

Advanced Photon Source

User Policies and Procedures

PROCEDURE	Page 1 of 21
Procedure #:	3.1.46
Revision #:	0
Issue Date:	4/11/12
Review Period:	3 years
Supersedes:	(see below)
Last Reviewed:	4/11/12

General User Beam Time

Changes made in this revision:

- Consolidates the information pertaining to General Users in Use of the APS Beam Time Access System (Procedure # 3.1.115, rev. 0) and APS User Administrative Policies and Procedures (Procedure # 3.1.101, rev. 0), along with the previous General User policy, "Participation of General Users at the APS."
- Updated and elaborated.

Comments for future revisions:

This document has several sections that are identical (or nearly so) with sections in the other beam time access policies cited in Beam Time Access Framework (Procedure # 3.1.115), Section 3.1/Access Modes. The information is duplicated so that each policy can stand alone for ease of reference by users. Changes to this policy should also be made in the other policies as appropriate.

Prepared by:

S. Strasser, XSD/User Program Manager
J. Andrew, XSD/Staff Assistant Senior

Reviewed/Approved by:

AES/UES Group Leader
AES/Technical Operations Specialist
XSD/Division Director
APS/Deputy Director, X-ray Science
APS/Director

APS_1426695

The current version of this procedure is accessible from <http://centraldocs.aps.anl.gov/>. Print or electronically downloaded copies may be obsolete. Before using such a copy for work direction, employees must verify that it is current by comparing its revision number to that shown in the online version.

PROCEDURE	Page 2 of 21
Procedure #:	3.1.46
Revision #:	0

Table of Contents

POLICY	4
1 PURPOSE	4
2 SCOPE	4
3 POLICY.....	4
3.1 General.....	4
3.1.1 Definition.....	4
3.1.2 Available Time	4
3.1.3 Calls for Proposals.....	6
3.1.4 Proposals and Beam Time Requests	6
3.1.5 Proposal Lifetime	6
3.1.6 Scientific Review.....	6
3.1.7 Beamline Comment	8
3.1.8 Allocation	8
3.1.9 Scheduling	9
3.1.10 National User Facilities	9
3.1.11 Alternative Experimental Modes	9
3.2 Specifics of Standard General User Mode.....	9
3.3 Specifics of Rapid Access General User Mode	10
3.4 Specifics of Project General User Mode	11
3.5 User Rights and Responsibilities	12
3.5.1 User Rights.....	12
3.5.2 User Responsibilities	12
3.6 Beamline Rights and Responsibilities.....	12
3.6.1 Beamline Rights	12
3.6.2 Beamline Responsibilities.....	12
4 ACRONYMS	13
5 DEFINITIONS	13
6 ASSISTANCE	14
7 RELATED POLICIES.....	14

PROCEDURE	Page 3 of 21
Procedure #:	3.1.46
Revision #:	0

Table of Contents (cont'd)

PROCEDURE	15
1 INTRODUCTION	15
1.1 Purpose	15
1.2 Scope.....	15
1.3 References	15
2 BACKGROUND	15
3 PRECAUTIONS AND LIMITATIONS	16
4 PREREQUISITE ACTIONS	16
5 PROCEDURE.....	17
5.1 Create Proposal Online.....	17
5.2 Conduct Scientific Review—Macromolecular Crystallography.....	18
5.3 Conduct Scientific Review—All Other Science	18
5.4 Allocate Beam Time.....	19
5.5 Schedule Beam Time.....	20
5.6 Conduct Experiment	20
5.7 Request Time in Future Cycles.....	21
6 DOCUMENTS/RECORDS CREATED BY THIS PROCEDURE	21
7 TRAINING REQUIRED	21
8 FEEDBACK AND IMPROVEMENT	21

General User Beam Time

POLICY

1 PURPOSE

The objective of this policy is to provide the primary means of access for external users. This access is offered through a competitive, proposal-driven, peer-reviewed system. The principle underlying this system is peer review that is fair, clear, expedient, and sensitive to the needs of users.

2 SCOPE

This policy applies to all users of APS General User beam time. For the overarching policy for access to beam time, see [Beam Time Access Framework, Procedure # 3.1.115](#).

3 POLICY

3.1 General

3.1.1 Definition

The General User mode is the primary means of access for external users. There are two categories of General User access: macromolecular crystallography (MX) and all other science. The proposal form and the review and allocation process are tailored to meet the different needs of these communities.

Most General User access is handled in the standard mode ([Section 3.2](#)). The rapid access mode ([Section 3.3](#)) and project mode ([Section 3.4](#)) govern short-notice and long-term work, respectively. This introduction gives the policy that is general to all three modes; the sections cited give information specific to those modes. [Figure 1](#) shows the typical life cycle of a General User proposal.

General User time is also open to APS staff members under the following conditions. At beamlines other than their own, APS staff members are considered as external users. At their own beamlines, APS staff members may be awarded General User time as long as at least 25% of the beam time has been awarded to external General Users.

3.1.2 Available Time

The overall time available to General Users is established within the context of all beam time access at the APS, as described in see Section 3.6/Available Time in [Beam Time Access Framework \(Procedure # 3.1.115\)](#). The specific time allotments for standard,

PROCEDURE	Page 5 of 21
Procedure #:	3.1.46
Revision #:	0

rapid access, and project general user modes are given in Sections [3.2](#), [3.3](#), and [3.4](#), respectively. The standard unit of beam time is an 8-hour shift, though smaller units are sometimes used.

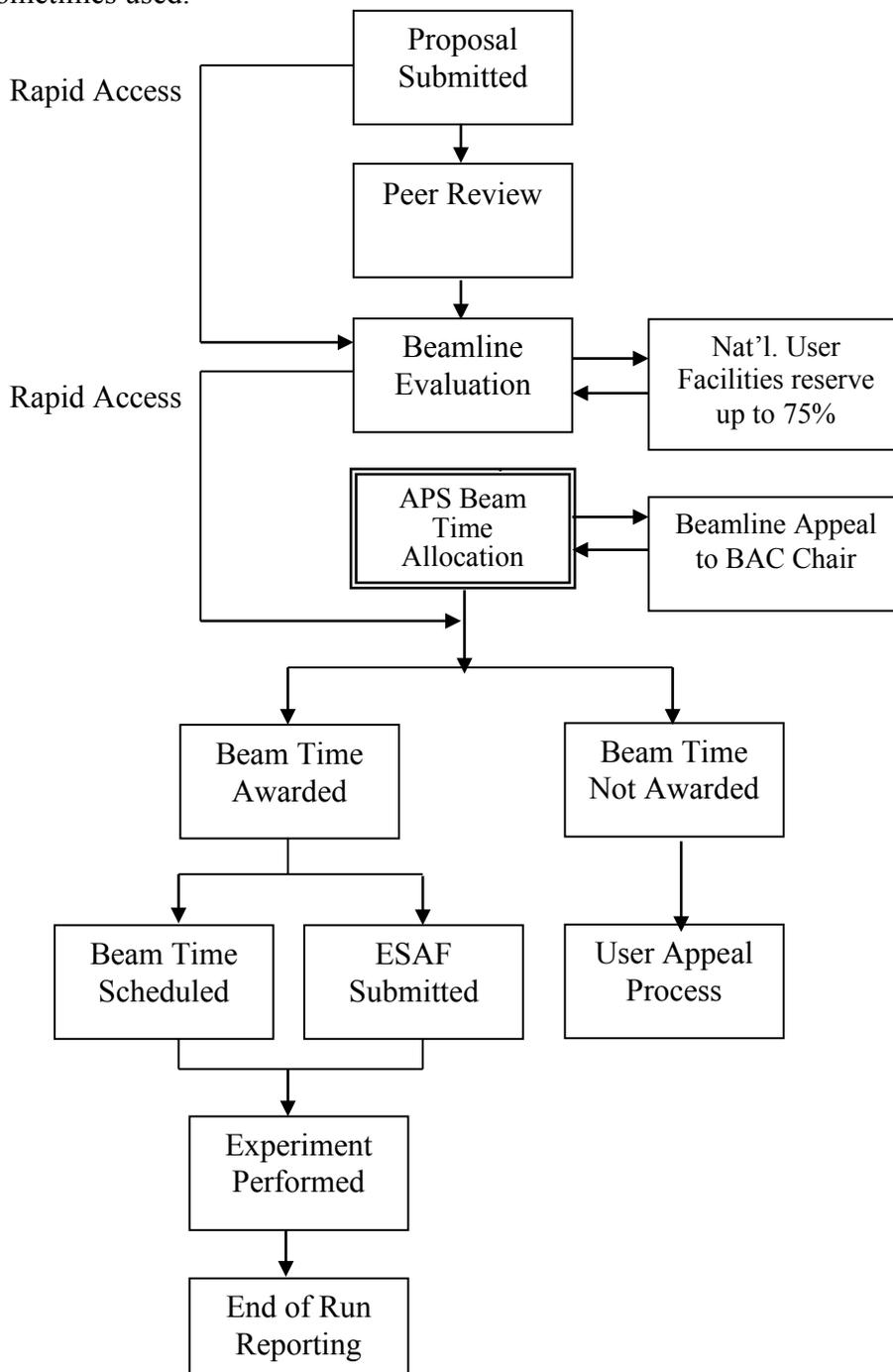


Figure 1. Process for General User Access

3.1.3 Calls for Proposals

Requests for access are solicited, reviewed, and allocated three times a year, in conjunction with the three run cycles. The rapid access mode permits access at any time, as long as beam time is available.

3.1.4 Proposals and Beam Time Requests

Time is requested through the Web-based Beam Time Access System. This online system enables the APS and beamline management to collect and document beam-time usage and provides the basis for DOE-mandated usage reports.

In this system, a *proposal* describes the work to be performed, and a *beam time request* (BTR) against the proposal identifies where and when the user wants to do that work. The proposal and the first beam time request are created together. For subsequent visits for the same work, a new request must be created against the original proposal; thus, a proposal can have multiple beam time requests.

The Beam Time Access System (in combination with the Beamtime Scheduling System) associates each beam usage with a specific

- Proposal
- Beam time request (BTR)
- Beam time attribute set (e.g., proprietary/nonproprietary, General User, rapid access, beamline commissioning/start-up, National User Facility, etc.)
- Experiment Safety Assessment Form (ESAF).

3.1.5 Proposal Lifetime

General User proposals remain eligible for time for two years (six run cycles), or until the amount of time approved by reviewers is used up.

3.1.6 Scientific Review

The review process is different for macromolecular crystallography (MX) and non-MX proposals. MX work is reviewed electronically by individuals; non-MX work is reviewed in person by Proposal Review Panels (PRPs).

Non-MX review. The PRPs are established by the APS with a view to balanced representation of techniques and disciplines. Candidate panel members are proposed by the APS User Organization Steering Committee, Partner User Council members, and current PRP members. Final appointments to the panels are made by the APS Deputy Director for X-ray Science, who also appoints each panel chair. Each panel consists of at least four persons appointed for two-year terms, renewable by mutual consent.

For non-MX work, the PRPs meet at the APS before each cycle (three times per year), to develop a consensus rating, comments, and recommended amount of time for each new proposal. The criteria used are given in [Table 1](#) (essentially those of the International Union of Pure and Applied Physics). Prior to each PRP meeting, the panel chair

electronically assigns two primary reviewers for each proposal. Primary reviewers are expected to read the assigned proposal and be prepared to lead discussion regarding its content. All reviewers are expected to be somewhat familiar with all proposals before the panel and to contribute to discussion of each proposal. If necessary, panel chairs can shift a proposal to a different panel or request that *ad hoc* reviews be solicited to supplement the panel's review. Users are able to view the scores and comments within a few days after the panels meet.

Table 1. Ratings System for General User Proposals

1 – Extraordinary	The proposal involves highly innovative research of great scientific or technological importance. Proposed research will significantly advance knowledge in a specific scientific discipline/field or create a new technological area. Considerable societal relevance is demonstrated. The radiation characteristics of the APS are highly desirable for the success of the proposed work.
2 – Excellent	The proposed research is of high quality and has potential for making an important contribution to a specific field, scientific discipline, or technical development project. The work is cutting edge and likely to be published in a leading scientific journal or lead to advances in a technological area. The radiation characteristics of the APS are important to the success of the proposed work.
3 – Good	The proposed research is near cutting-edge and likely to produce publishable results or incremental technological advances. Impact on a specific field, scientific discipline, or technological area is likely. Synchrotron radiation is essential to accomplish the intended goals of the research. The proposed work will greatly benefit from access to the APS.
4 – Fair	The proposed research is interesting by may not significantly impact a specific field, scientific discipline, or technological area. Publication may or may not result from this research. Synchrotron radiation is required, but the proposed work could be performed at other facilities.
5 – Poor	The proposed research is not well planned or is not feasible. Results would not make important contributions to fundamental or applied understanding, and work is not likely to result in publication. The need for synchrotron radiation is not clear
0—No review	The proposal provides insufficient information on which to base a review.

MX review. MX reviewers are drawn from a pool of individuals who have been identified by the user community and who have indicated their willingness to participate.

Proposals for MX are reviewed electronically on a rolling basis. Each proposal is rated by two external reviewers, and the individual scores are averaged. If the scores differ by more than 1.0, the Macromolecular Crystallography PRP reviews the proposal and provides the final score. On the electronic MX review form, the criteria in Table 1 are presented in the format shown in [Table 2](#). Users can see the scores and comments as soon as two reviews are submitted.

For proposals requiring confidentiality (e.g., proprietary, industrial, or classified), two review routes are available:

- If the user answers “yes” to the question “Will the data collected be considered classified?” on the proposal form, the proposal is sent only to the APS Deputy Director for X-ray Science, who provides the review.

- For other types of confidential work, the proposer must complete the proposal with as much information as is permitted. If the PRP or MX reviewers conclude that they do not have enough information to complete the review, they assign a score of 0, which triggers confidential review by the APS Deputy Director for X-ray Science.

In either case, the proposal is subsequently handled according to the Director's Discretionary Beam Time policy ([Procedure # 3.1.51](#)).

Table 2. Rating Criteria as Presented on MX Electronic Review Form^a

Quality of Research	Impact of Research	Need for Third-Generation Synchrotron	Potential for Publication
<ul style="list-style-type: none"> Highly Innovative and of great scientific importance (1) High quality and cutting edge (2) Near cutting edge (3) Interesting (4) Not well-planned or not feasible (5) 	<ul style="list-style-type: none"> Revolutionary (1) Significant (2) Important (3) Minimal (4) Insignificant (5) 	<ul style="list-style-type: none"> Essential (1) Highly desirable for success of experiment (2) Beneficial (3) Not required (4) Need is not clear (5) 	<ul style="list-style-type: none"> Very high in a leading scientific journal (1) High in a leading scientific journal (2) Strong in a non-leading scientific journal (3) Likely (4) Not likely (5)

^a One rating is chosen in each column; the score is calculated on the basis of the average of the weighting in parentheses.

3.1.7 Beamline Comment

Beamline staff have the opportunity to comment (through an interface in the Beam Time Access System) on the technical feasibility and other issues of General User proposals for their beamline. They can address any issue that bears on whether beam time should be awarded, including (but not limited to) environment, safety, and health issues; the past performance of an investigator; specific outreach on the part of the beamline management; or a unique suitability of the beamline to accommodate the proposal. These comments are considered in the allocation process.

3.1.8 Allocation

General User time is allocated within the overall context of all beam time access modes at the APS, with the available time calculated as stated in Section 3.6/Available Time in Beam Time Access Framework ([Procedure # 3.1.115](#)).

Two Beamtime Allocation Committees (BAC) are appointed to oversee allocation of General User beam time, one for macromolecular crystallography and one for all other science. Each has at least three members, who serve two-year terms (renewable by mutual consent). Candidates are solicited from all operational beamlines. The committee meets once each cycle to decide allocation of time.

The specifics of allocation for standard, rapid access, and project general user modes are given in Sections [3.2](#), [3.3](#), and [3.4](#), respectively.

3.1.9 Scheduling

The beamline on which the request was allocated is responsible for scheduling and coordinating the visit. Visits must be scheduled in the Beamtime Scheduling System. Beamlines should make every effort to schedule awarded general user proposals in the next run. However, if no suitable time can be agreed upon with the general user, the beamline may schedule the user in the following run. Upon mutual agreement between the beamline and the user, awarded time may be scheduled in a later cycle.

3.1.10 National User Facilities

Special considerations apply to requests for time at a Collaborative Access Team (CAT) beamline that operates as a National User Facility, that is, a beamline at which approximately 100% of the beam time is available to General Users. All proposals for experiments at these CATs are submitted and reviewed through the APS general user proposal system. However, these CATs award about 75% of the available beam time directly, following their own criteria; the remaining proposals are allocated time by the BAC in the usual manner.

3.1.11 Alternative Experimental Modes

Some experiments are carried out by “remote users,” that is, users located elsewhere who control the beamline through computer access. Some beamlines accommodate “mail-in users”: the users send samples by mail and local staff collect the data on the users’ behalf. Although mail-in and remote users are subject to slightly different administrative requirements (see [Site Access by Users and Visitors, Procedure # 3.1.43](#)), for the purposes of beam time allocation and reporting, the present policy and associated subpolicies hold just as they do for conventional experimental visits.

3.2 Specifics of Standard General User Mode

Definition. The following description applies to General User proposals and subsequent beam time requests submitted before the proposal deadline and without other special considerations.

Available time. In general, APS-operated beamlines provide 80% of available time to General Users; CAT-operated beamlines provide 25% of the available time (beginning one year after they become operational). Exceptions to this policy may be granted by the APS Director.

Allocation. Allocation decisions are made by one of two Beamtime Allocation Committees (BACs): one for MX and one for all other beam time. The BACs meet about three weeks after the proposal deadline to decide the allocation of standard requests. The following discussion applies to standard requests; allocation of rapid access and project requests is covered in [Sections 3.3](#) and [3.4](#), respectively.

- For standard General User beam time requests, beam time is allocated on the basis of the review ratings. To allow equitable access, the scores of unallocated proposals are

- “aged” at each cycle as part of the allocation process. If a proposal was not allocated time in the previous cycle, its score is improved by 0.2. This is done for a maximum of two consecutive cycles, for a maximum increase of 0.4.
- The number of shifts recommended by the PRP is used in making a preliminary allocation, but the final number of shifts allocated is at the discretion of the BAC.
 - Requests preselected by CAT national user facilities are removed from consideration before the BAC meeting.
 - Because of the volume of requests, the initial allocation of standard General User requests is done by an autoallocation algorithm. This algorithm takes into consideration the following data: the proposal score, the beamline(s) selected by the user, the order of beamline preference, the number of shifts required for a visit, and the number of BAC shifts on each requested beamline (and instrument percentages, if specified).
 - At the meeting of the BAC, the committee evaluates the results of this autoallocation and makes adjustments, for example, based on score, feasibility, student involvement, and so forth.
 - The User Office notifies users of the decision on their requests.
 - The allocation decisions are distributed to the beamlines, which are responsible for scheduling allocated beam time.

Appeals. Both the user and the beamline may appeal a decision of the BAC:

- **Beamline appeal:** If the beamline strongly disagrees with the decision of the BAC (e.g., if the proposed experiment is not technically feasible on the beamline), the beamline coordinator may appeal to the chair of the BAC. This appeal must be made within two working days. In these cases, the BAC Chair is authorized to act on behalf of the BAC to resolve the appeal.
- **User appeal:** If a proposer has concerns about the review or allocation process, he or she may communicate these concerns in writing to the APS Deputy Director for X-ray Science.

3.3 Specifics of Rapid Access General User Mode

Definition. The designation “rapid access” is applied to beam time requests submitted in the interval between the proposal deadline for a given cycle and the end of that cycle. This mode offers a mechanism for short-turnaround access to beam time for urgent needs.

Available time. The decision to set aside time for rapid access requests is made by each beamline for each cycle. The beamline specifies the percentage of time in the cycle that will remain open for rapid access requests; the APS must approve this percentage. This time is subtracted from the time available for allocation by the BAC (see Section 3.6/Available Time in [Beam Time Access Framework](#), [Procedure # 3.1.115](#)).

Status lifetime. The “rapid access” designation applies only to a specific beam time request and expires at the end of the requested cycle. The proposal itself is eligible for time for up to two years (six cycles) or until the amount of time approved by the reviewers is used up.

Scientific review. When a new proposal is submitted in interval between the proposal deadline for a given cycle and the end of that cycle (causing the associated beam time request to be designated rapid access), the proposal is reviewed retroactively at the next proposal deadline (non-MX proposals) or when reviewers are assigned (MX proposals).

Allocation. To fill the time set aside for rapid access, a beamline may choose from among all rapid access requests naming that beamline. The choice may be made at any time in the cycle. When the beamline is reviewed by APS, the beamline will be required to justify the scientific impact of the time allocated to rapid access requests.

3.4 Specifics of Project General User Mode

Definition. The designation of “project” status is reserved for proposals for experiments that require continued, guaranteed access to beam time for more than one cycle (up to two years) on a specific beamline (or several beamlines). The proposal spokesperson requests project status when creating a proposal. The proposer must justify why the work must be done on the beamline(s) specified and why the goals of the proposal cannot be achieved effectively or efficiently under a standard General User proposal (e.g., in terms of level of effort or experimental design).

Available time. Each beamline has a cap on the total time that can be assigned to project proposals. The cap is determined by the CAT management for CAT beamlines and by X-ray Science Division management for APS-operated beamlines. At each cycle, the amount of time required for successful project proposals is subtracted from the time available for allocation by the BAC (see Section 3.6/Available Time in [Beam Time Access Framework](#), [Procedure # 3.1.115](#)).

Scientific review. The User Office coordinates the review. The proposal is reviewed by the relevant PRP (selected by the proposer), which can either reject or recommend project status. If project status is rejected, the proposal reverts to a standard General User proposal. If project status is recommended, the proposal is reviewed by the SAC subcommittee for Partner User proposals (see [Partner User Beam Time](#), [Procedure # 3.1.47](#)). The SAC subcommittee uses the following criteria to determine whether a proposal should be recommended for project status: (1) PRP rating, (2) supplemental information provided by the principal investigator on the proposal (in the Questions section), and (3) input from the management of the requested beamline(s). APS management makes the final decision on project status.

Allocation. The beam time commitment for project-status General User proposals is deducted from the total General User commitment before the meeting of the BAC, as described in Section 3.6/Available Time in [Beam Time Access Framework](#) ([Procedure # 3.1.115](#)). A new beam time request must be submitted for each visit after the first.

3.5 User Rights and Responsibilities

3.5.1 User Rights

General Users have the right to appeal denial of beam time.

3.5.2 User Responsibilities

Users must complete training, have a user agreement in place, submit forms for safety review in a timely manner, acknowledge the APS and the beamline(s) in publications, and submit publications to the APS. Users who damage equipment owned by a CAT or APS after receiving appropriate training in its use will be held liable for damage, according to the provisions of their institutional user agreements. For a full statement of user responsibilities, see Beam Time Access Framework, Section 3.10 ([Procedure # 3.1.115](#)).

3.6 Beamline Rights and Responsibilities

3.6.1 Beamline Rights

For General User proposals on which beamline staff members are not collaborating, the beamline may determine that costs associated with the proposed experiment are in excess of routine expenditures. In these cases, the beamline will advise the APS User Office, which will ensure that the General User has a funded operating cost code (user account), in place to cover the supplies, materials, or services required by the General User (see Establishing and Maintaining Nonproprietary APS User Accounts, [Procedure # 3.1.23](#), and Establishing and Maintaining Proprietary APS User Accounts, [Procedure # 3.1.24](#)). To cover routine costs incurred by General Users at the APS, the APS will provide a cost code and spending authority limits.

A beamline may request in writing to the BAC that a specific General User not be granted time on that beamline. The written request must state the reasons for the exclusion of a particular General User. Appeals to the decision of the BAC to these requests will be decided by the APS Director.

3.6.2 Beamline Responsibilities

The beamline and the APS negotiate which techniques, instruments, and equipment will be made available to General Users. The beamline will provide the agreed capabilities as well as the required amount of technical support.

The beamline will also permit the General User to use existing sector laboratory facilities in the Laboratory Office Module for tasks that cannot reasonably be done off-site.

The host beamline will provide each General User with the technical training required to use the beamline and any ancillary equipment to which the General User has been granted access. If a General User requests the use of individually owned equipment not

officially designated for General User use, the beamline may refuse the request or, at its discretion, require the General User to use it in collaboration with the owner of the equipment.

For CAT-owned beamlines, during scheduled General User access periods, the host beamline will give General Users the same level of technical support that it provides to its members.

4 ACRONYMS

BAC	Beam Time Allocation Committee
BTR	beam time request
GU	General User
GUP	General User proposal
MX	macromolecular crystallography
NUF	National User Facility
PRP	Proposal Review Panel

5 DEFINITIONS

Beamline: All instrumentation and facilities that extend from the source in the storage ring to an experiment station.

Beam Time Access System: Web-based proposal submission and management system used for requesting all types of beam time.

Beam Time Allocation Committees (BACs): Committees that determine which beamlines will host which beam time requests and how much time each request will receive.

Beam time request (BTR): A web form (and the resulting electronic record) associated with a specific proposal, used to request beam time during a particular cycle on a particular beamline. This form is used both when the proposal is initially submitted and for subsequent cycles as long as the proposal is active.

Beamtime Scheduling System: Web-based system used by beamline staff to schedule all APS beam time. A specific beam time request is associated with each unit of beam time.

Cycle: One of three periods of beam time access each year, referring generally to all the phases of submission, review, allocation, and scheduling. Also called “run” or “scheduling period” when referring to the dates of actual beam availability.

General User: An investigator who applies for beam time through the APS peer-review proposal process for General User time.

General User (beam) time: The standard access mode for external experimenters. All beam time in this mode is allocated through the APS General User proposal process.

Mail-in service/users: An experimental mode in which users send samples by mail and local staff collect the data on the users’ behalf.

Project status: Designation given to a General User proposal that has been approved for guaranteed access over several cycles on a specific beamline or beamlines.

Proposal: Electronic document comprising the description of the proposed research and all associated beam time requests (BTRs). Created in the Beam Time Access System.

PROCEDURE	Page 14 of 21
Procedure #:	3.1.46
Revision #:	0

Proposal spokesperson: Person identified on the proposal submission form as the primary point of contact for communication about the proposal.

Proposal Review Panels (PRPs): Peer-review groups, organized by technique or scientific discipline, that evaluate the scientific merit and technical feasibility of proposals and provide a rating for each.

Rapid access: Mechanism for short-turnaround assignment of beam time for urgent needs that arise between the formal review and allocation cycles.

Remote access/users: Experimental mode in which a researcher uses remote computer access to conduct experimental work at the APS.

6 ASSISTANCE

The initial point of contact for questions about this policy is the APS User Program Manager.

7 RELATED POLICIES

- Parent policy: Beam Time Access Framework ([Procedure # 3.1.115](#))
- User Access and Administration Framework ([Procedure # 3.1.101](#))

PROCEDURE	Page 15 of 21
Procedure #:	3.1.46
Revision #:	0
Issue Date:	4/11/12
Review Period:	3 years
Supersedes:	(see below)
Last Reviewed:	4/11/12

General User Beam Time Access

PROCEDURE

1 INTRODUCTION

Establishing access to beam time involves navigating interactions with the various data systems the APS uses to manage and report on user activity. Two numbers are key to these interactions: the user **badge number** and the **proposal number**. Once a badge number is assigned to an individual, he or she keeps that number forever. The badge number is used both for authorizing site access and for associating an individual with specific experimental activity. The proposal number is key to scientific review, safety review, scheduling, and evaluation.

1.1 Purpose

This procedure establishes how users, User Office staff, and beamline staff interact with APS data systems so that, in the end, a specific General User user group is scheduled to do a specific experiment at a specific beamline at a specific time.

1.2 Scope

The procedure does not address the choice of an appropriate beamline, proposal development, or processes internal to individual beamlines.

1.3 References

The APS User Calendar, published on the APS web site, lists deadlines for proposal submission, run start and end dates, and schedules for proposal review and beam time allocation.

2 BACKGROUND

As a national user facility and publicly funded resource, APS has a responsibility to ensure that beam time is utilized efficiently and to best effect. As a result, APS must document, monitor, and report on the usage of the facility and the impact of the science carried out. Because of the volume of activity and the specificity of reporting requirements, the APS relies on many complex and interconnected data management systems to track and report on people, time, experiments, and experimental resources. Each request for beam time follows a path through these systems.

3 PRECAUTIONS AND LIMITATIONS

The following are ways to avoid common errors that result in confusion or missed opportunities:

- [1] **Choose the correct individual as the proposal spokesperson.** The proposal spokesperson is the person to whom all official correspondence about the proposal is sent. Thus, it should be someone who has some responsibility for the project and who is able to respond promptly to communication about it. An externally led group should not list a local beamline staff member as the proposal spokesperson.
- [2] **Have the spokesperson register and get a badge number well in advance.** A spokesperson badge number is required to create a proposal.
- [3] **Submit a request for each cycle in which time is needed.** After the initial proposal submission, the user must explicitly submit a beam time request for consideration in later cycles.
- [4] **Click the “submit” button to send completed proposal or beam time request to APS.** The APS cannot act on a proposal or request that is complete and saved but not submitted.

4 PREREQUISITE ACTIONS

- [1] Team Leader See the Team Leader procedure in User Access and Administration Framework ([Procedure # 3.1.101](#)) for an overview of the process of managing an experiment at APS.
- [2] User Office Establish and maintain review bodies:
 - Macromolecular crystallography reviewer pool
 - MX Proposal Review Panel
 - Other Science Proposal Review Panels
 - MX Beamtime Allocation Committee
 - Other Science Beamtime Allocation Committee
- [3] User Office Manage expired proposals in the Beam Time Access System. Before each proposal deadline, update the eligibility of existing proposals based on proposal lifetime, recommended number of shifts, and data from scheduling system. Notify the spokespersons of expiring General User proposals, i.e., those that meet any of the following conditions: (1) reaching sixth cycle, (2) allocations to date are approaching the maximum shifts recommended by PRP, or (3) all shifts recommended by PRP have already been allocated.

5 PROCEDURE

5.1 Create Proposal Online

NOTE An APS badge number is required to access the proposal submission system.

- [1] User Obtain badge numbers for proposal spokesperson and anyone else who will need to view the proposal online. See Site Access by Users and Visitors: Procedure ([Procedure # 3.1.43](#)), Section 3.

NOTE The same web password is used for all APS web-based systems, e.g., the system for processing Experiment Safety Assessment Forms, which you will use later.

- [2] User Log in to the Beam Time Access System at http://beam.aps.anl.gov/pls/apsweb/gup0005.start_page. If you are a **first-time external user**, enter your badge number as both your username and password, and follow the prompts to create a password. The screen Beam Time Request - Main Menu is displayed (hereafter Main Menu).

- [3] User On the Main Menu, on the panel Create a New Proposal, click the General Users button to start the proposal. Once you save the proposal, you can return to it later. **Make a note of the proposal number** for future use in this and other APS systems. Complete **and submit** the proposal. See tips below about the overall system and about the beam time request screen of the proposal.

TIPS ON BEAMTIME REQUEST SCREEN

- You may specify one, two, or three beamlines in order of preference.
- For APS-operated beamlines, you must specify which instrument you want to use.
- If the “Any appropriate beamline” box is checked, your request will be considered for all beamlines where your experiment is feasible.
- If you want to use two different beamlines for different parts of your experiment, complete a separate beam time request for the second beamline within the same proposal.

GENERAL TIPS

- When you click a different tab, information on the current screen is saved.
- Attachments may be added on the Abstracts screen. Keep attachments brief. Reviewers prefer short attachments that are directly relevant to the proposal.
- On the Experimenters screen, the APS strongly encourages use of the “Find” link, which permits automatic entry of existing user contact information.
- If you are doing an MX experiment and have multiple samples, then complete a separate sample page for each sample within the same proposal.
- If the proposal is proprietary or classified, submit as much information as permitted and indicate the reason for brevity so that appropriate review can be done.
- **The APS cannot act on your request until you send it by clicking on the Submit button.**

5.2 Conduct Scientific Review—Macromolecular Crystallography

NOTE Review comments are visible to users within the proposal as soon as the review process is complete.

- [1] User Office Obtain reviews. Assign two reviewers with appropriate expertise, taking care to avoid obvious conflicts of interest (e.g., co-proposer, same institution) and to balance load across the reviewer pool [supported by Beam Time Access System]. Follow up to assure completion of reviews.
- [2] User Office Resolve discrepancies. If two reviews have been received and the scores differ by more than 1.0, then notify the MX Proposal Review Panel, which adjudicates the score. Record the MX Proposal Review Panel score as final score.
- [3] User Access reviews within proposal.

5.3 Conduct Scientific Review—All Other Science

NOTE Review comments are visible to users within the proposal as soon as the review process is complete.

- [1] User Office If the proposal is marked classified, undertake review and allocation as described in Director’s Discretionary Time (Procedure # 3.1.51).
- [2] PRP Chair Assign two reviewers to each proposal.

- [3] PRP Conduct review. If the proposal is more appropriate to another panel, ask the User Office to reassign the proposal to that panel. If additional expertise is needed to complete the review, ask the User Office to seek additional review. Provide APS with the following information:
- Score between 0 and 5, according to the criteria in the corresponding policy, General User Beam Time (Procedure # 3.1.46), Table 1. A score of 0 is reserved for confidential research (e.g., proprietary, industrial, or classified) that cannot be reviewed due to lack of information. In such cases, further review and allocation are handled as described in Director's Discretionary Beam Time (Procedure # 3.1.51).
 - A total number of shifts recommended for the life of the proposal.
 - Number of shifts recommended for one visit.
 - Recommendation on project status (when needed)
 - Review comments on the science.
- [4] User Office Resolve issues and publish reviews within a few days of PRP meeting.

5.4 Allocate Beam Time

NOTE This procedure is conducted about three weeks after each proposal deadline.

NOTE NUF is National User Facility Beamline; BL Coord. is Beamline Coordinator.

- [1] User Office Request feasibility comments from beamlines.
- [2] User Office Determine the number of shifts each beamline is obligated to provide to General Users for the upcoming cycle according to the terms of Section 3.6, Available Time in Beam Time Access Framework (Procedure # 3.1.115).
- [3] NUF Select beam time requests for National User Facility beam time award and communicate decisions to the User Office [optionally automated in Beam Time Access System].
- [4] User Office Provide BACs with autoallocation results (based on aged scores), reviewers' scores and comments, and comments from the beamlines [working in Beam Time Access System with assistance of APS Information Systems group].

NOTE Steps [5] and [6] may be done concurrently.

- [5] MX-BAC Make MX allocations: Review the autoallocations in the Beam Time Access System and confer electronically as needed. BAC Chair makes any needed adjustments in Beam Time Access System.
- [6] Other Sci BAC Make Other Science allocations: In onsite meeting, review the autoallocations and adjust the allocations as appropriate on the basis of demand, instrument choice, and beamline feasibility assessments [electronically in Beam Time Access System].
- [7] User Office Notify beamlines of the beam time awards on their facilities.
- [8] BL Coord. Review allocation and appeal to BAC if needed within two working days of receiving notice. The BAC Chair will resolve the appeal.
- [9] User Office Notify users of allocation results.
- [10] BL Coord. During the cycle, select appropriate rapid-access requests to fill any set-aside rapid-access time [electronically in Beam Time Access System].

5.5 Schedule Beam Time

NOTE BL Coord.: Beamline Coordinator.

- [1] BL Coord. Schedule user visit in APS Beamtime Scheduling System, in upcoming run if at all possible, and notify user.

5.6 Conduct Experiment

- [1] User See User Access and Administration Framework ([Procedure # 3.1.101](#)) for the requirements for site access, safety, and follow-up.

5.7 Request Time in Future Cycles

NOTE If you cannot locate an existing proposal, contact the APS User Office, apsuser@aps.anl.gov, 630-252-9090.

- [1] User For each cycle for which you need beam time (during the approved duration of the proposal), access the existing active proposal and create **and submit** a new beam time request from within that proposal.

6 DOCUMENTS/RECORDS CREATED BY THIS PROCEDURE

The documents/records listed below will be created in the execution of this procedure. The documents created will depend on the type of proposal concerned.

Description of Document/Record	Custodian	Storage Location and Medium
Proposal	User Program Manager	Beam Time Access System
Beam time requests	User Program Manager	Beam Time Access System
Peer review comments	User Program Manager	Beam Time Access System
Beamline comments	User Program Manager	Beam Time Access System
Final allocation tables by beamline	Proposal Specialist	Excel files
Allocation notification emails to users	Proposal Specialist	Email server, with backup in Information Services
Scheduled beam time record	AES/Project Specialist	Beamtime Scheduling System
Scheduled beam time notification email	Beamline Coordinator	Beamline email server, with backup in APS Information Services if sent from Beamtime Scheduling System

7 TRAINING REQUIRED

No training is required to execute this procedure.

8 FEEDBACK AND IMPROVEMENT

If you are using this procedure and have comments or suggested improvements for it, please go to the [APS Policies and Procedures Comment Form](#) * to submit your input to a Procedure Administrator. If you are reviewing this procedure in workflow, your input must be entered in the comment box when you approve or reject the procedure.

Instructions for execution-time modifications to a policy/procedure can be found in the following document: Field Modification of APS Policy/Procedure ([APS 1408152](#)).

* http://centraldocs.aps.anl.gov/comment_form.php