

Ph.D. Student Application Guidelines for admission before May 2027 for “International joint research of geospace variability by combining multi-point ground and satellite observations and modeling” (PBASE Program)

The Grant-in-Aid for Scientific Research (International Leading Research) "International joint research of geospace variability by combining multi-point ground and satellite observations and modeling" (PBASE Program, 22K21345), started in January 2023, invites applications for a doctoral degree program. The selected students will be employed or appointed as research assistants or fellows by the participating institutions (Nagoya University, Kyoto University, Kyushu University, or the National Institute of Polar Research). They will be paid approximately 200,000 yen per month (before tax) for up to three years during the doctoral program, with 500,000 yen available annually for research expenses. Please note that it is undecided whether this program will continue beyond fiscal year 2029, and the program may conclude at the end of fiscal year 2028.

Purpose of this program

The near-Earth space (geospace), that includes our upper atmosphere, is a highly dynamic region. This is due to ultraviolet and X-ray radiation from the Sun, magnetic storms caused by high-energy plasma particles from solar explosions, and atmospheric waves from the lower atmosphere. These variations affect radio communications between satellites and the ground, causing failures in satellite positioning and communications. Magnetic storms also cause the atmosphere to heat and expand, resulting in the alteration of satellites' orbits. In addition, high-energy plasma particles from solar explosions and magnetic storms cause radiation hazards to astronauts, satellites, and aircraft crews. As humanity's use of space continues to increase, understanding and predicting these geospace variabilities have become an urgent issue.

To understand the mechanism behind geospace variability, it is necessary to combine ground instruments and satellites, allowing for comprehensive measurements of geospace. Furthermore, there is also a need to coordinate with modeling through numerical simulations

to complement sparse observations and for quantitative evaluations, including space weather prediction. The PBASE program aims to significantly contribute to the understanding and prediction of geospace variabilities by combining ground-based and satellite observations with modeling techniques, covering a wide area in both altitude and latitude/longitude.

More information: <https://www.isee.nagoya-u.ac.jp/dimr/PBASE/>

Applicant qualifications

Students who have already completed a master's degree or expect to complete a master's degree by the time of admission (before May 2027), who have already been assigned or are expected to be assigned before May 2027 to a doctoral course related to one of the following institutes: (a) Institute for Space-Earth Environmental Research, Nagoya University; (b) National Institute of Polar Research; (c) Research Institute for Sustainable Humanosphere, Kyoto University; or (d) International Research Center for Space and Planetary Environmental Science, Kyushu University.

Those who will be applying to a doctoral course related to one of these institutions are also eligible to apply for this program. However, failure to pass the entrance examination for the doctoral course will invalidate their selection.

Graduate students who are already receiving more than 1.5 million yen per year in scholarships or research assistant (RA) expenses from other organizations (such as Doctoral Course Fellow of the Japan Society for the Promotion of Science) will not be eligible for support of the PBASE program. If a student employed under this program receives another scholarship or RA expenses from another organization, their employment under this program will be terminated.

Application procedure

Submit the following application forms (free format) in a single PDF file to [asakura\[at\]isee.nagoya-u.ac.jp](mailto:asakura[at]isee.nagoya-u.ac.jp). No application fee is required. Please write "PBASE RA Application" in the subject of the application e-mail.

1. Curriculum vitae

2. Publication record and awards received
3. Proof of English ability sufficient for international joint research (e.g., scores of TOEIC, TOEFL, or IELTS).
4. Transcripts of undergraduate courses (including grades)
5. A research plan (about 2 pages in A4 size) (We will review the applicant's understanding of the purpose of this program and their expected level of contribution)
6. A summary of the applicant's previous research (1 page)
7. Letter of acceptance from the host researcher
8. A letter of recommendation from the current supervisor or the Dean of the University the applicants are currently attending (or last attended).

Application period

Application documents will be accepted between 09:00 am October 27, 2025 and 4:00 pm December 19, 2025 Japan Standard Time (JST=UT+9 h). Upon receipt, a confirmation e-mail will be sent to the applicant within a week. If you do not receive the confirmation e-mail, please contact [asakura\[at\]isee.nagoya-u.ac.jp](mailto:asakura[at]isee.nagoya-u.ac.jp) / tel: 052-747-6417 or your host researcher, and resubmit the application.

Selection method

1. Document screening

Preliminary screening will be conducted based on the application documents, and the applicant will be notified of the results via e-mail by January 19, 2026.

2. Interview

Applicants who pass the document screening will be invited to an online interview between January 20 and February 13, 2026. Details of the interview will be provided along with the notification of acceptance of the document screening.

Announcement of Successful Applicants

The successful applicants will be notified by e-mail by February 28, 2026.

Handling of personal information

Students' names and affiliations may appear on our website and in printed materials for publicity purposes. Names, addresses, and other personal information submitted at the time of the application will be used for document screening, the interview, announcement of successful applicants, and other operations related to this program. Personal information, such as examination results, will be used for aggregation and analysis of selection results, and for research and study of selection methods.

Contact information

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