



Asian Try Zero-G 2023

Send Us Your Proposals!

April 5, 2023
Rev. May 2, 2023

Revision List

| Section | Contents |
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| 2. Project Themes 2-2. Category B: Exercise in Space | 2., add “may be acceptable” Add 5. and 6. |
| 11. Terms and Condition (1) Management of Application Content | b) add “and personal information” |
| 11. Terms and Condition (2) Privacy Policy | a) delete “only” b) add “However, the personal information such as name, school, age,” change “at” to “for” |

1. Introduction

Asian Try Zero-G 2023 allows agencies from member countries/regions to participate in the Kibo-ABC (Asia Beneficial Collaboration through Kibo Utilization) initiative that utilizes the Kibo Japanese Experiment Module on the International Space Station. Each participating agency, which acts as the point of contact (POC), will publicly seek proposals for experiments and select candidate themes from their respective countries/regions. All of the participating agencies will then together select the experiments, and selected experiments will carry out aboard Kibo. JAXA is the POC in Japan.

2. Project Themes

For Asian Try Zero-G 2023, JAXA is soliciting proposals in the following two fields:

2-1. Category A: Physics Experiments

1. Ideas for visually confirming physical phenomena.
2. Describe the hypothesis/scientific basis as mathematically or logically as possible.

== Reference ==

Reports and videos of past experiments can be found at the following URL.

<https://humans-in-space.jaxa.jp/biz-lab/kuoa/tryzerog/>

2-2. Category B: Exercise in Space

1. Ideas for exercises that have never been tried in the zero gravity confines of the ISS.

== Key Points ==

- Movements that are impossible on earth, but possible in space (due to weightlessness).
 - Unique movements.
 - Body movements and/ or postures can be an exercise under microgravity, yet easily done
- e.g. Squatting can be easily done on Earth, but it may be difficult in space. •

Something that has not been done before.*¹

- Rev. | 2. Exercises using small items **may be acceptable** (see 3. Application Requirements below for details).
3. Describe the purpose of the exercise in detail.
e.g. Stretch the biceps, etc.
4. The purpose of the exercise must not be for medical research or medical treatment.
5. The volume of the space available on board should be 2m x 2m x 6m. (It may differ from the actual situation due to operational reasons of the ISS.)
- Rev. | 6. If you need to fix the body, handrails that are placed at intervals of about 1m are available. More details can be found in this image. (<https://humans-in-space.jaxa.jp/kibo/structure/>)

== For Reference ==

See how astronauts spend their time inside Kibo (Japanese only).

<https://humans-in-space.jaxa.jp/life/health-in-space/>
<https://humans-in-space.jaxa.jp/faq/detail/000734.html>

*¹ Reports and videos of past experiments (Japanese only).

https://www.youtube.com/watch?v=O31jy8y_aLE
https://www.jaxa.jp/press/2010/10/20101014_experiment_j.html

3. Application Requirements

Three proposals will be selected from each category (six in total), but the number may change depending on the themes selected.

- (1) The activity must be completed inside Kibo.
- (2) The activity should not require any special tools or should use items that are available inside the ISS.
 - (a) Stationery (paper, pens, scissors, rulers, binder clips, ziplock bags, etc.).
 - (b) Tools (screwdrivers, wrenches, tweezers, etc.)
 - (c) Other items available onboard (see Attachment 1. Onboard Items).
- (3) You may be able to have a simple item taken up to the ISS (see 7. Launch Items).
- (4) The activity should be completed in 10 minutes. Describe the procedure simply and concisely.

* You may submit a video showing the protocol/procedure for the activity.

- (5) As a rule, the activity should be able to be carried out by one crew member. However, proposals that would require two crew members will be considered.
- (6) Activities will be recorded using a high-resolution camera. The footage will be downlinked to earth and distributed to those involved.
- (7) We cannot accept proposals that could be seen to be linked to the financial gain of a specific group or organization.
- (8) Proposals are accepted from individuals and teams.
- (9) The exercise machines onboard the ISS are not available for use.

4. Eligibility

Students, up to postgraduate, (individuals or teams) must be enrolled in schools in Kibo-ABC member countries/regions*¹ that are participating in Asian Try Zero-G*².

For those applying from Japan, applicants must be Japanese nationals or foreign residents living in Japan (Japanese nationals living overseas are also eligible to apply).

*1 Kibo-ABC member countries/regions (in alphabetical order): Australia, Bangladesh, Indonesia, Japan, Malaysia, Nepal, New Zealand, Republic of the Philippines, Republic of Korea, Singapore, Taiwan, Thailand, United Arab Emirates, and Vietnam.

Kibo-ABC: <https://humans-in-space.jaxa.jp/biz-lab/kuoa/kibo-abc/>

*2 Asian Try Zero-G 2023 participating countries/regions (as of March 2023): Australia, Bangladesh, Japan, Singapore, and Thailand. Other countries/regions may be added. Check the official website for the latest list of participating countries/regions.

Asian Try Zero-G: <https://humans-in-space.jaxa.jp/biz-lab/kuoa/tryzerog/>

5. Schedule

| | |
|-------------------------------|--|
| June 2023 | Initial selection in each country/region |
| July 2023 | Final selection |
| December 2023 – February 2024 | Experiments conducted in orbit (Dates TBA) |
| March 2024 | Wrap-up Session |

*The schedule is subject to change without prior notice.

6. Points to Consider

If an experiment is deemed to pose a danger to the ISS/Kibo or if it is too difficult to conduct due to restrictions on astronaut activities, it may not be possible to carry it out. When proposing an idea, please check the following points to ensure that they do not apply.

- A) The following activities are considered to be unsafe onboard the ISS/Kibo:
- Use of dangerous materials/objects
 - Release of large amounts of water (1 liter or more) inside Kibo's cabin
 - Release of gases that cannot be processed on the ISS
 - Scattering of tiny objects, such as nuts and bolts, powder, and pieces of paper
 - Spinning of objects with a large mass at high-speed
 - Handling of fragile objects (e.g. glass)

- Handling of objects with sharp edges

B) The following activities are considered to be impractical onboard the ISS/Kibo:

- Work that takes a long time for crew members to complete
- Activities that infringe on the rights and privacy of crew members
- Activities that require stopping the circulation of air inside the cabin for a long time
- Activities that block the crew's emergency escape route (closing hatches, etc.)

7. Launch Items

As a rule, items that can be used in orbit are limited to those listed in Section 3 (2). However, you may propose the use of an item to be sent to the ISS if it meets the following conditions.

- Dimensions: 35 × 30 × 8 cm or smaller when folded.
- Weight: 950 g or less.
- Specifications: No sharp edges, no built-in power (no batteries), inanimate, non-hazardous substances, as fire-resistant as possible
- Even if it satisfies the above, smaller and lighter items are preferred

Launch items might not be used and will not be returned.

8. Preparing the Proposal

Please fill in the following information in the Proposal Form (Attachment 2) using the sample provided in Attachment 3 (English and Japanese versions are available).

Category A:

As a rule, the description in the proposal should be written in English because it will go through an international review process with participating countries. Japanese may be used but it will be treated as supplementary material, so please submit both Japanese and English.

- (1) Applicant affiliation
- (2) Title
- (3) Hypothesis/Theory
 - a) Hypothesis
 - b) Schematic diagram
 - c) Mathematical/theoretical supposition/scientific basis
- (4) Items required for implementation (including launch items)
- (5) Implementation procedure
- (6) Optional: Photo of the applicant (If you wish to be photographed with the astronaut, your photo will be sent up to the ISS and a commemorative photo taken in Kibo together with the astronaut(s). Please note that the photo will be made public.)

Category B

As a rule, the description in the proposal should be written in English because it will go through an

international review process with participating countries. Japanese may be used but it will be treated as supplementary material, so please submit both Japanese and English.

- (1) Applicant affiliation
- (2) Title
- (3) Purpose/use of the exercise
- (4) Description of the exercise (diagrams or videos may be submitted)
- (5) Items required for the exercise (including launch items)
- (6) Implementation procedure
- (7) Optional: Photo of the applicant (If you wish to be photographed with the astronaut, your photo will be sent up to the ISS and a commemorative photo taken in Kibo together with the astronaut(s). Please note that the photo will be made public.)

9. Submitting the Proposal

Please submit your proposal (English) to the local secretariat.

For applicants in Japan, please submit your proposal [here](#) (Japanese).

Deadline: Please contact the local secretariat in each country for application deadlines.

10. Selection Result Announcement

The selected proposals, the names of the applicants (representatives) and details of the proposals will be announced on the JAXA website.

<https://humans-in-space.jaxa.jp/biz-lab/kuoa/tryzeroq/>

Announcement Date: July 2023 (subject to change without prior notice).

Special awards will be presented. Details will be announced on the website in due course.

11. Terms and Conditions

Applicants shall be deemed to have agreed to all of the following. EU residents must also agree to the contents of Appendix.

(1) Management of Application Content

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- a) The rights to modify, implement, and use the results of the proposal for public and/or educational purposes belong to JAXA.
- b) Images and videos **and personal information** submitted with the application may be published on the JAXA website.
- c) The submitted idea may be used for public and/or educational purposes, even if it is not selected.
- d) If the requirements are not met, the proposal may be dropped even after it has been

announced.

(2) Privacy Policy

- Rev. |
- a) The collected personal information will **only** be used for contact purposes, for publicizing the selection results, and for other matters related to the event.
 - b) **However, the personal information such as name, school, age, images and/or photos taken for**at this event may be publicly disclosed.

(3) Responsibilities of the Applicant and JAXA's Disclaimer

- a) JAXA shall not be liable for any problems that may occur during participation in this event. The applicant shall be responsible for resolving any possible problems on their own.
- b) The applicant must ensure that their proposal does not infringe on any legal rights, such as intellectual property rights. If any legal issues arise in relation to the submitted material, the applicant shall be fully responsible for resolving them.

12. Contact

JAXA Kibo-ABC Secretariat Email: Z-ATZG@ml.jaxa.jp

Please include [ATZG Application] in the subject line.

Appendix

For the purposes of notification of event information and results of your recruitment, 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-ATZG@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").

JAXA does not transfer personal data to third countries or parties outside the European Economic Area.

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-ATZG@ml.jaxa.jp