

**Rules of Usage for the Electron Storage Ring BESSY II
at Helmholtz-Zentrum Berlin für Materialien und Energie GmbH**

(Rules of Usage / Nutzungsordnung)*

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*Please note: this translation of the Nutzungsordnung is for informational purposes only; in case of discrepancy or ambiguity, the German version (as of November 9, 2021) shall take precedence.

Annexes

- A** **General Guidelines of the BMBF (German Federal Ministry of Education and Research) regarding the use of research facilities of Helmholtz Centres (HZ) by third parties (as of March 1st, 2000)**

- B** **Safety regulations**
 - 1. On-site security
 - 2. Radiation protection
 - 3. Safety at work

- C** **Access to infrastructure**
 - 1. Laboratories
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- D** **Travel expenses**
 - 1. User Committee
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- E** **Statutes and Regulations**
 - 1. Rules of procedure of the Scientific Selection Panel
 - 2. Statutes of the User Committee
 - 3. Guidelines for users at HZB
 - 4. HZB data policy
 - 5. Quality Management Manual for Beamtime Projects

- F** **Pricing policy for commercial use and internal rules of procedure**
 - 1. Charges for the use of BESSY II instruments
 - 2. Rules of procedure of the User Coordination and the Finances and Accounting Department

- G** **List of laboratories and instruments at BESSY II**
 - 1. List of laboratories and workshops in user service
 - 2. List of instruments in the BESSY II experimental hall

The Supervisory Board of HZB approved the first version of the "Rules of Usages for the Electron Storage Ring BESSY II" on April 12, 2013. The present updated version was approved by the board of directors on November 9, 2021 after considering the recommendations of the Scientific-Technical Council (WTR).

Preamble

The Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (HZB) operates a scientific large-scale facility for research: the synchrotron radiation source BESSY II. HZB makes this unique research infrastructure available for excellent scientists and enables outstanding research. A general online access tool (GATE) provides a procedure for allocating experiment time at the experimental infrastructures.

The scientific evaluation of the experiment time applications is carried out by an HZB-external review panel (SSP/Scientific Selection Panel). HZB supports the user community by providing the expertise of HZB staff and by ensuring operation, maintenance, and further development of the experimental infrastructures.

Section I - Principles

§ 1 Intended purpose

BESSY II and its experimental infrastructures serve fundamental scientific research, applied research and metrology. Fee-based use by or for commercial enterprises is also possible. Research and use must be in accordance with the objectives and basic rules of the HZB, given in the "Articles of Association" ("Gesellschaftsvertrag" as of July 27, 2015). These principles include in particular the pursuit of peaceful purposes.

§ 2 User fee

For research projects of public funded research institutions and universities from Germany and abroad, no user fee is charged (see Annex A: Guidelines of the BMBF). For the use by other institutions and organisations, fees can be charged on the basis of standard market prices or full costs. Fees for external cooperation partners will be agreed individually on a contractual basis.

§ 3 Responsibility for experimental infrastructures

Generally, scientific and technical organisation units of HZB are responsible for setup, operation, and use of the accelerator and the experimental infrastructures at BESSY II.

If experimental infrastructures at BESSY II are set-up and/or operated by cooperating external research groups, contractual arrangements are required.

All experimental infrastructures at BESSY II are subject to regular evaluation by external experts, who make recommendations regarding continued operation and further development.

§ 4 Available instrument time

At least two-third of the entire available instrument time, averaged over all experimental infrastructures at BESSY II, must be provided to external users. External users are all short-term users, commercial users and cooperation partners, as long as they are not employed at HZB.

Each individual instrument should be accessible to external users at least half of the time. The remaining instrument time at a maximum of one-third is used for inhouse research of HZB organisation units, in particular those who set up, operate and develop the respective experimental infrastructure at BESSY II.

For experimental infrastructures, a distinction is made between infrastructures for which the full user service is offered ("scheduled instruments") and infrastructures for which the user service is offered only on a limited basis or not at all ("non-scheduled instruments").

For experimental infrastructures that are not in full use, for example due to maintenance, individual regulations apply with regard to the allocation of instrument time. For experimental infrastructures that are set up and operated by external collaboration partners, different contractual arrangements may apply.

§ 5 User support

Users are entitled to technical support by a person responsible for the respective experimental infrastructure (hereinafter referred as instrument scientist). This support includes preparation and execution of experiments and, if necessary, analysis of experimental data.

We distinguish two categories for experiment execution:

Conducting an experiment with a local team

- The instrument scientist does not per se take over the full task of an experimentalist for the users. Support is possible. The decision on the extent of this support is up to the instrument scientist and the organisational unit responsible for the respective experimental infrastructure.
- Users are responsible for registration of a sufficient number of experimentalists for the preparation and execution of their experiment at BESSY II.
- HZB has the right to cancel an experiment for safety reasons if the number of experimentalists present is insufficient.

Conducting an experiment via remote access

- The decision whether an experiment can be conducted by remote access is in the responsibility of the instrument scientist and the organisation unit responsible for the respective experimental infrastructure.
- The instrument scientist may provide on-site support for users. The decision on the amount of this support is the responsibility of the instrument scientist and the organisation unit responsible for the respective experimental infrastructure.

HZB must take preventive measures to ensure compliance with important regulations, in particular those relating to occupational safety and radiation protection. Complaints are to be handled in an appropriate manner (see Annex E5.).

For users traveling from abroad, financial support for travel and accommodation expenses may be provided on a case-by-case basis, subject to available budget resources (see Annex D2).

§ 6 Principle of publication requirement

Scientific results obtained using BESSY II experimental infrastructures have to be published (see §2 in HZB Articles of Association as of July 27, 2015, and HZB Publication Order as of August 23, 2012). Exceptions to this principle may be agreed in the case of fee-based use (see Sections III and IV).

Users have the primary right to the intellectual property of the scientific results of their work at BESSY II.

The use of BESSY II experimental infrastructures and the allocation of instrument time must be mentioned properly in the publication.

According to the DFG “Guidelines for Safeguarding Good Research Practice” (“Leitlinien zur Sicherung guter wissenschaftlicher Praxis”, adopted by the German Research Association DFG on August 1, 2019) and the HZB “Rules of Good Scientific Practice” (as of November 8, 2021) instrument scientists have to be included as co-authors in publications as far as they have contributed to.

§ 7 Radiation protection and safety regulations

HZB decides on regulations concerning radiation protection and safety in all matters of the operation of BESSY II within the framework of the legal and licensing regulations.

Users are obliged to follow these regulations and requirements as well as the instructions of the associated HZB personnel without exception (see Appendix B).

In the event of infringements, HZB has the right to deny access or to withdraw access that has already been granted.

§ 8 Insurance cover for user

The sending institution must ensure that all users who perform experiments at BESSY II experimental infrastructures and HZB laboratories have an adequate insurance cover, in particular health, accident and liability insurance for the entire period of their stay.

Section II - General Usage Regulations

§ 9 User group categories

Instrument time campaigns are distinguished between single projects (short-term use) and long-term projects (long-term use).

Long-term use includes:

- Use by external cooperation partners, research groups or institutions that set up and operate their own experimental infrastructures and support other users (external and HZB internal users) at these experimental infrastructures.
- Use by external cooperation partners, research groups or individuals who are temporarily assigned to the HZB and who, in addition to their own research, also perform general tasks for the user support of the HZB.
- Use of experimental infrastructures on the basis of long-term applications by external cooperation partners, research groups or individuals for a maximum period of two years or four application rounds. The organisational unit of the respective experimental infrastructure decides on the approval of long-term applications.

Short-term use includes the use by external cooperation partners, research groups or individuals who carry out their own experiments based on single instrument time applications approved individually.

§ 10 User Committee

The HZB User Committee collects feedbacks on matters of concern to individual users working at BESSY II, conveys an assessment summary of these feedbacks and suggests appropriate measures to the scientific Board of Directors. The User Committee consists of a maximum of six external scientists. The members of the User Committee are elected annually for two years with the option of being elected for one additional term (structure and procedures, see Annex E2). Entitled to vote are all users registered in the HZB user access tool GATE. Guests with a significant role in user operation and user support - appointed by HZB - can participate in the User Committee meetings.

§ 11 User group meetings

All scientists who perform experiments at BESSY II or have applied for new experiments are invited to the user group meetings. The primary purpose of these meetings is the exchange of information and, in particular, the presentation of the latest research results to all BESSY II users. The meeting is organised by the HZB User Coordination in consultation with the User Committee and should be held annually.

§ 12 Allocation of instrument time

Instrument time for single projects (short-term use) at BESSY II experimental infrastructures must be applied for electronically through the general access tool GATE. Applications for instrument time are requested by the HZB User Coordination.

Applications will be forwarded to the responsible instrument scientists to evaluate the feasibility and to the responsible HZB organisation units for review on safety and radiation protection concerns.

In a scientific review process, a recommendation on the acceptance of individual projects and on the allocation of instrument time contingents is developed. The scientific review will be carried out by an external review panel (SSP: Scientific Selection Panel) representing the diversity of scientific fields at BESSY II. The review will take place in semi-annual selection rounds.

Based on the recommendations of the Scientific Selection Panel (see Annex E1) and according to the operating calendar ("instrument time calendar") instrument time, available for single projects in the respective 6-month period is planned by the HZB User Coordination Department.

In consultation with the HZB User Coordination and the organisational unit of the respective experimental infrastructure the board of directors decides on the semi-annual contingent of instrument time for long-term use. Agreed commitments or contingents based on contracts, will be taken into account appropriately.

Urgent requests for instrument time can be considered outside the standard procedure in the operating calendar. In consultation with the Board of Directors or its authorised committee, the head of the HZB User Coordination department decides on such projects.

The final decision on the operating calendar lies with the Board of Directors.

§ 13 Instrument time reports

The results of single projects (short-term use) must be reported to the User Coordination Department within four months after the completion of the experiment. Reports have to be prepared in a special form defined by the User Coordination Department.

Reports on previous experiments are mandatory for the submission of follow-up applications.

§ 14 Shipment of samples / equipment

Before shipping samples, equipment etc., the current regulations must be observed (e.g. hazardous goods and export control regulations). The shipping costs, including import taxes, are in the responsibility of the sender and cannot be charged to HZB. Exceptions from these regulations have to be approved by HZB in advance.

Section III - Regulations for the use of infrastructure by cooperation partners

§ 15 Use of the experimental infrastructure by cooperation partners

According to Section I, § 3, HZB is responsible for the setup, operation and use of the accelerator and the experimental infrastructures at BESSY II. HZB may conclude individual cooperation agreements with one or more external cooperation partners for the use of its experimental infrastructures. These cooperation agreements allow external cooperation partners to set up and/or operate experimental infrastructures at BESSY II.

External cooperation partners can be public funded research institutions and universities from Germany and abroad, other institutions and organisations as well as commercial enterprises.

The use of infrastructures by external cooperation partners is also subject to the condition that, in accordance with § 2 No. 4 of the HZB's articles of association, the use of the results may only serve peaceful purposes.

§ 16 Costs/Expenses

Instrument times of external cooperation partners are subject to a fee. However, they are not commercial and therefore cannot be equated with an instrument time as defined in Section IV § 20. Usage fees and instrument time contingents for external cooperation partners are based on contractual agreements.

§ 17 Allocation of instrument time

If not agreed by contract, instrument time for single projects (short-term use) of external cooperation partners at experimental infrastructures according to §15 must be applied for in accordance with Section II, §12. Applications will be forwarded to the responsible instrument scientists to evaluate the feasibility and to the responsible HZB organisation units for review on safety and radiation protection concerns.

In a scientific review process, a recommendation on the acceptance of individual projects and on the allocation of instrument time contingents is developed. The scientific review will be carried out by an external review panel (SSP: Scientific Selection Panel) representing the diversity of scientific fields at BESSY II. The review will take place in semi-annual selection rounds. Agreed commitments or contingents based on contracts will be taken into account appropriately.

The final decision on the operating calendar lies with the Board of Directors.

§ 18 Exception to the publication requirement

Scientific results obtained by using BESSY II experimental infrastructures have to be published. Exceptions to this are only possible by prior agreements.

Section IV - Arrangements for commercial use

§ 19 Use and collaboration with industrial partners

In accordance with the mission of HZB (see § 2 in “Articles of Association” as of July 27, 2015) experimental infrastructures at BESSY II are also available for partners from industry. Cooperation with industrial partners on research and development projects, e.g. for the development of experimental infrastructures at the large-scale facility BESSY II, is explicitly welcome. Commercial use is also subject to the condition that, in accordance with HZB's Articles of Association, the use of the obtained results may serve exclusively peaceful purposes.

§ 20 Costs/expenses

If there is a prime interest in the commercial use of the results obtained, HZB will charge full costs. For cooperative projects in the interest of both parties, a partial assumption of costs can be agreed upon. However, at least the additional expenses incurred by the use of BESSY II experimental infrastructures must be covered.

In the case of projects of public funded research institutes, which in turn generate income due to the work performed at BESSY II, the same procedure as for commercial use must be followed.

The cost calculations are usually based on the time of use for the experimental infrastructure and the personnel effort provided.

§ 21 Approval of commercial use and allocating instrument time

The following applies for the acceptance of projects with a commercial background and the allocation of instrument time contingents: HZB and the responsible organisation units decide on the acceptance of projects with cost reimbursement and on the allocation of instrument time contingents for these projects (in accordance with § 12, section 1).

The main contents of commercial use are to be agreed by contract. The agreement must be in written form.

§ 22 Exception to the publication requirement

Scientific results obtained by using BESSY II experimental infrastructures have to be published.

Exceptions to this are only possible by prior agreements and complete reimbursement of expenses.

Approved by the Boards of Directors on November 9, 2021