

U.S. – Russian Cooperation in Missile Defense Is It Really Possible?

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The idea of cooperation between the United States and Russia in the area of missile defense has been popular in Russia since at least the early 1990s. The degree of interest has varied over time, but it has been consistently strong for most of the last decade. Disagreement on missile defenses and the Anti-Ballistic Missile (ABM) Treaty, which has been plaguing the U.S.-Russian relationships, actually has helped strengthen the popularity of the idea of cooperation. Just recently, the possibility of U.S.-Russian cooperation in missile defense was mentioned at least twice, in Duma hearings and in comments made by President Vladimir Putin. In both cases it was underscored that despite reservations about U.S. policy on missile defense, Russia is interested in participating in a joint missile defense development effort.

This memo examines the possibility of cooperation in missile defense in the context of existing U.S.-Russian joint projects. The main result of this analysis is that, although some kind of a joint effort is certainly possible, the area of missile defense is probably one of the least favorable ones for cooperation, because Russia and the United States lack the institutional infrastructure that is necessary to handle any kind of joint missile defense technology program. In addition, the attempts to politicize the issue by presenting it as a sign of a nascent U.S.-Russian partnership will most likely make any successful cooperation impossible.

A Case for Cooperation

The popularity of the idea of a joint missile defense effort has roots in the widely shared view that the Russian defense industry has developed a unique set of advanced technologies that are unavailable in the West and therefore can make a significant contribution to the U.S. program. Although this is certainly true in a sense that there are areas in which Russian industry still preserves technological advantage, this analysis will show that this fact is largely irrelevant for any cooperative missile defense efforts. Other factors, some of which are outlined below, play a much more important role and in the end determine the probability of any joint development.

As can be expected, political considerations play the paramount role. In Russia, the question of its cooperation with the United States has always been highly politicized. From a political point of view, as far as Russia is concerned, a joint project of almost any

kind had to demonstrate that Russia and the United States are equal partners. There are a number of notable exceptions in which the claim of an equal status is not possible, as is the case with the Cooperative Threat Reduction program (CTR). Even in those cases, though, it is the cooperative nature of projects that is emphasized the most.

It is interesting to note that in spite of the continually expressed interest in joint work in general, Russia and the United States have paid much less attention to specific projects in this area than would be warranted by the alleged importance of these projects for a U.S.-Russian partnership. For example, one of the few programs that could be described as a joint missile defense development effort, the Russian-American Observation Satellites (RAMOS), has experienced problems from its very beginning.

One possible explanation for the lack of support for the RAMOS program is that the Russian leadership considers this program too small to warrant high-level political support. The program is indeed relatively modest. It calls for the launch of two satellites that would conduct simultaneous observations of the earth's surface. In 2000 the cost of the program was estimated to be \$344 million spread over about five years. Of this budget, about a third will go to Russian contractors, which means that the average annual budget on the Russian side would be about \$20–30 million. Although this is a substantial amount by Russian defense industry standards, a program of this scale would hardly qualify as a symbol of U.S.-Russian cooperation.

The Scale of Current Cooperation Efforts

Russia and the United States are engaged in a range of cooperative activities in areas that involve defense industry and military technologies. The largest of these programs is the Highly Enriched Uranium-Low Enriched Uranium Agreement (HEU-LEU), under which highly enriched uranium from dismantled nuclear weapons in Russia is downblended to low enriched uranium. Russia then supplies to the United States this low-enriched uranium for nuclear reactor fuel. The program was initiated in 1993 and at that time its cost was estimated at \$20 billion for ten years. The current, actual annual payments to Russia under the program are averaging \$300 million.

Because of its size and the cooperative nature the HEU-LEU program can be considered as an example of a successful joint U.S.-Russian effort. However, as far as Russia's technological advantage is concerned, the program's record is rather ambiguous. Although the program does take advantage of the Soviet uranium enrichment technology that was significantly cheaper than its U.S. counterpart, in the end Russia is supplying uranium that is more of a raw material than a highly technological product.

Another large cooperative U.S.-Russian effort is the CTR program, under which the United States provides Russia with assistance in dismantling its weapons of mass destruction (WMD). The total annual budget of the Russian part of the program is comparable to that of the HEU-LEU deal, as much as \$250–300 million. In contrast to the HEU-LEU deal, however, most of this money is spent in the United States and the program is aimed at eliminating the Russian defense industry's capability rather than at taking advantage of it. In this regard, the CTR program is very far from a truly cooperative development effort. Nevertheless, it does provide an important reference point for other U.S.-Russian attempts at collaboration.

Among those attempts are a number of other assistance and cooperation efforts that are aimed at downsizing the Russian nuclear complex and employing its scientists and engineers. These programs include Initiatives for Proliferation Prevention, the Nuclear Cities Initiatives, and the International Science and Technology Center. All these programs are relatively small (the annual U.S. contribution to each program is on the order of \$20 million or less) and concentrate primarily on diverting human and material resources from military science and industry.

To find a program that could be a model of a successful U.S.-Russian development effort in terms of its size, successful use of Russian advanced technology, and equal partnership, we will have to look at the Russian space industry. The most visible joint project in space is the International Space Station (ISS), in which Russia is a major partner and a supplier of key hardware and launch services.

As a partner in the ISS project, Russia is supposed to provide its own financing for its part of the project. However, Russia has been receiving funding from the United States under a contract that provided the United States with access to the Mir orbital station. The total value of the contract since 1994, when it was signed, is estimated at \$530 million. Although the annual budget of this program is less than that of the HEU-LEU deal or CTR, the character of the program is markedly different. Russian participation provides ISS with valuable technical expertise and hardware. Russia also acts as an equal partner to the United States in terms of access to the station and responsibility for supporting it. In addition to the contract between governmental agencies, the ISS program spun off at least one major commercial contract. Under this contract, Boeing subcontracted work on the base ISS module to the Khrunichev Center. The cost of this contract, signed in 1995, was \$190 million (the work was completed in 1998).

The space industry provides other examples of successful commercial cooperation. Although none of them seem to involve military technology directly, there are projects that could be qualified as having some military applications. One example is the contract under which Energomash will provide RD-180 rocket engines for Atlas launchers developed by Lockheed Martin for the U.S. Air Force. The total cost of the contract is currently about \$190 million and could be as high as \$1.1 billion.

As we can see from the examples of U.S.-Russian cooperative efforts, a joint development project with an annual budget of a few hundred million dollars and the total cost of about a billion dollars is probably the most that the United States and Russia can handle at this time. At the same time, a project of this size, if founded, would be considered large enough to warrant high-level political support. Finding an area in which the U.S. missile defense program could benefit from Russia's technical expertise is certainly not easy, but not impossible, provided that political will exists on both sides.

Managing Cooperation

As the history of U.S.-Russian cooperation in the last decade clearly shows, identifying a politically attractive and technically meaningful joint program is only a first step toward its implementation. The actual success of the program depends to a large extent on the way the program is managed.

Political support is certainly one of the factors that determines program success. It usually takes the firm commitment of governments to ensure that a program gets implemented. This is especially true for large-scale efforts, such as the space station or the HEU-LEU agreement. High-level political support, however, does not guarantee success even if this interest is expressed by both sides. Another important condition is support for institutions that have stakes in the program and their ability to work with each other across the border.

In the non-commercial programs described above, the Russian side was represented by either the Ministry for Atomic Power (Minatom) or the Russian Space Agency (Rosaviakosmos). The CTR program, managed by the Ministry of Defense, is an exception, but it is quite different in its scope and goals from the rest of the programs considered here. Another exception is the RAMOS program, which will be considered separately.

On the U.S. side, cooperative efforts are managed by the Department of Energy (DoE) or the National Aeronautics and Space Administration (NASA), although some parts of the assistance efforts are managed by the U.S. Department of State. The CTR program is run primarily by the Department of Defense, with DoE managing some of its projects.

Two factors seem to determine the organizational success of a program. First, institutions involved in it must have substantial interest in the program. This happens almost automatically in Russia, because the financial support usually provides a sizable contribution to the budget of the managing organization. On the U.S. side, the motives are different. In the case of the DoE-Minatom programs, access to Minatom facilities in Russia and certain influence over Minatom policies are very important factors that ensure support of these programs in the United States.

In the case of ISS, Russia's participation and the potential savings that it could provide were among the key factors that helped NASA approve the project. After that, NASA continued its strong support of Russian involvement in ISS (although recently NASA and Rosaviakosmos have been gradually losing enthusiasm about cooperation). Another project, the Joint Data Exchange Center (JDEC), is an example of a joint project that has failed to take off despite continuing support at the highest level. JDEC is supposed to provide the capability to share early-warning data in almost real time. This idea enjoyed support at the highest level, but neither the U.S. nor the Russian military, which were responsible for the project, showed enough interest to get it implemented.

The second factor that facilitates cooperation is the compatibility of the institutional cultures of the organizations involved in the project. Despite all the differences, DoE and Minatom, and NASA and Rosaviakosmos have much in common in terms of their mission, technical culture, and responsibilities within their respective governments. The similarity in organizational and technical culture is even stronger in joint commercial or scientific projects.

The RAMOS program is one of the few that does not follow the outlined pattern. On the U.S. side it is managed by the Missile Defense Agency (MDA), which subcontracts it to the Space Dynamic Laboratory. On the Russian side the main contractor is TsNPO Kometa, but the program as a whole is managed by Rosoboronexport. One of the results

of this arrangement is that the program is managed by agencies that have no vital interest in it. Besides, MDA and Rosoboronexport do not share the common institutional culture needed to work together effectively. Nor do they have influence in their governments that would be comparable to that of agencies such as DoE or Minatom. As a result, the program has experienced serious difficulties with funding and is in constant danger of being terminated.

If we extend these observations to a possible cooperative missile defense effort, we would inevitably come to the conclusion that Russia and the United States do not seem equipped to manage it successfully. It is highly unlikely that the MDA would be interested in subcontracting work to Russian companies. A high-level political arrangement might provide the incentive, as was the case with RAMOS, but MDA does not have the influence to either lobby for such an arrangement or to sustain the political pressure necessary to get a program implemented.

On the Russian side the situation is even less favorable. First, there is no governmental agency that could take responsibility for a missile defense development project and provide it with support inside the Russian government. The design bureaus and production plants that were involved in missile defense work were subordinated to the Ministry of Radio Industry, which was disbanded without leaving a successor similar to Minatom or Rosaviakosmos. None of design bureaus of the former Minradioprom have positions similar to that of Minatom or Rosaviakosmos that would allow them to protect the projects they are involved in.

The management challenge appears to be the most serious obstacle on the way to serious U.S.-Russian cooperation in missile defense. This is especially true if it would be handled in a way most Russian politicians seem to anticipate—as a highly visible politicized project. The recent history of joint efforts shows that political pressure alone is no longer a guarantee of success. Success requires strong institutional support. In the area of missile defense development this support simply does not exist.

This does not mean that no cooperation in missile defense is possible. It just requires a different approach. The most promising way seems to be one that includes a direct contract between a U.S. contractor and a Russian company that is done without government intervention. At this point in the U.S.-Russian relationship, political attention can do very little to help a project materialize, while it can harm its implementation by tying it to an intergovernmental relationship and therefore making it susceptible to all kinds of political pressures and disagreements. If the Russian government is interested in giving its missile defense companies an opportunity to participate in joint development projects with the United States, whether in missile defense or in some other area, it should avoid politicizing the issue of cooperation.