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# CSDS News and Analysis 1476 (Feature Research: “COTS and Space-based Missile Defense,” Capt. Joshua Daviscount, USAF, AU Press)

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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 Research

["COTS and Space-based Missile Defense"](#). By Capt. Joshua Daviscount, USAF. Wild Blue Yonder, Air University Press. June 28, 2021.

American interests at home and abroad are under threat by three major classes of exo-atmospheric missiles: ballistic nuclear weapons, hypersonic nuclear or conventional glide vehicles, and short-range theater-based missiles such as the SCUDs used to attack American air bases. ... Even more worryingly, the Department of Defense (DOD) has no current counter to modern warheads and hypersonic delivery vehicles favored by the Russian and Chinese missile services. [Read Research](#).

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

### NUCLEAR WEAPONS AND DETERRENCE

- [Russia in the Arctic—A Critical Examination](#) (Carnegie Endowment)  
Russia has big Arctic plans, but how they will be realized is uncertain. For the United States this will likely mean the return to a Cold War–like environment rather than a new chapter in great-power competition in the Arctic.
- [Did Russia Test Hypersonic Missile From Syria? Israel May Know](#) (Breaking Defense)  
The KH-47M2 Kinzhal is an air-launched Russian nuclear capable missile with a range of 2,000 km. It can reach a speed of Mach 10 and is capable of performing evasive maneuvers.
- [Air Force Awards Contract for New Long-range Missile System](#) (Air Nuclear Weapons Center)  
“The LRSO team has strived for nearly three years to ensure the Air Force achieved a stable cruise missile design meeting the nation’s requirement for a credible air-delivered nuclear deterrent for many years to come,” said Elizabeth T. Thorn, LRSO program manager.
- [Coast Guard Considers Arctic FONOPs As Russian Activity Increases in Region](#) (Military.com)  
In a report in March, they [two experts] recommended that the issue be dealt with through diplomacy and deterrence.
- [New Mexico Activists Sue Federal Agencies over Pit Production Plans](#) (Santa Fe New Mexican)  
Plans call for Los Alamos and Savannah River to eventually make a combined 80 plutonium pits a year to modernize the nuclear arsenal and to equip a new warhead on a land-based Air Force missile.

- [Sticks and Stones: Nuclear Deterrence and Conventional Conflict](#) (Journal of Indo-Pacific Affairs)

The 2,200-km border has been a source of tension between the two regional powers since the British colonial government in India signed a treaty with Tibet that established the McMahon Line.

## COUNTER-WMD

- [SMC Eyes MEO Sats For Missile Tracking](#) (Breaking Defense)

The program also is novel in its consideration of an MEO orbit — the area of space between the edge of LEO at 2,000 kilometers above the Earth and the edge of GEO, which begins at 35,786 kilometers.

- [INDO-PACOM Used Ground-based Aegis Combat System Prototype to Target Missile Threats, Surface Targets](#) (USNI News)

Lockheed Martin has experimented with using the sensors on an F-35 to provide targeting data to missiles launched from the shore.

- [NYC Subway Sensors Could Provide Early Warning for Potential Chemical and Biological Threats](#) (Homeland Security Today)

Quickly detecting and mitigating biological or chemical threats in the subway is critical for preventing the spread of hazardous materials should the unthinkable occur.

- [If a Killer Robot Were Used, Would We Know?](#) (Bulletin of the Atomic Scientists)

In general, an attack with the autonomous mode enabled would look exactly the same from the outside as a manual-mode attack, except for probably imperceptible changes in decision-making speed. Compare that with verifying the use of chemical weapons.

## US ARMS CONTROL

- [China Bolsters Its Nuclear Options With New Missile Silos in a Desert](#) (New York Times)

Satellite images of construction could fuel the debate over American nuclear modernization and the future of arms control negotiations.

- [Grand Illusions: The Impact of Misperceptions About Russia on U.S. Policy](#) (Carnegie Endowment)

Getting Russia right ... is essential because the alternative of misreading them is a recipe for wasted resources, distorted national priorities, and increased risk of confrontation.

- [Exploring Post-INF Arms Control in the Asia-Pacific: China's Role in the Challenges Ahead](#) (International Institute for Strategic Studies)

With a new administration in Washington, it is worth revisiting this troubling dynamic and considering the prospects for regional arms control and risk reduction between the US and China.

- [India Arrests Alleged Uranium Traders](#) (Arms Control Today)

In the first case, Indian police arrested two men in Maharashtra for allegedly possessing 7.1 kilograms of natural uranium, estimated to be worth more than \$2.8 million, according to news reports.

## COMMENTARY

- [Great Power Competition Requires Theater Deterrence](#) (U.S. Naval Institute)

"The United States and its allies must have sufficient combat power in key theaters such that the enemy will hesitate to undertake hostile operations."

- [Walking the Tightrope: U.S. Extended Deterrence in Northeast Asia Under President Biden](#) (Stimson)

"In order to enhance extended deterrence and strategic stability in Northeast Asia, the Biden administration must consider the relationship between conventional forces and risks of nuclear escalation."

- [Erasing the Line between Theater and Strategic Defense Systems: Implications for U.S.-Russia Relations](#) (Center for Arms Control and Non-Proliferation)

"Even though the layered architecture would still pose no credible threat to Russian nuclear deterrence,

building more of it with greater capabilities to counter strategic weapons will be seen as a step toward nullifying those systems."

