

TECHNICAL NOTE

UPEX: Experiment Proposal and Registration Guide

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Revisions

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Preface

The European XFEL (XFEL.EU) is a research facility open to scientists worldwide. Beamtime is free of charge, but experiment proposals must go through a review process. Proposal must be submitted through the User Portal to the European XFEL (UPEX). As an important condition for access, after the experiments, the authors must strive to publish the results in peer-reviewed journals.

Before you start using UPEX, please be aware of some basic features depending on database criteria:

- Fields in the registration and proposal form should be completed in English. Names should be transcribed into standard Latin characters.
- Please be aware that symbols may not be saved if imported into a form field¹. In this case, we recommend a transcription into Latin script (e.g. α = alpha, β = beta).

¹ Following the ISO/IEC 8859-1 Standard.

1 Registering in UPEX

At the present stage, external users need a valid account in UPEX to be involved in any of the following tasks:

- Submitting a proposal (Main Proposer)
- Appearing on a proposal as Principal Investigator or Co-Proposer
- Reviewing proposals as a member of a PRP or as an external referee
- After a proposal has been allocated beamtime, being assigned to the experiment as a member of the user team (in case there is no perfect match with the list of proposers)

These different tasks are possible in the normal user role. This implies that none of the above is possible if registration in UPEX has not been correctly completed at a previous stage. Please allow for some time for processing in case your affiliation is not yet in our database and needs to be added by the XFEL.EU User Office. In the future, more access functionality is planned: registration for the experiment, submission of feedback forms, experiment reports, and information on publications.

1.1 How to register

To register in UPEX, follow these steps.

- 1 From the XFEL.EU website, and click on the link to UPEX:
<https://in.xfel.eu/upex>
- 2 At the bottom of the UPEX log-on page, click **Create New Account** to open the registration form.
- 3 Fill in all fields, as requested.

Fields marked with an asterisk (*) are mandatory.

1.1.1 Registration rules

When registering in UPEX, follow these rules:

- **Username**

Usernames can have only 4 to 8 lower-case alphabetic characters (a-z). They are case-sensitive and must be unique.

- **Password**

Passwords are case-sensitive and must have at least 6 characters.

- **Email address**

An existing unique email address is required to register. All correspondence relevant to the project and other important information will be sent to the email address you indicate. Please make sure you enter this information correctly.

- **Position**

When attributing the Principal Investigator responsibility in your proposal, make sure that the relevant UPEX user has a staff position and that this information is stated in the appropriate field.

- **Affiliation**

Select an affiliation from the existing database by clicking Select My Institute and searching by the name of the organization (mostly full name, abbreviation, or both) or town. If you do not find your affiliation, or if the name, address, or department is not correct, click the appropriate link at the bottom of the form to request support from XFEL.EU User Office by email and give the correct information.


The same applies if your department is not listed for an organization that is already in our database.

1.1.2 Email verification

After you have registered, a validation email is sent to your email address.

 **CAUTION:** This does not apply to XFEL.EU or DESY staff.

To validate your email, click the validation link in the body of the message. Before you do this, make sure that the complete validation link is fully marked as such. If it is not, you can copy and paste the link in the body of the validation email into the location bar of your browser.

 **CAUTION:** The validation must be completed within 24 hours from the time of registration. Failure to complete the validation in this timeframe will result in removal of the account.

1.2 UPEX lightweight account vs. Campus account

During your registration to UPEX (User Portal to the European XFEL), a lightweight account will be created for you. This account will not provide access to any other service but UPEX.

If your proposal is awarded beamtime, you will need to access other resources, services, software, and infrastructure, such as safety training, the experiment data access and processing system, different support resources, and so on. For this purpose, a Campus account will be set up for you (if you do not have it already) for accessing DESY/XFEL.EU campus infrastructure and services. In due time, you will receive an email notification with your Campus account log-on initial password (to be changed within a few days) and further instructions.

Please note:

- Campus accounts set up via UPEX lightweight accounts are provided and managed by the DESY registry. For the time being, you will get password expiration notifications from the DESY registry. However, password change or recovery takes place through UPEX. Please refer to the instructions below.
- Initial passwords must be changed during a short period (a few days) specified in the notification email you receive. Propagation of the new password to all of the services may take up to one hour.

- More details will be provided in the notification email. **Please DO NOT ignore it.**

After changing the initial password of the newly set up Campus account (and allowing for up to one hour for the implementation of the change for all services), you will be able to access the online safety training system, metadata catalogue, and other services with your Campus credentials. We strongly recommend using your Campus account to log on to UPEX. Nevertheless, you may still use your lightweight account credentials for UPEX only (for example, if you need to access UPEX urgently before a deadline but do not remember your Campus credentials).

Users with an existing DESY/XFEL.EU Campus account (DESY or XFEL.EU staff members) are advised to use these credentials for logging on to UPEX and DESY/XFEL.EU Campus services. If these users create a lightweight account in UPEX first, the relevant DESY/XFEL.EU Campus account will be automatically associated with the lightweight one and can be used from this moment. Both campus and lightweight account log-ons can be found in UPEX on the Edit profile page. Additionally, members of experiment teams will receive a one-time email notifications/instructions about the status of the campus account in due time.

1.2.1 **Changing passwords for Campus or UPEX lightweight accounts**

The passwords for both your UPEX lightweight account and your Campus account can be changed from your Edit profile page after logging on to UPEX:

https://in.xfel.eu/upex/user/edit_profile?role=1

1.2.2 **Recovering passwords for Campus or UPEX lightweight accounts**

For any UPEX lightweight accounts and any Campus accounts *created by XFEL.EU via the UPEX account*, the password can be reset from the UPEX password recovery page:

https://in.xfel.eu/upex/password/request_reset

If you forgot your XFEL/DESY Registry staff password, contact the IT administration of the organization to which you belong.

1.3 Log-on screen

Figure 1 shows the log-on screen of UPEX.

Figure 1: UPEX log-on screen

At the top of the log-on screen, you have the option to authenticate by using specific UPEX account credentials or XFEL/DESY credentials. Authentication through an UMBRELLA account will be available at a later stage.

If you already have an account in UPEX, enter your username and password to log on to the system.

If you do not remember your password, you can click Reset Your Password, enter your username or the email address you listed when registering your account in UPEX, and confirm Reset Your Password. A password reset link will be sent to the email address (see Section 1.1.1, “Registration rules”). Open the email and click the reset link. You will be then re-directed to UPEX. Enter and confirm your new password in the form displayed. From there you will be able to log on directly. The new password will be active for all subsequent log-ons.

NOTE: If you do not remember your username, request a reset link by indicating your email address. The username will be indicated in the form displayed in UPEX after clicking the reset link. Otherwise, contact the XFEL.EU User Office (useroffice@xfel.eu).

1.4 Your UPEX homepage

When you register for UPEX, the Normal User role is assigned by default, as shown in Figure 2.

Figure 2: Normal User dashboard in UPEX

The screenshot shows the UPEX user dashboard for Mrs. Silvia Bertini. The page is titled "User account: Mrs. Silvia Bertini". On the left, there is a sidebar with a dropdown menu for "Role: normal user" and navigation links for "Dashboard", "New Proposal", "Proposals", "Edit profile", and "Logout". The main content area is divided into several sections: "Edit profile" (with a link to view or edit account details), "Acceptances" (with a link to see policies), "Proposals" (with links to view submitted proposals and submit a new proposal), "Open calls for proposals" (listing instrument SCS SASE3), "User manual" (with a link to the manual), and "Feedback" (with a link to provide comments). The "Proposals" section includes a summary of total proposals (8) and a list of roles: as proposer (1), as principal investigator (3), as coproposer (4), as team member (1), editing (3), submitted (4), and scheduled (1). The "Description of proposed experiment as PDF" section lists requirements: maximum total length of three A4 pages, body text not smaller than 10 points, single spacing, and a maximum file size of 5 MB.

1.4.1 Edit profile

If you select the Edit Profile option, you can update your personal details (e.g. including password, affiliation, and other contact information). After registration, it is possible to update this information without limitation. However, after a first change of your personal details, you are allowed to change them again only after 7 days.

1.4.2 Proposals

You can also access all of the functions described below through the left sidebar on your dashboard. If more than one UPEX role has been assigned to you, you can switch to the relevant dashboard (and the relevant options) from the dropdown list at the top of the left sidebar.

1.4.2.1 View or edit a partially completed proposal or view submitted proposals

By clicking the link View or Edit Partially Completed Proposals, you can view some information about the number of proposals in which you are involved.

A proposal is “partially completed” until it is actively submitted (by clicking the Submit button). From then on, you will not be able to change anything in the proposal.

By selecting the link, you can access an overview of the proposals you are involved in as Main Proposer, Principal Investigator (PI), or Co-Proposer, as shown in Figure 3. You can also view or download them as a PDF. Main Proposers also have the permission to edit partially completed proposals (i.e. proposals in Editing status) and submit them before the call deadline.

Figure 3: Overview of proposals entered in UPEX as Main Proposer or Co-Proposer

Id	Title	Proposer	Principal investigator	Instrument	Status	Last modified	
2095	test 2	Markus Scholz	Markus Scholz	SCS SASE3	Submitted	2017-09-26 08:15:34	🔍 📄 ⬇️
2094	Test proposal WM	Dr. Wolfgang Morgenroth	Mrs. Silvia Bertini	SCS SASE3	Submitted	2017-09-25 17:15:31	🔍 📄 ⬇️
2092	test 1	Markus Scholz	Markus Scholz	SCS SASE3	Submitted	2017-09-23 10:41:48	🔍 📄 ⬇️
2090	test for Sample sheet	Mrs. Silvia Bertini	Mrs. Silvia Bertini	SCS SASE3*	Editing	2017-10-05 14:01:44	🔍 📄 ⬇️
2089	Test Proposal with new UPEX	Ms. Giulia Quondam	Ms. Giulia Quondam	SCS SASE3	Submitted	2017-09-12 11:57:44	🔍 📄 ⬇️
2085	Test Proposal GQ	Ms. Giulia Quondam	Ms. Giulia Quondam	MID SASE2	Scheduled	2017-04-19 10:04:55	🔍 📄 ⬇️
2073	Proposal number 2073	Ms. Halimah Shie	Mrs. Silvia Bertini	FXE SASE1*	Editing	2016-11-21 11:39:20	🔍 📄 ⬇️
2067	Proposal number 2067	Mr. Useroffice Useroffice	Mr. Useroffice Useroffice	SCS SASE3*	Editing	2017-08-31 10:05:09	🔍 📄 ⬇️

1.4.2.2 Proposal withdrawal

To withdraw a submitted proposal, contact the XFEL.EU User Office (useroffice@xfel.eu).









1.4.2.3 **Submit a new proposal**

Clicking Submit a New Proposal enables you to start the process of submitting a new proposal by opening the XFEL.EU Proposal Form (PF).

1.5 Icons used in UPEX

In the UPEX graphical user interface (GUI), you can hover your mouse over any icon to get context-sensitive help. Clicking the icon executes the action.

Table 1: Definitions of UPEX icons

Icon	Name	Action
	View	View a proposal in the UPEX GUI.
	Download	Download the PDF file of a proposal in which you are Main Proposer, PI or Co-Proposer at any stage.
	Edit (green)	Edit the document/section of a form
	Edit (grey)	Editing function is not available. For example, if this icon appears in the proposal overview on your dashboard, either you are not the Main Proposer who initiated submission and you do not have the corresponding privileges or the proposal was already submitted. For details, see Section 2.1, “General rules”.
	Delete	Delete a specific form section.
	Clone	Clone the current section (e.g. a sample sheet) and edit the copy to produce a new section.
	Team coordinator (grey)	Main Proposer or other user team member who is attributed team coordination responsibility.
	Select new team coordinator (green)	Select a new team coordinator among the members of the team (e.g. if the Main Proposer will not attend the experiment).

2 Submitting proposals

Over the first calls for proposals, our facility and the scope of operation will gradually develop. Updates on the status of the facility can be found on our website (<http://www.xfel.eu>). Information on instruments available to users is found in each specific call for proposals. If you need further information and support, contact the scientific teams of the instruments you are interested in or the XFEL.EU User Office well before submitting your proposal. Useful contacts are provided in Appendix B, “Useful email”.

2.1 General rules

When submitting proposals, follow these important rules:

- To submit a proposal for beamtime at XFEL.EU or be added as Co-proposer or Principal Investigator to the proposal, you must have a UPEX account.
- Submission is possible only before the deadline specified in the relevant call. After the deadline, it is not possible to submit proposals.
- Only complete proposals are accepted.
- Editing of not-yet-submitted proposals is possible only by the main proposer.
- It is not possible to save a page of the Proposal Form (PF) that contains incomplete mandatory fields.
- After submission, you will not be able to change a proposal.
- Information requested in the fields marked with an asterisk (*) is mandatory

- The experiment description is mandatory (see Section 2.3.2.4, “Description of Proposed Experiment”).

2.2 Attribution of responsibilities within the user team

Please note that the attribution of functions in the proposal submission and allocation process within the user team has to be done through the selection of the relevant scientist at the proposal stage. Each scientist mentioned in a proposal with the role of Principal Investigator, Main Proposer, or Proposer receives an email confirmation from UPEX on proposal submission.

2.2.1 Principal Investigator

Besides being in most cases the lead researcher or one of the lead researchers of the project addressed in the proposal, for the purpose of access to the European XFEL facility, the Principal Investigator is specifically identified among the authors of the proposal and bears exclusive long-term responsibility for experiment, especially for the data generated by the experiment.

2.2.2 Main Proposer

For the same purpose, the Main Proposer is the scientist actually submitting the initial proposal and may differ from the Principal Investigator. If this is the case, the Main Proposer will have the responsibility of acting as the contact person for proposal authors (including communication of the outcome of the reviews) and the practical preparations for the experiment in case the proposal is awarded beamtime.

2.2.3 Proposers

The (Co-)Proposers are all scientists identified as authors in the proposal.

2.2.4 Participants in the experiment

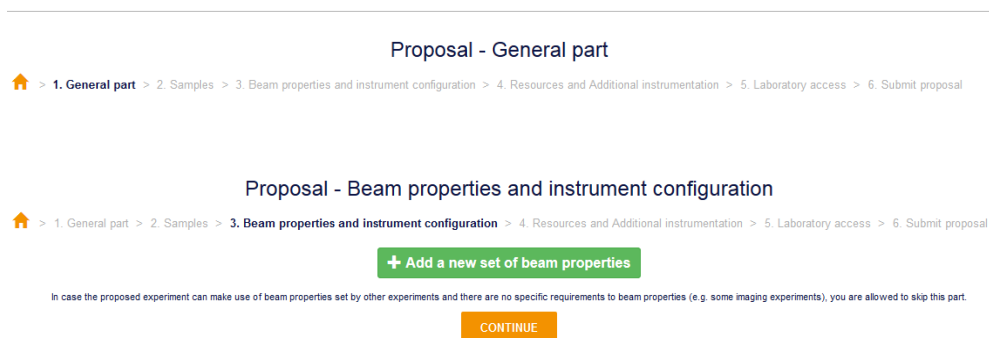
The Participants are the scientists designated to take part in the actual measurements at the European XFEL facility. They may also differ from the authors of the proposal.

2.3 European XFEL proposal form

2.3.1 Navigation

Once you have opened the proposal form, the breadcrumb navigation at the top center enables you to navigate from one section of the form to the other, as shown in Figure 4. However, you have to create and save a “General part” before proceeding with other sections. It is recommended to fill in each section of the form sequentially, one section after the other.

Figure 4: Inactive (top) and active (bottom) breadcrumb navigation at the top of different parts of the proposal form



2.3.2 General part

2.3.2.1 General information

The “General part” of the proposal gives some basic information on the project and the scientists involved. Some general information, like affiliation to a User Consortium or the involvement of industrial users in the project is, requested for merely **statistical/informative** purposes and has no influence on the ranking of the proposal. The same applies to the selection of the

scientific area, Horizon 2020 (H2020) challenge, or statement on expected innovative impact of the project.

In this part, you can define whether the proposal is a resubmission or the continuation of a previously submitted proposal.

2.3.2.2 Choice of scientific instrument

In addition, at this stage, the choice of the scientific instrument (and, consequently, the relevant Proposal Review Panel) is made. Each Proposal Review Panel reviews all proposals submitted for allocation to one specific instrument. Only instruments available in a given call for proposals will be displayed in the relevant dropdown.

2.3.2.3 Abstract

The abstract consists of a maximum of 600 characters. This is the first information that the reviewers will see about your project.

2.3.2.4 Description of Proposed Experiment

This part of the proposal is mandatory. Using the radio buttons in the form, you can choose between uploading the description to UPEX as a **PDF** (Portable Document Format, recommended in case of figures and/or formulas) or including the description as **text**, as shown in Figure 5. The RTF (Rich Text Format) form file for the preparation of the final PDF file is also accessible on your UPEX dashboard.

Figure 5: Choosing between PDF upload and text descriptions in the “Description of proposed experiment” section of UPEX

The screenshot shows a form titled "Description of proposed experiment". On the left, there is a "Description *" label. To its right are two radio buttons: "PDF" (which is selected) and "Text". Further right is a file upload field with a "Browse..." button and the text "No file selected.". Below these elements is a list of instructions:

- Please use [this template](#)
- Maximum total length: three A4 pages
- Body text not smaller than 10 points (recommended font types: Arial, Helvetica and Symbol for special characters)
- Single spacing
- Figures can be included in the PDF although the maximum length must be kept
- Max. total file size: 5 Mb
- Proposers bear responsibility for the readability of the description.

2.3.2.4.1 *Description of experiment – PDF upload option*

An RTF file template is provided and it can be downloaded directly by clicking the link **Please Use This Template**.

Rules for using the PDF upload option:

- Maximum total length:
Three A4 pages.
- Minimum body text size:
10 points.
- Recommended font types:
Arial, Helvetica, and Symbol (for special characters).
- Line spacing:
Single spacing.
- Figures:
May be included in the PDF as long as they do not exceed the page margins or maximum file size.
- File size:
Maximum total file size of 5 MB.
- Responsibility:
Proposers bear responsibility for the readability of the description.

Publications illustrating the scientific case should be added in this section. Mandatory information: title, authors (and their affiliations), journal name, volume, issue, and year of publication.

2.3.2.4.2 *Description of experiment – Text option*

A text form is provided for this option. You can then type (or paste) the answers to the relevant questions directly into the form. However, it is not possible to include figures or use symbols or special characters (other than Latin and Western Europe characters) in this section.


The maximum number of characters for this section, including headlines and questions, is 17 000. That is, your own text cannot exceed 16 650 characters when replacing the text already included in the form in square brackets ([...]) by the experiment description.

Publications illustrating the scientific case should be added in this section. Mandatory information: title, authors (and their affiliations), journal name, volume, issue, and year of publication.

2.3.2.4.3 *Publications by the Proposers*

This section has the purpose of giving information about the scientific activity of the Proposers related to the project detailed in the proposal.

List up to 15 articles, reports, and/or proceedings published by the Proposers over the past three years that are related to this proposal. If possible, include the DOI or PubMed ID.

 The “Publications by the proposers” and the “Publications illustrating the scientific case” sections are still under development and will evolve over the next few calls for proposals to become more user-friendly. Many thanks in advance for your patience.

2.3.2.4.4 *Suggested reviewers to avoid*

All proposals will be peer-reviewed, as detailed in the Terms of Reference of the European XFEL Proposal Review Panels (PRPs), and will be evaluated by Members of the PRPs and, if required, by external experts. In the textbox “Suggested reviewers to avoid”, you may want to give information about scientists who could have a potential conflict of interest and should therefore not review the proposal.

2.3.2.4.5 *Peaceful use of European XFEL facility*

The European XFEL pursues research for peaceful purposes only. Please confirm by selecting the appropriate box that the present proposal exclusively aims at and promotes peaceful purposes. You cannot proceed with your proposal submission until you have electronically confirmed this.

2.3.3 Sample/Substance Sheets

Fill in one form for each sample and substance to be used in your experiment.

List all samples and substances that you are planning to use in the experiment.

If your proposal is successful, after scheduling, you will be requested to confirm the samples or substances you intend to use in your experiment. Unilateral changes in the samples or substances mentioned in the experiment proposal are not acceptable. If, for serious reasons, the planned samples or substances are not available for the experiment and others need to be used, the XFEL.EU Management Board will decide on the case after approval by the Safety and Radiation Protection group and a technical assessment by the instrument group supporting the experiment. In order to inform the XFEL.EU facility of this situation and request an authorization to replace a sample or substance, contact the XFEL.EU User Office in writing and provide details. Ideally, this should happen at the stage of registration of the user group, in normal circumstances, four weeks before the experiment, and, in any case, not later than two weeks before the experiment. The proposers will be informed about the outcome of the change request as soon as possible.

Refer to “Safety Information for Proposals” concerning the fields of this section of the form.

Make sure you complete and save a sample sheet before you open a new one. After saving a complete sample sheet, you have the option of opening a new sample form, or cloning or deleting the sample sheet you are currently working on.

The Save button at the bottom enables you to save the form only if the data entered are complete. The Save and Continue button enables you to save the form if it is complete and move to the next step.

As a Main Proposer, you will be requested to certify that all details given in the Sample or Substance Sheet are complete and correct.

You will be requested to state whether a **specific sample requires long preparation** between notification of the outcome of the beamtime allocation process and the experiment (three months or longer). In this case, we will attempt to schedule your experiment with a delay of at least three months from the moment of notification. Note that this will create an additional scheduling constraint for your experiment. Consider that long delivery time for chemicals used in sample preparation may have a similar impact!

Each Sample and Substance Sheet must include a general part and at least one of the following specific sections: chemical, biological/isolated from biological substance, nanomaterial.

NO experiments with live animals and humans are permitted at XFEL.EU.

The use of radioactive samples or substances is not feasible in early user operation, i.e. in this proposal. If you intend to prepare for using radioactive substances, pieces of equipment involving radiation, or sources later in steady operation, contact the Safety and Radiation Protection group by email (expsaf@xfel.eu) well in advance in order to check about feasibility conditions.

2.3.4 Beam properties and instrument configuration

Relevant information is available on the homepage of each scientific instrument. **If you need further information about feasibility conditions, do not hesitate to contact the scientific instrument groups.**

As a rare exception, if the proposed experiment can make use of beam properties set by other experiments and if there are no specific requirements for beam properties (e.g. imaging experiments²), you may skip this part.

² Or, in any case, some other 'parasitic' use of the beam.

2.3.4.1 Single pulse properties

Indicate the photon energy range that would make your experiment possible.

Refer to the specific range of each instrument:

<https://www.xfel.eu/facility/instruments>

In addition, you must indicate the following:

- Bandwidth
- Pulse duration
- Pulse energy
- Spot size (diameter)

Prioritize each of the properties requested through the dropdown menu by selecting No Priority, Low Priority, High Priority.

Describe any special/additional requirements in the appropriate text box at the bottom of the section.

2.3.4.2 Requested pulse pattern

Refer to the information on each specific instrument:

<https://www.xfel.eu/facility/instruments>In this section, you are requested to specify the number of pulses per train, the pulse train length, and the requirements on special patterns.

Add any special or additional requirements in the Special Pattern text box at the bottom of the section.

To edit any field contained in the Beam Properties and Instrument Configuration section, or to add new information, click the **green edit icon**.

To delete the set of beam properties, click **red delete icon**.

Figure 6: Overview of a completed Beam Properties and Instrument Configuration section

Photon energy	Pulse duration	Pulse energy	Spot size	Pulses per train	Pulse train length
270 eV	5 fs	0.1 1e10 photons/pulse	55 µm	55	55 µs

CONTINUE

2.3.5 Resources and Additional Instrumentation

In the Resources and Additional Instrumentation section, you are requested to give details about further resources and instrumentation needed for your experiment. Provide information that is as accurate as possible since, in addition to the review outcome, the planning of the proposal is based on this information.

In particular, provide information about **optical lasers, required detector configuration, sample delivery, and any other equipment you may need.** Enter **requirements about typical laboratory equipment** in the **Laboratory Access section.**

In Early User Operation, the use of your own instrumentation or equipment in the experiments is not encouraged for feasibility and integration reasons. If you are planning to include in your proposal user-supplied instrumentation or equipment, please contact the relevant scientific instrument team well before proposal submission in order to verify feasibility. Below you will find rules for user-supplied instrumentation and equipment.

2.3.5.1 Rules for user-supplied instrumentation and equipment

In general, user-supplied equipment, instrumentation, and tooling shall only be used in experiments after testing and agreement by XFEL.EU. Complete information about user-supplied equipment, instrumentation and tooling shall be provided at the proposal stage at the latest (cf. (a) below).

(a) If the Principal Investigators, Proposers, and/or Participants in an experiment plan to bring their own equipment to use at XFEL.EU, either on

the instrument or in the user laboratories for sample preparation, this must be discussed with the relevant scientists of the instrument or laboratory well before proposal submission. If needed, the scientists will then address the relevant experts from the XFEL.EU support teams. The equipment shall be described in the proposal and will be subject to acceptance by XFEL.EU in the framework of the feasibility checks about the projects.

(b) Equipment needs to be checked by the Safety and Radiation Protection group, and Principal Investigators, Proposers, and /or Participants may be requested to provide a risk analysis of the equipment, depending of the outcome of the proposal evaluation. All material, including samples and equipment brought to the XFEL.EU facility remains entirely the responsibility of the Principal Investigators, Proposers, and Participants. Depending on the proposal evaluation, further tests or modifications to the equipment could be required to adapt it for use at the XFEL.EU facility well before the experiment, generally at the costs of the user group.

2.3.5.2 Optical lasers

Click the green Add Optical Laser button in order to open the form to enter the required parameters: Description of Laser Usage, Wavelength, Pulse Duration, Pulse Energy, Focus/Beam Size, Delay Range, and Information or Required Pattern. Special requirements should be detailed in the text box.

For information about maximum laser performance, refer to Table 2, which summarizes set points at the start of operation of the XFEL.EU facility.

For further information, please contact the instrument scientists before proposal submission.

Table 2: Basic European XFEL pump–probe laser parameters and set points
(courtesy of M. Lederer, WP78)

λ	800 nm	1030 nm
$\tau_{\Phi\Omega HM}$	15–300 fs (nearly transform-limited)	< 1 ps or 400 ps (chirped)

Set point	f_{rep} [MHz]	E_{pulse} [mJ] @ 800 nm	E_{pulse} [mJ] @ 1030 nm
1	4.5	0.05	1
2	1	0.2	4
3	0.2	1	20
4	0.1	2	40

Notes:

- The laser pulses are synchronized to the X-ray pulses.
- Repetition rate and energy set points 1–4, in combination with wavelength and pulse-width settings, correspond to fixed laser set points. Arranging for a different set point requires a configuration change of the laser.
- From any set point repetition rate, pulse patterns can be selected as required, including single pulse selection on both wavelengths.
- Set points with dual wavelength output can be arranged on request.
- Variable attenuation is available on request.
- Beams are close to diffraction-limited.
- Harmonics are possible on request.
- For further details, contact XFEL.EU before submitting your proposal.

2.3.5.3 Required detector configuration

Provide information and a justification on the planned use of detector(s) during your experiment:

- Detector type/name
- Sample-detector distance
- Planned use and special requirements (textbox)

For specific instructions, see the on relevant instrument page:

<http://www.xfel.eu/research/instruments/>

2.3.5.4 Sample delivery

Describe the required sample delivery in the text box.

2.3.5.5 Other equipment

This part must be completed **after consultation of the instrument scientists**. Provide details about the agreed requirements in the form.

2.3.6 Laboratory access

To fill out the Laboratory Access section correctly, refer to the **information about the XFEL.EU user laboratories** available on our website:

https://www.xfel.eu/users/experiment_support/user_labs

2.3.6.1 Laboratory workspace

In this section, you state the type of laboratory working space to which you are requesting (Biology Laboratory Risk Group 1 or 2 or other laboratories) with more detailed information that is useful for scheduling purposes (e.g. estimate of time needed at which type of working space, description of work, frequency of work during beamtime).

The size of a working space amounts to 1.2 or 1.5 metres each and, for biology laboratories, a max. of 4 working spaces can be requested at the same time.

2.3.6.2 Laboratory equipment

Independently of the access to workspace in a specific lab, you can separately request access to specific laboratory equipment.

To be able to fill out this section correctly, refer to the information about the XFEL.EU user laboratories available on our website:

https://www.xfel.eu/users/experiment_support/user_labsNote that exclusive use of the equipment is not guaranteed.

In this section, you can also specify if you need to **access to gases** (Ar, N₂, O₂, CO₂, pressurized air, or other),

3 Registering for experiments in UPEX

Over the first calls for proposals, our facility and the scope of operation will gradually develop. Updates on the status of the facility can be found on our website (www.xfel.eu). Information on instruments available to users is found in each specific call for proposals. If you need further information and support, contact the scientific teams of the instruments you are interested in or the XFEL.EU User Office well before submitting your proposal. Useful contacts are provided in Appendix B, “Useful email contacts”.

3.1 A-form: General information

The electronic form used for registering the experiment team and confirming samples and substances used in the experiment is called an Arrival Form (A-form).

- All prospective members of the experiment team must have registered on UPEX before the Main Proposer can add their records to the A-form.
- It is the responsibility of the Main Proposers to make sure that all prospective members of the team create their personal accounts in UPEX in time and accept the latest versions of the policies detailed on UPEX. Main Proposers should also make their team members aware that they need to take the online general safety training (available soon).
- **A maximum of 10 participants in each user experiment is recommended.** This is due to access restrictions in the experiment hall and instrument hutches for safety reasons.
- Please note that registration for remote access to user experiment data is possible through the A-form also at any other later stage.

A link to the active A-form can be found by the Main Proposer on UPEX next to the name of the scheduled proposal and on the dashboard.

In addition to the registration of the experiment team, the A-form includes the following:

- Confirmation of samples/substances to be used during experiments, chosen within the samples/substances included in the original proposal.

More information:

https://www.xfel.eu/users/experiment_support/policies

- Designation of funded users in case of eligibility.

More information:

https://www.xfel.eu/users/user_guide/funded_user_travel

- Optional requests for support for practical arrangements (travel, accommodation, invitations for visa purposes, and so on).

More information:

https://www.xfel.eu/users/user_guide

The A-form must be completed and submitted by the Main Proposer at least 4 weeks before the start date of the experiment. Timely submission is in the interest of the user team. This is particularly crucial for practical arrangements (access, accommodation, and travel support) as well as for computing accounts and other aspects of the experiment support. If submissions are late, the User Office will not be in a position to ensure high-quality service to users.

3.2 Attribution of responsibilities within the user team

Please note that the attribution of functions in the proposal submission and allocation process within the user team has to be done through the selection

of the relevant scientist at the proposal stage. Each scientist mentioned in a proposal with the role of Principal Investigator, Main Proposer, or Co-Proposer receives an email confirmation from UPEX on proposal submission.

3.2.1 Principal Investigator

Besides being in most cases the lead researcher or one of the lead researchers of the project addressed in the proposal, for the purpose of access to the XFEL.EU facility, the Principal Investigator is specifically identified among the authors of the proposal and bears exclusive long-term responsibility for experiment, especially for the data generated by the experiment.

For more information, refer to our Scientific Data Policy:

<https://in.xfel.eu/upex/docs/upex-scientific-data-policy.pdf>

3.2.2 Main Proposer

For the same purpose, the Main Proposer is the scientist actually submitting the initial proposal and may differ from the Principal Investigator. If this is the case, the Main Proposer will have the responsibility of acting as the contact person for proposal authors (including communication of the outcome of the reviews) and the practical preparations for the experiment in case the proposal is awarded beamtime, including registration of participants in the experiment and confirmation of samples and substances used in the experiment.

3.2.3 Co-Proposers

The Co-Proposers are all scientists identified as authors in the proposal.

3.2.4 Participants in the experiment

The Participants are the scientists designated to take part in the actual measurements at the XFEL.EU facility. They may differ from the authors of the proposal although this is not recommended.

3.3 A-form generation

Once a proposal has been scheduled, the yellow A-form icon appears on the dashboard of the Main Proposer of the relevant proposal with the text:

1 proposal(s) is scheduled—please submit the A-form at least 4 weeks before the start date of experiment

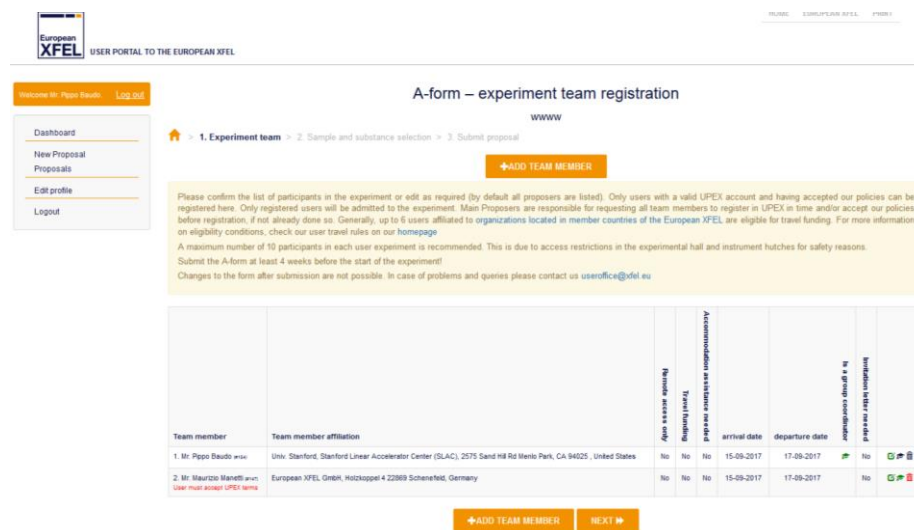
A link to the A-form in UPEX will also reach the Main Proposer with the notification about the scheduled experiment and the instructions for registration of the user team.

Figure 7: Dashboard access to the A-form generation

The screenshot shows the UPEX user dashboard for Mr. Pippo Baudo. The dashboard includes a navigation menu on the left with options: Dashboard, New Proposal, Proposals, Edit profile, and Logout. The main content area displays the user account information, a warning about UPEX lightweight accounts, and sections for 'Edit profile', 'Acceptances', and 'Proposals'. The 'Proposals' section shows a total of 2 proposals, with one scheduled and a warning to submit the A-form at least 4 weeks before the start date. It also includes instructions for submitting new proposals and a description of proposed experiments as PDFs.

Clicking the icon or the link will generate the electronic A-Form.

Figure 8: First step of A-form: Registration of user group



By default, all scientists mentioned in the original proposal are already listed in the A-form. The Main Proposer can edit the list by adding new UPEX users by clicking on the green Add Team Member button or by deleting some of the names already included by clicking the red recycle bin icon (🗑️) at the right of each record. By default, the Main Proposer has responsibility as Group Coordinator for the experiment. If, for serious reasons, this responsibility needs to be delegated to another member of the team, this is possible by selecting this function for the corresponding record already in the list by clicking on the green graduation cap icon (🎓).

CAUTION: Only scientists registered in UPEX can be added to the A-form.

The A-form cannot be submitted if the users listed have not accepted all required policies and their updates. These users must log on to UPEX once and accept the pending requirements so as to enable the Main Proposer to submit the document.

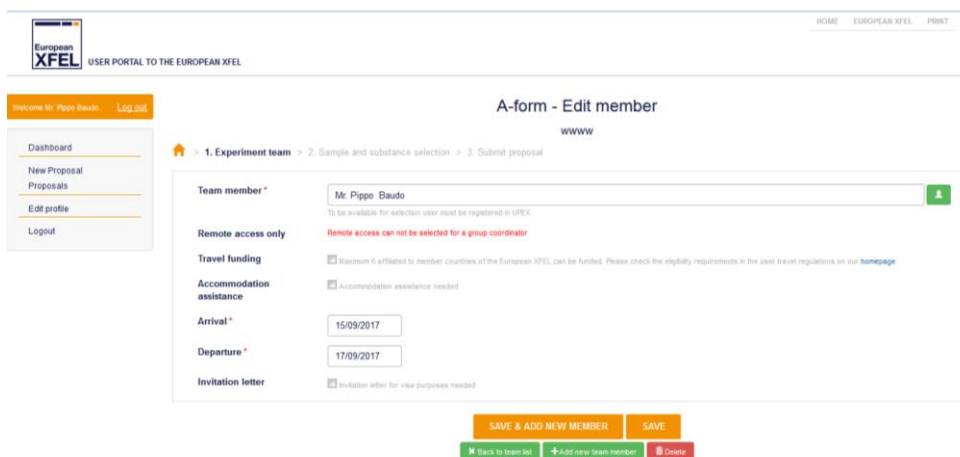
No other registration procedure is foreseen; it is the responsibility of the Main Proposers to make sure that all prospective members of the team create their personal accounts in UPEX in time and accept the latest versions of the policies detailed on UPEX.

Independently of services and support requested, all scientists appearing in the A-form will receive an email notification and will be able to access the original proposal after A-form submission.

Clicking the green Edit icon (✎) will enable the requesting of specific services for each member of the user team by generating an individual checklist.

 **TIP:** The A-form can be saved as often as needed before submission.

Figure 9: A-form – Edit member of experiment team



3.3.1 Selection of services in the A-form

The services described in this section can be selected for each member of the team in the “Edit member” form.

3.3.1.1 Remote access to data

This should be selected only for team members who are not going to travel to XFEL.EU and attend the experiment. Selecting this option disables all other service requests.

3.3.1.2 Travel funding

This request applies to a maximum of 6 users from shareholder and associate countries of XFEL.EU. Please note that users from the Hamburg/Schenefeld area are not eligible for funding.

For further information, refer to the User Travel Regulations on our homepage:

https://www.xfel.eu/users/user_guide/funded_user_travel

TIP: Selection of this option will trigger an automatic email to the user requesting to provide our Travel Office with more detailed information to deal with the travel arrangements and funding.

3.3.1.3 Accommodation assistance

Assistance for finding accommodation in the neighbourhood of the XFEL.EU can be requested for users travelling to Schenefeld/Hamburg for experiments.

TIP: The User Office will contact the selected user directly about arrangements and information.

3.3.1.4 Arrival / departure dates

By default, the start and end dates of the actual measurements are indicated. The Main Proposer should modify these dates for each team member as required.

3.3.1.5 Invitations for visa applications

The User Office can provide official invitations for the experiment as support documentation for a German visa application on request.

TIP: Selection of this option will trigger an automatic email to the user requesting the detailed information for issuing the invitation.

Figure 10: Edited A-form

The screenshot shows the 'A-form - experiment team registration' page in the XFEL user portal. The page has a navigation menu on the left with options like 'Dashboard', 'New Proposal', 'Proposals', 'Edit profile', and 'Logout'. The main content area shows the registration form with a breadcrumb trail: '1. Experiment team > 2. Sample and substance selection > 3. Submit proposal'. There is a yellow warning box with instructions for registration. Below this is a table with the following data:

Team member	Team member affiliation	Apply travel funding	Request travel funding	Accommodation assistance requested	arrival date	departure date	Invitation letter needed	Invitation letter needed in German language
1. Mr. Pippo Baudo	Univ. Stanford, Stanford Linear Accelerator Center (SLAC), 2575 Sand Hill Rd Menlo Park, CA 94025, United States	No	No	No	15-09-2017	17-09-2017	No	No
2. Mrs. Silvia Berlusconi	European XFEL GmbH, Holzkoppel 4 22869 Schenefeld, Germany	No	Yes	Yes	30-10-2017	31-10-2017	No	No
3. Mr. Ilija Derivankić	European XFEL GmbH, Holzkoppel 4 22869 Schenefeld, Germany	Yes			not applicable			

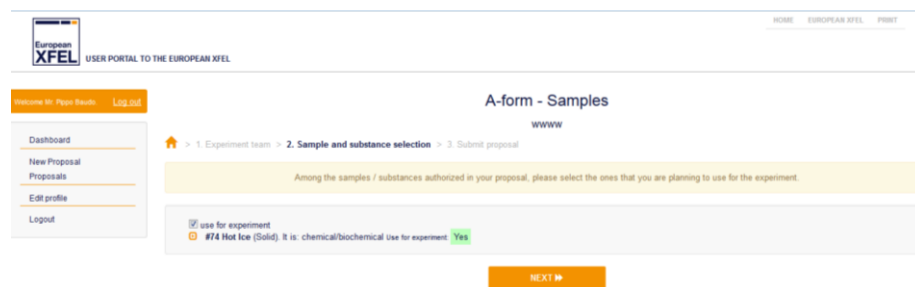
Once the list of experiment participants is complete and all services have been requested, the form can be saved and it is possible to switch to the second part of the A-form completion by clicking the orange Next button at the bottom of the list.

3.3.2 Confirmation of samples and substances used in the experiment

The form shown in Figure 10 enables the confirmation of the samples and substances used in the experiment among the ones listed in the original proposal.

To confirm a sample or a substance, select the checkbox above the name with the caption “Use for experiment”. Once a green “Yes” appears after the name of the sample or substance, the item is confirmed.

Figure 11: Sample/substance list



After the list is complete, you can go back to the list of experiment participants for further editing through the breadcrumb navigation at the top of the sample/substance list, as shown in Figure 12 or proceed to submission by clicking the orange Next button at the bottom of the sample/substance list.


Figure 12: Breadcrumb navigation



 **TIP:** Also at this stage, the A-form can be saved as often as needed before final submission.

3.3.3 Submission of A-form

In this case the A-form can be submitted by clicking the blue button at the bottom of the “Submit the A-form” page.

 **CAUTION:** Please review the A-form carefully before submission. After submission, it cannot be edited. All members of the team appearing in A-form will be notified by email. If corrections are necessary after submission, please contact the XFEL User Office at useroffice@xfel.eu before the deadline. After the deadline, changes are not permitted.

4 Feedback

4.1 Experiment report

As soon as the last shift of a beamtime has been completed, a link to the experiment report template will appear on the user dashboard of the Main Proposer in UPEX, in the “Feedback” section:

<https://in.xfel.eu/upex>

Submission of the experiment report is required **between 3 to 6 months after end of last shift of the experiment.**

Format instructions for the report:

- Maximum total length: Two A4 pages
- Body text not smaller than 10 points (recommended font types: Arial and Helvetica, as well as Symbol for special characters)
- Single spacing
- Figures can be included in the PDF, although the maximum length must be kept
- Max. total file size: 5 Mb
- Proposers bear responsibility for the readability of the description.

4.2 Feedback form

All users are welcome to share observations, recommendations, ideas, and general comments related to their experience at European XFEL. We sincerely appreciate all advice aiming at the improvement of the quality of our service.

For this purpose, a specific form is available in the “Feedback” section of the standard user dashboard in UPEX.

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B Useful email contacts

XFEL.EU User Office:	useroffice@xfel.eu
SASE1 scientific instruments:	FXE (Femtosecond X-ray experiments): christian.bressler@xfel.eu
	SPB/SFX (Single Particles, clusters and Biomolecules / Serial Femtosecond crystallography): spb.sfx@xfel.eu
SASE2 scientific instruments:	HED (High Energy Density matter): ulf.zastra@xfel.eu
	MID (Materials Imaging and Dynamics): anders.madsen@xfel.eu
SASE3 scientific instruments:	SCS (Spectroscopy and Coherent Scattering): andreas.scherz@xfel.eu
	SQS (Small Quantum Systems): michael.meyer@xfel.eu
Sample environment group and user labs:	sample.environment@xfel.eu