



UNITED STATES AIR FORCE  
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# CSDS News and Analysis 1480 (Feature Report: “Air Force B-21 Raider Long-Range Strike Bomber,” Congressional Research Service)

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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 July 7, 2021, 15 pp.

The Department of Defense is developing a new long-range bomber aircraft, the B-21 Raider (previously known as LRS-B), and proposes to acquire at least 100 of them. B-21s would initially replace the fleets of B-1 and B-2 bombers, and could possibly replace B-52s in the future. ... The Administration’s FY2022 budget request included \$2.98 billion for further development of the B-21. As passed, the FY2021 defense appropriations bill funded the program at \$2.84 billion. As a large defense program that involves issues of strategic and nuclear policy, as well as substantial expenditures, the B-21 is likely to be subject to significant congressional interest. [Read Report](#).

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

### NUCLEAR WEAPONS AND DETERRENCE

- [Tailoring Deterrence for China in Space](#) (RAND)

[The authors] review literature on classical deterrence theory and identify some key features that are particularly relevant to deterrence in the space domain.

- [Building an Agile Force](#) (Mitchell Institute)

In this report, Heather Penney explores how the Air Force can rejuvenate the aerospace industry to achieve a force that can innovatively outpace peer adversaries.

- [Northrop Lifts Outlook as Countries Ramp Up Space Exploration](#) (Reuters)

Analysts say Northrop’s B-21 bomber and GBSD intercontinental ballistic missiles are likely to be the backbone for the company’s growth over the next decade.

- [US Concern Over China Nukes Buildup After New Silos Report](#) (Reuters via VOA)

The report came weeks after another on the construction of about 120 missile silos in Yumen.

- [Exercise Tests DOD's Integrated Deterrence](#) (DoD)

GIDE 3 enabled [rapid collaboration] with all 11 combatant commands and across the department to see pertinent data and information, using a variety of sensors, [AI] and machine learning.

- ICYMI: [BUFF Up](#) (Air Force Magazine)

Once complete, Air Force Global Strike Command's improvements to its 76 B-52s will provide the equivalent of an extra 22 bombers' worth of weapon-carrying capacity.

## COUNTER-WMD

- [Lawmakers Demand Clearer Picture for Guam Missile Defense Plans](#) (Defense News)

MDA Director Vice Adm. Jon Hill said the plan ... includes the use of mature capabilities, which are believed to include the Aegis Combat System and the Terminal High Altitude Area Defense system.

- [Austin Says Alaska Is Strategic Hotspot for Indo-Pacific, Arctic Operations](#) (DoD)

On the way to Eielson in Army helicopters, local commanders gave Austin an aerial tour of the Clear Space Force Base and the missile fields that protect the homeland from rogue state missiles.

- [U.S. Hits One of Two Targets in Missile Defense Test - Agency](#) (Reuters)

The test on Saturday, dubbed "Flight Test Aegis Weapon System 33," aimed to intercept two short-range ballistic missile targets with two other missiles launched from a U.S. Navy warship.

- [Parasites to Fight Chemical and Biological Weapons](#) (James Cook University)

The funding is part of a US\$16.4 million contract awarded to US research and development company Charles River Analytics from the US Government's Defense Advanced Research Projects Agency.

- [DoD Professor Develops Countermeasure to Deadly Nerve Agent](#) (Uniformed Services University via DVIDS)

Researchers ... have identified a neuroprotective combination therapy that is effective against organophosphate (OP) nerve agent exposure.

## US ARMS CONTROL

- [Biden's 6-Month Clock On Russia-U.S. Nuke Talks Starts Now](#) (Defense One)

Some likely topics for the working groups include missile defense, new technologies such as hypersonic glide vehicles, and how to shape an agreement to replace New START ... .

- [U.S. Plans Sanctions Against Iran's Drones and Guided Missiles](#) (Wall Street Journal)

Western security officials say they view Iranian precision-strike capabilities as a bigger immediate threat than nuclear enrichment and ballistic missiles.

- Podcast: [Why Is China Expanding Its Nuclear Arsenal](#) (The Daily, New York Times)

The nation appears to be undertaking its most significant expansion in the history of its nuclear weapons program.

- [Nuclear Notebook: How Many Nuclear Weapons Does North Korea Have in 2021?](#) (Bulletin of the Atomic Scientists)

North Korea produces plutonium at its five megawatt-electric (MWe) nuclear reactor, located at the Yongbyon Nuclear Scientific Research Center in North Pyongan province.

- [The Future of the Global Norm Against Chemical Weapons: An Interview With Susanne Baumann](#) (Arms Control Association)

Concerns are rising that some desperate leaders have become newly emboldened to use chemical weapons, which generally cause slow, agonizing deaths.

## COMMENTARY

- [Building An Agile Force](#) (Air Force Magazine)

"U.S. aerospace forces can no longer spend decades in a quest to secure the most exquisite capability, nor use capability as a reason to reduce capacity. We cannot do more with less."

- [China: The Forgotten Nuclear Power No More](#) (Pacific Forum)

"New evidence has surfaced that China may be expanding its nuclear arsenal much more and much faster than previously assumed."

- [Industry Vital for Deterring Aggression in Space](#) (National Defense)

"A lesser known — but equally important — aspect is deterrence by denial of benefit. This refers to the capability to deny the other party any gains from the action which is to be deterred."

