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REASSURING RUSSIA ON BMD

by

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Biography

Commander Mark Fegley is a Surface Warfare Officer who is assigned to the Air War College, Air University, Maxwell AFB, AL. Most recently, he was assigned to Commander, Operational Test and Evaluation where he was responsible for the operational test planning, execution, analysis, and reporting of all Navy Ballistic Missile Defense Baselines, AEGIS Weapon Systems, Ship Self Defense System, and Cooperative Engagement Capability System. His sea tours include duty as STREAM Officer in USS MONONGAHELA (AO-178), Chief Engineer in USS THOMAS S. GATES (CG-51), USS ROOSEVELT (DDG-80), USS PORT ROYAL (CG-73), and Executive Officer in USS CURTIS WILBUR (DDG-54). His shore assignments were at Naval Postgraduate School in Monterey, California, and Navy Personnel Command as Special Placement Officer (PERS-44). He holds a Masters of Science in Electrical Engineering from Naval Postgraduate School, Masters of Science in Operations Management from University of Arkansas, and a Bachelor of Science in Civil Engineering from Arkansas State University.

Abstract

The United States' Ballistic Missile Defense comprehensive strategy states that the United States homeland missile defense capabilities are not focused on Russia, are not intended to affect the strategic balance with them, and are not of sufficient capacity to deal with Russian large scale attacks. However, Russia sees the United States' expansion of international efforts and cooperation on missile defense as a contentious issue. Of note, Russia has a strong disagreement with the United States about the extent of Iran's nuclear program, interprets the U.S. strategy as unilateral, is concerned over the degradation of their second strike capability, and is concerned with the U.S. and NATO eastward encroachment into their sphere of influence. Reflecting Russia's concerns over the U.S. ballistic missile defense strategy, Russia's President announced his *State Armament Program 2020* which increases spending on next generation missiles and countermeasures as well as strategic missile troops and aerospace defense forces. Ultimately, this counter response risks triggering regional conflict, crisis instability, and a new arms race. To hand off these outcomes, this paper proposes cooperative actions the U.S. should take to ease Russia's threat perception to include declarations of openness, Russian participation in NATO missile defense summits, development of a joint threat assessment, sharing of early warning data, instituting a cooperative command and control for ballistic missile intercepts, and developing a joint NATO-Russia training program.

Introduction

The United States' Ballistic Missile Defense (BMD) comprehensive strategy is outlined in the nation's Ballistic Missile Defense Review (BMDR) of 2010 which states that the United States' homeland missile defense capabilities are not focused on Russia, are not intended to affect the strategic balance with them, and are not of sufficient capacity to deal with Russian large scale attacks. The review further states that the intent of the missile defense system is to defend the homeland against limited ballistic missile attack from "states acquiring nuclear weapons and other weapons of mass destruction in contravention of international norms and in defiance of the international community".¹ However, Russia sees the United States' expansion of international efforts and cooperation on missile defense differently. A Russian news review sums up the Russian concerns, "Russian foreign minister Lavrov said Russia's agreement to discuss cooperation on missile defense in the NATO-Russia Council does not mean that Moscow agrees to the NATO projects which are being developed without Russia's participation. The minister said the fulfillment of the third and fourth phases of the U.S. 'adaptive approach' will enter a strategic level threatening the efficiency of Russia's nuclear containment forces."²

This research paper argues that the effective employment of BMD system provides a strategic value to the United States and NATO, but at the same time is a perceived threat to Russia. Since there is value to pursuing BMD, this paper provides recommendations to address Russian concerns. The remainder of this paper unfolds in four parts. The next section discusses the adversaries that the U.S. BMD system is developed to defeat. Then the capabilities and employment of the U.S. BMD system are explained. Once this foundation is laid, the discussion moves to an analysis of how Russia views the U.S. BMD system and what their response has

been. Finally, the paper concludes with recommendations to alleviate Russian concerns on the employment of the U.S. BMD system.

The Threat: Regional Adversaries

The 2010 BMD Review emphasized that the United States will continue to defend the homeland from limited ballistic missile attacks. The Review states, “These efforts are focused on an attack by a regional actor such as North Korea or Iran. The United States seeks to dissuade such states from developing an ICBM, deter them from using an ICBM if they develop or acquire such a capability, and defeat an ICBM attack by such states should deterrence fail.”³ More recently, the 2014 Quadrennial Defense Review, a legislatively mandated review of the Department of Defense’s strategy and priorities, stated, “Maintaining the capability to deter and defeat attacks on the United States is the Department’s first priority. In particular, against a varied, multifaceted, and growing set of threats, we continue to take an active, layered approach to protecting the homeland. We will maintain steady-state force readiness, resilient infrastructure to support mission assurance, and a robust missile defense capability. We must stay ahead of limited ballistic missile threats from regional actors such as North Korea and Iran, seeking to deter attacks or prevent them before they occur.”⁴

Iran is making technological advances related to both ballistic missiles and nuclear weapons that are increasing its ability to threaten the United States. For example, they have an active space launch program for placing satellites in orbit, and many of the technologies and processes are similar to those required for an intercontinental ballistic missile (ICBM). Specifically, additional work would be needed to design and test a reentry vehicle to deliver the warhead that would withstand the harsh dynamics and turbulence of atmospheric reentry. According to the 2013 National Air and Space Intelligence Center (NASIC) report, “Iran has

ambitious ballistic missile and space launch development programs and continues to attempt to increase the range, lethality, and accuracy of its ballistic missile force.”⁵ The 2013 NASIC report concluded that Iran will likely continue to pursue longer range ballistic missiles and more capable space launch vehicles, which could lead to the development of an ICBM system. Regarding Iran’s nuclear efforts, such as uranium enrichment and nuclear reactors, the Director of National Intelligence, James Clapper, acknowledged, “We do not know if Iran will eventually decide to build nuclear weapons,” adding that its “technical advancements strengthen our assessment that Iran has the scientific, technical, and industrial capacity to eventually produce nuclear weapons. This makes the central issue its political will to do so.”⁶ Furthermore, Iran uses aggressive public rhetoric and behavior toward the United States and its allies and have defied international obligations, ultimately contributing to concerns about their technological advancements.⁷

U.S. BMD Capabilities and Employment

When Obama entered office in January 2009, his administration recast BMD. One major change was to bring more flexibility and adaptability to meet the challenges of the changing missile threats of rogue nations. This is accomplished in part by increasing the solid propellant mass of the ship based interceptor to provide increased speeds and ultimately destroy Iran’s missiles in the boost phase. Intercepting in the boost phase provides two unique advantages. First, the ballistic missile is destroyed prior to deploying decoys, penetration aids, or advanced submunitions. Secondly, the debris caused from the intercept will typically fall back to the earth onto the nation that launched the ballistic missile versus over the land of innocent bystanders. The official title of the Obama BMD strategy is European Phase Adaptive Approach (EPAA)

and it entails four phases of growth in capabilities through 2020. The four phases as originally laid out are:

- *Phase One (completed in 2011)*: Deployed current and proven missile defense systems including the sea-based Aegis Weapon System, the Standard Missile (SM)-3 interceptor Block IA, and sensors such as the forward-based Army Navy/Transportable Radar Surveillance system (AN/TPY-2), to address regional ballistic missile threats to Europe and deployed personnel and their families;
- *Phase Two (scheduled in the 2015 time frame)*: After appropriate testing, deploy a more capable version of the SM-3 interceptor (Block IB) in both sea- and land-based configurations, and more advanced sensors, to expand the defended area against short and medium range missile threats;
- *Phase Three (scheduled in the 2018 time frame)*: After development and testing are complete, deploy the more advanced SM-3 Block IIA variant currently under development, to counter short, medium, and intermediate range missile threats; and
- *Phase Four (scheduled in the 2020 time frame)*: After development and testing are complete, deploy the SM-3 Block IIB to help better cope with medium and intermediate range missiles and the potential future ICBM threat.⁸

The EPAA strategy was agreed to by NATO and served as the framework under which the program would proceed. In support of Phase Two, the use of United States deployed ship based missiles provided the flexibility necessary to meet the changing security threat. In the same vein, Spain agreed to host four United States Aegis capable ships at the existing United States naval facility in Rota, and Romania agreed to host a United States land based SM-3 interceptor site in the southern city of Deveselu. Likewise, the United States and Poland entered into a Ballistic Missile Defense Agreement which places a land based interceptor site in the northern city of Redzikow and includes the SM-3 Block IIA interceptor in support of Phase Three.⁹ These agreements strategically moved the interceptors closer to launch points allowing for possible interception during the boost phase which is the most difficult to achieve due to the need for closeness to the launch point and requirement for sufficient time for an early warning of a launch.¹⁰ Additionally, according to the Congressional Research Service (CRS), the planned EPAA calls for more than 500 SM-3 interceptors based on 43 ships and the two land sites in

Europe by 2018, and it is ultimately envisioned that the number of the more capable SM-3 Block II interceptors will be increased later in EPAA Phase III.¹¹

The integration of U.S. capabilities into regional BMD architectures is meant to assure friends and allies of the United States of its commitment to regional security, and the deployment of United States operated BMD components on allied soil should make deterrence of external threats more credible.¹² An additional benefit of BMD domestically is the priority put on providing force protection from ballistic missiles for deployed U.S. forces. The cost of not doing so could be an inability to generate public support for future presidential decisions to deploy U.S. military forces.¹³

Implications for Russia

BMD is a contentious issue at present between the United States and Russia, and the ongoing controversy underscores basic differences in the two sides' understanding of strategic stability. Ever since the George W. Bush administration announced its plans to develop a missile shield based in Europe in 2007, Russian officials have vehemently opposed the idea, arguing that it is unnecessary and destabilizing. Russia took issue with the United States' decision to withdraw from the Anti-Ballistic Missile Treaty and deploy its Ground-Based Midcourse (GMD) system, and the plan of the George W. Bush administration to build an interceptor site for this system in Poland triggered fierce opposition from Russia.¹⁴ Although the Obama administration briefly eased this opposition with its attempted 2009 "reset" of U.S.-Russian relations, tensions over the EPAA and the overall scope of the United States' BMD system have increased.¹⁵ Russians believe that President Obama's basic posture is arguably little different from President Bush's. In an interview in September 2009, President Obama expressed the view that on BMD, "Russia has always been paranoid about this, but George Bush was right. This was not a threat

to them. And this program will not be a threat to them.”¹⁶ Rhetoric aside, as far as Russia was concerned there were strong elements of continuity in U.S. policy that adversely affected them. The BMDR stressed the need for increased flexibility to address threats as they evolved and emphasized maneuverable BMD systems that could be rapidly surged to parts of the world in times of crisis and ultimately threaten Russia’s ability to defeat the U.S. BMD system. The BMDR also fed Russian concerns about being sidelined as a major power, degrading their second strike capability, causing capability gaps in their current weapon systems, and encroaching on their sphere of influence.¹⁷

For Russia, the biggest problem with BMD is that it is unilateral. As the United States presses ahead with the expensive and technically advanced EPAA, Russia finds itself in the uncomfortable position of having to watch from the sidelines, receiving but never quite trusting U.S. assurances about the system’s limited purposes. Russia has a strong disagreement with the United States about the extent and purpose of Iran’s nuclear program. This causes Russia to simply not accept that such a costly and elaborate new BMD system could be for the limited purpose of defending against Iran. In the words of one expert, “It is like using a sledgehammer to crack a nut.”¹⁸ The Russian view is that Iran is already deterred by the certainty of retaliation and the cost. First, the certainty of an overwhelming United States retaliation is likely an already strong deterrent to Iran from launching a preemptive ICBM strike. Secondly, a U.S. homeland defense capability could also be cost imposing on Iran. Iran would have to throw more scarce resources into new designs, development, testing, and acquisition an effective, reliable threat as well as a delivery vehicle. For example, Iran would need to test sufficiently and at a great cost to convince itself and to demonstrate to the world that it has a credible threat. The East-West Institute summed it up best by stating, “It would indeed be suicidal for Iran to attack the United

States or Europe with ballistic missiles since such an attack would inevitably elicit a massive response. Ballistic missiles, after all, have a return address.”¹⁹

Russia’s concern over degradation of their second strike capability comes from two interrelated factors. The first factor is uncertainty over the future quantity and quality of BMD systems that are intended to protect the U.S. homeland and regional U.S. allies. The last phase of the EPAA, when the higher burnout velocity Block IIA SM-3 interceptors are introduced to the fleet in 2018, raises legitimate concerns for Russian military analysts. The higher speed SM-3 Block IIA interceptors could be used to create an integrated continental U.S. missile defense system that could engage Russian ICBM warheads, either in combination with, or independent of, the strategic GMD system now deployed in Alaska and California.²⁰ This fact introduces the possibility that Russian ICBMs could face many hundreds, or eventually thousands, of SM-3 interceptors in addition to the already deployed 30 GMD interceptors. Such large numbers of interceptors could be expected to create fears among Russian political and military leaders that the EPAA could cause some attrition of Russian warheads. As the preamble to New START explicitly recognizes the dynamic between strategic offense and defense, the potential of a substantially expanded U.S. continental BMD system could be considered an infringement on the numerical parity that forms the basis of New START, and a threat to Russia’s strategic deterrence forces.²¹

Secondly, the flexible and surge capability of the new systems also creates strategic ambiguity in Russia’s eyes. Russians prefer the new EPAA systems over the original fixed GMD third site where the boost phase technology was capable of intercepting the threat prior to its release of decoys and other countermeasures. However, with the new EPAA systems,

Russians are concerned that the regional and deployable naval BMD systems could rapidly be surged to Russia's periphery during future crises.²²

The U.S. forces in Poland and Romania in support of EPAA represent an eastward encroachment of the NATO Alliance. This holds true even though only small numbers of U.S. military forces are needed to man the land based interceptor sites. This causes Russia to question whether similar U.S. manned installations might soon appear in Ukraine or Georgia, both of which are former Soviet states which Russia sees as bulwarks of its "sphere of privileged influence".²³ Russian culture includes the belief that Russian security, prestige, and honor depend on imposing strict bounds on the sovereignty and policies of its neighbors. This came to be called the Brezhnev Doctrine in the Cold War, but elements of it exist today, most prominently with regard to Ukraine and Georgia but extending to several other regional states. This is the origin of the deep belief leading to President Putin's reference to a sacrosanct duty to protect Russian speakers wherever they are located.²⁴ President Putin, like many other Russians, remains bitter over NATO expansion, which he believes the United States promised would not happen if the then Soviet Union acquiesced in the 1990 German reunification.²⁵ Russian concern about U.S. encroachment reached new heights due primarily in part to NATO's declaration at its 2008 Bucharest summit that Ukraine and Georgia will become members of NATO. Furthermore, Russia also believes that the 2003 and 2005 color revolutions that brought democracy to Ukraine and Georgia were destabilizations inspired by the United States and are a model for taking similar steps against Russia.

Conversely, Eastern Europeans remain in favor of the land based sites. Their view is that deployment of U.S. forces in support of EPAA commits the United States to Eastern Europe while keeping the Russians out. Additionally, hosting the land based sites brings in a much

needed infusion of dollars in the form of infrastructure and human resource investments by the United States.

Russia's Response

As a diminished military power, Russia assigns high strategic importance to its nuclear deterrent and is concerned when there is any development that it thinks might undermine its nuclear retaliatory capability. Initially, Putin praised President Obama's decision to eliminate the Third Site in Poland, calling it a "very right and brave decision".²⁶ On the contrary, other officials, such as Russia's Ambassador to the United Nations, Vitaly Churkin, were unimpressed, stating that the United States BMD policy "shows to us that the United States continues to be a rather difficult negotiating partner, a partner who is loaded in many ways by a Cold War mentality."²⁷ In March 2012, Putin, then Prime Minister, declared that "our number one priorities are nuclear forces and aerospace defense" and that Russia would "under no circumstances surrender our strategic deterrent capability, and indeed, will in fact strengthen it."²⁸ Putin directly linked these moves to U.S. BMD, claiming that Russia was being "pushed into action by the U.S. and NATO BMD policies", requiring Russia to invest in measures to "overcome any BMD system and protect Russia's retaliation potential." Putin also added, "Whatever you call it, this has some elements of an arms race", maintaining that in Russia's strategic calculations there is an "inseparable link between BMD and strategic offensive weapons."²⁹

Russia has responded by engaging in an internal rebalancing which includes developing next generation missiles and countermeasures, increasing resources to strategic weapons, and establishing new military doctrine. In response to the U.S BMD development, Putin announced his *State Armament Program 2020* in 2010 which outlines plans for an additional US \$770

billion in spending levels to be spent over the next decade on Russia's armed forces. Clearly reflecting the priority of maintaining and enhancing Russia's nuclear deterrent, approximately 42% (US \$242 billion) of this will be spent on Russia's strategic missile troops and aerospace defense forces.³⁰ The primary focus was to increase resources to strategic and conventional weapons designed to balance the U.S. BMD system. This included developing BMD countermeasures and fielding them with new strategic and conventional weapons.

Strategically, a missile upgrade program that was previously announced in 2008 was intensified by replacing half of its nuclear arsenal by 2016, upgrading all nuclear systems by 2020 and initiating research into low-yield nuclear weapons.³¹ Responses also included the announcement in 2011 of the development of a new multiple independently targetable reentry vehicle (MIRV) ICBM that has a payload containing several warheads, each capable of being aimed to hit one of a group of targets, which can oversaturate and confuse the U.S. BMD system. Seen as a symbolic gesture, Russia's initial test of the MIRV ICBM occurred days after NATO announced that the first phase of its BMD system had been activated. Former Russian strategic forces director Viktor Yesin stated, "this is one of the measures being developed by Russia's military and political leadership in response to the United States deployment of a global anti-missile system." These developments and deployments have been further supported by investments in a new nuclear bomber, deployment of a new long-range nuclear cruise missile, and the development of a more capable command and control system.³²

Included in Russia's increased resource efforts is a resurgence of its own BMD program. Putin chose to improve Russia's current BMD system that defends the area around Moscow which is known as A135. The upgrades will include arming with conventional warheads versus nuclear tipped warheads, upgrading the capability of intercepting medium range missiles and

ICBMs, and adding an antisatellite (ASAT) capability.³³ Additionally, Russia started developing sea based BMD interceptors similar to the U.S. Navy's AEGIS system to provide a mobile element to the BMD system.

On 5 February 2010, President Dmitry Medvedev formalized Russia's new military doctrine, which was reflected in its National Security Strategy. The doctrine lowered the threshold for using nuclear weapons, outlined a proactive agenda that emphasized the role of international law, rejected unipolarity and United States primacy, and emphasized Russia's right to intervene regionally on behalf of Russian people and Russian interests. Although the doctrine declared nuclear and large scale conventional war unlikely, U.S. BMD was identified as a vital threat to Russia.³⁴ These responses, once fully implemented, risk becoming an irritant to the region worsening regional conflict, crisis instability, and worse, creating a new arms race between the United States and Russia.

Recommendations

This paper showed that the effective employment of BMD system provides a strategic value to the United States and NATO, but at the same time is a perceived threat to Russia. In order to alleviate Russian concerns on the employment of the U.S. BMD system, six recommendations are provided.

- **First recommendation:** Throughout the development of the BMD system, the United States has provided many reassurances to the Russians on the system's intent and offered a few declarations of openness to cooperation. For example, when President Obama took office in 2009, he made a visit to Moscow and clearly expressed his intention to cooperate. He stated, "I want us to work together on a missile defense architecture that makes us all safer. But if the threat

from Iran's nuclear and ballistic missile programs is eliminated, the driving force for missile defense in Europe will be eliminated. That is in our mutual interest". U.S. Deputy Secretary of State William Burns added that the "two countries have devoted more study and resources than any other to defending against the threat from ballistic missiles". Furthermore, NATO Secretary General Anders Rasmussen fully supported this idea, stating that NATO and Russia should cooperate in the development and building of defense against ballistic missiles.³⁵ The United States and NATO should continue their openness to cooperation.

- **Second recommendation:** Although NATO has invited the Russians to join the program, there has been no consensus on the degree or the form of that participation. As the start of showing signs of cooperation and openness, the United States and Russia have moved beyond mere diplomatic efforts and into action. NATO invited Russia to participate in their missile defense summit in Lisbon in 2010, in 2011 Putin created a working group within the Kremlin to advance missile defense cooperation with NATO, and in 2012 Putin appointed a special envoy for missile defense discussions with NATO.³⁶ If the United States and NATO's ultimate goal remains cooperation with Russia in the development of the BMDS, then they must ensure that Russia has a voice and is heard at future NATO summits pertaining to BMD.
- **Third recommendation:** Develop a process for utilizing joint assessments of threats emerging from the ballistic missile capabilities of the rogue nations that the BMDS is designed to defeat. Currently, U.S. and Russian perceptions coincide on the issue of short range missiles but still are seen differently on the

threat posed by long range missiles. In Russia's view, the missile programs of Iran and North Korea are not sufficiently developed, and their intentions to use missiles against the United States or Russia are nonexistent, therefore not constituting a threat requiring the deployment of missile defenses.³⁷ The recently developed United States and Iran deal of 2015 which supposedly blocks Iran's pathway to a nuclear weapon brings the U.S. and Russia closer together on agreement of the threat. This could pave the way to developing a joint threat assessment and ultimately decrease the need for BMD in the region.

- **Fourth recommendation:** Share sensor data for early warning and tracking. Russia's missile attack warning system, which is spread over the post Soviet region, could play a crucial role in providing important data from the region of concern that extends from North Africa to South Asia. The Joint Data Exchange Center currently has the basic mission of exchanging information of U.S. and Russian early warning systems of ballistic missile and space vehicle launches and is intended to avoid an accidental nuclear exchange. The two nations should even go a step further by integrating U.S. and Russian early warning radars into the Joint Data Exchange center. This would substantially improve the efficiency and effectiveness of the systems in detecting launches from rogue nations. Another system that can be utilized in sharing early warning data is the combined U.S.-Russia airspace initiative, which currently focuses on the exchange of air traffic data and helps to detect potential terrorist airplanes.³⁸ This system could be upgraded to also include data on cruise missiles.

- **Fifth recommendation:** Extend beyond the exchange of data and sharing of sensors to the actual intercept of missiles originating from rogue nations. Currently, the United States and Russia have different views on the management of the command and control of BMD systems. “Russia envisions the establishment of two systems that would be joined together by a unified command and control center. NATO rejects this model on the grounds that it would be transferring part of its responsibility for protecting elements of NATO territory to a state that is not within NATO.”³⁹ To overcome these differences, both sides should agree on tactics and preplanned responses utilizing the joint threat assessment and joint early warning and detection system as described in recommendations three and four. The command and control center can be manned by personnel from both nations and execution of the preplanned responses overseen by an upper tier coordinating officer who assigns intercept orders of each system in real time based from the preplanned responses.
- **Sixth recommendation:** Finally, both sides must resume joint training and exercises on BMD. This can begin with Russian military officers and scientists observing U.S. BMD system tests, both live operational testing and developmental testing in the lab. Russia could then participate in regularly scheduled U.S. combatant command (COCOM) exercises that train with all elements of the BMD system including sea based and land based sensors and interceptors as well as BMD command and control. This training should include both computer assisted exercises and full scale COCOM exercises.

Conclusion

Russian's perception that the United States' ballistic missile defense system poses a threat to their nation is a valid concern. Facts supporting this conclusion include the BMDS deployment locations, the BMD concept of operations, the resulting power shift of nuclear parity, and NATO's eastward encroachment. Nonetheless, there are cooperative actions the United States can take to ease Russian threat perceptions. These include declarations of openness, Russian participation in NATO missile defense summits, development of a joint threat assessment, sharing of early warning data, a cooperative command and control for ballistic missile intercepts, and development of a joint NATO-Russia training program. These recommendations will lead to a decreased need for BMD in the region.



Notes

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