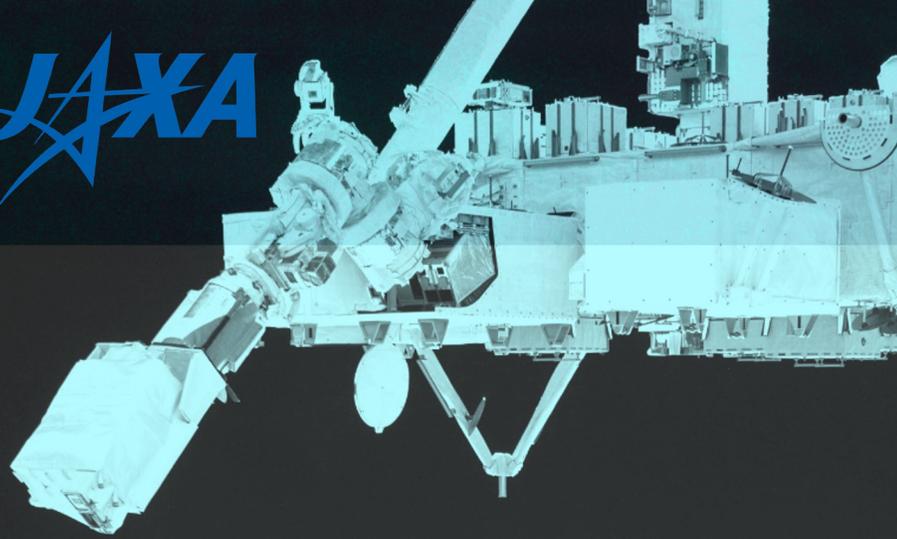




UNITED NATIONS  
Office for Outer Space Affairs



# KiboCUBE 8<sup>th</sup> round Announcement of Opportunity Webinar

22 June 2023  
13:00 CEST



# Access to Space for All

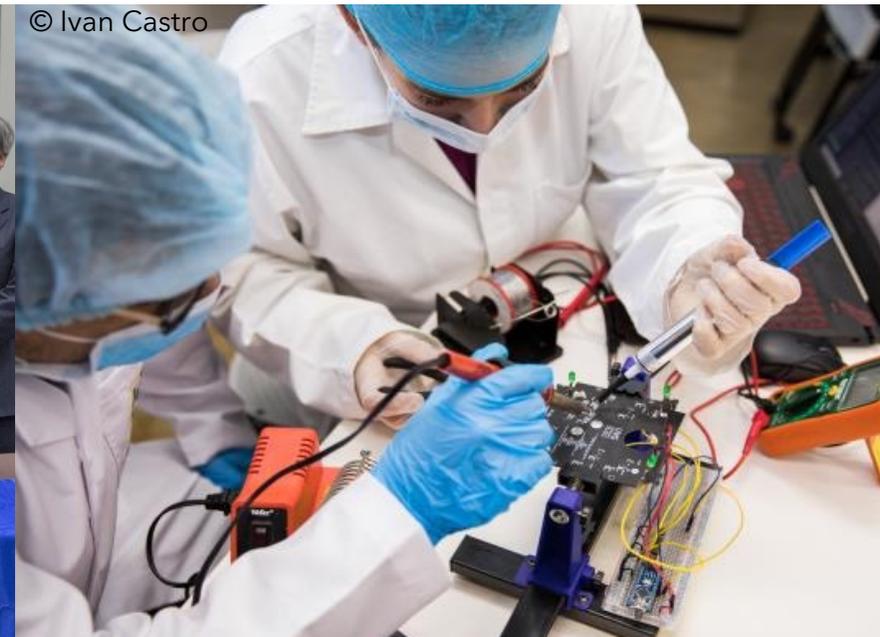
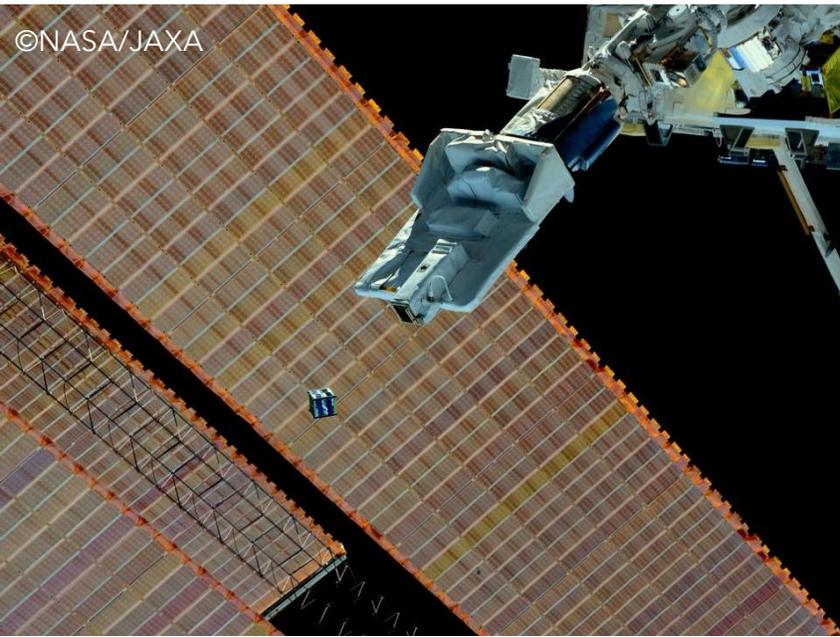
## Satellite Development Track



## KiboCUBE



- Partner: Japan Aerospace Exploration Agency (JAXA)
- Established: 2015
- Aims to provide educational or research institutions from developing countries with opportunities to **deploy 1U CubeSats from the Japanese Kibo module of the International Space Station**
- 5 CubeSats have been deployed; the first satellite of Kenya: "1KUNS-PF" in 2018, Guatemala: "Quetzal-1" in 2020, Mauritius: "MIR-SAT 1" in 2021, Moldova: "TUMnanoSAT" in 2022, and Indonesia: "SS-1".
- 3 CubeSats are under development in the Central America Integration System (SICA), Mexico, and Tunisia.





# Access to Space for All

## KiboCUBE Awardees



## KiboCUBE 1<sup>st</sup> Round Awardee: Kenya

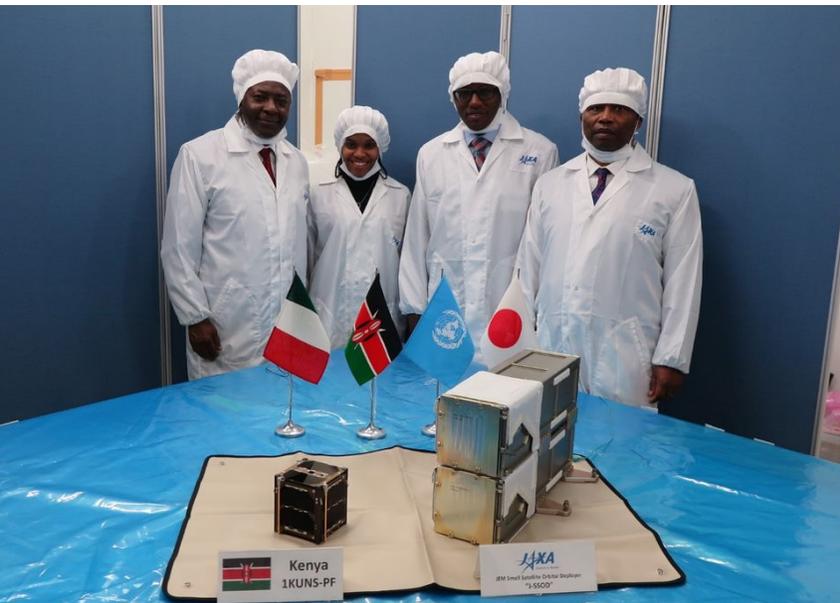
- Institute: University of Nairobi
- Satellite: 1KUNS-PF
- Objective: To monitor agriculture and coastal areas
- Partnership: University of Rome (Italy)
- Deployed from ISS: 11 May 2018
- Re-entered atmosphere: June 2020

### Achievements

- More than 300 images downloaded, surpassing initial expectations
- **Accelerated the creation of the Kenya Space Agency,** which led to more KSA participation in other Access to Space for All opportunities such as the Bartolomeo and ISONscope programme

Photo credit: JAXA

Photo credit: JAXA/NASA





# Access to Space for All

## Satellite Development Track



## KiboCUBE 2<sup>nd</sup> Round Awardee: Guatemala

- Institute: Universidad del Valle de Guatemala
- Satellite: Quetzal-1
- Objective: To test the acquisition of EO data
- Partnership: Universitat Wurzburg, University of Alabama, University of Colorado Boulder, LASP, NASA, ESAC, UKSA, ASTROSAT, and more
- Deployed from ISS: 29 April 2020
- Re-entered atmosphere: August 2021

### Achievements

- In operation for 211 days with 84,976 data packages received globally, **involved more than 100 students in the project, developed 70% of the CubeSat in-house.**
- **Conducted successful outreach activities** involving the media, workshops for young students (especially girls) & publishing books/documentaries

Photo credit: Ivan Castro





# Access to Space for All

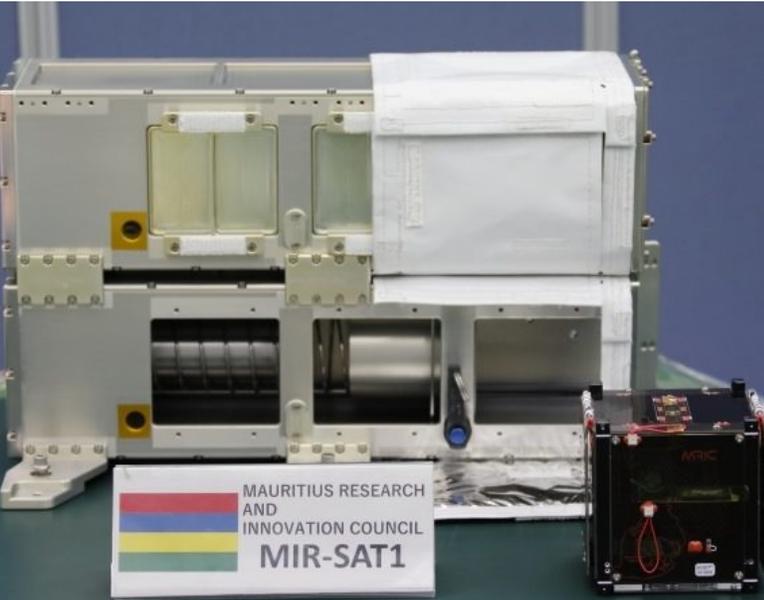
## Satellite Development Track



## KiboCUBE 3<sup>rd</sup> Round Awardee: Mauritius

- Institute: Mauritius Research and Innovation Council
- Satellite: MIR-SAT 1
- Objective: To collect images and to test onboard communication
- Partnership: SSC Clyde Space
- Deployed from ISS: 22 June 2021
- Re-entered atmosphere: April 2022

Photo credit: JAXA



### Achievements

- One of the first Small Island Developing Nations (SIDs) to develop a satellite. Downloaded images of Mauritius and neighboring areas.
- **Conducted successful outreach activities** involving the amateur radio society and providing antenna workshops to over 100 students in 12 schools and 5 universities in the country.

Photo credit: MRIC/MARS





# Access to Space for All

## KiboCUBE Awardees



## KiboCUBE 4<sup>th</sup> Round Awardee: Moldova

- Institute: Technical University of Moldova
- Satellite: TUMnanoSAT
- Objective: Technology demonstration in various modules and subsystems of the CubeSat
- Partnership: Romanian Space Agency
- Deployed from ISS: **12 August 2022**

Photo credit: TUM



Photo credit: JAXA/NASA



# Access to Space for All

## KiboCUBE Awardees



## KiboCUBE 3<sup>rd</sup> Round Awardee: Indonesia

- Institute: Surya University
- Satellite: SS-1
- Objective: technology demonstration that will test communication between an Automatic Package Reporting System (APRS) payload and the ground using amateur radio frequency
- Partnership: LAPAN/BRIN
- Deployed from ISS: **6 January 2023**

Photo credit: Surya University





# Access to Space for All

## KiboCUBE Awardees



### Access to Space for All Awardees

Through the various programmes under the initiative, UNOOSA has awarded opportunities to 30 awardees from all regions. The awardees conduct various activities, not only for the development of science and technology, but also outreach, education, and other impactful actions. Learn more about the teams and their space/related activities.



About Us | Our Work | Space4SDGs | Information for... | Events | Space Object Register

Our Work > Access to Space for All



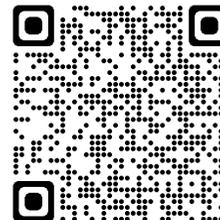
**ACCESS TO SPACE FOR ALL**  
A joint initiative to offer access to space research facilities, infrastructure and information, and to promote international cooperation in the peaceful uses of outer space.

[Our awardees >](#)

- [For Member States >](#)
- [Partnerships >](#)
- [Awardees >](#)
- [Contributions >](#)
- [Brochure >](#)
- [Hypergravity/Microgravity Track >](#)
- [Satellite Development Track >](#)
- [Space Exploration Track >](#)
- [Workshops and Expert Meetings >](#)

### Access to Space for All Latest Information

- EVENT** Access to Space for All will hold a hybrid side event at the 66th session of COPUOS on 31 May 2023, [read more >](#) (26 May 2023)
- EVENT** KiboCUBE will hold a hybrid side event at the 66th session of COPUOS on 2 June 2023, [read more >](#) (26 May 2023)
- EVENT** 1st Access to Space for All Expert Meeting has been held on 15-17 May 2023 online, [read more >](#) (17 May 2023)
- NEWS** UNOOSA and ESA announced the 2nd round HyperGES awardees on 8 May, [watch here >](#) (8 May 2023)



#### SATELLITE DEVELOPMENT TRACK AWARDEES

[read more >](#)

##### PHI Awardees

##### KiboCUBE Awardees

The United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) Japanese Experiment Module (Kibo) "KiboCUBE" is a programme of the United Nations Office for Outer Space Affairs (UNOOSA) in collaboration with the Japan Aerospace Exploration Agency (JAXA). The programme started in 2015. For information on how to apply to KiboCUBE, check the [Rounds page](#).

- Round 6: Universidad Popular Autónoma del Estado de Puebla (UPAEP)**  
This round was opened in December 2020 and closed at the end of May 2021, and UPAEP, the Popular Autonomous University of the State of Puebla of Mexico have been selected the awardees. UPAEP's CubeSat 1U CubeSat "Gxiba" is to observe active volcanoes in Mexico and analyze the ash dispersion. [read more >](#)
- Round 6: École Supérieure Privée d'Ingénierie et de Technologie Appliquée (ESPITA)**  
This round was opened in December 2020 and closed at the end of May 2021, the Private Higher School of Engineering and Applied Technology of Tunisia has been selected as the awardees. The objective of TUNSAT 1 is mainly to build the capacity of Tunisia in the aerospace industry. [read more >](#)
- Round 5: Sistema de la Integración Centroamericana (SICA)**  
SICA, the Central American Integration System has been selected as the awardee in the 5th round in 2020. SICA's CubeSat "Morazan-Sat" is currently under development, seeks to be a proof of concept for the development of a UHF/VHF communication platform. [read more >](#)
- Round 4: Technical University of Moldova**  
The Technical University of Moldova has been selected as the awardee of the 4th round in 2019. Their CubeSat "TUManoSAT" was deployed in August 2022. It intends to check under real conditions the functionality of various modules and subsystems of the satellite. [read more >](#)



# Access to Space for All

## KiboCUBE Academy



KiboCUBE Academy is an online educational series that aims to provide **theoretical knowledge to develop, operate and utilize small satellites.**

[https://www.unoosa.org/oosa/en/ourwork/access2space4all/SatDevTrack\\_Webinars.html#Tag5](https://www.unoosa.org/oosa/en/ourwork/access2space4all/SatDevTrack_Webinars.html#Tag5)

### Schedule for 2023

- **Friday 21 July 1PM CEST** [Online]  
Topics: CubeSat Technologies and CubeSat Launch and Operation
- **Sunday 1 October** [Onsite in Baku, Azerbaijan]
- **Mid-End October** [Online]  
Topics: Final Tips to Build a Strong Application
- **Technical Consultation Sessions** [Online]  
Will release details and open call in July



No.	Contents of Pre-Recorded Lectures
1	Introduction to Small satellite mission and Utilization
2	CubeSat for Capacity Building
3	Introduction to CubeSat Project Management
4	System Engineering for CubeSat
5	Introduction of J-SSOD and Safety Review process
6	CubeSat design for safety requirements
7	Introduction to CubeSat technologies
8	Subsystem Lecture for CubeSat (Power control system)
9	Subsystem Lecture for CubeSat (Communication system)
10	Subsystem Lecture for CubeSat (Command and Data Handling system)
11	Subsystem Lecture for CubeSat (Structure system)
12	Subsystem Lecture for CubeSat (Mechanism system)
13	Subsystem Lecture for CubeSat (Thermal control system)
14	Subsystem Lecture for CubeSat (Attitude Control System)
15	Introduction to CubeSat Environmental Testing
16	Orbit Dynamics of CubeSat
17	Introduction Operation technics and ground system
18	Introduction Payload for CubeSat
19	Satellite operation and Related Regulations (ITU etc.)
20	Space debris problem and Countermeasures
21	Lessons & Learned for CubeSat mission



# Access to Space for All Opportunities



Open for Applications

HYPERGRAVITY/MICROGRAVITY



Suborbital and parabolic flights

- Bartolomeo AIRBUS
- China Space Station CMS
- Dream Chaser SIERRA SPACE

Webinar on 26 June!

SATELLITE DEVELOPMENT

- canSATs
- PHI مركز محمد بن راشد

- KiboCUBE JAXA
- Vega-C AVIO

Kibo-RPC JAXA

PNST MEXT MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN Kyutech Kyushu Institute of Technology

SPACE EXPLORATION

- ISONscope
- Ground Analogues

Beyond GEO

KiboCUBE Academy JAXA UNISEC University Space Engineering Consortium



**Any questions?**

**Contact us**

 [\*\*unoosa-access-to-space@un.org\*\*](mailto:unoosa-access-to-space@un.org)

**Help us help  
#AccSpace4All**



**For more stats and information,  
check out the brochure!**

