Research Organization of Information and Systems
National Institute of Polar Research

Collaborative research program based on the allocation of PANSY radar observation time

(Period: April 2027 to September 2027)

Summary

The PANSY radar at Syowa Station started continuous atmospheric observation in 2012 as the first and only large aperture MST/IS radar in the Antarctic, and its full system operation has been conducted since October 2015. In the Xth phase of Japanese Antarctic Research Expedition (JARE) (FY2023-2028), a part of the PANSY radar observation time is allocated to collaborative research to further promote atmospheric studies. In this instruction we call for proposals from various atmospheric research fields in the world for the one-year period from April 2027 to September 2027. Since the full system operation of the PANSY radar will end in September 2027, this is the final call for applications.

Purpose

This program deals with the allocation of the PANSY radar observation time. Any research projects based on archived PANSY radar data are not handled in this program, but will be under a different frame (https://pansy-data.nipr.ac.jp/).

Observation modes / allocation time

This program mainly deals with established observation modes such as Mesosphere/Stratosphere/Troposphere (MST) mode, ionosphere electron density mode, frequency domain interferometry mode, and meteor head echo mode.

Because the main target of PANSY radar observation is the study of atmospheric phenomena in a wide frequency range, the radar has most continuously been operated under the routine MST mode to create a long-term database with only limited number of data gaps. Thus the time allocation for collaborative studies is supposed to be shorter than 5 calendar days a month.

If you are interested in observation modes other than the above-mentioned ones, please consult the PANSY support group (pansykyodo@nipr.ac.jp) before submitting your application.

Please note also that the users of any collaborative research projects are not supposed to directly access the radar system through internet, because the radar is located and maintained in an isolated place by only a limited number of personnel.

In addition, a small domestic system “Sumire” consisting of 22 antennas has been installed and operated at Shigaraki MU observatory in cooperation with the Research Institute for Sustainable

Humanosphere, Kyoto University, for training of PANSY radar operation and development and validation of observation algorithms. If you wish to conduct validation, etc. using “Sumire” before conducting observations in Antarctica, please contact the PANSY Support Group before submitting your application. Note that the time available for validation of the proposed observations is very limited, because the system is designed for training of operators and problem solving of PANSY.

Eligible applicants

The principal investigator of the proposal must be a full-time research staff member of a Japanese or foreign research institution for the purpose of academic research, or a JSPS Postdoctoral Fellow (excluding DCs). Participation as a co-investigator is open to research staff members, including part-time staff, of the above-mentioned research institutions, and undergraduate and graduate students.

Review process

The submitted proposal is first peer-reviewed, and then discussed by the steering committee of the PANSY radar collaborative research. The decision will be informed to the applicants in the latter half of March 2025.

Submission

Please fill out the application form (MS Word format), then send it to pansykyodo＠nipr.ac.jp.

If you do not receive a confirmation message within three days after the submission, please contact us again.

Deadline: Monday, December 21, 2026

Reports

The applicants of accepted research projects are invited to report science outcomes in the PANSY radar science workshop held every year, and requested to submit a short report (MS Word format).

When presenting results obtained through this program in research papers, please inform the PANSY support group (pansykyodo@nipr.ac.jp). Co-authorship may be requested depending on the contribution made by staff members of Advanced Radar Research Promotion Center.

Notes

The number of applications from the same principal investigator is limited to one.

This call for proposals is not intended to accept applications for participation in JARE nor for research funding. If your research proposal requires participation in JARE or research funding, you must apply to the Antarctic Research Center as a new Antarctic observation project.

The applicant is required to prepare any supplies (additional equipment, large capacity HDD, etc.) that he/she needs to bring to Antarctica for the proposed research.

Links

PANSY radar collaborative research program
（https://www.arrc.nipr.ac.jp/index.php/2026/11/19/pansy2027_en/）
Project of the Antarctic Syowa MST/IS Radar (PANSY)（https://pansy.eps.s.u-tokyo.ac.jp/en/）
Advanced Radar Research Promotion Center（https://www.arrc.nipr.ac.jp/）
PANSY data archive HP（https://pansy-data.nipr.ac.jp/）
Japanese Antarctic Research Expedition（https://www.nipr.ac.jp/english/antarctic/index.html）

Contact

pansykyodo＠nipr.ac.jp
PANSY Support Group, Advanced Radar Research Promotion Center (ARRC)