

Center for Strategic and International Studies

TRANSCRIPT  
Event  
**“Missile Defense at 40”**

***Congressional Perspective***

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FEATURING  
**Doug Lamborn**  
*U.S. Representative; Chairman, Strategic Forces Subcommittee, House Armed Services Committee*

**Seth Moulton**  
*U.S. Representative; Ranking Member, Strategic Forces Subcommittee, House Armed Services Committee*

CSIS EXPERTS  
**Seth Jones**  
*Director, International Security Program, CSIS*

**Tom Karako**  
*Senior Fellow, International Security Program and Director, Missile Defense Project, CSIS*

*Transcript By*  
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Seth Jones: Welcome, everyone. I'm Seth Jones. I'm the senior vice president and the director of the International Security Program here at the Center for Strategic and International Studies. And on behalf of CSIS, I'd like to welcome everyone both in person and online for a great discussion on what has become an important component of the Department of Defense's defense planning, the larger role of missile defenses.

As the Pentagon's recent National Defense Strategy, the unclassified version, noted, missiles have become, quote, "a principal means by which adversaries seek to project conventional or nuclear power," end quote. And as such, quote, "missile defense is a core deterrence by denial component," end quote, of how we content with adversaries.

We're here today to mark the 40th anniversary of Ronald Reagan's speech announcing the Strategic Defense Initiative. That speech, which was in March of 1983, came just a few weeks after his evil empire speech, which was March 9th. They were all coordinated toward the larger strategic goal of winning and bringing an end to the Cold War. One of the most recent books I wrote was on President Reagan's Covert Action Program to provide assistance to Solidarity. And I had the opportunity to talk to a number of folks within that administration and to spent several months, overall, in the Reagan Library going through National Security Council discussions.

One of the things I've always found helpful about the way he looked at SDI and the broader situation that the U.S. was in at the time was this was a struggle between democratic governments, including the U.S. – not always perfect, but it was – it was – it was a relatively clear competition between that democratic U.S. and its partners and allies and a communist and authoritarian Soviet Union. And there clearly are parallels to the situation we find ourselves in today. We're pleased that today's conference is being cohosted by the Ronald Reagan Foundation and Institute. And you'll hear from several representatives from them later today, including Roger Zakheim, the director of the institute.

The title of today's conference is "Missile Defense at 40." There were obviously a number of missile defense efforts that preceded the 1980s, going back to, at the very least, the 1940s. But what Reagan's speech would inaugurate is the broader institutionalization of what we call now the missile defense enterprise. So it brought together various components of research, development, testing efforts from across the services under one roof, called the Strategic Defense Initiative, and gave them a new purpose. So a lot has transpired since that speech and since that time. And we're going to cover all that today, or at least a chunk of it.

We'll begin with a panel on congressional perspectives. We've got a great panel here. Then turn to scholars, practitioners, and alums of the administration at that time. We're then pleased to welcome Vice Admiral Hill of the Missile Defense Agency. And we'll finally conclude this broader discussion with an industry panel looking at what has changed and what kind of challenges they face today. Each of these panels is designed both to look forward, but also to look backward. So to be retrospective and prospective.

So thank you all for coming, again, both virtually and in person. I'm going to turn you over now to Tom Karako. Tom is the director of the Missile Defense Project here at the Center for Strategic and International Studies who, together with his fantastic team in the Missile Defense Project put together today's conference, and who is going to moderate our first panel. So with that, Tom, I will turn this over to you.

Tom Karako: Great. Well, Seth, thank you very much. Thanks, everybody, for being here in person and online. We're going to go ahead and get started with our first – as Seth said, our congressional perspectives. And we're really honored to have here both the chair and the ranking members of the House Armed Services Strategic Forces Subcommittee. So thank you, gentlemen, Mr. Lamborn, Mr. Moulton, for being here. We're just going to jump right in, I would say. And I was hoping you all might start off by telling us kind of how you think about the missile defense landscape today. How do you think about it on Capitol Hill and more broadly? And, you know, in some respects looking back a little bit, what's kind of been the legacy of the past four decades of all these efforts?

Who wants to kick off?

Representative Doug Lamborn: Well, I'll go ahead and start. And it's always good to be here with Seth, my counterpart on this important subcommittee. Tom, it's great to be with you and everyone here at CSIS.

Ronald Reagan articulated a vision that some derided at the time as star wars, and they scoffed at it. Forty years, though, have made a huge difference. We do have a missile defense in place against rogue countries or accidental launches, things like that. It was never intended to deter a near-peer adversary. That would be destabilizing to attempt to do that. So we don't go there. But for these other threats, which when you look at Iran, and North Korea, and the kinds of things they say, are very real threats. Or an accidental launch from a near-peer adversary. So we do have 40 or so – 40-44 interceptors in California and Alaska that would give us that capability.

Now, the testing is sometimes – sometimes it doesn't work. Sometimes it does work. We need to keep working on the technology. We're not as far along on that as I would like. We'll hear more from Admiral Hill today about that. But since we have multiple interceptors, multiple shots at the same threat if necessary, I feel like we do have a robust defense to date. There are things on the horizon, though, that we need to be really giving attention to, funding research and development and making progress on, such as the hypersonic threat. Especially China. Russia talks about it a lot and they have some maybe more primitive capabilities, but China is the pacing threat when it comes to hypersonics. And I think we'll talk a little bit more about that later.

Dr. Karako: Yeah. Mr. Moulton.

Representative Seth Moulton: Well, thank you very much for having me. And it's an honor to be here with Doug. And, you know, we're – he's a great person to work with. He's been on the subcommittee longer than I have, and there's an awful lot of important work that we need to do, as Doug has just laid out.

Let me start by just making two quick points. The first is that missile defense is pretty remarkable. When you think about the physics of what we're trying to do, you have a ballistic missile going up to 15,000 miles per hour, an interceptor that can go up to almost 25,000 miles per hour. So you're trying to hit a bullet going 15,000 miles per hour with another one going 25,000 miles per hour, and it actually works, sometimes. That's amazing.

Dr. Karako: Yeah, it is.

Rep. Moulton: The science, the technology behind this is pretty incredible. The second just broad point I'd like to make to start off is that there is a lot of bipartisan agreement on our strategy here and what we're trying to do. And that's something – that bipartisan consensus is something that Doug and I work really hard to find, because it's important not only in this very divided Washington today, for a lot of reasons, but because this is fundamentally about our national security. It's about our strategic stability. It's about, if we get this wrong, the future of the human race, because a nuclear holocaust could result from getting this whole thing wrong.

And so the fact that we can agree on a lot is really important. And I think that, you know, Doug kind of touched on this already, but I sort of think of five different levels of missile defense. There is the – there's the strategic level. Let's call that number five, where you could use missile defense to stop a near-peer adversary. As Doug laid out, we don't do that.

We're not trying to stop Russia or China from – we have – you know, we have mutually assured destruction as our deterrent in that realm.

The next level down, of course, is that limited homeland defense, as Doug said, against a rogue nation. Or even, you know, I might just – we don't know who's going to – you know, it's Iran, North Korea primarily right now. But it could be other nations down the road. And that's – there's a lot of bipartisan agreement. That's really where we're focused right now on our missile defense.

The third level is – you could say this is nuance – but it's the accidental launch, right? Something that we really don't anticipate, but Russia calls up and says: Hey, we got a real big problem. We got a rogue general. They just launched a missile. We really wish you could shoot it down, right? (Laughter.) And we're able to do that too.

I would say level two is theater-level missile defense. This is not sort of anti-ballistic missile stuff, but this is all the things you see going on in Ukraine today. That's lower-level, tactical level. It's not destabilizing to the strategic situation that we're able to shoot down Russian or Iranian drones, or, you know, whatever else. And as a veteran of the Middle East, that's really important and we've made a lot of developments there too.

The sort of ground level is just the understanding what's going on, being able to detect hypersonics when they're coming in. It's really just the eyes and ears that are critical for missile defense. But the point is that you have all these different levels and there's agreement that, you know, we – bipartisan agreement about where we're focused, but also where we're not. You know, that we don't – I think Reagan's initial vision was that this would stop a Soviet assault. And we've all agreed that that's not realistic, so we're not going to try.

So it's a remarkable technology. And there's a lot of bipartisan consensus on how it's being used. But as Doug laid out, we still have a lot of work to do.

Dr. Karako:

Fantastic. Lots of stuff tabled there. I like the five buckets, and hopefully we'll work through some of those just now.

You know, both of you mentioned in your opening comments really sort of the homeland ballistic missile defense for ICBMs which is, in some respects, the – you know, the grandchild of SDI that has been deployed now, as you mentioned. The Biden administration began formally I think it was about two years ago – in fact, it was two years ago yesterday that

they kind of went forward with the acquisition of the next-generation interceptor.

And so this is something that there's been, after the RKV kind of cancellation and things like that, there was a little bit of anxiety about that. NORTHCOM's been making noise about the schedule for that. I wonder how you, from your perspective on Capitol Hill, are thinking about the capability and the schedule of that – it's the biggest program that the Missile Defense Agency is working on right now. How do you think about that program?

Rep. Lamborn: My best understanding is that we're on a current timeline to have those for, with initial operating capability, four to five years from now, 2027 to 2208. North Korea, in the meantime, is not standing still. And we may be facing some risk in the meantime. Excuse me. But we do have the 44 current interceptors in Alaska and California. The first tranche of NGIs will be around 20. And we have additional silos we can put those in immediately, in addition to the 44 we have now. Then we can start replacing the older 44 with the newer generation NGO, which are much more capable and effective. So that's what I believe is our best timeline at the moment.

Dr. Karako: Yeah. How do you think about that program?

Rep. Moulton: Look, I completely agree with Doug's point on the timeline. Here's the problem. And it's a math problem, OK? Just using publicly available data, you know, the history of the test for the interceptors that we have so far have about a 55 percent success rate. So, round number, is a 50 percent hit rate. And therefore, sort of the public shock doctrine is that if the North Koreans shoot a missile we're going to shoot four interceptors at it in response. In the latest parade, the North Koreans had 11 missiles. Eleven times four is 44. That's great. They get one more, we're overwhelmed. That's a real problem. One more ICBM, and our system to defend against their attack is overwhelmed.

And we don't have the next generation interceptor coming along for another four years. So at some point, we've got to think about whether North Korea is at that level four or it actually gets into level five, where we have to have a different theory of deterrence. And that's a real challenge. And I don't know what the answer is that, but that's a real challenge that I think we have to wrestle with. One more point on this, again, speaking in round numbers, 50 percent chance of hitting things. And, as I pointed out at the very beginning, you can understand why it might only be 50 percent because something going 15,000 miles, 25,000 miles, that's pretty hard, all right?

If I'm sitting at the Missile Defense Agency, and my daughter is working in L.A. and I call her up because there's an attack and I say: Listen, honey, I know that everybody's freaking out. I know that your phone's going crazy. I know that kids are getting run over in the street with people trying to get out of town, because it is true that in 20 minutes you could get incinerated in a thermonuclear blast, but the good thing is you have a solid three out of four chance that it doesn't happen. That's what we're saying. That's what we're saying. Three out of four chance that it doesn't happen. We got to really think about whether that's the theory of deterrence that we want to live with.

Rep. Lamborn: Now let me add one point to that. And you're making some good points here, but I would also like to add this is not a static situation. This is dynamic. If North Korea is lobbing salvo after salvo to the U.S., we're not going to stand there and try to swat them down one by one and just wait until their arsenal is depleted. We'll have other options if it comes to that – God forbid. If it ever comes to that, in the meantime. And I think the North Koreans know that. and we wouldn't just take it and then wait for what do they have next. We would have other things we would be doing in the meantime as well, conventional or whatever.

Rep. Moulton: Well, right, I think we would hit back at them. But my point is, that's a different theory of deterring than just saying we're going to shoot them down.

Rep. Lamborn: Yeah. Yeah. Well, I think we should use every kind of deterrence we have and create as much uncertainty in the minds of the adversary as possible.

Dr. Karako: And it sounds like, from the Biden administration's Missile Defense Review that came out last October, that they framed this problem in terms of staying ahead of the threat, but framing it as missile defeat as opposed to simply active missile defense, which I think speaks to some of the attack operations and I think also speaks to some of the how do we think about this and the theory of deterrence, if that makes sense.

Rep. Moulton: Yes, that's right. One of the things Doug's referring to is we're looking at other ways besides literally shooting a missile out of the sky that we can potentially defend against the threat, right? But of course, if said things are highly classified and the North Koreans don't know about them, that's not a very effective deterrent, right? So it's not necessarily a theory of deterrence. It's more a theory of protection.

But the point is that, you know, at some point we're going to get to the point – we're going to get to the level where we say, you know, this is a – whether it's North Korea, or Iran, or some other rogue nation, they actually have enough missiles to overwhelm us and we have to have a different theory of deterrence to make sure that we never get attacked. And I think that's one of the important things, the important questions I would say, that I hope you wrestle with today. I know we're just getting started.

Dr. Karako: I'm sure it's going to – I'm sure it's going to come up a few times. We've got a couple other issues I want to make sure we get at. And I'm not sure which of the five buckets this falls in, but I would say the Biden administration's signature missile defense effort, certainly in terms of scope and probably size in this decade, is probably the defense of Guam. And this is – I think it's been called kind of the perfect air and missile defense problem. Because you got a near-peer – a well-armed near-peer in their backyard with a lot of not just ballistic but cruise missiles and other kinds of things. How are you thinking about the defense of Guam? How do you see that progressing? Yeah.

Rep. Moulton: Well, I was in Guam last October. And I went out there because I think it is absolutely imperative that we effectively deter, prevent a war in the Pacific. And you're right, Guam is central to our power projection. It's central to that deterrence. If China think they can just take out Guam, then that doesn't render that piece of our deterrent very effective. So I was curious to see what our guys on the ground in Guam were thinking and doing. And I fundamentally am trying to ask this question that we ask on all CODELs which is, are the strategies we're being briefed in Washington actually being implemented on the ground?

And what I found is that they know in Guam – our officers, our mainly Navy personnel – they know exactly what they need to do. But they're way behind on the timeline. And if you look at what Xi Jinping has laid out for his potential timeline for invading, we need to step up the procurement of missile defense for Guam. You know, we're not talking about necessarily – you know, we don't know exactly how a war would start or where it would go with China. But the expectation is that they wouldn't launch hundreds of, you know, intercontinental ballistic missiles at Guam, right? So it really is in that theater-level category, where we have to defend it.

And we have very effective systems, like THAAD, for example, which actually has a near perfect intercept record, which is really remarkable. We have a lot of effective systems that can help with this problem. But if

they're not – if they're not deployed yet, if they're not in place by Xi's invasion timeline, then we've got a problem.

Rep. Lamborn: And I would add to that, Seth has said some things I really agree with. I've been to Guam several times myself. And it is an island. It's not going to sink or anything like that. (Laughter.) And we need to make the defense of it a priority. I agree with Seth completely. This is, once again, an area of bipartisan agreement we have. And I agree with the Biden administration when they came out with their Missile Defense Review and talked about the importance of Guam. And I support that 100 percent.

Dr. Karako: Wonderful. I look forward to discussions of how it fits into the PDI in the coming weeks, as you do hearings.

Now, Ukraine was mentioned. And Mr. Moulton, you mentioned kind of the day-to-day, week-to-week air and missile defense activities are going on in Ukraine. I think – I can remember five years ago when it was, oh my goodness, Russian cruise missiles are just – they're too good. We couldn't possibly think about that. And here we have, you know, NASAMS and other things in Ukraine on a weekly basis, apparently engaging these successfully. So I'm just curious about your take on the air and missile conflict that you see going on there, and maybe the lessons learned for the missile defense enterprise about what we – what we see happening there.

Rep. Lamborn: Seth, do you want to go first?

Rep. Moulton: Sure. I mean, I'll say, first of all, the Ukrainians have been remarkably innovative, creative, and fast. They're fast, right? They don't have time to have a years-long development cycle, you know, lots of contracting disputes, and then finally figure out how to produce these things. They're doing in months what we have scheduled to do in years. And that might be one of the most important lessons that we have to learn. Because when you get back to the Pacific and you look at all our deterrence plans to prove to China that it's a very bad idea, it's not going to go well for you, if you start a war over Taiwan or anywhere else.

The biggest concern I have is not that we don't have the technology or the willpower, or simply the plans and strategies to be able to do that effectively. It's that we're not doing it on the timeline that we need to meet. And so there's a lot of great technological innovations that have come out of Ukraine. There are a lot of great lessons that we can learn on that front. But I think one of the most important lessons that we have to

learn is they're doing things as quickly as we need to do in the Pacific, and we've really got to pick up the pace.

Rep. Lamborn: Yeah, and the Ukrainians are doing a remarkable job. I support them 100 percent. Huge bipartisan support in Congress for our friend, Ukraine. And for the – right behind their borders, or NATO allies close by. NASAMS have been huge and effective, as you mentioned. Our Patriots will be very effective once they get in there. They're on the way. So I'm excited about that. But sometimes you have low tech weapons, like drones – Iranian drones. They're working with Russia. They want to build a factory there to produce multitudes of these things. We saw how an Iranian drone killed an American in Syria just earlier this week, which is – which is sad.

So fighting drones is more of a low tech issue compared to intercontinental ballistic missiles or hypersonics. But it's something we still need to put our R&D dollars and deploy effective defenses there. And of course, Ukraine is a crash course. We're seeing in some respects the Russians are a paper tiger. But nevertheless, they're brutal, and vicious, and ruthless. So we have to do what we can to defend our friends, the Ukrainians, including learning about what's working and not working.

Dr. Karako: So let me follow up on that, which is to say you've both talked about kind of the importance and the utility, and I would say the feasibility, of active air and missile defenses in Ukraine. And you've also talked about it in terms of the importance, and the feasibility, and the necessity, really, of active air and missile defenses for Guam. And yet, both of these are about air and missile defenses in relate to a near peer, not a rogue state. And so, so much, I would say, of the missile defense conversation in the past has been about, well, we're just focused on the rogue states.

We can't think about the near peers because, and you said it, Mr. Lamborn in your opening, the big threat – we can't try to defend against that because it's destabilizing. How do we think about stability and the relation of active air and missile defense to strategic stability, when it sure looks like Russia and China are willing to overturn all kinds of tables, and do all kinds of things that are destabilizing to the international order? How do you think about that post-Ukraine, post-Crimea, post-the shenanigans in the South China Sea? Are we thinking about that differently in terms of the reality of the past several years?

Rep. Lamborn: I'm really concerned about China because their agreements that they're forming now with Russia, with Putin, you saw the picture of them having a toast together just a couple days ago. That's very troubling. China is

engaging in a nuclear breakout. There's no other word for it. They're building hundreds of nuclear ballistic missiles and warheads. They've overtaken us as a country that's come out in open sources in terms of the number of missile launchers that they have available to them. And they – and when New START was negotiated with the Russians, the Chinese weren't even a factor in those discussions. And yet, now they're trying to overtake the U.S. And who knows what some kind of agreement with Russia could produce, you know, God forbid, in a nuclear scenario.

So we need to be – and I'm calling on the Biden administration to look to include China or, in some way, incentivize them to come to the negotiating table. They have not yet done so. And I want to call on the administration to do even more to make them, to force them, to give them incentives to come to the negotiating table. Because what they're doing is very destabilizing, particularly if you think about some kind of collusion or co-partnership that they have with Russia.

Rep. Moulton: So, once again, I agree with everything that Doug just said. I mean, we're in a totally new world now where we don't just have one near-peer adversary, where it's very easy to balance, you know. If they shoot all these missiles, we're going to shoot all those missiles, and so neither of us is going to do it, right? Now we've got three, and how do you have treaties amongst three, and everything. These are all very, very challenging questions. And we do. We need to get theories, and answers, and have these debates.

But I think the question is really about whether the tactical level, operational level missile defense, shooting – you know, Ukrainians shooting Russian or Iranian drones out of the sky using our technology – is actually contributing to strategic instability, right? And I think it's not at all. In fact, what this conflict has proven is that if you use missile defense at that level two level that I laid out – I'm sure you all took notes on the five levels so we're all on the same page here. (Laughter.) But if it's at that level two level, it does not affect strategic instability.

Because, look, it's pretty remarkable that Ukraine is crucifying the Russian military using our support, and yet there have not been any fundamental changes to our strategic stability. The U.S. is not in a direct war with Russia. Despite all of Putin's threats of the use of nuclear weapons, he has not used nuclear weapons because he understands our strategic deterrent against them. So actually, no. I think that it's a great question, but the kind of premise of your question is kind of exactly wrong, that actually we've proven that strategic stability at this level, at the number-five level, really works.

Dr. Karako: Very good. So closely connected to that, also about the near-peers, not the rogues – at least, not yet, anyway. And that is this thorny and really hard problem of hypersonic defense. You know, hypersonic missiles are just missile, but they are able to sustain and control flight in a really complex thermal and aerodynamic environment. And it's very unpredictable, relative to those predictable ballistic trajectories. So is hypersonic defense possible? Can we afford not to do hypersonic defense of Guam, and just do the other stuff, for instance? How do you think about that emerging capability?

Rep. Lamborn: That is an emerging threat, especially with China. Russia talks about it, and they have some capability. China is the one we have to watch. China wants to build multitudes of these things – hundreds of thousands – multitudes of hypersonics. And they have some right now in their arsenal. We do not have a viable offensive capability with hypersonics. We're doing some testing. We're learning a lot from our testing. We're starting to build the beginnings of an industrial base. I was really glad when President Biden made a declaration with the Defense Production Act on March 3rd, saying we're going to have an industrial system and base that allows for the production of hypersonics in an efficient and effective way.

But we're not nearly where the Chinese are, much – or the Russians, for that matter. And that's offensive capability. When it comes to defense against hypersonics, and to make sure we're all on the same page that's Mach 5 or higher, 3,000 miles an hour or faster, and maneuverable. No one has a defense against that. No one has a defense against that. We're starting to put some dollars towards research and development. I know I'm working on that. I know Seth will agree and help on that as well. That in the next NDAA, and we started in the past a little bit, but we have to beef up our R&D on that. And the Missile Defense Agency will be the perfect agency to do that.

Rep. Moulton: So here's the challenge with hypersonics. You kind of – you have two fundamental different types of hypersonics. And it's really about how they're used, not about the technology specifically. But one type of hypersonic missile is, like, the next-generation Tomahawk, right? So you're going to use these against Guam. They're conventional munitions, but we're not going to be able to shoot them down very well so the Chinese have a better way to attack Guam effectively.

The second type of hypersonics is a strategic, essentially, nuclear hypersonic, right? We are not developing nuclear-tipped hypersonics. The Russians are, right? So they view the hypersonics as complementary to their ICBM fleet, to, you know, hold us at risk and contribute to strategic deterrence. Now, what Doug was talking about is we're looking at how you defend against the first type, because we want to be able to defend Guam and that's really important. But we have made a policy decision across multiple Democratic and Republican administrations, that the way to defend against nuclear hypersonic missiles is deterrence. That we're going to make it very clear to the Russians that if you shoot a hypersonic missile at Los Angeles with a nuclear warhead, you're going to get a full response from our triad, right?

Now, the problem is that you can't do either of those things if you don't have the third component, which is just being able to see these things when they're coming. And that's another place where we know we have a lot of work to do, because if we can't even detect that they're coming, then we're not going to be able to shoot them down, for the first group, attacking Guam. We're also not going to be able to launch a response from our triad, because we didn't even know it was going to hit us. So that's not very effective deterrence.

So the point is that we've really got to get, again, our theory of deterrence right here. And we want – we've made a – we've made a decision. We want missile defense to protect Guam from those hypersonics that are coming in, that's, like, the next-generation Tomahawk. But we have a different theory to deal with the other ones. And both of them require us to be able to see these things, which we can't do right now.

Rep. Lamborn: And I think you're referring to building out the HBTSS, space sensor layer. That will be important for detecting hypersonic threats if and when they materialize, and for giving tracking information to whatever defensive capability we might have, whatever, like, the glide interceptor phase vehicle that we would have to get the right signals, so they know where to go to intercept.

But when it comes to hypersonics, and I think Seth is really coming along with me on this, but we have a real need as a country to develop this offensive capability. There are some problem sets that are only solvable with hypersonics. You think of deep inland, mainland China, for instance. There's no other way, with certain problems, to address them without hypersonics. And some people say, well, we don't want to get into an arms race, because that's destabilizing.

OK, I would say a one-sided arms race is even more destabilizing. (Laughs.) If they have a viable and deadly capability that we're not addressing ourselves, that's extremely destabilizing. It gives them the temptation to start using that. And we have to at least show them we have a capability that they have to be very cautious about.

Dr. Karako: Let me dig in on this a little bit. And what I heard from both of you – both in your opening remarks and what you were just saying there in terms of a nuclear payload on a hypersonic glider or something, as opposed to a nonnuclear attack that happens to use scramjets or gliders, for instance. And your point that, hey, to the first thing, that's a really bad day and it makes sense to use the nuclear deterrent first and foremost for that. But it's that second thing that I've heard both of you talk about, the nonnuclear strategic attack – whether it's coming in from a ballistic, or whether it's coming in from a cruise missile, or whether it's coming from some highly maneuverable hypersonic thing, that's critical, especially for the Guams of the world that we absolutely have to defend.

And so my question to both of you then, and we'll get to the HBTSS thing in a minute here, is that's pretty important. And that threat, as you said, is already here. So how are you thinking about, from your perch on the subcommittee, you know, making sure that, for instance, the glide phase interceptor and these kind of things – is this going to be something that you want to see in this decisive decade? Or is the defensive capability, is this something we can put off until the 2030s? How do you think about the relative urgency of that, given the threat that we see from China today?

Rep. Moulton: Well, here's the fundamental problem that we have, is that we have these two different categories of hypersonics, and we agree we need to get radar to see them coming. But we can get the most sophisticated radar in the world, and we're not going to be able to tell which one it is. And that is why hypersonics are so fundamentally destabilizing. Because there is no dispute that if we see a Russian missile launch from an ICBM facility that it's got nuclear – we know. We've done the inspections. We know exactly what it's got on it, right? If they see ICBMs coming out of

Wyoming, or Omaha, or whatever, they know what's going to happen. That's why ICBMs, the whole triad, has really contributed to strategic stability.

Hypersonics are fundamentally destabilizing, and our senior military have agreed on this, because you can't tell what's coming. We've made a policy decision to say we're not even going to try to develop strategic nuclear hypersonics. But of course, if Russia doesn't believe that, then that's not very effective for stability. And it's not clear that they – that they do. They, on the other hand, have made a very conscious and public policy decision to have nuclear-tipped hypersonics. And so what is our theory if we see one of those coming? What is our response going to be? If we're serious about our nuclear triad deterrent, then we should launch a response. But what happens if it just has a 500-pound warhead on it when it hits? That's a real fundamental problem.

And we have to wrestle with this, because this kind of strategic instability, it's not about simply avoiding an arms race. It's literally about avoiding a nuclear holocaust. That's why this is so, so dangerous. And the uncomfortable part of this, for this discussion, is that hypersonics are a direct legacy of missile defense, because we all started developing hypersonics back in the '80s, but then we all stopped. And Russia and China are ahead of us, as Doug said, because they started as soon as we pulled out of the Anti-Ballistic Missile Treaty, established missile defense, and said: OK, if the U.S. is going to develop a system to shoot down our ICBMs, which despite our attestations is what Russia believed, then they have to find a way to get around it. And that is fundamentally why we have such a strategically destabilizing missile or weapon system today, because we pulled out of ABM.

Rep. Lamborn: But one way we lend stability to the situation is we have a no first use policy. So the U.S. will not be in a conflict where we're launching things in a first use scenario –

Rep. Moulton: Well, unless –

Rep. Lamborn: So at least we take that off the table.

Rep. Moulton: Well, but that's not really true, though. Because we're not going to launch a first use against Russia or China, but we have not –

Rep. Lamborn: Even hypersonics, deep inland hypersonics, that they might confuse for a possible nuclear strike.

Rep. Moulton: Right, but the United States has not actually signed up to a blanket no first use policy, because that's actually essential to our defense of NATO, right? We have said to Russia, you can have a conventional assault on Eastern Europe, and you might meet a nuclear response. And that's essential to the NATO deterrent that's helped keep the peace in Europe for decades.

Dr. Karako: But staying with, I think, your analogy of these things as essentially, if they're nonnuclear, they're a better cruise missile. You said, a better Tomahawk, as it were, in terms of kind of the function that they're performing. You also talked about with Ukraine that – I think both of you kind of alluded to this – that the act of defense against cruise missiles on these kinds of nonnuclear attack is it's not only not destabilizing, it's actually stabilizing. So isn't the takeaway from this that, hey, however they got here – as a reaction to Anti-Ballistic Missile defenses, whatever – they're here. And so wouldn't a – prioritizing hypersonic defense for this new generation of missilery, isn't that a necessary next step? That's kind of what we're doing, right?

Rep. Moulton: Let me just clarify what I said, because I didn't say that, you know, shooting Russian drones out of the sky is itself stabilizing. I'm just saying that the higher level of strategic stability that we have because of mutually assured destruction, doing missile defense at a tactical level hasn't affected that, right? So it's not that stability comes from doing missile defense at the tactical level, it's that doing missile defense at the tactical level does not affect strategic stability. That's the lesson that we've learned from Ukraine.

But, look, what you've just said sounds good, right? Like, I feel more comfortable myself knowing that we have a technology to shoot hypersonic missiles out of the sky. I feel more comfortable today. I feel much more worried about the world that I'm going to hand over to my two-year-old and four-year-old daughter if we continue on this arms race, where every time we develop a new missile defense, our adversaries develop a new way to get around it. And that's the problem.

Look, that is what the world realized, even bitter adversaries, in the early 1970s, when we signed the Anti-Ballistic Missile Treaty. We just realized that although it would make us feel more comfortable in the short term to be able to defeat their current technology, it's only going to lead to an arms race and, ultimately, like that scenario in L.A. where you call your daughter and say, hey, you're pretty good because you got a three out of four chance of not getting incinerated by a nuclear weapon, that's not a reality that we want to live with. And so that's the challenge. I think that's the biggest thing that I hope at this day-long conference you

really wrestle with, which is that we all like the short-term plan for missile defense, but what does it mean long term in terms of strategic stability?

Rep. Lamborn: And I would say just that it's not an option to do nothing and cede the field to an adversary and hope that they follow our example, or hope that they learn from us, or hope that they have the best of intentions. We have to match capabilities without a mindless arms race. But we have to match capabilities to the extent that they know we're serious. They know that they're in trouble if they go against us. And they're not going to get a free pass with some technology that they're exploiting and we're not.

Rep. Moulton: And yet, Democratic and Republican administrations – and you can compare the language in our Missile Defense Reviews and the strategy and everything else. It's almost word-for-word. Democrat and Republican administrations have agreed, we are not going to match them. We are not going to match them with strategic nuclear hypersonics. So we've actually agreed that we're not going to do it, and yet that's the argument for developing some more of these weapons. So there's a real, fundamental logical disconnect that we've got to figure out.

And it's obvious to me that this administration nor the previous one have figured this out. And we've asked some really tough questions in our hearings, classified and unclassified. They don't have good answers to this massive logical disconnect that could literally endanger the future of humanity. So we have to – hopefully you guys will come up with a solution today – but we really have to figure that out, because I do think it's very dangerous.

And, Doug, I totally agree with you. We shouldn't do nothing. But doing something might be wising up and getting back to some sort of treaty that limits this arms race, rather than just simply saying we're going to take the next step and, by the way, how long is it going to take for them to take the next step after that?

Rep. Lamborn: And I'll just say, to the Biden administration, find a way to bring China to the negotiating table. We haven't figure that out yet.

Rep. Moulton: It's essential. Essential. And it's very hard.

Rep. Lamborn: Yeah, exactly, and we haven't figured it out. And I think having some capabilities, even if they're in the nascent stage, is more likely to bring them to the negotiating table than not developing capabilities that are

out there that they're working on. And I'm thinking of hypersonics in particular.

Rep. Moulton: That might be true. But it's interesting, if I might cite, I think, Matt Pottinger from the Trump administration, who said that he does not think that China's going to come to the negotiating table until they believe they've reached parity with us. If they're going to have to get 1,500, you know, ICBMS, or whatever it is in their mind to be at parity with us for them to have a negotiation. Which actually argues against getting ahead of them. It actually argues for saying: That's crazy. We hope that you're just going to waste a lot of money because you're going to get to that level and then we're going to negotiate down. But if that's what you need to do, then let's get them as quickly as we can so we can actually have the strategic discussion.

Dr. Karako: So let me move to something that Mr. Lamborn you raised, HBTSS. Regardless of whether we're leaning more on the active defense side against various hypersonic threats or whether we're learning more on the deterrence side, or something else, it's helpful, and it's always been helpful including through all of those years in the Cold War, to have good early warning and good understanding of, hey, what's coming at you, so you understand, so you can inform your deterrence calculus. And so on this track, the Space Force, former STA, is pursuing all number of different space sensors and different constellations. But there's only one, and that's HBTSS, that is devoted to fire control quality track for these threats. Only one.

And during the Trump administration, they kept trying to put it into the SDA as opposed to MDA, Missile Defense Agency. And repeatedly Congress said: No. We're not going to let you do that. We want to keep that with a missile defense centered organization. Again, it's the only sensor that's focused on this. So why do you think – and, Mr. Lamborn, you were focused on this for a while – why do you think that is? Why was Congress so instant on that? And how do you think about the importance of HBTSS and the future role of, for instance, MDA in the space mission?

Rep. Lamborn: Tom, everything you said about HBTSS is absolutely critical and true, and is vital for our future because of the sensing that it does and for the tracking and possible fire control that it gives us if necessary. Hopefully that's not necessary, but if it is it'll be there. MDA is a lot further along in terms of an organization than SDA. So in my mind, that alone makes it worthwhile for it to be the go-to people for HBTSS.

Dr. Karako: OK.

Rep. Moulton: Look, I'm honestly going to defer to Doug on this. He's done a lot more work on this and he's been in the lead. But, I mean, what you said makes sense to me.

Dr. Karako: So let's go to maybe some other advanced capabilities, I think you were alluding to. Directed energy, lasers, and that sort of thing. They're, again, kind of taken out of the Missile Defense Agency's writ by the Trump administration a couple years ago. Now it was, I think, John Plumb who was sitting here in October or November. And he said, look, there's no future of missile defense that doesn't involve kinetic kill, right? So we're always going to have kinetic interceptors. And yet, there's a whole lot of promise for the non-kinetic side of the house. So how do you think about it, from your subcommittee, you know, asking where the non-kinetic solutions are for this space, do you think, in the coming year?

Rep. Lamborn: Well, I'm so passionate about directed energy that I started, with former Democratic colleague Jim Langevin, who's retired now, the Directed Energy Caucus. Because it's got such potential as a cutting edge technology to help us in our future security as a country. I think having more options on the table, like kinetic kill, plus directed energy, or other things – you know, cyber left of launch things would be a great thing to have in the pocket as well. So as many defenses as possible. But directed energy in particular, we're making real progress with them becoming more powerful. The more powerful a laser is, the less time it needs to dwell on an incoming object.

And whether it's a small thing, like a drone, or a Katyusha missile, in Israel, you know, they're working on Iron Beam now, or a Qassam rocket in Israel. You know, apart from intercontinental ballistic missiles, which is a whole different ballgame, but the smaller theater-type missiles are going to be a viable target where lasers can actually shoot them down. And the more powerful the laser, the quicker they do the job, and that makes them more effective. And we're seeing some demonstrated capability. And it's real exciting.

Rep. Moulton: I mean, look, this is just the history of the world, right? It's very easy to say I can't imagine a future without X technology, and then, you know, it becomes superseded, all sorts of things. So, I mean, I like John Plumb a lot. I think he's a little bit out over his skis to say that we're never going to get away from kinetic interceptors. We just don't know what the future is. And that's why investigating this, understanding it, really coming to a deep understanding of what its capabilities are, is really essential. And then we can better, you know, adjudicate what kind of money we want to invest in it.

Dr. Karako: Good. Well, we've – I know I've got to get you all back for votes. So I want to just kind of give you one last opportunity to maybe talk about any other big priorities that you have for the coming year, anything you'd, you know, like the community to think about in this space.

Mr. Moulton, do you want to kick off?

Rep. Moulton: Look, I've already given you my priority. (Laughter.) We need to come up with what the theory is for deterrence with these new weapon systems. And missile defense has to be part of that calculation. You have to understand not just the good things that come out of it, because it's a remarkable technology and it makes us feel safer in the short term. But the negative consequences to the arms races that it can engender in the long run. And this is really about not just what we need to do to meet today's threats and to deter the threats in the next few years, but the legacy of all the decisions that we're making today for the future of our world, and the long-term national security of the United States.

Rep. Lamborn: And I would say, Tom, that as a subcommittee, I am going to be really focused on – and I know everyone is going to agree on these priorities – three things, two of which you already touched on. The Chinese nuclear threat. They're conducting a breakout right now which is very troubling. The need to have offensive hypersonic capabilities. And someday defensive. Let's start working on that as well, because we're behind the Chinese. There's no other way around it. But thirdly, modernization. Modernization of our nuclear triad.

Now, missile defense is a huge deterrent, but making sure we have a credible nuclear response, you know, God forbid it's ever necessary, but having it there is a credible form is essential. And that's the sea-based, air-based, and land-based. And in all three cases, we're kind of going right up to the edge of starting to push our luck a little bit if we're not going to keep up with a rapid enough pace of modernization. We have older systems that are becoming not obsolete, but they're starting to get close to the point where their credibility could be called into question.

So the Sentinel program for ground-based nuclear missiles, ICBMs, or the Columbia-class submarine, or the B-21 radar stealth bomber, those are all things we're working on, and they're coming along, and they've got great promise. But they're not coming along ever, and this is maybe bureaucracy in the Pentagon, but as fast as we would like. And so we've got to keep pushing each one of those programs, making sure they're funded properly, but making sure that there's no glitches that are holding up future projections. And that's something – it's a constant

struggle and challenge and I know we're going to be working on that a lot.

Dr. Karako: Only easy problems on your subcommittee.

Rep. Lamborn: That's right. (Laughs.)

Dr. Karako: Well, look, really appreciate you both taking the time. You've been very generous, I know, on a very busy day. I'm sure we'd love to welcome you both back here in the near future. Thanks, everybody, for being here. What we're going to do is we're going to take a five-minute break. We're going to reset the stage. Then we're going to have some opening remarks by Roger Zakheim, the director of the Ronald Reagan Institute, who are our cohost for today. And then we'll have a whole nother panel hosted and moderated by Anthony Eames also of the Reagan Institute.

So, in the meantime, please join me in thanking Mr. Lamborn and Mr. Moulton. Thank you all. (Applause.)

(END)