



USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

Issue No. 1153, 20 February 2015

Welcome to the CUWS Outreach Journal! As part of the CUWS' mission to develop Air Force, DoD, and other USG 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 on unconventional weapons. These discussions include news articles, papers, and other information sources that address issues pertinent to the U.S. national security community. It is our hope that this information resource will help enhance the overall awareness of these important national security issues and lead to the further discussion of options for dealing with the potential use of unconventional weapons. **All of our past journals are now available at http://cpc.au.af.mil/au_outreach.aspx.**

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FEATURE ITEM: "Retiring Trident: Alternative Proposal for UK Nuclear Deterrence". Authored by Toby Fenwick; published by Centre Forum, February 2015, 108 pages.

<http://www.centreforum.org/assets/pubs/retiring-trident.pdf>

Shortly after the May 2015 election, the British Government will face the key "Main Gate" investment decision when will decide whether or not to replace the UK's Trident submarine-launched ballistic missile (SLBM) carrying *Vanguard*-class nuclear-powered ballistic missile submarines (SSBNs) with *Successor*-class submarines.

A decision to proceed will lock the UK into capital spending of up to £33.1bn by 20321 on the new submarines, and this will likely translate into the UK operating Trident beyond 2050 at a total through-life cost of approximately £109bn.2 As the major UK parties refine their policies for the 2015 manifestos, CentreForum has revisited its 2012 paper *Dropping the Bomb: A Post Trident Future*,3 in order to revise our policy recommendations.

We began our reassessment of the issue by considering what a UK policy of credible, minimum independent nuclear deterrence requires. In line with the declassified 1978 Duff Group deterrence criteria4, our view is that minimum deterrence requires a potential adversary to have limited confidence that they can stop the UK inflicting unacceptable damage on targets that matter to them.

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War is Boring

It's Decision Time for the Air Force's New Nuclear Cruise Missile

The question is—does the military need it?

By James Drew

February 17, 2015

This year, lawmakers must decide whether to approve the Obama administration's plan to spend billions of dollars on new nuclear weapons, including a stealthy cruise missile.

The Pentagon calls it the Long-Range Standoff Weapon, or LRSO for short, and it would replace the outdated Air-Launched Cruise Missile your grandfather's warbird—the 50-year-old B-52 Stratofortress—still carries on bomber runs over the Pacific and Europe to deter a preemptive attack on America and her allies.

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The Air Force's budget request for fiscal year 2016 calls for around \$1.8 billion in spending on the missile during the next five years. There will be two versions—one to carry an updated W80 thermonuclear warhead, and another packed with conventional explosives for non-nuclear attacks.

LRSO will not be some new smart bomb or another bunker-busting munition, but a high-yield nuclear device capable of great destruction from an equally great distance.

Because what's special about this weapon is its range—around 1,500 to 3,000 miles or greater, a relatively easy achievement given today's engine technology. There are few weapons in the Air Force's arsenal with that kind of reach.

Combine the missile with a smart, radar-evading flight system, and you have a very powerful weapon that is *extremely* difficult to shoot down.

The Navy has its own sea-based cruise missile—the Tomahawk. The Intermediate-Range Nuclear Forces Treaty signed by Ronald Reagan and Mikhail Gorbachev in 1987 explicitly forbids the use of ground-launched cruise missiles.

If Congress approves funding, lawmakers will make a long-term investment in this type of weapon, ensuring its survival well past the 2030s when the United States' aging ALCM nuclear-armed cruise missile is due to retire.

Arms race

But some in Washington are already calling for the Air Force to terminate—or at least delay—the project. Lawmakers argue the flying branch has not properly justified the missile's mission objectives, and that it goes against the spirit of the 2010 Nuclear Posture Review.

Others contend that having a conventional and nuclear-tipped cruise missile could increase the chances of strategic miscalculation during times of heightened tensions.

With both conventional *and* nuclear versions, nobody except the U.S. would know which type of missile any particular bomber has on board. This creates *uncertainty*—which is dangerous when dealing with potential Armageddon.

The Pentagon argues this program is necessary to keep the U.S. nuclear stockpile modern and capable against potential peer and near-peer adversaries like Russia and China.

Plus, the Air Force argues that it *already* employs a conventional version of the ALCM, known as the CALCM.

Then there's the question whether another nuclear cruise missile is necessary. The U.S. maintains a nuclear "triad" of bombers, submarines and intercontinental ballistic missiles. There's a broad consensus in Washington to keep all three legs of this triad.

But far fewer politicians have made up their mind about weapons on the fringes, like cruise missiles, which are nice to have but expensive to keep—and not required for the strategic deterrence mission, since most bombers already carry B61 nuclear gravity bombs.

Hans Kristensen, a nuclear weapons expert for the Federation of American Scientists, said the Air Force needs to make a more compelling case for buying the LRSO than simply arming the president with more "strike options," as the Air Force describes it.

He said other far-reaching weapons like land- and sea-based ballistic missiles, Tomahawks, and even conventional Joint Air-to-Surface Standoff Missiles already cover the mission area.

"Even if there were a unique mission need that cannot be performed with other capabilities, what would be the mission?" Kristensen said in an email.

"There are some who see the LRSO as an 'in-between' weapon that gives the president strike options that escalate from use of nuclear gravity bombs but avoid escalating to use of nuclear ballistic missiles," he added.

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“This is a good old Cold War era tit-for-tat escalation scenario that is not essential against Russia and China and not needed against smaller regional adversaries.”

The generals in charge of the U.S. strategic forces, however, argue there is a “capability gap” that only an air-launched cruise missile can fill. The Air Force detailed this gap in a classified review of alternatives submitted to the Pentagon in 2013.

The Office of the Secretary of Defense obviously agreed, since it found space in the latest budget request for LRSO. But the only real argument put forward since the project’s inception in 2011 is that a new air-launched cruise missile could punch through modern integrated air-defense systems, keeping strategic bombers out of harm’s way.

Gen. Stephen Wilson, commander of Air Force Global Strike Command, said during a January event in Washington that he wants to replace the ALCM, which he described as a “terrific weapon system.”

“It was designed in ’70s, built in the ’80s, and was designed to last 10 years,” Wilson said. “Today, we’ll use the current ALCM through 2030 ... At some point we have to be able to design a new standoff missile that provides the president with options.”

U.S. Strategic Command chief Navy Adm. Cecil Haney argues that the nation’s nuclear stockpile is at a critical point and needs upgrades, and that’s why the Pentagon is pressing so hard for LRSO *and* a new ICBM the Air Force wants funded in 2016.

“I don’t have an option,” the admiral said at a Feb. 6 event in Washington. “It’s not an area that we can wish away—we have to invest in those kinds of capabilities.”

Price tag

If the Air Force gets congressional approval, work on the cruise missile could start almost immediately. Four companies — Boeing, Lockheed Martin, Northrop Grumman and Raytheon—are already involved in technical studies.

In fact, the Air Force planned to begin the project this year, but pushed it back in favor of more spending on a guided tail-kit assembly for the B61 tactical nuclear bomb.

The Air Force wants \$37 million in seed money for 2016 to scale up the program and to hold a competition for the first phase of development. The service has solid enough preliminary designs to jump straight into modeling, simulation and early aircraft integration work, according to budget documents.

Wilson confirmed at a Feb. 12 Air Force Association conference in Orlando that LRSO is not tied to the development of the Long-Range Strike Bomber, which the service wants to purchase at \$550 million apiece. This is important, because it means the cancellation of one wouldn’t necessarily harm the other.

At the same conference, Air Combat Command chief Gen. Herbert Carlisle said he welcomes the development of a new conventional cruise missile, and has created an office to coordinate those activities with the service’s Global Strike Command.

“Just like we have the CALCM that was a spinoff for the ALCM, we see going forward that there will be a Long-Range Standoff Missile and there will be a conventional variant that will follow to be able to buy it in numbers and reduce the cost,” the general added.

There are more than 1,500 ALCMs and CALCMs in the Air Force’s storehouse. Each B-52 can carry 20 of the weapons—12 under the wings and eight on a rotary dispenser in the bomb bay. The ALCM has a range of 1,500 miles, but is slow and easy to detect.

The Pentagon junked the more stealthy Advanced Cruise Missile in 2012 to comply with the New START Treaty Pres. Barack Obama signed with Russian Pres. Vladimir Putin.

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The Air Force is responsible for the cruise missile “delivery vehicle,” but the National Nuclear Security Administration has responsibility for the warhead. According to the agency, the cruise missile will carry a life-extended version of the W80 warhead used on the ALCM and Tomahawk.

NNSA considered the B61 warhead, but it was too heavy. It looked at the W84 from the decommissioned Gryphon ground-launched cruise missile, but there are too few of those, so last year the agency formally decided on the W80.

The first production unit of the updated W80, designated W80–4, will enter service around 2025. The entire project is worth an estimated \$10 billion to \$20 billion, according to some analysts.

<https://medium.com/war-is-boring/it-s-decision-time-for-the-air-force-s-new-nuclear-cruise-missile-51832637571d>

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Sputnik International – Russian Information Agency

US Reaffirms Utility of Nuclear Weapons - US Global Strike Command Director

US Air Force Global Strike Command Director Michael Fortney said that the role and utility of the US nuclear arsenal is as important in the current strategic climate as it was in previous decades.

19 February 2015

WASHINGTON (Sputnik) — The role and utility of the US nuclear arsenal is as important in the current strategic climate as it was in previous decades, US Air Force Global Strike Command Director Michael Fortney said.

“The role of our [US] nuclear arsenal is at least as important today as it was in decades past,” Fortney stated at the annual nuclear deterrence summit in Washington, DC on Wednesday. “I believe US nuclear weapons have an important role for our country, our allies, and... a role for the world.”

Those responsible for the US nuclear weapons arsenal must “understand their role and utility” Fortney said, emphasizing their utility as a “strategic speed bump” that has so far prevented major world powers from engaging in head-to-head war.

Without naming specific countries, Fortney noted increased tensions among nuclear armed states who are currently modernizing their arsenals across all legs of their nuclear triad.

Fortney raised concerns about certain nuclear states revising their military doctrines reflecting “a resurgent doctrinal utility” for their strategic nuclear forces.

The top nuclear powers on the planet, Russia and the United States, are currently engaged in extensive nuclear modernization, according to both countries’ defense agencies.

Russia announced an updated military doctrine at the end of 2014 re-emphasizing its right to use nuclear weapons in retaliation or if a conventional attack threatened the very existence of the state, according to the document. The new doctrine stopped short of including a nuclear pre-emptive strike notion.

<http://sputniknews.com/us/20150219/1018456711.html>

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Korea JoongAng Daily – Seoul, South Korea

In an About-Face, Pentagon Denies Thaad Discussion

Beijing, Washington took turns nudging Seoul to take sides

By SER MYO-JA

February 16, 2015

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With growing controversy in Northeast Asia surrounding U.S. ambitions to deploy an advanced antiballistic missile defense system on the Korean Peninsula, the Pentagon has reversed its earlier position that Seoul and Washington were discussing the issue.

In the latest media briefing, the Pentagon's press secretary made clear the United States and South Korea are not having official discussions on possible deployment of the Terminal High-Altitude Area Defense system, better known as Thaad.

"There are no formal consultations or discussions about Thaad with our Republic of Korea counterparts, no formal consultations about Thaad. And we want to be very clear about that," said Navy Rear Admiral John Kirby on Friday in Washington. "We do discuss a full range of military capabilities with our allies in South Korea, of course, and some of those do include missile defense. But there are no consultations with respect to Thaad."

Kirby said it is for the South Korean government and its people to decide what is of strategic value to their country.

The Pentagon's verification came as Seoul, Washington, Beijing and Moscow have been engaged in an intensifying diplomatic tug-of-war in recent weeks over possible Thaad deployment. Throughout this month, defense officials in Beijing and Washington took turns nudging Seoul to make up its mind.

Thaad is a U.S. defense system designed to shoot down missiles using a hit-to-kill approach. Because it is equipped with a radar system that can cover more than 1,000 kilometers (621 miles), deployment of a Thaad battery in Korea has been a sensitive issue. Both China and Russia see it as a threat to their security interests that could be used for surveillance.

Beijing and Moscow appeared to be particularly sensitive to the Thaad system because of the AN/TPY-2 - a high-resolution, rapidly deployable X-Band radar designed to detect, track and identify ballistic missiles at long distances and very high altitudes.

During a press conference Feb. 10, Kirby said South Korea and the United States were discussing possible deployment of Thaad.

"I think we all recognize the importance of the capability," Kirby said about the Thaad system in Washington. "There are constant discussions, and certainly with our South Korean allies about that."

While offering no details, Kirby said, "It's an important capability. It's one that we talk to them about. That's really as far as I can go today."

Another U.S. government official, Lt. Col. Jeff Pool, a Pentagon press officer, supported Kirby's earlier comments, saying officials in Washington and Seoul often talked informally about Thaad, although there never was an official discussion.

"It would be untruthful to say we haven't informally discussed [it] because we already had a site survey in the ROK [South Korea] and Gen. [Curtis] Scaparrotti said he wanted it," Pool told Korean correspondents in Washington, referring to earlier statements by senior U.S. defense officials.

Deputy Secretary of Defense Robert Work said last year the United States had conducted site surveys and was working with the South to make a decision on the deployment. Scaparrotti, commander of U.S. Forces Korea, also said last year he had asked Washington to deploy Thaad.

Jolted by the Pentagon officials' remarks, Seoul quickly demanded an explanation because it has maintained no talks on Thaad ever took place.

When Kirby's first comments were relayed, dozens of Korean and U.S. defense and foreign affairs officials were attending an annual defense exercise in Seoul on Wednesday. During the Extended Deterrence Policy Committee tabletop exercise at the Korea Institute for Defense Analyses, South Korean officials asked their U.S. counterparts to clarify the remarks from Washington, a participant said.

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David Helvey, deputy assistant secretary of defense for East Asia policy who was in Seoul for the meeting, consulted with Washington and had a telephone interview with Korean reporters at the Defense Ministry.

"I want to affirm that we have not had any consultation between the Korean and U.S. governments regarding the deployment of Thaad," Helvey said.

Stressing that the United States has yet to make a decision on the deployment, Halvey said any discussion about Thaad at this point is "premature" and Washington will consult with Seoul if it decides to move forward.

A South Korean government official accused the U.S. officials of intentionally speaking provocatively.

"The United States is very well aware of Korea's sensitivity to the issue," he said, asking for anonymity. "Recently, Korea and China had talks on the possible deployment of the Thaad, and the latest remarks from Washington were probably to express its displeasure."

Seoul said it is maintaining its "strategic ambiguity" over the issue as its predicament grows deeper between Washington's push and Beijing's pressure to reject the plan.

Minister of National Defense Han Min-koo addressed the possible U.S. deployment of the Terminal High-Altitude Area Defense system in South Korea before the National Defense Committee of the National Assembly on Wednesday.

"Some criticized the National Defense Ministry for vacillating or having no strategy, but strategic ambiguity is exactly what we need right at this moment," Han said.

Admitting that his Chinese counterpart had expressed Beijing's concerns about the possible Thaad deployment during talks in Seoul earlier this month, Han said, "I told him that this is an issue in preparation for North Korea's nuclear and missile threats."

During his meeting with Han on Feb. 4 in Seoul, Chinese Defense Minister Chang Wanquan expressed his country's concerns about Thaad deployment. Han reaffirmed that Seoul's position remained unchanged and Washington had neither made a decision on deployment or a request to Seoul. He also told Chang that no discussions took place between Seoul and Washington on the issue.

The JoongAng Ilbo reported earlier this month that Chinese President Xi Jinping asked Korean President Park Geun-hye to reject any U.S. request to deploy Thaad here during their summit in Seoul last July.

Russia, through its new envoy to Seoul, also expressed its opposition to Washington's plan last week.

"We are concerned about continued attempts to bring about confrontations in the region," Russian Ambassador to Korea Alexander Timonin said in a speech on Diplomatic Service Day of Russia on Tuesday. "We regard the U.S. intention to extend its global missile defense system to the Asia-Pacific region as counterproductive and destabilizing."

While Seoul insists on "strategic ambiguity," critics say it has invited the controversy by failing to provide a convincing answer on how to fill the hole in its air defense against the North's threats.

Korea has said it will build its own shield, named Korea Air and Missile Defense, to deter the North. Unlike Thaad, it focuses on a terminal-phase, low-altitude missile defense. The military also said it will establish the "Kill Chain," an integrated information, surveillance and pre-emptive strike system to eliminate North Korean threats before they are launched.

Defense officials, however, said it will take years to complete the two systems - perhaps around 2022 - at a cost of 17 trillion won (\$15.45 billion). The timeline and cost have influenced Seoul and Washington's recent decision to indefinitely delay the U.S. handover of wartime operational control of Korean troops.

<http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=3000975&cloc=joongangdaily%7Chome%7Cnewslist1>

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Sputnik International – Russian Information Agency

Moscow Sees No Reasons to Denounce New START Treaty

Russian Ambassador-at-Large Grigory Berdennikov stated that Moscow currently has no plans to give up the fulfillment of obligations under the New Strategic Arms Reduction Treaty (START).

18 February 2015

MOSCOW (Sputnik) – Despite the overall deterioration of US-Russia relations, Moscow currently has no plans to give up the fulfillment of obligations under the New Strategic Arms Reduction Treaty (START), Russian Ambassador-at-Large Grigory Berdennikov said Wednesday.

"As of today we don't see any reasons not to deliver on this commitment," Berdennikov told RIA Novosti.

Berdennikov, also an envoy to the International Atomic Energy Agency (IAEA), said that over the last year Moscow and Washington had conducted 18 inspections each, and exchanged telemetric information on the launch of intercontinental ballistic missiles.

"In general, the implementation of the US-Russian START is continuing as normal," Berdennikov concluded.

Under the New START, signed between Russia and the United States in 2010, the countries must limit the number of deployed ballistic missiles and heavy bombers equipped for nuclear armaments to 700 and deployed nuclear warheads to 1,550. The treaty is valid until 2021 but may be extended for an additional period of up to five years.

Last month, the head of the Department for Non-Proliferation and Arms Control of the Russian Foreign Ministry said that Russia could revise its commitment to the New START in response to "unfriendly actions" by the United States.

Washington has imposed economic sanctions on Moscow and incited harsh anti-Russia rhetoric, accusing it of taking part in the internal armed conflict in Ukraine by aiding pro-independence militias.

<http://sputniknews.com/politics/20150218/1018429353.html>

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Sputnik International – Russian Information Agency

US-Russia Exchange Mutual Allegations of INF Violations

The United States and Russia exchanged allegations that the other is in noncompliance with the Intermediate-range Nuclear Forces Treaty.

19 February 2015

WASHINGTON (Sputnik) — The United States and Russia exchanged allegations that the other is in noncompliance with the Intermediate-range Nuclear Forces (INF) Treaty, US Under Secretary of State for Arms Control Rose Gottemoeller and Russian ambassador to the United States Sergey Kislyak said in remarks.

"The way it is presented to us is we Russians need to know better as to where we violate the [INF] Treaty. We do not," Kislyak said on Wednesday during a nuclear deterrence summit in Washington DC. "The Treaty itself is inconcrete. It's not easy to locate the point where the Americans want us to focus."

The ambassador further stated that Russia remains concerned about US development and testing of certain ballistic missile defense systems, which he says "appears to be in violation" of the terms of the INF.

Questioned about Kislyak's reference to the INF Treaty as "inconcrete," Gottemoeller stated that the United States has been very specific about where they believe Russia is in violation of the treaty.



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Gottemoeller stated that Russia has developed and tested a ground-launched cruise missile “in contravention” of the INF Treaty, adding that the US Department of State has been “very clear about providing additional details” regarding the alleged violation.

“Our view is we have provided more than sufficient information for the Russian Federation to know exactly what ground-launched cruise missile we are talking about,” Gottemoeller said.

Ambassador Kislyak noted that INF compliance remains an area where there are significant differences between the Russian and US outlook.

The United States and the Soviet Union signed the INF Treaty in 1988 banning nuclear and conventional ground-based cruise and ballistic missiles with a range of 310 miles (498km) to 3417 miles (5499km).

Beginning in July 2014, the United States announced Russia had violated the treaty by testing a prohibited ground-launched cruise missile, according to the US State Department. Russia has denied the US claim, pointing, in turn, to US INF violations.

<http://sputniknews.com/military/20150219/1018454786.html>

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TASS Russian News Agency – Moscow, Russia

Russia, US Agree Number of Ballistic Missile Launches to Exchange Information on in 2015

The sides agreed at the ninth session of the bilateral consultative commission on the Russian-US Strategic Arms Reduction Treaty

February 20, 2015

MOSCOW. February 20. /TASS/. Russia and the United States have agreed a number of ballistic missile launches to exchange information on in 2015, the Russian Foreign Ministry said on Friday after the ninth session of the bilateral consultative commission on the Russian-US Strategic Arms Reduction Treaty (START) that was held in Geneva on February 10-20.

"The Russian and US delegations continued to discuss practical aspects of the implementation of the treaty," the ministry said. "In line with its provisions, they agreed and adopted a decision on the number of launches of intercontinental ballistic missiles or submarine launched ballistic missiles on which they would exchange telemetric information in 2015.

<http://tass.ru/en/russia/778941>

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The Moscow Times – Moscow, Russia

Russia Is Americans' Biggest Enemy, Poll Shows

By Ivan Nechepurenko

February 16, 2015

In the eyes of Americans, Russia has surpassed North Korea as the main enemy of the United States, a new Gallup poll reveals.

Respondents were asked the open-ended question, "What one country anywhere in the world do you consider to be the United States' greatest enemy today?"

Russia led the pack of named U.S. foes, having been singled out by 18 percent of Americans. North Korea came second with 15 percent, followed by China (12 percent) and Iran (9 percent).

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Russia's leading position represented a significant leap from last year's poll, when only 9 percent of respondents to the same question picked Russia. In 2012, that number had been a mere 2 percent.

The poll also revealed that 72 percent of Americans view Russian President Vladimir Putin in a negative light. Only 13 percent said they harbor good opinions of him. "Putin's favorable ratings are similar to what Gallup measured last March, but are down a bit from earlier readings in his second presidential administration, and well below what they were in his first administration from 2000-2008," according to a statement released by Gallup.

Overall, only 24 percent of Americans possess a favorable view of Russia, representing a 10 percent decrease since last year.

Nearly half of all Americans, 49 percent, view Russia's military forces as a critical threat to U.S. security, up 32 percent from the previous year.

Still, the perceived threat of Russia's military power pales in comparison to Americans' other concerns. "Despite the increase in perceptions of Russia's military power as a critical threat, the issue still is rated well behind other international challenges such as terrorism generally, the ISIS group specifically, and Iran's development of nuclear weapons," the statement said.

These results were based on a poll conducted between Feb. 8 and 11 among 837 adults aged 18 or older across the United States, and had a margin of error not exceeding 4 percent.

Meanwhile, the results of a recent Russian survey shows the feelings are mutual.

Some 81 percent of Russians view the United States negatively, independent Moscow-based pollster the Levada Center revealed earlier this month. The findings represented an all-time high for the pollster, which has been conducting similar studies since 1990. The Levada Center poll was conducted among 1,600 respondents with a margin of error not exceeding 3.4 percent.

Though the level of mutual disregard is soaring to historic highs while Russia-U.S. relations scrape post-Cold War lows, the relationship between the two nations is not irreparable, Gallup said in its explanatory note. "If Russian and American policy interests find more common ground, Americans' views of Russia could recover quickly."

<http://www.themoscowtimes.com/news/article/as-americans-see-it-russia-is-enemy-number-one/516012.html>

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Want China Times – Taipei, Taiwan

New Chinese Electromagnetic Weapon may Paralyze US Air Defense: Expert

By Staff Reporter

February 14, 2015

The development of an X-ray pulse generator by the Xi'an Institute of Optics and Precision Mechanics under the Chinese Academy of Sciences has attracted the attention of Vassily Kashin, an expert at Russia's Center for Analysis of Strategies and Technologies, according to Moscow-based Sputniks News.

Kashin believes that China's electromagnetic weapon system based on the X-ray pulse generator has the potential to create a huge challenge to the United States in the Asia-Pacific region. It could be used to paralyze the air defense and anti-ballistic missile systems of the United States and its security partners including Japan, Taiwan and South Korea in the region. After that, the People's Liberation Army could easily wreak havoc on the opposing force's military facilities and hardwares with its own aircraft and ballistic missiles.

With the electromagnetic weapon system, the US can no longer rely on smaller quick reaction forces to confront Chinese expansion, according to Kashin. He said that Washington must deploy more troops and invest more money to strengthen the defense capability of American military bases in the Western Pacific.

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Yet, Kashin said, the US will not be able to defend its interests in Asia if it devotes too much attention to the Ukrainian crisis. Chinese nationalist tabloid, the Global Times, said that Kashin wrote the article with political motives in mind. As one Chinese expert told the Global Times, Russia is exaggerating the threat of the Chinese electromagnetic weapon system to try and divert the attention of American forces away from Europe, and more specifically Ukraine, and focus more on the Asia-Pacific region. He went on to say that Kashin has no knowledge regarding the development of the Chinese X-ray pulse generator at all.

<http://www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1101&MainCatID=11&id=20150214000016>

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The Korea Herald – Seoul, South Korea

U.S. Expert Warns against China's THAAD Opposition

February 16, 2015

China's heavy-handed opposition to the possible deployment of a THAAD missile defense battery to South Korea could backfire and prompt greater public support in the South for a stronger alliance with the United States, an American expert said.

Scott Snyder, a senior researcher on Korea at the Council Foreign Relations, made the point in a recent article posted on the CFR website, saying it makes no sense for Beijing to demand Seoul refrain from bolstering its missile defense capabilities "in the face of a clear and expanding danger from North Korea."

China's opposition to THAAD also shows that it perceives the U.S.-South Korea alliance "as vulnerable and is trying to contain the capabilities" of the alliance, Snyder said, adding that Beijing's opposition is also "counterproductive" to building further trust with Seoul.

"In the end, China's effort to force South Korea to choose Beijing's preferences is likely to stimulate a backlash that will likely only lead to stronger South Korean public support for the U.S.-ROK alliance as a hedge against anxieties about the implications of China's rise for the future of the Korean Peninsula," he said.

The possibility of the U.S. deploying a THAAD battery in South Korea has been the focus of attention in Seoul because such a deployment is seen by critics as part of a broader U.S. attempt to get the Asian ally to join its missile defense system.

The deployment could inflame tensions with China and Russia because they see the move as a threat to their security interests.

The two countries have repeatedly expressed concern and opposition at such a possibility in recent months.

Earlier this month, China's foreign ministry warned that a THAAD deployment to South Korea could undermine the "overall interest of bilateral relations" between Seoul and Beijing. The warning came days after China's defense minister expressed concerns about THAAD during talks with his South Korean counterpart.

Snyder stressed that North Korea is working hard to bolster its missile capabilities and test-fired a new anti-ship missile just days after Beijing's warning against a THAAD deployment in South Korea. That missile launch appears to be the beginning of a new missile-testing season, he said.

The North conducted 19 separate missile tests involving over 111 projectiles last year, he said.

"North Korea's increased frequency of testing shows that North Korea sees the tests both as a form of protest against U.S.-ROK joint exercises and to enhance its own capacity to threaten South Korean assets by increasing the range and accuracy of its launch capabilities," the expert said. (Yonhap)

<http://www.koreaherald.com/view.php?ud=20150216000757>

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The Korea Times – Seoul, South Korea

'S. Korea Needs to Block THAAD Deployment'

By Jun Ji-hye

February 17, 2015

National security analyst Paik Hak-soon believes that the government should oppose any move by the United States to deploy its latest ballistic missile interception system in South Korea as part of its missile defense (MD) program.

"A Terminal High-Altitude Area Defense (THAAD) missile battery is actually ineffective to neutralize ballistic missiles from North Korea unlike its primary purpose," said Paik, the director of the Center for North Korean Studies at the Sejong Institute in a recent interview.

He said THAAD is designed to shoot down missiles at high altitudes, and the North is too close to be affected by such a defense system.

The THAAD system is designed to detect and intercept missiles during their final or terminal phase of flight.

"While the primary role of the anti-missile defense shield has been called into question, Washington's consistent efforts to bring it here have irritated Beijing and Moscow," he said.

Washington and Seoul have stressed that the battery is a defensive measure against missile threats from the North, but China feels vulnerable due to the radar system alone, as it could potentially snoop on its radar systems.

Paik said China has understood the importance of U.S.-South Korea relations to a considerable extent, despite U.S.-China rivalry, as the two Koreas are still technically at war with each other.

But Beijing is objecting to possible THAAD deployment because it believes the system is a strategic weapon for the U.S. and can also threaten the country, Paik said. He noted that the deployment is regarded as an attempt by Washington to get its Asian ally to join its MD system to contain the influence of China and Russia.

The Ministry of National Defense has emphasized that Seoul will build its own Korean Air and Missile Defense System (KAMD), rather than joining the U.S. system. But Paik claimed that as long as THAAD is stationed here, the nation's defense system will inevitably belong to the U.S. system under the name of maintaining interoperability. And this will result in South Korea being swept away by a confrontation of world powers.

"It sounds unrealistic. But let's suppose a world war breaks out," he said. "The first thing that China would do would be to attack the THAAD battery stationed in South Korea to remove its functions to intercept the country's missiles and snoop on its radar system."

More realistically, Paik pointed out that Beijing and Moscow are likely to stop financial and personal exchanges with Seoul in retaliation, if THAAD is actually deployed here.

"This will be a very serious problem as Seoul has maintained good cooperative relations with them in non-military areas," he said.

Paik called on the government to explain the surrounding situation actively and clearly to the U.S. and issue its official opposition, rather than saying that it and the U.S. have never discussed the issue. "Who will believe that?" he said.

"Although South Korea is a small country, there are two things that it should never make a concession on to keep its national interest," he said. "They are national security and economy. The THAAD issue involves both of these. This is why the nation needs to persuade the U.S. to withdraw its plan to place the defense shield here. It is right for the nation to disapprove of the deployment."

http://www.koreatimes.co.kr/www/news/nation/2015/02/116_173805.html

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Yonhap News Agency – Seoul, South Korea

N. Korea Conducts Submarine Missile Ejection Test: Sources

February 20, 2015

SEOUL, Feb. 20 (Yonhap) -- North Korea appears to have conducted a test of a missile ejection launcher that helps fire missiles from submarines, South Korean military sources said Friday.

The communist North "tested the ejection launcher from the seashore near the Sinpo South Shipyard on Jan. 23 for missiles that can be fired from submarines," one military source here said, requesting anonymity.

The ejection test last month from the North's northeast coast simulated the initial stage of boosting a missile out of a submarine launch tube, the source said.

According to South Korean and U.S. intelligence officials, the North has been developing a submarine-launched ballistic missile (SLBM) in a move to boost its underwater missile strike capabilities after launching a new 2,500-ton submarine last year.

The North's move appears to be part of its efforts to equip its missiles with miniaturized nuclear bombs, raising further concerns over the North's evolving missile and nuclear threats, say North Korean watchers.

Noting that the objects from the launcher fell into the water after flying some dozen meters during the test, another South Korean military source said he does "not think it was a flight test just as the U.S. media website, Washington Free Beacon, reported earlier this week."

Citing U.S. defense officials, the website reported that Pyongyang had carried out the first flight test of its SLBM last month.

Noting that the North carried out similar land-based tests last year, another South Korean military source said the ejection tests "seem at least partly to show off its SLMB development project."

<http://english.yonhapnews.co.kr/national/2015/02/20/47/0301000000AEN20150220001900315F.html>

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The Scotsman – Edinburgh, Scotland, U.K.

Replacing Trident with Jets ‘Would Save £13bn’

By ANDREW WHITAKER

15 February 2015

REPLACING Trident with a nuclear deterrent dropped from the air would save up to £13 billion for priority defence equipment spending, a think-tank has claimed in a new report.

Trident nuclear submarines at Faslane are an "expensive and excessive" solution to the UK deterrence requirements and would have been ineffective even during the Cold War, CentreForum said in its analysis.

Instead, the UK's forthcoming F-35 Joint Strike Fighters – a stealth aircraft bought for conventional missions – should be adapted to deliver a "minimum nuclear deterrent" based upon a stockpile of 100 British built B61-12 nuclear bombs, the "independent liberal" think-tank stated.

The proposal echoes that of the Royal Air Force's V-force of the 1950s and 1960s, when the UK's nuclear deterrent was carried by Valiant Vulcan and Victor bombers.

Nationalist politicians have made the replacement of Trident in the next parliament a key election issue, with First Minister Nicola Sturgeon suggesting that the SNP would make the scrapping of the system a condition of propping-up a minority Labour government.



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Toby Fenwick, the author of the report, said the cost of an “air-dropped nuclear deterrent” was half the £33 billion estimated cost of replacing the four Faslane-based Vanguard class submarines that carry nuclear weapons.

Mr Fenwick said a government led by Labour or the Tories would face a “tough challenge” to fund the renewal of Trident, which he claimed would put the UK’s defence budget under financial strain.

He said: “Trident is a gold plated solution that risks the modernisation of the UK’s conventional forces. Its advocates need to explain how they can fund their expensive system without doing irreparable damage to the UK forces.

“Our costed proposal provides a credible minimum independent UK nuclear force whilst providing our soldiers, sailors and airmen with the equipment they need.”

CentreForum’s report claimed replacing Trident with an air-dropped nuclear deterrent would “significantly strengthen the conventional armed forces”. It said it would free up funds for a further five Astute-class attack submarines and four Type 26 frigates for the Navy, as well as eight maritime patrol aircraft to fill the gap left by the cancellation of Nimrod aircraft in 2010.

Mr Fenwick added: “Our costed proposal provides a credible minimum independent UK nuclear force.”

However, a Ministry of Defence spokeswoman, said a UK Cabinet Office review in 2013 had examined similar proposals for free-fall air bombs, but “judged such a system insufficiently credible”.

A Nationalist MSP also criticised the plan from CentreForum, which he said “misses the point entirely” and would leave nuclear weapons in Scotland.

SNP MSP Bill Kidd said: “Moves to simply replace one eye-wateringly expensive nuclear weapons system with another one misses the point entirely.

“Nuclear weapons are a moral obscenity and the prospect of wasting tens of billions of pounds on weapons of mass destruction at a time when more and more people are relying on foodbanks is utterly wrong.”

<http://www.scotsman.com/news/politics/top-stories/replacing-trident-with-jets-would-save-13bn-1-3691227>

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The London Telegraph – London, U.K.

Putin: Will He Go Nuclear?

The Ukraine crisis has turned into a potentially apocalyptic nuclear stand-off as President Vladimir Putin primes Russia for conflict with the West. But how scared should we really be?

By Marc Bennetts

15 February 2015

Earlier this month, as fighting raged in eastern Ukraine between pro-Russian rebels and forces loyal to the Western-backed government in Kiev, Dmitry Kiselyov, the pugnacious, middle-aged journalist who heads Russia’s main state news agency, gazed defiantly into a TV studio camera. “What is Russia preparing for?” he asked. As if in reply, the director cut to an ominous backdrop image of an intercontinental ballistic missile emerging from an underground launch silo.

“During the era of political romanticism, the Soviet Union pledged never to use nuclear weapons first,” Kiselyov told the audience of Vesti Nedeli, his current affairs show, one of the country’s most widely watched programmes. “But Russia’s current military doctrine does not.” He paused briefly for effect. “No more illusions.”

There was nothing out of the ordinary about this reminder that Russia reserves the right to use nuclear weapons in response to a “threat” to its statehood. Since the start of the crisis in Ukraine, which has massive geostrategic importance for Russia, state-controlled TV has engineered an upsurge in aggressive anti-Western sentiment, with Kiselyov as the Kremlin’s top attack dog.

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Last spring, as Washington warned of sanctions over Russia's seizure of the Ukrainian peninsula of Crimea, Kiselyov boasted about his country's fearsome nuclear arsenal. "Russia is the only country in the world realistically capable of turning the US into radioactive ash," he declared.

Kiselyov's blood-curdling comments will have had the Kremlin's implicit backing, analysts say. "This threat of nuclear war should be taken seriously," said Sergey Markov, a political strategist. "In Russia, we believe that Ukraine has been occupied by the US. And that this occupation is not about democracy, or even money, but that it is the first step in a war against Russia. The US is seeking to undermine our sovereignty, neutralise our nuclear potential, and steal our oil and gas. Under these circumstances, the danger of nuclear confrontation is very real."

Some 5,500 lives have been lost in the almost year-long conflict in Ukraine, where pro-Russian rebels in the east have carved out two self-declared "people's republics". The crisis was sparked by the February 2014 overthrow of Ukraine's pro-Russian president, Viktor Yanukovich, in what Kremlin officials say was a coup orchestrated by the US. In addition, President Vladimir Putin has spoken of what he called a "Nato legion" fighting alongside the Ukrainian army.

While there is no proof that Nato forces are in action in Ukraine, US officials have suggested that Washington could supply weapons to Kiev to assist its battered army. The proposal sparked a furious response: Viktor Zavarzin, of Russia's defence committee, warned of the "irrevocable consequences" of such a move.

In turn, the West has accused Russia of providing both troops and weaponry to the rebels, a charge Putin has consistently denied.

A ceasefire thrashed out by the leaders of Russia, Ukraine, France and Germany – the second attempt to bring peace to the devastated region – was set to come into effect today at one minute past midnight.

Amid these tensions, Kiselyov is not the only one pushing the possibility of nuclear confrontation with the West. Russia's Zvezda TV channel, owned by the defence ministry, has also been preparing its audience for the worst. "Russia and the US are on the verge of nuclear war," read a headline on its website last week. The article cited an analyst from the Moscow-based Politika think tank, Vyacheslav Nikonov, which said a nuclear exchange between the two former Cold War-era foes was increasingly likely because the US wanted Russia to "disappear" as an independent country. "This is not in our plans," he said.

Russia has the world's largest stockpile of nuclear weapons, with 8,400 warheads compared with a US total of 7,500. A day after last week's peace talks in Belarus, Russia's nuclear forces staged large-scale exercises, soon after navy nuclear combat drills in the Arctic. All of which causes concern in the West. Michael Fallon, the UK Defence Secretary, said earlier this month that he was worried Russia had "lowered its threshold" for the use of nuclear weapons, while "integrating nuclear with conventional forces in a rather threatening way."

The prospect of nuclear war is also being talked up by pro-Kremlin movements. In a clip posted online last month, a Kalashnikov-wielding member of the Moscow-based, pro-Kremlin National Liberation Movement (NOD) vows global nuclear devastation in the event of the defeat of Russia's interests in Ukraine. "If we lose, we will destroy the whole world," intones a young NOD activist named Maria Katasonova. She sweeps a circle with her arm, and the screen is filled with a virtual image of an explosion as the planet is consumed in an atomic inferno.

"Russians will not sit by and watch as their country's sovereignty is threatened by the US," Katasonova told The Sunday Telegraph last week. "If our country is in genuine danger, we really will use nuclear weapons."

Katasonova is a follower of Alexander Dugin, a hardline nationalist thinker who has called for the destruction of the US. Dugin – described as "Putin's brain" by the respected US-based Foreign Affairs journal – is something of a fanatic. He combines political activities with occultism, and often speaks of his belief that the world must be "brought to an end".

So what's going on? Is Moscow really preparing its people for the unthinkable – nuclear confrontation? Or is all this simply North Korean-style bluff and bluster? How many minutes are left until the Kremlin's doomsday clock strikes midnight?

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"It is, of course, a disgrace and an embarrassment to my country that such things are being said on national television," said Lev Ponomaryov, a veteran human rights activist and Soviet-era dissident. "But statements about nuclear war are mainly for domestic consumption. In particular, they are directed at the more radical, nationalist members of society – those who have been fighting as volunteers in Ukraine, or support the rebels there."

While Putin denies that regular Russian troops are fighting in Ukraine, he has hailed the hundreds, if not thousands, of apparent volunteers who have travelled to what the rebels call "Novorossiia" – "New Russia". A number of these fighters have become folk heroes back home; in particular, Igor Strelkov, the ultra-conservative enthusiast who spent much of last year commanding rebel forces in Ukraine's Donbass region.

"I think these people frighten the Kremlin even more than they scare me," said Ponomaryov. "The authorities are afraid that they could one day turn their weapons against them, and the government will do anything to keep them on side."

State television's war rhetoric is not confined to the nuclear. In recent days, one Kremlin-run channel has discussed how long it would take for Russian tanks to "reach Berlin", while in east Ukraine, bloody and bruised government soldiers were abused by a notorious rebel commander in front of Russian television cameras.

But state-run media's fever-pitch, anti-Western TV programming is not only pandering to the radicals, it is also creating them. "Nationally televised broadcasts, such as those presented by Dmitry Kiselyov, have scared people, and led to increased hostility in society," said Lev Gudkov, who heads the independent, Moscow-based Levada-Center polling agency. "We have seen a drastic change in the collective consciousness of the Russian people over the last year or so."

The figures are startling. The number of Russians who believe their country and the US are now mutual enemies has increased tenfold in a year to 42 per cent, according to an opinion poll. The total professing a negative attitude to the US has almost doubled.

The statistics are backed by everyday incidents, from the racist image of a banana-munching President Barack Obama laser-beamed on to the wall of the US embassy in Moscow, to the T-shirts with slogans hailing Russia's nuclear missiles, on sale across the country.

"Of course I don't want an atomic war with the West," said Yegor Denisov, a twentysomething computer programmer. "But we have to defend ourselves from our enemies. And this," he said, gesturing at the ballistic missile on his newly bought T-shirt, "will help us do that."

Although state media broadcasts have clearly had a pernicious influence on society, putting the country on a war footing and boosting Putin's approval ratings, Peter Pomerantsev, a UK journalist who worked in Russian TV in the 2000s, believes they are mainly intended for a Western audience.

"I wouldn't take these statements about nuclear war literally," said Pomerantsev, whose book, *Nothing is True and Everything is Possible*, dissects the Kremlin's media manipulation tactics. Talk of impending nuclear conflict is "one of Putin's mind-benders", part of what he called an attempt to convince the West that the former KGB officer is this "crazy, unpredictable" leader whom it would be advisable not to push too far.

But the lines between fantasy and reality can all too often get blurred.

"There is always the danger that games somehow slip into reality – you start off playing with these narratives, and you end up stumbling into a real conflict," said Pomerantsev.

The Kremlin's masters of reality have uncorked the atomic genie. It is to be hoped they show the same aptitude when it comes to putting it back in the bottle.

<http://www.telegraph.co.uk/news/worldnews/europe/ukraine/11412878/Putin-Will-he-go-nuclear.html>

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The Moscow Times – Moscow, Russia

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Russia Develops New Fuel for Hypersonic Cruise Missile

By *The Moscow Times*
February 17, 2015

Russia has created a powerful recipe for fuel that will allow missiles to fly faster than five times the speed of sound, a development that if utilized effectively would make Russia a major player in a growing hypersonic arms race, a deputy defense minister said.

"The recipe has been created and the energy accumulated in this fuel will enable our vehicles to exceed Mach 5," General Dmitry Bulgakov, deputy defense minister, was quoted by the TASS news agency as saying on Tuesday.

Mach 5, or 6,126 kilometers per hour, is considered to be the barrier between supersonic speeds and hypersonic speeds.

Militaries around the world are racing to harness the power of hypersonic flight, which by slashing missile flight times will complicate countries' ability to detect and respond to attacks and potentially upset the global military balance of power.

The United States, China, Russia and India are all working to develop hypersonic missile systems, but the engineering challenges are daunting. Hypersonic missiles need to be strong to withstand the stress of flight beyond Mach 5.

While the United States and China have focused their efforts on so-called boost-glide hypersonic missiles, which launch on a rocket and then glide to their target, Russia and India have chosen to focus their efforts on the co-development of a hypersonic cruise missile.

Cruise missiles differ from ballistic missiles in that they fly under their own power to their target and can fly low to evade early warning radar systems.

Russia and India have already developed a cruise missile together, known as BrahMos. Considered the fastest supersonic cruise missile in the world, BrahMos travels at speeds up to Mach 3, or about 3,675 kilometers per hour.

<http://www.themoscowtimes.com/business/article/russia-develops-new-fuel-for-hypersonic-cruise-missile/516053.html>

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TASS Russian News Agency – Moscow, Russia

Two New Generation Radars to be Commissioned Ahead of Time in Russia's Siberia

The deadlines for deploying new generation Voronezh-M and Voronezh-DM radars were revised and moved from 2020 to 2018 in view of US plans for deploying missile defense systems in Europe and Alaska
February 17, 2015

MOSCOW, February 17. /TASS/. The Russian Defense Ministry has tightened the deadlines for commissioning two new generation missile attack early warning radars, the general director of the Minsk Radio Engineering Institute, Sergey Boyev, told the media on Tuesday.

"The Defense Ministry has asked us to commission two more facilities ahead of time. We will do our best, of course. There are updated schedules already. The concern's entire industrial segment has been shifted to a more intensive mode of operation," he said.

Russian Defense Minister Sergey Shoigu issued orders to ensure the radars' early commissioning in late 2014. Besides, the deadlines for deploying new generation Voronezh-M and Voronezh-DM radars have been revised and moved from 2020 to 2018 in view of US plans for deploying missile defense systems in Europe and Alaska.

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The plans for building radars in other regions of the country are proceeding in accordance with plans.

"Then there will follow the other radars - in Orsk (the Urals), Murmansk and Vorkuta (the Arctic). Everything will be accomplished on time," Boyev said.

The high factory readiness radars from the Mints Radio Engineering Institute possess far higher technical and tactical parameters than the previous generation radars. They consume far less energy, take up far less space and require fewer personnel. The Voronezh-DM radar has a range of 6,000 kilometers. It is capable of identifying, tracking and classifying modern and future air and space attack weapons, including ballistic and aerodynamic ones.

<http://tass.ru/en/russia/778103>

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The Moscow Times – Moscow, Russia

Russian Shipbuilder Sets Post-Soviet Record by Building 4 Nuke Subs Simultaneously

By Matthew Bodner

February 17, 2015

One of Russia's most prominent military shipbuilders, Sevmash in Severodvinsk, has set a post-Soviet production record for the most submarines built at one time, with four atomic-powered boats under construction in their yards.

Sevmash is now building two new Borei- and Yasen-class submarines each, a rate of production unheard of in modern Russian history, according to a statement published on the shipyard's website Tuesday.

The new vessels are key to Russia's two-pronged submarine modernization drive, begun under President Vladimir Putin as part of a general rearmament effort.

The Borei-class submarines are Russia's next-generation "boomers" — large submarines packed with nuclear-tipped intercontinental ballistic missiles (ICBMs) that lurk in the safety of the ocean depths, ensuring that Russia will always have a reserve of missiles to fire at its enemies if its land-based strategic nuclear forces are obliterated.

In this role, the Borei-class takes over for the now-retired massive Typhoon-class submarines — the largest ever built, with a length of 175 meters and a displacement of 50,000 tons. The Borei-class displaces a mere 24,000 tons, but is 170 meters in length.

Though design work on the Borei-class submarine began in the 1980s, the first ship was not laid down until 1996 and didn't enter service until 2013 — making it the first new Russian nuclear missile submarine fielded since the Cold War.

The Russian Navy is expecting 8 Borei-class submarines overall, with a possible addition of two more later on.

Meanwhile, Russia's new Yasen-class belongs to a group of submarines known as hunter-killers. They are designed for a number of missions — such as hunting enemy boomers, defending Russia's own, or sinking enemy surface ships.

Designed in the 1990s to replace the Akula-, Oscar- and Alfa-class submarines, the Yasens are said to be some of the most advanced attack submarines in the world. Despite their size, they only have a crew complement of 90 sailors, leading some to speculate that the ships are highly automated.

Yasens can travel up to 20 knots while remaining relatively quiet, and if need be can race up to 35 or 40 knots, according to international affairs journal The National Interest — a very high speed for a large submarine.

<http://www.themoscowtimes.com/business/article/russian-shipbuilder-sets-post-soviet-record-by-building-4-nyke-subs-simultaneously/516108.html>

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TASS Russian News Agency – Moscow, Russia

Russia Starts Deployment of New Radar Systems Capable of Detecting Hypersonic Targets

The Nebo-M radar system is notable for a significantly increased operational range and high rates of updating data on ballistic and hypersonic targets

February 19, 2015

MOSCOW, February 19. /TASS/. The Russian Aerospace Defense Forces (ADF) have launched the deployment of the new Nebo-M radar system, ADF spokesman Colonel Alexey Zolotukhin told journalists on Thursday.

The radar system is capable of detecting small aerodynamic and hypersonic targets, he added. Such systems are notable for a significantly increased operational range and high rates of updating data on ballistic and hypersonic targets.

"The use of active phased array antennas improves the characteristics of target detection and tracking," Zolotukhin noted.

The number of operational personnel has been reduced twice after the introduction of digital automatic data processing and the system's ability to determine the target's class and other technical characteristics, he added.

Calculations for the radar systems are carried out in the Center for training personnel of Anti-Aircraft Missile Troops at the Military and Space Academy. From 2013, about 250 people have been trained to operate Nebo-M.

This year, four radar systems Nebo-M and Nebo-UM will become operational in the Eastern Military District, particularly in Zabaykalsky, Khabarovsk and Primorsky Krai.

<http://tass.ru/en/russia/778605>

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The London Independent – London, U.K.

RAF Jets Scrambled after Russian Bombers Spotted off Coast of Cornwall

By Heather Saul

Thursday, 19 February 2015

RAF jets were scrambled to escort Russian bombers spotted off the coast of Cornwall, the Ministry of Defence (MoD) has confirmed.

The two Russian bear bombers were flying in international airspace close to the UK on Wednesday afternoon, an MoD spokesman said.

Typhoon jets from RAF Coningsby in Lincolnshire escorted the Russian aircraft out of the UK "area of interest". They did not cross into British sovereign airspace and their presence did not disrupt civil aircraft, according to initial reports.

"RAF Quick Reaction Alert Typhoon fighter aircraft were launched yesterday after Russian aircraft were identified flying close to UK airspace," an MoD spokesman said.

"The Russian planes were escorted by the RAF until they were out of the UK area of interest. At no time did the Russian military aircraft cross into UK sovereign airspace."

The incident comes just weeks after the UK summoned the Russian ambassador to the Foreign Office when two Russian bombers flew over the English Channel, disrupting civil aviation.

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Russian bombers were intercepted by RAF jets twice in three days in November.

Earlier, the Defence Secretary Michael Fallon warned the Russian President Vladimir Putin was "testing Nato all last year" and mentioned the incident over the Channel.

"He flew two Russian bombers down the English Channel two weeks ago. We had to scramble jets very quickly to see them off. It's the first time since the height of the Cold War, it's the first time that's happened.

"That just shows you, you need to respond, each time he [Mr Putin] does something like that, you need to be ready to respond," Mr Fallon claimed.

He said Mr Putin poses a "real and present danger" and could try to inflame tensions in former Soviet states in the Baltic such as Latvia, Lithuania and Estonia.

<http://www.independent.co.uk/news/uk/home-news/raf-jets-scrambled-after-russian-bombers-spotted-off-coast-of-cornwall-10055838.html>

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Yahoo News.com

Nuclear Deterrent Important in 'Dangerous World', Says Hollande

Agence France-Presse (AFP)

February 19, 2015

Istres (France) (AFP) - President Francois Hollande on Thursday stressed the importance of maintaining the country's nuclear deterrent in "a dangerous world", as he detailed France's atomic arsenal for the first time.

His comments were quickly shot down by the French branch of the International Campaign to Abolish Nuclear Weapons (ICAN), which said that far from making the world a safer place, they made it more dangerous.

"The international context does not allow for any weakness... the era of nuclear deterrence is therefore not over," Hollande said on a trip to an air base in the southern city of Istres.

"In a dangerous world -- and it is dangerous -- France does not want to let down its guard," he said.

"The possibility of future state conflicts concerning us directly or indirectly cannot be excluded."

Hollande's speech will be seen as a further setback to stalled global moves to reduce the number of atomic bombs, after US President Barack Obama promised in 2009 "concrete steps towards a world without nuclear weapons."

Their numbers have fallen sharply from their Cold War highs of some 70,000-80,000 thanks to several arms control treaties.

But there remain around 16,300. Some 4,000 of these are "operationally available", and some 1,800 are on "high alert" and ready for use on short notice, according to the Bulletin of Atomic Scientists.

ICAN France on Thursday condemned "the hardening of the French nuclear deterrent doctrine."

"This speech, instead of going in the direction of easing international tensions, contributes to creating the conditions for a less secure world," it said in a statement.

Hollande also unveiled the make-up of France's nuclear arsenal in a "transparency" drive and urged other countries to do the same.

Altogether, nine states are confirmed or believed to possess nuclear weapons -- France, Britain, China, Pakistan, India, the United States, Russia, North Korea and Israel.

Hollande said France had "less than 300" nuclear warheads, three sets of 16 submarine-launched ballistic missiles and 54 medium-range air-to-surface missiles.

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FARS News Agency – Tehran, Iran

Monday, February 16, 2015

Speaker: Iran Opposed to Extension of N. Talks

TEHRAN (FNA) - Iranian Parliament Speaker Ali Larijani stressed Tehran's seriousness in its nuclear talks with the world powers, but meantime, voiced opposition to any further extension of the negotiations.

"The Islamic Republic of Iran is serious about reaching an agreement in the nuclear negotiations and doesn't agree with the extension of negotiations," Larijani said in a meeting with visiting Chinese Foreign Minister Wang Yi in Tehran on Monday.

He also underscored the necessity for the Group 5+1 (the US, Russia, China, Britain and France plus Germany) to show political will to reach an agreement with Iran.

Wang, for his part, stressed China's commitment to the peaceful settlement of Iran's nuclear issue under any conditions, and said he believed that an agreement should be reached which provides the interests of both sides.

"The West is using the nuclear issue as a pretext to prevent Iran's progress and economic development," he added.

In relevant remarks in January, Iranian Foreign Minister Mohammad Javad Zarif stressed the failure of the West's pressure policy on Tehran, and said no one in Iran believes in the further extension of the nuclear talks with the world powers beyond the July deadline.

"I believe that the other side should understand this reality that if it wants to reach an agreement with Iran, it won't be possible through keeping pressure, as Iranians don't strike agreements under pressure," Zarif told FNA.

Asked if extension of the nuclear talks after the upcoming deadline of July 10 would be among possible options, he said, "It is too difficult to imagine that this time can be extended again."

"No one in the Islamic Republic seems to be ready for another extension in this round (of talks)," Zarif added.

He, meantime, described reaching a final deal with the G5+1 as "completely possible", and said, "We don't have any problems and our nuclear program is completely peaceful and all measures which are due to be adopted are aimed at ensuring them that this program is peaceful and no problem exists in this regard."

The 10th round of negotiations between Iran and the six world powers was held in Vienna from November 18 to 24, where the seven nations decided to extend the talks until July after they failed to strike an agreement.

The latest round of the nuclear talks between the two sides was held at the level of deputy foreign ministers in Geneva, Switzerland, on January 18.

The two sides decided to continue their talk in February without specifying the time and venue.

Both Iran and the G5+1 negotiators have underlined that cutting a final deal before the July 10 deadline is possible.

<http://english.farsnews.com/newstext.aspx?nn=13931127001455>

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Islamic Republic News Agency (IRNA) – Tehran, Iran

16 February 2015

Velayati: Nuclear Talks Should Cover General, Detailed Terms

Tehran, Feb 16, IRNA – Head of Strategic Research Studies Center at the Expediency Council Ali Akbar Velayati said on Monday that nuclear talks should cover the general and detailed terms.

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He made the remarks on the sidelines of his meeting with visiting Chinese Foreign Minister Wang Yi.

'Our nuclear negotiators move in line with the directives of the Supreme Leader of the Islamic revolution,' Velayati said.

The Iranian nuclear negotiators are obliged to move in line with a defined framework and one of the main principles call for simultaneous conduct of nuclear talks in general and detailed terms, he said.

General and detailed issues should be proceeded in parallel, Velayati said.

Referring to the peace negotiations between Palestinians and Zionist regime in 2104, he said separation of general and detailed terms in talks is regarded as a colonial trick pursued by Americans and Zionists.

He said that the western governments are exploiting the timeframe envisaged to set the general terms and the details afterward as procrastination and bargaining chip.

He said that the Oslo and Camp David accords are good examples of the western governments procrastination.

Such historical examples indicate that separation of general and detailed terms in talks is not advisable, he said.

On reimposing sanctions on Iranian oil tankers by European Union after the European Court of Justice revoked the sanctions on the oil tankers citing lack of substantive evidences, he said Iran was under tough economic sanctions from early stages of the Islamic revolution.

'We have learned how to overcome economic sanctions and the country under no circumstances will change its stand or give up legitimate rights,' he said.

In the meeting, the two sides also discussed Iran's nuclear program, he said.

Chinese foreign minister believes in Iran's peaceful nuclear program and the fact that the Islamic Republic of Iran has no plan to proliferate nuclear weapons, he said.

After the meeting, the Chinese foreign minister told reporters that current level of relations between the two countries is satisfactory, Velayati said.

The two sides should do their best to achieve the dlrs 200 billion target set for annual trade, he said.

<http://www.irna.ir/en/News/81508836/>

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FARS News Agency – Tehran, Iran
Tuesday, February 17, 2015

Senior MP: Europe, US Not Seeking to Clinch Final Deal with Iran

TEHRAN (FNA) - A senior Iranian lawmaker underlined that the US and the European countries are not serious about striking a final deal with Iran.

"Unfortunately, the western governments do not fulfill their undertakings," Rapporteur of the parliament's National Security and Foreign Policy Commission Seyed Hossein Naqavi Hosseini told FNA on Tuesday.

The prominent legislator noted that the western countries have violated the Geneva interim agreement repeatedly, and said, "The Group 5+1 (the US, Russia, China, France and Britain plus Germany) vowed under the Geneva agreement not to impose any new sanctions against Iran and not to even extend the existing sanctions; hence imposing new sanctions against Iran is blocked according to the contents of the Geneva agreement."

But you can see that they have imposed sanctions on Iranian individuals and entities several time since November 2013 when the interim deal was struck, he added, and condemned the new sanctions imposed by the US and Europe against the National Iranian Tanker Company (NITC).



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Naqavi Hosseini noted that the West is trying to push the negotiations into deadlock by ignoring the rules of the game and without leaving the negotiating table.

During a meeting in Brussels on Thursday 12 February, members of the European Union decided to sanction again the NITC, which is transporting oil around the globe, after the European court of appeal rejected the demand of the 27-nation block to keep the Iranian entity under sanction.

Last week, Iranian President Hassan Rouhani stressed the necessity for the annulment of all sanctions against the country, and dismissed the US officials' claims that Tehran had sit to the negotiating table with powers under pressures and sanctions.

"Those who state that Iran has come to the negotiations due to sanctions are uttering lies; Iran has sit to the negotiating table not as a result of pressures but for the sake of logic and for the establishment of peace in the region and the world," Rouhani said, addressing millions of people participating in the February 11 rallies marking the 36th anniversary of the victory of the Islamic Revolution in Tehran and other cities.

He asked the western officials if their claims that Iran had sit to the negotiating table due to sanctions were true, then why they didn't impose further embargos on the nation and had resorted to talks with Tehran, instead.

"Speak honestly and admit that you have been left with no other option against the Iranian nation but interaction, and say it to the world out loud that if you intend to establish peace and stability and uproot terrorism in the Middle-East region, you have no way out but (to interact with) the Islamic Republic," Rouhani underscored.

Stressing that Iran was after a win-win understanding with the world powers, Rouhani said, "This means that if Iran shows transparency in its peaceful nuclear program within the framework of the international regulations, the other side should also end the illegal sanctions and this will benefit both sides."

The 10th round of negotiations between Iran and the six world powers was held in Vienna from November 18 to 24, where the seven nations decided to extend the talks until July after they failed to strike an agreement.

The latest round of the nuclear talks between Iran and the six world powers was held in February.

Both Iran and the G5+1 negotiators have underlined that cutting a final deal before the July 10 deadline is possible.

<http://english.farsnews.com/newstext.aspx?nn=13931128001484>

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Tasnim News Agency – Tehran, Iran

Iran Unveils Mock-Up of Manned Spacecraft

February 17, 2015

TEHRAN (Tasnim) – Iran on Tuesday unveiled the mock-up of a homegrown spacecraft that is capable of carrying astronauts into space.

The spaceship, built on one-to-one scale, was put on display in an exhibition of Iran's latest achievements in space industry, held in Tehran on Tuesday.

The spacecraft will be reportedly launched into orbit next Iranian year (starts on March 21, 2015).

Iran has in recent years made great headways in manufacturing satellites thanks to the efforts made by its local scientists.

Earlier this month, Iran successfully sent the homegrown Fajr (Dawn) satellite into orbit with a domestically-built satellite carrier, dubbed Safir-e Fajr.

In January 2013, Iran sent a monkey into space aboard an indigenous bio-capsule code-named Pishgam (Pioneer).

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And later in December 2013, the country's scientists could successfully send a monkey, called 'Fargam' or Auspicious, into space aboard Pajoheshan (Research) indigenous rocket and return the live simian back to earth safely.

<http://www.tasnimnews.com/English/Home/Single/657512>

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FARS News Agency – Tehran, Iran

Tuesday, February 17, 2015

President Rouhani: Iran Speeds Up N. Progress

TEHRAN (FNA) - Iranian President Hassan Rouhani underlined that the country doesn't take permission from anyone to make progress in different scientific and technological fields, and said Tehran has accelerated its peaceful nuclear activities.

"We have made highly important progress in the nuclear field, but the negotiations receive so much attraction and hue and cry that they overshadow these activities, otherwise, we are running at a higher speed," Rouhani said, addressing a ceremony to commemorate the space technology day in Iran on Tuesday.

He underscored the country's progress in different aerospace, genetics, medical and other scientific fields, and said, "We don't and will not take permission from anyone to make progress in science and knowledge."

He referred to the enemies' attempts to seek excuses to pressure Iran and block the country's scientific development, and said his government is and will continue efforts to defuse the enemies' plots and show that their excuses and allegations are baseless.

His remarks came after Iran's Supreme Leader Ayatollah Seyed Ali Khamenei underlined that the dispute over the country's nuclear program is politicized, used as a pretext to put pressure on the Islamic Republic, slow down its scientific/technological progress, and contain its influence across the region and beyond.

According to Ayatollah Khamenei, even if Iran and the Group 5+1 (the US, Russia, China, Britain and France plus Germany) clinch an accord, the West will come up with new excuses to antagonize Tehran.

The 10th round of negotiations between Iran and the six world powers was held in Vienna from November 18 to 24, where the seven nations decided to extend the talks until July after they failed to strike an agreement.

The latest round of the nuclear talks between Iran and the six world powers was held in February.

Both Iran and the G5+1 negotiators have underlined that cutting a final deal before the July 10 deadline is possible.

<http://english.farsnews.com/newstext.aspx?nn=13931128000550>

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The Daily Star – Beirut, Lebanon

Iran Bans Weekly for Criticizing Tehran's Nuclear Concessions

Reuters

February 17, 2015

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ANKARA: Iran has shut down a hardline conservative weekly for criticizing the government's nuclear negotiations with six major powers aimed at ending a decade-old standoff, the Iranian Students' News Agency (ISNA) reported Monday.

The broad goal of the talks is to restrain Iran's nuclear energy capacity to remove any concerns it could develop bombs in return for the lifting of sanctions that have ravaged the Iranian economy.



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The Noh-e Day weekly, run by hardline member of parliament Hamid Rassai, had repeatedly criticized pragmatist President Hassan Rouhani's government for "making too many concessions" during the nuclear negotiations.

"Iran's press watchdog has banned the Noh-e Day weekly for publishing articles that contradicted the country's nuclear policy," ISNA reported.

"Each step that [Foreign Minister Mohammad Javad] Zarif took during the walk destroyed 100 kilograms of [Iran's] reserve of enriched uranium," the weekly said in January regarding Zarif's lakeside promenade with U.S. Secretary of State John Kerry at the Geneva negotiations.

That diplomatic stroll raised an outcry among Iranian hardliners wary of Rouhani's moves to thaw Iran's antagonistic relations with the West, and Zarif was summoned by lawmakers to explain his actions.

ISNA said Noh-e Day had also been accused of offending the late founder of Iran's 1979 Islamic Revolution, Ayatollah Ruhollah Khomeini.

The United States and its European allies have long suspected Iran of covertly trying to develop nuclear weapons know-how. Tehran insists its nuclear program is geared to production of non-fossil fuel and scientific research.

China's foreign minister said during a trip to Tehran that a nuclear settlement would help it escape from sanctions and allow more efforts to be spent on economic development.

Negotiators failed to meet a self-imposed deadline in November to clinch a final agreement. They have set a new deadline of June 30.

Under a Nov. 24, 2013 preliminary accord with Britain, China, France, Germany, Russia and the United States, Iran halted its most sensitive nuclear activity and took other steps in exchange for some easing of sanctions.

<http://www.dailystar.com.lb/News/Middle-East/2015/Feb-17/287694-iran-bans-weekly-for-criticizing-tehrans-nuclear-concessions.ashx>

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Aviation Week – Arlington, VA

Controversy Continues over Iran's Rockets and Weapons

Nuclear deal with Tehran will not eliminate all threats

By Bill Sweetman, Aviation Week & Space Technology - Defense Technology Edition

February 17, 2015

Iran's linked development of nuclear energy and surface-to-surface missiles is motivating multiple missile-defense programs, including most of Israel's work, exports of Patriot PAC-3 and Terminal High Altitude Area Defense missiles to the Middle East, and U.S. deployment of elements of the European Phased Adaptive Approach missile defense system. The progress of Iran's projects, however, remains under debate and wrapped in secrecy.

The Obama administration has led efforts by the P5+1 group (U.S., Russia, China, France and Britain—the permanent members of the United Nations Security Council—plus Germany) to negotiate agreements that confine Iran's nuclear program to civil uses and provide assurance against covert or overt breakouts from such restrictions. Optimists see the current slump in oil prices putting pressure on Iran to pursue an agreement to lift sanctions.

Some see a nuclear agreement as sufficient to contain Iran's missile program. Medium- and intermediate-range ballistic missiles are mainly nuisance weapons because of poor accuracy and high cost, unless combined with weapons of mass destruction (WMD) payloads. They are ineffective against most military targets and, given the tracking, prediction and communications technologies available, a civil defense system can eliminate many casualties without forcing an entire city to take shelter.

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Others, however, see risk in two areas. One is that Iran may see the P5+1 process as a stalling tactic, and wait for the consensus on sanctions to erode. The other is that Iran might add guidance systems to its weapons, making them lethal and effective against more targets.

Sanctions were imposed because of an “unprecedented and inherently ephemeral set of circumstances,” notes Suzanne Maloney, senior fellow at the Brookings Institution. These include the inflammatory rhetoric of then-President Mahmoud Ahmadinejad and domestic repression.

In Mahoney’s view, “for months, Iran’s diplomacy has been focused on ensuring that Washington is seen as the spoiler if . . . prospects for a deal . . . go south.” She suggests the obstacle is simple: Iran’s supreme leader, Ayatollah Ali Khamenei, is not interested in any agreement that does not leave the nation’s nuclear capabilities intact.

Even if there are successes in negotiations or failures in Iran’s nuclear program, there is evidence that progress in missile development continues. In a presentation last year, Israeli missile-defense pioneer Uzi Rubin argued that indicators pointing to slowdowns in missile development, which some analysts see as the result of sanctions, may be misleading. Rubin cited ongoing if unsuccessful space-launch attempts and the May 2013 unveiling of a transporter-erector-launcher (TEL) for the 2,000-km-range (1,245-mi.) Shahab-3 missile. The TEL was not a prototype: Iran showed a production line, and modifications to the unit’s design disguise it as a civilian tractor-trailer.

Other developments include Iran’s announcement in February 2014 of a multiple reentry vehicle (MRV) payload for the Shahab-3. The following month, Iran’s Fars news agency announced that the Shahab and the newer 800-km-range Qiam were equipped with MRVs, and showed images of 24 Qiams, apparently in a tunnel, and 44 weapons in a hangar. Also recently unveiled was Kadr F, which is capable of covering 1,950 km. Rather than a slowdown, Rubin says tests are being concealed as “part of a wider diplomatic effort to ease . . . sanctions.”

Rubin also warns of progress in adding GPS guidance to missiles. An October 2014 report by the Center for Strategic and International Studies (CSIS) quotes him as saying Iran added a guidance system to the 210-km-range, 600-kg (1,320-lb.) Zelzal-2 warhead and could do the same with longer-range missiles. “This threat can degrade the [Israeli military’s] ground capabilities,” Rubin says. “It can paralyze Israel’s war economy . . . and . . . inflict massive casualties.”

Rubin says nations such as Iran find missile development easier and cheaper than building or maintaining strike aircraft. In a 2013 interview, he noted that “we are in the middle of a revolution” in guided rocketry. “An iPad can guide a missile,” he said, predicting a widespread increase in the use of guided ballistic missiles in the next five years.

Others are more cautious. The CSIS report pointed to areas of uncertainty, including “limited tests under ‘white-suit’ conditions” that give a distorted impression of accuracy and lethality, the potential effectiveness of missile defense systems, and the risks and costs of retaliatory strikes. Even with guidance systems that offer better theoretical circular-error-probable numbers, “CEP applies to 50% of perfectly located and launched missiles that operate perfectly in flight to reach a perfectly located target . . . [P]ractical test and evaluation, as well as U.S. combat experience warn that the error budget of things that can degrade operational accuracy in a real world missile is far greater than the accuracy of the platform would suggest.”

<http://aviationweek.com/defense/controversy-continues-over-iran-s-rockets-and-weapons>

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Xinhua News – Beijing, China

Iran Rejects Two-Stage Nuclear Deal by July Deadline: Spokesperson

(Xinhua)

February 18, 2015



USAF Center for Unconventional Weapons Studies
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Maxwell AFB, Alabama

TEHRAN, Feb. 18 (Xinhua) -- Iran does not consider a two-stage nuclear deal in the remaining time leading up to a deadline by July, Iran's Foreign Ministry Spokeswoman, Marzieh Afkham, said in her weekly press briefing on Wednesday.

Asked whether the talks for a potential comprehensive nuclear deal will continue if a political framework cannot be agreed on by the end of March, Afkham said based on the November agreement, the talks were extended for another seven months and both Iran and the world powers are committed to the negotiations.

"Obviously, we will not have a two-stage agreement in the course of the negotiations" by the end of the deadline, and the pre-condition of a political framework is not a hindrance to the one-stage agreement, she told reporters.

Iran agreed to suspend nuclear activities in return for limited ease of sanctions under an interim deal between Tehran and the P5+1 group (namely the United States, Britain, France, Russia, China and Germany) on Nov. 24, 2013.

After failing to bridge gaps last year, both sides are committed to agreeing on a political framework by the end of March, before heading towards another self-imposed deadline by July this year.

Earlier, U.S. Secretary of State John Kerry told Iran's Foreign Minister Mohammad-Javad Zarif that the United States aimed "to move toward a political framework by the end of March."

In response, Iran's Supreme Leader Ayatollah Ali Khamenei urged a single-stage "detailed" agreement, suggesting that an agreement on political framework cannot serve as a prerequisite for the continuation of talks.

The Western powers have imposed rounds of diverse sanctions on Iran, accusing the Islamic Republic of having been developing atomic weapons under the cover of civilian nuclear plan.

Iran rejected the allegations as baseless, and insisted that its nuclear program is solely peaceful and all the western sanctions should be lifted "at once" after a final nuclear deal is clinched.

http://news.xinhuanet.com/english/world/2015-02/18/c_134005700.htm

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Agency – Tehran, Iran
Wednesday, February 18, 2015

Supreme Leader: West Never Removes Sanctions against Iran

TEHRAN (FNA) - Supreme Leader of the Islamic Revolution Ayatollah Seyed Ali Khamenei warned of the arrogant powers' plots to impede Iran's progress in different scientific and technological fields, and said even if Tehran accepts all the demands of the world powers in the nuclear standoff, they will never remove their embargos against the country.

"Their main goal of such measures (sanctions) is humiliation of the Iranian nation and stopping the nation and Islamic Republic's great move towards a new Islamic civilization and I believe that even if we accept the demands that they (want to) dictate on us in the nuclear issue, the sanctions will not be removed since they are opposed to the (Islamic) Revolution in essence," Ayatollah said in Tehran on Wednesday, addressing a large number of visiting Iranians from East Azerbaijan province.

He elaborated on the underlying cause of economic problems in Iran, and said, "One of the most important problems is the arrogant powers' plots after the end of the (Iraqi-) imposed war (1980-1988) to prevent Iran from becoming an influential economic hub in the region and the world."

Ayatollah Khamenei pointed to the western states' attempts to keep Iran away from partnership in major regional and international economic projects, including oil and gas pipelines, and keep Tehran under sanctions, and said in addition to the arrogant powers' plots, the country's economy is suffering from dependence on oil and government's major role in different projects.

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He underlined the necessity for implementation of Resistance Economy plans in Iran, and said, "The resistance economy which is necessary for the country under any conditions, under or free from sanctions, means that the country's economic foundation should be organized in a way that it is not affected by global trembles."

"If the country's economic basis is planned and strengthened based on using people's capacities and domestic production, we will never mourn or grow concerned over sanctions and reduction in oil prices," Ayatollah Khamenei said.

He underscored that one of the important and main solutions to get rid of oil-oriented economy is cutting the budget's dependence on oil revenues, and emphasized the necessity for using the abundant capacities of the Iranian youth to make progress and materialize the goals of the Revolution.

He blasted the US threats and the European states' obedience to the US policies, and said, "If they is to be any sanction imposed, the Iranian nation too can impose sanction (on them) and it will do so."

In relevant remarks earlier this month, Ayatollah Khamenei underlined that Iran would never accept a bad agreement with the world powers, adding that the country is in favor of a single-phase comprehensive deal which would respect the Iranian nation's inalienable rights and entail all details.

"I agree with an agreement if it can be struck, but I disagree with a bad agreement," the Supreme Leader said in a meeting with the commanders and personnel of the Iranian Air Force and Air Defense in Tehran.

He pointed to the US officials' remarks that "disagreement is better than a bad agreement", and said, "We believe the same and we believe that not agreement is better than striking an agreement that would harm the national interests and pave the way for humiliating the great Iranian nation."

The Leader further stressed his opposition to striking a deal over general issues and leaving the details for some other time in future, saying that a final agreement should include all the general principles and all the details together and should not leave anything for future.

The Supreme Leader reiterated that the Iranian nation will not tolerate bullying, excessive demands and illogical behavior.

Ayatollah Khamenei stressed that the general points and technical details of any accord need to be agreed upon simultaneously as the US has already proved that it tries to escape its undertakings under the pretext of different interpretations.

"The contents of such a contract should be transparent, clear and not open to interpretation. The contents of the agreement should not allow the other side which is used to bargaining to seek excuses on different issues," he added.

The 10th round of negotiations between Iran and the six world powers was held in Vienna from November 18 to 24, where the seven nations decided to extend the talks until July after they failed to strike an agreement.

The latest round of the nuclear talks between Iran and the six world powers was held in February.

Both Iran and the Group 5+1 (the US, Russia, China, Britain and France plus Germany) negotiators have underlined that cutting a final deal before the July 10 deadline is possible.

<http://english.farsnews.com/newstext.aspx?nn=13931129001121>

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Deutsche Welle - Bonn, Germany

IAEA Says Iran Not Fully Cooperating with Nuclear Probe

The International Atomic Energy Agency (IAEA) has issued a report criticizing Iran for not fully cooperating with an investigation into its nuclear program.

19 February 2015

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In a document released by IAEA on Thursday, the United Nations watchdog said it was particularly worried about Tehran's potential to develop weapons, and chastised the country for not being totally honest with the inquiry into its nuclear capabilities.

"The agency remains concerned about the possible existence in Iran of undisclosed nuclear-related activities involving military-related organizations, including activities related to the development of a nuclear payload for a missile," it said.

For the past 18 months the Islamic republic has been meeting with Britain, China, France, Germany, Russia and the US—the so-called "P5+1" group. The two sides are attempting to strike a deal curbing Tehran's nuclear program, in exchange for tough international sanctions being lifted.

Iran has always denied it has nuclear ambitions.

An interim deal in late 2013 saw the nation's stockpile of fissile material diluted and some sanctions eased.

The P5+1 group is pushing for limits to be set on Iran's uranium enrichment capacity and for the country to open itself up to regular IAEA inspections.

Iran's deputy foreign minister, Abbas Araghchi, said on Thursday that diplomats from Iran and the United States would begin a new round of talks on Friday, which would then be continued by Iran's foreign minister, Mohammad Javad Zarif, and US Secretary of State John Kerry.

He said that senior envoys from the other five powers could join in later. The US State Department said the consultations "will take place in the context of the P5+1 nuclear negotiations with Iran."

Unanswered questions

Iran's deputy foreign minister, Abbas Araghchi, is expected to travel to Vienna next week to meet with the IAEA's director-general, Yukiya Amano, in a bid to move stalled talks forward.

The IAEA says Iran still has not answered questions on specifics, such as whether it has carried out research on nuclear arms.

Tehran has explained away suspicions, such as work related to detonators that could potentially be used to implode nuclear material in a warhead, as being designed for civil engineering and non-nuclear military purposes.

The IAEA is also trying to find out further information on high-explosives testing and computer modeling that could be related to developing nuclear weaponry.

However, the report did mention that, as part of agreed-to measures designed to build confidence, Iran has not increased uranium production, and has stopped constructing a plutonium reactor in the western city of Arak.

The leaders hope to have a deal outlined by the end of March, with the final details to be settled in the following months.

Both sides continue to disagree over the severity of the restrictions and when international sanctions would be lifted.

(dpa, AP, Reuters, AFP)

<http://www.dw.de/iaea-says-iran-not-fully-cooperating-with-nuclear-probe/a-18269855>

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Islamic Republic News Agency (IRNA) – Tehran, Iran

Iran, US Resume Bilateral Nuclear Negotiations

20 February 2015

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Geneva, Feb 20, IRNA – Bilateral Iran-US nuclear negotiations featuring the two countries' deputy foreign minister resumed at 11 o'clock local time, 1:30 pm, Tehran time here in Geneva.

The Iranian nuclear negotiation team headed by Deputy Foreign Minister Seyyed Abbas Araqchi arrived in Geneva Friday morning to pursue talks with the US delegation on ways for achieving a comprehensive final agreement on Iran's peaceful nuclear program with the western Sextet t pre-scheduled deadline.

Deputy Foreign Minister for Europe and American Affairs Majid Takhte-Ravanchi is another member of the Iranian negotiation team in these talks.

The Head of the US delegation in the talks in Friday and Saturday negotiations is the veteran US politician Wendy Sherman, who is the US Secretary of States' third top official.

The two countries' two-day talks at deputy ministers' level will lead to the Sunday and Monday talks of Foreign Minister Mohammad-Javad Zarif and Secretary of State John Kerry in Geneva.

Araghchi had on Thursday predicted that on the 4th day of the negotiations the deputy foreign ministers of the other five members of the 5+1 Group (also known as the western Sextet, the E3+3 and the UN Big Five plus Germany), too, will join the talks, but not at the seven countries' foreign ministers' level.

The Iranian Foreign Ministry's legal and international affairs deputy Araqchi will after these negotiations head for Vienna on Tuesday to talk with the Managing Director of the UN nuclear watchdog Yukiya Amano aimed at accelerating the Iran-IAEA cooperation.

<http://www.irna.ir/en/News/81513354/>

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The Times of India – New Delhi, India

Govt Approves Construction of 7 Stealth Frigates, 6 Nuclear-Powered Submarines

Rajat Pandit, Tamil News Network (TNN)
February 18, 2015

NEW DELHI: In a major step towards building a formidable blue-water Navy for the future, the Modi government has cleared the indigenous construction of seven stealth frigates and six nuclear-powered attack submarines, which together will cost well upwards of Rs 1 lakh crore.

The Cabinet committee on security (CCS) took these decisions in tune with the "critical necessity" for India to bolster its "overall deterrence capability" in the entire Indian Ocean Region (IOR), especially its primary area of strategic interest stretching from the Persian Gulf to Malacca Strait.

Under the over Rs 50,000 crore 'Project-17A' for stealth frigates, four will be constructed at Mazagon Docks in Mumbai and three in Garden Reach Shipbuilders and Engineers in Kolkata. "The contract will be inked with MDL and GRSE this month itself, with an initial payment of Rs 4,000 crore," said a source.

Both the defence shipyards are already geared up for the project because it's a "follow-on" to the three 6,100-tonne stealth frigates built by MDL, INS Shivalik, INS Satpura and INS Sahyadari, which were inducted in 2010-2012.

The new multi-mission frigates will be larger, faster and stealthier than the Shivaliks as well as packed with more weapons and sensors to operate in "a multi-threat environment". But it could well take a decade, if not more, to build all the seven frigates.

The complex project for the nuclear-powered submarines (SSNs) will take longer. After the CCS approval, technical parameters or naval staff qualitative requirements (NSQRs) will now be drafted for the over 6,000-tonne submarines.

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The SSNs are likely to be constructed at the secretive ship-building centre (SBC) in Vizag, where India's first three SSBNs (nuclear-powered submarines with nuclear ballistic missiles) are being built to complete the country's nuclear weapons triad.

The government has basically "reworked" the 30-year diesel-electric submarine-building plan, approved by the CCS in 1999, which envisaged induction of 12 new conventional submarines by 2012, followed by another dozen by 2030. But with no new submarine inducted till now, the government has decided to go in for six SSNs and 18 conventional vessels, said sources.

Nuclear-powered submarines are much deadlier than diesel-electric submarines since they do not need to surface every few days to get oxygen to recharge their batteries. "SSNs, which usually carry only conventional missiles, can swiftly and quietly undertake long-range patrols. They can run at high speeds like 30 knots for much longer distances, hunting for targets and gathering intelligence," said an expert.

INS Chakra, the nuclear-powered Akula-II class SSN taken on a 10-year lease from Russia, may not be armed with long-range missiles due to international treaties, but has bolstered India's depleting underwater combat arm that is currently grappling with just 13 ageing conventional diesel-electric submarines.

Armed with 300km range Klub-S land-attack cruise missiles and advanced torpedoes, INS Chakra can be a potent 'hunter-killer' of enemy submarines and warships as well as provide effective protection to a fleet at sea.

<http://timesofindia.indiatimes.com/india/Govt-approves-construction-of-7-stealth-frigates-6-nuclear-powered-submarines/articleshow/46281364.cms>

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The Hindu – Chennai, India

Prithvi-II Proves its Mettle in User Test-Firing

With a strike range of 350 km, Prithvi-II is capable of carrying 500 kg to 1,000 kg of warheads and is thrustured by liquid propulsion twin engines.

By Y. Mallikarjun

February 19, 2015

Strategic Forces Command personnel test-fired the nuclear-weapons-capable Prithvi-II missile from Chandipur in Balasore district of Odisha on Thursday for a range of 250 km as against its full strike range of 350 km.

The missile regiment unit of the Command picked up a missile randomly from the production lot and launched it from a road mobile launcher around 9.15 a.m. for regular user training.

After a nearly seven-minute flight, the surface-to-surface missile carrying a 500-kg dummy payload splashed into the Bay of Bengal within less than 20 metres of the target point, said Defence Research and Development Organisation (DRDO) scientists.

Objectives met

The "copybook flight" met the mission objectives. A hybrid GPS-INS (inertial navigation system) aided accuracy, they said.

Two indigenously developed radar transponders for S and C bands were test-flown in the missile and validated, a scientist said adding they could be used for bigger missiles.

The transponders would communicate via radar the position of the missile and help track it.

Radars and electro-optical tracking and telemetry systems along the coast monitored the trajectory and other parameters of the missile in real time, while a down-range ship recorded the explosion during the terminal event.

Many tests carried out

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The nine-metre-tall, single-stage liquid-fuelled Prithvi-II, the first missile to be developed under the Integrated Guided Missile Development Programme of the DRDO, was inducted into the Command in 2003. Several flight-tests were held for user training.

The scientist said Prithvi-II could not be intercepted because of its “manoeuvring trajectory capability”.

<http://www.thehindu.com/news/national/nuclear-capable-prithviii-missile-testfired/article6911901.ece>

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Arms Control Wonk.com

OPINION/Blog

Discriminate Deterrence

By Michael Krepon

18 February 2015

One paradox of nuclear deterrence has always been that whatever utility the Bomb provides is lost once the nuclear threshold is crossed, however large or small the boom. There is no bigger blunderbuss than a nuclear weapon atop a long-range missile. Smaller-yield message-senders have been created in the form of tactical nuclear weapons, but any advantageous battlefield use of nuclear weapons against a similarly armed foe requires heroic assumptions. Basic nuclear deterrence is measured by non-use. The derived benefits of “strengthening” deterrence by means of more discriminating or improved methods of delivery have been completely conjectural.

How much of a deterrent is a weapon that hasn’t been used on battlefields for almost 70 years? Deterrence strategists object to this formulation. They argue that, even without mushroom clouds, the Bomb has leveraged favorable outcomes in diplomacy, crises and wars. These arguments do not withstand close scrutiny. The Bomb has indeed energized diplomacy to defuse crises – after exacerbating them. It has also reinforced the common sense of major powers not to fight full-blown conventional wars. Beyond reinforcing caution, the Bomb’s suasion is limited. It can’t override bad national decisions, local circumstances, and differentials in commitment to achieve preferred outcomes. The Bomb hasn’t proven its worth when nuclear-armed states square off against non-nuclear-weapon states, as is evident by a painfully long track record of conventional wars, limited wars, proxy wars and unconventional wars.

The quest to fine-tune deterrence to increase leverage above and below the nuclear threshold is nonetheless an endless project. As missile accuracies improved and warheads multiplied, thanks to MIRVs, targeting lists grew. Limited and not-so-limited options were added to massive targeting plans in the quest for leverage, advantage, or war-winning capabilities.

Deterrence benefits from limited nuclear options are based on two dubious presumptions — that escalation can be controlled and that an adversary will not skip rungs on the escalation ladder. Mental gymnastics have always been required to derive deterrence benefits out of plans for massive retaliation.

In the 1990s, the advent of precision-strike conventional capabilities promised greater diplomatic leverage and militarily effectiveness without crossing the nuclear threshold. But air power alone has always had limited effectiveness and suasion. “Prompt global strike” and hypersonic weapons are now advanced in the pursuit of more discriminate, effective deterrence. Their promise also rests on risky assumptions – that strikes will not mistakenly hit nuclear-armed or related targets, and that a foe will accept attrition without crossing the nuclear threshold.

Fred Iklé and Albert Wohlstetter led a study on ‘Discriminate Deterrence’ at the end of the Reagan administration. Their Commission on Integrated Long-Term Strategy report was released in January 1988. Contemporary readers will find no hints in this report that the Soviet Union, against which the Commission’s recommendations were primarily directed, was a house of cards. One example: “We will seek to contain Soviet expansionism in any region of the world.”

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The Commission predicated its recommendations on this key finding:

To help defend our allies and to defend our interests abroad, we cannot rely on threats expected to provoke our own annihilation if carried out. In peacetime, a strategy based on such threats would undermine support for national defense. In a crisis, reliance on such threats could fail catastrophically for lack of public support. We must have militarily effective responses that can limit destruction if we are not to invite destruction of what we are defending.

How, then, to proceed? Here are some excerpts:

We must diversify and strengthen our ability to bring discriminating, non-nuclear force to bear where needed in time to defeat aggression. To this end, we and our allies need to exploit emerging technologies of precision, control, and intelligence that can provide our conventional forces with more selective and more effective capabilities for destroying nuclear targets...

We and our allies would rather deter than defeat an aggression, but a bluff is less effective and more dangerous in a crisis than the ability and will to use conventional and, if necessary, nuclear weapons with at least a rough discrimination that preserves the values we are defending...

The precision associated with the new technologies will enable us to use conventional weapons for many of the missions once assigned to nuclear weapons. The new technologies will work to strengthen the ability of our ground and air forces to defeat invasions. Particularly important in this connection is the prospective use of "low observable" (Stealth) technology in combination with extremely accurate weapons and improved means of locating targets. In the years beyond 2000, this combination will provide new ways to stop invading forces at great distances from the front lines.

Iklé and Wohlstetter were prescient in forecasting that the United States would pursue precision strike conventional capabilities, low observables, and replacing nuclear for conventional weapons against certain targets in strategic war plans. Even so, the U.S. track record of deterrence, dissuasion and compellence during the past quarter-century has not merited high marks. The awesome powers of nuclear weapons are greatly compromised in the real world. Diversified and more discriminating capabilities do not help when leaders and their followers are not amenable to deterrence. In these instances, what matters most is maintaining a firewall between nuclear and conventional capabilities.

Michael Krepon is Co-founder of the Henry L. Stimson Center and the author or editor of thirteen books and over 350 articles. Prior to co-founding the Stimson Center, Krepon worked at the Carnegie Endowment for International Peace, the US Arms Control and Disarmament Agency during the Carter administration, and in the US House of Representatives, assisting Congressman Norm Dicks.

<http://krepon.armscontrolwonk.com/archive/4483/discriminate-deterrence>

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Australian Strategic Policy Institute (ASPI) – Barton, Australia

OPINION/The Strategist

Re-Envisioning the Second Nuclear Age

By Rod Lyon

19 February 2015

Concepts are long-lived in the world of strategy—so long-lived that we need to revisit them periodically to confirm that their meaning hasn't shifted. Lately, I've started thinking that the notion of a 'second nuclear age' has matured a lot during the last twenty years. Indeed, the concept has evolved through three distinct variations, each a little more worrying than its predecessor.

In its first formulation, the concept warned of the potential failure of deterrence doctrine when nuclear weapons spread to 'rogue states' such as North Korea. That's because strategists in the 1990s found it difficult to imagine

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the circumstances in which nuclear weapons would once more have the prominence in great-power relationships that they had during the Cold War years. In consequence, there was an emphasis placed on the new, the weak and the poor—‘underdogs’ Robert O’Neill once called them—as the future problems of the nuclear world.

In that vein, Keith Payne’s *Deterrence in the Second Nuclear Age* (1995) and Paul Bracken’s *Fire in the East* (1999) both signalled the difficulties that deterrence encountered from proliferation. Bracken wrote of a second nuclear age characterised by nationalism rather than ideology; a willingness to use other kinds of weapons of mass destruction, like chemical weapons; impoverished nuclear weapon states; shaky command and control systems; difficulties in communicating and bargaining with the West; deliberate reductions in conventional capabilities to permit greater nuclear capacities; and less willingness to model deterrence policies upon the strict logic of game theory.

Then, in 2004, almost a decade after writers initially began to contemplate the strategic significance of rogue nuclear powers, a small group of strategists—Kurt Campbell, Robert Einhorn and Mitchell Reiss—wrote of the emergence of a potential nuclear tipping point. Regional proliferators risked exciting small proliferation chains—and among status quo powers, not merely rogues. That book contained a set of case studies outlining possible proliferation by Egypt, Saudi Arabia, Syria, Turkey, Germany, Japan, South Korea and Taiwan. The broader message about the second nuclear age became more complicated. Rogues were bad enough, but proliferation chains might, indeed, undo the broader global nuclear order, set at its core by the Nuclear Nonproliferation Treaty (NPT). The NPT had obliged most states to choose their future nuclear identity at the end of the 1960s and beginning of the 1970s, and thirty-odd years down the track, there was the chance that some had repented of their choice.

In 2015, I think we’re beginning to see the second nuclear age in its third variation. Paul Bracken warned in his 2012 work *The Second Nuclear Age* that nuclear weapons were returning to relevance among the traditional great-power members of the nuclear club, but tensions between those players have increased noticeably since then. The possibility that seemed remote in the 1990s now seems less remote. The P5 are modernising their weapons—and it’s strategy and not mere technological obsolescence that’s driving those modernisation programs. In short, the strategic significance of nuclear weapons is going up in relation to the ‘top dogs’, and not merely in relation to the underdogs and their status-quo regional neighbours.

This third variation of the second nuclear age (an ungainly expression) carries us into even more difficult terrain. Tensions between Russia and the West have increased, bringing with them both Russian behaviour—like long-range bomber patrols—reminiscent of the Cold War years and echoes of the nuclear debates in Europe during that period. In Asia, uncertainties resulting from the growth of Chinese conventional power are driving a brisker discussion about US extended nuclear assurance. In the Middle East, Iran’s nuclear future—and thus the region’s—is murky.

Nuclear weapons are making a comeback, but we’re sorely lacking in a good understanding of where they’re going to fit in both national and international strategies. If we can’t get rid of them—and we can’t—how can they be leveraged in the current international environment to provide the greatest contribution to international security? Since the end of the Cold War, the generation of nuclear strategic thinkers who concentrated upon such questions has largely passed. A new generation needs to address the topic.

Meanwhile, the topic itself has become harder. Future nuclear strategists aren’t just dealing with the Cold War problem of how to ensure deterrence and stability in a bipolar relationship of risk-averse and economically-decoupled superpowers. Great-power strategic relationships are more multipolar. There are larger worries about the possible leakage of nuclear weapons to non-state actors. And those two earlier waves of the second nuclear age did reflect genuine concerns: rogues and potential proliferation chains now haunt the order in a way they haven’t since the end of the 1960s. A major challenge lies ahead in a field in which we’ve been shedding expertise rather than nurturing it.

Rod Lyon is a fellow at ASPI and executive editor of The Strategist.

<http://www.aspistrategist.org.au/re-envisioning-the-second-nuclear-age/>

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Lexington Institute – Arlington, VA
OPINION/Analysis

Missile Defense: A Common Kill Vehicle Will Improve Performance and Save Money

By Constance Baroudos
February 19, 2015

The Missile Defense Agency aims to develop a common kill vehicle (CKV) to address future ballistic threats in 2025 and beyond. A CKV will take many years to develop, but it will boost the capacity of missile defense systems to neutralize complex threats while increasing efficiency and reducing costs.

Kill vehicles have the challenging task of destroying incoming threats in space. The kill vehicle is carried by an interceptor outside the Earth's atmosphere and then breaks away when in range of its target. Next, the vehicle uses its own propulsion, communication links and guidance system to ram into the target. The kinetic force of high-speed impact completely obliterates the threatening warhead.

The CKV program aims to create one kill vehicle model to equip interceptors in all future ballistic missile defense architectures. An identical kill vehicle used in systems such as the Aegis Ballistic Missile Defense and the Ground-based Midcourse Defense means less manpower and maintenance resources would be necessary for upkeep (one version of the kill vehicle is easier to sustain than multiple types). Additionally, specialists would be able to focus on optimizing the effectiveness of one type of kill vehicle instead of having to juggle several different models. Since the CKV will be an essential component to all missile defense systems, costs of future modifications would be minimized due to economies of scale.

Funding for the CKV program was a result of the redirected Standard Missile-3 (SM-3) Block IIB interceptor program back in March 2013. At that time former Secretary of Defense Chuck Hagel made clear the reorganization would improve America's security when he stated, "By shifting resources from [SM-3 Block IIB] to fund ... kill vehicle technology that will improve the performance of the Ground Based Interceptor and other versions of the SM-3 interceptor, we will be able to add protection against missiles from Iran sooner, while also providing additional protection against the North Korean threat."

The question that remains open is what type of kill vehicle the CKV will be. One option is a unitary kill vehicle that would destroy a single incoming missile or decoy at a time, assuming it does not miss its target. A downside is that a unitary model would require more interceptors to account for additional threats or decoys in outer space, or if a kill vehicle were to miss its target. A second and smarter option is to have multiple kill vehicles (MKVs) carried on the same interceptor to eliminate several incoming missiles and penetration aids and to account for possible mistakes in aiming. More interceptors could then be held in reserve because there would not be a one-to-one exchange ratio of interceptors and incoming warheads.

Missile threats are only going to increase with the passage of time. According to U.S. public intelligence, there are about 6,300 ballistic missiles of different ranges not controlled by the U.S., NATO, China or Russia today and that number is expected to grow to 8,300 by 2020 – a 30 percent increase. The best place for America to begin building a sturdier layered missile defense is at home by creating a powerful common kill vehicle to shield its homeland, armed forces, and allies from present and future threats in an efficient and cost-effective manner.

Constance Baroudos is a Policy Analyst and Program Director at the Lexington Institute. Her current research interests include ballistic missile-defense and nuclear strategy.

<http://lexingtoninstitute.org/missile-defense-a-common-kill-vehicle-will-improve-performance-and-save-money/>

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The Diplomat – Tokyo, Japan

OPINION/Article

Are China's THAAD Fears Justified?

There is speculation that the U.S. will deploy its THAAD batteries to South Korea. Should China be worried?

By Sukjoon Yoon for *The Diplomat*

February 20, 2015

The U.S. has been giving out ambiguous signals on whether it intends to deploy Terminal High Altitude Area Defense (THAAD) batteries to South Korea. For its part, China has repeatedly expressed serious concerns and deep unhappiness about the prospect. From a South Korean perspective, this is regarded as a political rather than a military matter. Would China's strategic security really be compromised by such a deployment?

On February 4, Chinese Defense Minister Chang Wanquan delivered China's first official response to ongoing speculation about the prospective deployment of the U.S.-developed THAAD to South Korea, during the bilateral "cooperative" defense ministers meeting. General Han Min-koo, his South Korean counterpart, attempted to allay Chinese concerns by reiterating that there has been no agreement between South Korea and the U.S. on this issue. Nevertheless, Beijing is exerting heavy pressure on Seoul to speak out against any such deployment, claiming that it would endanger their bilateral relationship and threaten regional peace and stability. Why is China so sensitive?

China's Concerns

Whenever a state places defensive weapons and systems at forward bases to protect forward forces from a specific adversary, this can easily give rise to political misunderstandings by neighboring states, resulting in unintended military escalation. For China, the deployment of THAAD to South Korea is just such an apparent provocation.

The deployment would imply that South Korea is part of the Ballistic Missile Defense (BMD) led by the U.S. Missile Defense Agency. South Korea is also developing an indigenous missile defense system against North Korean threats, the Korea Air Missile Defense (KAMD) system, which is less likely to antagonize China than THAAD, since it will not be integrated into the wider BMD system designed to counter Iran in Europe and China in the Asia-Pacific.

Moreover, operating THAAD in South Korea represents an explicit threat to China's asymmetric Anti-Access/Area Denial (A2/AD) strategy, which aims to exclude forwarded U.S. forces from the so-called first island chain. So China could interpret THAAD deployment by South Korea as a major military posture by the U.S. intended to neutralize China's A2/AD strategy. In September 2013, *Jane's Defence Weekly* reported a successful test of an integrated linkage between the Aegis and THAAD systems, the fourth consecutive successful intercept test. THAAD can therefore serve as a hard kill tool for the broader GBMD system. China is also understandably concerned about South Korean involvement in the trilateral intelligence sharing accord signed last year with Japan and the U.S. and the extent to which this facilitates GBMD coordination.

Moreover, THAAD's range will extend beyond the Korean Peninsula. The coverage provided by the existing sea-based Aegis system will be greatly extended by the planned deployment of AN/TRY-2 radars. These track inbound short- and medium-range ballistic missiles (SRBMs and MRBMs) with a high-resolution X-band (8-12.4 GHz) phased-array sensor system providing a 120-degree azimuth field out to 1,000~3,000km, effectively covering the whole of mainland China.

China's Fears Justified?

China is clearly rattled by the possible consequences of the U.S. plans to deploy additional defensive THAAD to the Asia-Pacific region. *Jane's Defence Weekly* reported in April 2013 that the first THAAD was installed in Guam that month; it is intended to provide early intercept capability for North Korean missiles during their boost or ascent phase.

Military leaders in Beijing will have noted General Curtis Scaparrotti's infamous remarks during his keynote speech at a defense-related forum held in Seoul on June 3, 2014. Scaparrotti recommended the deployment of THAAD to

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South Korea as a superior option to KAMD, citing THAAD's capability to engage all classes of ballistic missiles and in all phases of their trajectories. This rings alarm bells for China, which sees the U.S. stance as intended to deter not only North Korean WMD threats, but also as a military rebalancing to Asia in which the U.S. acquires the capacity to detect air and missile trajectories over China.

What has particularly disturbed the Chinese military is the prospect of the U.S. linking individual sensors, interceptors, and communications assets dispersed all around the Asia-Pacific region into a comprehensive and integrated BMD system to interdict Chinese ballistic missiles in the boost and ascent phases of their trajectories. This would allow THAAD to penetrate and severely compromise China's air defense zone. The Chinese senior political and military leadership, right up to President Xi Jinping, are worried that the deployment of THAAD and Aegis surface combatants in and around Japan and South Korea will prove a game changer. This is because China has numerous SRBMs and MRBMs which, in the event of conflict, could potentially annihilate U.S. forward bases; but which could be neutralized with a full deployment of THAAD and related systems.

No Game Changer

The South Korean press has exaggerated the significance of this issue, at least insofar as it concerns South Korea directly. If THAAD is indeed deployed in South Korea, then it will be the U.S. using this system to protect its forward military forces in South Korea, which are under constant threat from North Korea. Therefore, if the Chinese are concerned, Beijing should take the matter up directly with Washington, instead of leaning on Seoul and thereby fuelling the ongoing speculation about the possible deployment of THAAD.

And China should remember that South Korea is a core strategic partner, and that their bilateral relations have been growing ever closer and more consolidated, while China's ties with North Korea have deteriorated. It must be evident that South Korea has no interest in deliberately provoking China. The controversy about whether to deploy THAAD is not being taken lightly in South Korea: we understand the Chinese standpoint.

All things considered, China should accept at face value the U.S. insistence that the purpose of deploying THAAD in South Korea is to protect the U.S. military force in South Korea from incoming North Korean SRBMs and MRBMs. China should also recognize that South Korea has no intention to be integrated, in the way that Japan is, into the U.S.-led theater BMD architecture which counters Chinese SRBMs and MRBMs targeting U.S. forward-deployed military forces in the region. Given China's vast stockpile of ballistic missiles, which underpin its A2/AD capabilities, it is not surprising that the U.S. is incrementally building a collective BMD system in East Asia. With continuing technological advances, Chinese ballistic missiles are becoming ever more capable and sophisticated, so that with the possible deployment of THAAD to South Korea, and even with the ultimate regional integration of THAAD and related systems, the Chinese will still be able to retain a very adequate defensive posture.

South Korea represents a significant strategic wedge, balanced between China's declared vision of a New Asian Security and the U.S. implementation of its rebalancing to Asia. It is true that South Korea hosts U.S. forward military forces on the Korean Peninsula, but these number fewer than 30,000. Again, China should take up the issue of THAAD deployment in South Korea directly with the U.S., through the recently established bilateral military-to-military channels. It should refrain from pressing South Korea to directly oppose the U.S.: Chinese interests are better served by allowing South Korea strategic autonomy, while China continues to hedge its bets between the two Koreas.

Sukjoon Yoon is a retired navy captain and a senior research fellow of the Korea Institute for Maritime Strategy. He is also a visiting professor at the Department of Defense System Engineering, Sejong University, Seoul, Korea.

<http://thediplomat.com/2015/02/are-chinas-thaad-fears-justified/>

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ABOUT THE USAF CUWS

The USAF Counterproliferation Center was established in 1998 at the direction of the Chief of Staff of the Air Force. Located at Maxwell AFB, this Center capitalizes on the resident expertise of Air University, while extending its

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reach far beyond - and influences a wide audience of leaders and policy makers. A memorandum of agreement between the Air Staff Director for Nuclear and Counterproliferation (then AF/XON), now AF/A5XP) and Air War College Commandant established the initial manpower and responsibilities of the Center. This included integrating counterproliferation awareness into the curriculum and ongoing research at the Air University; establishing an information repository to promote research on counterproliferation and nonproliferation issues; and directing research on the various topics associated with counterproliferation and nonproliferation .

The Secretary of Defense's Task Force on Nuclear Weapons Management released a report in 2008 that recommended "Air Force personnel connected to the nuclear mission be required to take a professional military education (PME) course on national, defense, and Air Force concepts for deterrence and defense." As a result, the Air Force Nuclear Weapons Center, in coordination with the AF/A10 and Air Force Global Strike Command, established a series of courses at Kirtland AFB to provide continuing education through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the Counterproliferation Center in 2012, broadening its mandate to providing education and research to not just countering WMD but also nuclear deterrence.

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards.

The CUWS's military insignia displays the symbols of nuclear, biological, and chemical hazards. The arrows above the hazards represent the four aspects of counterproliferation - counterforce, active defense, passive defense, and consequence management.

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