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Introduction

The development of aerospace studies not only promotes the space industry but also cooperates with other technologies; it drives the evolution of materials and processing technology, energy and power machinery, as well as information, communication, and control appliance. Moreover, aerospace research has made a global advance in animal science, cosmic science, earth science, and life science. The transformation of aerospace technological achievements promoted progress in other areas of the global economy and constructed strong traction on economic development. From different perspectives, vigorously developing aerospace technology has far-reaching impacts and strategic significance of displaying the innovative evolution of economy and society in various countries.

The International Space Station has been in operation for 14 years, and it is unfortunately at the peak to "retire". However, at this compelling point, more and more countries are reluctant to participate in its construction. In April 2021, Russia has announced that it will build its space station, which means that it will withdraw from the International Space Station. Thus, the operation of the International Space Station is bound to be suspended, as Russia occupies a very necessary share in the construction of the International Space Station. In addition, some countries are reluctant to participate in the construction of space stations. Under such a challenging period, delegates should provide mankind all around the world with an opportunity to conduct earth and astronomical observations in space orbit for the long term.

Aerospace is not a field that can be developed by one person alone. It demands collaborative spirits bounded by different national space agencies. In addition, it also requires a lot of technical and financial support from nations. Therefore, in order to achieve common progress and win-win results, countries must help each other and learn from each other's advantages to promote the expansion of science & technology and indirect development of all countries in the end.

Definition of Key Terms

Coopetition

The consolidation of competition and collaboration. It refers to the position where countries that compete with each other on certain products or technologies shift into both cooperation and competition when they realize that there will be more benefits from bilateral cooperation, which is the so-called mutual benefit and win-win situation. With globalization and network economy, the strategy of coopetition is becoming progressively crucial. Countries should seize the current development opportunity, introduce cooperation into competition strategy, seek cooperation in competition, and promote competition with cooperation.

Space agencies

The space agencies are government organs responsible for civil space management and international space cooperation in various countries. The space agencies implement industrial management of space activities to ensure their stable, systematic, secure, and coordinated development. It is crucial to promote the rapid development of the aerospace industry and the continuous renewal of products. There are mainly two types of aerospace scientific research management institutions in countries. The first type is centralized management, which integrates research, design (including trial production), and production into one system. They should be under the leadership of industrial departments (usually government departments). The research institutes under this department are responsible for the pre-research before model development. The specific model development is carried out by the design bureau or the scientific research and production joint company, and the production is imposed in the production enterprise or the production joint company after the trial production is completed. Another way is Decentralized Management, in which research will be separated from model development and production. In this management, theoretical and applied research in the field of aerospace science is mostly responsible by the government because it costs a lot of money and cannot benefit directly. Thus, the patent right of research results belongs to the government and is provided to companies and enterprises. Countries adopting these two management systems have centralized aerospace scientific research centers, which are responsible for the organization and implementation of scientific research.

International Space Station (ISS)

The International Space station was established in 1993 and jointly built by 16 countries (United States, Russia, France, Germany, Italy, the United Kingdom, Belgium, Denmark, the Netherlands, Norway, Spain, Sweden, Switzerland, Japan, Canada, and Brazil). It is the largest and most time-consuming space project in the world, and it also involves the largest number of countries; it is the largest space platform in orbit and a large space project with modern scientific research equipment. The large-scale, multi-disciplinary space laboratory for basic and applied scientific research provides a large number of experimental loads and resources for scientific experimental research in a microgravity environment and supports the long-term residence of human beings in earth orbit. It is jointly built, operated, and used by 16 countries. The International Space Station is mainly operated by NASA, the Russian Federal Space Agency, the European Space Agency, the Japan Aerospace Exploration Agency, and the Canadian Space Agency.

Six government space agencies

The six government space agencies incorporate organizations including but not limited to China National Space Administration (CNSA), the European Space Agency (ESA), the Indian Space Research Organization (ISRO), the Japan Aerospace Exploration Agency (JAXA), the (US) National Aeronautics and Space Administration (NASA), and the Russian Federal Space Agency (RFSA or Roscosmos). They are significant due to their highly valued accomplishments in the scientific world, recognizable almost by every country.

Background

On October 27, 2019, the mysterious space plane X-37B of the US Air Force returned to earth, which is the fifth time that X-37B has completed its space mission. As one of the important battlefields of military struggle, space is pregnant with a new type of strategic deterrence. The right to control space has

also become the latest commanding height of the war. Therefore, countries have made efforts to space to develop new combat forces to strengthen their strategic position and military capability in the space field. From the establishment of the space command in the United States to the establishment of the space military command in France, to Japan's plan to set up a new "space operation team", and vigorously establish the military formation force of space war - space army, which has become a new hot spot of international strategic competition.

On the other hand, the European Union and some Middle East countries have been committed to promoting and formulating space policies that can fulfill the future development needs of the world and meet the interests of the united nation. "Cooperation" has occupied the theme across the globe under the field of space exploration, but the practice has proved that the 'bridge' towards cooperation faces many complex and sensitive issues. From the specific contents of new space laws of various countries and the performance of "coopetition" in tryouts over the years, it can be concluded that the concept of "coopetition" demands further amelioration in the global space, including its purpose, realization aspects, realization path, and technical approaches.

Space is an innovative field with high scientific and technological content& high risk. Seeking international cooperation is generally the basic orientation of space strategic development of various countries, and the most typical is international space projects. Meanwhile, space is an eminently competitive field. With the intensification of strategic competition among major countries, the relationship between cooperation and competition in the space field is becoming more and more complex. At present, the competition and game of the United States, Europe, Russia, and other countries in the field of space strategy are becoming more and more intense, and their competition for the international space market is becoming more and more prominent; The United States' latest space strategy emphasizes cooperation with allies, and later countries also need the support of advanced countries; The increasing risk of space weaponization and militarization may further promote the formation of a situation of "competition over cooperation" and increase the risk of space conflict.

Emergence of human spaceflight era

On April 19, 1971, the Soviet Union launched the first space station "salute 1". Since then, mankind has entered a new era of space development and exploration. After completing its mission, which is to test the system components of the space station and promote scientific experimental research. salute 1 crashed over the Pacific on October 11 of the same year. After that, "salute 2" failed due to its self-disintegration after being launched into space. Due to the constant research and modification of scientists, the small space station "salute 3", "salute 4", and "salute 5" have been successfully launched, and many scientific experiments have been completed in space. Against this background, the United

States (UN) decided to build its space agencies to surpass the Soviet Union. On May 14, 1973, the United States successfully launched a space station called "Skylab". On July 12, 1979, Skylab crashed into the atmosphere over the southern Indian Ocean and burned down. However, compared with the second-generation space agencies by the Soviet Union, it had a higher operation height, heavier quality, larger workplace, as well as stronger performance, and was able to hold more passengers.

In 1983, US President Reagan put forward an international space cooperation plan - the International Space Station, but it has not been completed to this date. After nearly 10 years of exploration and repeated redesign, the ISS was not designed and implemented until the disintegration of the Soviet Union and the consolidation of Russia in 1993. This project has dissolved the estrangement between countries in the world and constructed a ravishing situation of mutual cooperation, communication, and exchange among countries.

Hardships and conflicts

There are many unknown stories behind the success of "salute 1". When the Soviet Union developed the "Salute 1" space station, scientists proposed that the space station should not be motionless in space. This was because if it is arrested, it would be pulled back to the earth by the earth's gravity, which can lead to a very frightful outcome. Thus, if the operation speed of the "salute 1" space station in space does not reach the first cosmic speed, it will not be able to escape the force of the earth's gravity and revolve around the earth in a circle, eventually being pulled back to the earth. Encountering these two concerns, scientists decided to enhance the propeller to construct it to be more powerful and efficient. However, the carrying capacity of the space station itself is not considered, thus leading to the fuel reserve being limited, which seriously shortens the service life of the space station.

Some scientists ask such a question: will living and working in weightlessness for a long period do harm to astronauts' health? After many experiences and repeated practices, scientists have supposed that the microgravity environment will deliver a terrible impact on astronauts' health, safety, and working ability. Living and working on the space station for a long term can lead to a variety of physiological and pathological phenomena, specifically including cardiovascular dysfunction, bone loss, decreased immune function, muscle atrophy, endocrine dysfunction, and decreased working ability. It can be seen that the harm to the human body is fairly calamitous.

As the space agencies have gradually evolved into International Space Stations, more hardships have gradually emerged. The earliest spacesuits could not satisfy the comfort of astronauts or even prevent the invasion of some harmful cosmic rays. Later, scientists concocted a constant temperature spacesuit. Nevertheless, there are pros and cons. The disadvantage is that the length of the communication line cannot meet the working length of astronauts, and if the communication line is pulled too long, it may be dragged into some insecure areas. If the winding is too tight, it may break the communication line, which will cause astronauts to lose contact with the outside world and endanger the lives of astronauts.

It is worth mentioning that the United States strongly opposed inviting China to participate in the planning and construction of the International Space Station, so China failed to become the initiator of the International Space Station. This is because the United States believed that China would treat the technology of the International Space Station as military uses, so it has imposed sanctions on China. However, China plans to build its space station around 2020.

Space arms race

During the Cold War, the United States and the Former Soviet Union fought a space race for supremacy as space powers. After the end of World War II, the two countries seized a large amount of German rocket technology and personnel and began a nuclear arms race, mainly with missiles. Technological superiority not only brings supreme status but guarantees national security and symbolizes advanced ideology. The space race has made groundbreaking achievements, including the successful launch of artificial satellites to the moon, Venus, and Mars, unmanned space probes, and manned spacecraft to low Earth orbit and the moon. Sputnik 1's orbit won a Soviet victory on October 4, 1957. On April 12, 1961, Yuri Gagarin became the first human in space, allowing the Soviet Union to beat the United States again. The space race reached its peak on July 20, 1969, when Apollo 11 completed the first human mission to the moon. In April 1972, a cooperative agreement was reached for the Apollo Alliance test program. In July 1975, American astronauts and Soviet cosmonauts met in Earth orbit, and tensions between the two sides eased for a while. After the end of the Cold War, the US army made full use of the benefits brought by satellites and quickly won military victories in many local wars. War practice has proved that satellites are military "multipliers" and "enablers". The US military believes more in space control theory and sees space as the "ultimate high ground" for military victory. As a result, the U.S. military began to develop and deploy weapons in space, setting off a chain reaction among other countries and gradually creating a new arms race in space.

In 2021, an American general broke the ominous news that two Russian satellites were tracking an American spy satellite in orbit. He said it was unclear whether the space satellite would attack the U.S. surveillance ship, U.S. -245. In addition, "it could create a dangerous situation in space," said Gen. Jay Raymond, head of the Pentagon's Space Command. Although the event was recent, it marked a new phase in the increasingly intense space arms race. In the space race, satellites, laser-fired spacecraft and other technologies that might contain bombs have gone from science fiction to reality. Russia once fired a missile from Earth and blew a satellite to pieces as a symbol of force. NATO Secretary-General Jens Stoltenberg called the action "reckless." "This shows that Russia is developing a new weapon system that can shoot down satellites," he said at a meeting with European Union defense ministers on Tuesday.

Dmitry Rogozin, president of Russia's State Aerospace Group, expressed the United States is pushing for an arms race in space, but Russia doesn't need to be bothered because "China has the advantage in the field of space arms race with the best missile weapons in the world". "In the future, weapons may be deployed not on earth, but in space," Rogozin said. What the Americans are doing today is trying to launch weapons into space. Unfortunately, this is true. We see an arms race moving in that direction." Rogozin pointed out that Russia is not behind in the space arms race. "Our missile weapons are by far the best in the world. Our citizens need not worry. We have an

advantage there." In addition, according to a media report published on July 14, 2021, Rogozin said that Russia had no intention of participating in the US moon mission, calling it a political project because "the previous actions of the US violated the principles of cooperation and mutual assistance in the International Space Station". According to him, Russia is planning to cooperate with China in the field of manned space flight. Even Russian cosmonauts are ready to send Chinese spacecraft into space and Chinese people will be able to ride in Russian spacecraft in the future. Prior to that, he also noted that China and Russia are discussing the establishment of a joint moon base, an initiative that currently only involves China and Russia, but does not rule out opening it to the United States in the future.

Nations keep their military space activities secret, and since many of the dual-use technologies have civilian and defense applications, their capabilities are not completely clear. However, the competition is so fierce that the Pentagon believes Russia and China have the potential to overtake the US by 2019 when it will establish its space force. "Maintaining U.S. dominance in this area is the current mission of the U.S. Space Force," said Mark Esper, the defense secretary at the time. Competition has evolved from the idea of destroying satellites with missiles or Kamikaze satellites to methods of destroying them with lasers or high-energy microwave weapons. Both Russia and China have developed "space-tracking" satellites that can be manipulated to interfere with other countries, according to Brian Chow, an independent space policy analyst who has worked at the Rand Think Tank for 25 years. With the robotic arm, "they can track the opponent's satellite, move it somewhere else, or bend the antenna," Zhou said.

These satellites are still few and far between, but Russia's deployment of two satellites in 2020 that threaten the United States shows the technology has matured. China and the United States both have highly classified programs for small, reusable robots and winged spacecraft that could be used to build weapons and destroy rival satellites. Countries are also developing ground-based weapons to jam and deceive satellite signals and use directed energy to destroy them. The US Defense Intelligence Agency said in 2019 that China has five bases where ground-based lasers could be used to destroy enemy satellites.

In recent years, the international community has engaged in fierce competition in the field of space science and exploration, with many non-state actors launching spacecraft, including space telescopes, to conduct scientific research in the universe and to explore the moon and Mars. There is, of course, competition among space agencies in the field of space science applications, including the International Space Station, the International Lunar Space Station, the Chinese Space Station, and the Private commercial Space station in the United States.

China is steadily pushing ahead with the construction of a space station, with the US government led by President Donald Trump hurriedly announcing that he hoped those private companies could accelerate the construction of a commercial space station, to build it in China to complete the station. Meanwhile, the U.S. government set aside a budget for 2018 specifically to privatize the ISS. The move is aimed at encouraging the construction of commercial space stations, getting ahead of China, and demonstrating "American greatness." In addition, it is worth noting that some countries are setting up their own "blocs" to produce lunar space stations or deep space gates. The United States has invited only Russia, Japan, and a few other countries to participate in its

attempt to build a lunar version of the International Space Station. The station is scheduled for completion in 2022. When the United States announced the completion of its lunar space station at this peak, it did not seem hard to detect a strong intention to compete with China, given the timeline of the Chinese space station.

In order to maintain national security and international strategic stability, some countries have to develop or test space weapons from the worst-case scenario. In recent years, Russia has significantly increased the development of anti-satellite weapons systems. In addition, the US often spreads the "China space threat theory". Through this propaganda, coupled with self-fulfilling predictions, a space arms race has developed between the US, Russia, and China, with the US acutely aware of the rapidly growing space threat from China and Russia.

Space discourse

Space discourse power competition is a crucial aspect of space strategic competition among countries. The most rudimentary way is to publicly announce a space strategy. In March 2018, the Trump administration announced the outline of its national space strategy. The strategy emphasizes the principle of "America first", the leadership of the United States in space, and the hegemonic strategy of seeking peace through strength. Once published, it provoked strong reactions from all over the world. Russia, western European countries, Canada, Japan, and South Korea have also developed or issued strategic space plans named after policies, norms, frameworks, basic laws, and plans. All states have publicly declared that the objective of their space strategy is to obtain space benefits and defend the development of independent space military capabilities and competition for space superiority.

In order to enhance the implementation of space strategy, countries are competing to form a huge implementation agency, organizational system, and functional system, to enhance the leadership, organization, and management system of space strategy. From the perspective of the approach of various countries, there are not only conducting institutions specialized in strategic decision-making and planning but also professional departments specialized in implementation and implementation, as well as research and staff institutions specialized in consulting and sponsoring work, to achieve the integration of resources and unified command of space strategy. For example, to implement the Trump administration's space strategy and ensure that the US "primacy in space will never be questioned or threatened", the US has reshaped almost the entire management system and functional system in the space sector.

Strengthening space deterrence capacity building is a significant pillar of all countries' space strategies. Deterrence comes from sophisticated technology, weapons, and equipment. Space weapons and equipment are highly technical. A country with an advantage in outer space weapons can frequently take benefit and dominate the international military competition and international strategic landscape. To this end, major countries have accelerated the development of various new military space technologies and equipment and facilities, increasing the risk of space militarization. One telling sign is that space weapons can no longer be clearly distinguished from ordinary test spacecraft, such as the US-developed X-37B. As a space mobile spacecraft, X-37B has the characteristics of unmanned, round-trip, long-term orbit operation, and fast response. It has evolved a new space combat platform for carrying out space reconnaissance, communication command, space countermeasures, long-

range precision strikes, and other missions. It keeps an orbital duration of up to two years and can drive at high speeds on different tracks. It can not only destroy other countries' satellites with its controllers but also be equipped with laser weapons to transform into an attack unmanned intelligent fighter in space at any time.

Major Parties Involved

China National Space Administration (CNSA)

In 2011, China was banned from the International Space Station due to certain laws set by the U.S. government. Due to this it has escalated tensions specifically between these two nations. These laws prohibited NASA to work with China. Thus, China started a project to build their own space station. This project is aimed to be finished by the end of 2022 and will be called Tiangong. However, China is still working with other countries like Germany and Russia in human and robotic space projects.

Russian Federal Space Agency (Roscosmos)

Last year around April, Russia confirmed that they will be leaving the International Space Station program after 20 years of cooperation. This showed Russia distancing itself from the world in terms of space research and development as they even made a deal with China to make their own space station. This marked a huge occasion as Russia spent the last 20 years working in the ISS. In a statement, Russia's prime minister said that 'reports of malfunctions have become more frequent in recent times' about the ISS (Victor Tangermann, 2021). Even before these tensions between Russia and the U.S. were rising which caused it to affect space research and development however in December, the situation developed. According to Rogozin, the head of Roscosmos, Roscosmos and NASA are finalizing a deal in 2022 called the Crew Dragon which links to transporting astronauts to the ISS. However, there was nothing about whether they will be rejoining the ISS. It seems that the plan is still for Russia to leave the ISS by 2025.

National Aeronautics and Space Administration (NASA)

NASA has been working on the ISS for a long time, with many other countries and organizations. However, NASA, as mentioned, is unable to work with China due to certain laws set by the U.S. government. As of now it seems as if they do want competition as they are also in the progress of making a deal with Russia (Roscosmos) even though they have made it clear they will be leaving the ISS project and be making their own space station. Their website also suggests that they are happy with working with other nations and are trying to get the most out of it that they can.

United Kingdom Space Agency (UKSA)

The British Space Agency (UKSA) was officially established on April 1, 2011. UKSA is subordinate to the Department of Commerce, innovation and skills, with an annual fund of £ 240 million. David Willetts, the minister in charge of university scientific research, served as the director. The British space agency will take over most of the space exploration and science responsibilities promised by Britain. According to Willetts, the regulations formed over the years have no overall coherence. The British space agency will continue to establish contacts with industry

and academia and will work with other British organizations, such as the technology strategy committee, the R & D Council, the international space innovation centre, etc, And overseas institutions such as ESA and NASA.

Japan Aerospace Exploration Agency (JAXA)

Japan Aerospace Exploration Agency (JAXA) is an independent administrative legal person responsible for Japan's aviation and space development. Its main work includes research, development and launch of man-made satellites, asteroid exploration and possible future lunar landing plans. The aerospace research and development agency is subordinate to the Ministry of education, culture, science and technology. On October 1, 2003, it was integrated by three government agencies related to Japan's aerospace industry: Japan Institute of Space Sciences (ISAS), Japan National Aeronautics and Astronautics Laboratory (NAL) and Japan Aerospace Development Corporation (NASDA). The incumbent CEO is Naoki Okumura.

Indian Space Research Organization (ISRO)

The Indian Space Research Organization operates under the Department of Space (DOS) and is overseen by the Prime Minister of India. According to the Chief of ISRO, K. Sivan, India will not be joining the International Space Station and instead will launch their own space station, 5 to 7 years after project Ganganyaan is finished with the aim being 2030. The plan for India's Space Station is to be in a low Earth orbit, with the capability of harboring three people for 15 to 20 days. Part of the reason why the ISRO is not joining the ISS is due to funds, as the ISRO's goals are focused elsewhere. Their near future goals involve: landing a rover on Mars, development of a semi-cryogenic engine, manned missions and etc. Long term plans focus more on developments on sustainable launchers, and etc. However, while the ISRO is not part of the ISS, they still have numerous cooperative arrangements with other nations through Agreements, Memoranda of Understanding and Framework Agreements with around 56 nations and four international multilateral bodies. Some of the projects that the ISRO has worked on or collaborated with other nations or bodies include: Chandryaan-1, Indo-French satellite missions, Lunar Polar Exploration Mission (LUPEX) and NASA-ISRO Synthetic Aperture Radar (NISAR).

European Space Agency (ESA)

The European Space Agency is an intergovernmental organization composed of 22 member states that was established in 1975. The agency also has a few nonmember nations that contribute in some way but are not fully part of it. Currently the ESA has numerous cooperation agreements with nations such as China, India, Russia, Turkey and more that are not planning on joining the ESA. Recently since China has been developing its space program, the ESA has become one of their major partners including ROSCOSMOS, and they have worked with China National Space Administration on the Double Star Mission. In 2017, the ESA also sent two of their astronauts to China for training with Chinese astronauts to build cooperation. In 2011, the head of the ESA, Jean-Jacques Dordain said that the ESA and ROSCOSMOS would do the first flight to Mars together. As of the moment, the ESA also has strong ties to NASA. However, only 11 of the 22 member states, are currently involved with the ISS. Other member states chose not to due to concerns about expenses or other reasons. These member

states have contributed ‘Columbus’ which is a laboratory and around €8 billion of the €100 billion put in the project to date.

Timeline of Events

Date	Description of event
January 25, 1984	The President of the United States, President Reagan directed NASA to build an International Space Station and to finish it within the next 10 years.
December 25, 1991	The Soviet Union collapses and Russia takes their space program and starts an alliance with the U.S. which starts off with astronaut exchanges.
November 20, 1998	The first segment is launched by a Russian rocket. The segment is called Zarya which is used to supply fuel, battery power and give docking capability for space vehicles that would potentially come to the ISS.
December 4, 1998	The first segment by the U.S. is launched. It is called Unity Node and it joined with Zarya in order to start creating an orbiting laboratory.
November 2, 2000	Three astronauts become the first crew to ever stay in the ISS. The mission was called ‘Expedition 1’ and the crew spent 4 months in the space station.
February 7, 2001	The U.S. add ‘Destiny,’ a laboratory module on the ISS which later in 2005 becomes one of the country’s national laboratories so that U.S. government agencies and institutions can have more access to it.
2008	In February ‘The European Space Agency’s Columbus Laboratory’ joins the ISS and then in March, Japan’s ‘Kibo’ laboratory also joins.

Previous Attempts to Resolve the Issue

Around the mid 20th century, space exploration picked up and competition between countries rose. In order to alleviate tensions between nations and to get them to work together the United Nations (UN) formed the United Nations Office for Outer Space Affairs (UNOOSA) on December 13th, 1958. The committee began with 24 members and now has 95 members. It has helped alleviate tensions by setting regulations and laws that countries must follow in space and ‘reviewing international cooperation in peaceful uses of outer space.’ An example is that no country is allowed to claim sovereignty in space; so, they cannot claim land or a planet as theirs. This committee also promotes the collaboration between countries in regards to space technology, which many nations that are still developing do not have access to. To do this, UNOOSA created ‘The Program on Space Applications’ (PSA) in 1971, which has been increasing the knowledge of space technology and sharing it for a ‘sustainable economic and social development’ (UNOOSA, N.D.). Another example is the sub-division called The International Committee on Global Navigation Satellite Systems (ICG) which promotes the transparency of satellite navigation systems to benefit everyone using open applications. This promotes cooperation as for this to be possible, all nations need to agree to this, and this level of openness will be a key factor of building trust which will lead to even more cooperation. Another example is the World Space Forum which was an event held in Austria from 18th to 22nd

November 2019 which was open to all parties related to space. So, private companies, countries and etc. were able to come with the purpose of discussing the future of space and international cooperation. There are also other measures the UNOOSA has taken to increase international cooperation such as 'Access to Space for All' and 'UN-Space'. All these methods have had their advantages and have created opportunities for countries to collaborate in a peaceful environment with others around to stop tension from rising. However, due to Covid and other events around the world, tensions have been rising and there is still conflict between countries that is preventing international cooperation to its fullest, such as tensions between China and the U.S. Other committees in the UN have also tried to encourage cooperation by discouraging conflicts and competition. For example, since 1980 the General Assembly has been passing resolutions against an arms race in space and encourages nations to not take any actions that go against this goal.

Possible Solutions

- A key step to continue international cooperation through space agencies is to navigate and solve issues arising about the state of the International Space Station. At the moment one of the reasons Russia is planning on completely leaving the ISS by 2025 is due to concerns about how it is progressing and the issues that have arisen. As Russia's prime minister has said, many more malfunction reports have been occurring recently. This has been a matter of concern as it puts the value of the ISS into questions and it may eventually lead to more nations and organizations to be wary of whether the ISS is worth it, or if they would be better making their own. So, we would recommend the formation of a sub-committee to oversee progress reports and also consult directly with national space agencies and private agencies to tackle the issues and prevent them in the long run through the most efficient and sustainable way possible. We would also recommend the formation of another sub-committee to communicate with delegates from the nations involved with the ISS to directly communicate with them about their concerns and alleviate them, or bring them up to other nations if they see it to be relevant.
- Another thing to consider is alleviating tensions between nations. As a relatively sensitive field in the relations between countries, heads of state demand to recognize the necessity of communication to reach a series of military agreements or arrangements, such as maritime encounter arrangements, notification mechanism of major events, army exchange mechanism, etc., thus can make the space exchanges of countries in a positive state. All countries should take a more rational and calmer attitude towards the differences in aerospace strengths and establish certain mechanisms/norms. UN shall ensure that misunderstandings and misjudgments between nations can be avoided at the fastest speed and misfires can be prevented. The five principles of peaceful coexistence are the best way to handle relations between countries. The five principles of peaceful coexistence were indicated by the Chinese government and jointly advocated by the governments of India and Myanmar. They should be followed in establishing normal relations and exchanges and cooperation among countries. Over the past half-century, the five principles of "mutual respect for sovereignty and territorial integrity, non-aggression, non-interference in each other's internal affairs, equality and mutual benefit and peaceful coexistence" have been accepted by the vast majority of countries in the world and can possibly evolve important norms regulating

international relations. At the moment, there are barriers that stop NASA from working with China which reduces cooperation. Even though China is making their own space station, collaboration between NASA and China could help both parties with their respective projects and find solutions together. A solution to do this would be to encourage the U.S. to reevaluate legislations that prevent government agencies to work with certain countries and to review them to see if there is a possibility of developing them. In addition, attempting to improve the legal construction of space could also make a substantial effect. The threat to space security is caused by the proliferation of space militarization. This is contrary to the purpose of peaceful use and development of space advocated by the international community. The lack of constraints on space behavior and the lack of legal construction in space have exacerbated the process of space militarization. At present, the five international treaties dealing with Space Affairs, namely the outer space treaty of 1967, the rescue agreement of 1968, the Liability Convention of 1972, the Registration Convention of 1976 and the moon agreement of 1984, emphasize the need to regard space as a "global commons" and ensure space security through international cooperation, but they appear in the form of soft law, There are no mandatory restrictions on International Space actors, leaving potential safety hazards. Therefore, the UN must play a leading role in space regulation, advocate the formulation of a complete space legal system, establish a perfect space security governance mechanism, curb the weaponization of space and ensure the safety of space.

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