

Version 1.0

Released Date: February 18th 2022

# **3<sup>rd</sup> Kibo Robot Programming Challenge Entry Description**



Version 1.0 (Released Date: February 18<sup>th</sup>, 2022)

**Japan Aerospace Exploration Agency (JAXA)**

Version 1.0

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## List of Changes

All changes to paragraphs, tables, and figures in this document are shown below.

Release Date	Revision	Paragraph(s)	Rationale
February 18 <sup>th</sup> , 2021	1.0	All	-

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# 1. Participation

## 1.1. Entry Qualification

The basic qualification is that you are a student up to graduate level who lives in the United States of America or a Kibo-ABC member country/region\*<sup>1</sup> who expresses interest in participating in the Kibo-RPC \*<sup>2</sup>. In some circumstances, foreign students and non-citizens may also take part. Special cases may be approved based on permission from the Kibo-RPC Point Of Contact (POC) in the participating country/region. Please communicate with your county's/region's POC if you wish to be considered as a special case.

Some examples of special cases;

- 1: Non-students may be eligible to compete if they are not professional programmers.
- 2: Students who study abroad can form a team representing their home country with foreign students.

\*1 Kibo-ABC member countries/regions:

Australia, Bangladesh, Indonesia, Japan, Malaysia, Nepal, New Zealand, Philippines, Rep. of Korea, Singapore, Taiwan, Thailand, United Arab Emirates, Vietnam.

Kibo-ABC URL: [http://iss.jaxa.jp/en/kuoa/kibo\\_abc/](http://iss.jaxa.jp/en/kuoa/kibo_abc/)

\*2 Countries/regions participating in the 3<sup>rd</sup> Kibo-RPC (as of February 2022):

Australia, Bangladesh, Indonesia, Japan, Malaysia, Nepal, New Zealand, Singapore, Taiwan, Thailand, the United States of America, Vietnam.

JAXA is now coordinating the participation of other countries/regions.

To respond to the requests from non-Kibo-RPC member students, JAXA establishes a new team classification to allow them to participate with a condition. Teams from outside the Kibo-ABC member countries/regions are able to participate in this competition by forming a multinational joint team, Worldwide Team, through the Kibo-RPC Secretariat by contacting participating teams within the Kibo-RPC member countries/regions. The competition contributes to SDGs, provides more opportunities to students worldwide, and opens internationally.

See section 1.2 for details on team types and section 1.4(3) for information on how to form a joint team.

## 1.2. Types of participating teams

There will be two types of teams in this competition

- Kibo-ABC Team  
A team consisting of participants who are nationals of a country/region participating in the 3<sup>rd</sup> Kibo-RPC or belong to schools in that region.
- Worldwide Team  
A Worldwide team is a team of participants who are not from a 3<sup>rd</sup> Kibo-RPC participating country/region or who do not belong to a school in that country/region, but are integrated

with a Kibo-ABC Team. Please note, only teams that are integrated through the Kibo-RPC Secretariat will be recognized as Worldwide Teams.

The team classification of participants is shown in Table 1.2.

Table 1.2 Team Classification

Team Classification		Nationality of participants	Location of their school	Remarks
Kibo-ABC Team	Case 1	Kibo-RPC participating country/region	Kibo-RPC participating country/region	
	Case 2	Kibo-RPC participating country/region	Kibo-RPC non-participating country/region	
	Case 3	Kibo-RPC non-participating country/region	Kibo-RPC participating country/region	
Worldwide Team		Kibo-RPC non-participating country/region	Kibo-RPC non-participating country/region	Section 1.4.(3)
		The team will become a Worldwide Team by integrating with a Kibo-ABC Team through the Kibo-RPC secretariat.		

### 1.3. Types of Preliminary Round

There will be two types of Preliminary Rounds in this competition. Only teams that win

Either National or Bonus of these Preliminary Rounds will advance to the Final Round on orbit.

- **National Preliminary Round**  
These are preliminary rounds that are held in each country/region and are open to all teams. Each team participates in the national preliminary round held in the country/region to which it belongs. Worldwide teams will participate in the national preliminary rounds held in the country/region to which their pre-integrated team belongs.
- **Bonus Round**  
This is a Preliminary Round held after a National Preliminary Round for Worldwide Teams only. Only Worldwide Teams that were eliminated in the National Preliminary Rounds are eligible to participate. The teams that advance to the Final Round will be determined based on their performance in the National Preliminary Rounds.

Kibo-ABC Teams are only eligible to participate in the Preliminary Round held in their respective countries/regions. Worldwide Teams will be eligible to participate in two Preliminary Rounds: a National Preliminary Round and a Bonus Round. This increases the likelihood that the Worldwide team will be able to participate the Final Round. All Kibo-RPC participating countries/regions are encouraged to actively cooperate in the formation of Worldwide teams (see section 1.4.(3)).

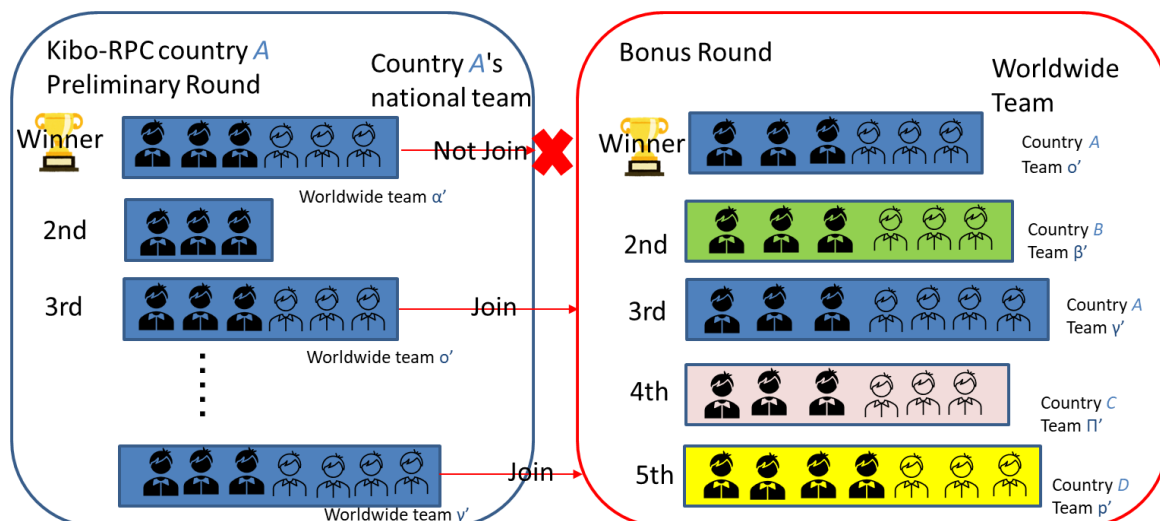


Figure 1.3 Image of Worldwide Team Preliminary Round

## 1.4. Team Creating Rules

### (1) Team Structure

- A team is comprised of 3 or more members.
- Students CANNOT join more than one team.
- Teams cannot add a new member after finishing the Preliminary Round.

### (2) Team Representative

- Each team must have a leader who is responsible for team management. A student in a team or guardian can be the representative.
- The team leader has the following responsibilities:
  - ✓ Manage the progress of the team
  - ✓ Register for the application form
  - ✓ Submit your program
  - ✓ Communicate and share information with the POC

### (3) How to form a Worldwide Team

Applicants from countries/regions other than Kibo-RPC participating countries/regions who wish to participate must apply to the Kibo-RPC Secretariat as non-Kibo-RPC member according to the following steps.

#### 1) Determine the members of the team

A team must have at least three members from non-Kibo-RPC countries/regions. In the team classifications in Table 1.2, if the members include participants who fall into cases 1 to 3, the team will be considered a Kibo-ABC Team. Please check Table 1.2 for your reference to select members.

#### 2) Application to the secretariat for participation

Follow the application procedures in Section 1.5 and apply from the application URL non-Kibo-RPC participating country/region.

### 3) Recruitment of a team by the secretariat

Based on the application information, the Kibo-RPC Secretariat will notify each country/region by e-mail that a Worldwide Team has applied and will recruit teams willing to integrate with the team that applied. The team recruitment period will be about two weeks from notification.

### 4) Accepting entries as a Worldwide Team

If a team accepts an applying team, the Kibo-RPC Secretariat will connect and re-register them as a team from the country/region to which the accepting team belongs.

\* As a reminder, if no team accepts the integration, a Worldwide Team will not be formed and will not be able to participate in the competition. Also, teams formed without applying to the Kibo-RPC secretariat will not be considered as a Worldwide Team and will not be allowed to participate in the Bonus Round.

Please make sure to apply to the Kibo-RPC Secretariat.

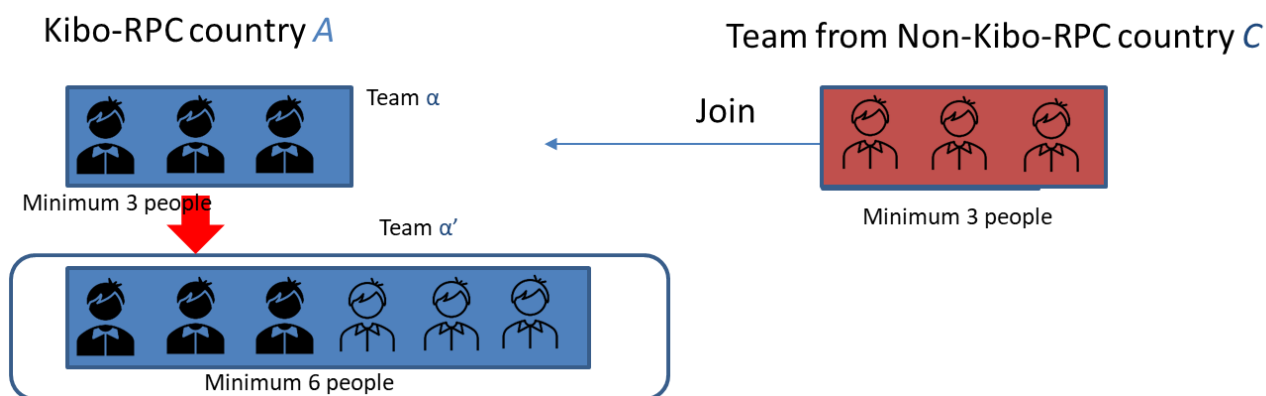


Figure 1.4 Worldwide Team Composition Image

## (4) Other conditions

- The following skills and knowledge are recommended but not mandatory:
  - ✓ Android programming and image processing with Java
  - ✓ College-level knowledge of physics or mathematics
- All teams shall read paragraph 2 especially carefully and place a check mark at the top of the application form before you submit it.

## 1.5. Application form

- (1) Access the Kibo-RPC Web ( <https://jaxa.krpc.jp/> ) and fill out and submit the application form from the URL provided for each country/region. While teams are waiting for a notification of acceptance, they can read the Guidebook and prepare to participate in this competition. The items to be entered in the application form are as follows.
  - ✓ Team name
  - ✓ Team representative: name, age, nationality, organization, address, phone number, e-mail address



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- ✓ Team members: name, age, nationality, school name, participation in previous competitions
  - ✓ How did you learn about Kibo-RPC?
  - ✓ Confirmation of consent
- (2) After applying, an email will be sent automatically when the reception is completed. It will include an ID and Password to login to the participant's website and instructions to access JAXA's simulation environment.
- (3) If your team qualifies as a Worldwide team as described in section 1.1, please send an e-mail to the Kibo-RPC secretariat with your team name. If you do not notify us, your team may not be considered as a Worldwide team.

**Deadline: May 16<sup>th</sup>, 2022**



## **2. Terms and Conditions**

Applicants must agree to all of the terms below. If you live in the EU, please agree to the contents of the attached materials.

### **2.1. Privacy Policy**

- (1) Collected personal information will only be used for the operation of the Kibo-RPC.
- (2) The videos and photos taken at this tournament will be made publicly available.

### **2.2. Responsibility of Applicant and Exemption Clause of JAXA**

- (1) JAXA will not be liable for any problems that may occur during program participation. Applicants need to take full responsibility for solving issues of this nature that may arise.
- (2) Applicants must guarantee that information on the application form and the program code do not violate any legal rights or obligations, such as intellectual property or export control, as applicable. If a legal problem related to the submitted information arises, the applicant will take full responsibility to solve the problem.
- (3) If there is a violation of these matters registration may be canceled, even after registration.

### **2.3. Notes**

- (1) Underage applicants must first obtain parental consent.
- (2) Do not use the simulator environment provided in the Kibo-RPC for any purpose other than the Kibo-RPC. Sign-on information for accessing the simulator environment will be made available only to the competition applicants. Do not disclose this information to anyone else.
- (3) JAXA may use the program codes and results of the competition for the purpose of public relations and education.

Attachment  
Consent content based on EU GDPR

For the purposes of notification of competition information, Sending of prize certificates and commemorative gifts, provide information to POC in countries/regions other than Japan for the purpose of managing the event, JAXA needs to collect your personal data requested in the present form. You may at any time object to the use of your data for this purpose by writing to the following address:

[Z-KRPC@ml.jaxa.jp](mailto:Z-KRPC@ml.jaxa.jp)

You will find below all the detailed information concerning this processing of your personal data and a reminder of your rights, in application of the legislation in force.

JAXA, willing to respect the privacy and protection of personal data of its prospects and clients, complies with the legislation in force regarding the protection of personal data as data controller, and in particular Law no. 78-17 of 6 January 1978 (the "Data Protection Act") and, from 25 May 2018, Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and the free movement of such data (the "GDPR").

PLEASE BE INFORMED THAT THE PERSONAL DATA WILL BE TRANSFERRED TO JAPAN AND POC AND TEAM OF THE PARTICIPATING COUNTRIES/REGIONS FOR THE PURPOSE AS DESCRIBED ABOVE.

You have, under the conditions defined by the Data Protection Act and the GDPR, unless otherwise provided:

- (i) The right to withdraw at any time your consent to the processing implemented by JAXA based on such consent ;
- (ii) The right to obtain from JAXA the confirmation that your personal data are or are not processed and, when they are, access to said personal data as well as to several information on the processing (processing purposes, categories of personal data concerned, recipients or categories of recipients to whom your personal data have been or will be communicated, the retention period of the personal data envisaged or, where this is not possible, the criteria used to determine this duration, etc.)
- (iii) A right of access, rectification and/or erasure of your personal data;
- (iv) The right to receive your personal data provided to JAXA, in a structured, commonly used and legible format, and the right to transfer this data to another data controller without JAXA having to obstruct it;
- (v) A right of opposition, for legitimate reasons, to the processing of your personal data and the right of opposition to the use of such personal data;
- (vi) The right to request from JAXA the portability of your personal data in the event you wish to obtain the transfer of your personal data to the benefit of another data controller.

You can set, change and revoke at any time guidelines for the retention, erasure and communication of your personal data after your death. You have the right to appoint a third party to whom your data may be communicated after your death. You agree to inform this third party of your approach.

You may exercise the rights described above by writing to JAXA at the following email address:

[Z-KRPC@ml.jaxa.jp](mailto:Z-KRPC@ml.jaxa.jp)