

*Regional
Bodies*

European Space Agency



CHAIR: Jamie Urrunaga

GWCI XXIX

December 7th

GWCIA XXIX

Letter from the Chair

3

History

5

Topic 1: International Cooperation and Relations

6

Topic 2: Ensuring a Future for the Agency

9

Character List

12

Works Cited

20

GWCIA XXIX

Letter from the Chair

Hello,

I hope you're all ready to blast off into the world of the European Space Agency!

My name is Jamie Urrunaga, and I'm a Sophomore at the George Washington University! I'm a double major in Political Science and Education. I'm so excited to be your chair for this committee and I hope you are too! This will be my second year on the Model UN team and first year as Assistant Head Delegate, so if you have any questions about MUN just reach out to me! Model UN is so much fun for me and my goal is to make sure that you all have fun in committee too.

I can't wait to meet everyone and dive right into our committee, which, as you can probably tell, is space themed. This committee will be set in 2025 with the goal of charting the future course of the European Space Agency. I strongly encourage you to do some research into the background of this topic so that you can have some idea of what's within the realm of possibility for this committee. In addition, I love science fiction as much as the next person, however I do intend to keep this committee at least mostly grounded in reality, but reach out to me if you have any questions about what that entails.

In terms of expectations for this committee, I absolutely do NOT tolerate any bullying, bigotry, or disrespectful behavior towards your fellow delegates or anyone else. That being said, I encourage you all to have fun with the direction of this committee and keep it at least a little lighthearted! I'm a big fan of seeing delegates that are

GWCIA XXIX

collaborative, take on leadership roles, and are cool and quick under pressure. I am so excited to hear everyone's creative resolution titles, silly space puns, and fun solutions!

Good luck with your prep work, and I'll see you in committee!

Jamie Urrunaga

Chair

jamie.urrunaga@gwmail.gwu.edu

GWCIAXXIX

History

The European Space Agency (ESA) was originally two organizations, the European Launcher Development Organization (ELDO) – an organization that specialized in developing satellites and satellite launch vehicles – and the European Space Research Organization (ESRO) – an organization that specialized in actual space research. These two eventually decided to merge due to funding troubles and diverging interests among member nations. The ESA was founded in 1975, and ratified by all 10 founding states (Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden, and the United Kingdom) by 1980. As the founding states declared in the establishing treaty, “The purpose of the Agency shall be to provide for and to promote, for exclusively peaceful purposes, cooperation among European States in space research and technology and their space applications...”

In 1975, the ESA launched its first major mission; the Cos-B, a probe built to monitor background gamma-ray emissions in the universe. Since then, the ESA has continued to help pioneer space research well into the modern day. With projects like the SMART-1, a probe testing propulsion systems that are intended to be used for manned missions to Mars and Venus someday, and the Euclid Spacecraft, a project that is helping us learn more about Dark Matter and Dark Energy, the ESA is pushing the bounds of space science.

Topic 1: International Cooperation and Relations

Overview

One of the biggest considerations of member nations today is the topic of International Relations. As they move into the future, members of the ESA must balance their willingness to share information with their partners and the security risks that come with that. Members must also consider the future of International Affairs in space. With commercial spaceflight becoming more and more accessible every day, delegates are increasingly called upon to answer the question of extraterrestrial territorial claims.

Subtopic 1- Technology sharing and Project Cooperation

Technology sharing and project cooperation with other space agencies are both important aspects of International Cooperation and Relations. The ESA is no stranger to cooperation, working with NASA as early as 1978 on the International Ultraviolet Explorer (IUE) as well as on the Hubble Telescope, Spacelab, the James Webb Space Telescope, and the Artemis Program. They also maintain close connections with other national programs like Chinese National Space Agency (CNSA), the Russian Space Agency (Roscosmos), the Indian Space Research Organization (ISRO), the Japanese Aerospace Exploration Agency (JAXA), and other international groups like the European Union Agency for the Space Program (EUSPA), the International Space Station, and even private companies like SpaceX in recent years. This long history of cooperation, especially with antagonistic countries like Russia and China, opens members of the ESA up to risks. By sharing information with other nations, member states are exposed to the risk of accidentally revealing secret information that could be used against them. Also, by helping countries like Russia build rockets, states are helping them create not only exploration tools, but also possibly weapons that could be

used against them in the form of ICBMs, Cruise Missiles, and other long-range weaponry.

Subtopic 2- Territorial Claims on Extraterrestrial Bodies

Another important subtopic to consider is the issue of territorial claims on extraterrestrial bodies. As spaceflight technology advances, so too does the accessibility of this technology. With organizations like the ESA, NASA, CNSA, and private companies like SpaceX and Blue Origin researching ways to launch rockets more efficiently and accessibly, it is only a matter of time before actors are able to make defensible claims on extraterrestrial bodies like moons, asteroids, or even other planets. Historically, the only major treaty governing outer space was the 1967 Outer Space Treaty, signed by every member of this committee. This treaty laid out only ground rules for the peaceful usage and exploration of space such as banning the usage or storage of WMDs outside of Earth's atmosphere, barring any military usage or weapons testing on the moon or other celestial bodies, proclaiming that the use and exploration of space should be done for the good of all mankind by any state, and that no state can claim sovereignty or militarily occupy any part of space for their own exclusive use. This treaty was, however, written almost 60 years ago, and technology has advanced far beyond where it was then. As space becomes more and more accessible, this treaty becomes more and more obsolete. Many have discussed whether this treaty should be enforced into the future, updated to reflect contemporary advances in science, or completely scrapped in order to create a new agreement. Another aspect that must be considered is the defense of any assets or territory that could possibly be claimed in space. Since 2021, the ESA has followed what it calls the "Matosinhos manifesto," which sets its priorities on crisis response, a green future, and most importantly, the protection of its assets in space. Questions have been raised as to how far states are willing to go to protect their

GWCIA XXIX

assets in space like satellites and probes, and how much further they may go if territory and resources are involved. As delegates of the European Space Agency, it is up to you to guide the direction that the members of this body follow.

Questions to Consider:

Should the ESA continue working with other space agencies, or should it try to be more self-sufficient?

Does your nation believe that the benefits of collaborating with antagonistic countries outweigh its risk, or do they believe that collaboration can sometimes be too risky?

Should the ESA allow its member states to claim territory in orbit and on extraterrestrial bodies or should the ESA claim such territories for the Agency? Should international actors be able to claim territory in space at all?

How can the ESA enforce its rules and practices in space?

Should the ESA arm its future space modules to defend them, or will that just lead to more conflict?

Should the ESA invest in orbital weaponry to ensure security for its member states?

Topic 2: Ensuring a Future for the Agency

Overview

The European Space Agency exists today, but each member nation must ensure that it will continue to exist tomorrow and however long it is needed. Recently, the ESA has drawn criticism from environmentalists for the amount of pollution caused by rocket launches, the increased amount of junk in low earth orbit, and the destruction of natural places in order to build spaceports and research facilities. There is also the issue of accidents occurring in spaceflight. Delegates will need to minimize the risk of accidents by implementing proper safety regulations, as many people are concerned about the safety of astronauts should an accident occur.

Subtopic 1: Making spaceflight more environmentally friendly

There are many critics of spaceflight who oppose the use of rockets to reach space due to the polluting effects that they have on the atmosphere. Many potential solutions to the environmental issue have been proposed, although none have yet been implemented. The first idea is the basis of the NASA ARTEMIS program; building a space station around the moon that could be used to create a fully self-sustaining rocket industry outside of Earth's atmosphere. Not only would building and launching rockets from a space station decrease the amount of pollution being put into the atmosphere, it would also be more cost effective than launches from Earth's surface. Because it wouldn't need to overcome Earth's gravity, a rocket being launched from a lunar station would need less fuel. This plan has been criticized as needless though, as some have asked the question of how the workers, building materials, and fuel would get to the station from earth. Another option that has been presented is the work of a company known as SpinLaunch. Their plan is to use a massive centrifuge to spin pods up to a proper speed,

GWCIAXXIX

before releasing them to travel through the atmosphere and into space without the need for propulsion or engines. This solution would bypass the pollution caused by rocket launches through the atmosphere, however it has been criticized as fantastical, as the materials that would be needed to withstand the forces created by a centrifuge spinning that fast are almost impossible to find on earth.

Subtopic 2: Preventing accidents and increasing the safety of spaceflight

There is a long history of accidents and deaths due to spaceflight and space research. From the fire onboard NASA's Apollo 1 rocket that killed the three astronauts inside, to the Apollo 13 explosion that almost stranded astronauts on the moon, to the failed maiden voyage of the Ariane 5 rocket system that exploded only 37 seconds after launch. It is clear that there will always be a risk of accidents, however it is the job of the delegates to institute proper safety measures that minimize the risk and ensure the safety of our astronauts.

Case Study: Space Shuttle Challenger

The Space Shuttle *Challenger* was an American space shuttle that experienced a serious failure during its launch, breaking apart 73 seconds after launch and killing every member of its 7 person crew. The report after the disaster revealed that faulty O-Ring connectors had caused the entire shuttle to come apart in midair, however it was revealed that this was not a freak accident. The Rogers Commission Report revealed that NASA and contractor Morton Thiokol had overlooked evidence that showed the dangers of the O-Ring connectors, with NASA accepting the risk of losing the O-Rings without taking into account how it would affect the safety of the mission. The report concluded that NASA had not cultivated a culture of safety that was sufficient enough to be able to

GW CIA XXIX

discover, investigate, and mitigate flight issues. In response to this conclusion, NASA created an Office of Safety, Reliability, and Quality Assurance in order to ensure that there would be a place for engineers to report concerns they had without risk of being punished for going against the grain. This successfully prevented many more accidents from occurring to NASA launches

GWCI XXIX

Character List

All member states of the ESA are expected to take part in mandatory activities such as research for space sciences, technologies, and studies.

Austrian Space Agency - The Austrian Space Agency (ASA) has had multiple successful missions in the past, participating in bilateral projects with nations like the former Soviet Union, Norway, Sweden, France, Switzerland, and Germany as recently as 2002. Austria became a full member of the ESA in 1987 and has been involved in various optional scientific research programs in fields like microgravity research, space infrastructure, and space navigation alongside their mandatory research activities.

BELSPO Space Research and Applications- Belgium's Space Research and Applications department of the Belgian Science Policy Office (BELSPO) manages its contributions to the ESA. As a founding member of the ESA, Belgium has provided support to nearly every ESA mission and continues to be a key player in maintaining the cybersecurity of the ESA.

Space Research and Technology Institute - Bulgaria's Space Research and Technology Institute (SRTI) has been actively launching research satellites and probes since 1981. As a relative newcomer to the ESA, having only signed their cooperation agreement in 2014, Bulgaria's SRTI has much to prove and has been an active participant in multiple future frameworks.

Croatian Ministry of Science and Education- Croatia's Ministry of Science and Education (MoSE) has consistently pushed for more focus on engineering and aerospace

GW CIA XXIX

research within Croatia. As a relatively new member of the ESA, only signing their cooperation agreement in 2018, Croatia has a lot to prove and is ready to jump into the race!

Cypriot Ministry of Communications and Works - Cyprus' Ministry of Communications and Works (MoCW) is the body responsible for sharing information between the government and the ESA. Cyprus' 2009 signature of the cooperation agreement was a landmark for them, as their first time stepping into the space race!

Czech Ministry of Transport - The Czech Ministry of Transport (MoT) is responsible for research into spaceflight within their country and sharing information with the ESA. The MoT is not new to the space race, having put the first person that wasn't a Soviet or American into space, and contributing to the construction of the ISS, they have much to offer for the future of space

DTU Space - Denmark's Space Institute at the National University of Denmark (DTU Space) has much experience with outer space, conducting constant research on fields like astrophysics, space technology, and geodesy, as well as leading the Swarm project to investigate properties of Earth's magnetic field. Having been a founding member of the ESA, Denmark has a lot to offer and years of experience to utilize.

Estonian Space Office - The Estonian Space Office (ESO) is an office that handles the research and commercial aspects of space development in Estonia, as well as their primary contact point with the ESA. While not a space program itself, nor is it in charge of space policy within Estonia, the ESO maintains contact with numerous space research

GWCIAXXIX

companies, as well as ensuring competency for technology and business development, making it one of the most well-qualified delegations to the ESA

Finnish Ministry of Economic Affairs and Employment - The Finnish Ministry of Economic Affairs and Employment (TEM) manages their association with the ESA. Having been a member of the ESA since 1995 and contributing research opportunities like the REMS Mars Weather Station and the Aalto-1 satellite which studied the condition of solar winds in the upper atmosphere have led to Finland having a great working knowledge of satellites, and close relationships with other member nations like Spain.

National Centre for Space Studies - The French National Centre for Space Studies (CNES) is one of the largest and most successful individual space programs within the ESA, having their own spaceport in Guiana and a history dating back to 1961. With their long history of contributions to the ESA from being a founding member, to creating the Ariane rocket system, to leasing out their spaceport to the ESA, the CNES delegation has a lot of sway within the committee.

German Aerospace Center - The German Aerospace Center (DLR) has had a long history of organizing and facilitating with other space agencies, from the HELIOS missions alongside NASA, to the ABRIXAS telescope with Roscosmos, to the Rosetta probe with the ESA. As the founding member of the ESA that is usually responsible for organizing and implementing plans, German organization and planning is something that any agency would like to have on their side.

GWCI XXIX

Hellenic National Space Committee - Greece's Hellenic National Space Committee (EKED) is a nonprofit government organization dedicated to the exploration and development of space. Since its inception in 2003, EKED has assisted in almost every ESA program since then, along with its primary involvement in the ESA's Copernicus Observation Program.

Hungarian Space Research Office - The Hungarian Space Research Office (HSO) is the government agency tasked with guiding Hungary's space exploration activities for both national programs and ESA programs. Despite the office's experience history, having been founded in 1992, Hungary's recent membership in 2015 means that the HSO's skill with research and engineering is often overlooked.

Enterprise Ireland - Enterprise Ireland is an economic development agency created to help Irish companies start, grow, innovate, and win exports in global markets. This means that it often provides grants for aerospace engineering and space research companies within Ireland. Alongside that, Enterprise Ireland is also the main contact between the Irish government and the ESA, meaning that it can also leverage lots of private market connections.

Italian Space Agency - The Italian Space Agency (ASI) is a government agency created to fund, regulate, and coordinate Italian space exploration efforts by acting as the owner and operator of several Italian state-run research and development agencies and by representing the country's interests in foreign collaborations. The ASI's status as a founding member of the ESA and long history of international cooperation has led to

GWCI XXIX

the ASI becoming a notable negotiating partner that can bring disparate coalitions together.

Latvian Space Office - The Latvian Space Office (LaSO) is the entity responsible for guiding Latvian space development and coordination with the ESA. Having only been granted membership in 202, the LaSO has much to prove!

Lithuanian Space Office - The Lithuanian Space office (LiSO) is the agency in charge of leading Lithuanian space development and investments. Since their admission to the ESA in 2021, LiSO has been hard at work trying to prove themselves and showcase their capabilities!

Luxembourg Space Agency - The Luxembourg Space Agency (LSA) is the space agency of the Grand Duchy of Luxembourg, with the goal of using state funds to support companies in the field of space exploration, and specifically asteroid mining. With the LSA's founding being as recent as 2018, it is one of the most future-minded space agencies, with a major focus on supporting and funding the research and development of asteroid mining.

Malta Council for Science and Technology - The Malta Council for Science and Technology (MCST) has been the leading body in developing new space technology for the country. Since 2012, Malta has been proving that their capability for development far exceeds that of their size!

GWCI XXIX

Netherlands Space Office - The Netherlands Space Office (NSO) is the national space agency of The Netherlands founded in 2009 through a merger of the old space agency, NIVR, and several other research institutes. Aside from being the central point of contact for the ESA, as well as other space agencies like NASA and JAXA, the NSO is notable for its reliability and talent at completing projects ahead of time and under budget.

Norwegian Space Agency - The Norwegian Space Agency (NOSA) is the government agency that ensures that Norway benefits from any space activity that it is involved in. As an agency of the Norwegian Ministry of Trade, NOSA is well known for being able to squeeze every ounce of profit out of a project for both itself and its partners.

Polish Space Agency - The Polish Space Agency (POLSA) is a government agency focused on developing satellite networks, communication technologies, and space technologies for Poland. Despite only being formed in 2014, Polish space programs have existed since the 1970s, leading to Poland being notable for its vast engineering know-how and experience in utilizing communication technologies.

Portugal Space - Portugal Space (PT Space) is the Portuguese space agency responsible for promoting and implementing the Portuguese strategy for a self-sufficient program by 2030, as well as focusing on global satellite and observation infrastructure. PT Space's focus on satellite and observation infrastructure means that it has a vast knowledge base and is aware of many global events as soon as they happen. This alongside its plan to build a spaceport in the Azores by 2030 make PT Space one of the biggest up-and-comers in the ESA.

GWCI XXIX

Romanian Space Agency - The Romanian Space Agency (ROSA) is a public institute that coordinates space technology research programs and activities related to space research education. As a subordinate to the Hungarian Ministry of Education, ROSA is known for having some of the most highly educated delegates to the ESA and consistently pushing for more educational programs to be offered by the ESA.

Slovakian Space Office - The Slovakian Space Office (SLSO) has been leading the Slovakian expansion into space for as long as they've existed! Since their 2022 admission into the ESA, Slovakia has been pushing the boundaries of education for their relatively small budget.

Slovenian Ministry of Economic Development and Technology - The Slovenian Ministry of Economic Development and Technology (MoEDT) is the body in charge of guiding the Slovenian journeys into space. Having been accepted to the ESA in 2016, the Slovenians have cemented themselves as hard workers and a good-natured group of representatives.

Spanish Space Agency - The Spanish Space Agency (AEE) is the space agency of the Spanish government, meant to group the original two research institutes, INTA and CDTI, under one administration. The AEE's role as an advisor to the Spanish government means that it often has many creative insights and is known for its outside the box thinking. As a founding member, the AEE has proven that these often wacky ideas are worth listening to and have merit to them.

GWCI A XXIX

Swedish National Space Agency - The Swedish National Space Agency (SNSA) is the government agency responsible for facilitating international cooperation with other space agencies, developing and designing their own space missions, providing grants to Swedish research and development opportunities, and initiating research on space sciences. The SNSA's wide scope has led to it gaining a reputation as a jack-of-all-trades within the ESA, being able to assist on any project no matter what is required of them.

Swiss Space Office - The Swiss Space Office (SWSO) is the Swiss government's competence center for space matters, meaning that it is responsible for preparing reports on current space events, and developing strategic goals for Swiss space development. This goal-oriented approach has led to the SWSO being notable for the effectiveness of the schedules that it sets for projects it is involved in.

United Kingdom Space Agency - The United Kingdom Space Agency (UKSA) is the agency responsible for England's civil space program with the goal of improving coordination in fields like earth sciences, telecommunications, and space exploration. The UKSA's ability to work under any conditions has earned it the reputation of being thrifty and being able to complete any project far below budget.

GW CIA XXIX

Works Cited

- “About Us | Belspo.” *Belspo.be*, 2024,
www.belspo.be/belspo/organisation/about_en.stm. Accessed 5 July 2024.
- “Austria in Space | FFG.” *Www.ffg.at*, www.ffg.at/en/space/austria-in-space.
- “Enterprise Ireland.” *Wikipedia*, 8 May 2024,
en.wikipedia.org/wiki/Enterprise_Ireland. Accessed 5 July 2024.
- “Estonian Space Office.” *Wikipedia*, 16 Mar. 2024,
en.wikipedia.org/wiki/Estonian_Space_Office. Accessed 5 July 2024.
- “European Space Agency.” *Wikipedia*, 27 June 2024,
en.wikipedia.org/wiki/European_Space_Agency#.
- “European Space Research Organisation.” *Wikipedia*, 22 Mar. 2023,
en.wikipedia.org/wiki/European_Space_Research_Organisation.
- “Hellenic National Space Committee.” *Wikipedia*, 6 Mar. 2024,
en.wikipedia.org/wiki/Hellenic_National_Space_Committee. Accessed 5 July 2024.
- “Hungarian Space Office.” *Wikipedia*, 30 May 2024,
en.wikipedia.org/wiki/Hungarian_Space_Office. Accessed 5 July 2024.
- “Italian Space Agency.” *Wikipedia*, 25 Nov. 2021,
en.wikipedia.org/wiki/Italian_Space_Agency.
- “Luxembourg Space Agency.” *Wikipedia*, 17 Mar. 2024,
en.wikipedia.org/wiki/Luxembourg_Space_Agency. Accessed 5 July 2024.
- “Ministry of Economic Affairs and Employment.” *Wikipedia*, 7 July 2023,
en.wikipedia.org/wiki/Ministry_of_Economic_Affairs_and_Employment.
Accessed 5 July 2024.

GWCI A XXIX

- “Ministry of Science and Education (Croatia).” *Wikipedia*, 24 June 2024,
[en.wikipedia.org/wiki/Ministry_of_Science_and_Education_\(Croatia\)](https://en.wikipedia.org/wiki/Ministry_of_Science_and_Education_(Croatia)).
Accessed 5 July 2024.
- “Netherlands Agency for Aerospace Programmes.” *Wikipedia*, 29 July 2023,
en.wikipedia.org/wiki/Netherlands_Agency_for_Aerospace_Programmes.
Accessed 5 July 2024.
- “Netherlands Space Office.” *Wikipedia*, 3 May 2023,
en.wikipedia.org/wiki/Netherlands_Space_Office.
- “Norwegian Space Agency.” *Wikipedia*, 22 Nov. 2023,
en.wikipedia.org/wiki/Norwegian_Space_Agency. Accessed 5 July 2024.
- “Polish Space Agency.” *Wikipedia*, 13 Jan. 2024,
en.wikipedia.org/wiki/Polish_Space_Agency.
- “Portugal Space.” *Wikipedia*, 17 Jan. 2023, en.wikipedia.org/wiki/Portugal_Space.
Accessed 5 July 2024.
- “Romanian Space Agency.” *Wikipedia*, 29 Feb. 2024,
en.wikipedia.org/wiki/Romanian_Space_Agency.
- “Space Research and Technology Institute.” *Wikipedia*, 8 Jan. 2024,
en.wikipedia.org/wiki/Space_Research_and_Technology_Institute. Accessed 5
July 2024.
- “SpinLaunch.” *Www.spinlaunch.com*, www.spinlaunch.com/#p4.
- “Swedish National Space Agency.” *Wikipedia*, 20 Aug. 2022,
en.wikipedia.org/wiki/Swedish_National_Space_Agency.
- “Swiss Space Office.” *Wikipedia*, 12 Jan. 2024,
en.wikipedia.org/wiki/Swiss_Space_Office. Accessed 5 July 2024.

GWCI A XXIX

“Technical University of Denmark.” *Wikipedia*, 21 June 2024,

en.wikipedia.org/wiki/Technical_University_of_Denmark#DTU_Space.

Accessed 5 July 2024.

“The Outer Space Treaty at a Glance | Arms Control Association.”

Www.armscontrol.org,

www.armscontrol.org/factsheets/outer-space-treaty-glance#:~:text=The%201967%20Outer%20Space%20Treaty.

“UK Space Agency.” *Wikipedia*, 23 Feb. 2022,

en.wikipedia.org/wiki/UK_Space_Agency.

Wikipedia Contributors. “Agencia Espacial Española.” *Wikipedia*, Wikimedia Foundation, 25 June 2024,

en.wikipedia.org/wiki/Agencia_Espacial_Espa%C3%B1ola. Accessed 5 July 2024.

“German Aerospace Center.” *Wikipedia*, Wikimedia Foundation, 2 Feb. 2020,

en.wikipedia.org/wiki/German_Aerospace_Center.

“Outer Space Treaty.” *Wikipedia*, Wikimedia Foundation, 6 Feb. 2019,

en.wikipedia.org/wiki/Outer_Space_Treaty.