Top Pentagon Future Technologies Official Pushes Offensive Hypersonic Weapons Capability

Michael Griffin, the undersecretary of defense for research and engineering, speaks to a Hudson Institute forum on Aug. 13. Hudson Institute via YouTube

The Defense Department is developing a space-based sensor system and an associated communication network to defend the nation against hypersonic weapons. But the military's top future technologies official also wants to field an offensive capability.

Although the United States led the world in developing significant parts of hypersonic technology, "we choose not to weaponize it," Michael Griffin, the undersecretary of defense for research and engineering, said Aug. 13.

But "our adversaries are developing hypersonic weapons." In response, "I came into office wanting DoD to make a big deal of that. I want to be the offense. I want to hold others hostage. … Hypersonic technology is the key to that."

In addition to the research being conducted by defense agencies, the U.S. Navy, Army and Air Force all have programs to produce hypersonic missiles, with some test flights expected within a year.

Griffin said the danger from hypersonic weapons is that they "overfly our air defense and underfly missile defense. They're a new class of threat we have to deal with," he told a Hudson Institute forum. And that requires sensors in space that can detect and track hypersonic missiles, which can fly more than five times the speed of sound and, unlike ballistic missiles, can maneuver.

Because they fly so low and so fast, "by the time we see them, it's too late in the kill chain" to intercept them. "We have to see them farther out. Radar detection ranges are "about as good as they're going to get," he said. "If this were exclusively a land conflict, the solution would be to forward-deploy radars." But intelligence suggests a future war would be "a maritime conflict," Griffin said.

Because there are "not a lot of islands out there" to put radars on, "we have to move to space. You can see a lot from space." Hypersonic weapons also present a dimmer target than ballistic missiles so the space-based sensors need to be in a lower orbit than those looking for ballistic missiles, he explained.

"The sensor layer is critical. But if it can't talk among itself, it won't be efficient. The network underlays everything we need to do, in space, land and maritime. That's what we don't have today," Griffin said.

Developing that network is one of the main jobs of the Space

Development Agency (SDA), which then-acting Defense Secretary Patrick Shanahan created in March, Griffin said. SDA was placed under Griffin, but if Congress agrees to create a Space Force, as President Donald Trump proposed, and Griffin supports, SDA would move into the Space Force, he said.

Asked about the ground-based midcourse missile defense system, which includes the 44 interceptors in California and Alaska, Griffin said he has “a great deal of confidence” in that system, even though the Missile Defense Agency stopped its program to develop a new kill vehicle for the interceptors because preliminary tests indicated it would not be successful. Now the MDA and his office are looking for alternatives, Griffin said.

Under official U.S. policy, the current missile defense system is not designed to counter an attack from Russia or China, which have more ballistic missiles than it could handle. Building a system to defend against Russia and China would be a budgetary issue, not a technology challenge, Griffin said.

“We know how to do it,” he said.