



— UNITED STATES AIR FORCE —  
**CENTER FOR STRATEGIC  
DETERRENCE STUDIES**

**NEWS AND ANALYSIS**

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Welcome to [USAF Center for Strategic Deterrence Studies](#) News and Analysis. As part of the CSDS mission to develop [U.S. Air Force](#), [Department of Defense](#), and other [government](#) leaders to advance the state of knowledge, policy, and practices within strategic defense issues involving nuclear, biological, and chemical weapons, we offer the government and civilian community a source of contemporary discussions.

## Feature Report

["Air Force B-21 Raider Long-Range Strike Bomber"](#). Congressional Research Service; Updated September 22, 2021.

"The B-21 is intended to operate in both conventional and nuclear roles, with the capability of penetrating and surviving in advanced air defense environments. It will be capable of operation by an onboard crew or piloted remotely. It is projected to enter service in the mid-2020s, building to an initial fleet of 100 aircraft. B-21s will be based at Dyess AFB, TX; Whiteman AFB, MO; and Ellsworth AFB, SD, with Ellsworth as the training base." [Read Report](#).

## Nukes and Deterrence, Counter-WMD, and Arms Control in News and Research

### NUCLEAR WEAPONS AND DETERRENCE

- [Northrop Grumman Now Has Five B-21 Stealth Bombers in Production](#) (Defense News)

Previously, the Air Force had only acknowledged two B-21 test aircraft in production — a sign that the program may be accelerating as it heads toward a planned first flight in 2022.

- [Next-gen ICBM Survives Defunding Attempt in House](#) (Defense News)

The nascent Ground Based Strategic Deterrent's been at the center of a drawn-out fight over whether the U.S. needs land-based nuclear missiles in addition to sea- and air-launched missiles.

- [GBSD: First Missile Test Flight 2023, Initial Production 2026](#) (Breaking Defense)

The Minuteman III missiles, their silos, command and control system, etc., were first fielded in 1963 ... they still use largely analog, not digital, communications systems ... .

- [USS Wyoming Submarine Conducts Two-missile Trident II Test Flight](#) (UPI)

"The DASO test, and others like these, underscore our readiness and capability for 21st Century Strategic Deterrence," Rear Adm. Thomas E. Ishee, USSTRATCOM director of Global Operations, said.

- [AFA NEWS: Experiments Informing Nuclear Command, Control Upgrades](#) (National Defense)

The Pentagon is pursuing a variety of new systems for its nuclear triad, which includes air-, ground- and sea-based platforms.

- [The Nuclear Policy Trilemma "Keynote Address by Senator Angus King"](#) (CSIS)

"Now China is very much in the mix. It's now a tripolar world and it's – and China is deeply engaged in a nuclear buildup."

## COUNTER-WMD

- [Patriot Missiles Fired from Hawaii for First Time](#) (Stars and Stripes)

The truck-mounted PAC-3 is the Army's premier guided air and missile defense system, capable of countering aircraft and sophisticated tactical ballistic and cruise missiles.

- [Upgraded Boost Vehicle Meets Test Requirements](#) (Redstone Rocket)

The GMD element of the Missile Defense System provides combatant commanders the capability to engage and destroy intermediate and long-range ballistic missile threats to protect the U.S.

- [Army Reserve Soldiers Tackle Toxic Valley Exercise](#) (U.S. Army)

CBRN teams have spent their days reacting to a variety of training scenarios with both simulated and live chemical agent threats.

## US ARMS CONTROL

- [The Special Role of US Nuclear Weapons](#) (Atlantic Council)

The United States should continue to pursue nonproliferation policies to denuclearize North Korea and prevent Iran from acquiring nuclear weapons.

- [Better Monitoring and Better Spying: The Implications of Emerging Technology for Arms Control](#) (Texas National Security Review)

These factors provide a framework to analyze the likely effects of emerging technologies, four of which are addressed here: small satellites, drones, AI, and digital additive manufacturing.

- [North Korea's Uranium Enrichment Plant: What to Make of New Construction](#) (38 North)

Building an addition to the centrifuge halls is one possibility, as North Korea has set goals for its nuclear weapons program that will require more of both plutonium and high-enriched uranium.

- [US Rules Out Redeploying Tactical Nukes to South Korea](#) (VOA)

Conservative South Korean politicians have for years called for their redeployment, especially as North Korea has expanded its own nuclear weapons program.

## COMMENTARY

- [Improved Missile Defense Essential to Countering North Korea, Iran](#) (The Hill)

"America's limited intercontinental ballistic missile (ICBM) defenses are clearly designed to defend against rogue states with only modest nuclear-strike capacity."

- [Limiting the Nuclear-proliferation Blowback from the AUKUS Submarine Deal](#) (The Strategist)

"This non-treaty association of states aims to limit the risks of nuclear proliferation arising from the sale and transfer of nuclear-capable delivery systems."

- [Merkel's Silence Over Defense Will Haunt Her Successor](#) (Carnegie Europe)

"It does mean, however, that the United States will continue to want the Europeans to take on more of the burden when it comes to deterrence and defense spending."

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