



Dates  
Référence

## How to apply to beamtime at the AGLAE facility?

Rédacteur	Vérificateur	Approbateur	Version	Signatures	Date

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## 1. Submission via the IPERION-HS transnational access

### 1.1. Who can apply?

User Groups can apply for Transnational Access in case they meet the following conditions:

- the User Group Leader and the majority of the User Group members work in an institution/SME established in a Member State of the European Union, an EU Associated State or a developing country.
- the User Group Leader and the majority of the User Group members work in an institution/SME located in a country other than the country where the legal entity operating the infrastructure is established.
- only User Groups that are entitled to disseminate the foreground they have generated under the project are eligible to benefit from access free of charge to the infrastructure.

### 1.2. Where to apply?

The submission should be done on the IPERION-HS website.

<http://www.iperionhs.eu/>

### 1.3. How to apply?

This is a summary of the procedure to submit a proposal through the IPERION-HS website. A video demo is available on the website in the “how to access” page (<http://www.iperionhs.eu/iperion-hsaccess/>)

#### 1.3.1. Registration

If it is your first visit on the website, a user account needs to be created by clicking on register in the top right corner.

Once the creation is effective, you have to log in before going further.

If you already registered, just log in and proceed.






### 1.3.2. Selection of the techniques

Before submitting your proposal, you have to go through the catalogue of techniques available in IPERION-HS. The catalogue can be found either by going in the menu [SERVICES/Catalogue of services](#) or directly at the following address : <http://www.iperionhs.eu/catalogue-of-services/>

Then you enter the FIXLAB catalogue by clicking on FIXLAB in the service platforms (NB: you can directly enter the FIXLAB catalogue through the menu [SERVICES/FIXLAB](#)).

#### SERVICE PLATFORMS

 <p><b>ARCHLAB</b></p> <p>Access to physical and digital (offline) data collections in European museums or conservation institutes, such as objects, technical images, samples and reference materials, analytical data and conservation documentation.</p>	 <p><b>FIXLAB</b></p> <p>Access to key fixed facilities for heritage science research, e.g. particle accelerators, neutron and laser sources and other non-transportable research facilities.</p>	 <p><b>MOLAB</b></p> <p>Access to a comprehensive selection of mobile analytical instrumentation for in-situ measurements (close-range and remote sensing) on objects, collections, buildings, and sites, allowing non-invasive investigations for complex multi-technique diagnostic projects.</p>
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On the catalogue of all the FIXLAB techniques, AGLAE will be found in [Ion Beam analysis techniques](#).

#### FIXLAB

[Catalogue of services](#) →













The goal of FIXLAB is to provide access for the Heritage Science (HS) community to key fixed research facilities and to the associated scientific experience of their staff that develop and maintain sophisticated state-of-the-art instrumentation for advanced diagnostics and archaeometry.

Access is offered to researchers in Heritage Science to help address the **major questions raised by the materiality of Heritage Science artefacts** in terms of their genesis, manufacturing processes, alterations, conservation and preservation. The unique FIXLAB services offered to the HS community embrace advanced state-of-the-art instrumentation; dedicated facilities with teams of experts in the field of micro-analysis of HS artefacts; novel developments resulting from IPERION HS joint research activities to improve access progressively; development of both new sample-positioning devices at a micro-scale and software tools for the integration of imaging data.

##### Platform coordinator

**Name:** Michel Menu

**Email:** [michel.menu@culture.gouv.fr](mailto:michel.menu@culture.gouv.fr)

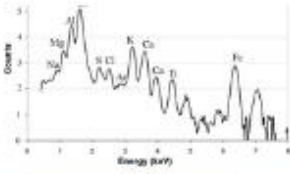
 <p>Ageing techniques &gt;</p>	 <p>Biological analysis &gt;</p>	 <p>Conservation techniques &gt; and preparation methods</p>
 <p>Dating &gt;</p>	 <p>Environmental parameters measurements &gt;</p>	 <p>Imaging (multiscale and &gt; multispectral)</p>
 <p><b>Ion Beam analysis techniques &gt;</b></p>	 <p>Mass Spectrometries &gt;</p>	 <p>Microscopies &gt;</p>
 <p>Molecular analysis &gt;</p>	 <p>Molecular &gt;</p>	 <p>Neutron techniques &gt;</p>

In Ion beam analysis techniques, you will have to enter each technique needed by clicking on the name of the technique. Note that AGLAE does not provide ERDA in the frame of the IPERION-HS Transnational Access.

When you enter the technique, you can now select the provider where you want to use that technique. To do that, you have to add the provider to your cart by clicking on the cart situated to the right of the provider name. For example, in the PIXE page:

46 > FRLAB > Category: Ion Beam analysis techniques

## Particle Induced X-ray Emission (PIXE)



Particle-Induced X-ray emission (PIXE) is a technique used to determine the elemental make-up of a material or sample. When a particle interacts with an atom its electrons from inner electronic layer can be ejected. Other electrons from upper electronic levels will replace the missing ones, generating X-rays. The energy of such X-rays depends on the nature of the atom. PIXE enables to identify and quantify chemical elements from Na to U for major, minor and trace elements, the latter meaning their quantity is at the ppm (part per million) scale. PIXE is a powerful yet non-destructive elemental analysis technique now used routinely by geologists, archaeologists, art conservators and others. By scanning the surface of the object with a focused ion beam 2D information about the elemental distribution can be achieved with micrometer spatial resolution in vacuum, circa 25  $\mu\text{m}$  under helium atmosphere. In air, the resolution is less favourable and some lighter elements cannot be detected by the method. On the other hand, the in-air set-up make it possible to analyse larger or sensitive objects. The elemental composition may indicate the provenance, manufacturing process and technology, workshop, date of production, authenticity, etc of the object.

### Fields of application

#### Cultural heritage

architecture, art, decorative arts, derno anthropologic object, manuscript, mosaic, musical instrument, other, painting, papyrus, sculpture, textile, archaeological object.

### Materials

#### Inorganic

glass, stone, metal and metallurgical By-Products, ceramic (clay, mud brick, terracotta, earthenware, stoneware, porcelain), pigment

#### organic

animal parts, binding media, glues, wood, paper, textiles, varnishes.

### Provider

**Ion Beams Laboratory**  
Bem tér 15/C - 4001 Debrecen Hungary

**Wigner Research Centre for Physics**  
Konkoly-Thege Miklós út 29-33 - 1121 Budapest Hungary

**Grand Louvre Accelerator for Elemental Analysis**  
quai François Mitterand - 75001 Paris France

### Reference

-[https://en.wikipedia.org/wiki/Particle-induced\\_X-ray\\_emission](https://en.wikipedia.org/wiki/Particle-induced_X-ray_emission)

### TOOLS

**FRLAB**  
@TOOL • ION BEAM ANALYSIS TECHNIQUES

Scanning Nuclear Microprobe



The Oxford type scanning nuclear microprobe is operated at one of the beamlines of our particle accelerator. The beam diameter is about 1-3 microns for the usual applications in vacuum. The microprobe is equipped with a 5-axis goniometer (X-Y-Z translations and two rotations, to move the sample into the required position), optical microscope, camera and...

Provider: [Ion Beams Laboratory](#) Contact person: [Zsolt Fekete](#)

**FRLAB**  
@TOOL • ION BEAM ANALYSIS TECHNIQUES

Wigner FK PIXE external milli-beam setup



The external milli-beam PIXE setup is located at the 5MV Van de Graaff accelerator of Wigner FK (Wigner Research Centre). The properly collimated proton beam of 2-3 MeV energy is extracted from the evacuated beam pipe to air through a 73 micrometer thick Kapton foil. Target-window distance of 10 mm was chosen for the measurements...

Provider: [Wigner Research Centre for Physics](#) Contact person: [Anna Kovács](#)

**FRLAB**  
@TOOL • ION BEAM ANALYSIS TECHNIQUES

AGLAE external  $\mu\text{Beam}$  PIXE detection system



Type and energy of particles: protons or deuterons from 1 to 4 MeV or Alpha from 2 to 6 MeV for Alpha. Beam size: down to 20  $\mu\text{m}$ . Single spot or mapping on areas up to  $\text{cm}^2$  sized area (max 20x20  $\text{cm}^2$ ). PIXE system: 5 SDD detectors, ens with a deflecting magnet and an Helium flux for low energy X-Ray...

Provider: [Grand Louvre Accelerator for Elemental Analysis](#) Contact person: [Quentin Lemaire](#)

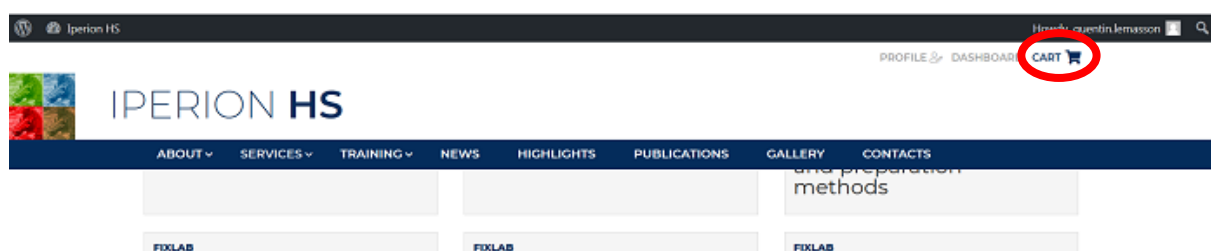
A pop up will show up to confirm that the item was added to the cart. Congratulations! Now the technique performed at the AGLAE facility is now in your cart!

You can now add another technique using the same procedure. Note that if you need several techniques, you must add all of them to the cart before proceeding to the next step.

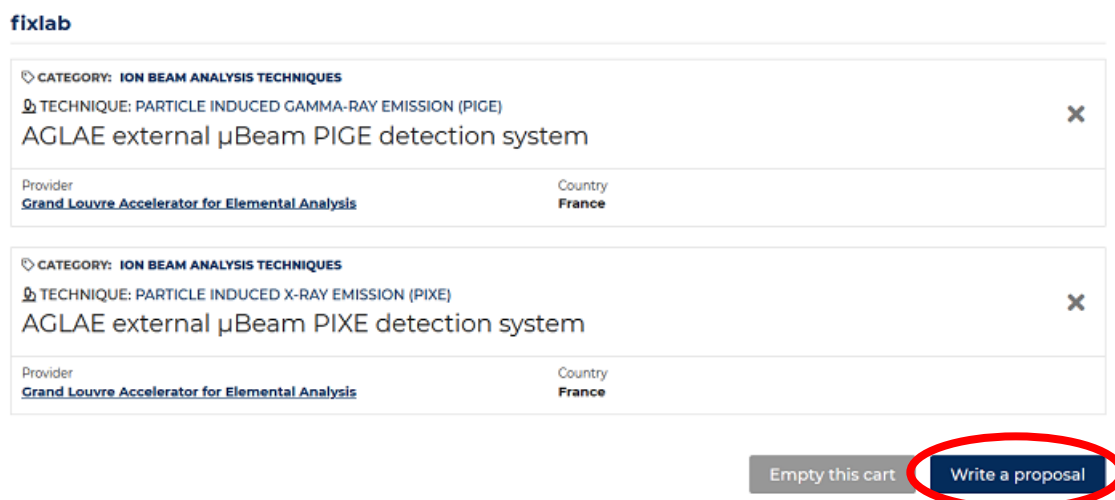
As the website is a common deposit for all the IPERION-HS proposals, if your project needs a multiplatform analysis (e.g. AGLAE + multispectral analysis or X-ray imaging), you can do a common proposal by adding to your cart items from different providers.

### 1.3.3. Proposal submission

Once your cart is completed with all the techniques needed, you can proceed to the next step, the proposal submission. You have to visualize your cart by clicking on the cart situated on the upper right of the page.



You can now click on [Write a proposal](#)



A form is displayed on the screen; you have to fill all the boxes (the ones with a red asterisk \* are mandatory). The scientific description must be added as an attachment.

To upload the file online, the file should be saved in pdf and rename with the acronym of the proposal (acronym.pdf)



The description of the project must contain the following elements:

- Project summary (Be sure to include the novelty and/or added value of the proposed work) (max 300 words)
- Scientific background (max 500 words)
- Description of the planned work and experimental methods (experimental technique(s)) requested with justification, required set-up(s), measurement strategy, sampling area/point details (number, location, etc.), etc.) (max 600 words)
- Previous analysis on the artefact (max 300 words)
- Expected achievements (max 400 words)
- Impact and dissemination plan (max 400 words)
- References (min 5 – max 10)

If necessary, you can save your proposal as a draft. You will be able to access to your draft proposal in the cart, the **Write a proposal** button will be replaced by **Edit draft proposal**.

If your proposal is finished, you can click on **Send proposal** and the proposal is submitted. Be careful to accept the Terms and conditions at the end (by check the corresponding boxes).

Your proposal will no longer be editable and will go through the evaluation process once the deadline is over. The proposal is first evaluated by the provider to check its feasibility and, only if feasible, it will be evaluated by the peer review panel of IPERION-HS.

#### 1.4. Contacts

If you need assistance concerning the techniques and experiments, you can contact the AGLAE staff: Quentin Lemasson, Claire Pacheco or Laurent Pichon ([quentin.lemasson@culture.gouv.fr](mailto:quentin.lemasson@culture.gouv.fr), [claire.pacheco@culture.gouv.fr](mailto:claire.pacheco@culture.gouv.fr) or [laurent.pichon@culture.gouv.fr](mailto:laurent.pichon@culture.gouv.fr)).

If you need help with the submission, you can contact the IPERION-HS user helpdesk ([userhelpdesk@iperionhs.eu](mailto:userhelpdesk@iperionhs.eu)).

## 2. Submission via the national and international access (except EU)

### 2.1. Who can apply?

Any group that doesn't fit in the groups described in the paragraph 1.1. i.e. only French user groups and groups from outside Europe.

### 2.2. Where to apply?

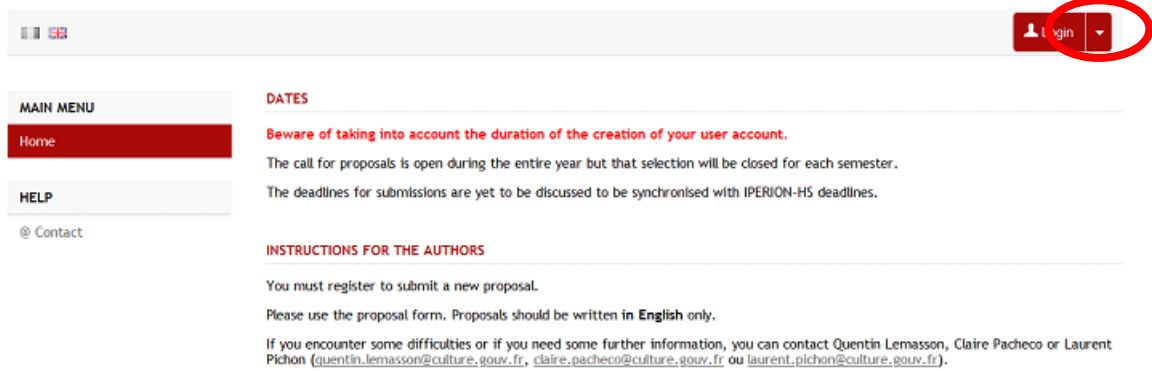
The submission should be done on the AGLAE call for proposal website.

<https://aglae.sciencescall.org/>

## 2.3. How to apply?

### 2.3.1. Registration

If it is your first visit on the website, a user account needs to be created by clicking on the arrow next to login and click on “Create an account” in the top right corner.

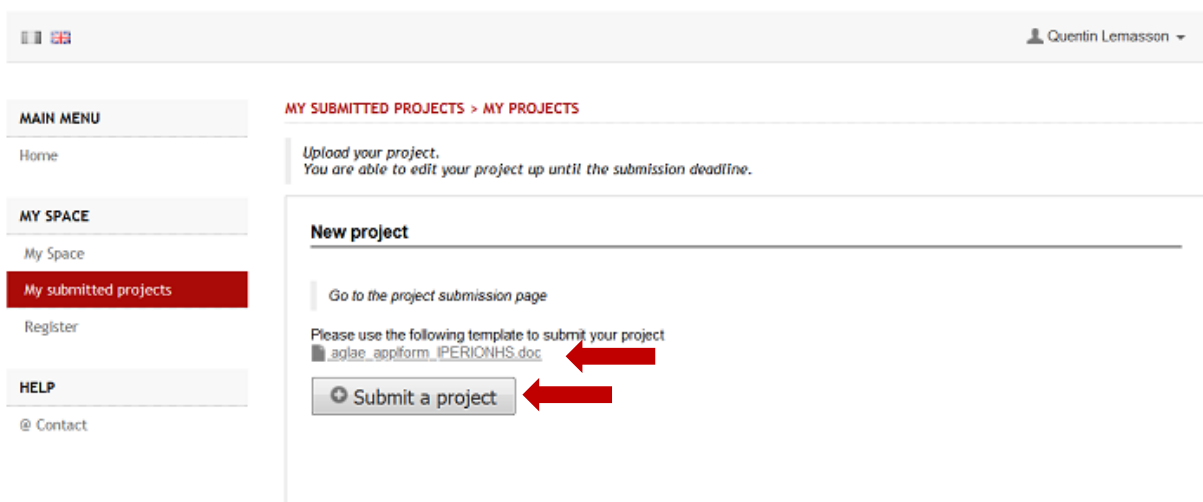


Once the creation is effective, you have to log in before going further.

If you already registered, just log in and proceed.

### 2.3.2. Proposal submission

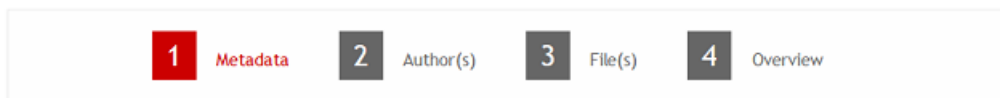
Once you are logged in, a new menu will appear on the left. You can go on the **My submitted projects** tab. There, you can download the template for the proposal and submit a proposal by clicking on the **Submit a project** button.





Follow the following steps

#### NEW PROJECT



1 Metadata: Title of the project

2 Author(s)

3 File(s): You can upload the template file completed with your project. Pdf and doc or docx formats are accepted. All the formats will be converted to pdf. You can add supplementary data (e.g. list of objects) but the scientific description of the project should be filled in the template.

4 Overview: In the overview, you can check your submission. You can then validate using the Submit/Save button. Note that project can be edited latter until the submission deadline.

#### 2.4. Contacts

If you need assistance concerning the techniques and experiments, you can contact the AGLAE staff: Quentin Lemasson, Claire Pacheco or Laurent Pichon ([quentin.lemasson@culture.gouv.fr](mailto:quentin.lemasson@culture.gouv.fr), [claire.pacheco@culture.gouv.fr](mailto:claire.pacheco@culture.gouv.fr) or [laurent.pichon@culture.gouv.fr](mailto:laurent.pichon@culture.gouv.fr)).

If you need help with the submission, please contact Quentin Lemasson.