

North Korea's Hypersonic Missile Less Developed Than China's

THE ISSUE

On January 5 and 11, 2022, Pyongyang test-launched its second hypersonic missile capable of evasive flight maneuvers. The missile event was yet another step in North Korea's relentless development in recent years of a more extensive and improved arsenal of land-based and sea-based missiles to threaten the United States and its allies South Korea and Japan. Every North Korean missile development is worrisome, particularly missiles that could have the ability to evade allied missile defenses.

However, North Korea's short-range hypersonic missile is far less capable than the Chinese long-range hypersonic missile launched in October 2021. The Chinese missile has an intercontinental range and could theoretically be deployed on any Chinese satellite.

HOW DANGEROUS ARE NORTH KOREA'S HYPERSONIC MISSILES?

- On January 5 and 11, Pyongyang launched a new hypersonic glide missile with the same warhead that successfully flew between 700 and 1,000 kilometers (km), respectively, while conducting several evasive maneuvers. The missile was likely first revealed during a North Korean weapons exhibition in October 2021. In September 2021, North Korea launched a new Hwasong-8 hypersonic glide missile that flew 200 km.
- North Korean-released photos show two distinct warhead designs—that of the missiles launched in January, and that of the Hwasong-8 launched last September. Both missiles may be

capable of longer ranges than demonstrated in their initial test flights. It is not clear whether the two hypersonic vehicle designs are meant to compete with or complement each other and whether both would be deployed.

- Hypersonic missiles fly at least five times the speed of sound, as does any ballistic missile traveling more than approximately 300 km. More important than the speed, however, is that both hypersonic missiles have detachable, maneuverable warheads that can fly at lower altitudes than standard ballistic missiles, which follow a more predictable parabolic trajectory. These characteristics make radar tracking more difficult and enable the weapons to evade allied missile defense interceptors.

DANGEROUS, BUT LESS CAPABLE THAN CHINESE HYPERSONIC MISSILES

- In October 2021, China tested a long-range hypersonic weapon that went into orbit before launching a smaller vehicle that struck a target on Earth. General John Hyten, then-Vice Chairman of the Joint Chiefs of Staff, stated that the missile “went around the world, dropped off a hypersonic glide vehicle that glided all the way back to China [and] impacted a target in China.”
- Beijing's ability to place the system into orbit means that, in the future, every Chinese satellite will have to be considered a potential hypersonic weapon carrier—with dire consequences for crisis stability.

This paper, in its entirety, can be found at <http://report.heritage.org/fs227>

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HOW DANGEROUS IS THE NORTH KOREAN NUCLEAR AND MISSILE THREAT?

During his 10 years in power, Kim Jong-un accelerated development of North Korea's nuclear and missile programs and exponentially increased testing of all ranges of weapons systems.

By 2017, North Korea was assessed to have produced 30 to 60 nuclear warheads or weapons' worth of fissile material with capacity to create seven to 12 warheads per year, and successfully tested a hydrogen (thermonuclear) weapon in 2017 at least 10 times as powerful as the Hiroshima and Nagasaki bombs.

- Washington and its allies assess that North Korea has the ability to deliver nuclear weapons against targets in South Korea, Japan, U.S. bases in Guam and Hawaii, and the continental United States.

North Korea is producing a new generation of advanced mobile missiles that, in addition to being more accurate, more mobile, and more difficult to detect and target, have an enhanced ability to evade allied missile defenses.

- In 2017, North Korea successfully tested two intercontinental-ballistic-missile (ICBM) systems that could target the American homeland with nuclear weapons.

The Hwasong-14 can reach half of the United States, while the Hwasong-15 is capable of targeting the entire continental United States.

- In 2020, Pyongyang paraded a multiwarhead ICBM that has not yet been flight tested. Coupled with Pyongyang's newly developed ability to domestically produce large (11-axle) transporter-erector launchers for ICBMs, the regime might be able to overwhelm the limited missile defense system protecting the American homeland.
- In 2019, North Korea launched 26 missiles, the most ever in a year, revealing five new short-range and medium-range missile systems to threaten South Korea, Japan, and U.S. forces stationed in both countries.
- In 2021, Pyongyang conducted additional missile launches, revealing an additional five new missile systems, including a long-range cruise missile, a submarine-launched ballistic missile, an improved short-range ballistic missile, the first North Korean missiles launched from a train, and a hypersonic glide missile.
- All North Korean ballistic missile launches, regardless of range, are violations of 11 United Nations Security Council resolutions.