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ASTROPOLITICS AND USA-CHINA'S NEW GEOPOLITICAL RIVALRY AREA

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Introduction:

With the development of human technology, new environments have been proposed for geopolitical games (Vasegh & Isanedjad 2021). Geopolitics has traditionally been an Earth-centered field, but technological progress and the space race during the Cold War created a new context for this science: "*Astropolitics*". Although the space realm, the moon, and other celestial bodies are still far from the focal point of geopolitics, they are becoming an important base of national power because of their characteristics and resources. Global security is increasingly intertwined with space security, as space-based communications are heavily dependent on broadcasting and observations. In this context, the complexity of threats in outer space and the proliferation of new acting agents have made astropolitics a very interesting topic (Vozmediano 2021, 6).

Equally important, space has always been a geopolitical competition field. Since the beginning of the space age, programs and goals have been driven primarily by the Cold War competition. This is nothing new, although US officials have complained that space is no longer a sanctuary. Apparently, space was never a sanctuary, and satellites were always in danger. For this reason, most nuclear reduction agreements between the United States and the Soviet Union contained clause warnings against targeting national technical vehicles or data-gathering satellites. What has changed now is the role that space plays in the United States: it is, in fact, an important provider of national security. For Russia, however, space, while important to some of its national security efforts, is more of a way to maintain geopolitical importance. There is also a complexity in strengthening China's space capabilities. This, coupled with the growing interest in global anti-space capabilities, allows conflict on

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Earth to spill over into space orbit; alternatively, misperceptions of activities in orbit lead to conflict on Earth (Samson 2021). With an ever-increasing number of countries pursuing their own interests, geopolitics has turned into astropolitics. Near-Earth outer space can become a battlefield just as the New World has become a battlefield for European nations. However, since warfare is an energy-taking activity and energy production is costly for any human pursuit in space, most conflicts in space are non-violent and require hybrid, electronic, cyber, and electromagnetic technology to maintain economic, legal, informational, and institutional stability. The political and psychological war of this type of astropolitical conflict may be appropriate for countries with a community of growing space assets dedicated to supporting their geopolitical security and economic interests (Giri 2022).Therefore, this study illustrates the role of contemporary geopolitics in today's space based on the dynamic nature of astropolitics and assesses the emerging geopolitical competition behind the rise of international interest in space. Methodologically, primary and secondary sources were used to shed light on this research and these sources were diversified to obtain sufficient information: books, articles, websites, and official institutional publications were used to prepare this article. Given the current and future orientation of this study, almost all referenced documents are relatively recent.

Theoretical Framework

Geopolitics

Swedish geographer Rudolf Kjellén first used the term geopolitics in his article on the formation of Sweden's natural borders in 1899. Kjellén defines geopolitics as a theory that describes the state as an organism or geographical phenomenon at a certain level. Karl Haushofer, one of the important German intellectuals between the two world wars, defines it as the doctrine of spatial determinism of general political processes based on many elements of the science of geography. During World War II, Edmund Walsh, an American political scientist, defined geopolitics as the combined study of human geography and political science (Tovy 2015, 1). The term geopolitics was removed from academic and public discourse after the Second World War but gradually came back into use, since the 1970s. In academia, progressive geographers such as French geographer Yves Lacoste reclaimed geopolitics as an active and emancipatory approach to geography and politics. Realist diplomats such as the US Security Advisor and Secretary of State Henry

Kissinger (1973-1977) reintroduced the concept of geopolitics to counter political choices based on idealism and ideology and to put "national interests" on the agenda of foreign policymakers (Mamadouh & Dijkink 2006, 350).

Contemporary geopolitics defines the sources, practices, and representations that enable territorial control and resource extraction. States continue to practice statesmanship. In this sense, "*all-seeing*" interpretations of the world are still offered by political and intellectual leaders. But their "*situated knowledge*" is increasingly being questioned by others in "*situations*" different from the clubs and boardrooms of politicians and business leaders. Geopolitical knowledge is seen as part of the struggle because marginalized people in different situations seek to resist the dominance of the views of the powerful (Flint 2006, 17).

Since geopolitics deals with fundamental aspects of the development of civilization, its analysis in the form of a complete methodology has a fourfold purpose: (**1**) to establish a solid theoretical foundation from which to develop geopolitics as a systematic discipline; (**2**) to examine the nature of contemporary regional and global geopolitical development, including the seabed and space; (**3**) to reconstruct the geopolitical history of a particular country, region, or the world; and (**4**) to analyze the national power of key countries. Therefore, geopolitics have both theoretical and operational aspects, (Nuhija et al. 2021).

Geopolitics is a dynamic struggle between powerful states trying to possess the new "space" and organize it in their interests. Therefore, geopolitical interests in space can be defined as opportunities to achieve maximum freedom of action, develop full-space capabilities, and seize key positions and resources in space. The essence of outer space activity is to pursue these interests with the most cost-effective means among the limited options (Wang 2009, 436).

Using geopolitical analysis, it is not surprising that we understand the region at the center of this analysis as either strategic (an independent field of conflict) or operational (an active area of operations). On one hand, this field has characteristics that influence thinking about the interaction between space forces and other acting agents. However, they are related to other areas and mutually influence their activities carried out in them. Physical nature then places fairly clear limits on the nature of the operations that humans are currently capable of performing. In this case, the level of technological development is still basic and the technology used is not advanced. Therefore, any activity in space is determined by the level of technological complexity, because without appropriate technologies, humans cannot perform any task (Doboš 2020, 238).

Astropolitics (Geopolitics of Space)

Space has strategic utility and meaning and constantly intersects with terrestrial geopolitics and geo-economics. Space may be a vast physical vacuum, but it is not a political vacuum where scientists occasionally conduct experiments and governments carry out unique missions, such as sending humans to the moon and returning them safely to Earth. In the early 21st century, space has become as important to geopolitics and geo-economics as the world's complex transportation routes in oceans or continents (Sheldon 2021, 8).

Earth's orbit, constellations of satellites based there, supporting infrastructure on the ground, and infrastructure applications provide a wide and diverse range of services and data that governments, non-state actors, and individuals can use for real and nefarious purposes. From an altitude of approximately 100 km to 40,000 km, the Earth's orbit is a geographic environment used by actors of the international system for a wide range of political, commercial, diplomatic, scientific, and infrastructure needs that are currently very important. In this strategic sense, it is no different from using the oceans and the Earth's atmosphere (Bowen 2020, 22). In addition, the definition of this limit is still unclear, because developed countries refuse to recognize the claim of sovereignty of equatorial countries over the areas just above their airspace, which extends to the fixed earth orbit between thirty-five and 40 thousand kilometers above Earth's equator (Klinger 2019, 675).

Remote sensing, as a field of official scientific interest, began in October 1957 with the launch of the Sputnik satellite. It is widely understood that future satellite launches and national space programs will require international agreements on satellite orbits, capabilities, and future space exploration efforts. On December 13, 1958, a year after Sputnik, the United Nations created a Special Committee on Peaceful Uses of Outer Space, whose main purpose was to "promote international cooperation in the peaceful uses of outer space". A year later, on December 12, 1959, the United Nations General Assembly passed Resolution 1472 (XIV), which authorized the establishment of the permanent Committee on Peaceful Uses of Outer Space (COPUOS) (Salla 2014, 95-96). However, since the Soviet Union first placed a man-made object in orbit in 1957, space has become an increasingly geopoliticized area (Williams 2010, 785).

The Outer Space Treaty came into force in 1967 as the first major multilateral treaty on space. The treaty established a set of basic principles regarding governmental use of outer space, including the inherent right of all nations to freely access, use, and explore outer space. The parties to

the treaty also agreed that space and all celestial bodies cannot be claimed as land, property or exclusive territory of any country (Conrad et al., 2012). The international community quickly ensured the international character of space by signing the Outer Space Treaty in 1967, which enshrined its non-sovereign status. During the Cold War, space was a relatively undeveloped area of bipolar tension, apart from the Cuban Missile Crisis and Reagan's Strategic Defense Initiative (better known as Star Wars) (Williams 2010, 785). Since the beginning of space activities in the Cold War, the geopolitical context of international relations and space platforms have also changed significantly. For more than three decades, space has been seen as one of the sites of peaceful Cold War competition between the United States and Soviet Union to replace armed conflict. However, in the context of the "*space race*", international cooperation was central to the political strategy of the two space powers (demonstrating leadership ability and technological capabilities) for similar reasons (Peter 2016, 146). During the Cold War, the importance of space became apparent when the United States and former Soviet Union developed their own space programs as competitive tools. Since then, the number of state actors has increased. The use of space technology has grown exponentially, and this is evident in contemporary space weapons (Argyris 2021).

Just as the Cold War was the defining context of the first space age, the fall of the Soviet Union marked the beginning of the second space age. The Persian Gulf War in 1991, sometimes referred to as the "*First Space War*", is another defining event of this era. The dominant features of the second space age include (**1**) the emergence of globalization with the enormous increase in communication and information flows made possible by the global landscape of satellite technology; (**2**) shifting military emphasis on using space to enhance strategic capabilities, to using space to gain operational and tactical advantages in ground warfare; and (**3**) decreasing and changing emphasis on civil space. It is possible to change the unipolarity of today's international system to a multipolar environment with much wider and more diverse actors. As power is dispersed among these actors, the nature of power in space will begin to change. Other potential features of the next space age may include (1) major technological advances that would significantly lower barriers to entry for space actors; (2) a shift from a geocentric to a solar system perspective; and (3) renewed strategic competition in space (Hays & Lutes 2007).

However, the beginning of the 21st century is witnessing a historical development destined to transform the world, although relatively in its infancy. For the first time in decades, the United States has been a real competitor in terms of both economic and global ambitions. John Ikenberry argues that

the current US-created international order has the potential to integrate and absorb China in the long run, rather than replacing it with a Chinese-led one. This is an important measure of the meaning of China's rise. Thus far, the rise of a new global hegemon has led to a major change in the international order, both in Britain and the United States. Given that China promises to be so powerful and diverse, it is difficult to resist the idea that its rise will eventually herald the birth of a new international order. One field in which competition between America and China will be experienced is the space field (Constantin-Bercean 2022, 123).

Space is the fourth military domain after air, land, and sea; and cyberspace is classified as the fifth domain. According to the US Department of Defense Joint Doctrine Publication on Space Operations: (1) space capabilities have proven to be force multipliers when integrated into military operations; (2) spatial capabilities provide global communications, such as Positioning, Navigation and Timing (PNT); environmental monitoring; space Intelligence, Surveillance and Reconnaissance (ISR); and warning services for Combatant Commanders (CCDR), services and agencies (Quintana 2017, 94).

In addition, the development of space weapons shows that the geopolitical picture of space is now a contested competitive situation in which the United States and China are the main acting agents, and maintain the belief that space is a way for these countries to pursue their military and economic interests. The ideological dominance resulting from the historic space race between the United States and the former Soviet Union during the Cold War has already shown that a country with a geopolitical advantage in space has superior military, intelligence, scientific, and commercial power (Argyris 2021).

Further, "*astropolitics*" is a theory rooted in geopolitics and applied to space in its broadest sense. Astropolitics is often studied as an aspect of security and as a subfield of international relations in political science. This includes the role of space exploration in diplomacy as well as the military use of satellites, for example, for surveillance or cyber warfare (Young 2021).

Astropolitics considers outer space full of geopolitical significance. This means that the state that can best reflect its power in occupying important positions and using resources in space, becomes the ruler of this new "*space*". Based on this assumption, the competition for dominance of outer space (in terms of the relative efficiency of technology to achieve the allocation of outer space resources) is not only the key to achieving a power that ensures its survival in the space age, but it is also considered its central dynamic; to be transatlantic astronomy (Wang 2009, 440).

Astropolitics is defined as the political study of stars, celestial bodies,

and activities in space. Space activities include those that have been recognized by the national space programs and military forces of different countries through the release of official media. However, it is these activities that are not officially recognized that pose the greatest challenge to a comprehensive study of astropolitics (Salla 2014, 98).

Similar to Mahan's focus on natural sea lines and "choke points" and Mackinder's emphasis on geographical regions, Dolman sees orbiters, space zones, and launch sites as critical geopolitical assets over which states can be expected to compete for competitive and strategic control (Havercroft & Duvall 2009). Everett C. Dolman (2005, 6-7) under the influence of classical geopolitics and Mackinder's Heartland theory says:

> "He who controls low-Earth orbit also controls near-Earth space.
> One controls the near-Earth space rules of Terra.
> Whoever rules Terra will determine the fate of humanity".

Four different astronomical regions of space are described here according to their physical characteristics (Dolman 1999, 92):

1. Terra or Earth, consisting of an atmosphere extending from the surface to just below the lowest altitude, capable of supporting an unpowered orbit. Here, Earth and its atmosphere are the conceptual equivalents of a coastal zone for outer space. All objects that enter orbit from the Earth and re-enter from space must pass through it.
2. Terran or Earth space: from the lowest habitable orbit to just beyond rest altitude (approximately 36,000 km). Global space is the operational environment for the military's most advanced reconnaissance and navigation satellites, and all existing and planned space weapons.
3. The lunar or moon-space void is the region that extends from a fixed orbit to slightly beyond the orbit of the Moon. Earth's moon is the only visible physical feature that stands out in this area, but it is only one of several strategic locationsere.
4. Solar Space includes everything in the Solar System (i.e., in the Sun's gravitational well) beyond the Moon's orbit. It is clear that expansion into this area will be limited by the use of existing technologies. However, solar space exploration is the next major goal of manned missions and eventually permanent human colonization.

Astropolitics and Space Competition between America and China

United States of America

With the onset of World War II, US foreign and defense policy bureaucracies, along with think tanks and members of the national security community, conceptualized the identity of the US government through the National Security Charter and Global Strategy. Among the US national security elite, space is no longer considered the ultimate battleground, if not the next. Geopolitics and outer-space diplomacy have now become commonplace, and astropolitics has emerged as a genuine geopolitical discourse on outer space (Grondin 2009, 108).

The United States has made several attempts to propose a "*national strategy*" for space. It is likely that these have taken the form of national space policies since 1958. That year, the United States under the Eisenhower administration, the US drafted and passed the National Aeronautics and Space Act. This comprehensive law, known to abolish the National Advisory Committee on Aeronautics and replacing it with the National Aeronautics and Space Administration, introduced spaceflight and its political and economic benefits to the country and provided legal mechanisms for such activities (Constantin-Bercean 2022, 127).

In the 21st century, President George W. Bush announced on January 14, 2004, at NASA headquarters that he plans to establish a permanent base on the Moon as part of this "*vision*" for "*the Moon, Mars and Beyond*". Beyond space exploration, it was followed by an executive order to create a commission to review and recommend the implementation of the "Bush Vision Thing". The Presidential Commission (2004) concluded in its final report, a Journey to Inspire, Innovate, and Exploration, released in June 2004, that "fundamental changes are needed in the nation's approach to space exploration and successful space management" (Bormann 2009, 81).

On October 11, 2010, President Obama signed the NASA Authorization Act authorizing $58.4 billion for NASA's space exploration and development programs over the next three years. In conjunction with various other laws and policies initiated by the United States, some initiatives are encouraged, including advanced space transportation systems, custom spacecraft development, commercial habitats, space stations, space settlements, commercial mining, techniques to optimize spacecraft trajectory for landing on near-Earth asteroids, commercial spacecraft construction, interplanetary

and interstellar communications, and space exploration missions to near-Earth asteroids, the Moon, Mars, and the two Mars moons Phobos and Deimos (Weeks, 2012, p.2). Meanwhile, in 2017, US Director of National Intelligence, Daniel Coats, presented a report to the Senate entitled Global Threat Assessment of the US Intelligence Community, confirming that space warfare operations will soon become an inevitable reality:

> "Russia and China seek to counterbalance any advantage the United States derives from the use of civilian, military, or commercial space systems. They are increasingly considering satellite attacks as part of their war doctrine.Both Russia and China are seeking a wide range of anti-satellite weapons to reduce US military effectiveness. These systems will include the development of kinetic destructive tools in the next few years. Russian and Chinese militaries consider anti-space weapons as part of a larger arsenal and are pursuing different technologies to target satellites in all orbits" (Spagnulo 2019, 104).

In March 2019, US Vice President Mike Pence declared:

> "Make no mistake. Today, we are in a space race, as in the 1960s, and the stakes are even higher. These statements indicate a new competition for space, especially between the United States and China" (Vozmediano 2021, 16).

In May 2020, when NASA publicly announced its intention to draft a new international agreement to support lunar exploration, activist concerns about the geopolitical implications of this quickly increased. Initially, it was unclear whether the new agreement would be global in scope, relying on the existing legal structure or simply it would be a set of bilateral arrangements aimed at legitimizing and supporting US lunar activities. A few months later, on October 13, 2020, when seven partner nations signed the Artemis Agreement, it was clear that the agreement was the path taken by the space superpower. In fact, the treaties so far have clearly targeted "like-minded" countries that have entered into bilateral relations with the United States by signing the treaties (Emilia 2022, 15).

The US, on the other hand, plans to go even further with Artemis as the growing competition with China expands in space, eventually building a moon base to launch a manned mission to Mars by the 2040s. The Artemis program consists of three stages. If the current mission is successful, a manned spacecraft will be launched to fly to the moon in 2024. A third mission will launch in early 2025 to land astronauts, including the first woman, on the

moon. NASA's partners in the Artemis program include space agencies from Japan and Europe. Orion carries two microsatellites developed by the Japan Aerospace Exploration Agency, one of which (Omotenashi) will be the first Japanese spacecraft to land on the moon (Shiraishi & Tabeta 2022).

The United States also recently established the US Space Command and the US Space Force, which serve as the command and service branch of the nation's space warriors, respectively. The United States is currently looking to land a crew on the moon in 2024, and together they are building a "*lunar gateway*" – a space station orbiting the moon. In recent years, NASA has increased its reliance on a wider range of commercial actors to deliver its programs. This was done to increase competition between contractors and the number of NASA exit options to reduce costs and avoid program disruption. This, among other factors, has enabled the commercial space industry in the United States to grow significantly, as innovative companies like SpaceX push the boundaries of what is possible in the current decade. In 2019 alone, the United States saw more than $4.6 billion in venture capital investment in American space companies (Gautel 2021). Again in this context, the US Space Command (USSC) report illustrates the current US narrative about China's space program: China's goal of establishing a leading position in the economic and military use of space, or what Beijing calls the "space dream". It is an essential component of realizing the goal of "Great Rejuvenation of the Chinese Nation". To achieve this goal, China has devoted high-level attention and considerable funding to eventually surpass other spacefaring nations in terms of space-related industry, technology, diplomacy, and military power (Gadd 2021).

Speaking on April 18 at Vandenberg Air Force Base, about 155 miles northwest of Los Angeles, Vice President Kamala Harris said: "We will continue to focus on writing new rules for the road to ensure that all space activities are conducted in a responsible, peaceful and sustainable manner. The United States is committed to lead the way and to lead by example" (Einhorn 2022).

Perhaps not coincidentally, on November 22, the US Space Force became the first US base in the Indo-Pacific. The Defense Department's largest combined combatant command was almost entirely focused on countering the rise of China. "I applaud and congratulate the Space Force for bringing the first service component to Indo-Pacom", I believe it is the right place at the right time for this" U.S. Space Command chief Gen. James Dickinson said on Nov. 29. Gen. B. Chance Saltzman, chief of U.S. Space Force in Space Operations, spoke at a ceremony at the Indo-Pacific Command headquarters near Honolulu, Hawaii, to formally establish the space component. He said:

"We find ourselves competing with a thoughtful enemy that continues to field its anti-space systems as well as its superior space support systems for its increasingly capable ground forces" (Erwin 2022).

"It's a fact: We're in a space race", said Bill Nelson, NASA administrator appointed by US President Joe Biden in 2021. Nelson said he and others are worried the communist country could claim land on the moon once it arrives. It is better to make sure that they will not reach anywhere on the moon under the guise of scientific research. It's not unlikely for them to say, 'Stay away, we're here, this is our territory,' Nelson explained (Bender 2023).

China and Space

China's space program, which launched its first astronaut in 2003, has evolved significantly over the past two decades. The truth is that China is rapidly falling behind the United States in space capabilities, despite being removed from the International Space Station in 2011. According to one estimate, China's industry can cycle through new space technologies twice as fast as the US space industry (Araya 2022).

Additionally, since 2013, Xi Jinping has invested in Mao's nuclear program with the same credibility and resources as China's space development, saying: "The space dream is part of the dream of making China stronger" (Lin, 2021). In this regard, China's defense documents continue to emphasize anti-space capabilities as a central part of the concept of "*informationized warfare*" to blind the enemy. In December 2015, the People's Liberation Army announced the creation of a strategic support force to oversee space, cyber and electronic warfare operations (Quintana 2017, 96).

In 2015, after the successful launch and implementation of the first phases of China's Lunar Exploration Program (CLEP), an orbiting, landing and return project, China proposed a program to be completed before 2030. The program includes exploring the lunar environment and resources, building a long-term fundamental research platform and validating technology to utilize existing resources. The general scientific objectives are: (1) to investigate the global distribution, content and source of water and volatile compounds; (2) Investigating the composition and structure within the moon; (3) age measurement of the Antarctic-Aitken basin; and (4) investigating the spatial physical environment above the south pole of the moon (Li et al. 2019)

Furthermore, China's military strategy aims to wage a "war beyond all borders and limitations" in any future war. To achieve this goal, China has set an ambitious space program to improve its military and diplomatic

influence by putting the entire world within its reach. Robert Johnson says: "The more precise combat vehicles of the future will continue to require more warfighter-technicians who can operate these devices, both defensively and offensively, such as next-generation anti-missile technology and semi-autonomous vehicles" (Khan & Khan 2015, 188).

In March 2016, General Zhang Yulin, National Legislator and Vice President of the Weapons Development Department of the Central Military Commission, stated that China will use the space between the Earth and the Moon for solar energy and other industrial development purposes. "Earth-Moon space will be strategically important for the massive rejuvenation of the Chinese nation", Zhang said (Donnellon-May 2022).

In 2016, China's navy also captured a US underwater drone that was officially mapping the South China Sea. To do this, the Chinese used automated robotics technology that could soon be used in space. In 2016, the China Aerospace Science and Technology Corporation tested its powerful new Long March 7 rocket and launched Aolong-1, a small satellite built by Haibing Institute of Technology whose mission is to retrieve orbital debris with a special robotic arm. This type of technology has a clear dual purpose. On the one hand, it allows the connection and manipulation of debris to clean outer space. Also, like a submarine drone under the sea, it enables the capture of satellites (Spagnulo 2019, 107).

"The universe is an ocean, the moon is the Diao Islands, and Mars is the Huangyan Island," says Ye Peijian, head of China's lunar exploration program. "If we don't go there now, even though we can afford it, we will be scolded by our grandchildren. If others go there, then they take the responsibility and you can't go even if you want to. This is enough reason" (Davis 2018).

China is also building the Gaofen High-Resolution Earth Observation Satellite Constellation (a collection of Chinese civilian remote sensing satellites for the Chinese High-Resolution Earth Observation System (CHEOS) program that feeds the Earth observation component of the Space Silk Road). These Earth observation satellites provide imagery to China and the Belt and Road Initiative countries for a wide range of applications from resource, land and urban management to disaster response and national security (Sheldon 2021, 16).

Meanwhile, as of 2019, China has launched more missiles than any other country. In relation to commercialization, in 2014, China released Document 60, titled "State Council Guiding Views on Reinvestment and Financing Mechanisms in Key Areas and Promotion of Social Investment", to encourage Chinese private companies to engage in space activities. The result

of this initiative is that China now has about 100 private space companies (Wibowo 2022, 132).

In March 2021 leaders of the China National Space Administration (CNSA) signed a memorandum of understanding with the Russian Federal Space Agency (Roscosmos) to build a lunar outpost called the International Lunar Research Station (ILRS). With these characteristics, the potential for military action if needed seems clear. China's ambitions to compete with America's leadership in space extend beyond the moon. China's presence on the International Space Station was vetoed by the United States on charges of technology theft. China's response was to build its own space station and open it up to other countries and private initiatives to compete directly with the ISS. Chinese officials describe the station as

> "a comprehensive scientific experiment base with the capability of long-term autonomous operation, built on the lunar surface and/or [in] lunar orbit that will carry out multi-disciplinary and multi-objective scientific research activities such as lunar exploration and utilization, lunar-based observation, basic scientific experiment[s] and technical verification" (Sanmartí 2021).

China also plans to conduct multiple missions to Mars and nearby comets and asteroids to return samples to Earth. And perhaps most importantly, China has announced plans to build a joint moon base with Russia-although no timeline has been set for the mission (Tepper & Shackelford 2022).

On March 10, 2022, China launched a long-range rocket from the southern island province of Hainan to deliver cargo to the orbiting Tiangong spacecraft, which Beijing plans to complete this year, making China the only country to manage its own space station. The following month, Xi Jinping ordered officials to build a world-leading spacecraft launch site in Hainan. "To explore the vast cosmos, develop the space industry and build China into a space power is our eternal dream", Xi Jinping said in the introduction to the White Paper on China's space program released in January. Ye Peijian, commander of the robotic Moon missions and chief designer of China's first lunar probe, told state media at the time that China could send astronauts to the moon for the first time by 2030. "China really wants to be seen as the NASA of the future", said Michele Hanlon, co-director of the University of Mississippi Center for Air and Space Law and editor of the Space Law Journal. "China wants to be the leader. China thinks China's time has come," she said (Einhorn 2022). Also, the announcement of the first international experimental projects of the China Space Station, the discovery of fast and

repetitive radio bursts by the 500-meter radio telescope, the official opening of Beijing Daxing International Airport and the first expedition of "Shulong 2", China's first research icebreaker, the official commercialization of the next generation internet services, the discovery of the largest black hole known so far, and the completion of the core of the BeiDou satellite system, are other space achievements of this country (Kazemi 2022).

These achievements strengthen China's international reputation as a technologically advanced country and help strengthen the position of the Chinese Communist Party in the eyes of Chinese citizens. However, China is struggling to maintain positive momentum due to its public security-focused stance on space. China believes that space is a high ground to be fought over and dominated to ensure that wars are won on "*informatisation*" terms (Rajagopalan 2016).

Conclusion

Currently, China seems to be making faster and more coordinated progress in this field. Since this country is currently one of the contenders in the global clean energy competition and has ambitious space programs in its plans, if it develops space-based solar energy before the United States and other parts of the world, it can become a force to be converted. Space is at a premium. This could lead to a key element in China's Belt and Road Initiative, and Beijing offers this type of clean energy alongside opportunities for economic development and greater connectivity with other countries. The growing interest in the development of solar and space-based energy can expand the existing strategic competitive environment to geographical dimensions. To date, the growing competition between the United States and China on Earth has led to competing designs for scientific and economic dominance in space.

China's space program differs from the US and Soviet space programs in only one way, and that is the use of the military in space missions. But one thing is certain: the Chinese basically have special plans for the moon. Meanwhile, the United States, in particular, has serious concerns about China's possible military plans on the moon.

On the other hand, research shows that the space competition between China and the United States will intensify and deepen in the coming years. Therefore, the two sides are intensifying their efforts to shape a new international system that benefits the national interests of both sides. Both China and the United States are significantly increasing their space industry

budgets. Of course, in this competition, the Chinese are moving faster (in terms of increasing the budget of space programs). Therefore, it can be said that a new competitive race based on mastery of the moon has begun.

In the US-China debate, threats have escalated as the two sides have placed economic barriers against each other, and ideological differences fuel these confrontations due to the pandemic and political conflicts. Failure to cooperate in space not only risks an arms race, but could also lead to conflicts over the extraction of hundreds of billions of dollars' worth of mineral resources on the Moon and other planets.

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ABSTRACT

Space has always been a place for geopolitical competition, and concepts such as astropolitics have even emerged in the scientific world. However, in the last two decades, technological advances have led to an increase in interest in space activities and new global space competition involving many public and private organizations. In addition to political and commercial competition in the world, China and America have expanded the scope of their competition to somewhere outside the world, that is, outer space, and they are trying not to lag behind their competitors in this field. A new round of competition between China and the United States to return to space was formed, which was reminiscent of the space program competition between the United States and the former Soviet Union. The purpose of this research is to analyze the space competition between America and China from the perspective of space geopolitics, using the concept of Astropolitics. Therefore, this study illustrates the role of contemporary geopolitics in today's space based on the dynamic nature of astropolitics, and assesses the emerging geopolitical competition behind the rise of international interest in space.

KEYWORDS

Space. Geopolitics. Astropolitics. America. China.

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