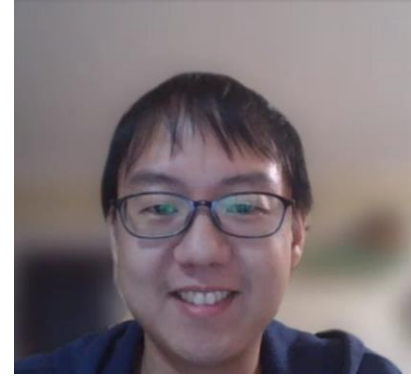


Brownbag Lunch: Access to Space for All





Access to Space for All Initiative





Access to Space for All Initiative



What if a country would become spacefaring, for example launching satellites, without national space law and policy, without an economic analysis or lack of a technology roadmap or trained personnel?



Access to Space for All Initiative

*The goal of the **Access to Space 4 All Initiative** is to provide research and orbital opportunities for UN Member States to access space and to ensure that the benefits of space, in particular for sustainable development, are truly accessible to all*



UNITED NATIONS OFFICE
FOR OUTER SPACE AFFAIRS



#AccSpace4All



Access to Space for All Initiative

What if there was no Access to Space for All?

United Nations

A/AC.105/INF/433



General Assembly

Distr.: General
24 January 2019

Original: English

**Committee on the Peaceful
Uses of Outer Space**

Information furnished in conformity with General Assembly resolution 1721 B (XVI) by States launching objects into orbit or beyond

Note verbale dated 23 January 2019 from the Permanent Mission of Kenya to the United Nations (Vienna) addressed to the Secretary-General

The Permanent Mission of Kenya to the United Nations (Vienna) has the honour to transmit, in accordance with paragraph 1 of General Assembly resolution 1721 B (XVI) of 20 December 1961, information on the satellite "1KUNS-PF", launched into outer space on 11 May 2018 (see annex).

United Nations

A/AC.105/INF/433/Add.1



General Assembly

Distr.: General
1 February 2021

Original: English

**Committee on the Peaceful
Uses of Outer Space**

Information furnished in conformity with General Assembly resolution 1721 B (XVI) by States launching objects into orbit or beyond

Note verbale dated 20 January 2021 from the Permanent Mission of Kenya to the United Nations (Vienna) addressed to the Secretary-General

The Permanent Mission of Kenya to the United Nations (Vienna) has the honour to transmit, in accordance with paragraph 1 of General Assembly resolution 1721 B (XVI) of 20 December 1961, additional information on the 1st Kenyan University NanoSatellite-Precursor Flight (1KUNS-PF) satellite, previously registered by Kenya (see A/AC.105/INF/433), which ceased to exist in June 2020.

The satellite, owned and operated by the University of Nairobi, re-entered the Earth's atmosphere and was no longer in Earth orbit as at 2300 hours Nairobi time on 12 June 2020.¹

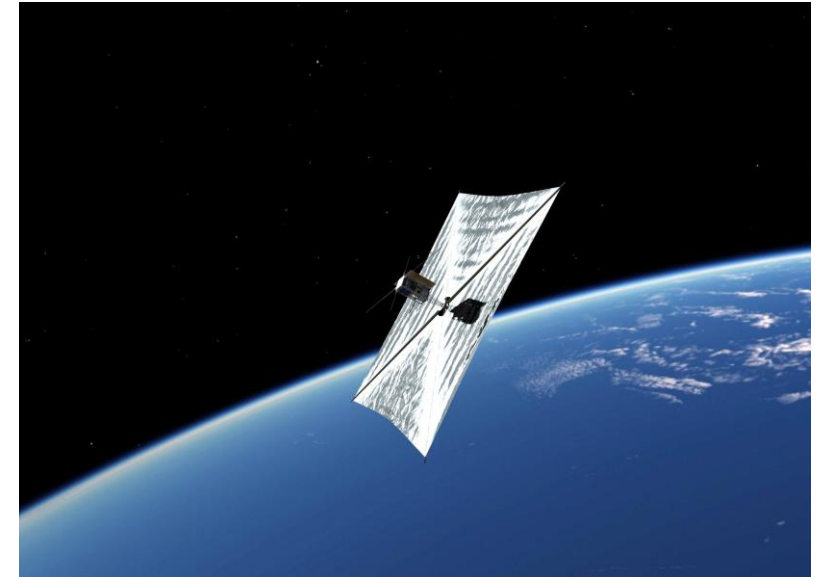
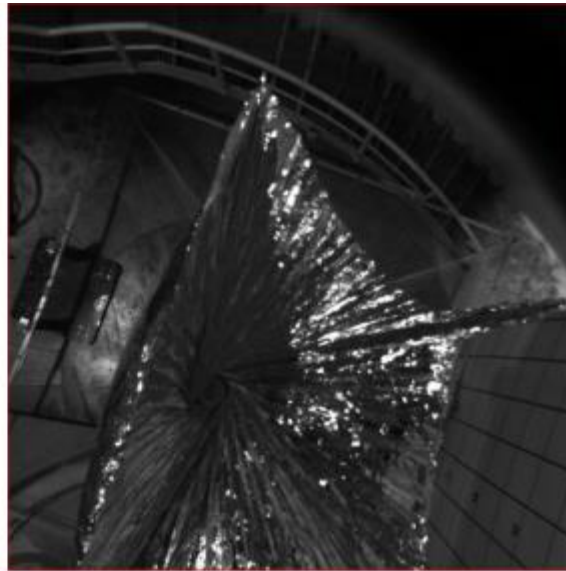
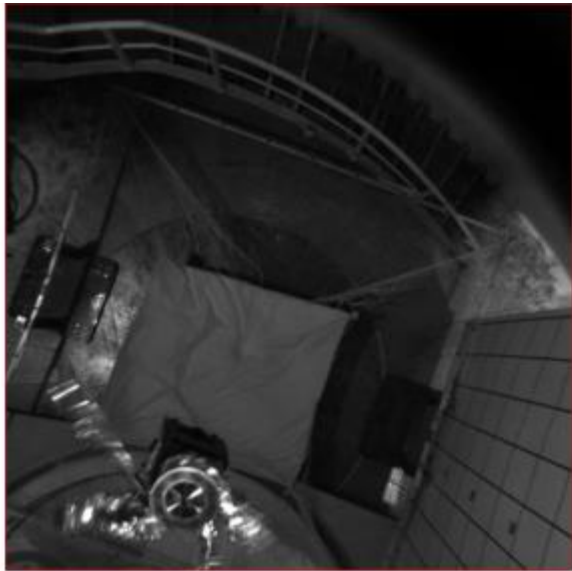
Responsible and Sustainable Behaviour



Access to Space for All Initiative



What if there was no Access to Space for All?



Deorbit sail deployment tested through DropTES in ZARM's drop tower

Responsible and Sustainable Behaviour



Access to Space for All Initiative

What if there was no Access to Space for All?

FIRST MAURITIAN SATELLITE – OPENING NEW OPPORTUNITIES

JOURNEY TO SPACE ALTHOUGH NOT EASY BUT EXTREMELY REWARDING AND OFFERS HIGHLY PROMISING FUTURE

HyperGES “Watermeal, the Future Food Source for Space Exploration”



HyperGES and community impacts

- Expand space-related knowledge and awareness in Thailand
- Flagship program in astroculture, produce intensive research environment
- Team up with other organization. Stepping out of their comfort zone encouragement

Ellas construyen el satélite guatemalteco

Conozca a las siete estudiantes que participan en el proyecto del CubeSat.

BUENAS NOTICIAS #GuateVA(E)Espado

GUATEMALA **AL ESPACIO**

“Estamos haciendo historia”
Estudia Ingeniería Industrial y es parte del equipo de Medica y Comercio Exterior. “Este proyecto me permitió poner en práctica lo que aprendí en el aula”, dice. “Es importante que las personas puedan entender de las cosas científicas que se están haciendo aquí...”. “Es posible también la magnitud y complejidad que involucra trabajar en el espacio. Estoy segura que los resultados serán muy interesantes”, añade.

LUISA LABRA, de 22 años, es una de las protagonistas del proyecto.

“No debemos enviarle nada a los hombres”
“Este proyecto me permitió poner en práctica lo que aprendí en el aula”, dice María, que es Comunicaciones y Control en Tierra. “Como ingeniera, bióloga, porque debemos demostrar que somos una ingeniera. No a ser un trabajo largo, como cuando al mismo tiempo, encontramos a otras mujeres para poner”, añade.

MARLEY MAZAREZCO, de 19 años, es ingeniera.

“Me aprendí de todos”
“Responde a la idea de trabajar en un equipo que no estábamos acostumbrados. Me gusta porque me permite aprender de todos”, dice Mariana, que es parte del equipo de Ingeniería de Software. “Me encanta de hacer el plan de construcción del CubeSat, lo que me permite tener un poco de libertad, porque debo investigar, estudiar los planes, que se han convertido en un desafío, pero me encanta porque me permite aprender de todos”, añade.

“Hay que trabajar en equipo”
“Este proyecto me permitió poner en práctica lo que aprendí en el aula”, dice Mariana, que es parte del equipo de Ingeniería de Software. “Me encanta de hacer el plan de construcción del CubeSat, lo que me permite tener un poco de libertad, porque debo investigar, estudiar los planes, que se han convertido en un desafío, pero me encanta porque me permite aprender de todos”, añade.

“Somos capaces de hacer un excelente trabajo”
“Este es el proyecto más importante de mi vida”, dice Mariana, que es parte del equipo de Ingeniería de Software. “Me encanta de hacer el plan de construcción del CubeSat, lo que me permite tener un poco de libertad, porque debo investigar, estudiar los planes, que se han convertido en un desafío, pero me encanta porque me permite aprender de todos”, añade.

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MAURITIUS EMBARKS IN NEW SPACE ERA

- Geolocation interesting for future space related activities
- More advanced space nations interested to collaborate

BOOST TECHNICAL CAPACITY

- Building highly technical capacity
- Sophisticated ground station for future missions set up
- Training of younger generation

A POTENTIALLY NEW SOCIO-ECONOMIC PILLAR

- Space offers numerous possibilities for Mauritius. Data analytics, opportunities for R&D, business opportunities, intergovernmental collaborations.

ENTHUSIASTIC YOUNGSTERS

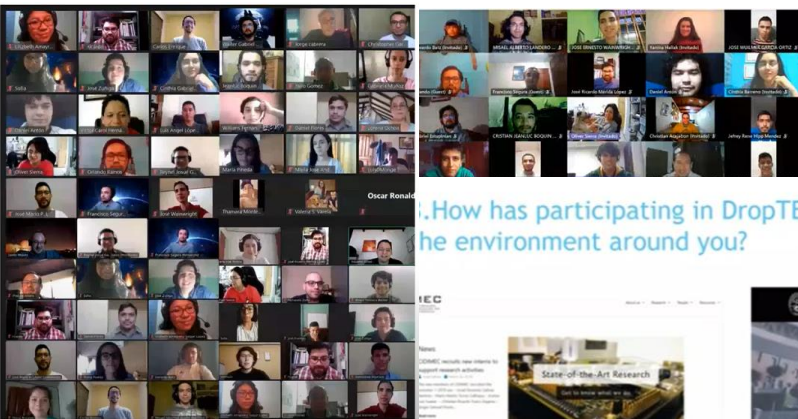
- The training program on antenna building gave us an insight of the high level of enthusiasm for this new field. There is hope to enhance this interest further to build new capacity.

GOVERNMENT FULLY SUPPORTIVE

- This historical initiative for the Republic of Mauritius promises to unlock new opportunities for research, innovation and socio-economic development.

3. How has participating in DropTES changed the environment around you? Cont'd (3)

In Feb. 2017 I was elected to be the President of the American University of Madaba (AUM) in Jordan. That month AUM started the Innovation project for its students and for high school students in Jordan at large.



How has participating in DropTES changed the environment around you?

RESEARCH CENTER

MECHATRONICS DEPARTMENT

State-of-the-Art Research

INGENIERIA MECATRONICA

Free surface reconstruction of opaque liquids in microgravity. Part 1: design and on-ground testing

ESLIUM: A student experiment to investigate the sloshing of magnetic liquids in microgravity

Free and Forced Oscillations of Magnetic Liquids Under Low-Gravity Conditions

Final results!! COSPAR 2021

AXISYMMETRIC AND LATERAL FREE-SURFACE OSCILLATIONS OF FERROFLUIDS IN MICROGRAVITY



Access to Space for All Initiative

Access to Space and SDGs



4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

A white icon of an open book and a pencil, set against a red background.

Among others targets:

“By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”

There is no technological innovation without education

Education contributes to the economy



Access to Space for All Initiative

STEM Skills for jobs

Latest CVs	Latest Jobs
Systems AIV Engineer Country: Netherlands Last update: 06/03/2021	Technical Engineer Country: Germany Last update: 08/03/2021
System Engineer Country: Germany Last update: 03/03/2021	Radio Navigation Engineer Country: Netherlands Last update: 08/03/2021
Business development executive Country: Canada Last update: 03/03/2021	Configuration Management Engineer Country: Netherlands Last update: 08/03/2021
GIS & Remote Sensing Researcher Country: Spain Last update: 03/03/2021	(Senior) Engineer, BizDevOps Satellite Applications Country: Luxembourg Last update: 08/03/2021
Consultant Country: France Last update: 19/02/2021	Developer, Integration Services and Automation Country: Luxembourg Last update: 08/03/2021
Postdoctoral Researcher Country: Korea Last update: 15/02/2021	Flight Dynamics Engineer - Biomass Command Generation Country: Germany Last update: 08/03/2021
Senior GIS / Remote Sensing Analyst Programmer Country: Italy Last update: 14/02/2021	Flight Dynamics Engineer - Orbit Routine Operations for Earth Explorers Country: Germany Last update: 08/03/2021
Radio Communication Researcher Country: Spain Last update: 12/02/2021	

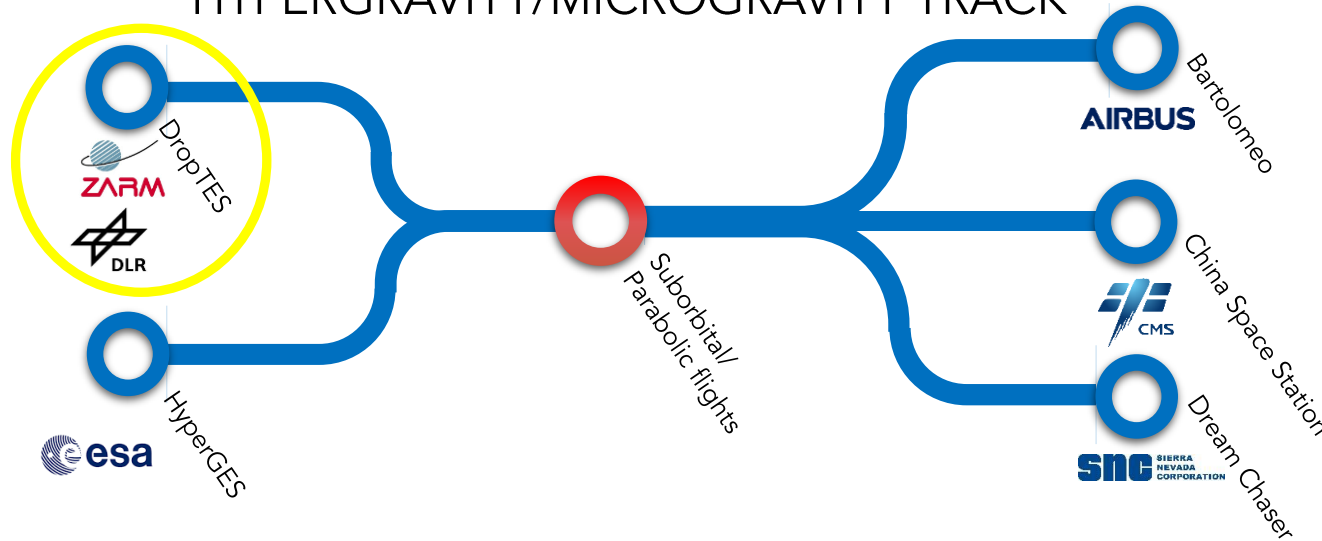




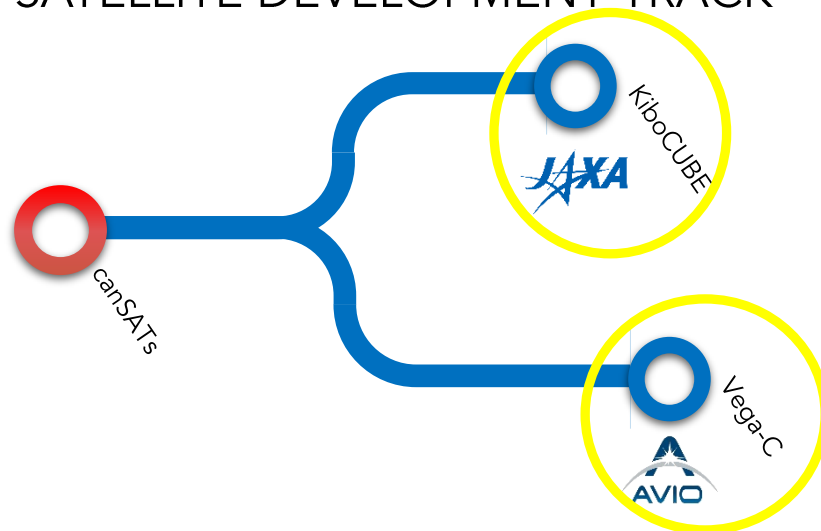
Access to Space for All Initiative



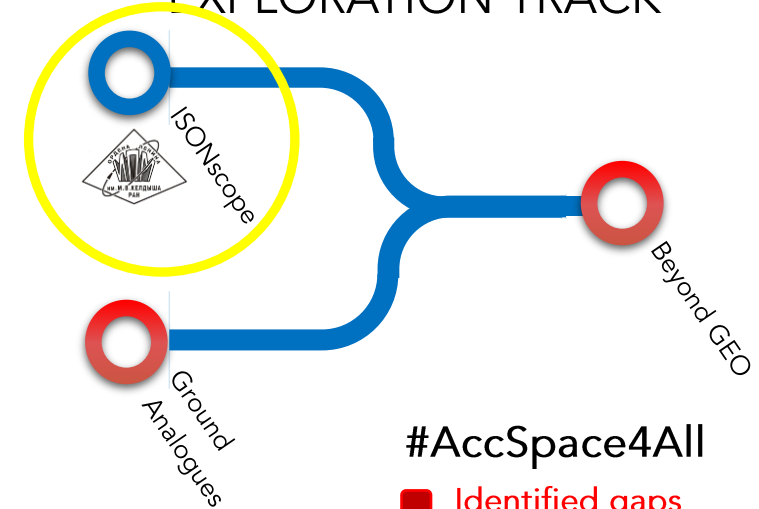
HYPERGRAVITY/MICROGRAVITY TRACK



SATELLITE DEVELOPMENT TRACK



EXPLORATION TRACK



#AccSpace4All

■ Identified gaps



Hypergravity/Microgravity Track



DropTES - Applications Open until 30 June 2021!

- Partners: ZARM (Center of Applied Science Technology and Microgravity) and DLR (German Aerospace Center)
- Established: 2014
- Aims to provide educational or research institutions with opportunities to conduct a series of microgravity experiments at the Bremen Drop Tower in Germany.
- The drop tower experiment series consists of 5 drops or catapult launches to be conducted within one week. Each experiment series is accompanied by an on-site experiment integrations taking place one week prior to the campaign.










Photo credit: ZARM



Hypergravity/Microgravity Track



DropTES: Previous Winners

	Winner		Objective
1 st round 2014	German Jordanian University JORDAN		to investigate the stability of tether dynamics for satellites with electromagnetic tether systems using a Tilger, a mass damper
2 nd round 2015	Universidad Católica Boliviana "San Pablo" BOLIVIA		to examine and evaluate the property of an alloy of Nickel and Titanium "Nitinol" under the microgravity environment
3 rd round 2016	Instituto Tecnológico de Costa Rica Universidad de Costa Rica COSTA RICA		to expand the technical knowledge and information on the behaviour of a reduced-scale robotic arm manipulator such as dynamics, motion, and control under microgravity conditions
4 th round 2017	Warsaw University of Technology POLAND		to verify, in vacuum and microgravity conditions, the deployment of the deorbit sail system on their two unit CubeSat called "PW-Sat2"
5 th round 2018	University of Bucharest Politehnica University of Bucharest ROMANIA		to expose medicine droplets containing aqueous chlorpromazine (CPZ) solution to both laser radiation and microgravity conditions
6 th round 2019	Politecnico de Milano (Polimi) ITALY		to analyze the lateral sloshing of a ferrofluid solution in low-gravity with the aim of measuring its oscillation frequency while subjected to different magnetic field intensities.
7 th round 2020 *experiments delayed to 2021	Universidad Católica Boliviana "San Pablo" BOLIVIA		to determine the 3D printing feasibility under microgravity conditions, measure intra-structure remaining liquid resin after light exposure and compare manufacturing time, amount of used material, while processing the same piece between 2 different approaches (Fused Deposition Modeling (FDM) and Digital Light Processing (DLP))



Hypergravity/Microgravity Track



HyperGES - Applications for the next round will open this year!



- Partner: ESA (European Space Agency)
- Established: 2019
- Aims to provide educational or research institutions with opportunities to conduct a series of hypergravity experiments at the Large Diameter Centrifuge (LDC) facility at the European Space Research and Technology Centre (ESTEC) in the Netherlands.
- The LDC allows samples to be exposed to acceleration forces of 1-20 times Earth's gravity. The experiment series consists of 1-2 weeks for on-site experiment integration/preparation and actual experiment campaign.
- First round winner is a team from Thailand that will study the effect of hypergravity on watermeal, the future food source for space exploration.

Photo credit: ESA





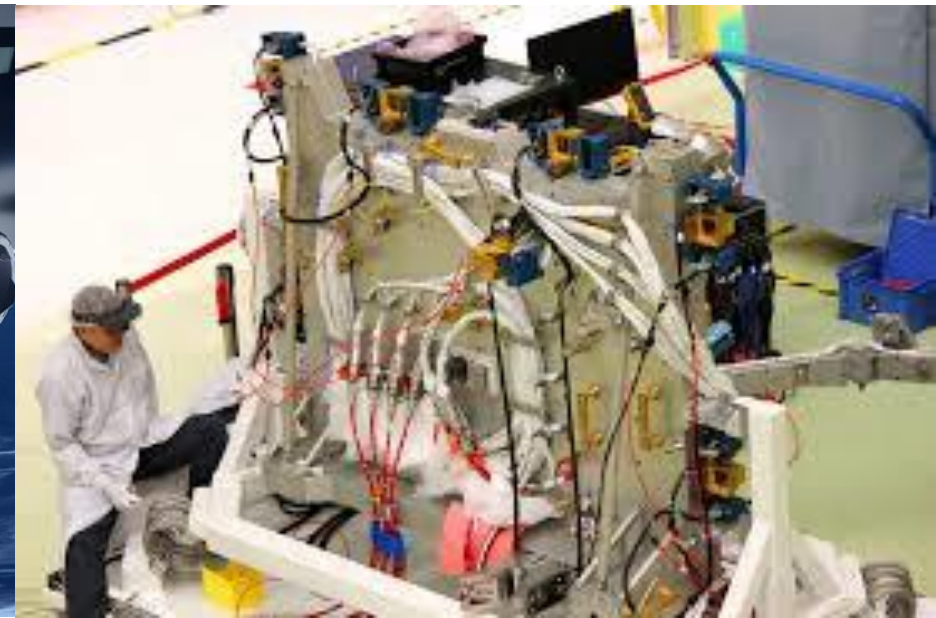
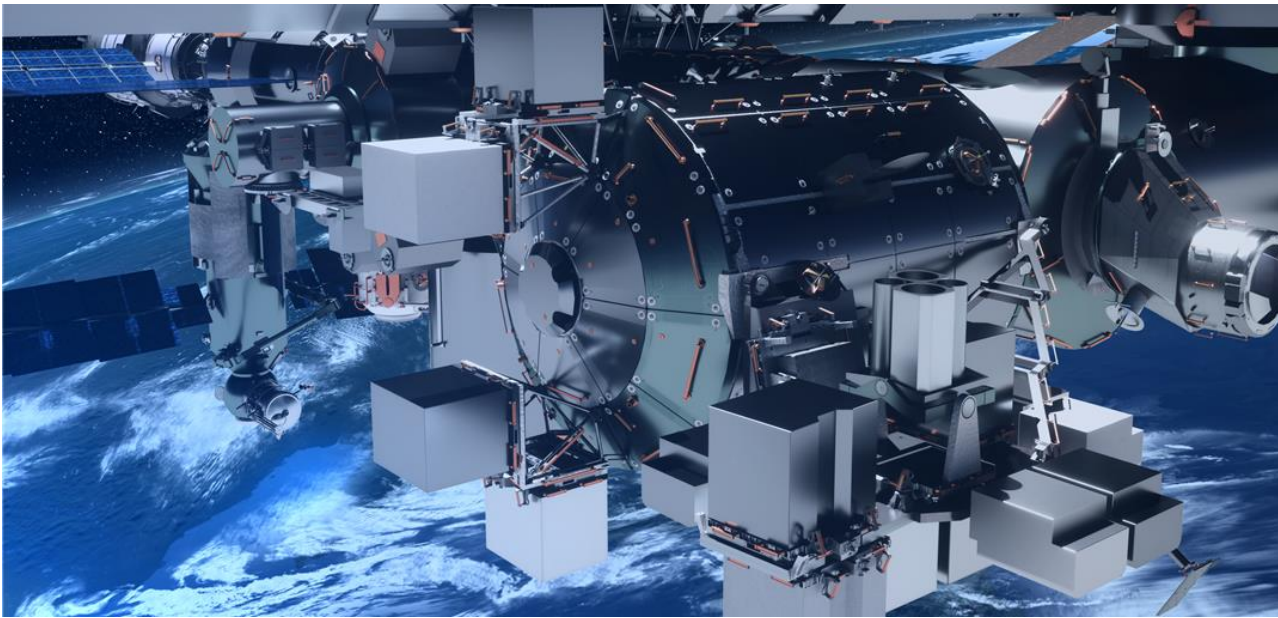
Hypergravity/Microgravity Track

Bartolomeo

- Partner: Airbus S.A.S.
- Established: 2018
- Aims to provide institutions with opportunities to accommodate a payload on the Airbus Bartolomeo external platform on the International Space Station.
- The opportunity is for a 3U CubeSat payload which will get an "All in One" Space mission service (integrated, launched, installed as a part of the Bartolomeo for a mission operation span of a year)
- The first round winner will be announced soon!

AIRBUS

Photo credit: Airbus





Hypergravity/Microgravity Track

China Space Station

- Partner: CMSA (China Manned Space Agency)
- Established: 2018
- Aims to provide scientist from around the world with opportunities to conduct their own experiments on board the China Space Station (CSS) either inside or outside the CSS.
- 9 projects involving 23 institutions from 17 UN Member States has been selected for the first round. The research areas vary from life science, biotechnology, fluid physics, combustion, astronomy to space technologies.



Photo credit:
(left) CMSA
(right) Norwegian
University of
Science and
Technology
(NTNU) ; one of the
winners of the
programme
conducting
research on tumors
in space





Hypergravity/Microgravity Track



Dream Chaser

- Partner: Sierra Nevada Corporation
- Established: 2018
- Aims to provide institutions with opportunities to participate in an orbital space mission utilizing the Dream Chaser[®] space vehicle.
- A technical briefing of the capabilities of the vehicle was conducted in 2018 and a call for interest for a landing site was conducted in 2019. Currently in discussion of opening a round for applications.





Satellite Development Track



KiboCUBE -Applications Open until 31 May 2021!



- Partner: JAXA (Japan Aerospace Exploration Agency)
- Established: 2015
- Aims to provide educational or research institutions from developing countries with opportunities to deploy CubeSats from the Japanese Kibo module of the International Space Station
- 2 CubeSats have been deployed; the first satellite of Kenya "1KUNS-PF" in 2018 and the first satellite of Guatemala "Quetzal-1" in 2020. The first satellite of Mauritius "MIR-SAT 1" will be deployed later this year.

Photo credit: NASA/JAXA

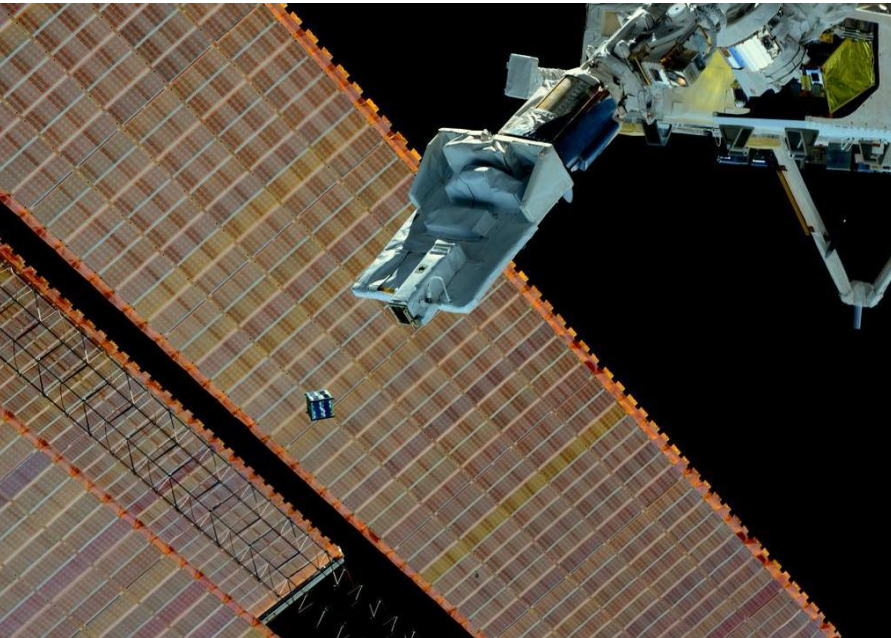


Photo credit: JAXA

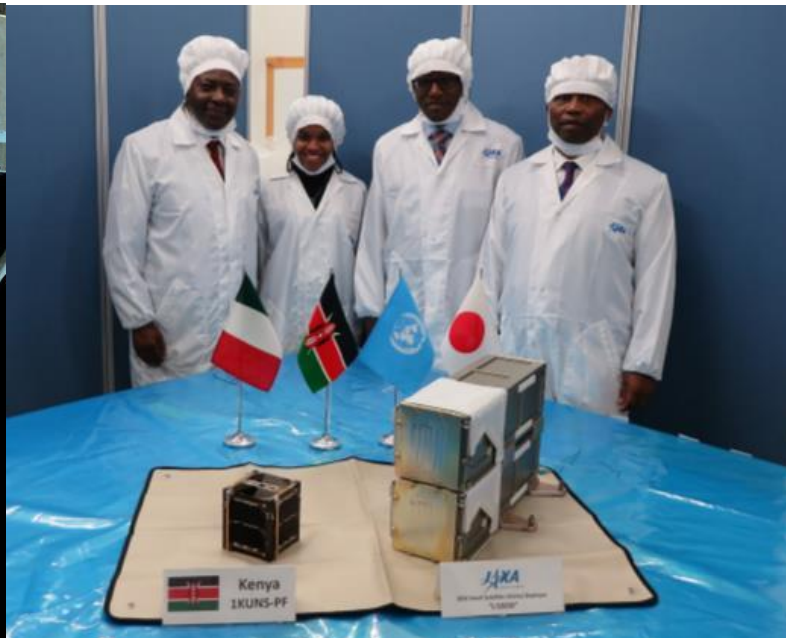
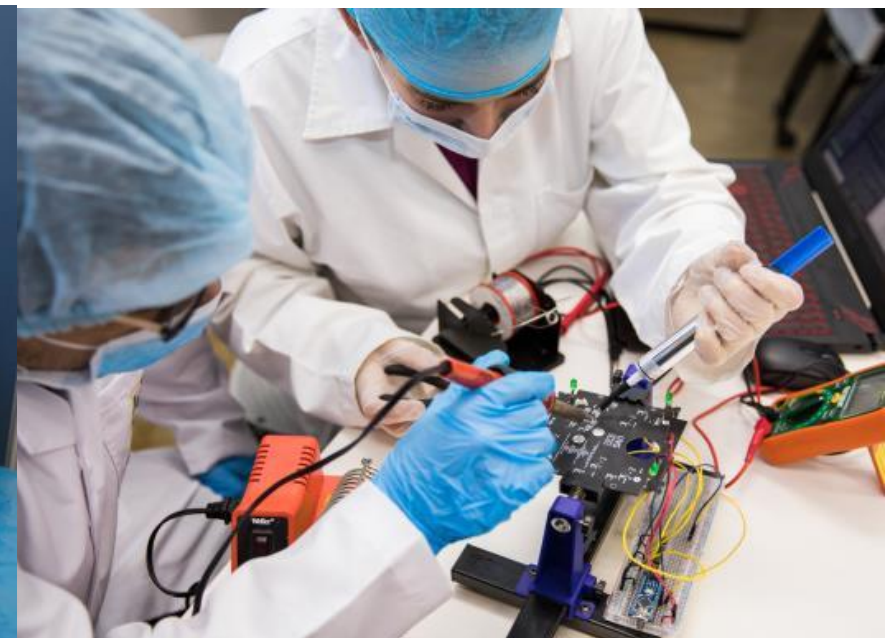


Photo credit: Ivan Castro











Satellite Development Track



KiboCUBE: Previous Winners

	Winner		Objective	Deployed	Launched	Selected
1 st round	KENYA: University of Nairobi "1KUNS-PF"		To monitor agriculture and coastal areas	11.05.2018	04.2018	08.2016
2 nd round	GUATEMALA: Universidad de Valle De Guatemala "Quetzal-1"		To acquire remote sensing data for natural resource management	29.4.2020	03.2020	09.2017
3 rd round	MAURITIUS: Mauritius Research and Innovation Council "MIR-SAT 1"		To collect images and to test onboard communication	Currently under development		06.2018
3 rd round	INDONESIA: Surya University "SS-1"		To demonstrate remote communication	Currently under development		09.2018
4 th round	MOLDOVA: Technical University of Moldova "TUMnanoSAT"		To demonstrate technology and test various components	Currently under development		06.2019
5 th round	SISTEMA DE LA INTEGRACIÓN CENTROAMERICANA (SICA) "MORAZAN-SAT"		To monitor weather variables in remote areas providing early warning during extreme weather events	Currently under development		12. 2020



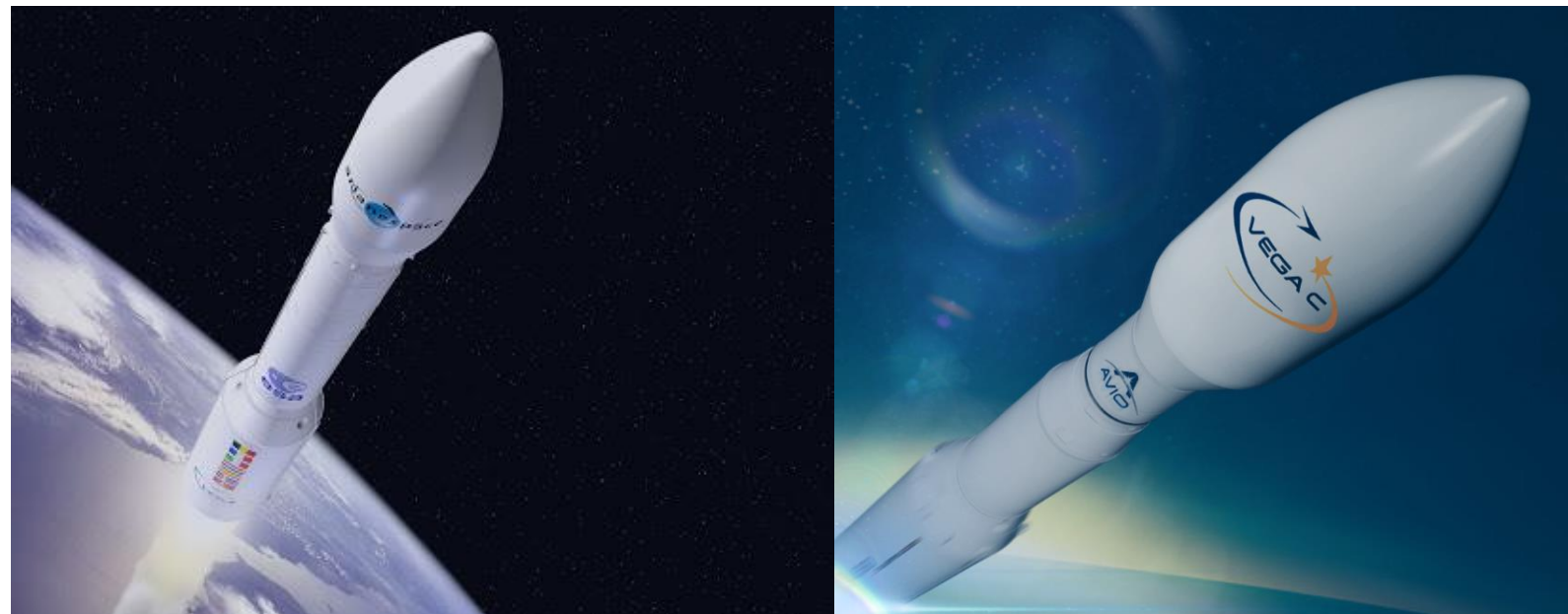
Satellite Development Track

Vega-C -Applications Open until 4 April 2021!

- Partner: Avio S.p.A.
- Established: 2018
- Aims to provide educational and research institutions with opportunities to deploy a CubeSat of maximum 3U size using the Vega-C launcher.
- The first round has opened for applications in October 2020 and will close soon!



Photo credit: Avio





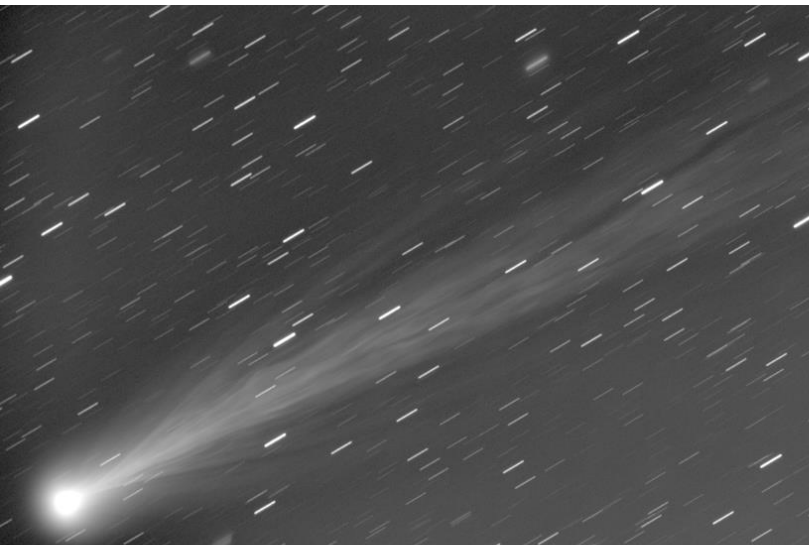
Exploration Track

ISONscope -Applications Open until 1 May 2021!

- Partner: KIAM RAS (Keldysh Institute of Applied Mathematics, Russian Academy of Sciences)
- Established: 2020
- Aims to provide a small wide field-of-view telescopes to educational or research institutions from developing countries.
- The cooperation is under the International Scientific Optical Network (ISON) and winning teams are expected to contribute to the observation campaigns of ISON.



Photo credit: L. Elenn, ISON-NM observatory (H15)

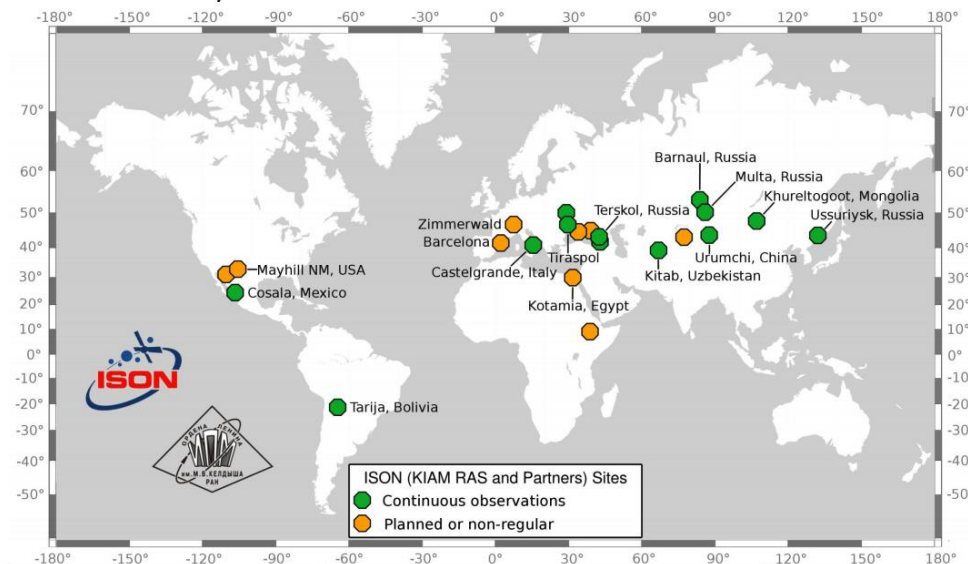


C/2012 S1 (ISON)

Photo credit: ISON



ISON/KIAM RAS OPTICAL TELESCOPE NETWORK





Other related fellowship programmes



Post-graduate Study on Nano-Satellite Technology (PNST)

- Partner: Kyutech (Kyushu Institute of Technology) with the support of the Japanese Ministry MEXT
- Established: 2013
- Provides 3 students in the Master's Programme (2 years duration) and 3 students in the Doctoral Programme (3 years duration) to enroll in Kyutech's Space Engineering International Course (SEIC) for a hands-on, extensive research opportunity in nano-satellite systems through the use of the nano-satellite development and testing facilities available at Kyutech.
- The selected fellows are expected to return to their home countries upon completion of their studies and contribute to their countries using the experience and knowledge gained from the programme.



Photo credit: Kyutech



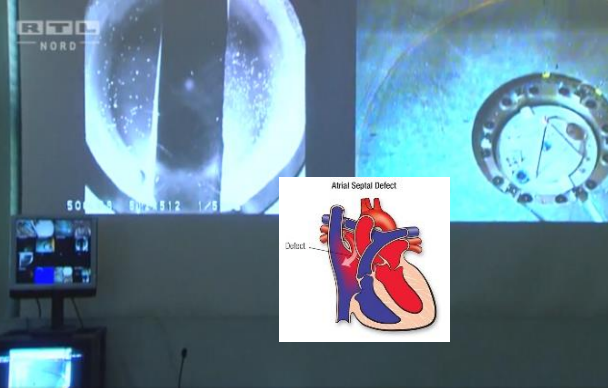
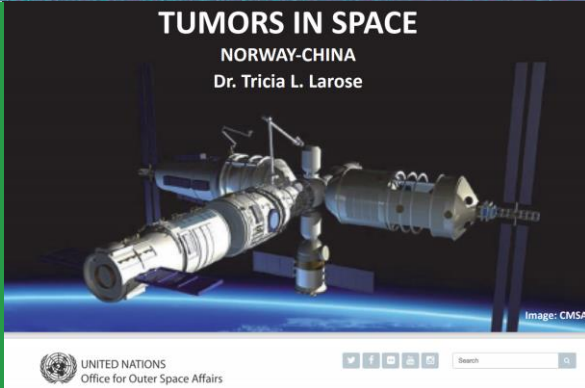
Academic Operators





Sustainable Development Goals (SDGs)

3 GOOD HEALTH AND WELL-BEING

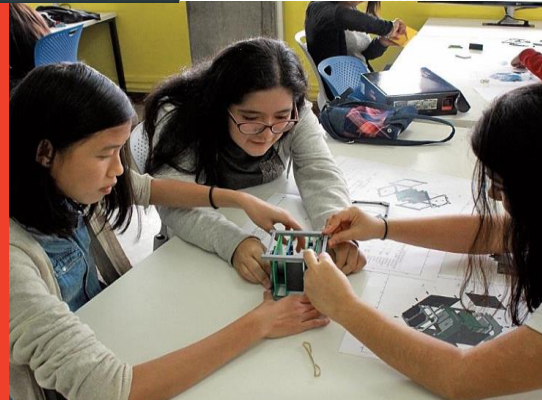


*All photos from Past-winners of the Initiative

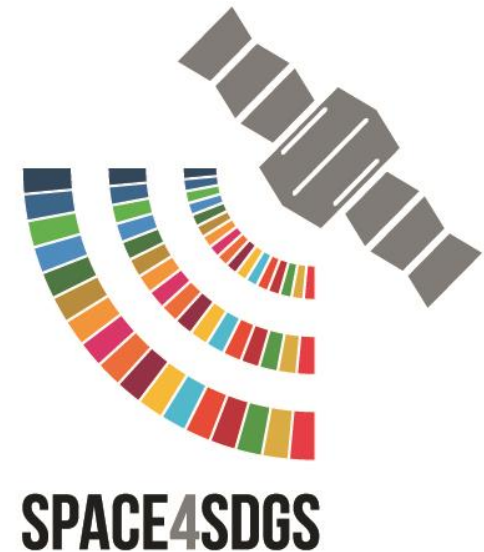
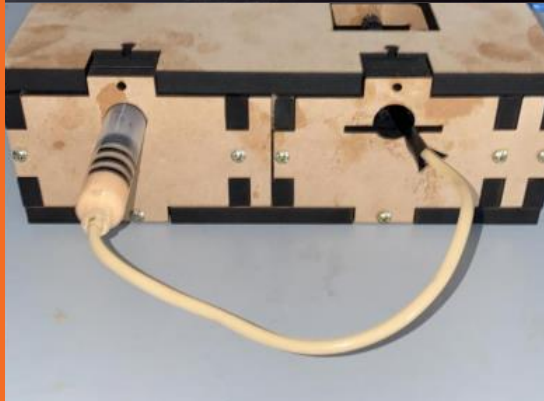
6 CLEAN WATER AND SANITATION



5 GENDER EQUALITY



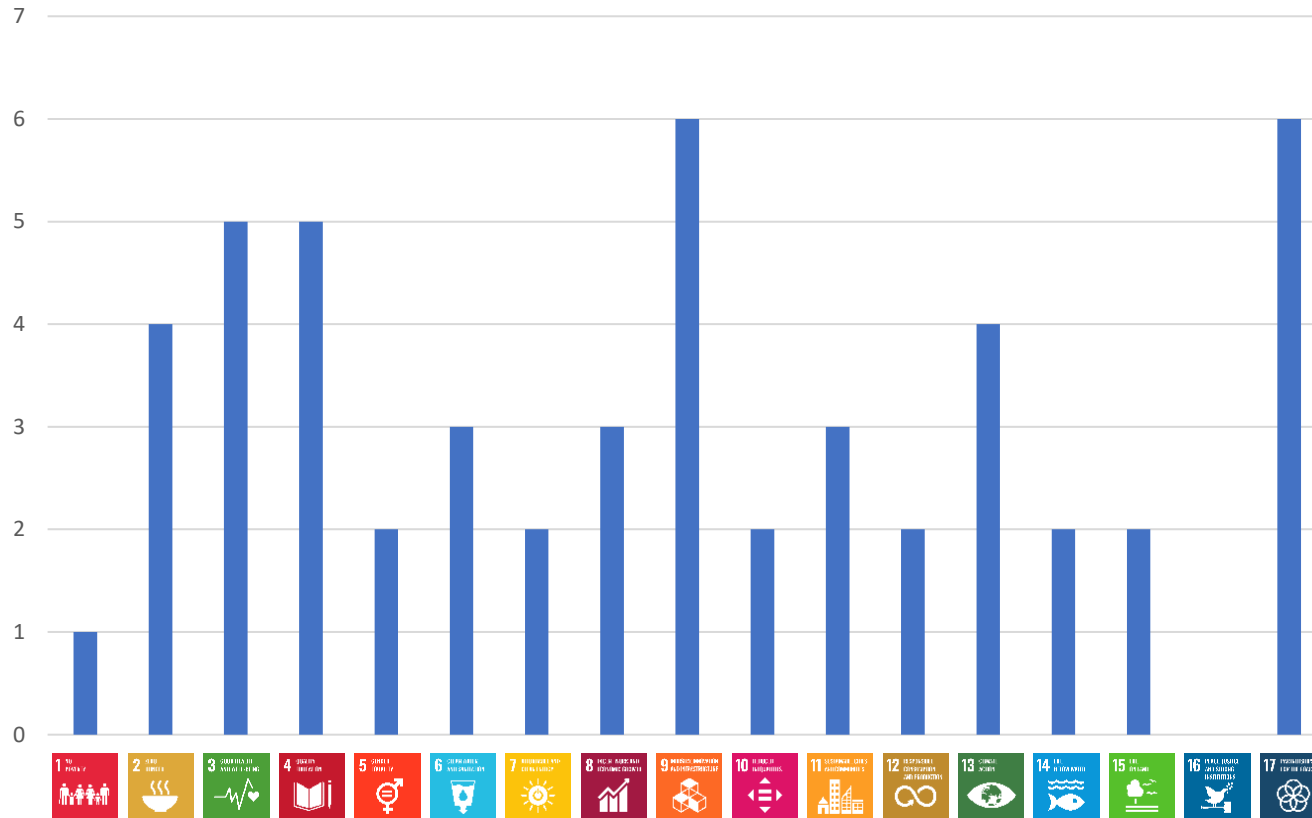
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



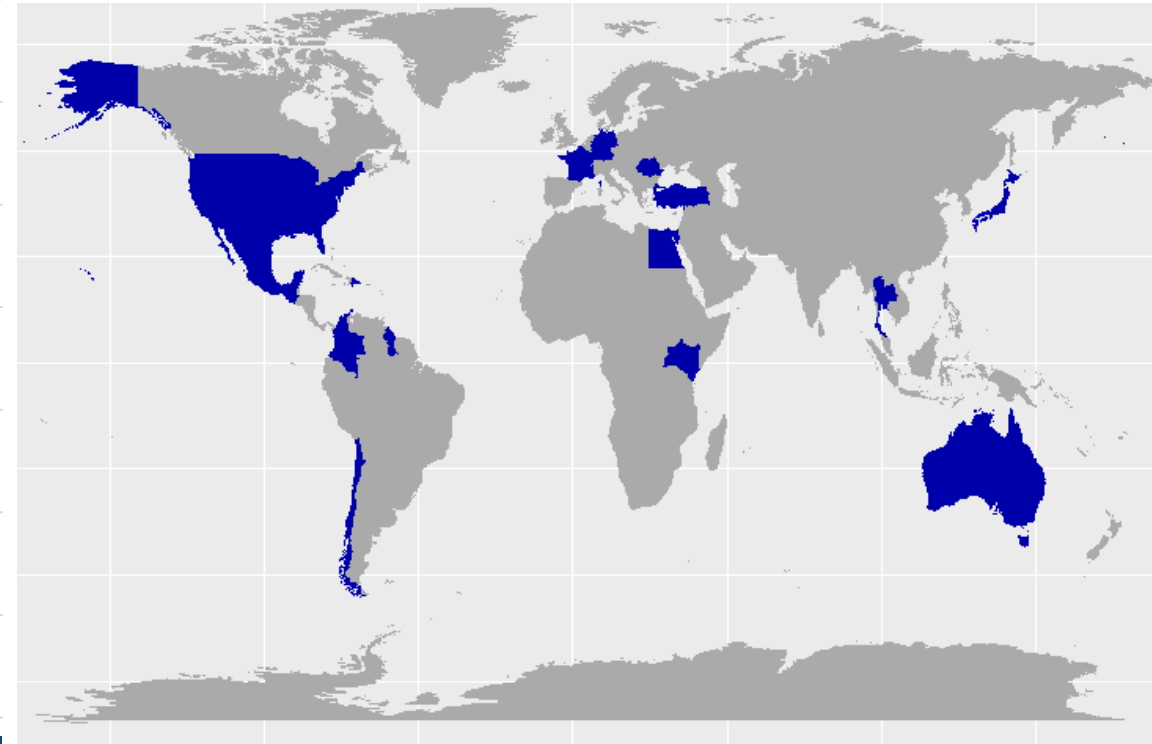


Sustainable Development Goals (SDGs)

Links between proposals and SDGs



- 16 out of the 17 SDGs mentioned
- SDG 9 and SDG 17 the most represented



- 17 countries (eligible)



Access to Space for All Educational Content



“By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”

- Opportunities go to those who prepares best, and knowledge goes to everyone who participates in.
- What we are doing for Education for Access to Space 4 All.
 - Series of Webinars:
 - Tips for an Access to Space for All application
 - KiboCUBE Academy
 - Hypergravity/Microgravity Webinars
 - Post-graduate study on Nano-Satellite Technologies (PNST)
- What would like to do for Education for Access to Space 4 All.
 - Access to Space 4 All Curriculum
 - Access to Space 4 All MOOCs

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all





Access to Space for All Educational Content



“Tips for application” series of webinars

October – December 2020

- "How to Raise Awareness about Your Project"
- "Space Law and Regulations"
- "Experiences from Past Winners"
- "Artificial Intelligence and Access to Space for All"

- Two sessions each webinar, reach out for different time zone
- About 60 participants each webinar
- Twitter "AccSpace4All" rank top in the Office

Available on OOSA's website:

https://www.unoosa.org/oosa/en/ourwork/access2space4all/accspace4all_tips.html

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



UNITED NATIONS
Office for Outer Space Affairs

Outer Space Treaty

Entry into force: 10 October 1967

- Exploration and use of outer space - province of all mankind (Article I)
- Principle of non-appropriation (Art. II)
- International law and UN Charter (Art. III)
- Prohibition of Weapons of mass destruction (Art. IV)
- **International responsibility for national activities in outer space (Art. VI)**
- **International liability for damage (Art. VII)**
- **Registration of space object (Art. VIII)**
- Cooperation and mutual assistance, due regard, harmful contamination, harmful interference (Art. IX)
- Information and notification (Art. XI)

Slide 6

JP AD NS A AV UI K AA AV



“KiboCUBE Academy”

14 January – 4 February 2021, every Thursday

- Introduction of KiboCUBE Academy by Yasuko Shibano, JAXA
- CubeSats Change the World by Toshinori Kuwahara, Tohoku Univ.
- Introduction to CubeSat Technologies by Toshinori Kuwahara, Tohoku Univ.
- Overview of Satellite Development Process by Shinichi Nakasuka, Tokyo Univ.
- How to Make Your Satellite Survive in Space by Shinichi Nakasuka, Tokyo Univ.
- Introduction to Satellite Testing by Mengu Cho, Kyutech
- CubeSats for Capacity Building by Mengu Cho, Kyutech
- Satellite Operation and Related Regulations by Toshinori Kuwahara, Tohoku Univ.
- Q and A

Available on OOSA's website:

<https://www.unoosa.org/oosa/en/ourwork/psa/hsti/kibocube/2020.html>

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

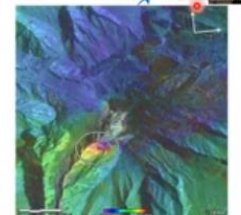


Synthetic Aperture Radar (SAR)

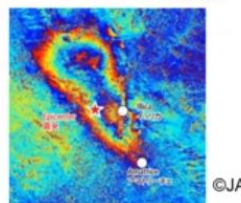


ALOS-2

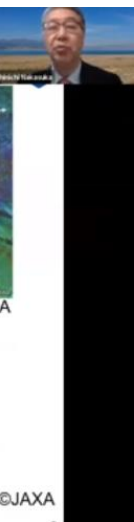
©JAXA



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Access to Space for All Educational Content

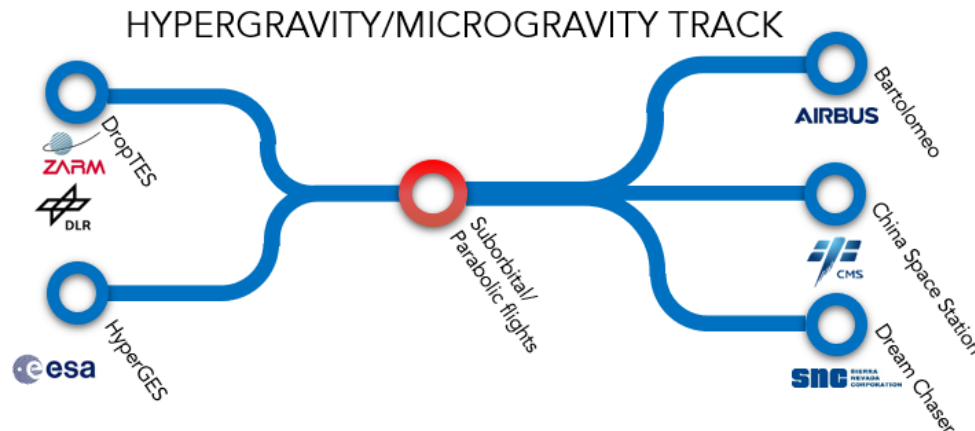
STAY TUNED!

Hypergravity/Microgravity series of webinars

- Starting from April, 9 webinars planned
- Experts from all over the world
- To introduce general aspects of developing and conducting an experiment in the Hypergravity/Microgravity

Visit AccSpace4All website:

<https://www.unoosa.org/oosa/en/ourwork/access2space4all/index.html>





Access to Space for All Educational Content



Curriculum

- We cannot train everyone, but we provide methodology.
- A syllabus contains the way you may go.
- As a baseline of the education in Access to Space 4 All.

MOOCs

- A brand-new study platform.
- Everything integrated in one platform.
- Provide a better learning experience.

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all





Access to Space for All Educational Content



Partnerships

- Partnership is a distinctive feature of the Initiative. The Access to Space for All Initiative is only possible thanks to partnerships with various public and private actors, who are contributing to the initiative in various manners. **New contributions to the Initiative are possible and encouraged.**
- Participants are important to us, partnership either.

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all





Access to Space for All Initiative



Reach of Access to Space for All

8 OCTOBER 2020

Daily Press Briefing by the Office of the Spokesperson for the Secretary-General

**Space Week

And as you know, this is Space Week. So I want to flag that, tomorrow, the United Nations Office for Outer Space Affairs, based in Vienna, is organizing a webinar on KiboCUBE programme to mark the Space Week.

The KiboCUBE programme is a collaboration with the Japanese Aerospace Exploration Agency and gives developing countries the opportunity to deploy a satellite from the Japanese module of the International Space Station free of cost. Kenya and Guatemala have already deployed their first satellites into orbit through KiboCUBE, building their space technology skills and gaining access to data and imagery. In the webinar, past and current winners of KiboCUBE will discuss how the programme has helped them with access to space exploration. Other winners, such as Mauritius, Indonesia and Moldova, are set to deploy their satellites through KiboCUBE in the coming months and years.

“The Organization advanced a broad range of technology initiatives related to sustainable development. This included [...] the Access to Space for All initiative.”

UN Secretary-General

Report of the

<https://www.un.org/annualreport/2019/files/2019/09/Annual-report-SG-2019-EN-Complete-Web.pdf>

Reach AccSpace4All last 2 months

- Facebook: ~ 25,000
- Twitter: ~ 464,000





Access to Space for All Initiative



Value propositions

VALUE PROPOSITION FOR PARTNERS

- ❑ Partner with United Nations to bridge the space divide and support the development of cross-cutting skills
- ❑ Visibility of infrastructure and facilities
- ❑ Opportunities augmented and more impactful, having long-lasting impact
- ❑ Cost-efficient
- ❑ Development of responsible behavior
- ❑ Space for economy, society, accessibility and diplomacy

VALUE PROPOSITION FOR APPLICANTS

- ❑ Acquiring cross-cutting STEM skills (human capital)
- ❑ Get sustainable A-Z capabilities
- ❑ Learning by doing
- ❑ Development of space economy
- ❑ Cross-fertilization, skills acquired through these opportunities can be used in other fields
- ❑ Access to research facilities and infrastructure
- ❑ Visibility of research



Access to Space for All Initiative

Next steps

- Working on filling in the gaps
- Space for All Curriculum and Space for All MOOC
- Education for Access to Space for All
- Network of winners
- ...



#AccSpace4All

Working on filling in the gaps

Ongoing discussions on

- Parabolic flights/balloons
- Analogues
- Exploration data
- ...

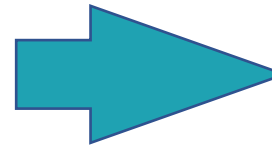
Missing

- CanSats
- Analogues

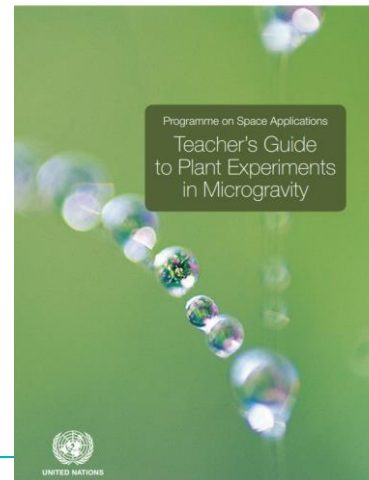
Curriculum and MOOCs

Support to opportunities

- Need to streamline content
- Create curriculum
- Work with regional centres
- Development of teacher's guides



UNITED NATIONS
OFFICE FOR OUTER SPACE AFFAIRS



Education for Access to Space for All

Support to opportunities

- Fellowships and grants
- Train the trainers
- Hardware
- Software
- Local reach



Access to Space for All Initiative



Everything you say matters

Help us help

#AccSpace4All