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**


"The impact of cyber on nuclear stability is one of the most forward-looking and strategic topics in the current international security field. The Shanghai Institutes for International Studies (SIIS) and Carnegie Endowment for International Peace (CEIP) have conducted a joint study around this topic, aiming to provide a reference for the establishment of cyber and nuclear stability mechanisms among nuclear states." [Read Paper](#).

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

**NUCLEAR WEAPONS AND DETERRENCE**
- Russian and Chinese Nuclear Threats Pose Problem for U.S. Deterrence, Experts Say (USNI News)
  Adding in China, ... expected to at least double its [nuke] stockpile in a decade, as well as North Korea and possibly Iran, Payne said, “the threat context is becoming more and more challenging.”

  Strategies of deterrence and compellence differ in their relationships to the prevailing status quo: Deterrence seeks to preserve the status quo, while compellent policies seek to alter it.

- Sharpening the Blunt Tool: Why Deterrence Needs an Update in the Next U.S. National Security Strategy (Strategy Bridge)
  Emerging concepts such as tailored deterrence, cross-domain deterrence, and dissuasion offer new ideas to address criticisms of deterrence in theory and practice.

- ICYMI: Credibility of U.S. Deterrence in the Baltic States After Crimea’s Annexation (CSDS)
  Russia’s actions in 2014 raised the apparent threat level to the Baltic states and demanded additional deterrence ..., either ... internal Baltic state capability or reassurance via the U.S. response.

**COUNTER-WMD**
  Concepts about the threat environment tend to evolve incrementally with changes in administration and emergence of new technologies and threats, or events that dramatically alter threat perceptions.

- New 3D Radar Developed to Support Counter-UAS Efforts (National Defense)
  Numerica Corp., a Colorado-based company, recently debuted a new 3D-radar solution for counter-drone efforts and other short-range air defense missions.

- Sensor Tech Key to Effective Missile Defense (National Defense)
  Hyten discussed the way forward for integrated air-and-missile defense, saying the key to missile defeat and defense is “the sensory capability that can track that missile.”
US ARMS CONTROL
- **Iran Nuclear Talks Start on Positive Note in Vienna** (New York Times)
  Working groups on sanctions and uranium enrichment are making progress, diplomats said. The indirect negotiations between Tehran and Washington are set to resume next week.

- **Rejoining Open Skies Would Send 'Wrong Message’ to Russia, State Tells Partners** (Defense News)
  The Biden administration did not spell out its noncompliance concerns ..., but the Trump administration quarreled ... over what cameras were being equipped on Russian overflights.

- **Chemical Weapons Arms Control at a Crossroads** (Center for Nonproliferation Studies)
  "Speaking alongside Dr. John Walker and Dr. Una Jakob, [Dr. Notte's] remarks focused on Russia’s stance in the OPCW over the Navalny case and contestations over Syria’s disarmament-related obligations."

- **Japan Extends Its Own North Korean Sanctions Another 2 Years** (AP via ABC News)
  Japan, the United States and South Korea have called for full implementation of the U.N. sanctions and for ensuring international efforts to denuclearize North Korea.

COMMENTARY
- **U.K. Nuclear Weapons: Beyond the Numbers** (War on the Rocks)
  "The increase in the warhead stockpile and reliance on strategic ambiguity come at a cost to nuclear diplomacy."

- **Finding Common Ground on Homeland Missile Defense** (Defense News)
  "The NGI is a ground-based interceptor missile designed to protect the United States homeland from North Korean and potential Iranian long-range ballistic missiles."

- **After The Abraham Accords: Nuclear Deterrence And Nuclear War In The Middle East** (Modern Diplomacy)
  "As long as Israel’s Iranian adversary continues to nuclearize – a scenario that has not been rendered any less worrisome by the Abraham Accords – these Trump-fostered agreements must figure as a net-negative.”