

## **State of the Space Force**

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## Maj. Gen. Doug Raaberg, USAF (Ret.):

Well, good morning Guardians and Airmen. Roughly a year ago, we kicked off our warfare symposium here in the Colorado Rockies for the very first time. We also welcomed here on this very stage, our first keynote speaker of the morning, General Chance Saltzman. General Saltzman took on the reign as chief of Space operations and laid out his theory of success outlining competitive endurance. To face the pacing threat, he has implemented a new system of space deltas and led the charge as Guardians birthed a new mission statement "to secure our nation's interest in, from, and to space." As the Space Force reached another milestone by celebrating their fourth birthday, we are eager to see how our CSO will continue to lead Guardians in the fight to space superiority. Ladies and gentlemen, it is with great honor that I present to you your Chief of Space Operations General "Salty" Saltzman, please.

## Gen. Chance Saltzman:

Wow. Thank you, Doug. It's a kind introduction. Remember, it's Fat Tuesday, Hydrate, hydrate, hydrate. That's as big a threat today as China, China, China maybe, but... Sorry, Mr. Secretary. All right, thank you, Doug, for that introduction. Thanks to AFA for continuing to support the department with events like these. And Secretary Kendall, thank you for your continued leadership and vision in this time of accelerated change. Your unwavering commitment to the Space Force's future has allowed us to stand up new missions and build new partnerships to secure our nation's interests in, from, and to space. General Allvin, I could not have asked for a better partner in the department, as you understand the importance of the critical relationship between the Space Force and the Air Force. And you continue to be a strong advocate for Guardians and Airmen. Thank you. And finally, to all the Guardians and Airmen that are in attendance today, you all are the foundation for the success of the department as we reoptimize our organizations to meet the challenges of great power competition.

And for the space power enthusiasts and history buffs in attendance, I will point out that it was this week in 1957 that major General Bernard Schriever gave his famous space superiority speech at the first ever Astronautics Symposium. Schriever, who was head of the Western Development Division, now Space Systems Command, was charged with developing a workable ICBM. And unsurprisingly, his speech dealt primarily with missiles. But he didn't stop there. Despite the fact that some leaders in the new Air Force didn't want to distract from their primary air superiority mission, Schriever was a big believer in speaking truth to power, and he firmly committed to lifting the veil of secrecy surrounding what he saw as a very real struggle for space. "The compelling motive, he said, "for the development of space technology is the requirement for national defense. In the long haul, our safety as a nation may depend upon our achieving space superiority."

"Several decades from now," he said "the important battles may not be sea battles or air battles, but space battles, and we should be spending a certain fraction of our national resources to ensure that we do not lag in obtaining space supremacy." Time Magazine summed up General Schriever's sensational remarks this way, The conquest of outer space appears right around the corner, and that corner must be soon turned if the U.S. is to maintain its air supremacy." Now, the speech was very well received, in fact, a little too well received in the view of some. Immediately after his speech, Schriever was told by the Secretary of Defense to never use the word space again. That gag order lasted about eight months when the Soviet Union launched Sputnik in October 4th, 1957 and the space race officially began. Today, the space race that started in the 1950s has evolved into the immensely more complex great power



competition and space that we are engaged in now, and the United States Space Force was established to meet these challenges.

When the Space Force stood up, we worked hard to meet several charges given to us by Congress. First, we were tasked to create a lean organization focused on operations. Second, we were charged with increasing the acquisition speed needed to put the most cutting edge space capabilities into the hands of the war fighter. Third, we were tasked to better integrate commercial and allied space efforts. And fourth, but perhaps most importantly, we were expected to address the threats in the domain and build a cadre of military space professionals that are best in class, laser focused on war fighting and space. Now, there are many other assertions, but these were the big ticket asks that kept coming up. The Space Force, from day one, accepted these challenges, and it is on a path to meeting them. And in at least one effort, I think we've already succeeded.

And I'm here today to tell you the Space Force Guardians are the best in class. The Guardian spirit is shining through. Everywhere I go, I see a sense of urgency. I see seriousness about the threat. I see dedication to improvement and addressing shortfalls. It's the spirit, it's this spirit that gives me confidence that we're on the right path. And we're doing all of this while remaining lean, agile, operationally focused. In fact, our Guardians represent less than 1% of the total DOD active personnel. To put that in perspective, the entire Space Force could go to work down the road at Force Carson and we would still have room for 10,000 more people. To go one step further, the Space Force is about 3% of the Total Department of Defense budget. Despite those numbers, the entire military satellite communication enterprise, all aspects of both strategic and theater missile warning and the position navigation and timing constellations, missions that are vital to the success of the joint force fall to the Guardians to operate, sustain, and protect.

This has got to be the greatest bargain in the Department of Defense, not just in critical capabilities and indispensable services that we provide to the joint force, and in the case of GPS, really to the citizens of the world, but also in the force multiplying value our Guardians bring to the fight wherever they're called on to support. The Space Force has brought a level of clarity and focus to operations in, from, and to space that the Department of Defense did not have before its establishment. And this lean operations focus service dedicated to space deliberately stood up only five career fields, intelligence, cyberspace, space operations, developmental engineering, and program management. That's it. This allows our Guardians to focus exclusively on delivering capability, understanding the threat, conducting operations, and protecting the joint force from space enabled attack. And I contend that this focus has started producing benefits.

A significant challenge given to the Space Force was to increase the speed of acquisition, to ensure our processes were sufficiently agile, to keep pace with potential threats, but be nimble enough to take advantage of the latest commercial developments. And since that time, the Space Force has developed, delivered, and deployed capabilities at a speed, I'll say is uncommon in the Department of Defense, particularly related to space capabilities. For example, this past year the Space Development Agency delivered 23 satellites into low earth orbit to support our missile warning, missile tracking and space data transport layer. This is increasing the resilience of these no-fail missions. By shifting missile warning and communication capabilities from a few exquisite yet vulnerable systems to a much larger number of harder to attack systems in low earth orbit, we will create the resiliency needed in these critical mission areas.

But the fact that this first tranche went from order to orbit in under two years proves just how fast we can acquire and deliver capabilities when properly motivated and resourced. Another example of Guardian's increasing acquisition speed comes from our VICTUS NOX Tactically Responsive Space Program. And I know some of you may have heard me talk about this effort before, but I think it's a truly



remarkable feat. The VICTUS NOX satellite was built and tested in less than 12 months. After being put in storage until it was needed, it was flown to Vandenberg Space Force Base, made it to a firefly rocket, and ready for launch in under 60 hours. It was then placed into orbit 27 hours later, and ready for operations 37 hours after that. That's five days from the warehouse to operating on orbit. Now, while that's still a singularly discreet event in terms of on orbit capability, the event streamlined processes that can be used over and over again to speed on orbit delivery.

The success of VICTUS NOX marks a major milestone in our nation's ability to respond to adversary action with the operational speed necessary to control escalation, attribute malign behaviors, and deter irresponsible behavior in space. We're looking at building upon its success with the launch of VICTUS HAZE next year, a similar approach focused on end-to-end execution using commercial capabilities. Now around the same time the Space Force stood up, the joint staff established initial requirements for moving target indication program from space. The ultimate goal of this program is to replace legacy air breathing platforms with more survivable space assets that can perform targeting activities needed to close long range kill chains on a global scale. The Space Force was able to build on the efforts of the Air Force, analyze options, and select a way ahead in less than a year. Now for the professionals in the room, you know getting a program started is sometimes the slowest part of delivery. And as a next step, Guardians are collaborating with mission partners, developing innovative operational concepts to ensure movement. Target indication meets all operational requirements set forth by the joint force.

The Space Force also took FY'23 appropriations and built a cyber test environment focused on missile warning ground networks. We did this in less than a year, and it has already hosted seven major training exercises. These are just a few of the examples of the Space Force delivering capabilities with a sense of urgency. Now, there is still work to do, but we are moving in the right direction. The third area we were asked to address is to better integrate commercial space efforts across the Department of Defense by acting as the focal point for the integration of these new and critical capabilities. We have taken this charge seriously because of how essential the commercial sector is to our resiliency and capacity. The Space Force goal here is to increase our competitive advantage by integrating commercial space goods, services, and activities to support joint and combined operations.

To that end, let me describe some of the exceptional work that Space Systems Command accomplished in establishing the tactical surveillance reconnaissance and tracking pilot program this last year. This initiative will leverage the global data marketplace to deliver commercially sourced sensing and data fusion analytics to meet the unclassified space awareness needs of our downrange joint and partner war fighters. I'm excited to announce that the Tac SRT pilot is now officially kicked off and has already directly supported four combatant commands. For example, the team rapidly responded to earthquakes in Morocco, Japan, floods in Libya, and the most recent outbreak of wildfires in South America by providing near realtime information and support. These are great examples of how the Space Force is integrating commercial space capabilities at the speed of relevance with scalable programs to support any combatant command. And we're not just focused on better integration with our commercial partners. We're working to improve our integration with our allies.

One of the biggest barriers to integration has been outdated classification policies. Now to mitigate that barrier, just last month, the Department of Defense released an updated classification policy, one that enables us to fundamentally rethink the way we approach classification of space systems and the effects they generate. This policy advances national defense strategy priorities by expanding access to information within the U.S. government and reducing barriers to space integration with allies, partners, and commercial space actors. I believe this is the most significant change in space classification policy in 20 years, and it will allow us to share more information more quickly with more stakeholders to better address the challenges in today's competitive space environment.



And speaking of improved coordination with our allies, back in September, the U.S. signed a memorandum of understanding with Australia and the United Kingdom on the deep space advanced radar capability. This effort will provide 24/7 all weather capabilities that increase our ability to detect, track, identify, and characterize objects in deep space. It will expand our ability to monitor and detect potentially hostile actions in space, and if necessary, take defensive action. Additionally, in less than 30 days after the memo was formalized, construction began at site one in Australia. The Space Force was primed to act responsibly and rapidly to deliver this capability. Along the same lines, the Space Force has also partnered with Japan to deliver two space domain awareness payloads to provide comprehensive warning of impending collisions in the Geo Belt. These payloads will expand our on orbit approach to understanding the domain, identifying threats, and sharing data between United States and Japan. Recently joining the NOW 10 Nation combined Space Operations Initiative, Japan is proving itself as a tremendous space partner.

These are just a few of our cooperative initiatives and programs aimed at protecting and defending activities that undermine the safety and security of space. And I can assure you, we will continue to aggressively leverage opportunities to improve cooperation, increase coordination, and promote interoperability with our allies and commercial partners. So don't be shy. Don't wait for us to ask the perfect question or to deliver you the perfectly worded set of requirements. We want to hear your ideas. Now, perhaps the most critical and complex ask of the Space Force was to address the threat and build space experts who understand it. As the space domain continues to become more and more contested and congested, the Space Force has been working hard to ensure our Guardians have the training and skills to navigate these unique threats. Let me give you a good example. Intelligence Guardians have actively run a two year campaign of learning where threat knowledge is tested, debriefed, and embedded in our thinking, all so that it can be fully integrated into every aspect of our mission.

The standards are high. We know we need to be the experts in the space domain, but we also need to teach the joint force and external stakeholders so they better understand the threat. And to that end, the National Space Intelligence Center recently published their first ever competing in space unclassified threat primer. Additionally, they have also published a classified version, which we delivered to Congress and other senior stakeholders. We've gone beyond just knowing the threat. We are now ensuring there is a widespread detailed understanding of this threat. And in the final aspect of this charge, the Space Force was asked to build a cadre of space experts who understand how to put all this together, a cadre taught from the first day in the service how to win in the domain, shaping the future leadership and expertise within our service. And we needed to create an environment that allowed a distinct Space Force culture to emerge, and it started with the creation of a new basic military education program.

And for other services, recruits coming to basic training are on average of about 18 years old. For the Space Force, our recruits average about 22 year olds, and many have college experience. But mostly, they're just fired up about military space, and that created an opportunity for us to explore different basic training focus. So we created a tailored program for preparing new trainees for military service to provide new Guardians a space specific curriculum, everything from space history to space vocabulary. In its short history, it has graduated 1,153 Guardians, steeped in our core values of character, commitment, connection, and courage, Guardians who are ready to serve a wide variety of missions and in units around the globe. Now, we will work hard to inspire them next to pursue a career long effort in the Space Force.

One step in that direction occurred at the end of last year when Congress approved the Space Force Personnel Management Act. This is a revolutionary new way to manage our talent. We now have the ability to rethink workforce roles, contributions, and career paths. We will have the ability to have full



and part-time positions inside the Space Force. Now, this is not a separate Space Force Reserve component. It is fundamentally different, an active force of full and part-time positions and the ability to shift between them without leaving the Active Space Force. This new talent management model will be phased in over the next few years because we've learned a lot from the intersection, I'm sorry, the inner service transfer process over the past four years. And we're committed to ensuring stability in our workforce. We don't want to inadvertently cause harm to people in their careers as we implement.

We are committed to getting this right, so we'll be deliberate as we manage billet structures, personnel moves and transfers, and all of the administrative details needed to execute these authorities. So we're working on getting this right, but we want to get it right quickly. So all this is to say I'm extremely proud of the Space Force and all the good that it has accomplished. But as good as we are, as much as we've done, as far as we've come, it's not enough. We are not yet optimized for great power competition. To some degree, all of our efforts to move in the right direction have highlighted some key deficiencies that we need to correct, and that's why we spent so much time in recent months examining all aspects of how the Space Force organize, trains, and equips, how we equip this service to support the combatant commands in this era of great power competition.

And that's why we are implementing new initiatives such as Standing Up a Futures Command, redesigning our initial officer training course to optimize for potential conflict in the future. But these are just a few of our efforts. Back in September, I outlined how the Space Force is creating the structure and the processes we need for a future, what some have affectionately referred to as the Saltzman puzzle chart. Now, it's called that not because it takes a long time to put together. In the end, you realize there's a piece missing. No, that's not why they call it that. Rather, it's because all of these activities must fit together. They're required. They're all required. They must work together to form a coherent outcome. And at the core of this discussion was how the service is driving towards a purpose built Space Force for great power competition. And at the time, we had focused on these initiatives under four separate bins, force design, force development, force generation, and force employment.

But what we realized through our optimization discussions was that the four bins that we identified in September matched up with the great power competition, pillars of capabilities, development, people, readiness, and power projection. And the initiatives I introduced yesterday, the Space Futures Command, officer training course, units of action all fit perfectly into this model, and they fit because at the core. The purpose of all the Space Force's optimizations initiatives is to increase our war fighting capabilities. And so I thought it was important to take time today to talk a little more about some of the other efforts that the Space Force is going to undertake above and beyond the ones we mentioned yesterday. Now, our first pillar is capabilities development, centered on a forward looking planning process that ensures competitiveness over time. Initiatives under this effort are aimed at optimizing the service for the transition of operationally relevant technology at a pace and scale that exceeds that of rival powers.

While Space Futures Command is a major part of this capabilities development effort, it is not the only one. The Space Force will also reprioritize and streamline science and technology pipelines to better meet war fighter needs at the point of delivery. We are prioritizing these science and technology needs based on the future operational concepts so that the research labs can map their efforts more directly to our highest priority activities. Our goal is to maximize operational return to the nation on our investments. And streamlining this process will ensure that the relevance of science and technology investments and their integration into our force design occurs over a long term. Our second pillar is people, and it is a goal to create joint minded war fighters who understand the battlefield context of the space domain and who are well equipped to act within it. The Space Force inherited a variety of operational cultures, disparate organizational structures, and different training requirements when we stood up four years ago.



And these conditions had evolved over the past couple of decades, driven by a pursuit to have optimal efficiency, to the point that we lost focus on effectiveness, effectiveness across our organizational structures, workforce roles, training requirements, among other things. And this has to be corrected. So in support of our optimization efforts, we have been working to establish clear delineation of roles, responsibilities, and the duties of our officer enlisted and civilian Guardians to better align and optimize our force. And I'm excited to announce that this work is now complete, and we have a clear set of narratives and principles for each category of our Guardian workforce. And we will use that information to realign our unit structures and our developmental initiatives to optimize our Guardians for great power competition. Let me just take a minute to describe these roles in a little more detail.

First, for the officer Guardians, they are our services principal leaders and planners. They're accountable for military decision making at the tactical, operational, and strategic levels. They're tasked with leading commanding, planning, and directing resources within the Space force and the joint organizations. Second, our enlisted Guardians. These are the services technical specialists. They are our primary war fighters, trained as frontline operators and technical experts responsible for unit readiness. They're tasked with executing operational orders while serving as leaders themselves, weapon system experts, and advisors to their officer and civilian counterparts. And finally, for our civilian Guardians, they possess high levels of unique technical and specialized experience supporting all the space power disciplines. They provide the operational stability, unit continuity, and depth of expertise critical to mission success over time. And in these terms of reference provide us with clear roles and functions for officers enlisted in civilians, all with the goal of streamlining daily operations and facilitating future career development.

And along with the creation of the officer training course and Space Force Personnel Management Act, these initiatives under this pillar are aimed at expanding the training, education, and the development opportunities to Guardians to meet the services high tech operational demands. And that brings us to our third pillar, readiness. In the past, our readiness standards have reflected our ability to procedurally operate our systems in a benign environment. And while this is still necessary, it will no longer be sufficient to fight for space superiority against our pacing threat. We have provided space effects with impunity for decades, and these days are over. Our service must define our readiness by our ability to deter and defeat rival powers rather than our capacity to provide services to others. And it begins with providing all our Guardians with the realistic threat based training they require through a robust operational test and training infrastructure, what we call OTTI.

OTTI is an umbrella term describing the collection of distributed enterprise-wide test and training systems, processes effectively integrated and synchronized to establish and sustain combat readiness Across the spectrum of conflict. We are already building live ranges to conduct events in the actual environment, ensuring ground truth is captured for systems and tactics evaluations. We are also creating an intelligence informed inventory of adversary capabilities with opposing forces whose tactics reflect actual counterspace threats to the space, ground, and link segments. And finally, we are investing in a high fidelity mission specific simulators that replicate each unique mission area, weapons system, and their associated crew positions. And these simulators will encompass the full spectrum of training from initial qualifications to advanced employment. And looking forward, we know these are substantial organizational training and equipping challenges that could impact the Space Force's ability to ensure its systems and operators are ready for full spectrum combat operations in the space domain. Therefore, we must develop and maintain capable, sustainable, adaptive and collaborative architectures to conduct realistic test and evaluation, full spectrum training, tactics validation to ensure maximum war fighting readiness.

Improved readiness will help us better orient space forces towards the high end fight and ensure our Guardians can win that contested space domain. And our final pillar is power projection. As a service



focused on space superiority, we know we must fully integrate into the joint force, properly trained, equipped, and ready to accept mission command for assigned objectives. And yesterday, we introduced combat squadrons as the unit of action for the Space Force. In the implementation of our space generation model, we talked about how they will both enable the accomplishment of advanced readiness activities in the force generation. And as I said yesterday, integration sometimes starts with our service components around the world. Our service components are central to space power projection because they are essential to the proper integration into joint plans. The expertise these components provide will allow effective and realistic inclusion of space effects. They drive realistic joint training, they ensure effective security cooperation activities with our allies and partners, and they enable seamless global collaboration between all elements of the space enterprise.

We have already seen the positive effects, for example, our response to the Russian invasion of Ukraine, our ongoing efforts to protect U.S. and allied forces, particularly with regards to the Houthis situation in Yemen and the ongoing conflict in Israel. And our efforts to strengthen space related defenses. At a time when the near-peer adversarial threat is growing from China, and to an extent, North Korea and Russia. All of these efforts were enhanced by the work of our service components. Now, by normalizing force generation and presentation, we provide the combatant commands with better forces prepared to meet their space war fighting requirements and project power, just like our sister services have for decades. As I finish up, I'm in awe of how far we've come in four short years. I'm excited for where we're going in the future. Our Space Force is just under 14,000 officer, enlisted, and civilian Guardians. Small when compared to our sister services, but do not mistake our size for our value or our impact.

But just because we've come a long way does not mean we have arrived. And let me be clear on this point, it is also true that no team is more capable of getting us ready for war than the Guardians of the Space Force. And let me close with another comment by General Schriever. He said he and his group accepted that they were taking risks because they knew if they did not develop the long range ICBM capability and a reliable satellite reconnaissance system, it would strain the strategic balance between the U.S. and Soviet Union. "We never lost confidence," he said, "even when we had failures, which we had plenty of in the early days. Of course, there were concerns, but we met them every time."

Today, the risk of moving too slow is far greater than any risk associated with rapid change. We must evolve. We must take risks. We must solve problems. And we will, because I know our Guardians, and they have proven they have the confidence and skills to deliver. Now is the time to prepare so that we will be ready to meet any threat anytime, anywhere, to secure our nation's interests in, from, and to space. Thank you. Semper Supra.

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