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Voiceover:

Please welcome our next speakers to the stage, Major General Douglas Schiess, Commander, Combined Forces Space Component Command, United States Space Command and Vice Commander, Space Operations Command, United States Space Force and AFAs Director of STEM Education programs, Colonel Stuart Pettis.

Stuart Pettis:

Good afternoon ladies and gentlemen, and welcome to our session on space operations, today and tomorrow. Space Operations Command or SpOC is just one of three space force fuel commands and the only one devoted to operations. It is responsible for everything from electronic warfare to satellite operations, to ISR. It is with a great honor that I get to have host a panel with my old boss, Major General Douglas Scheiss, the Vice Commander Space Operations Command. Welcome General.

Maj. Gen. Doug Schiess:

Hey Stu, thanks. Appreciate the opportunity and one of my hats to talk about the awesome women and men of Space Operations Command. I hope when you all realize that this is not General Whiting sitting here, that everyone doesn't start exiting the stage, because that was the plan and unfortunately due to a small family issue, everything's okay. He couldn't be here today. But it's always great to jump in for my boss and so appreciate that. So thanks.

Stuart Pettis:

Thanks sir. So General, I just briefly touched on some aspects of Space Operations command's mission, however, how would you describe your mission in its critical contributions to national defense?

Maj. Gen. Doug Schiess:

Yeah, thanks Stu. So obviously you mentioned that Space operations command is one of three field commands within the Space Force. When we reorganize or set up the Space Force, we did that with some intentionality to have an operations command, an acquisition and sustainment command, and then a training and readiness command.

So SpOC is the nexus between the Space Force and United States Space Command, where that obviously, that operational component of the Space Force. But then we are presented to US Space Command to do that mission. We are the fight tonight force for our nation and for US Space Command.

We do that in several different mission areas, but a little bit different than we were in under what the old Air Force Space Command, where all of the organized training effect, our organized train and equip forces work together in Air Force based command. We're now separated between those three field commands and that allows SpOC to just focus on operations.

And we do that in several different areas. Obviously one of the most important is our space domain awareness, knowing the domain that we're in, knowing what is out there, what our adversaries and our allies are doing, so that we can be a better force to do that. We also do a very critical NOFA mission of missile warning and our support to missile defense and missile tracking.

And so we have to do that on a daily basis to make sure that we're preparing for all, not only US based command, but for all the combatant commands. We do electromagnetic warfare, we do command and control. We have to be able to command and control our forces for US space command.

And then most recently we've added some capabilities that were there, but put more emphasis on them in the defensive cyber capabilities that we have to do. My boss likes to say that cyber is the soft underbelly of space operations and so we have to make sure that we are cyber secure.

And then ISR, we have to be able to put forces together with intel led operations. We also have SATCOM, we have gps, and then we have the Protect and Defend mission. And so SpOC protects American, our allies, in from two space and we do that on focused on combat, readiness and our ISR led forces.

Stuart Pettis:

Awesome, sir. So Space Operations Command is now just two years old. Can you explain how you got here and where you are today and then what advancements are you going to make to Space Operations?

Maj. Gen. Doug Schiess:

Thanks. Obviously the whole Space Force is light, lean and agile and so when we decided to go into these three field commands and set them up, SpOC being the first field command that was set up, we're just about ready to have our second birthday. So we're a little bit younger than the Space Force.

General Whiting would like to say that we're, we're now walking, we're crying, we're making ourselves known as a two year old does. But we're doing things to be able to put ourselves on the right path. One of the things that we did in that Lean Agile, is we compress our command echelons. So if you go back to our time in the space or in the Air Force where we had squadrons, groups, wings numbered air forces match coms, we now have squadrons that are mission focused. But we also have Deltas, that's our oh six level of command that is mission focused and then right up to the field command at that level.

And then those forces are presented to task forces and others across the combatant command. We also, in our area preparing, partnering and posturing for the fight, we knew that we couldn't be the old Air Force base command of the past. While we still have the Napoleonic structure of an S staff, we had to combine those together just by virtue of having less personnel. And we did that into three, kind of like the Space Force staff did into three deputy commanding general for different things.

So we had a deputy commanding general for operations, that has our two, our three, our five, so our operations, our intel, our cyber and our nuclear forces, our NC three forces. But then we have a deputy commander for support, that has our personnel, our logistics, our plans and programs. And then really interesting, we have an exchange officer from the Royal Canadian Air Force, Brier General Kyle Paul who took the place of Brier General Kevin Whale before him.

That puts all of our innovation, our transformation, our chief data officer, our chief technology and information officer all together in one to make us better. So we still have all the necessary forces, but those are under those three. And then probably the most biggest change that we've done, is we set up these missionary teams that are focused just on a mission area to be that headquarters element to support both up to the Space Force staff and across the US space command, but also down to our deltas. To ensure that Delta commander who needs to be just focused on operations has the capability at the headquarters there to be able to do that.

Those are led by O6's or NH4s or GS15s. And we found just incredible synergies there to be able to do that. So that's one of the areas. And then lastly, we helped stand up the other two field commands. So we had the honor of having star Delta in our formation and then helped as Major General Bratton stood up Star Command and we helped them by providing them resources until they could stand up.

And then obviously Space Systems Command was well on their way with space and missile system center, but we transferred the launch mission to Space Systems Command. We wanted to make sure we did that without a fail. And so that was a big effort in our first year. Second year we pivoted to improving our war fighting posture. One of the ways we did that is we stood up combat training squadrons within each of the deltas.

So while Starcom does an incredible job of providing us the Guardians, that are ready to do either space operations, intel, cyber or in the acquisition community. We then use those cyber training or those combat training squadrons to provide the next level of their weapon system and make sure that they are ready to do that.

Are they doing advanced training in the congested and contested environment? And so we were able to do that. A couple really interesting and cool things that we did is we stood up two deltas that are focused on areas that we've always had to have but really weren't concentrated. And that's Delta six, which is our cyber Delta.

And it has a couple different missions. One is to continue the legacy of the old Air Force satellite control network, which is now the satellite control network, to provide that ability to contact and command and control your satellites, not just for the Space Force but for civil and our national reconnaissance office partners.

So they've continued to find ways to make that more efficient, because obviously with more satellites, we were getting to our capacity level. They're working with our space systems field command to bring on phased array antennas to make that even better.

But one of the most important things they're doing is they're bringing on mission defense teams. So cyber squadrons are being developed. As a matter of fact, we're going to bring on more cyber squadrons in the next year to partner with each of those deltas, to be able to provide that defense of our cyber system.

One of the best examples of that is right now in Delta four, we have a cyber squadron that is doing mission defense on the SBIRS architecture and making sure that that SBIRS mission, the space based infrared system mission that the nation needs to be able to provide warning and decision makers time that is cyber secure. And so they are right there in the same building and the same ops floor with our space missile warning operators and they're doing incredible job. We'll continue to do that. Obviously we can only do a small portion of our whole structure, but we're going to continue to do that.

And then even probably more revolutionary is our Delta seven, our intel surveillance and reconnaissance Delta that is bringing on space intel into our operations so that our operations can be intel led. And one of the things that they've done is they've stood up detachments each of our Deltas focused specifically on that mission.

So for instance, our electromagnetic Delta, Delta three that is performing those missions. They have an attachment of intel specialist Guardians that are not only intel professionals, but they know the electromagnetic spectrum.

And so they're sitting in that kind of left seat, right seat, right there with the operators, making sure that they're doing that. What that one thing has done right there is shorten the amount of time that we get intel from intel to the operators from days to minutes. And so an incredible job that the team has been doing, the men and women of space operations command in our first couple of years.

Stuart Pettis:

Awesome. So sir, can you talk about what space operations looks like in the future and how do you plan to be successful in future conflicts with potential adversaries? Because we know that they're also making significant advances in space operations as well.

Maj. Gen. Doug Schiess:

Yeah, obviously if you've heard this morning from the secretary and General Brown and then others today, our near peer competitors are continuing to modernize their forces and developing new long range conventional strike weapons that pose challenges to our defenses. And so like I said, we have to continue to have that intel led operations, so that we can make decisions faster to be able to get ahead of those near peer competitors.

We also have to harden ourself with our cyber defenses, to make sure that, that's not an easy way for them to get after us. We want to make it hard for them to be able to do anything to our assets. And then we need to ... you heard a little bit from General Saltzman and his testimony, how we're going to force package our forces. So we have GPS operators that are flying the GPS constellation. Well, we need to make sure that they're working with our SATCOM operators and our protect and defend operators.

So it's not just one missionary working together, but we're making sure that we're working together to be the best that we can be. One of the things we also did, and actually then Major General Leah Lauderback, I think I saw earlier today, Lieutenant General, Leah Lauderback and I know Major General Select Greg Gannon in their S two capacity at the Space Force staff, helped SpOC stand up the National Space intelligence Center and bring on Delta 18th.

We're the 18th member of the intelligence community. And so bring on that capability, to provide not only critical intel that maybe takes a little bit longer to get at that our operators need, but also providing that to our national authorities. And so that's been a big thing that we've done over the last couple days.

But regardless, we have to continue all of those things, but we also have to bring on new architecture. We have to make sure that we don't, as my good friend, Major General Deana Burt, some of our satellites are the fat kids in gym class. We need to make sure that we have a resilient force across. And not so many fat kids, all though those are really capable fat kids. But we need to make sure that we have a structured, layered architecture out there to be able to do our mission.

Stuart Pettis:

Yes, sir. So sir, you recently transferred Army and Navy SATCOM capabilities into the Space Force. Can you speak about what that is done for the space enterprise and what there'll be more capabilities transitioning?

Maj. Gen. Doug Schiess:

Yeah, there's some really interesting and cool things with this as well. So as you know, Stu, I happened to be the for Stops commander a long, long time ago. And in that mission there, I actually had both flying the satellite bus and the payload, but not all of the payload. Some of that was still done out at other regional SATCOM support centers around the world.

We have now in conjunction with the Army, working together, have brought all of SATCOM into the Space Force and specifically into one delta. And the really cool thing is here that Delta Commander is our first Army IST colonel that is commanding a delta. And so that's Colonel Dave Pheasant and his folks at Delta eight. And so they have brought that on.

So last June, we brought over the Navy SATCOM mission from Point Magu. And so we stood up a squadron there to be able to 10th Space Operation Squadron to be able to do that mission for the UFO,

the ultra high frequency follow on satellite. And then the mobile user objective system satellite from UOS, that brings that narrow band forces to all kinds of war fighters around the world.

And so that is now under Space Operations Command and they're doing incredible job. And then probably even a bigger lift is we worked with our friends at Space and Missile Defense or Army space and Missile Defense Command to bring over the wide ban part of that. So for years, the Air Force Space Command and the Space Force for the last three years has been flying the discus, the Defense Satellite Communication System and then the wide ban global SATCOM system.

But we've only really been flying the bus, making sure kind of from an airplane perspective, making sure the airplane's in the right spot, but then folks in the back are actually controlling the payload. And that was the army that was doing that. We have now brought that into our forces as well.

With that came about 300 personnel, both Army soldiers and civilians that are now Guardians and Department of the Air Force civilians across the globe with all of our wideband satellite operation centers, that are all over the world to be able to command plan and control those satellite systems and networks and our regional SATCOM centers.

So now within Delta eight, the whole SATCOM architecture is within one Delta Commander and one field command, to be able to do that, integrate. We're finding synergies already and being able to be able to take people off of one network and put them on another, that in the past could have happened, but was much harder to do.

So an incredible lift over the last year and I just want to thank the Army for the help that they did to be able to do that. And then on top of that, over the next year we're in talks with the Army, that we would bring over, I want to say jtag, but I want to make sure I get it right, the Joint Tactical Ground Station Mission as well. And that will also bring all of that missile warning for all of the theater combatant commanders into one as well. And so we're on the very beginning stages of that. But I know that our partnership with the Army was great for the SATCOM and I know it'll be great for the Army as well. Or for the JTAG as well.

Stuart Pettis:

Yes, sir. So sir, we're entering a new war fighting environment. How do you prepare Guardians to fight in a domain as newest space?

Maj. Gen. Doug Schiess:

Yeah, thank you. One thing we have to do is we have to be agile enough to be able to test and train and be able to change much faster. We have this new intel led operations and how does that intel get into our training? And so my good friend, Major General Bratton at StarCom has a responsibility to provide us Guardians that are ready to do that, for SpOC, at least in the area of space operations, intel and cyber.

But he also does that for the acquirers at Space Systems Command as well. So we have to work with them to make sure that they're getting the intelligence, the threat is based and we're getting that threat into our training as soon as possible. But we also have to be able to have a test infrastructure, to be able to get after that. We can no longer put a satellite up and say, "We'll test it." And then we're just going to put it right into operations.

We have to be able to test that in an environment that shows that can contested it, that contested environment and be able to give our operators the ability to do that much like they do out at [inaudible]. Perform the missions before they actually perform the missions. And so we're working with StarCom on that.

They're obviously trying to stand up a national space and training center and we're StarComs probably biggest proponent to help them be able to do that. But we have to continue to do that. We also have to continue in our intel and our cyber and not just rest on our laurels, but bring them up to new capabilities as well as we train them. And so all space operations has to continue to evolve, learn from the threat, learn from the adversaries, and then be able to test and train in an environment that provides the best Guardians to do the mission that they need to do.

Stuart Pettis:

Outstanding, sir. So many leaders have also stressed the need to accelerate, change the key pace with our potential adversaries. So what can your Guardians and Space Operations Command do to meet that challenge?

Maj. Gen. Doug Schiess:

Yeah, it's definitely a contested environment out there. One things you could look at is just the number of launches that's going on. So since July 22, 46 US launches. My good friend Steve Purdy and his team and Rob Long out of Vandenberg are launching satellites you wouldn't believe. But the Chinese are also launching satellites you wouldn't believe, and so are the Russians and so are there other nations.

And so we need to keep pace on that. We have to have automation and we have to have tools and analytics to be able to do things faster. Back when you and I were youngins, it was a keyboard and a mouse where we were flying satellites, but we were also doing a lot of stuff on chalkboards.

Stuart Pettis:

Grease pens.

Maj. Gen. Doug Schiess:

Grease pens and different checklists and making decisions with the best possible information. Well now the speed of data and things that we have, we have to harness that and to be able to have that. One of the things that Delta four in what we call a combat development team. So this is a operators and acquirers put together to be able to get after innovative things that we can just bring on without a huge acquisition program.

One of the things that they did, was they brought on the Delta analysis report and tracking system. So it's an application that helps them do basically what they were doing on pen and pencil and maybe some calculators, to be able to do that much faster. So when we're in a situation with the number of missiles that we have seen in the environment today, they can make decisions faster. They can do things to be able to harness the capability of the missile warning constellation to be able to do it much better.

And so they're continuing to do that, bringing on new areas. But we also have to make sure that we build Guardians that have that thought, that innovative thought, kind of run with scissors carefully. But make sure that they're doing what we want and from the lowest level, that they have a voice and what's the best thing to do. And so getting after that.

One of the other things we're doing is we're working to stand up Delta 15. That Delta will be the C2 delta for the National Space Defense Center, much like Delta five is that for the Combined Space Operations Center. When we stood up the National Space Defense Center, we kind of did that on the backs of some joint billets and other things. Well now as a service, we need to be able to provide a delta that C2s that. Those two centers will work together, as I said, bringing that sentry to be able to not only provide those

combat relevant effects to the war fighter, but also making sure that we're protecting and defending and working together.

So we need to continue to expand that Protect and Defend mission. The operators of Delta four and Delta eight that do those high value assets, they need to be linked with the operators of Delta nine, that are eventually going to bring on that Protect and Defend mission. And so we have to find ways to be able to do that. So we're getting after that with our Protect and Defend concept and just continuing to look at ways to be better.

Stuart Pettis:

Just out of curiosity, sir, the CDT and Delta four that did that Delta analysis tool, what rank were those guys?

Maj. Gen. Doug Schiess:

Probably some lieutenants and I definitely know some NCOs that were there to be able to do that.

Stuart Pettis:

Outstanding.

Maj. Gen. Doug Schiess:

Kind of off script a little bit, but our Super Coder program within the Space Force enabled some of those guys to go get the training to be able to then get after some of this analytics. And then the thing that we have to do is just make sure that they can get access to the data now and making sure it's cyber secure. But then they can get access to the data, use what they're learning in the super coder program, to then be able to get after some of these problems.

Stuart Pettis:

That's amazing, sir. So as the operational arm of the Space Force, what areas would you like to see more highlighted in the future?

Maj. Gen. Doug Schiess:

Yeah, one of the things that we're obviously working through is sustainment. And so if you haven't been out to one of our ground based radars, they're aging. They have great software, not only space Systems command, but Air Force Material Command and Air Force Life Cycle Management Center has done a great job continuing to bring them up to the capabilities they need to do.

But as you know, they got some really old parts. And so we have to make sure that we have as General Whitey would say, space logs. Folks that know how to get after that. In my other hat, my other boss, General Dickinson really wants to make sure that we are getting after when there's an outage as fast as we can. And that we are finding innovative ways to bring those capabilities back. And so that's just an area that we need to continue to work on.

General Whiting likes to use the quote from Sun Zoo about if you know logistics, there's order. I'm kind of getting it wrong. He's like, "We need to have logistics to be able to get after our mission." And so that's an area that we need to continue to work on. A couple other areas that are in my other hat too, but we do at Space Operations Command is our integration with the commercial partners.

And so one of the things we've stood up at SCI, the Combined Force Space component Command is the cyber intelligence, our cyber integration center, or I'm sorry, Commercial Integration Center, where we

have folks together, each of those companies bring someone forward that is cleared to the top secret SCI level and they sit right in our area there at the Combined Space Operations Center and work together with us. And so we have to be able to do that, because one, we might get some of that leading intel from them if they're seeing something that's going on with their systems.

But we also may be able to provide them some information that we could only provide at a classified level. I got it, we got to get it over classification. But sometimes because of intel stuff, they are classified. But being there together in the CSpOC at the classified level, we can integrate together, we can synergize and we can make sure that we're doing the right thing. So that's been a huge effort and we'll continue to do that not only from the Space Force, but from US Space Command to bring on more capability to integrate with our commercial.

And then obviously, most important is our coalition and our allies and work together to be able to do that. I know that I talk on a regular basis with my counterparts in the UK, Australia and Canada. As a matter of fact, they're in our weekly and intelligence updates and we're making sure that we are providing the information, because quite frankly we've got to get to where let's bring their capabilities and then not get those ... we don't have to spend money on those and then we can provide capabilities to them and we're a stronger force together. And so those are the things that we're working on in the future.

Stuart Pettis:

So this kind of near new to my heart, we know in a military service, we always have some unsung heroes out there. What parts of the mission do you wish the general public knew more about?

Maj. Gen. Doug Schiess:

Yeah, it's interesting. I actually was at a family event this weekend and someone said, "Hey, someone told me the bald guy over there is a two star in the Space force." And so he came over and started talking. I don't know what he is talking about. I have plenty of hair, but-

Stuart Pettis:

Sir, I'm jealous. That's all I got to say.

Maj. Gen. Doug Schiess:

Okay. But his first comment was, "Hey, what does the Space Force do? I don't get this." And so just talking to him to the fact that I asked him, "Did you drive to the event here using Global Positioning System?" He's like, "You mean the thing on my phone? Yes." "Well that was brought to you by the Space Force."

And so some of the unsung heroes are just the things that we do each and every day across op centers, across the world. The women and men of space operations come in that are up at places like Tuley at two o'clock in the morning making sure that any missile attack is categorized and sent to the national leaders to make that decision.

The people that are at locations like Guam, or other locations, Diego Garcia, where they leave their families, or actually right now we have deployed forces forward doing the mission that lead their families. Every everyone that's in an operation center doing that is an unsung hero.

And then I just have to give a shout out to the United States Air Force too, because all of our installations, we have to have the Air Force help us do our mission. And so those defenders that are on the gate that are providing defense for those operations centers, those logistics readiness squadron

folks that are doing, those are the unsung heroes, making sure that we do the space operations that we need to do today.

Stuart Pettis:

And by the way, you did mention the greatest base in the Department of the Air Force dually.

Maj. Gen. Doug Schiess:

I thought you'd like that.

Stuart Pettis:

I love that. Yes. So sir, it's been two years or coming up on two years Space operations span. What are your proudest achievements?

Maj. Gen. Doug Schiess:

Yeah, so I just said some of them, but what I would like to say is for those of us in the Space Force, it's felt like we've been on high speed for about three years, just going as fast as we can to bring on this new service, to do all the things we need to do. And thankfully, I've got great colleagues up at the Pentagon that are doing the really hard work, bringing on new uniforms. And the things that are really important to our Guardians.

And so some people might joke, but that is a really important thing to our Guardians. But they're also bringing on new capabilities for our personnel. How we rate our personnel, how we develop our personnel. And so they're doing all that hard work with the Starcom and Space Systems Command. And so there's just incredible amount of work. But what I would say is to the average American, they didn't see anything lost.

We continue to do every day what we need to do, to be able to provide defense of our space assets and really important, provide combat relevant effects to the joint war fighter and protect them as well. And so that's what I'm most proud of, is while we've been doing all of these changes and making sure that we've got everything set, organizational changes and things to do to be able to be that Space Force of the future, we didn't miss a beat with the operations.

And so just an incredible job for both the Guardians and the Airmen, each and every day come to Space Operations Command or Starcom or Space Systems Command and just do the mission. As General Brown said, "Do the j-o-b." And so I'm really proud of the efforts that they've done.

Stuart Pettis:

Outstanding, sir. We have a few more minutes. Are any other topics that we didn't discuss what you'd like to address? Any other things? Anything? What's keeping you up at night?

Maj. Gen. Doug Schiess:

Wow, what's keeping me up at night?

Stuart Pettis:

Or are you-

Maj. Gen. Doug Schiess:

No, I, well, I sleep pretty good. My wife's right over there, so she can tell you if I sleep pretty good, but I sleep good because of what I just talked to you about. The women and men that are doing the mission every day. I do think we have to continue to push on our architecture. And I know that Lieutenant General Goline and the Space Systems Command, along with all of our acquisition partners, we have the Space Rapid Capabilities Office, the Department of the Air Force Rapid Capabilities Office, Space Development agency.

We have to look at architectures that are more resilient and more reliable. We're still going to have those big satellite systems, but we can't rely just on them. We've got to get after having more resilient, because the adversaries are looking at us. They've watched us for 21 years. They know that space is important to our joint war fighters. And so that they're doing things to be able to take away those capabilities. And we have to do everything that we can to protect and defend those, while still providing those combat relevant effects to the war fighter.

Stuart Pettis:

Outstanding sort. So ladies and gentlemen, this is the time we have. General Schiess, thank you so much for stepping in and it's always, always a pleasure to have you up on stage and work with you. On behalf of, obviously besides people in the room, we also are streaming this, so we know we have young Guardians who are watching. Thanks for giving them some insight and what their future might be.

Thank you very much for that. And for audience members, one plea, I am your AFA director of STEM education programs. What that means is I oversee cyber patriot and seller explorers. Last year we had 22,000 high school and middle school students learning about space system design and cyber defense. We know we'll have a couple hundred of them that will actually join the services.

So I'd encourage you to learn more about that. And for our corporate sponsors who sponsor us, thank you so much. And sorry I got to make an announcement. If you're joining us for the outstanding Airmen of the Year reception tonight, we look forward to seeing you at the exhibit hall beginning at 1700. Otherwise, we'll be back here at 08:20 tomorrow. Have a great day.

Maj. Gen. Doug Schiess:

Thanks, Stu. Appreciate it.

Stuart Pettis:

Thank you, sir.

