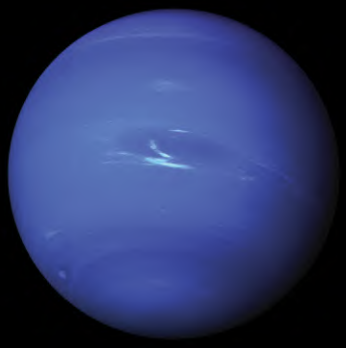
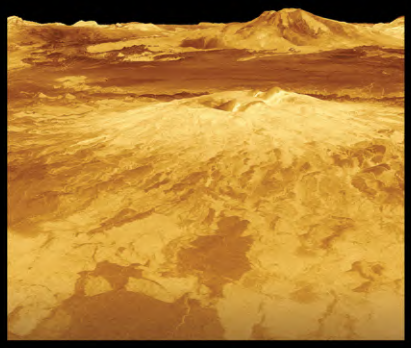
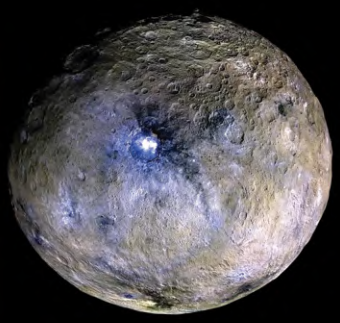
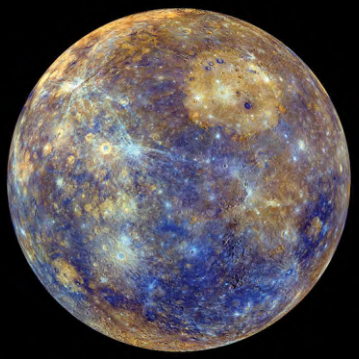
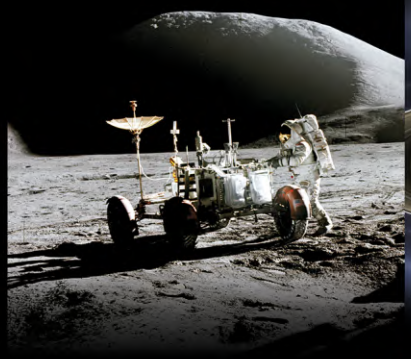
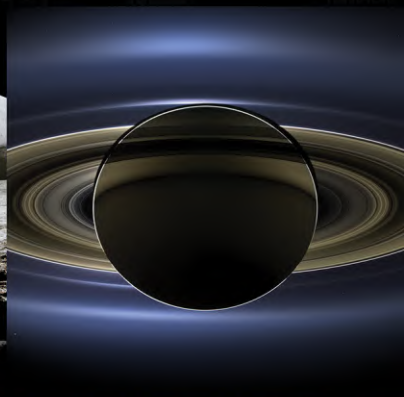
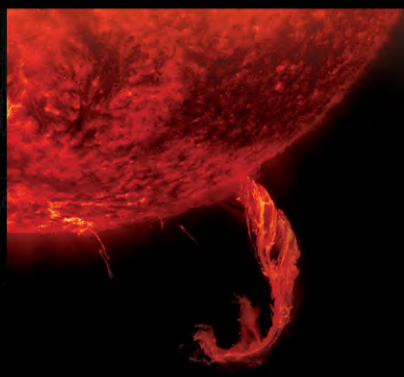




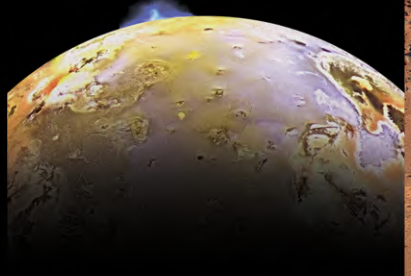
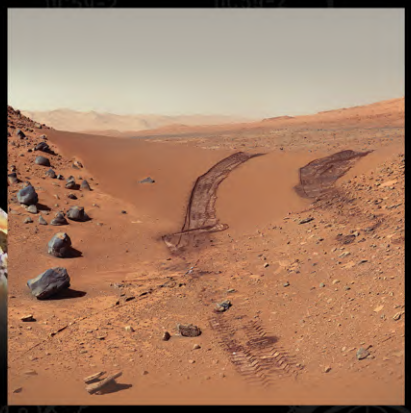
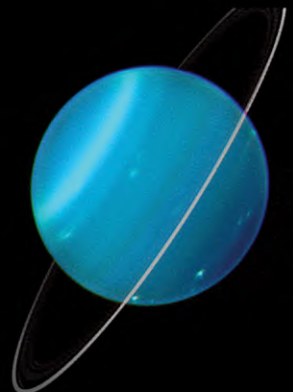

SEPG

SPACE EXPLORATION
PROJECT GROUP

NEWSLETTER

NEWS FROM YOUR SOLAR SYSTEM AND BEYOND

MAY 2021

SEPG

SPACE EXPLORATION PROJECT GROUP

NEWSLETTER

NEWS FROM YOUR SOLAR SYSTEM AND BEYOND

Index

THE SUN

explore at **solarsystem.nasa.gov/sun**

www.nasa.gov

NASA/SDO

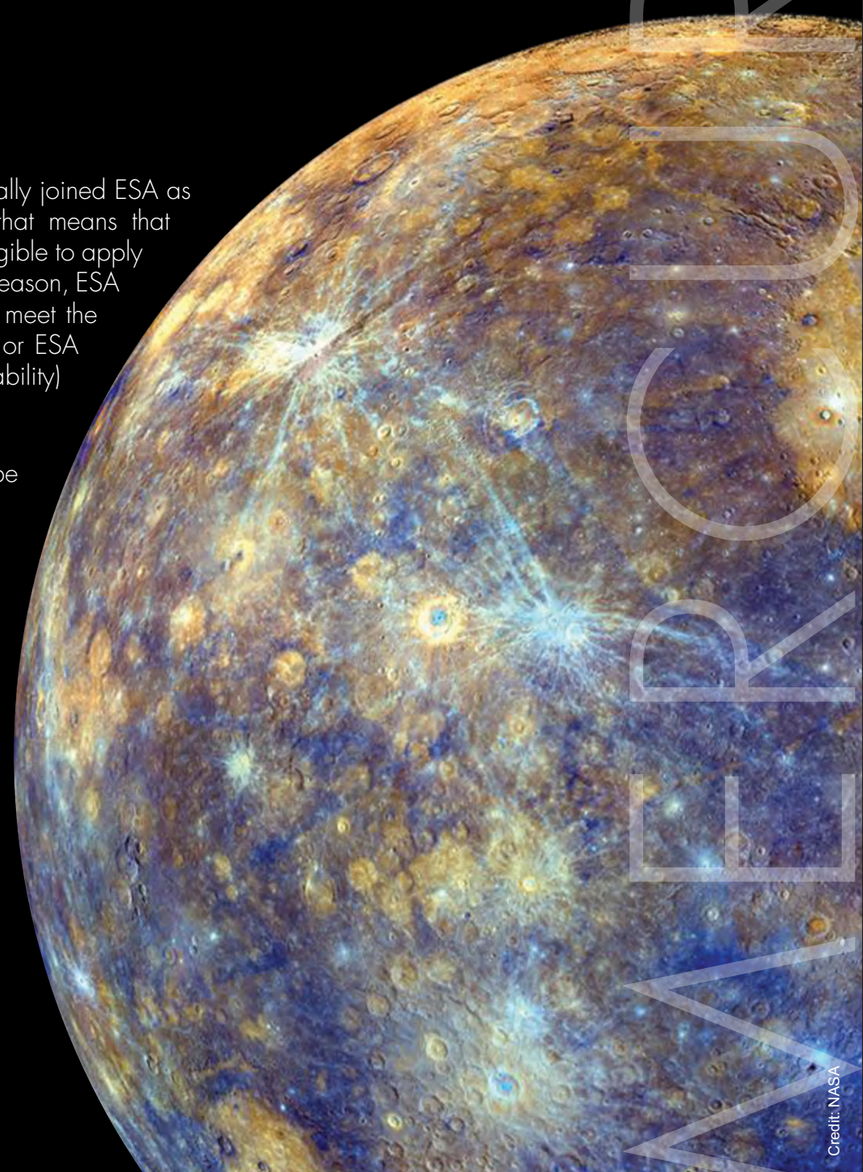
Credit: ESA

Highlight of May

On May 21st, Lithuania officially joined ESA as an Associate Member and that means that Lithuanian citizens are now eligible to apply for all ESA vacancies. For this reason, ESA is encouraging all those who meet the criteria for the ESA Astronaut or ESA Astronaut (with a physical disability) vacancies to apply.

Additional information can be found at:

https://www.esa.int/About_Us/Careers_at_ESA/ESA_Astronaut_Selection/ESA_extends_deadline_for_astronaut_applications_as_new_Associate_Member_joins



Credit: NASA

SGAC&SEPG performed and upcoming events

The SEPG is proud to announce that 10 papers submitted by SEPG members and teams to the IAC 2021 were accepted to the conference. Sincere congratulations to everybody for the achievement!

Open SEPG project opportunities

Original Project 1: Space-Hell.

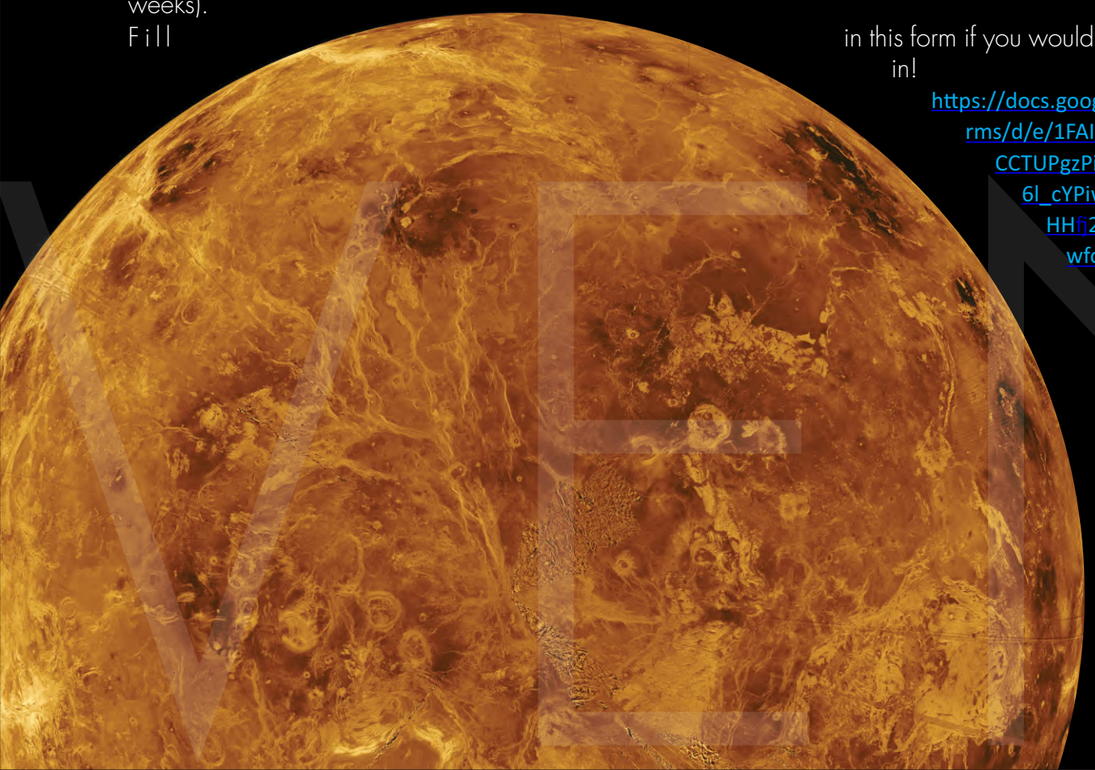
The "SpaceHell - SGAC Edition" is a game about space exploration, specifically commercial exploration.

Players are members of SGAC.

The game aims at improving skills such as debate, critical thinking, strategies and more. The goal is to raise debate and awareness within the players and in the scientific community. The main objective is to argue topics related to space exploration which, for the moment, are thought to be of secondary importance. Results will be judged by the SGAC members who are not players and the online community. We might hold remote/live workshops for discussion between players and the rest of the community. Players will receive information about a crewed mission to the Moon, and they shall address tasks or questions at their best using available resources, online community and more.

Tasks/questions will be formulated on a periodic basis (like every two weeks) and the team players can change only at the end of the period (like at the end of the two weeks).
Fill in this form if you would like to be in!

https://docs.google.com/forms/d/e/1FAIpQLSdxeLCCTUPgzPicOj5x8Vit6l_cYPiwii4y_S8nHHfj2h1zQ/viewform



Credit: NASA

Original project 2: Analogue Think-Tank (ATT).

Analogue missions are known as scenarios simulating human activities in space on the ground. Images capturing people dressing up as astronauts in deserts are one of the most popular identification. Around the Globe, there are several organisations, societies and groups organising such missions, and this business is growing very fast!

Analogues are the way through which many are bringing their contribution to support planetary exploration.

To date, such missions build on a variety of approaches linked to different business cases.
Analogue missions are independent scenarios of possible human life in space where the global efforts vanish. For more info, read this article on The Space Review.

The ATT aims at connecting various communities to strengthen the impact of analogue missions and activities. The main objective is to identify solutions to existing gaps in multilateral cooperation and interoperability.

Fill in this form if you would like to be involved:

https://docs.google.com/forms/d/e/1FAIpQLSeyBgbx9-jTyUmV1OPSogrxK_CkVhFAfNcr27I3y-abGQPFEA/viewform

SEPG Member to Member Lectures.

For a new Space Exploration webinar series, we successfully selected 3 members to join this team. In the upcoming months we will design an webinar series specifically for SGAC members interested in space exploration. The team consists of:

Megha Choudhary
Chesler Thomas
Bram de Winter
Theodora Varelidi Strati

We are looking for a SEPG member willing to support the organisation of these lectures around monthly meetings together with the SEPG Member relations and support team. If you are interested please contact bram.dewinter@spacegeneration.org

We already have selected some topics together with member in the last meeting. Will build on from these ideas.

Update April Project Call

We thank all SEPG members for their applications that were sent in for the projects in the latest project call. Currently, the SEPG Member relations and Support team is processing these applications and will contact all members that have sent in their application.

For our next project call in the future, we are looking for new projects. Your input and ideas would be very helpful.

You can contact us (sepmembers@gmail.com) to discuss new projects

Project Opportunity highlights.

Call for Journal Paper writing

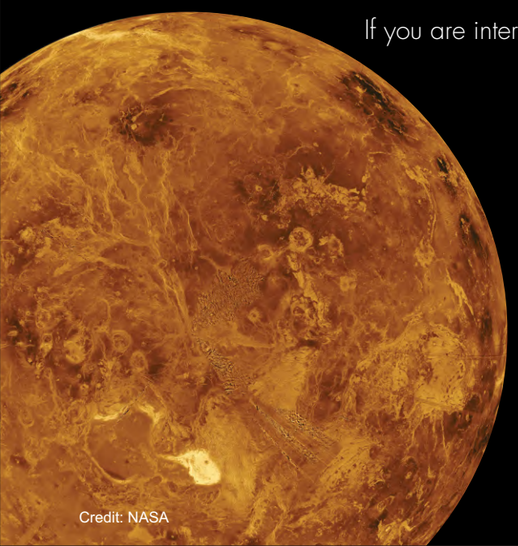
International Association For the Advancement Of Space Safety (IAASS) publishes its flagmark journal, Journal of Space Safety Engineering (JSSE) every quarter of the year. It deals with space hazards, debris and the safety standards that should be ensured while managing risks in space, along with radiation exposure and effects during space exploration and much more.

We are looking for motivated members to join the team and work together towards putting forward a compelling high quality paper for this

More information about the association and journal: IAASS – Journal of Space Safety Engineering (sepmembers@gmail.com) to discuss new projects

Current team members include
Dhanisha S
Vatasta Koul

If you are interested in joining please contact, sepgmembers@gmail.com or dhanisha.sateesh@spacegeneration.org



Credit: NASA

Barcelona Zero Gravity Challenge 2021.

Organized by UNIVERSITAT POLITÈCNICA DE CATALUNYA (UPC) BarcelonaTECH with Aeroclub Barcelona-Sabadell and the Space Generation Advisory Council.

APPLY NOW!

You can win a free Aerobatic Zero G Flight for your Experiment, along with a 2,500 euros Grant for your microgravity research Team (travel to Barcelona + stay expenses).

The competition challenges young students' teams of 2-4 people (maximum) between the ages of 18-35 to submit proposals for experiments to be conducted in a zero-G environment.

Undergraduate, Master and PhD students from any part of the world are encouraged to apply. The top team with the best proposal, endorsed by an academic professor will actually get their experiment flown in parabolic flight.

Do you have a zero gravity experiment ready to fly?

Phase 1: Submit your experiment. DEADLINE - 30th JUNE 2021
Phase 2: Selection (by ESA Academy experts): June-September 2021
Phase 3: ZeroG Flight of the Experiment: Fall 2021

More information: (window2theuniverse.org)

Future Conferences

We are looking for a way to keep you updated on all conferences that are going on in the space community. Therefore we are brainstorming on the the best way to have this overview of conferences. This could be either in Trello/Slack or other communication platforms.

As SEPG member you can support us with contacting us with conferences that we missed. And if you want to propose a abstract or looking for a team to write an abstract, contact us!

sepgmembers@gmail.com

ESA Opportunities

https://ideas.esa.int/servlet/hype/IMT?userAction=BrowseCurrentUser&templateName=MenuItem.

PhD Positions

2 PhD studentships in Space technologies, resources and "multi-planetary" communities

Location: Institute of Ethnology and Cultural Anthropology and Doctoral School in the Humanities, Jagiellonian University, Krakow, Poland
Closing Date: 23.59 hours CET on Monday 5 July 2021
Open Date: 7 June 2021

Lead Supervisor (PI): Dr Anna Szolucha

Description:

Applications are invited from highly motivated and qualified candidates to undertake a doctoral degree as part of a dynamic research team studying "Space technologies, resources and 'multi-planetary' communities".

Our interdisciplinary project investigates how space exploration shapes the ways in which people imagine life and living on this and other worlds. As part of our team, PhD students are expected to carry out their own individual research projects in this area and participate in the work of the team. The scope and focus of the research proposed by the candidates must be compatible with the overall aims of the project. Prior to submission of their applications, applicants are, therefore, advised to contact the project's PI to discuss their research proposals.

Requirements:
Applications are invited from strong candidates who hold or are close to completion of an MA degree (or equivalent) in social anthropology or another discipline in the humanities or social sciences (such as but not limited to history, philosophy, sociology, politics, international relations, human geography). Successful applicants should also submit a competitive research proposal for a doctoral project in the area of space exploration. Experience in conducting ethnographic research is desirable but not required. The team's working language will be English so candidates should have excellent English language skills in speaking and writing.

Studentships:
The studentships are for full-time study over three years, commencing 1st October 2021. Successful applicants will be provided with a monthly stipend of PLN 5,000 (gross), a personal laptop, generous research funding as well as other resources and academic support necessary for a successful completion of their PhD.

How to apply:
Applications should be submitted electronically using the University's IRK system (Internetowa Rekrutacja Kandydatów). Other important information on how to apply can be found at https://irk.uj.edu.pl/en-g
Further details are available at: https://human.phd.uj.edu.pl/en_GB/stypendium-w-grancie-dr-anny-szoluchy

Deadline:

Applications must be submitted by 23.59 CET on Monday 5 July 2021. Short-listed candidates will be invited for an online interview. We currently anticipate that the interviews will take place over one day around 28 to 29 July 2021.

The PhD studentships are part of the research project "Space technologies, resources and 'multi-planetary' communities: Space exploration and the imaginaries of living in a climate-changing world" funded by the National Science Centre, SONATA BIS 10 grant.

For further information about the project and on how to apply please contact the PI Anna Szolucha at anna.szolucha@uj.edu.pl.

Further details are available at: https://human.phd.uj.edu.pl/en_GB/stypendium-w-grancie-dr-anny-szoluchy

Anna Szolucha, PhD

Institute of Ethnology and Cultural Anthropology
Jagiellonian University
ul. Golebia 9, 31-007 Krakow, Poland

www.annaszolucha.com

Conclusion.

Many interesting projects are taking place in the SEPG! We hope these projects will excite and kindle the interest of our members. For more information please contact co-leads Antonino and Ilaria or sepgmembers@gmail.com.

Remind that SGAC has a dedicated Calendar with all the upcoming webinar, give it a look to see what is coming next:
https://spacegeneration.org/events/category/webinar

Other relevant news:

ROSCOSMOS

Roscosmos assigned ISS crews until 2023

Russia has revealed the crew compositions for upcoming expeditions to the International Space Station from 2021 to 2023. The commanders and spaceflight participants of the prime and backup crews that will launch to the station within the scientific and educational project 'Challenge', have also been officially confirmed.

Credit: Yegor Aleyev/TASS

In 2022, Roscosmos cosmonauts Oleg Artemyev, Denis Matveyev and Sergey Korsakov were confirmed as the 67th long-term expedition crew and Sergey Prokopiev, Anna Kikina and Dmitry Petelin as their backups.

For the first time after a long break, a Russian woman, Roscosmos cosmonaut Anna Kikina will become the ISS crew member of the 68th expedition, scheduled for autumn 2022 - spring 2023. She will launch to the station with cosmonauts Sergey Prokopiev and Dmitry Petelin. Oleg Kononenko, Nikolay Chub and Andrey Fedyaev will be their backups during the preparation. In the second half of 2023, as part of the ISS-69 expedition, Oleg Kononenko, Nikolay Chub and Andrey Fedyaev have been appointed as the prime crew of the Russian segment of the ISS.

Additional information can be found at:
https://www.ruaviation.com/news/2021/5/20/16218/?h

Spaceport,
spaceport
and one more Spaceport.
UK paving the way for the first

The U.K. parliament is establishing regulations that will enable the nation's Civil Aviation Authority to start issuing licenses to spaceports, as well as rocket and satellite operators, by the end of August. The country, has been encouraging commercial players to develop spaceflight capabilities on the islands since 2014 and originally hoped to see first flights in 2020. The aspiring British spaceports and the rocket builders hope to be the first to loft satellites into orbit from Europe,

Previously, the U.K. government, via the U.K. Space Agency, provided funding to three prospective spaceports and their partnering rocket-makers. All three are still in the running, with varying amounts of work ahead of them before they can kick off their first countdown.

Spaceport Cornwall: the town of Newquay in Cornwall might host the Newquay's airport, located just a few hundred meters from the Atlantic coast, expects to host regular Virgin Orbit launches from early 2022.

Space Hub Sutherland still has a few hurdles to overcome. The vertical launch site is meant to be built in the pristine wilderness of the Moine Peninsula in the very north of Scotland. The development has been challenged by Scotland's biggest landowner (and richest man) Anders Povlsen, who owns a neighboring estate. Povlsen, who cites environmental concerns as a reason for the objections, has since invested in a rival venture, the Shetland Space Centre, to be located on the Shetland Islands between the north of Scotland and Norway.

Shetland Space Centre submitted its planning application in January and is still awaiting a decision by the Shetland Islands Council, the local authority governing the Islands. The spaceport eventually plans to operate three launch pads and has recently lured Lockheed Martin, previously associated with Space Hub Sutherland, to switch to the more remote Shetland base.

The prospective spaceport is located on the island of Unst, 200 miles (320 km) north of the Moine Peninsula where Space Hub Sutherland is located. Despite not yet having a permission to establish the spaceport, the Shetland base already provides facilities to European rocket builders to test their technology.

Black Arrow Space Technologies is quietly working in the background on its plan to launch rockets from a repurposed crude bulk carrier off the coast of Wales. The company targets a later date for the start of its operations and expects to attempt its maiden launch in 2023. The company hopes to start offering a mobile satellite launch service that could be taken anywhere in the world. The concept is similar to that of Virgin Orbit, just without the need of a spaceport.

Additional information can be found at: https://www.space.com/uk-spaceports-commercial-rockets-licenses-microlaunchers

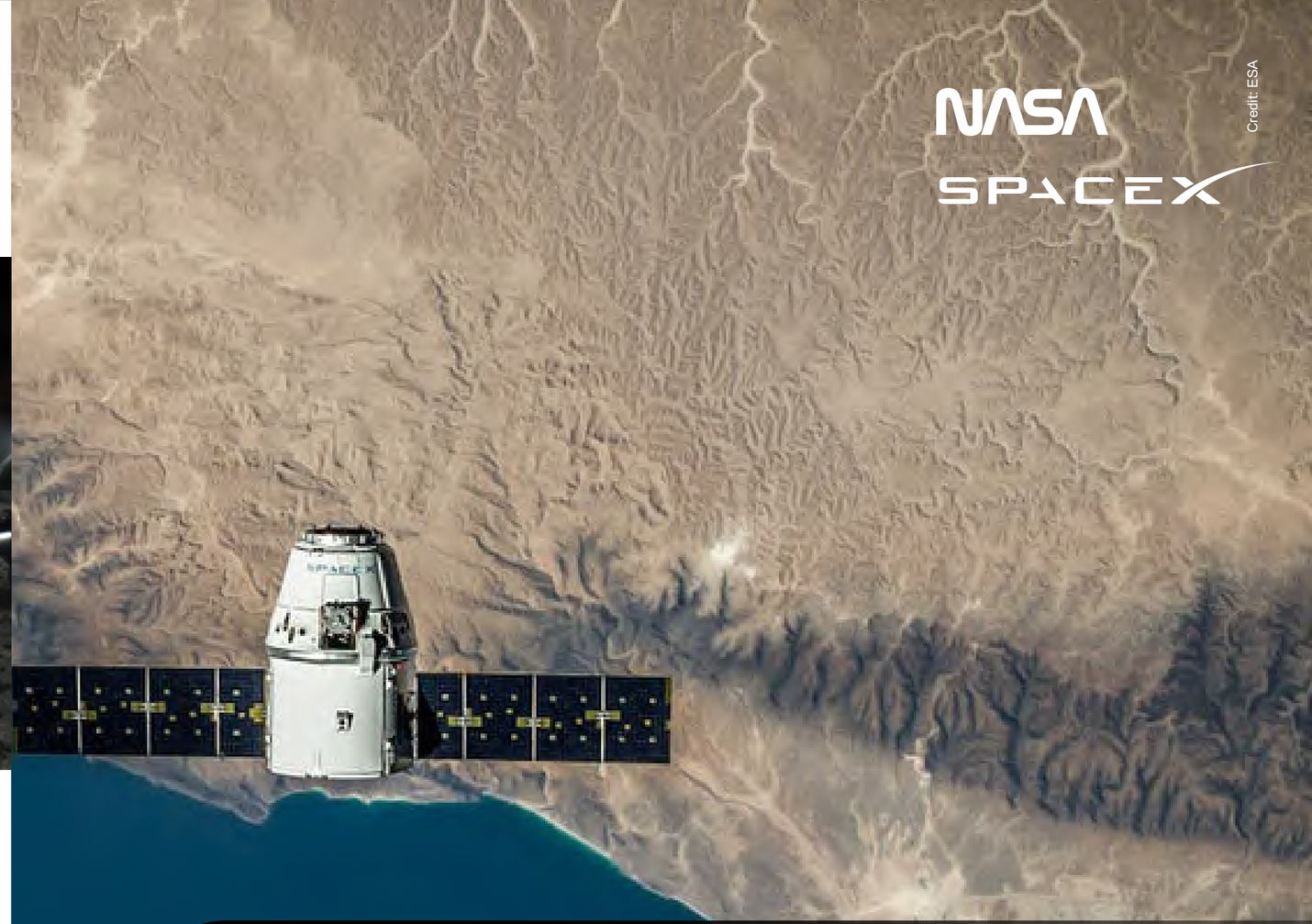
A potential new partner for the Artemis programme

South Korea is in last-minute negotiations with the United States to join NASA's Artemis programand are underway between U.S. officials and South Korea's Ministry of Foreign Affairs and the Ministry of Science.

The official said the move to join the Artemis program was in line with "our continued commitment to strengthening partnership with NASA" when it comes to space exploration. The official said the U.S. has also played its part in bolstering the partnership, citing NASA's contribution to "ShadowCam" to South Korea's first robotic lunar exploration mission, Korea Pathfinder Lunar Orbiter (KPLO), as an example.

ShadowCam is the nickname of a lunar reconnaissance orbiter camera, developed by Arizona State University and Malin Space Science Systems, which NASA contributed to KPLO that is set to launch in August 2022 aboard a SpaceX Falcon 9 rocket to image the moon. The authorities will make a formal announcement when a deal is done.

Additional information can be found at:
https://spacenews.com/south-korea-to-join-nasas-artemis-project-reports/



Credit: ESA

Latin America looks to Space

Latin American countries have increased their interest in space to speed their development despite their limited resources. Several international discussions have taken place to discuss the outlook of the "new space race" and what it can do for health, education, and other fields. Latin American countries such as Mexico stated that the future is in everybody's hands, and if they (Latin American countries) are not part of it, they will disappear or waste the opportunity to play a relevant role in the construction of the future.

Many countries with limited financial resources see the possible benefits of space. They are interested in satellite technology, international partnerships and local development.

The growth of the space industry and the possibility for internet connectivity from satellites could help countries lacking internet coverage. Satellite information can also guide crop-growing, help predict natural disasters and help industry. Satellites also can closely watch weather and conditions linked to the spread of disease.
Additional information can be found at:
https://slate.com/technology/2021/05/latin-american-caribbean-space-agency-future.html

Analog missions

There are many groups and organisations around the world involved in analog missions and here below you can find some links to their webpages. Keep an eye on them to see if there are incoming opportunities:

- Mars Desert Research Station (Utah, United States)
  Website: http://mdrs.marssociety.org/

Credit: MDRS

- Flashline Mars Arctic Research Station (Nunavut, Canada)
  Website: http://fmars.marssociety.org/

Credit: FMARS

(Image credit: Michaela Musilova)

Analog missions

• Analog Astronaut Training Center (Rzepiennik, Poland)
Website: https://www.astronaut.center/

Credit: Analog Astronaut Training Center

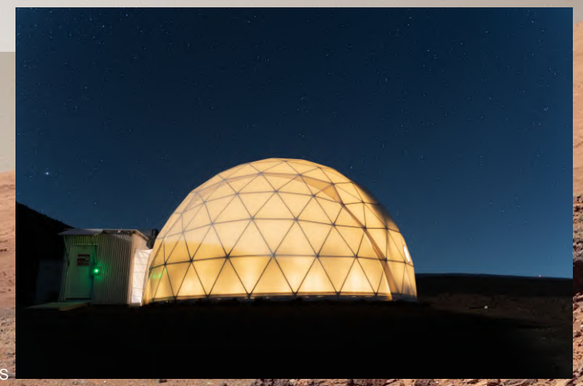
• LUNARES (Pila, Poland)
Website: https://lunares.space/

Credit: LUNARES

• LUNARK (Greenland)
Website: https://lunark.space/

Credit: SAGA Space Architects

• The Hawai'I Space Exploration Analog and Simulation (Hawaii, United States)
Website: https://hi-seas.org/



Credit: HI-SEAS

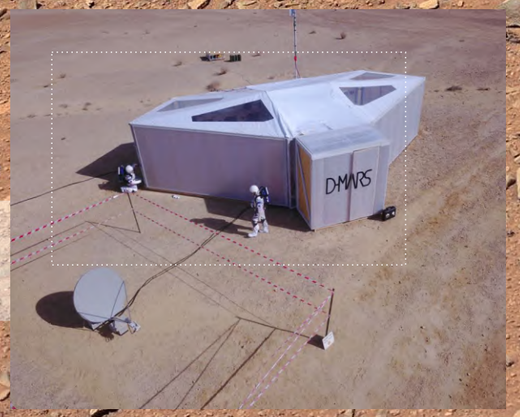
• UKAM (Scotland)
Website: https://ukam.space/

Credit: UKAM

• Austrian Space Forum (Austria)
Website: https://oewf.org/en

Credit: OEWF

• D-MARS (Israel)
Website: https://www.d-mars.org/?language=eng



Credit: D-MARS

Main launches of the month and upcoming ones

Wondering what happened in May in space history?

May 4, 9, 15, 26 Falcon 9 - Starlink Multiple launches

May 6 Long March 2C - Yaogan 30-08

May 15 Electron “”Running Out of Toes” - Earth Observation satellites

May 18 Atlas 5 - Missile early-warning detection

Long March 4B - Haiyang 2D

May 28 Soyouz - One Web 7

May 29 Long March 7 - Tianzhou 2

Credit: NASA

May 4, 9, 15, 26 Falcon 9 - Starlink Multiple launches

This month the company has launched batches 26-27-28-29 of the Starlink constellation, each injecting in orbit 60 satellites.

Additional info can be found at:

https://spaceflightnow.com/2021/05/04/starlink-launch-marks-100-straight-missions-since-an-in-flight-falcon-rocket-failure/

https://spaceflightnow.com/2021/05/09/spacex-reaches-rocket-reuse-milestone-on-starlink-launch/

https://spaceflightnow.com/2021/05/16/spacex-ramps-up-launch-rate-fifth-falcon-9-mission-in-three-weeks/

https://spaceflightnow.com/2021/05/26/first-phase-of-spacexs-starlink-network-nears-completion-with-falcon-9-launch/

SPACEX

Credit: SpaceX

May 6 Long March 2C - Yaogan 30-08

A Chinese Long March 2C rocket launched three Yaogan 30-08 surveillance satellites for the Chinese military and the Tianqi 12 data relay small satellite.
Additional info can be found at:

https://spaceflightnow.com/2021/05/06/china-launches-four-satellites-on-long-march-2c-rocket/
-


Credit: OurSpace


Credit: Rocket Lab Ltd

May 15 Electron ""Running Out of Toes" - Earth Observation satellites

A Rocket Lab Electron rocket failed during a launch of two small optical Earth observation microsatellites for BlackSky. Although the mission failed moments after second stage ignition, Rocket Lab recovered the Electron's first stage booster at sea.
Additional info can be found at:
https://spaceflightnow.com/2021/05/15/two-blacksky-satellites-lost-on-rocket-lab-launch-failure/
-

May 18 Atlas 5 - Missile early-warning detection

A United Launch Alliance Atlas 5 rocket launched the U.S. Space Force's fifth Space Based Infrared System Geosynchronous satellite, or SBIRS GEO 5, for missile early-warning detection.
Additional info can be found at:
https://spaceflightnow.com/2021/05/18/atlas-5-rocket-launches-infrared-missile-detection-satellite-for-u-s-space-force/
-

Credit: United Launch Alliance

May 19 Long March 4B - Haiyang 2D

A Chinese Long March 4B rocket launched China's Haiyang 2D oceanography satellite.

Additional info can be found at:

https://spaceflightnow.com/2021/05/19/chinese-long-march-rocket-launches-oceanography-satellite/

Credit: XinhuaNet

May 28 Soyouz - One Web 7

A Russian Soyuz rocket launched 36 satellites into orbit for OneWeb, which is developing a constellation of hundreds of satellites in low Earth orbit for low-latency broadband communications.

Additional info can be found at:
https://spaceflightnow.com/2021/05/28/oneweb-surpasses-200-satellite-mark-with-soyuz-launch/

-

courtesy of Xinhua.

May 29 Long March 7 - Tianzhou 2

A Chinese Long March 7 launched the Tianzhou 2 resupply ship to dock with the Chinese space station. The automated cargo craft is the first resupply freighter for the Chinese space station.

Additional info can be found at:
https://spaceflightnow.com/2021/05/31/cargo-ship-docks-with-chinese-space-station/
-

courtesy of Xinhua.

Space related Science/Curiosity

ESA plans for Moon ISRU

Belgium-based Space Applications Services is building three experimental reactors under a contract with ESA that will be used to fine-tune the oxygen-making process to be tested on the moon as part of the planned in situ resource utilization demonstration (ISRU) mission in 2025.

The oxygen-making machine will rely on the FFC Cambridge process, named after its inventors George Chen, Derek Fray and Thomas Farthing, for direct extraction of titanium from titanium oxide. The process uses electrolysis to separate the pure metal from the ore.

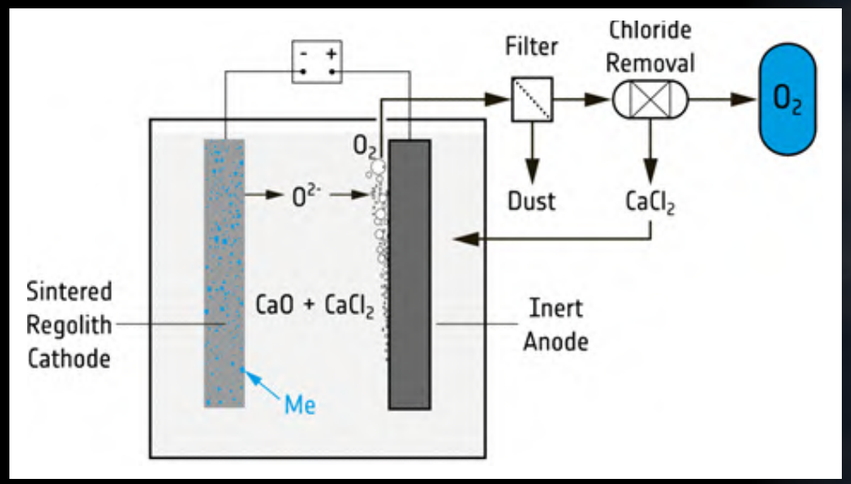
The technique will split lunar regolith, which is known to consist of up to 45% oxygen, into metal alloys and pure oxygen. Locally made oxygen will be key for maintaining longer-term human presence on any celestial body and the metal alloys left after the oxygen extraction could be used to manufacture components for a moon base or a Martian station, for example with 3D printing.

The company is also looking into another technique for oxygen extraction from lunar soil: the hydrogen reduction of ilmenite, that involves baking the regolith in a closed container together with hydrogen gas. In the presence of heat, the oxygen from the ilmenite reacts with the hydrogen and forms water vapor, which can then be split into oxygen and hydrogen.

The oxygen and hydrogen manufactured on the moon could be used as fuel for missions venturing deeper into the solar system, for example to Mars.

Additional information can be found at:

https://www.space.com/esa-oxygen-from-lunar-regolith-demonstration.html



Credit: Lukas Schlüter

ESA partners with startup to launch first debris removal mission in 2025

The European Space Agency signed a contract with a Swiss start-up called ClearSpace to launch the first space debris removal mission in 2025. The mission will use an experimental four-armed robot to dispose of a piece of space junk called Vespa.

The recent fall to Earth of a massive Chinese rocket has renewed concerns about the perils of space junk and one project from the European Space Agency might be able to help.

The European Space Agency (ESA) announced plans to launch a space debris removal mission in 2025 with the help of a Swiss start-up called ClearSpace. The mission, dubbed ClearSpace-1 , will use an experimental, four-armed robot to capture a Vega Secondary Payload Adapter (Vespa) left behind by ESA's Vega launcher in 2013. The piece of space junk is located about 500 miles (800 kilometers) above Earth and weighs roughly 220 lbs. (100 kilograms).

Additional information can be found at:

https://www.space.com/esa-startup-clearspace-debris-removal-2025

Japanese robot will be on the Moon in 2022, but it won't be giant one

The Japanese company ispace will deliver the baseball-sized rover to the moon for the Japan Aerospace Exploration Agency (JAXA) using the commercial HAKUTO-R lander in 2022. JAXA will use the rover to snap pictures of the moon and collect data on lunar dust — a corrosive substance known to be tough on people and machines.

The "transformable lunar robot" will be an ultra-compact and ultra-lightweight robot that can traverse in the harsh lunar environment.
The robot includes contributions from partners Sony, TOMY Company and Doshisha University, JAXA noted, adding the agency will "continue to conduct studies for realizing international space exploration by utilizing the lunar landing opportunities and technologies offered by commercial companies."

Mission telemetry from ispace will also help with JAXA's plans to deploy "Lunar Cruiser", the company stated. Lunar Cruiser is a huge pressurized rover for astronauts that could be ready for moon driving by 2029. Possible research areas include automatic operations and driving technology, ispace stated.

Additional information can be found at:

https://www.space.com/japan-transformable-moon-robot-ispace-2022-lunar-lander

Credit: JAXA

NASA sending water bears, liquid squid to the ISS

NASA will send 128 glow-in-the-dark baby squids and some 5,000 tardigrades (also called water bears) to the International Space Station for research purposes. The water bears and bobtail squid will be involved in experiments aboard the floating laboratory. They will arrive in a semi-frozen state, before being thawed out, revived and grown in a special bioculture system.

One of these studies involves looking at how the water bears– tiny animals (around 1 mm long) that can adapt to extreme conditions on Earth, including high pressure, temperature and radiation– would behave in a spaceflight environment. Researchers will be able to study their hardiness close up, and possibly identify the genes that allow them to become so resilient.

By learning how the water bears can survive in low gravity conditions, it would be possible to design better techniques to keep astronauts healthy on long-duration space missions.

Additional information can be found at:

is the link correct??

https://www.space.com/spacex-dragon-crs-22-launching-squid-tardigrades

Additional resource: "Water Bears in Space" by Houston We Have A Podcast - NASA.:

https://www.nasa.gov/johnson/HWHAP/water-bears-in-space

Credit: NASA

Credit: Getty

Space related initiatives
(e.g. webinars, programmes, conferences)

Space Generation Fusion Forum 2021

August 21 – 23, 2021

The Space Generation Fusion Forum (SGFF) is a two-day, high-intensity, fast-paced professional development and networking event focussed on the global space industry. Students and young professionals from around the world, who are working and participating in all facets of the space community, apply to attend SGFF each year.

Additional info can be found at:

https://spacegeneration.org/sgff2021-home

Other Media curiosities:

- Space Watch
https://spacewatch.global/
Keep track of worldwide Space related events

- Space Café Podcast https://www.radioline.co/podcast-space-cafe-podcast
New podcasts released every month!

- Space Agenda
Keep track of Space related events in your area or all over the world with Space Agenda.
http://www.spaceagenda.com/events/date/2020/08

- Cold Star Technologies Podcasts
The show about the unexpected challenges of scaling businesses, including Space firms.
https://www.youtube.com/channel/UC6eQq4wjFwJpPgkKJ9pq-IA

- SpaceConnex
To connect, collaborate and catalyze ideas, actions, people and projects that lead to the opening of the space frontier.
https://www.linkedin.com/company/spaceconnex/posts/?feedView=all

The Global Space Exploration Conference 2021

The International Astronautical Federation (IAF) and ROSCOSMOS are organizing the Global Space Exploration Conference (GLEX) 2021 that will take place in St. Petersburg, Russian Federation from 14 – 18 June 2021.

Additional info can be found at:
https://www.iafastro.org/events/global-series-conferences/glex-2021/

2021 NASA Exploration Science Forum & European Lunar Symposium

Solar System Exploration Research Virtual Institute (SSERVI) and its European partner organizations will jointly co-host the 2021 NASA Exploration Science Forum & European Lunar Symposium as a virtual meeting. This conference will bring together scientists from around the world to focus on science which enables human and robotic exploration, and science enabled by human exploration as relates to the target bodies of the Moon, Near Earth Asteroids, and the moons of Mars.

Additional information can be found at:
https://lunarscience.arc.nasa.gov/nesfels2021
- /

NASA EXPLORATION SCIENCE FORUM & EUROPEAN LUNAR SYMPOSIUM

2021 International Astronautical Congress - Dubai, UAE

The International Astronautical Congress is the one place and time of the year where all global space actors come together. The event attracts more than 6,000 participants each year. Covering all space sectors and topics, it offers everyone the latest space information and developments in academia and industry, networking opportunities, contacts and potential partnerships.

Credit: NASA

Upcoming Astronomy events

Credit: NASA

Before checking what is going to happen next month, give a look to the incredible video of the Moon eclipse in May

https://www.cbsnews.com/news/lunar-eclipse-photos-super-flower-blood-moon-may-2021/

June 1: Conjunction of the Moon and Jupiter.
Jupiter passes at 4.4º north of the Moon at 09:00 UTC. The Moon is at a magnitude of -12.1, and Jupiter at a magnitude of -2.5.

June 10: Annular Solar Eclipse.
The Moon passes in front of the Sun, creating an annular solar eclipse from 08:13 to 13:11 UTC. The maximum annular eclipse occurs at 10:42 UTC.
The annular solar eclipse is visible in extreme eastern Russia, the Arctic Ocean, western Greenland, and Canada. A partial eclipse will be visible in the northeastern United States, Europe, and most of Russia.

June 10: New Moon.
The Moon is between the Earth and the Sun, so the bright side of the Moon is facing away from the Earth.
In June the Galactic Center of the Milky Way is visible. From Patagonia, where the skies are extremely clean, you can capture a beautiful vertical. And from the USA you have the option of capturing a panorama at the beginning of the night and a vertical one before Sunrise

June 12: Conjunction of the Moon and Venus.
Venus passes at 1.3º south of the Moon at 06:43 UTC. The Moon is at a magnitude of -8.8, and Venus at a magnitude of -3.9.

June 13: Conjunction of the Moon and Mars.
Mars passes at 2.4º south of the Moon at 19:53 UTC. The Moon is at a magnitude of -10.1, and Mars at a magnitude of 1.8.

June 21: June solstice.
The June solstice is at 03:16 UTC. This is also the first summer day (summer solstice) in the Northern Hemisphere and the first winter day (winter solstice) in the Southern Hemisphere.

June 24: Full Moon.
The Moon is on the opposite side of the Earth so the Sun illuminates it completely. Full Moon is at 18:41 UTC.

June 27: Conjunction of the Moon and Saturn.
Saturn passes at 4.0º north of the Moon at 09:27 UTC. The Moon is at a magnitude of -12.6, and Saturn at a magnitude of 0.3.

June 28: Conjunction of the Moon and Jupiter.
Jupiter passes at 4.3º north of the Moon at 18:41 UTC. The Moon is at a magnitude of -12.4, and Jupiter at a magnitude of -2.7.

Additional info can be found at:

https://www.photopills.com/articles/astronomical-events-photography-guide#step5

Space Media

Podcast of the Month: “For All Mankind”

The space race continues. Join Host Krys Marshall and from space experts and former astronauts about what really goes down beyond our atmosphere on the official podcast for the Apple TV+ series for All Mankind.

https://podcasts.apple.com/us/podcast/for-all-mankind-the-official-podcast/id1552072013

Film of the Month: IMAX: Hubble 3D

In May 2009, NASA astronauts embark on a mission to perform maintenance and repairs to the Hubble Space Telescope. As they go about their tasks, danger and beauty are never far away. The nature of space indicates that even the simplest routine can go fatally awry, while amazing photographs taken by the telescope celebrate the wonder of Earth's celestial surroundings.

TV-Show of the Month: Mars (2 Seasons)

The first manned mission from Earth to Mars in 2033 attempts to colonize the red planet. A crew of six astronauts launch from Florida on a journey to be the first people to set foot on Mars.

Credit: NASA

Get Involved – Space Exploration Project Group

Join as an active member of the Space Exploration group.

SEPG Monthly Call

SEPG co-leads and SEPG Member relations and Support Team will organise a monthly meeting with all SEPG members . This will be organised every second Thursday in the month, which started on the 11th of February. Next call will be 08 April 5.00 pm CEST (UTC+1). During this meeting we will have time for new SEPG members and member project initiatives to present themselves.

- If you as a new member would like to introduce yourself, please contact sepgmembers@gmail.com with a little background story of yourself and a profile picture. Our team will make sure that you get the opportunity to introduce yourself to other SEPG members.

- If you want to present your project at the monthly SEPG call, please send an email to sepgmembers@gmail.com with a little explanation of your project. We hope to see some inspiring projects be presented to SEPG members.

Occurs the second Thursday of every month effective Thursday, April 8, 2021 from 5:00 PM to 6:00 PM, (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna 5:00 PM | (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna | 1 hr
Join from the meeting link
https://unilu.webex.com/unilu/j.php?MTID=mb9d4cba6bb0f96d6c1b91bbe0fad833a

Join by meeting number
Meeting number (access code): 175 231 8527
Meeting password: MSpcnRk6988

Schedule:

(5.00 - 5.10) Introduction of new members
(5.10 - 5.30) Presentations from the members showcasing their initiatives and projects
(5.30 - 6.00) General inquiries, Q&A, debate and reactions on presentations

SEPG

SPACE EXPLORATION PROJECT GROUP

NEWSLETTER

NEWS FROM YOUR SOLAR SYSTEM AND BEYOND

THE TEAM:

Guadalupe Espinoza Gastelum
Mechatronics Engineer

Simone Paternostro
Space Engineer

Alec Bartos
Creative director/fouder
Art&Space Center

https://spacegeneration.org/projects/space-exploration