

Asian Try Zero-G 2025 Application Guidelines

Looking for experiments to try out in space!!

November 1, 2024

1. Introduction

Asian Try Zero-G 2025 allows agencies from member countries/region 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 (ISS). 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 the participating agencies will then select the experiments together, and selected experiments will be carried out aboard Kibo. JAXA is the POC in Japan.

*See the video of Asian Try Zero-G 2023: 2023 (Astronaut Furukawa)

2. Application Information

Asian Try Zero-G 2025 is calling for themes related to simple physics experiments that will be carried out in the Japanese Experiment Module Kibo.

2-1. Application Summary

- 1. Ideas for visually confirming physical phenomena.
- 2. Describe the hypothesis/scientific basis as mathematically or logically as possible.
- 3. The only tools that can be used in the experiment are those that have been used in past Asian Try Zero-G experiments. For details, please refer to section 3.

2-2. Key Points

- Please propose an experiment that has never been conducted before (a new experiment) or an experiment that has been conducted in the past but has been further developed or improved. Please refer to the "Past Experiment Reports" (below) and "Attachment-1_Video List" for examples of previous experiments.
 - https://humans-in-space.jaxa.jp/en/biz-lab/kuoa/tryzerog/
- Please make sure that your proposal is written in a way that is easy for anyone to understand. If the content is too complicated, there is a possibility that the theme selectors will not understand the purpose of the experiment. If necessary, it is also possible to supplement the experimental process and hypothesis using videos and diagrams. Please refer to section 7 for information on how to write a proposal.

3. Application Requirements

A total of 9 themes will be adopted across all Kibo-ABC participating countries/region. Please note that the number of themes adopted may change depending on the content of the

selected themes.

- 1) You can apply as an individual or as part of a group.
- 2) The activity must be completed inside Kibo.
- 3) No special tools required, or you can only use tools that can be used in the ISS.
 - a. Stationery (Paper, pen, scissors, ruler, binder clip, Ziploc bag, etc.)
 - b. Tools (screwdriver, wrench, tweezers, tape, rubber gloves, etc.)
 - c. Simple tools that have been used in the past (See Attachment-2_Available Items).
 *Depending on the situation, the aforementioned items may not be available.
 - d. The items listed in Attachment-2 can also be used in combination with each other.
- 4) The activity should be completed in 10 minutes. Please clearly and concisely explain the procedures.
 - *You can also submit your application with a video showing how to carry out the experiment. *The time required for operations on orbit is about **twice as long** as the time required for the same operations on the ground.
- 5) As a rule, only experiments can be carried out by one crew member. However, proposals that would require two crew members will be considered.
- 6) The whole process will be recorded with a high-resolution camera. The high-resolution images are downlinked to the ground and distributed to the proposers.
 - *The video distributed may only be used for educational purposes at the educational institution to which the proposer belongs. If you would like to use it for other purposes, please consult JAXA. Also, if you are using images of astronauts, please consult JAXA. Example:
 - Use at school cultural festivals, etc. (no permission required)
 - Use at academic conferences outside the school, use of images featuring astronauts (permission required)
- 7) Please keep the following in mind when preparing your material for the presentation externally. In addition, please allow JAXA to confirm the materials before submitting them.
 - a. The results have to be indicated as obtained through participation in the Asian Try Zero-G 2025.
 - b. The materials should be sent to JAXA for pre-confirmation before submission. (It takes approximately 10 days for confirmation.)
- 8) You should inform JAXA if you are interviewed or featured in a newspaper, TV, or other media.
- 9) Proposals that are deemed to be linked to the financial interests of specific groups or organizations will not be accepted. Furthermore, the activities of Asian Try Zero-G cannot be used for advertising or publicity.

4. Eligibility

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

To be eligible to apply in Japan, you must either be a Japanese citizen or a foreign national living in Japan (if you have Japanese citizenship, you can also apply if you are living overseas).

*1 Kibo-ABC Member countries/region (in alphabetical order) Australia, Bangladesh, Indonesia, Japan, Malaysia, Nepal, New Zealand, Republic of the Philippines, Republic of Korea, Singapore, Taiwan, Thailand, United Arab Emirates, Vietnam Kibo-ABC URL: https://humans-in-space.jaxa.jp/en/biz-lab/kuoa/

*2 Asian Try Zero-G 2025 Participating countries/region (as of November 2024) Australia, Bangladesh, Japan, Republic of the Philippines, Singapore, Taiwan, Thailand, United Arab Emirates. Participation from other countries is being coordinated. Please check the official website for the latest participating countries/region.

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

5. Schedule

January 2025 Initial selection in each country/region

March 2025 Final selection

December 2025 - February 2026 Experiments conducted on orbit (Dates TBA)

May 2026 Wrap-up Session * The schedule is subject to change without prior notice.

6. Points to Consider

There are cases where experiments cannot be carried out on the ISS/Kibo due to safety concerns or restrictions on the activities of astronauts. Check the following points when proposing an idea, and make sure that none of them apply.

- 1) 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 bolts, nuts, pieces of paper, and powders
 - Spinning an object with a large mass at high speed
 - Handling of fragile objects (glass, etc.)
 - Handling of objects with sharp edges
- 2) The following activities are considered to be impractical onboard the ISS/Kibo:
 - Long hours of work
 - Any action that could lead to infringe on the rights and privacy of crew members
 - Stopping the air circulation in the cabin for a long time
 - Blocking astronaut emergency escape routes (Closing hatches, etc.)

7. How to Write a Proposal

Please refer to the Attachment-4 sample and fill in the following information in the Attachment-3 proposal form.

Please write your proposal in English, as it will be reviewed internationally.

- 1) Applicant affiliation
- 2) Title
- 3) Summary of the proposed experiment (approx. 200 words)
 Background, purpose, experiment process, predicted results, discussion, etc.
- 4) Hypothesis/Theory
 - a) Hypothesis
 - b) Schematic diagram
 - c) Mathematical/theoretical supposition/scientific basis

^{*} Ask about the proposal deadline for the agency / local secretariat in your country/region.

- 5) Items required for implementation
- Experiment ProcedurePlease also include the estimated time for each step.
- 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.)
 - * Please make sure to **provide easy-to-understand** explanations of the hypotheses, theories and experimental procedures of your experiment, using diagrams and supplemented videos, etc. Also, if you are sharing a video as supplementary material, please change the file name to the name of the experiment.

8. Submitting the Proposal

- Please submit your proposal (in English) and any supporting documents to the local secretariat.
 - For applicants in Japan, please submit your proposal here (Japanese).
- Deadline: Please check the deadline for submitting the application form with the local secretariat in your country/region.

9. Selection Result Announcement

Selected themes will be posted on the JAXA website, along with the content and the name of the school of the person who proposed it.

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

Announcement date: March 2025 (subject to change without prior notice)

*The applicants whose proposal is selected have opportunities to watch the experiment the crew conducts on the ISS and the facility tour of JAXA.

10. Terms of Conditions

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

- 1) Management of Application Content
 - a) All rights to modify, implement, and use the results of all submitted ideas for public and educational purposes belong to JAXA. It may also be used in space awareness and utilization activities by the partner company.
 - b) Images and videos submitted with your application may be published on the websites of JAXA and related companies.
 - c) If there are any provisions that are contrary to these application guidelines, the proposal may be dropped even after it has been announced to be selected.

2) Privacy Policy

- a) The personal information collected will be used for contact purposes, for publicizing the selection results, and for other matters related to the Asian Try Zero-G and Asian cooperation activities.
- b) Footage and photographs of participants and other related parties taken in relation to Asian Try Zero-G may be published on the websites of JAXA and related companies.
- 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.

11. Contact

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

➤ Please write "ATZG Inquiry" in the subject line of your email.

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