

Important Notice for International Researchers:

Starting from fiscal year 2028, the operation of the accelerator for treatment purposes will be transferred from the HIMAC to the new accelerator. However, the operational method for experimental use of the accelerator has not yet been finalized. Therefore, the current system will be terminated at the end of fiscal year 2027, and the new operational policy will be announced during FY2027.

When preparing your research proposal for this application, please ensure that the research plan is scheduled to be completed by the end of FY2027.

Additionally, from FY2026, a usage fee system will be introduced for the experimental animal facility in the HIMAC. Details regarding the fees and collection methods will be announced once the operational procedures are finalized.

As of FY2025, the application process has been revised, and a new application form is now in use. Please make sure to carefully read the updated guidelines to avoid any errors in your submission.

Cyclotron proposals will not be accepted at this time.

CALL FOR PROPOSAL OF EXPERIMENTS AT ACCLERATORS in Chiba

1. Description

National Institutes for Quantum and Science and Technology (QST) in Chiba, Japan, will accept proposals for experiments using Accelerators in Chiba during the period from April 2026 through March 2027.

Although HIMAC is an accelerator designed for medical applications, beam time is available for research projects beyond the scope of medical sciences.

Electrostatic Accelerator can perform PIXE (Particle-Induced X-ray Emission) analysis and microbeam irradiation using proton or helium ions.

2. Address for Submission of Proposals

Additional information and instructions for submission of proposals are available from the Program Coordinator at the following address.

E-mail :	himac_riyou@qst.go.jp (HIMAC) kyoyo-seiden@qst.go.jp (Electrostatic Accelerator)
Surface mail :	Department of Accelerator and Medical Physics National Institutes for Quantum Science and Technology 4-9-1 Anagawa, Inage-ku, Chiba 263-8555, JAPAN

3. Deadline for Submission of Proposals

December 12th, 2025

4. Description of Facilities

Two experimental halls are available for research at HIMAC. These include facilities for Biology, and Medium-Energy Beams.

HIMAC is used for medical applications. Other research can only be basically performed on Tuesday and Wednesday night.

Three types of PIXE analysis systems (PASTA) are available in the electrostatic accelerator: conventional, in-air, and microbeam scanning types.

In addition, the system includes a dedicated beamline for in-air microbeam irradiation using proton or helium ions (SPICE).

5. Type of application

The HIMAC collaborative research program will be terminated in FY2024, and the experimental use of HIMAC will be operated under a new system starting in FY2025.

There are three ways to use HIMAC under this program, as described below.

A. Collaborative Research

This is a proposal to be researched in collaboration with a QST co-researcher.

If your proposal is accepted, an MOC (Memorandum of Cooperation) must be signed between your institution and the QST before the experiment starts.

When applying, please be sure to include the name of a QST co-researcher.

The co-researcher will handle the identity registration process at QST. The Secretariat will not do this in the future.

No fee is required.

B. Paid Use

This is conducted without MOC.

Requires the signing of a user contract or articles of incorporation.

Applies to those that do not disclose experimental results.

Please contact the secretariat for fees.

No identity registration process at QST is required, but a Radiation Controlled Area Entry Certificate must be submitted.

C. Paid Use to Publish Results

This is conducted without MOC.

Requires the signing of a user contract or articles of incorporation.

If the results are to be published in a paper, a reduced fee will be applied.

Please contact the secretariat for fees.

No identity registration process at QST is required, but a Radiation Controlled Area Entry Certificate must be submitted.

* If you have any questions about this section, please email your liaison if you are currently using HIMAC, or the Secretariat if you are not using it.

6. Spokesperson

One of participants in the proposal should be identified as the spokesperson. All correspondence with QST should be through this spokesperson.

7. Review and Selection of the Proposals

A Program Advisory Committee (PAC) consisting of researchers inside and outside of QST will review all proposals. The final selection of approved experiments will be informed by the Director General of Institute for Quantum Medical Science based on recommendations from the PAC. The approval is valid for one year. Renewals for continuation or revised proposals must be submitted each year.

Beam time is scheduled every six months. The spokesperson and the liaison at QST for each experiment will work with a beam-time coordinator at QST to arrange preferred beam times.

8. Submission

Necessary documents for submission include,

(1) A summary of the proposal should be presented using the attached form: "Proposal for Research Project at QST-xxx".

(2) Information describing details of the proposal should be presented on separate sheets in either Japanese or English using guidelines in the attached form: "Instructions for Preparation of Details of the Proposal"

* **Caution:** Ensure that you have completed the "Safety Issues and Special Requirements" to evaluate the safety of your experiment and confirm necessary procedures.

(3)-1 HIMAC:

Beam-time applications for HIMAC are handled independently from the current application process. The Secretariat of the Beam-Time Committee will provide applicants with the application guidelines, forms, and other documents required for conducting experiments.

(3)-2 Electrostatic Accelerator:

The beam time application guidelines and application form for the electrostatic accelerator are enclosed with this application. Please submit both the research proposal and the beam time application form by the deadline.

10. Available Beams

Characteristics of typical beams are listed below. Additional ions or energies may be available in a limited manner upon request. Please contact the Program Coordinator for more information.

-- Medium-Energy Beams--

Ion	He, C, N, O, Ne, Si, Ar, Fe
Energy	6 MeV/u
Intensity	$<2.0 \times 10^{12}$ pps

-- Biology --

A large and uniform irradiation field is provided for Biology. The user can select a mono-energetic beam with a narrow Bragg Peak (MONO) or a beam with a broad "Spread-Out" Bragg Peak (SOBP).

Ion	energy (MeV/u)	field shape
He	150	MONO, SOBP60
C	290	MONO, SOBP60
C	135, 350, 400	MONO
Ne	230	MONO
Ne	400	MONO, SOBP60
Si	490	MONO
Ar	500	MONO

Fe 500 MONO
A diameter of the beam is 100 mm.

SOBP60 indicates an SOBP field with a thickness in depth of 60 mm. Maximum intensity is approximately 5 Gy/min. for a MONO beam and 3 Gy/min. for an SOBP beam.

-- PASTA--

Ion	H
Energy	<3.4MeV
Intensity	<100 pA @ micro-PIXE analysis

-- SPICE—

Ion	H, He
Energy	<H:3.4MeV, He:5.1MeV
Intensity	1 ~ 50,000 particle/shot