

# KIBOCUBE

## EXPANDING POSSIBILITIES FOR SPACE EMERGING COUNTRIES



A SIDE EVENT TO THE 66TH SESSION OF THE  
UN COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

2 JUNE 2023 13:00 - 14:00 CEST

HYBRID EVENT: ROOM CR-7, VIC / MS TEAMS

Organized by the UN Office for Outer Space Affairs and Japan Aerospace Exploration Agency (JAXA)  
Supported by the Permanent Mission of Japan



# Access to Space for All

## KiboCUBE Awardees



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

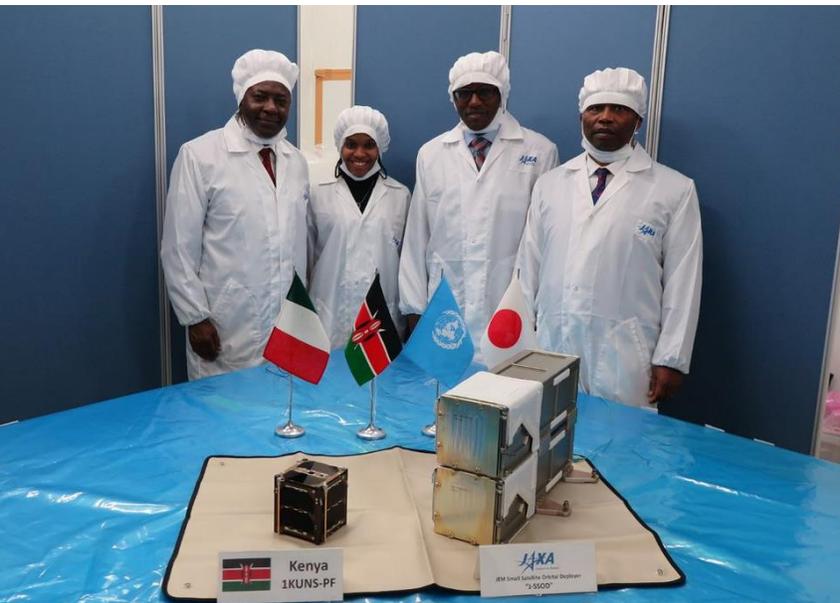
- Institute: University of Nairobi
- Satellite: 1KUNS-PF
- Objective: To monitor agriculture and coastal areas
- Partnership: University of Rome (Italy)
- Deployed from ISS: 11 May 2018
- Re-entered atmosphere: June 2020

### 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

## 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



### GET INSPIRATION FROM PAST 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.



UNITED NATIONS Office for Outer Space Affairs

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 facilities, infrastructure and information to promote international cooperation in the peaceful use of outer space.

Our awardees >

For Member States | Partnerships | **Awardees** | Contribution to the SDGs | 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 "Gixiba" 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 - How to Apply -



### FIND THE APPLICATION DOCUMENTS



kibocube



All

Images

Videos

Maps

News

More

Tools

About 14.300 results (0,41 seconds)

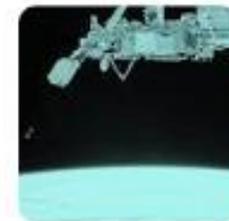


UNOOSA

<https://www.unoosa.org> > oosa > ourwork > psa > hsti

### KiboCUBE

**KiboCUBE** aims to provide educational or research institutions from developing countries of United Nations membership with opportunities to deploy, from the ISS ...



<https://www.unoosa.org> > oosa > ourwork > KiboCUB...

### KiboCUBE Rounds

The 7th Round of **KiboCUBE** under the Access to Space for All is open Learn more about **KiboCUBE**, CubeSat development & the application process in **KiboCUBE** ...





# Access to Space for All

## KiboCUBE - How to Apply -

### FIND THE APPLICATION DOCUMENTS

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



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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 Work

- Secretariat of COPUOS
- Programme on Space Applications
- UN-SPIDER
- International Committee on GNSS
- UN-Space

#### Access to Space for All

- For Member States
- Partnerships
- Opportunities
- Awardees
- Acknowledgement
- Space Law for New Space Actors
- Space for Persons with Disabilities
- Space4Youth

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- Hypergravity/Microgravity Track
- Satellite Development Track**
- Space Exploration Track

- Workshops and Expert Meetings

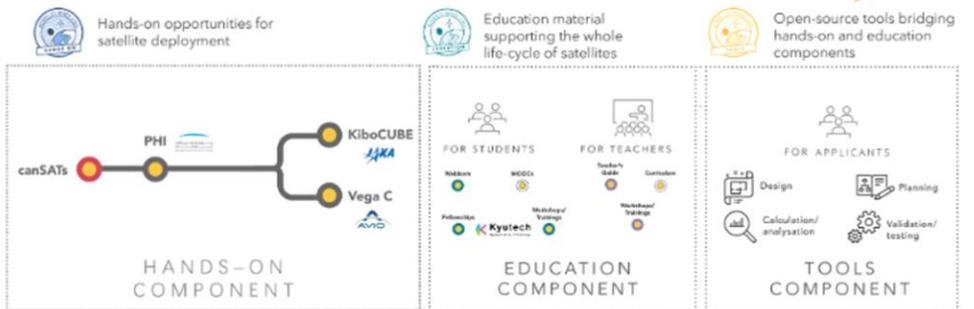
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### Satellite Development Track

#### SATELLITE DEVELOPMENT

- Building capacity that enables the development, deployment, and operation of satellites



The Satellite Development Track is aiming at building the capacity to design, implement, verify, operate and decommission a satellite in a responsible and sustainable manner.

#### Hands-on Component

- canSATS
- PHI
- KiboCUBE**
- Vega C

#### Education Component

- PNST Fellowship Programme
- KiboCUBE Academy
- Common Webinars
- PHI Webinars
- KiboCUBE Webinars
- Vega C Webinars

#### Tools Component

- Tools component



# Access to Space for All

## KiboCUBE - How to Apply -

### FIND THE APPLICATION DOCUMENTS

## United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station (ISS) Japanese Experiment Module "KiboCUBE"



KiboCUBE in partnership with Japan Aerospace Exploration Agency provides the opportunity to develop a cube satellite (CubeSat) and have it deployed from the International Space Station Japanese module "Kibo".

KiboCUBE enables access to space promoting the sustainability of future space activities.

### News

- KiboCUBE will hold a hybrid side event at the 66th session of the COPUOS on 2 June 2023, [read more](#).
- KiboCUBE Academy webinar held on Thursday 9 March 1pmCET. Watch from [here](#).
- 3rd round awardee Surya University's SS-1 was deployed from the ISS on 6 January. Watch from the [JAXA YouTube](#).
- More live-sessions and pre-recorded lectures for KiboCUBE Academy have been uploaded! Check them out [here](#)
- Interview with Mauritius Research and Innovation Council (MRIC) is published! Read from [here](#)
- Check out our new brochure: "[KiboCUBE: Expanding Possibilities for Space Emerging Countries](#)"

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Search

#### ROUNDS



#### AWARDEES



#### PARTNER



- Space4Women
- World Space Forum
- Worldwide Space Agencies
- Capacity Building Activities

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. KiboCUBE is the dedicated collaboration for utilizing the ISS Kibo for the world. KiboCUBE aims to provide educational or research institutions from developing countries of United Nations membership with opportunities to deploy, from the ISS Kibo, cube satellites (CubeSats) which they develop and manufacture. The deployment of CubeSats from ISS is easier than the direct deployment by a launch vehicle thanks to the lower vibration environment during launch. With these comparatively less demanding interface requirements, UNOOSA and JAXA believe that KiboCUBE will lower the threshold of space activities and will contribute to building national capacity in spacecraft engineering, design and construction.

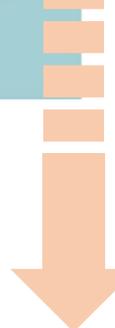
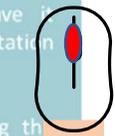
- 1st Round: University of Nairobi (Kenya)
- 2nd Round: Universidad del Valle de Guatemala (Guatemala)
- 3rd Round: Mauritius Research and Innovation Council (Mauritius) and Surya University (Indonesia)
- 4th Round: Technical University of Moldova (Moldova)
- 5th Round: Central American Integration System (SICA)
- 6th Round: Universidad Popular Autonoma del Estado de Puebla (Mexico) and Ecole Supérieure Privée d'Ingenierie et de Technologie Appliquée (Tunisia)

This opportunity is in collaboration with the Japan Aerospace Exploration Agency (JAXA), the national space agency of Japan. Currently, the only module to deploy CubeSats from the ISS is Kibo, developed by JAXA. Kibo's unique capability is comprised of an airlock system and a robotic arm. The first orbital deployment of CubeSats from Kibo was successfully conducted in October 2012 through the Small Satellite Orbital Deployer developed by JAXA. Since then, nano-satellites and CubeSats from various countries around the world have been deployed from Kibo.

[read more >](#)

[read more >](#)

[read more >](#)





# Access to Space for All

## KiboCUBE - How to Apply -



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### KiboCUBE Rounds

8th Round: from 2 June to 31 December 2023

**NEW!** Detailed Webinar for 8th Round Application will be held on 22 June 2023 at 13:00 CEST, register [here!](#)

**NEW!** UNOOSA and JAXA open the 8th round of applications to deploy CubeSats from the International Space Station

#### 8TH ROUND DOCUMENTS

- Announcement of Opportunity (.pdf)
- CubeSat Mission Application template (.word)
- JEM Payload Accommodation Handbook (JPAH) (.pdf) Updated 2 November 2021 (Section 4.2.2.2 (3))
- Guidance on Space Object Registration and Frequency Management for Small and Very Small Satellites

#### REFERENCE MATERIALS

- Video: "Deployment from Kibo" (provided by MEXT/JAXA)
- Technical Presentation by the Japanese Delegation: At the 58th Session of the Committee on the Peaceful Uses of Outer Space
- Webinar materials: See KiboCUBE Webinars

#### Previous Rounds

**7th ROUND**  
This round was opened in July 2021 and closed in December 2021. [read more >](#)

**6th ROUND**  
This round was opened in December 2020 and closed at the end of May 2021. UPAEP, the Popular Autonomous University of the State of Puebla of Mexico and the Private Higher School of Engineering and Applied Technology of Tunisia have been selected as the awardees. UPAEP's CubeSat 1U CubeSat "Gxiba" is to observe active volcanoes in Mexico and analyze the ash dispersion. The objective of TUNSAT 1 is mainly to build the capacity of Tunisia in the aerospace industry. [read more >](#)

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- Space4Youth
- Space4Water
- Space4Women
- World Space Forum
- Worldwide Space Agencies



**JOIN** the Announcement of Opportunity Webinar on 22 June



**READ** all of the documents carefully



**WATCH** the KiboCUBE Academy Webinars



**SUBMIT** the documents on time  
**DEADLINE: 31 December 2023**



# 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/access2space4aII/SatDevTrack\\_Webinars.html#Tag5](https://www.unoosa.org/oosa/en/ourwork/access2space4aII/SatDevTrack_Webinars.html#Tag5)



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



HYPERGRAVITY/  
MICROGRAVITY



Suborbital and  
parabolic flights



SATELLITE  
DEVELOPMENT

canSATs

PHI  
مركز محمد بن راشد  
للفضاء والعلوم الفضائية  
Mohammed Bin Rashid Space Centre



SPACE  
EXPLORATION



Ground  
Analogues

Beyond GEO





# Access to Space for All

## Overview of the Expert Meeting



### Details

Date: 15 - 17 May 2023

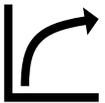
Format: online

Target Audience: partners, awardees, government, potential applicants and partners, and the general public

### Objectives



**Share and gain insights** from success stories and challenges on capacity-building activities and effective outreach



Discuss **how to improve** the Access to Space for All initiative



**Bring together** partners, awardees, supporting governments, and potential future partners and applicants of the initiative to **build new partnerships**



**Raise awareness** of the Access to Space for All initiative



**Presentations, Videos, and the Report to COPUOS** are available on our website!

Click [here](#) or scan the **QR code**



**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!**

