Additionally, The Creator League hosts virtual competitions for beginner and experienced developers to earn industry standard certifications.

Eligibility: All DoD personnel, veterans and their families

Join the community for the latest news, announcements and collaborate with Creators!

JOIN THE DISCORD!

Beyond the Horizon, Within Reach



**MIKE WASSON, VP AND GENERAL MANAGER,
COMSPOC**

Building an organization from the group up is exhilarating, and watching that organization grow is transformative. At the inaugural Spacepower conference, bold threats were discussed, and bold solutions were shared, creating a space for government and industry to come together to usher in the next phase of growth for the U.S. Space Force.

There's something to be said about being first – on the ground floor of something great – in the spotlight of innovation – the disruptor. COMSPOC is that company when it comes to making sense of what you are sensing in space.

COMSPOC was honored to participate in the Space Force Association's (SFA) inaugural Spacepower Conference as a charter member of SFA and witnessing, first-hand, the exponential growth of the new Space Force service. Another notable first: the conference brought together a diverse, highly-motivated group of experts – well beyond traditional conference attendees – attracting Flag officers and senior government civilian officials. We met key decision-makers who are driving policy and regulato-

ry decisions that will determine the potential of the space economy. It was also incredibly inspiring to meet so many Guardians who brought enthusiasm, drive, and a keen understanding of the importance of increasing safety and sustainability to democratize space for humankind.

We were honored to participate in a panel discussion on how readily available commercial Space Situational Awareness and Space Traffic Management technologies can enhance existing and planned government Space Domain Awareness capabilities. Let's be honest, developing software is not the DoD's area of expertise, nor should it be. We do that, and we do it well. The conversation was provocative with questions about the opportunities, challenges, and realities of

doing business with the public sector. The conclusions supported what we've been saying: there's a critical need for a total team approach to space innovation in today's highly charged and fast-paced environment,



and commercial is the cornerstone to making this a reality.

Space is crowded and growing more congested each day. With this expansion comes threats – considerable threats. At COMSPOC, we believe that bold threats require bold solutions. We established the first-ever commercial Operations Center in 2014 and continue to support governments and operators around the globe with the best-in-class Space Situational Awareness and Space Traffic Management technologies. Our mission-critical Space Domain

Awareness tools and services are modern, highly accurate, and scalable at one-tenth the cost and one-tenth the latency. We understand the critical need for flexibility and accuracy and offer turn-key software solutions that are available on-premises or in the cloud.

As a retired Colonel of the Air Force, I am proud of my service to my country. I'm fortunate to be able to expand my commitment and reinforce the core values of the Air Force through my current leadership role at COMSPOC and involvement in SFA.

COMSPOC looks forward to expanding our partnership with SFA as the organization grows and continues to provide a forum for government, business, and other key stakeholders to share diverse ideas that will define national spacepower and build a Space Force capable of achieving it.

Happy 4th anniversary, SFA. Onward to a successful 2024.

HONORING SERVICE AND INNOVATION: SPACEPOWER AWARDS DINNER

SFA Staff

The Space Force Association held its inaugural Spacepower awards dinner acknowledging contributions to the progression of the space domain from key players in industry, government, academia, and the USSF. The dinner was an amazing event filled with humor, camaraderie, and great music. The winners are listed below:

Engineering and Space Technology

Dr. Lisa Costa

Legacy Award

Representative Mike Rogers, Legacy Award for the Advancement of Space Power

Representative Jim Cooper, Legacy Award for the Advancement of Space Power

Representative Brian Babin, Legacy Award for the Advancement of Space Power

Representative Don Bacon, Legacy Award for the Advancement of Space Power

Space Force Association Innovation Award

Dr. Derek Tournear

Advancing Human Presence in the Space Domain

Jared Isaacman

Spacepower Visionary Leadership Award

General B. Chance Saltzman

THANKS AGAIN!

SEE YOU IN DECEMBER!

AN AMAZING EVENT FOR AMAZING PEOPLE IN AN AMAZING PLACE.

**THANK YOU TO ALL WHO ATTENDED SFA'S INAUGURAL
SPACEPOWER CONFERENCE.**

WE LOOK FORWARD TO MAKING MORE MEMORIES!



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SFA is proud to align ourselves with top industry sponsors for the launch of our inaugural conference. These partnerships are contributing to the production of an unforgettable experience; one that will turn into the new “must attend” annual space industry event.



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