

Inter-University Research Program Application Guidelines for the University of Tokyo
Institute for Cosmic Ray Research (ICRR)

1. Purpose of Public Invitations for Applications

The purpose of public invitations for applications from researchers is to invite them to conduct observations and research on cosmic rays and related topics in the broad sense together with ICRR.

2. Application Items

A) We publicly invite Inter-University Research Program proposals for research on cosmic rays in the broad sense and on elementary particles or astrophysics to be conducted jointly with ICRR. The Research themes should involve the joint use of facilities and equipment belonging to ICRR including:

- Norikura Observatory
- Akeno Observatory
- Kamioka Observatory
- Research Center for Cosmic Neutrinos
- KAGRA Observatory
- High Energy Astrophysics facility in Canarias
- Kashiwa Low-Level Radioisotope Measurement Facility
- ICRR's computer system is also used jointly by its research division

Any research topics involving the facilities above and related to the research themes listed below will be considered.

B) Research Topics

- a) Cosmic ray research conducted underground or in deep sea
- b) Research on high-energy cosmic rays in the broad sense carried out using satellite and/or balloon, and/or on high mountains and/or other above-ground locations
- c) Research focused on detection and observation of sources of high-energy cosmic gamma rays
- d) Research on the origins of cosmic rays or inter stellar matter and cosmic dust by chemical composition analysis, isotope measurement, and other means
- e) Experimental research on existing detectors involved in cosmic rays in the broad sense
- f) Research and the development of observation methods and equipment useful for the study of cosmic rays in the broad sense
- g) Theoretical or exploratory research on themes in the study of cosmic rays in the broad sense that are expected to become prominent in the future

C) Scientific Meetings

These meetings bring researchers together at ICRR over a period of about 1–3 days to discuss specific themes of particular interest in cosmic ray research in the broad sense.

*Travel expenses are limited to domestic travel in Japan to ICRR and its research facilities and observatories.

*Goods are limited to those purchased in Japan and used in Japanese institutions or in ICRR facilities overseas.

*We also accept research proposals limited to use of facilities only. (See Points to Note 5)

3. Eligibility

Researchers (including postdoctoral fellows etc.) of universities and national or other public research institutions. However, principal investigators must be full-time and able to take full responsibility for conducting independent research. A postdoctoral researcher applying as a principal investigator must enter the following items (1) and (2) in Form 3 and obtain the approval of the Inter-University Research Program Selection Committee.

- (1) Effort (percentage) in the event that the research proposal is selected

(2) Consent of superior

Note that undergraduate students can participate only as research assistants.

4. Application Procedure

A) Application Materials: Fill out all required items in the prescribed Inter-University Research Program Application Forms (**Form 1: Cover, Form 1: Annex (list of participating researchers and research assistants), Form 2, Form 3 if postdoctoral researcher**) (available on the ICRR website: <http://www.icrr.u-tokyo.ac.jp/en/collaborators-2/>) and submit your application by email with the required digital files attached (See below for file formats).

B) Letter of Consent: Applicants should obtain formal consent from head of the affiliated research organization and submit Form 7 by email with the required digital file attached. (See below for file format)

Form	File format
Form1: Cover Form1:Annex (list of participating researchers and research assistants)	Send Excel file.
Form 2 Form 3 Form 7	Convert Word file to PDF file, and send the PDF.

5. Application Deadlines*

- A) Submission of digital files (Form 1 and 2, Form 3 if applicable) 5 PM (JST), January 12 (Tue), 2021
- B) Submission of Letter of Consent (Form 7) 5 PM (JST), January 29 (Fri), 2021

***Kindly note that application materials received after the deadline will NOT be accepted.**

6. (1) Inquiries regarding application submission and procedure

University of Tokyo Institute for Cosmic Ray Research Inter-University Research Program Administrator
5-1-5 Kashiwanoha, Kashiwa-shi, Chiba, 277-8582, Japan
Email: kyodo-riyo_at_icrr.u-tokyo.ac.jp
(replace _at_ with @ when sending emails)

(2) Inquiries regarding research and technical matters

The Head of the research division to which you are applying or Director of the facility that you wish to use
*A list of contacts is provided on the last page.

7. Screening

The Inter-University Research Program Selection Committee screens research proposals for selection or rejection and assesses required expenses based on the information provided in the submitted files, with the final decision being taken by the Advisory Committee.

8. Timing of selection decision

Scheduled for late April
The names of selected research proposals and principal investigators (including applicant's organization) will be published on the ICRR website.

9. Reporting research results

(1) After the end of the relevant fiscal year, the principal investigator should promptly submit a digital report describing research results as notified after acceptance of the proposal. Since research result reports are

published as is on the ICRR website, they should be concise and clear. ICRR also holds the meeting for presentation of research results (remote attendance to the concerning meeting will be allowed in case of absence in Japan at that time) Note that the content of these presentations may be taken into account when assessing applications for the following fiscal year.

(2) When publishing papers on the results of Collaborative research, you should clearly state in the Acknowledgments that the research was supported by ICRR's Inter-University Research Program. (Article 7 in the Regulations on Collaborators at the Institute for Cosmic Ray Research of the University of Tokyo)

The following is an example of acknowledgment for your reference. *() is optional.

• This work was (partially) supported by the Collaborative research program of the Institute for Cosmic Ray Research (ICRR), the University of Tokyo.

10. Safety and health education etc.

Participating researchers and research assistants are required to take safety and health education specified by the facility to be used, and to observe facility director instructions on safety and health. Participating researchers are also required to have accident insurance and liability insurance coverage.

11. Miscellaneous

- A) Applicants should obtain formal consent of the head of the research organization to which they belong before submitting their applications.
- B) If submitting a new application for use of a facility, be sure to obtain the consent of the facility director before submitting your application.
- C) The period in which human assistance can be provided for installing and operating observation equipment at Norikura Observatory is limited by snowfall in winter. You should therefore consult the director of the Norikura Observatory as required when drafting your research plan.
- D) See the table in Reference 2 on the last page for overseas observatories.
- E) Principal investigators must have completed the ethics education program provided by the organization to which they belong and/or eL CoRE (e-Learning Course on Research Ethics provided by Japan Society for the Promotion of Science) by the time they apply if they plan to claim expenses.
(eL CoRE URL: <https://elcore.jsps.go.jp/top.aspx>, click "English" button on top right to switch the language)
- F) Applications submitted after the application deadline will not in principle be accepted. Since withdrawing your proposal for unavoidable reasons after it has been selected will not prejudice any future applications by you, we recommend that you apply even if the decision to conduct the research has not been finalized by the application deadline.

Points to note when filling out your Inter-University Research Program Application Form

0. Notandum: /

Be sure to use the latest application forms.

- **Form 1: Cover** (fill in only the white fields. Color will not be printed.)
- **Form 1: Annex** (fill in name of your collaborators and research assistants)
- **Form 2: Research Plan** (should be two pages or less in length)

1. Application items:

Select applicable items (A, B, C) in the top right section of the Application Form based on the Application Guidelines. You may choose more than one (especially in the case of an application to attend Workshops (C)).

2. Research division, Center or facility name etc.:

Select the appropriate symbol in the top left section of the Application Form. (See "For your reference: research division/center/facility names etc. (Symbols A-K)" below)

3. Research proposal:

Provide the title of your research proposal.

4. International Collaborative research:

This is pre-circled to mark your proposal as being for international Collaborative research with ICRR.

5. Expenses required for your research:

If you wish to claim expenses required for your research, provide total amount and breakdown into goods costs and travel expenses (domestic travel in Japan to ICRR and its research facilities and observatories). We are unable to allocate research expenses for proposals not directly related to cosmic ray research, since such proposals are limited to facility use only. Select this rule as indication that you have understood it. Note that principal investigators must have completed the ethics education program provided by the organization to which they belong by the time they apply if they plan to claim expenses. Select "Completed" in the "Research ethics education" field to confirm that you have completed such a program.

6. Participating researchers and research assistants:

Enter the total combined number of participating researchers and research assistants in Form 1: Cover, and the names of participating researchers and research assistants in Form 1: Annex (list of participating researchers and research assistants). (In principle, no additions are permitted, but if you wish to make an addition at the confirmation stage after a selection decision has been taken, you should submit Form 5.)

Research assistants mean undergraduate students. Undergraduate students are ineligible for travel expenses.

If there is not sufficient space to list everyone, use as many pages of Form 1: Annex (list of participating researchers and research assistants) as you require. For affiliation, provide the name of the organization to which the person will belong as of April 1, 2020.

You should also provide the emergency contacts of the organization to which participating researchers visiting ICRR or its attached facilities to conduct experiments belong (telephone and e-mail of an administrative office etc. of your organization that can definitely be reached in the event that the research group principal investigator or other member of the group meet with an accident or similar contingency.) You should ensure that the system is in place for contacting the person responsible for safety management at your organization through the above emergency contacts in the event of an emergency. Note that you do not need to fill this field in if visiting ICRR only to attend research meetings etc.

(Note)

* If there are multiple Collaborators belonging to the same organization, you need to fill in only the field for the

leader.

7. Application Form "Other" section:

If you have obtained or applied for other funding for research related to this application, be sure to state that fact. If submitting multiple Inter-University Research Program applications as a principal investigator, supply the research proposal names and order of priority in the "Other" section of the Application Form.

As a safety and health rule, you are required to take safety and health education specified by the facility to be used and observe facility director instructions on safety and health. Select this rule as indication that you have understood it.

8. Inter-University research consent form:

Form 4 is Inter-University research consent form for participating researchers. After obtaining required consent and filling in the form, participating researchers should hand it to the principal investigator for safekeeping.

9. "Your contact at the Institute for Cosmic Ray Research" (Form1: Cover, upper part)

If no researchers from ICRR are participating, supply name of the ICRR researcher serving as contact. If left empty, we will designate an ICRR researcher after selection.

10. Points related to 2021 applications that require special mention

A) Modifications from the previous fiscal year

- Item 9, "Your contact at the Institute for Cosmic Ray Research" had been added.
- "Newly appointed priority" was abolished in FY 2020.
- High Energy Astrophysics facility in Canarias is newly established as an adjunct facility as of April 2019.
- Letter of Consent (Form 7) had been added as an additional document.

B) The following modifications have taken place for FY2021 applications

- (P1) B) Research Topics: e) has been added
- (P1) B) Workshops: Title has been changed to Scientific Meetings
- (P3) 9. Reporting research results: Modification in explanation
- (P4) 0. Notandum, Form 2 (Research Plan): (should be two pages or less in length) has been added
- (P6) "Contacts": Changes in phone numbers

For your reference: Research division/center/facility names etc. (Symbols A-K)

1. Research applications are handled by the following research divisions, centers, and facilities as required. Your application form will be forwarded to the relevant research division head or center director. When relevant centers/facilities etc. are specified, research division heads will inform center/facility directors etc.

Neutrino and Astroparticle Division

A Super-Kamiokande (division head)

B Kamioka facilities other than Super-Kamiokande (division head and Kamioka facility director)

High Energy Cosmic Ray Division

C Akeno Observatory facility use (division head and Akeno Observatory director)

D Norikura Observatory facility use (division head and Norikura Observatory director)

E High Energy Astrophysics facility in Canarias use (division head and High Energy Astrophysics facility in Canarias director)

F Gamma rays, highest energy cosmic rays, ultra-high energy cosmic rays, high energy astrophysics (division head)

Astrophysics and Gravity Division

G Gravitational wave-related (division head and KAGRA Observatory facility director, *Kamioka facility director if using Kamioka facilities)

- H Observational cosmology, theory (division heads)
Research Center for Cosmic Neutrinos
- I Primary Cosmic rays, Kashiwa underground facility use (center director)
- J Computer use (center director and Computer Committee)
- K Workshops on the future cosmic ray studies

Contacts

Division name etc.	Name	Telephone	Email address
Head, Neutrino and Astroparticle Division	Masato Shiozawa	+81-(578)-85-9611	masato@suketto.
Head, High Energy Cosmic Ray Division	Masato Takita	+81-(80)-4860-7998	takita@
Head, Astrophysics and Gravity Division	Masahiro Kawasaki	+81-(80)-4814-1388	kawasaki@
Director, High Energy Astrophysics facility in Canarias	Masahiro Teshima	+81-(80)-4831-8055	mteshima@
Director, KAGRA Observatory	Masatake Ohashi	+81-(578)-85-2343	mohashi@
Director, Research Center for Cosmic Neutrinos	Kimihiro Okumura	+81-(80)-4872-9272	okumura@
Director, Kamioka Observatory	Masayuki Nakahata	+81-(578)-85-9603	nakahata@
Director, Akeno Observatory	Hiroyuki Sagawa	+81-(80)-4808-2374	hsagawa@
Director, Norikura Observatory	Masato Takita	+81-(80)-4860-7998	takita@

*For email addresses, add "icrr.u-tokyo.ac.jp" (without quotes) after the above entries.

*+81 is Japan country code. When making local calls within Japan, delete +81 and add 0 before the area code or the mobile prefix in parenthesis.

2. ICRR's overseas observatories are as follows:

Overseas observatory name	Facility/equipment name
Tibet, China	Air shower detector
Utah, USA	Telescope Array (TA)
Chacaltaya, Bolivia	Chacaltaya Observatory of Cosmic Physics
La Palma, Spain	Cherenkov Telescope Array (CTA) / High Energy Astrophysics facility in Canarias