



Access to Space for All: News and Updates

Luc St-Pierre, Mami Sasamura, Hongqing Li



UNITED NATIONS
Office for Outer Space Affairs

SPACE APPLICATIONS SECTION (SAS)

- (a) Promoting the use of space science and technology and their **applications** towards achieving the SDGs, particularly in developing countries;
- (b) Planning and implementing the 52 years old **United Nations Programme on Space Applications** to build national capability in the areas of basic sciences, basic space technology and human space technology, and to promote integrated space technology applications in the areas of global health, disaster management, climate change, humanitarian assistance, environmental monitoring, and natural resources management.



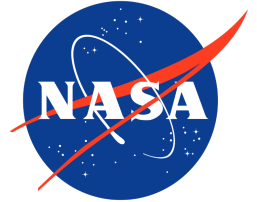


Access to Space for All

Provide research and orbital opportunities to access space and to ensure that the benefits of space, in particular for sustainable development, are accessible to all

- **10** Hands on Opportunities
- **1** Annual Fellowship
- **34** Awardees involving **47** Entities from **34** countries
- **5** CubeSats launched
- **8** Microgravity and **3** Hypergravity Experiments
- **16** projects in development
- **70+** Scholarships granted
- **100+** Hours of educational content on YouTube

Space Agencies



Research Institutions and Universities



Private Sector





Access to Space for All Awardees



DropTES



2014 German Jordanian University, Jordan



2015 Universidad Católica Boliviana "San Pablo", Bolivia



2016 Instituto Tecnológico de Costa Rica, Universidad de Costa Rica, Costa Rica



2017 Warsaw University of Technology



2018 University of Bucharest and Politehnica University of Bucharest, Romania



2019 Politecnico de Milano "Polimi", Italy



2020 Universidad Católica Boliviana "San Pablo", Bolivia



2023 Universidad de Antioquia, Colombia



2024 Universidad de Central Venezuela

HyperGES



2020 Mahidol University, Thailand



2023 Macau University of Science and Technology, China



2023 Universidad Católica Boliviana "San Pablo", Bolivia



2024 University of San Carlos and Holy Name University, the Philippines

Bartolomeo



2021 A consortium composed of Egyptian Space Agency, Kenya Space Agency, and Uganda National Space Programme

PHI



2022 Antarikchya Prathistan, Nepal

2022 National Space Science Agency, Bahrain

KiboCUBE



2015 University of Nairobi, Kenya



2016 Universidad del Valle de Guatemala



2017 Mauritius Research and Innovation Council



2018 Surya University, Indonesia



2019 Technical University, Moldova



2020 Central American Integration System (SICA)



2022 Universidad Popular Autónoma del Estado de Puebla, México

China Space Station



2019 9 proposals were selected initially. 7 projects from 17 institutions from 13 different countries are under development: China, Germany, India, Italy, Japan, Kenya, Mexico, Peru, Poland, Russia, Saudi Arabia, Spain, Switzerland

Vega C



2023 University of Nairobi, Kenya, supported by the University of Arizona and Space Trust

ISONscope



2022 Kenya Space Agency



2022 National Space Research and Development Agency, Nigeria



Access to Space for All

CubeSat launch/deployment: Exolaunch EXOpod



- Opportunities to deploy CubeSats for the selected entities flying with the Exolaunch EXOpod deployment system.
- Exolaunch is a premier global launch, deployment, mission management, integration and in-space logistics provider for small satellites (HQ in Germany and with offices in France and United States of America)
- **Agreement signed in January 2024 and Announcement of Opportunity is today 26 June 2024**
<https://www.unoosa.org/oosa/en/ourwork/access2space4all/Exolaunch/Exolaunch-Index.html>



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In collaboration with



ACCESS TO SPACE FOR ALL
NEW ANNOUNCEMENT

Exolaunch EXOpod
First-Round Opportunity

Free of charge launch
opportunities to space for
CubeSats

Announced on: 26 Jun 2024

Application by: 31 Dec 2024



Please visit the UNOOSA Access to Space for All webpage for details:
<https://www.unoosa.org/oosa/en/ourwork/access2space4all/Exolaunch/Exolaunch-Index.html>





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Microgravity experiments: DropTES



- ZARM (Centre of Applied Space Technology and Microgravity) and DLR (German Aerospace Centre)
- Access to the Bremen Drop Tower and GraviTower Bremen Pro in Germany and to technical and professional tutoring
- **New round to be announced in Q3 2024**



2024 Universidad de Central Venezuela

Effects of microgravity on the welding of aerospace aluminium alloys

Photo credit: ZARM



2014 German Jordanian University



2015 & 2020 Universidad Católica Boliviana “San Pablo”



2016 Universidad de Costa Rica



2017 Warsaw University of Technology



2018 University of Bucharest Politehnica



2019 Politecnico de Milano “Polimi”



2023 Universidad de Antioquia





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Hypergravity experiments: HyperGES



- European Space Agency (ESA)
- Access to 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.
- **New round to be announced in Q3 2024 and cooperation UNOOSA/ESA to continue**



2020 Mahidol University, Thailand

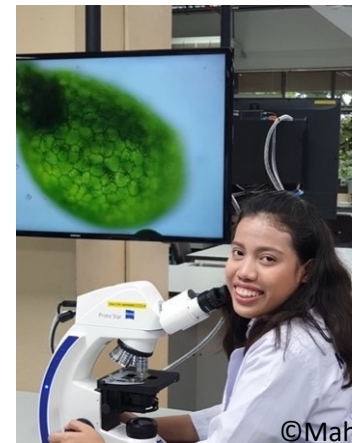
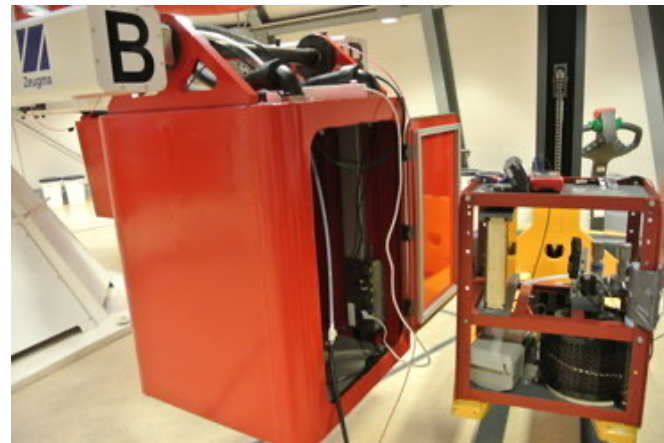
2023 Macau University of Science and Technology

2023 Universidad Católica Boliviana "San Pablo"

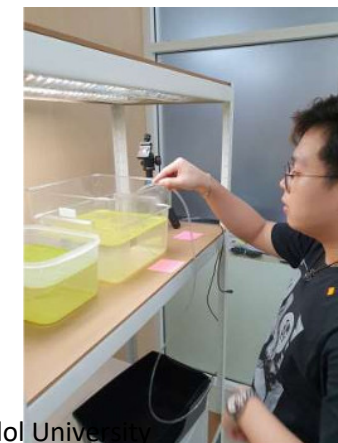


2024 University of San Carlos and Holy Name University
Test the growth and response of bone cells on 3D-printed scaffolds using material extracted from red seaweeds in hypergravity.

©ESA



©Mahidol University





Access to Space for All

CubeSat development/deployment: KiboCUBE



- Japan Aerospace Exploration Agency (JAXA)
- Deployment of 1U CubeSats from the Japanese Experiment Module "Kibo" of the International Space Station



8th round opened for applications until 31 December 2023; currently under selection.



Kenya: "1KUNS-PF" in 2018



Guatemala: "Quetzal-1" in 2020



Mauritius: "MIR-SAT 1" in 2021



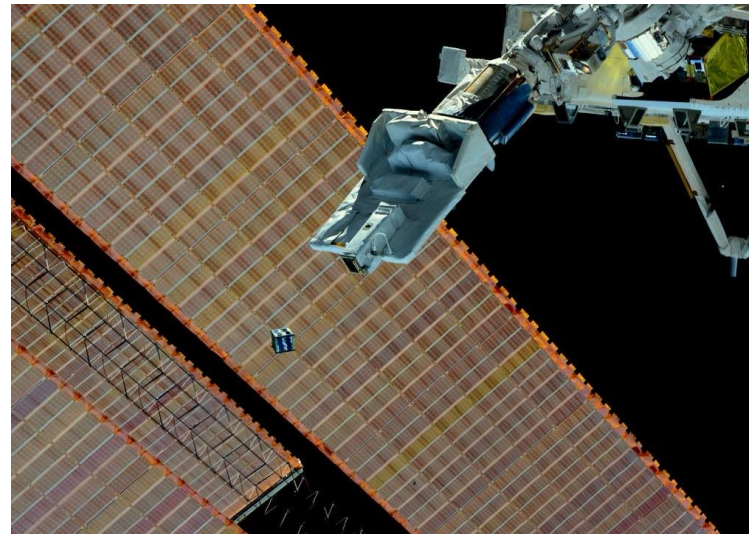
Moldova: "TUMnanoSAT" in 2022



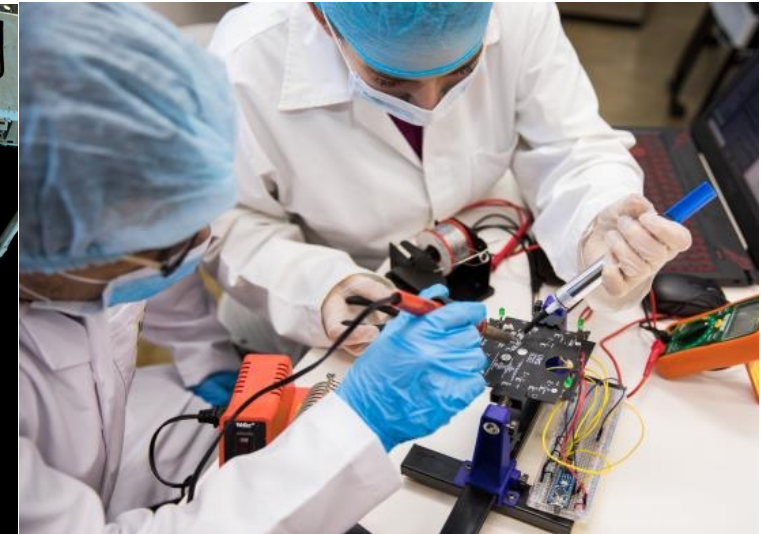
Indonesia: "SS-1" in 2023

- 2 under development in the Central America Integration System (**SICA**) and **Mexico**.

© JAXA



© Ivan Castro





Access to Space for All

Kibo Robot Programming Challenge (Kibo-RPC)



- Japan Aerospace Exploration Agency (JAXA)
- UNOOSA joined on 5th round, opening the competition worldwide (*54 teams, 256 people from 19 countries participating as UN international slots*).



The 4th round in 2023, ORION team from the Yogyakarta State University, Indonesia selected from the UN International slots and moved to the final.

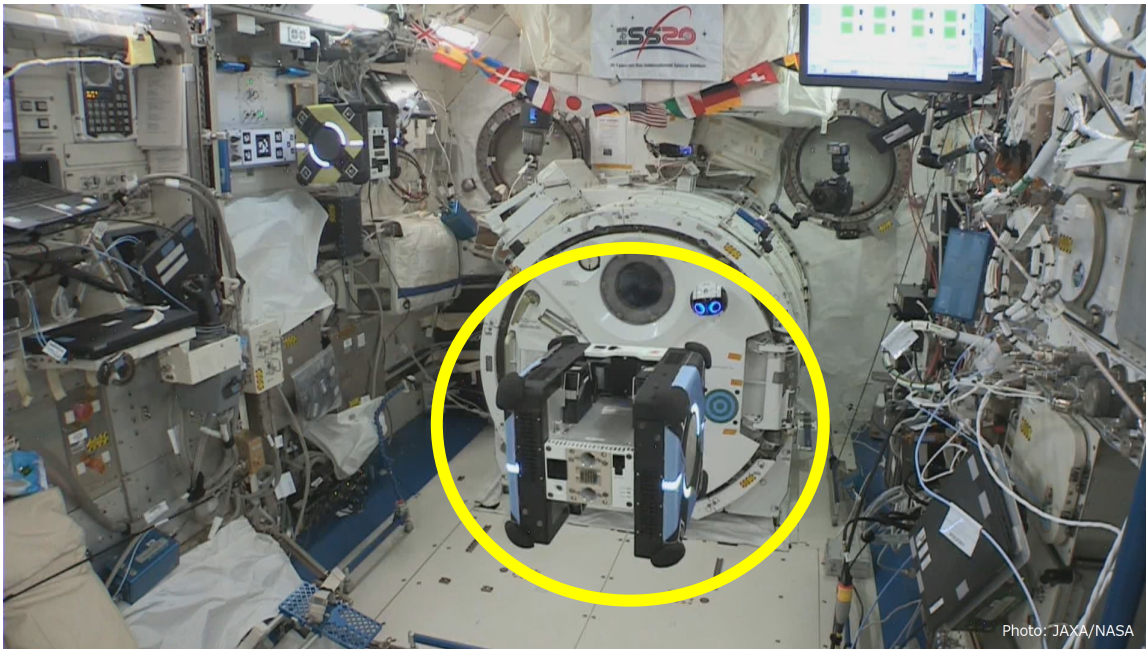


Photo: JAXA/NASA

Kibo-RPC is an educational programme which students will solve various problems by moving free-flying robots (Astrobee and Int-Ball) using their programming skills. The preliminary round will be held in a **simulation environment**, and, in the final, in the Japanese Experiment Module "**Kibo**" aboard the International Space Station (ISS) *around November 2024*.



Access to Space for All Payload Hosting Initiative (PHI)



- Mohammed Bin Rashid Space Centre (MBRSC)
- Hosting a payload (up to 5U) on a 12U PHI modular satellite platform developed by MBRSC.
- 2nd round was open for applications until 31 March 2024 and currently under selection.

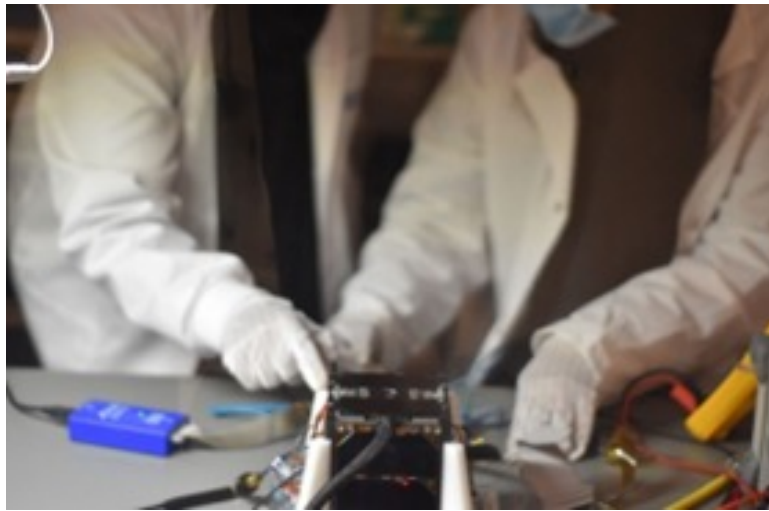


First round in 2022 awarded to teams from;
Bahrain will test communication between the satellite and the ground station/Internet of Things (IoT) terminals;



Nepal will study the operation of middleware for drones in space.

©MBRSC





Access to Space for All

WHY?



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SPACE4SDGS 

4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



2 ZERO HUNGER



Earth's Gravity Sample
(control)



Simulated Microgravity
Sample

3 GOOD HEALTH AND WELL-BEING





Access to Space for All

Telescope provision: ISONscope



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- Keldysh Institute of Applied Mathematics
- **2nd round in discussion between UNOOSA/Keldish Institute**



Kenya Space Agency
Site selection completed



Centre for Basic Space Science of the National Space
Research and Development Agency, Nigeria
Material delivered and training in preparation



ISONscope in partnership with the Keldysh Institute of Applied Mathematics, the Russian Academy of Sciences (KIAM-RAS) offers the provision of small telescopes to academic and research institutions in developing countries, with the aim of increasing the capabilities of countries for astronomy and space data analysis.



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