



National Security Update

The Trump Administration's Space Force

This *IFPA National Security Update* examines the Trump Administration's proposal to create a new U.S. Space Force, its rationale, alternative approaches, and Congressional perspectives.

Key Conclusions and Findings

Establish the Space Force proposed by President Trump as the single advocate for space in the U.S. military space enterprise. It is vital to do so because:

- The United States is increasingly reliant on space to conduct military operations; the use of U.S. space capabilities is being threatened by the counter-space assets of our adversaries while they are simultaneously improving space capabilities to conduct their own military operations:
 - U.S. space superiority is eroding.
- The military services are organized around their service's domain of responsibility, and space, although officially designated a warfighting domain, is still frequently seen as a subordinate function.
- Space responsibilities are diffuse and budgets are fragmented among several Department of Defense (DOD) and national security stakeholders:
 - No centralized leadership exists to make enterprise-wide decisions together with the requisite budget authority for space acquisitions and other resources.
- Contributing to the problem is the protracted time it takes to field U.S. space technologies and systems:
 - DOD's space bureaucracy has been slow/reluctant to leverage commercial/high-tech sectors and their ability to develop, produce, and field space technologies/systems rapidly.
- U.S. dependence on space for military operations will continue to grow including in support of the missile defense mission to counter proliferating missile threats:
 - The United States is likely to begin the development of a space-based-sensor network to detect, track, and provide data to ground- and sea-based shooters/interceptors to destroy ballistic missiles and the new hypersonic systems being developed by Russia and China;

- A new space-sensor network will improve the range and accuracy of current U.S. missile defense interceptors and supply post-interceptor-engagement damage assessment;
- Space assets, including a new space-sensor network, will assist in boost-phase-intercept operations, a near-term capability Congress has directed DOD to develop;
- The 2019 National Defense Authorization Act passed by Congress directs DOD to develop a space-based intercept layer with the capability for boost-phase interception and to achieve operational capability as soon as possible;
- A key DOD official has declared that interceptors deployed in space are technically achievable and affordable.

President Trump's team needs to develop a cogent and cost-effective Space Force proposal with all the stakeholders in DOD offices/agencies, the Joint Staff, the military services – but especially the U.S. Air Force – together with the intelligence community on board to increase the likelihood of garnering broad bipartisan support for the initiative on Capitol Hill:

- A compelling plan supported by the key stakeholders will help overcome opposition from members of Congress who by and large agree that significant changes in the U.S. military space enterprise are necessary but who hold different views on the appropriate reorganization solution.
- The Democrats' taking control of the House – and thus the chairmanship of the House Armed Services Committee (HASC) – may complicate passage of the President's initiative since some Democrats, including the likely new HASC Chairman, support alternative concepts for reorganization of the U.S. military space enterprise.
- Another potential hurdle is the cost factor with an Air Force estimate putting the price tag of a Space Force at \$13 billion over five years.
- The recent announcement by the White House of a reduction in its 2020 defense budget request may also complicate support for the President's proposal on Capitol Hill, exacerbating competition for now declining defense dollars and therefore limiting the funding available for new initiatives such as the Space Force.
- Political and budget realities could force compromises resulting in a less comprehensive overhaul of the military space enterprise than what the Trump Administration envisions or possibly lead to the creation of the Space Force, but which is sequenced over several years versus the one year currently proposed by the White House.
- The Trump Administration should move forward as rapidly as possible with the elements of the Space Force that the Pentagon already has the authority to carry out:
 - This includes creation of the Space Development Agency and the Space Operations Forces.

Introduction

Although President Trump first broached the idea of a Space Force in March 2018 during a speech in San Diego,ⁱ it was at a meeting of the National Space Council on June 18, 2018 that he officially instructed the Department of Defense (DOD) “to immediately begin the process necessary to establish a space force as the sixth branch of the armed forces” which will be separate from but equal to the other military branches. Citing the importance of space to U.S. national security, he declared that “When it comes to defending America, it is not enough to merely have an American presence in space. We must have American dominance in space.”ⁱⁱ

According to reports, one of the principal catalysts for President Trump’s decision to create a Space Force was his growing concern that Russia and China had merged their respective military space activities into a single branch within the past three yearsⁱⁱⁱ and that they were quickly catching up with the United States in both military- and civil-space capabilities, a fear reflected in his June announcement of the Space Force noted above. The new branch would integrate DOD’s space operations, now handled primarily by the Air Force, into a separate, independent Space Force.

The idea of a military force dedicated to space did not originate with the Trump Administration, however. For example, in 2000 a military-reform commission headed by Donald Rumsfeld proposed the establishment of a military space organization. The idea fell by the wayside, however, given the 9/11 terrorist attacks and the ensuing wars in Afghanistan and Iraq. More recently in 2017, the House Armed Services Committee (HASC) approved a bipartisan provision in its version of the Fiscal Year (FY) 2018 National Defense Authorization Act (NDAA) to create a Space Corps but it was rejected in the Senate version of the NDAA. In 2018, Representatives Mike Rogers and Jim Cooper endorsed a stand-alone U.S. Space Force.

Although the Trump Administration set the process to create a U.S. Space Force in motion, its fate will be determined by Congress: a new military branch can only be established by Congressional authorization. For example, the U.S. Air Force (USAF) was created in 1947 when President Truman signed Congress’ National Security Act. A U.S. Space Force would join the Army, Navy, Marine Corps, Air Force, and Coast Guard as the sixth U.S. military branch.

Factors Leading to Calls for Changes in the Military Space Enterprise and Creation of a Space Force

The fact that U.S. space forces need to be given greater priority and managed and organized more effectively spurred President Trump to initiate the establishment of a U.S. Space Force. This need is largely recognized and acknowledged by key military and national security stakeholders within the executive branch and in Congress, although the solutions advanced to rectify the problem are diverse. It is driven by several factors including the increasing dependence of the United States on space assets for virtually all its military operations.

The numerous missions and functions provided by space assets include: space situational awareness, space control, assured positioning and navigation, intelligence collection, communications and battle management and command-and-control, environmental monitoring, damage assessment, early warning of missile attacks, nuclear detonation detection, and missile defense.

The missile defense mission is increasing in importance due to a more prominent role in U.S. national security planning. With the proliferation of both ballistic and other types of missiles including cruise and hypersonic missiles (the latter being developed by Russia and China), the utilization of space assets to counter these threats will only grow and it further underscores the urgent need for a major reorganization of the U.S. military space enterprise and the creation of a Space Force.

For example, the Missile Defense Agency (MDA) believes that a constellation of satellite sensors in low- and medium-Earth orbits is the solution to track and help guide interceptors to counter ballistic missiles/warheads and the hypersonic missiles being developed by Russia and China. A new space-sensor network would greatly improve the range and accuracy of current and future U.S. missile defense interceptors. The program start of this sensor network may be announced in the long-delayed Missile Defense Review being prepared by Pentagon which is reportedly completed and expected to be released shortly.^{iv}

MDA/DOD has also been tasked by Congress to explore near-term boost-phase-intercept (BPI) capabilities using for example, the *Aegis* Standard Missile, drones, or possibly the F-35 aircraft. The use of space capabilities would play an important role in the conduct of such BPI operations. In addition, boost-intercept from space is becoming part of our national security discussion. The FY 2019 National Defense Authorization Act passed by Congress in August 2018 included language directing MDA to develop a space-based-intercept (SBI) layer to complement the current U.S. missile defense system. It also states that the SBI layer must provide a boost-phase-intercept capability and that it should achieve operational capability as soon as practical.

Michael Griffin, the Undersecretary of Defense for Research and Engineering (USD/R&E), is on record as saying that deploying both sensors and interceptors in space is “relatively easy, technically feasible, and reasonably affordable.” He also stated that previous cost projections for an SBI layer have been “unrealistically,” even “naively” high.^v Vice President Pence’s statement on October 23, 2018 that he did not rule out future deployments of weapons in space if circumstances warranted may have been referencing a potential SBI layer.^{vi}

Coupled with this growing dependence on space as a critical element of U.S. national security and military power is the fact that threats to our space capabilities are growing rapidly and eroding U.S. space superiority. As numerous civilian and uniformed military officials note: space is no longer a sanctuary; it is contested, congested, and competitive. Space is now a warfighting domain that is increasingly an arena for conflict.

For example, apart from their recent creation of separate space-force branches noted earlier, Russia and China are developing and fielding unambiguous capabilities to nullify and offset U.S. capabilities – military, civil, or commercial – derived from space that could provide the United States an advantage in a military conflict. Both nations continue to pursue a spectrum of anti-satellite (ASAT) weapons including direct-ascent kinetic ASATs, technologies for directed energy ASATs, and on-orbit satellite activities such as rendezvous and proximity operations which possess inherent counterspace/ASAT capabilities, together with jamming, lasing, and cyber capabilities to degrade/destroy the space assets of the United States, reduce their military effectiveness, and increase the risks/costs of U.S. intervention in regional affairs.

Other potential adversaries such as Iran and North Korea are also pursuing counter-space capabilities to include jamming, lazing, cyber-attacks, and electromagnetic pulse (EMP) attacks. In addition, the global threat of electronic warfare in combination with cyber-attacks against space systems will continue to grow, putting at risk the operations of military communication satellites, radar imaging satellites, the U.S. Global Positioning System or GPS, and other information networks.^{vii}

In addition, space activities within U.S. space enterprise are widely dispersed with over 60 military and national security agencies responsible for space acquisitions. Likewise, space budgets are fragmented among several military and national security stakeholders with no single organization to make enterprise-wide decisions together with the budget authority for space acquisitions and other resources. The consequence of the absence of centralized leadership and budget authority is drawn-out decision-making, lack of coherence in developing and fielding space capabilities, and minimal accountability when space programs are delayed and/or exceed their budgets.^{viii}

Another major catalyst for why officials in the executive branch and Congress are calling for changes/restructuring in the U.S. military space enterprise is the rising cost and increasing time it takes to develop, produce, and field U.S. military space systems. There is a growing realization that the United States needs to leverage the processes, best practices, and technologies utilized and developed in the commercial space and high-tech sectors more frequently and effectively than is presently the case to speed the deployment of space assets and reduce their costs.

As the next section makes clear, the plans for the creation of the Space Force have not been finalized and there are different ideas about the structure, responsibilities, and costs of the new branch within DOD and the services while in Congress alternative organizations to improve the U.S. military space enterprise are being advanced.

Space Force Plans and Alternatives

1. The Department of Defense's Approach to a Space Force

At the October 23, 2018 meeting of the National Space Council,^{ix} Deputy Secretary of Defense (DEPSECDEF) Patrick Shanahan outlined DOD's proposal for standing-up the new military branch. Shanahan is spearheading the Pentagon's development of a U.S. Space Force with General Joseph Dunford, Chairman of the Joint Chiefs of Staff (JCS), and John Rood, Undersecretary of Defense for Policy (USD/P), playing prominent roles. The Air Force is responsible for approximately 90% of U.S. military space programs but is reportedly only going to have a limited support role in determining the evolution of the Space Force.^x

The Pentagon's Space Force proposal sets forth the following six steps:

1. Establish U.S. Space Command (USSPACOM) as a unified combatant command;
2. Develop a legislative proposal for the creation of a Space Force for review by the White House;
3. Create a funding request proposal for the Fiscal Year (FY) 2020 defense budget to include Space Force elements;

4. Review the diverse space agency authorities to understand and streamline chain-of-command;
5. Create the Space Development Agency for new satellite and technology procurements; and,
6. Strengthen the relationships between the new Space Force and the intelligence community.

The National Space Council voted unanimously to submit the Pentagon's Space Force proposal to the White House.^{xi} The six recommendations, together with other Pentagon inputs (more below), will be reviewed and vetted by the White House leading to a new Space Policy Directive referred to as SPD-4. Once President Trump signs off on SPD-4, the Pentagon would have 30 days to determine the resources necessary to create components of the Space Force and 45 days to identify the operating model for the Space Development Agency.^{xii}

Additional details of the Pentagon's thinking on the organization of a Space Force were outlined in earlier DOD memoranda, including a September 10, 2018 memo entitled *Space Reorganization and Management Tasks*.^{xiii} The first step is to proceed with actions that can be taken under existing authorities. These include standing-up the unified USSPACOM, which could occur by the end of 2018, and establishing the Space Development Agency (SDA) which should have initial operating capabilities in 2019.

JSC Chairman General Dunford and USDEF/P Rood are responsible for establishing USSPACOM, and USD/R&E Griffin and Heather Wilson, Secretary of the Air Force, were each asked by DEPSECDEF Shanahan to develop plans for the SDA (more below). The memo also states that DOD will begin plans to create a new office of the assistant secretary of defense for space responsible for civilian oversight of space which "could evolve into the future headquarters of the Space Force." This new ASD position would require Congressional approval.

The creation of Space Operations Forces, which would be composed of joint space warfighters able to surge expertise to leverage space capabilities when needed to support the Combatant Commands and the SDA, would also be part of DOD's initial actions. General Dunford and James N. Stewart, Acting Undersecretary of Defense for Personnel and Readiness, will head the development of the Space Operations Forces producing both an inventory of the forces and functions conducting or directly supporting space operations as well as a plan to manage active, reserve, National Guard, and civilian workers as part of these Forces.

Only Pentagon space functions and not those of the intelligence community (IC), e.g., the National Reconnaissance Office and the National Geospatial Intelligence Agency, would transition into the Space Force. The relationship between the Space Force and IC offices/agencies could change over time as the Space Force organization and responsibilities evolve. The Space Force would be formed largely by absorbing some personnel from the Air Force Space Command, the Navy's Space and Naval Warfare Systems Command, the Naval Satellite Operations Center, and the Army's 1st Space Brigade.^{xiv}

The new SDA would focus on joint experimentation, prototyping and accelerated fielding of space capabilities. It is also hoped that the SDA will help eliminate/reduce the duplication of space technology by different segments of the military space enterprise. Who runs the SDA and how it is organized has sparked controversy within DOD and will be part of a larger debate

once the Trump Administration submits the legislative proposal for a Space Force to Congress next year. For example, in response to DEPSECDEF Shanahan's September 2018 request for his input on creation of the SDA, USD/R&E Griffin stated that the SDA should be a new agency tasked with developing next-generation space programs rapidly and transforming how the military acquires space technologies, in part by taking advantage of technologies developed in the commercial sector.

Griffin thinks it should be located in Washington, D.C. under his purview, at least initially, to facilitate SDA collaboration with other agencies that perform space-related activities such as the Missile Defense Agency, the Defense Advanced Research Projects Agency, the Strategic Capabilities Office, and the Defense Innovation Unit. Eventually responsibility for the SDA would be transferred to a new assistant secretary of defense for space which, as noted earlier, DOD is planning.

On the other hand, in her response to DEPSECDEF Shanahan in a September 14, 2018 memorandum, SECAF Wilson stated that the SDA should be organized under the existing Air Force Space Rapid Capabilities Office, which has the authority to develop and prototype next-generation space technologies, and be connected both geographically and organizationally to U.S. Space Command.

She is opposed to an SDA structure located in the Pentagon under the control of the Office of the Secretary of Defense which would have no direct connection to the military personnel that organize, train, equip, and possess the organizational skills to bring space technologies to maturity. Wilson is also opposed to DOD's plan to establish a new assistant secretary of defense for space, arguing that it would create an unnecessary bureaucratic structure disconnected from the operators of space forces/assets.^{xv}

A DOD draft of the legislative proposal states that the Space Force would include a Department of the Space Force headed by a civilian secretary and a military service, i.e., the U.S. Space Force led by a four-star officer who would also join the Joint Staff. USD/P Rood, the Joint Staff, the secretaries of the military services, and DOD's legislative office are responsible for developing the legislative proposal to be submitted to Congress.

David L. Norquist, the Under Secretary of Defense (Comptroller)/Chief Financial Officer, will develop a budget for the Space Force that will include a five-year cost estimate for the Space Force, the Space Development Agency, the Space Operations Forces, U.S. Space Command, as well as the plan for transferring existing space budgets to the new Space Force. Vice President Pence has stated that the requisite legislative language and funding proposal to establish the new Space Force will be included in the Trump Administration's FY 2020 defense budget request to Congress in February 2019.

2. The U.S. Air Force Concept for the Space Force

In her September 2018 memorandum to DEPSECDEF Shanahan setting forth her ideas for the Space Development Agency described above, SECAF Wilson also outlined the Air Force's vision for a new Space Force including its projected costs, personnel requirements, functions and

missions, and how military space forces/assets, programs, and agencies would transition to a new Space Force.

Wilson stated that the critical functions of the Space Force would be to organize, train, equip, and provide space forces for military operations; develop tactics and doctrine for offensive and defensive space operations, including missile defense; and be responsible to achieve and sustain space superiority. Other Space Force missions would include: conducting space operations to enhance joint campaigns, providing combat support and joint space bases, and managing integrated global command and control for space operations.

In Wilson's concept, the Space Force would have approximately 13,000 personnel including a 2,400-person headquarters with its own secretariat and general staff. Satellite operators, threat analysts, and forward deployed units numbering about 10,000 people would comprise the majority of the Space Force. If Congress provides the authority and resources to establish a Space Force in FY 2020, the Air Force would transfer personnel and programs beginning in FY 2021.

Over five years the Space Force would require funding of almost \$13 billion. Wilson stated that the budget for the first year would total about \$3.3 billion which would include \$425 million for the Space Force headquarters, \$351 million for direct reporting units, \$1.3 billion for elements of the Space Force, \$114 million for combatant command personnel, and \$1 billion for combatant command military construction. She added that the \$13 billion projection was conservative, hinting that it could be revised upward following additional number crunching and analysis.

The Space Development Agency, the Air Force Space and Missile Systems Center, and elements of both the Army Space and Missile Defense Command and the Navy Space and Naval Warfare Systems Command would be incorporated into the Space Force. In addition, Wilson argues that a close connection and working relationship between the Space Force and the National Reconnaissance Office should be established but without impinging on the prerogatives of the intelligence community.

Wilson also believes that certain space endeavors of the Defense Department's Missile Defense Agency and Strategic Capabilities Office, NASA, the National Oceanic and Atmospheric Administration, and the Department of Commerce's space traffic management office should be transferred to the new Space Force.^{xvi}

Wilson's budget estimates and plans for standing-up a Space Force have drawn criticism from several quarters including in Congress and from defense budget experts who view them as a means to undercut the Trump Administration's initiative. For example, Representatives Rogers and Cooper, both key proponents of the Space Force, believe SECAF Wilson's figures are extremely inflated, designed to create sticker-shock to forestall the creation of a Space Force, sour Congress on the idea, and keep the military space enterprise in the Air Force portfolio.

Todd Harrison, defense budget analyst at the Center for Strategic and International Studies and supporter of the Space Force, also stated that Wilson's budget numbers were overly inflated representing "the highest estimate you could possibly come up with" and not the true cost of establishing a new Space Force.^{xvii} DEPSECDEF Shanahan recently stated that DOD's initial

budget projection will be lower than Wilson's figure, in the "single digits" of billions of dollars, and "could be" less than \$5 billion^{xviii} and thus more politically palatable. Other critiques of Wilson's proposal are that the personnel numbers (13,000) are too high and her recommendation regarding the relationship between the Space Force and the National Reconnaissance Office is a "poison pill" calculated to derail the Space Force and create opposition in Congress.

Not long after her September Space Force proposal and budget estimates, reports began to surface that President Trump was irritated with SECAF Wilson's handling of his directive to create a Space Force and was considering replacing her following the November 2018 mid-term elections. The White House was reportedly concerned that Wilson was attempting to undermine the project. However, both the White House and subsequently the Pentagon have denied these reports.^{xix}

To be fair, apart from Wilson, several other military leaders including Secretary of Defense James Mattis, found themselves in awkward positions following President Trump's June 2018 order to establish a Space Force. Prior to the President's directive, both Mattis and Wilson were opposed to the idea of an independent Space Force and had also argued against the creation of a Space Corps within the Air Force, a less ambitious scheme advanced earlier by Representatives Rogers and Cooper.^{xx}

The military has a long history of opposing outside efforts to allot priority status/independence to a new warfighting domain. For example, in 1947 the Navy contested the creation of the Air Force that it thought would eliminate the Navy's dominion above the sea.

3. Congressional Space Force Perspectives and Alternatives Under Consideration

On Capitol Hill, the push for creation of a separate Space Force/Space Corps has come largely from the House of Representatives. While several members of the Senate have stated that the space domain should be given greater priority and that funding for military/national security space should be increased, less emphasis has been placed on organizational solutions such as the creation of an independent Space Force.

As noted, for the Space Force to become a reality it must be authorized by Congress. Debate on Capitol Hill in 2019 on the Trump Administration's Space Force plan will revolve around the structure and organization, responsibilities, timing, alternative options, and the costs to establish it. Given SECAF Wilson's high cost estimate noted above, the fact that DOD will be requesting billions of dollars in new spending for the Space Force, and the recent announcement by the White House that it is reducing its defense budget request for FY 2020 to \$700 billion, a 2.2% reduction below the FY 2019 figure of \$716 billion and a 4.5% decrease below the \$733 billion that DOD had projected for FY 2020,^{xxi} the cost issue could become a major stumbling block to the establishment of a Space Force.

In an October 4, 2018 letter to DEPSECDEF Shanahan and Vice Chairman of the Joint Chiefs of Staff General Paul Selva, Mac Thornberry, Chairman of the House Armed Services Committee, states that before the HASC endorses any Space Force option/concept the Committee wants more specific details from the Pentagon on how it plans to organize and fund a Space Force. He identifies four possible methods/models to structure a Space Force

and wants the Pentagon to provide information on the potential implications of moving forward with each model.

The four models Thornberry identifies include:

1. A Space Corps model which would entail a separate military service under the Department of the Air Force rather than as a stand-alone military service.
2. An enhanced Space Corps model which would add Army and Navy space components and the Missile Defense Agency to the Space Corps model #1.
3. An independent military department like the approach the Trump Administration advocates.
4. A U.S. Special Operations Command-based model which would be a Space Force structure similar to USSOCOM with selected authorities to organize, train, and equip for space capabilities and headed by a senior civilian.^{xxii}

Representatives Rogers and Jim Cooper, Chairman and Ranking Member, respectively, of the HASC Strategic Forces Subcommittee (responsible for military space issues) are the leading advocates of an independent military department (model #3). They sponsored language calling for creation of a Space Force in the House version of the FY 2019 NDAA.

Both Rogers and Cooper were highly critical of the budget estimate for a Space Force that SECAF Wilson provided in September 2018 and detailed above. Rogers called the \$13 billion, five-year projection an example of “gold-plating and slow-walking” and evidence that the Air Force does not really support establishment of an independent Space Force. He added that a Space Force will not require much additional funding.^{xxiii}

A space corps approach (model #1) within the Air Force, which was endorsed in the House version of the 2018 NDAA but rejected in the Senate, is championed by Representative Adam Smith (D-WA), the Ranking Member on the HASC. He opposes a separate Space Force branch because it is not the most cost-effective means to provide the space domain with the priority it needs.

Representative Steve Knight (R-CA), a member of the HASC, disagrees with the President and his Space Force plan. He fears that creating the Space Force would drain resources from other defense programs, strip them of authority, and possibly weaken the military. Knight said recently that “I’m standing up for the U.S. Air Force here. There’s nobody on the planet that does this [space operations] better than they do.”^{xxiv}

It is likely that the four options identified by Chairman Thornberry will also serve as the focus of debate in the Senate, where Republicans increased their majority in the recent midterm elections, and particularly in the Senate Armed Services Committee. Several SASC members hold diverse views on an independent Space Force. Chairman Senator James Inhofe (R-OK) previously opposed the Space Force because he was not convinced that it was worth the cost. Following discussions with SECDEF Mattis, however, he reportedly has become a supporter. Senator Inhofe will be holding hearings on the Space Force after the legislative plan is sent to Congress. He wants to drill down on cost issues and determine whether a new Space Force would add unnecessary bureaucracy and duplication.^{xxv}

Other SASC members remain opposed to the idea. For example, Senator Dan Sullivan (R-AK) thinks it is more important to get the current five services back to the needed readiness levels before consideration of a new Space Force branch.^{xxvi} SASC member Senator Joni Ernst (R-IA) said it remains an open question for her committee whether a Space Force should be a separate entity or whether it should remain within the existing Air Force structure. Like Chairman Thornberry, Senator Ernst wants a better understanding about how different options for standing-up a Space Force affect the total cost, responsibilities, etc.^{xxvii}

The opposition in the House and Senate noted above represents a threat to President Trump's Space Force idea which requires Congressional approval to overcome several financial and logistical hurdles to enact one of the most extensive reorganization in the U.S. military since the Air Force was created out of the Army Air Forces in 1947.

With the Democrats taking control of the House following the November 2018 mid-term elections, Representative Smith will likely be the HASC Chairman when the White House/Pentagon presents its Space Force proposal and legislative plan in 2019. His disapproval of the Space Force, particularly over its cost – which was likely intensified by SECAF Wilson's hefty \$13 billion, five-year price tag – could unite Democrats, and help sway budget-conscious Republicans, to vote against, or significantly modify the Trump Administration's Space Force proposal. The fact that there may be less defense funding available given, as noted earlier, that the White House is cutting its FY 2020 defense budget request, may further work against formation of a new military branch.

Conclusions

It is critical to establish a single advocate for space in the U.S. military space enterprise such as the U.S. Space Force proposed by President Trump for several reasons:

- The United States is more and more reliant on space to carry out the majority of its military operations.
- Current and future U.S. space capabilities and assets are, and will continue to be put, under increasing risk by the counter-space assets of Russia and China (and other adversaries) who at the same time are improving space capabilities to conduct their own military operations.
- The military services are organized around their service's primary domain of responsibility with space still regarded as a subordinate function.
- Space activities within the U.S. space enterprise are also widely dispersed:
 - More than 60 military and national security agencies are responsible for space acquisitions with space budgets fragmented among several stakeholders with no single organization responsible for enterprise-wide decisions or with the budget authority for space acquisitions;

- This situation results in protracted, uneven decision making in the development/procurement of U.S. space capabilities and negligible accountability if a space program is behind schedule or over budget.
- DOD's cumbersome bureaucracy has also been very slow – and reluctant – to take advantage of the space commercial/high-tech sectors and their ability to develop, produce, and field technologies far more rapidly than their DOD counterparts.
- For all these above reasons, our adversaries are eroding U.S. space superiority.
- It is critical for the U.S. military space enterprise to be reorganized because the dependence of the United States on space for military operations will continue to expand:
 - For example, as ballistic and other missile threats proliferate, the missile defense mission has become a central component of U.S. national security with the utilization of space an integral part of that mission;
 - The likely development of a space-sensor constellation to help counter ballistic missiles/warheads and the hypersonic missiles being developed by Russia and China and Congress' call both for DOD to explore near-term boost-phase-intercept capabilities and to develop a space-based-intercept layer as soon as feasible highlight the growing dependency on space-based capabilities to accomplish the missile defense mission;
 - A key DOD official maintains that a space-sensor constellation and an SBI-layer are both technically feasible and affordable.

President Trump's team will first have to develop a compelling and comprehensive proposal accompanied by a viable budget plan for the U.S. Space Force that has the support of DOD stakeholders before it is presented on Capitol Hill to overcome opposition in Congress. While support exists in both chambers of Congress to improve the organization and effectiveness of the U.S. military-space enterprise, several representatives and senators hold diverse opinions on how to undertake these improvements including several organizational concepts at variance with the White House approach.

- A persuasive, compelling plan supported by DOD stakeholders could help convince undecided members of Congress – and possibly those (Democrats and Republicans) who oppose the specific White House plan but who support a space enterprise reorganization – to back the creation of the U.S. Space Force.
- The Democrats winning control of the House in the mid-term elections will complicate passage of the President's initiative. Several Democrats are opposed to the White House plan which could result in major modifications to it.
 - For example, Representative Smith, likely the next HASC Chairman, favors a Space Corps located within the Air Force, an approach which was first advanced and supported in 2017 by Representatives Rogers and Cooper;

- With the Democrats' mid-term victory, Representative Cooper could become the Chairman of the HASC Strategic Forces Subcommittee, which has responsibility for military space issues.
- Another hurdle is the cost factor. SECAF Wilson's \$13 billion "conservative" estimate could be a deal breaker. However, DEPSECDEF Shanahan has stated that the initial budget projection being developed by the DOD Comptroller may be lower than \$5 billion.
 - The White House's recently announced reduction in its FY 2020 defense budget request will add to the cost-factor difficulties facing a new Space Force.
- The optimal approach to make the military space enterprise most effective would be creation of a U.S. Department of Space and U.S. Space Force military service as the focal point and advocate for military space priorities.
 - However, political and budget realities could force compromises and a less elaborate reorganization option such as the Space Corps or the Unified Space Command;
 - It could also mean that creation of the Space Force could be sequenced over several years as opposed to the ambitious schedule of standing it up in one fiscal year, 2020, as is currently planned.
- The Trump Administration should move forward as rapidly as possible with the elements of the Space Force that the Pentagon already has the authority to carry out.
 - This includes creation of the Space Development Agency and the Space Operations Forces.

Endnotes

ⁱ "Trump suggests the military needs a new 'space force' military branch," by Joshua Stewart, *The San Diego Union-Tribune*, March 13, 2018. See <http://www.sandiegouniontribune.com/news/politics/sd-me-trump-miramar-20180313-story.html>.

ⁱⁱ "Read Trump's full remarks on immigration, 'Space Force'," *The Boston Globe*, June 18, 2018. See <https://www.bostonglobe.com/news/politics/2018/06/18/read-trump-full-remarks-immigration-space-force/QcLtBX1us0LIL2eW5KrajL/story.html>.

ⁱⁱⁱ "National Space Council votes unanimously to send Space Force proposal to Trump," by Sandra Erwin, *SpaceNews*, October 23, 2018. See <https://spacenews.com/national-space-council-votes-unanimously-to-send-space-force-proposal-to-trump/>.

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