**Gen. Stephen Whiting's remarks at Space Symposium 39 keynote address Apr. 9, 2024**

Good morning, and thank you so much for being here.

I want to thank the Space Symposium for the opportunity to speak at 8:45 in the morning. And congratulations to all of you for being here on time. That's not easy. In fact, that's hard to, to get up in a in a strange hotel room, find your clothes, get dressed, get your coffee and be in seats on time. But you know, what else is hard? Space is hard. And yes, space is hard, but it's also incredibly important and serious.

Now, space was hard for humanity to get to that only happened 66 and a half years ago within the lives of some of you in this room. And the hard won benefits that space has brought to us are a foundation for our modern way of life and how we secure our nations. And what's on my mind today is how peace loving people everywhere can win in space and competition in crisis and in conflict. As President John F. Kennedy said, we want to see space governed by a banner of peace and freedom. Now sometimes we military space professionals forget our history, and we kind of act like space has only recently become an arena for great power competition. But in reality space was birthed in great power competition. In 1957, the Soviet Union won the opening chapters of the space race when they launched the first object Sputnik, the first animal, the first man and the first woman, and that created a crisis of confidence certainly here in the United States. Now ultimately, the United States won that that space race when Neil Armstrong walked out on the lunar surface in 1969. But throughout the Cold War, we saw countries like the United States and Soviet Union go to space for strategic advantage, and we even saw the development of capabilities to hold at risk other space systems, and we saw the development of the first military space commands in the 1980s, in fact, right here, in Colorado Springs.

Now, sometimes we think of DESERT STORM as the first space war, not because Saddam Hussein took us on in space, but because for the first time we used space capabilities to enable a tactical battlefield and actually reduce the number of fatalities that were involved and speed up those conflicts. But since January of 2007, when the People's Republic of China conducted their hit to kill ASAT test that has left over 3,500 pieces of long-lived debris we're still having to deal with, we have seen both China and Russia continue to conduct irresponsible tests demonstrating they have turned space into a warfighting domain.

I can assure you that all of us at U.S. Space Command are closely watching our strategic competitors as an intelligence-led organization. Now both the PRC and Russia have made rapid advancements in fielding capabilities which threaten the peaceful use of space. The People's Liberation Army has made their terrestrial forces space enabled as well. And frankly, China is moving at a breathtaking speed. Since 2018. China has more than tripled their on-orbit intelligence, surveillance and reconnaissance satellites. And with these systems, they've built a kill web over the Pacific Ocean to find, fix, track, and yes, target United States and allied military capabilities. And they built a range of counterspace weapons from reversible jamming all the way up to kinetic hit-to-kill direct ascent and co-orbital ASATs.

And in that same period, Russia has more than doubled their total number of satellites. Moscow's war with Ukraine has proven the indispensable role of space in modern conflict. On the opening day of Russia's invasion, they even did a cyber-attack against a commercial SATCOM company, knocking off the air tens of thousands of SATCOM modems. Despite failing to achieve their war aims in Ukraine, Russia continues to invest in counterspace weapons. Russia appears more and more to be relying on asymmetric capabilities like space, cyber and nuclear.

Now in 1957, before Sputnik was even launched, Major General Bernard Schriever, of the United States Air Force, presciently said, “in the long haul our safety as a nation may depend upon achieving space superiority.”

Several decades from now, the key battles may not be sea battles or air battles, but space battles, and we should be sending a certain spending, a certain fraction of our national resources, to ensure we do not lag in obtaining space superiority.

But let me be crystal clear, those of us in U.S. Space Command, do not want a war to start in or extend into space. War in space is not inevitable. And in fact, it would be detrimental to the United States and our allies and our way of life. Americans, our allies, indeed all of humanity, have become accustomed to the benefits that we derive from space – communications, entertainment, precision, agricultural, global timing – we don't even worry about where our teenage children are anymore because we can track them on their phones and we know they'll be able to get home to us using GPS. And while we've built the world's best space architectures, our current military space constellations are optimized for a benign environment.

Now despite this strong foundation, we have a lot of work to do to obtain the collective advantage we need to when in crisis and conflict. As Jeff said, at U.S. Space Command, we take our mission so seriously that we speak in terms of fulfilling our moral responsibilities. We must deliver space capabilities to the Joint Force, the nation, and our allies. They assume they will have access to those capabilities through all levels of conflict, despite whatever threats there may be, and their slot sized accordingly.

Number two, we must protect and defend our current constellations against the threats now arrayed against us, and we must protect our Joint Force from space-enabled attack of others. Now, to protect our national security interest in space the Department of Defense leverages capabilities from across a whole series of stakeholders to deter aggression and if deterrence fails to prevail in conflict.

Now as a combatant command, the Unified Command Plan is an order from the President of the United States that lays out our five unique responsibilities. Space Operations – that includes all the legacy missions we've done so long and so well, communications, position, navigation and timing, missile

warning, ISR, but it also includes protect and defend and human spaceflight support. Global Sensor Manager – we have the responsibility of integrating space domain awareness sensors, missile warning sensors and Missile Defense sensors. Global SATCOM Operations Manager – managing satellite communications for the entire Department of Defense; Transregional Missile Defense planning and operational support, and then we are the space Joint Force provider.

Now the UCP has also given us, Space Command, what we call an astra graphic area of responsibility that starts 100 kilometers over our head and extends to infinity. These different responsibilities mean we are both a supporting command and a supported command. As a supporting command, we're only as successful as those we have to support each and every day. And as a supported command we're responsible for conducting operations in our AOR and receiving support from others to be successful. So, our job is to make sure we continue to support others and that we protect and defend ourselves in our AOR to do so.

Now to get after these Unified Command Plan responsibilities, we are pursuing four priorities. Number one, prepare and posture, we must maximize combat readiness by 2027. All of us at U.S. Space Command are laser focused on improving all of our existing forces and capabilities, so that we can stitch them together seamlessly when called upon. Now sometimes, this is referred to as closing the kill chain. Now we're also working with capability providers to try to deliver as much new capability as we can within the next three years.

Our second priority is countering threats. The threats we've been talking about for years are no longer theoretical possibilities. They are deployed in the domain and terrestrially and many of them are now on combat duty in China and Russia. They hold at risk our modern way of life and how we defend this nation. And we must be able to deter and counter these threats when called upon to achieve space superiority.

Our third priority is strengthen relationships. Relationships matter and spaces a team sport, no one country, command, service, agency or department can do all that we have to do in space to be successful. And like the best teams, we are truly successful when we pursue outcomes over equities. At U.S. Space Command we are committed to building a coalition of teammates to achieve a collective advantage, and we're committed to being great teammates ourselves.

Now, it's often said that America's, one of one of our greatest advantages, is this system of allies and partners that we have around the world – likeminded nations who share our values and interests in ensuring space remains safe, sustainable, secure.

Now, operation OLYMPIC DEFENDER is our named operation in space that today is conducted with four countries – the United States, Australia, Canada and the United Kingdom. I am proud to announce today that we have invited three new allies to join OLYMPIC DEFENDER – Germany, France, and

New Zealand. Our international Allies and Partners provide strategic and operational advantages. We share intelligence, we plan together, and we work to ensure that space is safe for all. And we're working to even improve our integration through improved command and control and planning to make sure that we get even better in the future. I've been proud to work alongside Germany, France and New Zealand for many years. And I look forward to their consideration of our invitation for them to join operation OLYMPIC DEFENDER. But OOD, as we call it, is only the beginning of our partnerships.

Back in February of this year, out of Vandenberg Space Force Base, we hosted exercise Global Sentinel. It involved 25 countries, with two observer nations, and even the NATO Space Center of Excellence. Global Sentinel allows us to come together and figure out improved ways to operate together to develop space domain awareness. And our missile defense war game which we call Nimble Titan will also have 25 countries joining us when we get together at the end of May for our tenth senior leader event in the 20-year history of that exercise.

The U.S. commercial aerospace industry is also one of our nation's biggest advantages, and it's an advantage that is growing. Today we have multiple companies in our Commercial Integration Cell at Vandenberg Space Force Base. And I'm excited to announce today that we are inviting eight additional companies to enter the Integration Cell so we can share information and gain insights into how each other's constellations are operating again, to make space more safe and secure.

And we partner with commercial companies at our Joint Commercial Operations Cell right here in Colorado Springs, which now has nodes on three continents with countries from companies from multiple countries.

We've also embedded cyber experts on the operations watch floor of the space Information Sharing and Analysis Center, also here in Colorado Springs. That's an industry focused working group to share cyber threats.

And U.S. Space Command has now signed 185 space domain awareness, data sharing agreements, and later this week, I will sign another one with the country of Uruguay. By sharing space information with spacefaring allies and partners and academic institutions, we promote trust required for coalition unified action.

Now our fourth priority is to expand our warfighting advantage. At U.S. Space Command, our primary focus is on our real time mission. So, I like to say our event horizon goes out to about 2027, but we must be thinking beyond 2027 as well, to help shape military and military space power for the future fight. My predecessor General Jim Dickinson used to emphasize that we must prepare for a war not yet fought.

So, I'm announcing today that U.S. Space command’s Capability Assessment and Validation Environment, or CAVE, as we call it has achieved minimum viable capability. CAVE is our modeling

and simulation laboratory which enables us to perform analysis on warfighting, on plans, on campaigning, and we'll use that to derive better ways of deterring, and planning to conduct operations for a war that's never happened and a war we don't want to happen. We'll also use it to figure out our combatant command requirements and gain insights into multidomain joint warfighting concepts.

So, what are the actions we need to take to maintain to win in competition and deter conflict? Now those of you in the military sphere are likely aware of the Chief of Space Operations, General Chance Saltzman's theory of success called competitive endurance. It's built on three principles: avoid operational surprise, deny first mover advantage and perform responsible counterspace campaigning. At U.S. Space Command, we subscribe to these tenants. And in our campaign plan we use those tenants to allow us to compete and develop the sets and reps we need to rapidly transition when called upon to confront any potential adversary and crisis, and when directed, defeat an enemy in conflict in such a way as to assure future generations have access to and in space.

So, what are those actions we need to take to win in a crisis or conflict? First, we must build a committed coalition with shared objectives. Next, we must campaign together – joint and combined unified action will deter competitors in strategic competition. We want them to know we're always watching together. We'll execute combined training and exercises where we develop our command and control, and plans, and we demonstrate interoperability. We'll close friendly kill chains to improve the speed that Joint Force commanders can make decisions by linking friendly sensor-to-shooter information. We will reveal to deter, and we will conceal to win. And by presenting a potential adversary with synchronized and compounding dilemmas, it's our job to instill doubt, so that every morning they wake up and say, 'today is not the day for armed conflict.'

But if deterrence fails, we prefer to fight with our likeminded Allies and Partners. The coalition's resilient and redundant space architectures will enable us to absorb a first strike, and then quickly reconstitute and respond when directed. We must be able to achieve and maintain space superiority. Space superiority enables the coalition to counter an adversaries' C5ISRT kill web.

Now in INDOPACOM, they talk about this as having the ability to blind, see, and kill enemy targets in any domain. This is vital to protect the Joint Force from the space-enabled attack of others. We will protect and defend our systems, our ground infrastructure, and our links so that we can defend friendly assets to assure delivery of critical space capabilities to friendly forces.

Now, U.S. Space Command does not want any war, let alone a war that starts in or extends into space, which would be particularly bad for our domain. Direct space combat would be economically and environmentally devastating, perhaps for decades. We want to remain in enduring competition, and not progress into crisis or conflict. And to do that, there are a couple important capabilities that we need to field quickly.

It's time to bring dynamic space operations and on-orbit logistics and infrastructure to the space domain. The days of energy neutral positional operations in space need to end. It's time to bring sustained space maneuver to the AOR. Now, sustained space maneuver will change how we operate, opening up new tactics, techniques and procedures and operating concepts and allowing operations until the mission is complete – not until the fuel we launched with runs out. Sustained space maneuver includes on-orbit refueling, replenishment sustained, sustainment system repair, and forward sustainment. Investment in sustained space maneuver technologies is critical to assess our ability to achieve and maintain space superiority, and to fortify how we win, we must be ready to use limited contingency capabilities and activate a commercial reserve.

Now those of us at U.S. Space Command applaud the work of U.S. Space Forces recent tactical responsive space and launch operations, which are demonstrating the promise of reconstitution, replenishment, and augmentation. But let's acknowledge we have a lot to do in space.

So, let's do a thought experiment for a moment. There was a time when our country didn't have to spend anything on space or do any space operations because it was before the Space Age. And there'll be a time in the far future where we'll likely have to do a lot more and spend more because humanity will go back to the moon, and then on to Mars and the asteroids. But today, we've got a lot to do – we've got to make all of our constellations more resilient; we've got to protect and defend those constellations against the threats now arrayed against us; we have to protect the Joint Force from space-enabled attack; and we must have a test and training enterprise that convinces us that these capabilities will work in a conflict which has never happened.

And let's constantly ask ourselves, are we doing all we can to assure America maintains our position as the world's leader in space while we work with our international partners? Accordingly, I'm calling for a committed coalition of U.S. government stakeholders, allies and partners, commercial industry and academic institutions. Such commitment must take bold action, and it starts with information sharing to increase trust and support our shared interest.

Now, a prime example of this is the recent approval of the Department of Defense's new space security classification guidance policy, but we must now diligently work to operationalize this new policy. If we don't change because of that policy, we are failing, and we need to do so quickly. We must continue to leverage our nation's lead in commercial space technology.

Our commercial industry will deliver innovative state-of-the-art capabilities. We have to modernize our legacy systems, ensure they all work together seamlessly, and deliver new capabilities by 2027 to counter the threats that we now see. Moreover, we must invest in capabilities, which won't deliver until after 2027, to ensure we remain postured to be successful in space. Together, these next necessary steps will ensure that all of us, as a team, win in competition and in conflict.

Now, space is the final frontier, yet it extends as far as we can comprehend and is infinite in its possibilities. Just as NASA through the Artemis Accords, with 30 other countries is taking humanity back to the moon in 2026, so we will work with a coalition of peace-loving nations to ensure space remains safe, sustainable, and secure for future generations. And if we do this, I'm confident that in my lifetime, we will see humans on Mars, and in the lifetime of some of you younger than me in this audience, I think we'll see humanity permanently living out in the solar system, while here on terra firma, we continue to live in peace while enjoying all the benefits space brings to us.

So thank you, and let's all work together to ensure there is never a day without space.