

Arms in Space and Implications of the Oscillatory Nature of US Policy on Space Governance:

Projecting the US Approach to the Final Frontier under the Second Trump Presidency

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Abstract: This paper explores the cyclical shifts in US space policy between dominance and cooperation, conceptualised as the "pendulum effect." Analysing recent administrations, and the securitization of space, the essay contrasts the Trump administration's maximalist focus on space deterrence and military supremacy with the Biden administration's retrenched approach emphasising international norms and stability. The Trump administration's strategy promoted unilateral initiatives, establishing the US Space Force and pursuing interest-driven partnerships with the private sector, framing space as a competitive and contested domain. In contrast, under Vice President Kamala Harris, the Biden administration championed multilateral agreements, expanded the Artemis Accords, and introduced a voluntary anti-satellite weapon moratorium to reinforce responsible behaviour in space. The paper forecasts that the second Trump administration, building on its previous initiatives, will likely intensify a maximalist approach, fostering alliances with like-minded nations, promoting a competitive model for space exploration, and prioritising military capacity in space. It also explores a hypothetical Harris administration as an analytic tool to compare two different approaches and outcomes. However, both approaches present challenges in an increasingly militarised space environment. Where maximalism could lead to heightened rivalries and an arms race in space, a retrenched stance might struggle to maintain strategic leverage against assertive space actors such as China and Russia. This analysis underscores the oscillatory nature of US policy and tries to forecast how the US leadership will shape global frameworks for space policy and arms control in the years to come.

US foreign policy has long oscillated between competing priorities of dominance and cooperation, reflecting broader tensions in international security strategies, a dynamic that can be described as the "pendulum effect". This concept proves useful in analysing the United States government's space policies and the administration's attitude towards this domain. The Trump administration, for instance, emphasised space deterrence and supremacy, focusing on enhancing the US military's capabilities and minimising engagement in multilateral agreements. Conversely, the Biden administration, particularly under the leadership of Vice President Kamala Harris as chairman of the National Space Council, has promoted a vision of global stability and cooperative frameworks to govern space activities.

These shifts are not merely administrative preferences but part of a larger narrative that has securitised space. As argued by scholars, space has moved from being viewed as a peaceful sanctuary, as envisioned in the early stages of space exploration, to being perceived as "contested, congested, and competitive," with clear implications for national security.² At the heart of these debates is the tension between arms control, as symbolised by the Outer Space Treaty (OST), and the persistent militarisation of space activities, aggravated by the rise in dual-use technologies, which remain only loosely regulated by international norms.³ As we stand at the intersection of emerging technological capabilities and increasing geopolitical tensions, the future of space governance, especially in relation to proliferation and arms control in this domain, will likely be shaped by how effectively the US navigates these competing pressures.

This essay compares and contrasts the space strategies of the Biden and Trump administrations, emphasising the importance of collaboration and deterrence in both. By examining the narratives underlying these tactics and how they interact with the larger discourse of space securitization, it

¹ Stephen Sestanovich, Maximalist: America in the World from Truman to Obama (New York: Alfred A. Knopf, 2014).

² P.J. Blount, "The Discourse of Space Securitization", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 61-75, https://doi.org/10.1093/oxfordhb/9780197582671.013.4.

³ Jessica West, "Arms Control and the Myth of Peaceful Uses in Outer Space", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 223–247, <a href="https://doi.org/10.1093/oxfordhb/9780197582671.013.14​::contentReference[oaicite:0]{index=0}

forecasts future events under a second Trump presidency. Moreover, to amplify the contrast between these two approaches, a speculative parallel future under a Democratic administration is explored. This hypothetical future will emphasise the strategic and normative ramifications for US space leadership and the capacity of the international community to control the increasing militarization of space.

Changing Nature of Space: From Peaceful Pursuits to a Contested Domain

The dual imperatives of national security and international cooperation have long driven the development of US space policy. From the early days of the Cold War to the present, space has evolved from a purely scientific and exploratory domain into a critical theatre for military and strategic operations. The pendulum of US space policy, shifting between militarisation and cooperative governance, reflects broader geopolitical dynamics and technological advancements, as each administration has navigated an increasingly complex security landscape.

The origins of US space policy are deeply rooted in the aftermath of World War II and in President Eisenhower's efforts to limit the proliferation of nuclear weapons. In his famous 1953 "Atoms for Peace" speech before the United Nations General Assembly (UNGA), President Eisenhower sought to ensure that nuclear capabilities were dedicated only to "peaceful uses." This concept is encapsulated by Eisenhower's reference to "peaceful pursuits," which became a cornerstone of his administration and a guiding framework for subsequent space-related negotiations. Although the Soviet Union rejected the US proposal on nuclear arms, leading to the failure of the Atoms for Peace Initiative (API), the concept itself proved to be highly influential in the following space negotiations.

In fact, Eisenhower laid the groundwork for a broader international dialogue on the peaceful use of outer space, which would later become a key principle in treaties such as the Outer Space

⁴ Dwight D. Eisenhower, "Atoms for Peace", speech, United Nations General Assembly, December 8, 1953, https://www.iaea.org/about/history/atoms-for-peace-speech.

⁵ Foreign Relations of the United States, 1958–1960, Volume III, National Security Policy; Arms Control and Disarmament, Microfiche Supplement. Washington, DC: Office of the Historian, U.S. Department of State, https://history.state.gov/historicaldocuments/frus1958-60v03mSupp/summary

Treaty of 1967. This dialogue, initiated by the US government through Eisenhower's letter to Nikolai Bulganin, allowed the international community, particularly the United States and USSR, to establish shared values and principles in this domain.⁶ These were formalised by UNGA Resolution 1348 (XIII), titled "Question of the Peaceful Uses of Outer Space," which also created an ad hoc Committee on the Peaceful Uses of Outer Space.⁷ Resolution 1348 (XIII) represents the first UN General Assembly resolution on space, and every subsequent resolution concerning space has incorporated the terms "peaceful pursuits" or "peaceful uses."

However, while often invoked in international discourse, the concept of "peaceful purposes" when applied to space activities is somewhat misleading. Historically, states have rarely equated "peaceful" with strict non-military interpretation, and contemporary state practice clearly rejects such an understanding.⁸ This is also confirmed by Article IV of the OST, which clearly states that "the use of military personnel for scientific research or any other peaceful purposes shall not be prohibited."

Still, while the term "peaceful purposes" lacks a precise legal or political definition, it is generally associated with principles of communication and cooperation. Within the context of securitisation theory, the concept of "peaceful purposes" is often framed as an attempt to de-securitize space. During the early space age, the cooperative approach to peace was intended to mitigate security risks associated with space by embedding these activities in a normative framework aimed at de-escalation, such as the OST, the 1963 Treaty Banning Nuclear Weapon

⁶ Dwight D. Eisenhower, Letter to Nikolai Bulganin, Chairman, Council of Ministers, U.S.S.R., January 12, 1958, released January 13, 1958, https://www.presidency.ucsb.edu/documents/letter-nikolai-bulganin-chairman-council-ministers-ussr.

⁷ UN General Assembly Resolution 1348 (XIII), "Question of the Peaceful Uses of Outer Space", December 13, 1958, A/RES/1348(XIII), https://undocs.org/A/RES/1348(XIII)

⁸ Ivan A. Vlasic, "The Legal Aspects of Peaceful and Non-Peaceful Uses of Outer Space", in *Peaceful and Non-Peaceful Uses of Space*, ed. Bhupendra Jasani (New York: Taylor & Francis, 1991), 37–55.

⁹ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty), Article IV, paragraph 2, opened for signature January 27, 1967, 610 U.N.T.S. 205.

¹⁰ P.J. Blount, "Innovating the Law: Fifty Years of the Outer Space Treaty", in Innovation in Outer Space: International and African Legal Perspective, ed. Mahulena Hofmann and P.J. Blount (Baden-Baden: Nomos Verlagsgesellschaft mbH & Co. KG, 2018), 31–52.

¹¹ Barry Buzan, Ole Wæver, and Jaap de Wilde, Security: A New Framework for Analysis (Boulder, CO: Lynne Rienner Publishers, 1998).

Tests in the Atmosphere, in Outer Space and Under Water (PTBT) and the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (MA). The goal was not to make space a sanctuary devoid of military presence but to avoid the breakdown of normative order that could lead to heightened security tensions.

Nonetheless, by the 1970s, a new narrative began to take shape, particularly within US military policy, framing space as a contested domain. This narrative of contestation grew in prominence, gradually overshadowing the earlier emphasis on space as a realm for peaceful purposes. A significant shift in US policy occurred in 2011 when, for the first time, the Department of Defense described space as a "congested, contested, and competitive" domain. As discussed by J.P. Blount in his essay "The Discourse of Space Securitization," this characterization was not in use until 2009, but within a few years, it created a cascading effect both nationally and internationally. Following the publication of the Department of Defense's National Space Policy, this framing has been cited in sixteen UN documents and referenced by key delegations, including the European Union, the United Kingdom, Japan, South Korea, and the United States, as well as non-governmental observers like UNIDIR. 14

The Pendulum Period of US Space Policy

Thus a US space policy cyclical in nature, conforming to the "pendulum effect," emerged from these dynamics, with successive administrations oscillating between prioritising space dominance and deterrence or emphasising arms control and cooperation. This oscillation reflects the tension between viewing space as a domain of strategic competition, particularly with near-peer adversaries like China and Russia, as noted by the US Air Force General Raymond, and promoting its sustainable and peaceful use through international collaboration.¹⁵

¹² Robin Dickey, "The Rise and Fall of Space Sanctuary in U.S. Policy", Aerospace Corporation, September 2020.

¹³ Department of Defense. 2011. National Security Space Strategy.

¹⁴ P.J. Blount, "The Discourse of Space Securitization", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 61-75, https://doi.org/10.1093/oxfordhb/9780197582671.013.4.

¹⁵ Stephen Buono and Aaron Bateman, "A Short History of Space Security", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 22–37, https://doi.org/10.1093/oxfordhb/9780197582671.013.2

The concept of the "pendulum" applied in this paper is the one developed by Stephen Sestanovich, a former diplomat under the Reagan and Clinton administrations, in his book "Maximalist: America in the World from Truman to Obama." According to Sestanovich, since World War II, US foreign policy has followed a cyclical pattern, swinging between two extremes: maximalism and retrenchment. Maximalism is characterised by an aggressive, expansive approach to foreign policy, whereby the US commits significant resources to shape global events. On the other hand, retrenchment represents a strategic pullback, whereby the US reduces its international commitments in response to perceived overextension, adopting a more cautious, restrained approach to international relations. In the author's view, Presidents like Eisenhower, Nixon, and Obama are seen as retrenchers, who have adjusted US foreign policy in reaction to previous maximalist overreach.

Sestanovich's thesis on the cyclical nature of American foreign policy can be applied to US space policy, which has also experienced oscillations between expansionist, assertive strategies and more cooperative, restrained approaches. In space policy, maximalism might manifest as the prioritisation of military capabilities and unilateral actions to secure strategic advantages.

Retrenchment, in contrast, focuses on arms control and diplomatic measures to avert conflicts, typically incorporated into a multilateral strategy in an attempt to manage space as a global common. Just as in foreign policy, these strategies mirror a pendulum swing in foreign policy, whereby administrations respond to perceived shortcomings or overreach by their predecessors by trying to either project power or reestablish equilibrium through shifting strategic priorities.

The US space policy pendulum swing started with a shift from the Bush administration to the Obama presidency. In the 2006 US National Space Policy (NSP06), the Bush administration

John W. Raymond, Statement of General John W. Raymond, Commander, Air Force Space Command, to the House Armed Services Committee on Fiscal Year 2018 Priorities and Posture of the National Security Space, May 19, 2017, https://docs.house.gov/meetings/AS/AS29/20170519/105974/HHRG-115-AS29-Wstate-RaymondJ-20170519.pdf.

¹⁶ Stephen Sestanovich, *Maximalist: America in the World from Truman to Obama* (New York: Alfred A. Knopf, 2014), Kindle edition, Prologue, position 140-153

¹⁷ Stephen Sestanovich, "American Maximalism", *The National Interest*, March 1, 2005, https://nationalinterest.org/article/american-maximalism-431.

emphasised a unilateral and assertive approach to space.¹⁸ The policy stressed the importance of US space dominance, particularly from a national security perspective. The US reserved the right to deny adversaries access to space, promoting an approach aligned with a broader post-9/11 defence and deterrence strategy. Most importantly, the NSP06 rejected arms control agreements that could limit American activities in space, and room for collaboration and cooperation in space was left open where it would align with US national interests.¹⁹ Less than one year later, China tested its nationally-developed anti-satellite weapon (ASAT).²⁰

In contrast, the 2010 National Space Policy (NSP10) under President Obama reflected a retrenchment from this aggressive stance, with a focus on cooperation, diplomacy, and transparency. Obama's programme highlighted the importance of ethical and sustainable space activity whilst fostering international cooperation. While national security concerns were still addressed, the tone was significantly different, with a greater emphasis on multilateral engagement, arms control, and the peaceful use of space. The Obama administration attempted to strike a balance between safeguarding American space assets and working to create standards and regulations that would guarantee long-term stability in space. One way to interpret this change is as a part of the larger pendulum swing from maximalism to retrenchment, in which an overabundance of power is followed by a period of diplomacy and reform.

The transitions between the Bush and Obama administrations illustrate how US space policy is cyclical, reflecting a larger pattern of oscillation between maximalism and retrenchment. These swings, driven by the need to balance national security with international cooperation, have shaped the US's approach to space as both a contested domain and a global common.

¹⁸ U.S. National Space Policy, August 31, 2006, https://history.nasa.gov/national_space_policy_2006.pdf.

¹⁹ Todd Barnet, "United States National Space Policy, 2006 & 2010", Florida Journal of International Law 23, no. 2 (2011): Article 4, https://scholarship.law.ufl.edu/fjil/vol23/iss2/4.

²⁰ Brian Weeden, "2007 Chinese Anti-Satellite Test Fact Sheet", Secure World Foundation, updated November 23, 2010 https://swfound.org/media/9550/chinese asat fact sheet updated 2012.pdf

²¹ U.S. National Space Policy, June 28, 2010,

Trump v. Biden: Maximalism-Retrenchment Pendulum

On Power: Trump's Maximalist Approach to Space

This pattern of policy reversal, seen during the Bush and Obama years, also extends to the Trump and Biden administrations. As noted by Philip A. Wallach, a key focus of Barack Obama's presidency was undoing the assertive, unilateral regulatory policies of the George W. Bush era. In turn, Donald Trump's administration sought to dismantle many of Obama's cooperative frameworks, emphasising military dominance. Now, under Joe Biden, we witness yet another shift, even if moderate, and the re-establishment of multilateral engagement and sustainability in space policy.²² This constant back-and-forth of each administration recalibrating from the priorities of its predecessor illustrates the enduring pendulum of US policy, swinging between power projection and diplomatic cooperation, that is, between a maximalist and retrenched approach.

The first Trump presidency adopted a distinctly maximalist approach to space-related matters. While initially operating under Obama's NSP10, Trump's vision for space focused on prioritising military capabilities to secure strategic advantages, with little interest in establishing or advancing new arms control treaties. Although Trump only released his own National Space Policy (NSP20) towards the end of his administration, his efforts on space policy were evident throughout his term, particularly through the issuance of several Space Policy Directives (SPD-n) and the National Space Strategy (NSS) brief.²³ For the purposes of this paper, the NSS and the Space Policy Directive-4 represent Trump's most important policies on space.²⁴

²² Philip A. Wallach, "The Pendulum is the Pits: Can the United States Make Enduring Regulations?" *Brookings Institution*, December 21, 2020

²³ Center for Space Policy and Strategy, Space Policy Archive, Aerospace Corporation. Archive accessible at https://csps.aerospace.org/resources/space-policy-archive?page=0

Office of the Press Secretary, "President Donald J. Trump is Unveiling an America First National Space Strategy", *The White House*, March 23, 2018. Accessed at Space Policy Archive. Archive accessible at https://csps.aerospace.org/resources/space-policy-archive?page=0

²⁴ National Space Policy Directive-4 (NSPD-4): Establishment of the United States Space Force, February 19, 2019,

 $[\]underline{\text{https://trumpwhitehouse.archives.gov/presidential-actions/text-space-policy-directive-4-establishment-united-states-space-policy-dir$

Two weeks before the election, Trump sharply criticised Obama's space policies, accusing him of severely undermining the US space programs.²⁵ Most notably, in direct contrast to Obama's NSP10, Trump's political advisors, Robert Walker and Peter Navarro, published an op-ed outlining Trump's vision for space. In this piece, titled "Peace Through Strength," the two advisors argued that the Trump administration's space policies should focus on reducing vulnerabilities and ensuring that military commands have the necessary space-based tools for their missions.²⁶ Additionally, they advocated for the development of emerging technologies capable of revolutionising warfare, alongside the establishment of more extensive military partnerships with the private space sector to expedite the growth of new capabilities.²⁷ Thus, the future of Trump's space policy was clearly delineated before his election.

In 2017, five months after taking office, President Trump issued an Executive Order on *Reviving the National Space Council* (EO 13803), reestablishing the National Space Council (NSpC).²⁸ This council, a revamped version of the NSpC from the G.W. Bush era, works as an executive branch council and operates as a policy development office, overseeing a wide range of civil, commercial, national security, and international space policy issues.

During Trump's administration, the NSpC played a key role in launching new initiatives, including efforts to return Americans to the moon, streamline regulations for commercial space activities, establish a new military branch for space, and update the overall national space policy.²⁹ It is noteworthy that the subcommittee on National Security of the Users' Advisory Group, a federal advisory committee established to represent the interests of industry and other non-federal entities

²⁵ Marcia Smith, "Trump: 'I Will Free NASA' From Being Just a LEO Space Logistics Agency", *SpacePolicyOnline*, October 25, 2016,

https://spacepolicyonline.com/news/trump-i-will-free-nasa-from-being-just-a-leo-space-logistics-agency/

²⁶ Jeremy Grunert, *The United States Space Force and The Future of American Space Policy. Legal and Policy Implications* (United States: Brill | Nijhoff 2022)

²⁷ Robert S. Walker and Peter Navarro, "Donald Trump's 'Peace Through Strength' Space Vision", *SpaceNews*, October 24, 2016 https://spacenews.com/op-ed-donald-trumps-peace-through-strength-space-doctrine/

²⁸ Donald J. Trump, "Executive Order 13803—Reviving the National Space Council", https://www.govinfo.gov/content/pkg/DCPD-201700449/pdf/DCPD-201700449.pdf

²⁹ Scott Pace, "US National Security Interests in Space", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 275–292, https://doi.org/10.1093/oxfordhb/9780197582671.013.16.

involved in space activities, has the largest number of advisors.³⁰ Before the first meeting of the National Space Council, Vice President Mike Pence, who would soon serve as its chairman, wrote in the Wall Street Journal: "In the face of this threat [China and Russia's ASAT developments], America must be as dominant in space as it is on Earth."³¹ Thus, the administration immediately demonstrated a strong interest in space-related matters, adopting a more assertive stance compared to the Obama presidency.

The Trump administration's maximalist space policy approach officially began with the National Space Strategy of 2017.³² The strategy outlined a whole-of-government approach, working closely with the private sector and allied nations to enhance the resilience of space architecture, improve capabilities, structures, and processes, foster favourable domestic and international environments, and strengthen both deterrence and warfighting capabilities. As noted by Scott Pace, the 2017 National Space Strategy reflects some of the key ideas presented in the 2001 Rumsfeld Commission Report.³³ However, the Office of Management and Budget (OMB) went a step further, outlining recommendations to "strengthen the leadership, management, and organization of the Department of Defense with respect to the national security space activities of the Department," as mandated by Section 1616 of the 2017 National Defense Authorization Act.³⁴

Two years later, in 2019, as a major expression of maximalism, the Trump administration reestablished the US Space Command. Four months later, it made the historic decision to create a sixth branch of the armed forces - the first since 1947: the US Space Force.³⁵ USSPACECOM's mission is to conduct operations in, from, and to space to deter conflict, and if necessary, defeat

³⁰ UAG Organization. March 20, 2024,

https://www.nasa.gov/wp-content/uploads/2024/03/uag-organization-2024-03-20-2.pdf?emrc=86e425

³¹ Mike Pence, "America Will Return to the Moon—and Go Beyond", *Wall Street Journal*, October 4, 2017, https://www.wsi.com/articles/america-will-return-to-the-moonand-go-beyond-1507158341

³² US National Space Strategy, March 23, 2018,

https://trumpwhitehouse.archives.gov/briefings-statements/president-donald-j-trump-unveiling-america-first-national-sp ace-strategy/.

³³ See note 29.

³⁴ National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 1616, 130 Stat. 2000 (2016), https://www.congress.gov/bill/114th-congress/senate-bill/2943.

^{35 &}quot;Space Force: Trump Officially Launches New US Military Service", *BBC News*, December 21, 2019, https://www.bbc.com/news/world-us-canada-50876429

National Defense Authorization Act for Fiscal Year 2020, Pub. L. No. 116-92, § 952, 133 Stat. 1198 (2019), https://www.congress.gov/bill/116th-congress/senate-bill/1790.

aggression, deliver space combat power for the Joint/Combined force, and defend US vital interests with allies and partners.³⁶

With this approach, the Trump administration made the United States the first country in the world to establish an independent space force, complete with its own doctrine, budget, and mission, "ensur[ing] that America's superiority in space is never questioned and never threatened."³⁷ In doing so, the administration completed the process of securitization of space, prioritising the strategic aspects of this domain and focusing on the development of necessary military capabilities to address potential threats.

Lastly, the Trump administration also demonstrated a shift in international diplomacy compared to the previous administration. While the Obama presidency favoured a multilateral approach with universal aspirations for governance—even showing a willingness to sign arms control treaties—Trump's space policy favoured a return to non-binding agreements and collective efforts among like-minded nations. Progress has been made in the discussion of guidelines for the long-term sustainability of space activities (LTSSA) in the United Nations (UN) Committee on the Peaceful Uses of Outer Space (COPUOS), with the organisation adopting twenty-one voluntary non-binding guidelines by consensus in June 2019.³⁸

Furthermore, following the previous SPD-1, President Trump issued an Executive Order titled *Encouraging International Support for the Recovery and Use of Space Resources* (EO13914), with section 2 stating that space is not a global common and that the 1979 Moon Agreement would not be considered as a basis of customary international law, also defining the US version of good practices in space.³⁹ EO 13914, even if it is focused on extraction in and the commercial use of

³⁶ US Space Command Public Affairs Office, "USSPACECOM Campaign Plan, New Mission Focus on Defeating Adversaries", *U.S. Space Command*, May 20, 2020, https://www.spacecom.mil/Newsroom/News/Article-Display/Article/2193524/usspacecom-campaign-plan-new-mission-focus-on-defeating-adversaries/

³⁷ Robert Burns, "Trump declares new Space Command key to American defense", Associated Press, August 29, 2019, available at

https://apnews.com/article/air-force-donald-trump-ap-top-newspolitics-19f021f991844b348dc716f6f8851f7c.

38 See note 29; United Nations Office for Outer Space Affairs. *Long-term Sustainability of Space Activities*, 2021. https://www.unoosa.org/oosa/en/ourwork/topics/long-term-sustainability-of-outer-space-activities.html.

³⁹ Donald J. Trump, "Encouraging International Support for the Recovery and Use of Space Resources". Executive Order 13914, April 6, 2020",

space, makes the shift to a more competitive and interest-driven approach clear, marked by a return to a strategy that promotes non-binding agreements and bilateral or multilateral efforts with countries that share the US' strategic interests.

This approach is further advanced by the Artemis Accords and their design for a coalition-of-the-willing approach. The Artemis Accords, led by the United States, represent the realisation of the diplomatic direction outlined in the 2017 National Space Strategy (NSS).⁴⁰ These accords favour non-binding political agreements, both bilateral and multilateral, among like-minded nations. Among other objectives, the Artemis Accords are designed to establish norms of responsible behaviour in space, setting operational and para-legal standards with the long-term goal of developing them into customary international law.

At the end of Trump's mandate, only nine states signed the Artemis Accords, of which four are NATO members and four are strict allies.⁴¹ This is also reinforced by foreign perception, such as the definition of these accords by Dmitry Rogozin, the head of the Russian space agency Roscosmos, as "too US-centric."⁴² Moreover, Ni Lexiong, a Chinese military commentator, said Beijing would be concerned by the United States attempting to set international rules with a "small group of allies," and that such an approach could foster rivalry and conflict, even on the Moon.⁴³

In addition to the coalition-of-the-willing approach, the development of domestic manned spaceflight capabilities by the US has weakened international partnerships with key states that should be central to any space governance discussions - most notably with Russia. This political shift is driven by several factors, including economic considerations, such as the cost per astronaut

 $[\]underline{\text{https://www.federalregister.gov/documents/2020/04/10/2020-07800/encouraging-international-support-for-the-recovery}_{-and-use-of-space-resources}$

⁴⁰ Office of the Press Secretary, "President Donald J. Trump is Unveiling an America First National Space Strategy," *The White House*, March 23, 2018, . https://csps.aerospace.org/resources/space-policy-archive?page=0

⁴¹ NASA, Artemis Accords: Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes, October 13, 2020, https://www.nasa.gov/specials/artemis-accords/index.html.

⁴² Andrew Jones, "Russian Space Chief Disses NASA's Artemis Moon Landing Plans," *Space.com*, November 4, 2020, https://www.space.com/russia-space-agency-chief-criticizes-nasa-moon-plans.

⁴³ Elya A. Taichman, "The Artemis Accords: Employing Space Diplomacy to De-Escalate a National Security Threat and Promote Space Commercialization," *American University National Security Law Brief*, Vol. 11, No. 2 (2021), https://digitalcommons.wcl.american.edu/nslb/vol11/iss2/5.

per trip to the ISS, industrial factors stemming from the vibrant US private space industry, and broader geopolitical dynamics.⁴⁴

The emphasis on public-private and military-private partnerships within the Space Policy Directives (SPDs) and NSP20 envisions a level of US independence from traditional international partnerships. While promoting international cooperation, this approach remains competitive and interest-driven. By focusing on domestic capabilities and private sector involvement, the US seeks to reduce reliance on international collaborations, fostering an environment where cooperation is secondary to ensuring strategic and economic advantages in space activities.

In conclusion, Trump's space policy reflected a departure from Obama's retrenched posture, which was characterised by a more cooperative and governance-oriented approach, and favours a maximalist strategy grounded in national interests, military dominance, and partnerships that support US strategic objectives and interests. This strategy is exemplified by the administration's larger shift where space became a domain for competitive advantage and deterrence, the re-establishment of the National Space Council as support to executive space policy, the founding of the Space Force, and the USSPACOM.

Global Governance for Peace: Biden's partial retrenchment

The first Biden administration, on the other hand, saw the pendulum swing in the other direction, adopting an retrenched approach. When he took office, President Joe Biden's administration signalled a departure from President Trump's military and unilateral space policy. Whilst Biden did not fully reverse all of Trump's initiatives, he has demonstrated a clear return to multilateralism and international cooperation in space governance. This shift marked a partial retrenchment of space policy, emphasising collaboration, diplomatic engagement, and sustainable use of space resources as cornerstones of US space strategy. Central to this reorientation has been the National Space Council, led by Vice President Kamala Harris, which sought to restore US leadership in crafting international norms and arms control agreements in outer space. Biden's

⁴⁴ Pavel Luzin, "U.S.-Russia Space Cooperation: Eroding Interdependence Followed by Symbolic Partnership," *Russian Analytical Digest* 253 (2020): 6-8, https://doi.org/10.3929/ethz-b-000420927.

approach, though more moderate than Obama's after the Bush administration, represents a recalibration of US space policy in favour of global governance frameworks.

During the election campaign, space and arms control within this domain were not major topics of discussion. While Trump—along with his advisors and collaborators—consistently demonstrated a strong interest in space, Biden was more reserved in addressing these matters, even if he is considered a "fan of the space program," as declared by the former astronaut and US senator Bill Nelson. Similar to Trump, the Biden administration operated under a national space strategy defined by the previous presidency. In fact, the Democrats continued to follow the NSP20, which was introduced by the Republican administration at the end of Trump's term. Nevertheless, Biden's retrenched approach became evident through executive orders and initiatives, such as the expansion of the Artemis Accords and the promotion of the 2022 "Strategy for Space Diplomacy" by the Department of State.

The Biden administration began with full support for the major initiatives of the previous administration, signalling a potential end to the pendulum period.⁴⁸ In response to this question, White House Press Secretary Jen Psaki stated that space was one of the few areas where the administration shared common ground with the previous one.⁴⁹ Although the NSP20 was published during a maximalist phase, the bipartisan consensus on space issues during Trump's presidency enabled the creation of a strategy that even a new administration from the opposition could work

⁴⁵ Rachael Nail, "What Would a Biden Presidency Mean for the Space Program vs. a Second Trump Term?" *Florida Today*, September 4, 2020, https://www.floridatoday.com/story/tech/science/space/2020/09/04/donald-trump-vs-joe-biden-space-issues/336301600

⁴⁶ National Space Policy of the United States of America, December 9, 2020, https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/12/National-Space-Policy.pdf.

⁴⁷ U.S. Department of State, A Strategic Framework for Space Diplomacy, 2022, https://csps.aerospace.org/sites/default/files/2023-05/Space-Framework-Clean-2-May-2023-Final-Updated-Accessible-5 .25.2023.pdf; U.S. Department of State, A Strategic Framework for Space Diplomacy, 2022, https://csps.aerospace.org/sites/default/files/2023-05/Space-Framework-Clean-2-May-2023-Final-Updated-Accessible-5 .25.2023.pdf

⁴⁸ Jeremy Grunert, The United States Space Force and The Future of American Space Policy. Legal and Policy Implications (United States: Brill | Nijhoff 2022), 116.

⁴⁹ White House, "Press Briefing by Press Secretary Jen Psaki", *The White House*, March 30, 2021, https://www.whitehouse.gov/briefing-room/press-briefings/2021/03/30/press-briefing-by-press-secretary-jen-psaki-march-30-2021/.

with.⁵⁰ Just two weeks after his inauguration, President Biden expressed his "full support" for creating the Space Force, reinforcing this stance through a statement from White House Press Secretary Jen Psaki, who confirmed that the administration was not "revisiting the decision to establish the Space Force."⁵¹

This support is due to several factors, the most significant being the irreversibility of conceptual changes regarding space during the maximalist period, and the economic implications. Trump's maximalist space policy created political, strategic, and operational imperatives in space that are now difficult to reverse due to the securitisation of the domain, also demonstrated by the assertive measures taken by US adversaries like Russia and China. Additionally, previous investments, particularly those related to restructuring the Air Force and creating the Space Force, are nearly irreversible, as going back on these decisions would entail significant political and financial costs. As Dale Ketcham, Vice President of Government Relations at Space Florida, remarked: "It is just too important. It would be too awkward, expensive, and dangerous to try to go back."

Moreover, the Biden administration confirmed the continuation of the National Space Council (NSpC), which had been revived by Trump in 2017.⁵³ The administration recognized the strategic role of the council in shaping space policy together with the executive branch. Naming the Vice President as chair of the NSpC also gave Kamala Harris a high-profile role that could enhance her political credibility.⁵⁴

⁵⁰ U.S. Senate Committee on Commerce, Science, and Transportation, "Bipartisan NASA Authorization Bill Clears Senate", *Press Release*, December 18, 2020,

 $[\]underline{https://www.commerce.senate.gov/2020/12/bipartisan-nasa-authorization-bill-clears-senate}$

Karl A. Bingen, Kaitlyn Johnson, John Dylan Bustillo, and Marie Villerreal Dean, U.S. Space Force Primer, Center for Strategic & International Studies, January 3, 2023, https://www.csis.org/analysis/us-space-force-primer.

⁵¹ Sandra Erwin, "White House: Space Force 'Absolutely Has the Full Support of the Biden Administration", *SpaceNews*, February 3, 2021,

https://spacenews.com/white-house-space-force-absolutely-has-the-full-support-of-the-biden-administration/.

⁵² U.S. Space Command Public Affairs Office, "Russian Direct-Ascent Anti-Satellite Missile Test Creates Significant, Long-Lasting Space Debris", *U.S. Space Command*, November 15, 2021, https://www.spacecom.mil/Newsroom/News/Article-Display/Article/2842957/russian-direct-ascent-anti-satellite-missile-test-creates-significant-long-last/.

⁵³ Jeff Foust, "A Biden Space Policy Takes Shape", *The Space Review*, December 6, 2021, https://www.thespacereview.com/article/4296/1.

⁵⁴ Jacqueline Feldscher, "Biden's Space Policy: One Giant Leap for Climate Change", *Politico*, October 28, 2020, https://www.politico.com/news/2020/10/28/biden-space-policy-climate-change-433236.

Through the Executive Order on the National Space Council (EO 14056), the Biden administration not only renewed the existence of the NSpC, acknowledging its crucial role, but also expanded its composition. Five new members were added: the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Labor, the Secretary of Education, and the National Climate Advisor. This new composition aligned with a broader strategy aimed at promoting space development and exploration for the benefit of all humanity, particularly in the fight against climate change, emphasising an approach centred around international cooperation and global governance. The Democratic platform, leading up to the 2020 election, frequently referenced universal concepts such as "our own planet and place in the universe" and "our home planet," highlighting the shift from the previous maximalist policy. 56

One key difference from Trump's strategy lies in Biden-Harris's approach to international partnerships with both traditional allies and emerging space powers, as supported by the former NASA Administrator Sean O'Keefe.⁵⁷ This approach seeks to move beyond the competitive and interest-driven focus of the previous administration, instead shifting towards a more cooperative and governance-based strategy grounded in international law and shared values. This focus is clearly articulated in both the 2021 "United States Space Priorities Framework" and the 2022 "A Strategic Framework for Space Diplomacy." Both documents advocate for the renewal and strengthening of space diplomacy, primarily with allies and partners, but also extend efforts to engage emerging space powers and other nations, even adversaries.

While there is continued support for initiatives centred around non-binding agreements, the new administration's space policy, under the leadership of Vice President Harris, aims to strengthen

⁵⁵ White House, "Executive Order on the National Space Council", The White House, December 1, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/01/executive-order-on-the-national-space-council/

⁵⁶ See note 55.

⁵⁷ See note 46.

⁵⁸ United States Space Priorities Framework, December 2021, Office of the Vice President, https://csps.aerospace.org/sites/default/files/2021-12/United-States-Space-Priorities-Framework--December-1-2021.pdf; U.S. Department of State, A Strategic Framework for Space Diplomacy, 2022, https://csps.aerospace.org/sites/default/files/2023-05/Space-Framework-Clean-2-May-2023-Final-Updated-Accessible-5-25.2023.pdf

binding agreements and promote responsible behaviour in space activities. Most importantly, the second pillar of the document "A Strategic Framework for Space Diplomacy," "Space for Diplomacy," puts great emphasis on universal concerns such as "climate change and environmental sustainability; crisis management and conflict prevention; arms control and international security ... and human health," reinforcing a vision of space for humankind.⁵⁹

The Biden-Harris administration has promoted new and expanded legal principles governing space behaviour both at the domestic and international levels. Domestically, in July 2021, Secretary of Defense Lloyd Austin issued a memorandum establishing five tenets of responsible behaviour for the Department of Defense (DoD). 60 Internationally, on the other hand, these efforts have been advanced in various manners, such as through the Artemis Accords and the UN.

For instance, while continuing to promote the Artemis Accords, the administration has actively advocated for expanding its membership to include a broader range of nations, aiming to create more inclusive and widely accepted norms for space activities. In discussing Vice President Harris' role during the Biden presidency, former NASA Administrator Bill Nelson remarked that "[Harris] has been a key advocate for the importance of space cooperation with our international partners and growing the number of Artemis Accord signatories." Under her leadership, the number of participants in the Artemis Accords increased from seven to forty-five, reflecting the administration's commitment to defining norms of behaviour "to enhance safety, stability, and sustainability in space."

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⁵⁹ U.S. Department of State, *A Strategic Framework for Space Diplomacy*, 2022, https://csps.aerospace.org/sites/default/files/2023-05/Space-Framework-Clean-2-May-2023-Final-Updated-Accessible-5. 25.2023.pdf.

⁶⁰ U.S. Space Command, *Tenets of Responsible Behavior in Space*, July 7, 2021, https://www.spacecom.mil/Newsroom/Publications/Pub-Display/Article/3318236/tenets-of-responsible-behavior-in-space/

⁶¹ Joshua Posaner and Matt Berg, "'Space Aficionado' Kamala Harris Aims for Moonshot Presidency", *Politico*, August 5, 2024,

https://www.politico.eu/article/kamala-harris-moonshot-presidency-donald-trump-us-elections-2024-space-race-chinamoon-lunar/.

⁶² NASA, List of Signatories of the Artemis Accords, accessed 10/19/2024, https://www.nasa.gov/specials/artemis-accords/index.html; U.S. Department of State, *A Strategic Framework for Space Diplomacy*, 2022,

 $[\]frac{https://csps.aerospace.org/sites/default/files/2023-05/Space-Framework-Clean-2-May-2023-Final-Updated-Accessible-5}{.25.2023.pdf}$

The most significant difference from the Trump administration, however, is the role played by the United States in establishing new and expanded legal principles governing space behaviour and limits. The primary forum where the Biden-Harris administration has sought to reestablish US leadership in the space sector has been the United Nations, where it has re-engaged with international forums such as the UN Committee on the Peaceful Uses of Outer Space (COPUOS) and the Conference on Disarmament (CD), to advance discussions on space arms control and sustainability of space activities.⁶³

In 2021, the US backed the UK-led initiative "Reducing Space Threats through Norms, Rules and Principles of Responsible Behaviours" through the UNGA's First Committee.⁶⁴ UK aimed to re-start stalled discussions on the "Prevention of an Arms Race in Outer Space Treaty (PAROS).⁶⁵ The UK first called on states to identify activities that could be considered "responsible, irresponsible, or threatening" and to share ideas for developing norms of responsible behaviour.⁶⁶

The British proposal also called for the establishment of an open-ended UN working group with four main tasks: to take stock of the existing international legal and normative frameworks related to outer space, to consider current and future threats to space systems, to define irresponsible behaviour, and to make recommendations on potential norms, rules, and principles, as well as how they could contribute to the development of legally binding instruments.⁶⁷ However, even if approved by an overwhelming margin by the First Committee – 163 votes in favour, 8 votes against, and 9 abstentions – it is worth noting that both Russia and China voted against the US-backed UK's initiative, undermining the operational capabilities of the working group, which

⁶³ U.S. Department of State, *A Strategic Framework for Space Diplomacy*, 2022, https://csps.aerospace.org/sites/default/files/2023-05/Space-Framework-Clean-2-May-2023-Final-Updated-Accessible-5. 25.2023.pdf

⁶⁴ Aidan Liddle, "Responsible Behaviours in Outer Space: Towards UNGA 76", *Foreign, Commonwealth & Development Office Blog*, June 8, 2021, https://blogs.fcdo.gov.uk/aidanliddle/2021/06/08/reducing-space-threats-towards-unga-76/.

⁶⁵ NTI, "Proposed Prevention of an Arms Race in Space (PAROS) Treaty", *Nuclear Threat Initiative*, https://www.nti.org/education-center/treaties-and-regimes/proposed-prevention-arms-race-space-paros-treaty/.

⁶⁶ Jessica West, "Arms Control and the Myth of Peaceful Uses in Outer Space", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 223–247, https://doi.org/10.1093/oxfordhb/9780197582671.013.14.

⁶⁷ Jeremy Grunert, "The United States Space Force," 117-118.

requires consensus. Still, the Biden-Harris administration has shown the will to pursue an international system that is rules-based, marking a major shift from the previous approach of the Republican presidency.

In addition, the Biden-Harris administration has shown significant interest in arms control initiatives, particularly regarding anti-satellite (ASAT) weapons. In 2021, within the framework of the open-ended working group, the United States, on Vice President Harris's initiative, started a voluntary moratorium on destructive tests of direct-ascent ASAT weapons as a concrete example of a norm of responsible behaviour in space.⁶⁸ Despite objections raised by Russia and China, these initiatives reflect the US' commitment to arms control, particularly through international engagement.⁶⁹

As reported by the Secure World Foundation, on December 7, 2022, the United Nations General Assembly overwhelmingly adopted Resolution A/RES/77/41, supporting the moratorium on destructive DA-ASAT testing.⁷⁰ The resolution received 155 votes in favour, with nine against and nine abstentions. Notably, the United States, India, China, and Russia are the only states that have demonstrated destructive direct-ascent anti-satellite missile capability, and as of the time of writing, neither India, China, nor Russia have supported the moratorium or the resolution.⁷¹

In conclusion, space policy under the Biden-Harris administration has signalled a swing from the maximalism of the Trump era to a retrenched period, charting a course toward a more cooperative and governance-based strategy anchored on international law and multilateral diplomacy. In addition, through the expansion of the Artemis Accords, promotion of norms for

⁶⁸ The White House. "FACT SHEET: Vice President Harris Advances National Security Norms in Space." April 18, 2022.

https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/18/fact-sheet-vice-president-harris-advances-national-security-norms-in-space/.

⁶⁹ Jeremy Grunert, "The United States Space Force," 118.

⁷⁰ United Nations General Assembly. Resolution 77/41. Destructive Direct-Ascent Anti-Satellite Missile Testing. A/RES/77/41, December 7, 2022. https://undocs.org/A/RES/77/41.

⁷¹ Secure World Foundation. "Direct-Ascent Anti-Satellite Missile Tests: State Positions on the Moratorium, UNGA Resolution, and Lessons for the Future." *Secure World Foundation*, October 24, 2023. Last updated on October 31, 2023.

 $[\]underline{\text{https://swfound.org/2023/10/direct-ascent-anti-satellite-missile-tests-state-positions-on-the-moratorium-unga-resolution}_{-and-lessons-for-the-future.}$

responsible space behaviour, and a renewed arms control agenda among others, the Biden-Harris administration has sought to reassert US leadership in global space governance, not only amongst like-minded states, but also at international level. Whereas Trump's programme was basically seen as a go-it-alone initiative, Biden has recalibrated US space activities to align with other major powers and to meet broader international goals of sustainability, peaceful use, and cooperation with allies and new spacefaring states.

The Next Frontier: Polarisation and Space in the Election's Aftermath

The space sector is becoming more and more securitised, which will be a challenge for the newly elected Republican administration. With the electoral victory of Trump in the November 5, 2024, election, we might see another swing of the policy pendulum under his leadership. From the previous analysis of recent administrations, it is evident that US space policy, too, is shaped by the oscillatory nature of American politics between maximalism and retrenchment. While this pattern was particularly pronounced during the Bush and Obama presidencies, the last two administrations have been no exception.

With Trump's re-election, clear signs suggest that the pendulum will swing back toward a strongly maximalist stance. Notably, the Republican campaign has emphasised achievements in the space sector during Trump's previous presidency. This is especially true when it comes to Greg Autry, former NASA's White House Liaison and NASA's CFO; and Robert Walker, former chairman of the US House Science, Space, and Technology Committee, and former chairman of the Commission on the Future of the US Aerospace Industry. Both emphasise the effectiveness of Trump's maximalist space policy in the geopolitical context of a new Cold War, where the US is leading a "Space Race 2.0."

⁷² The White House, National Space Council. *Renewing America's Proud Legacy of Leadership in Space: Activities of the National Space Council and United States Space Enterprise.* January 2021. https://trumpwhitehouse.archives.gov/wp-content/uploads/2021/01/Final-Report-on-the-Activities-of-the-National-Space-Council-01.15.21.pdf

⁷³ Planetary Radio, "Space Policy Edition: The Space Policy of a Second Trump Administration," The Planetary Society, September 6, 2024, https://www.planetary.org/planetary-radio/space-policy-issues-second-trump-term; Greg Autry, Peter Navarro. Red Moon Rising: How America Will Beat China on the Final Frontier. Foreword by Douglas Loverro, Post Hill Press, 2024

While the party platform may not dedicate more than fifty words to space, the three core principles of the maximalist approach and the first Trump administration are easily discernible: deterrence, competition, and an interest-driven strategy. Indeed, following the GOP platform "the United States will create a robust Manufacturing Industry in Near Earth Orbit, send American Astronauts back to the Moon, and onward to Mars, and enhance partnerships with the rapidly expanding Commercial Space sector to revolutionize our ability to access, live in, and develop assets in Space."⁷⁴ This might conceivably be accomplished by reinforcing the previous decisions related to the establishment of the Space Force, the Artemis Accords, and improved partnerships and benefits with the private space sector.

The Space Force, created in 2019, will likely act as a main enabler for the US Space development, operations, access, and exploration. Continuing his maximalist approach, in a speech delivered in Detroit to the National Guard Association of the US, Trump pledged that, if re-elected, he would establish the Space National Guard, consisting of 4,000 personnel, as the first combat reserve for space operations. Here, the value of the Space Force to the Republican administration as a deterrent power is clear, with Trump claiming that the US was being "destroyed" in space before the establishment of the new military branch. However, with its creation, he argued, the country is now "leading in all of the major metrics in space."

Secondly, with a second Trump administration, we would likely see a preference for non-binding international agreements, along with the continuation of the Artemis Accords under the principle of a "coalition of the willing." In any case, the maximalist approach of the Republican presidency will view such agreements as tools of power to influence norms of responsible behaviour in space, with the aim of making them internationally accepted, fostering a like-minded nations approach. While Russia and China did not originally endorse the Artemis Accords, this lack

⁷⁴ Republican Party. *2024 Republican Party Platform: Make America Great Again!* The American Presidency Project. July 8, 2024. Available at: https://www.presidency.ucsb.edu/documents/2024-republican-party-platform.

⁷⁵ Brett Tingley, "Trump Says He'd Create a Space National Guard If Elected." *Space.com*, August 29, 2024. https://www.space.com/space-force-national-guard-trump-2024

⁷⁶ Miranda Nazzaro, "Trump Says He Would Create a Space National Guard and Build an 'Iron Dome' Missile Shield Around the US," *The Hill*, August 26, 2024, https://thehill.com/homenews/campaign/4848896-donald-trump-space-national-guard-iron-dome/.

of support will likely be emphasised by the statements of Dmitry Rogozin, former director of Roscosmos, who remarked, "They [the US] see their program not as international but as similar to NATO."

Lastly, a second Trump administration would see a significant strengthening of the commercial and private space sectors, bolstered by both the US' ability to protect its interests in the space domain and, above all, the administration's strong support for the private sector. During Trump's first term, SPD-1 was specifically aimed at encouraging commercial space activities. Additionally, Trump's close relationship with Elon Musk, CEO of the groundbreaking SpaceX, suggests that private companies will continue to play an increasingly prominent role. With a view of the economic sector as a major engine for US development and security, a Republican-led government would likely pursue stronger private partnerships and greater outsourcing of space missions and developments. However, it is important to note that this would occur under the umbrella of maximalism, in which the improvement of the private sector and the partnerships with it are intended to win the second Space Race and ensure US leadership in space, via a competitive and interest-driven approach.

On the other hand, Trump's maximalist approach could negatively impact international stability, as well as the proliferation and control of weapons in space. This approach, centred around concepts such as unilateralism, competition, deterrence, and militarisation, might push the world toward an arms race in a domain that has traditionally been characterised by international cooperation, or at least by "peaceful pursuits." In fact, such an approach risks fostering rivalry rather than collaboration, leading to heightened tensions among spacefaring nations and

https://spacenews.com/gop-platform-lays-out-aggressive-space-agenda-to-counter-china/.

⁷⁷ See note 46.

⁷⁸ "Space Policy Directive-2, Streamlining Regulations on Commercial Use of Space," Presidential Memoranda, May 24, 2018,

https://www.whitehouse.gov/presidential-actions/space-policy-directive-2-streamlining-regulations-commercial-use-space/.

⁷⁹ Alayna Treene et al., "Trump Says Elon Musk Has Agreed to Lead Proposed Government Efficiency Commission as Ex-President Unveils New Economic Plans", CNN Politics, September 5, 2024, https://www.cnn.com/2024/09/05/politics/trump-economic-plans-musk-government-commission/index.html.

⁸⁰ Greg Autry and Alexander William Salter, "GOP Platform Lays Out Aggressive Space Agenda to Counter China", SpaceNews, July 17, 2024,

undermining efforts at arms control, especially in the realm of anti-satellite and space-based weapons. Due to the limited participation in international agreements based on the "like-minded nation" concept and the refusal of arms control agreements, a Trump administration could provoke adversaries like China and Russia to accelerate their own space weaponization efforts. This would risk further destabilising the security landscape in space and complicating diplomatic efforts aimed at establishing norms and rules that promote responsible behaviour in space.

To allow for a more nuanced understanding of the distinctions and potential outcomes of Trump's future space policies, as well as to envision a potential path forward after the second Trump presidency, this essay will also look at an alternate future in which the Democratic candidate won the 2024 election.

Although the Biden-Harris administration has retained some pillars of Trump-era space policy, Kamala Harris's leadership in space matters has ushered in significant changes. A Harris administration would likely have maintained the pendulum swing towards a retrenched approach seen during the Biden administration. These shifts from the maximalist position would have been reflected in a different approach to international cooperation and diplomacy, promoting both binding multilateral agreements and political principles, favouring binding arms control agreements in institutional forums like the United Nations, and an inclination to de-securitize the discourse around space.⁸¹

Kamala Harris' Democratic Party platform is notably brief and vague regarding space policy. However, given Harris' general continuity with Biden's policies, it is likely that the retrenched approach seen under the Biden administration would have continued. This approach, marked by a commitment to international cooperation and dialogue, aligns with sustaining the US presence on the ISS, a well-recognized achievement of international diplomacy, and advancing the Artemis

tional-security-norms-in-space/.

⁸¹ The White House, "Fact Sheet: Vice President Harris Advances National Security Norms in Space," *The White House*, April 18, 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/18/fact-sheet-vice-president-harris-advances-na

Accords. These initiatives would likely have followed the path set during the Biden administration, where policies' results in the space domain were a direct expression of Harris' leadership.

As discussed in this paper, regardless of the approach taken, the next administration will need to contend with a space domain which is increasingly but yet fully securitised. The rhetoric and decisions of the US government in the past decade, combined with an unpredictable geopolitical environment, escalating tensions, and developments in space, make a focus on national security essential for every future presidency. A potential Democratic administration would likely have continued policies related to the Space Force, and aimed to establish it as a proper combat force, rather than a combat-support force. As underlined by VP Harris during a speech at the US Air Force Academy's graduation ceremony, "America's national security and global stability depend on our strength in the sky and space."

Still, Harris's approach would have focused considerable effort on diplomacy and international agreements, attempting to soften the rhetoric surrounding space. This is evident in her support for the commitment not to conduct DA-ASAT tests. Over the past two years, this memorandum has been signed by 37 states, including all EU members, as part of an effort to shape international norms. Additionally, significant attention would be given to de-securitizing the discourse on space, following in Obama's footsteps. Harris's leadership has aimed to swing space policy back toward "peaceful purposes," particularly "for the benefit of humankind." Despite the similarities with past approaches, the core of a potential Democratic administration's retrenched strategy would have been addressing climate change while endeavouring to exploit space's strategic role for the benefit of humankind.

ches-call-to-action-to-bring-the-benefits-of-space-to-communities-across-america/.

⁸² Aaron T. Blore, "Responsiveness Is Not Operational: Aligning Strategy in the Newest Service," Æther: A Journal of Strategic Airpower & Spacepower, December 11, 2023, 45.

⁸³ Katherine Spessa, "Vice President Harris Congratulates USAFA Class of '24", U.S. Air Force Academy Strategic Communications, June 4, 2024.

https://www.af.mil/News/Article-Display/Article/3795910/vice-president-harris-congratulates-usafa-class-of-24/.

⁸⁴ Secure World Foundation, "Space Industry Statement in Support of International Commitments to Not Conduct ASAT Tests", June 12, 2024, accessed 10/26/2024, https://swfound.org/industryasatstatement/.

⁸⁵ White House, "Fact Sheet: Vice President Kamala Harris Launches Call to Action to Bring the Benefits of Space to Communities Across America," April 8, 2024, <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2024/04/08/fact-sheet-vice-president-kamala-harris-launches Call to Action to Bring the Benefits of Space to Communities Across America," April 8, 2024, <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2024/04/08/fact-sheet-vice-president-kamala-harris-launches Call to Action to Bring the Benefits of Space to Communities Across America," April 8, 2024, <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2024/04/08/fact-sheet-vice-president-kamala-harris-launches Call to Action to Bring the Benefits of Space to Communities Across America, "April 8, 2024, <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2024/04/08/fact-sheet-vice-president-kamala-harris-launches Call to Action to Bring the Benefits of Space to Communities Across America, "April 8, 2024, <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2024/04/08/fact-sheet-vice-president-kamala-harris-launches Call to Action to Bring the Benefits of Space to Communities Across America, "April 8, 2024, <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2024/04/08/fact-sheet-vice-president-kamala-harris-launches Call to Action to Bring the Benefits of Space to Communities Across America, "April 8, 2024, "A

On the other hand, a retrenched approach under a hypothetical Harris administration could have faced significant challenges and limitations in an increasingly competitive and contested space domain in which securitization becomes the norm. The focus on multilateralism, diplomacy, and arms control agreements might have been perceived as passive by adversaries like China and Russia, who have already declared their refusal of US attempts to limit weapons in space due to the American *strategie mélange*. Moreover, her approach could have overlooked a domain that is becoming - or had already become - a warfighting domain, and the capabilities of international adversaries which had progressed further. Thus, while Harris's diplomatic and cooperative strategy would aim to mitigate conflict, it could inadvertently reduce the US' strategic leverage, allowing adversaries to exploit perceived gaps in America's defence posture in space.

Conclusion

In conclusion, this paper uses the "pendulum effect" to examine space policy, and map out future pathways for the US' space nonproliferation and arms control initiatives following the 2024 elections. A major focus is given to both the Trump and Biden-Harris mandates as the last presidential candidates, highlighting how they framed the Space domain during their respective leaderships. On one hand, Trump framed this as a competitive, strategic domain, with a focus on deterrence, unilateralism, and military supremacy – marking a clear maximalist stance. Conversely, Kamala Harris' leadership during the Biden administration swung towards a retrenched approach advocating for a cooperative framework rooted in diplomacy, multilateral agreements, and international norms.

Moreover, as a core argument of this paper, the "pendulum effect" has been accompanied by a continuous securitization of the Space Domain. If initially conceived of as a sanctuary, the "Final Frontier" has, over the years, undergone a securitization process that has transformed it into a domain described as "contested, congested, and competitive" and, since the early 2000s, a

⁸⁶ Jessica West, "Arms Control and the Myth of Peaceful Uses in Outer Space", in *The Oxford Handbook of Space Security*, ed. Saadia M. Pekkanen and P.J. Blount (Oxford: Oxford University Press, 2024), 223–247, https://doi.org/10.1093/oxfordhb/9780197582671.013.14.

"warfighting domain." This process, encouraged by maximalist approaches over the years, has led to an almost complete securitization of space, making it an essential domain for national security and an unavoidable priority on the political agendas of any administration.

Following the 2024 elections, the pendulum of the US policy might swing again. Trump's second administration will very likely express a maximalist approach, with an even stronger stance on the militarisation of space, and promote a coalition of like-minded states to promote shared principles and values. This approach will likely build on initiatives from Trump's first term such as the establishment of the Space Force and the Space Command.

Thus, key aims are likely to be establishing and reinforcing norms of responsible behaviour, without restricting the US' freedom as an independent actor, and working as a geopolitical counterbalance to third party initiatives. This will likely be accompanied by a rejection or disregard of binding agreements on arms control and proliferation, with such agreements potentially being dismissed as constraints on American freedom in the "Next Frontier." Any agreements on ASAT weapons that could be seen as a limit to the US' ability to protect its assets will likely be given the same treatment.

On the other hand, a hypothetical Harris presidency would have maintained the retrenched approach expressed by the Biden administration. Her approach would likely have embraced efforts to increase international cooperation on space matters by limiting proliferation through binding agreements discussed and approved in international fora like the United Nations. These are intended as tools to reshape the debate around the space domain toward a de-securitized one, in which the benefits for humanity and the need to address global challenges such as climate change prevail.

However, regardless of which approach characterises the US space policy, both carry risks due to the multipolar, unstable, and tense international context in which the space domain already exists. The maximalist approach of Trump could risk an arms race in space similar to that experienced during the Cold War, in addition to increasing geopolitical tensions. On the other hand, the

retrenched approach might struggle to establish effective diplomatic channels to limit such a race, as well as avoid losing US strategic leverage due to the increased securitization of the space debate.

Still, policies are difficult to predict and the space policy of the next presidency may fall outside the oscillation of the pendulum described previously. Moreover, continued issues with growing competition between the United States and China, federal budget constraints, climate change, and new and ongoing international conflicts could impact the space agenda in unforeseen ways. Once Trump takes power in January and begins to enact his policies, the future of US leadership in space, and its impact on the global norms and frameworks that govern this Last Frontier, will come to light.

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