TUNTWIN's Workshop

Session E: How to apply for getting beamtime at the synchrotron

Funded by the Horizon 2020 Framework Programme of the European Union under the GA N° 952306

Session: Spectroscopy techniques

How to apply for getting beamtime at the synchrotron

Iris H.Valido

How to apply for getting beamtime at the synchrotron

Where?

How to apply for getting beamtime at the synchrotron

Where?

http://www.veqter.co.uk/

How to apply for getting beamtime at the synchrotron

When?

- Calls for proposals: usually twice per year
  - February/March
  - September/October
- Several runs/cycles through the year
- Shutdowns: the synchrotron stops 1-2 weeks between runs/cycles
- Machine days: the synchrotron stops 1 day/week

1 day = 3 shifts
(1 shift = 8h)

How to apply for getting beamtime at the synchrotron

How much?

- Academic
  - Experimental covered by public funding
    - CERIC
    - NFFA
  - Funding opportunities (travel and accommodation expenses)
    - Depends on the synchrotron facility and the researcher's institution of origin
  - How to access:
    - Standard proposal
    - Rapid access proposals
    - Commissioning/User friendly access
    - Mail-in operation mode
- Proprietary (cost cover by the user):
  - Industrial access (500-600€/h)

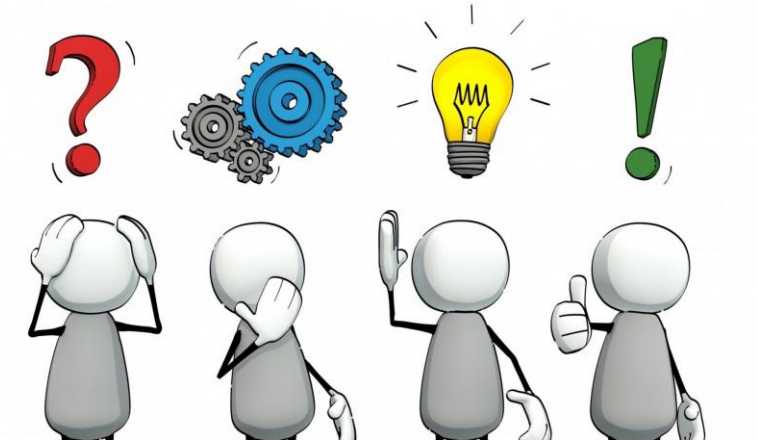
https://www.cells.es/en/accelerators/2021_operations_calendar.pdf

How to apply for getting beamtime at the synchrotron

How to apply?

SR should be considered as a tool necessary when other techniques cannot solve the problem at hand, that is, it is not a routine experimental tool

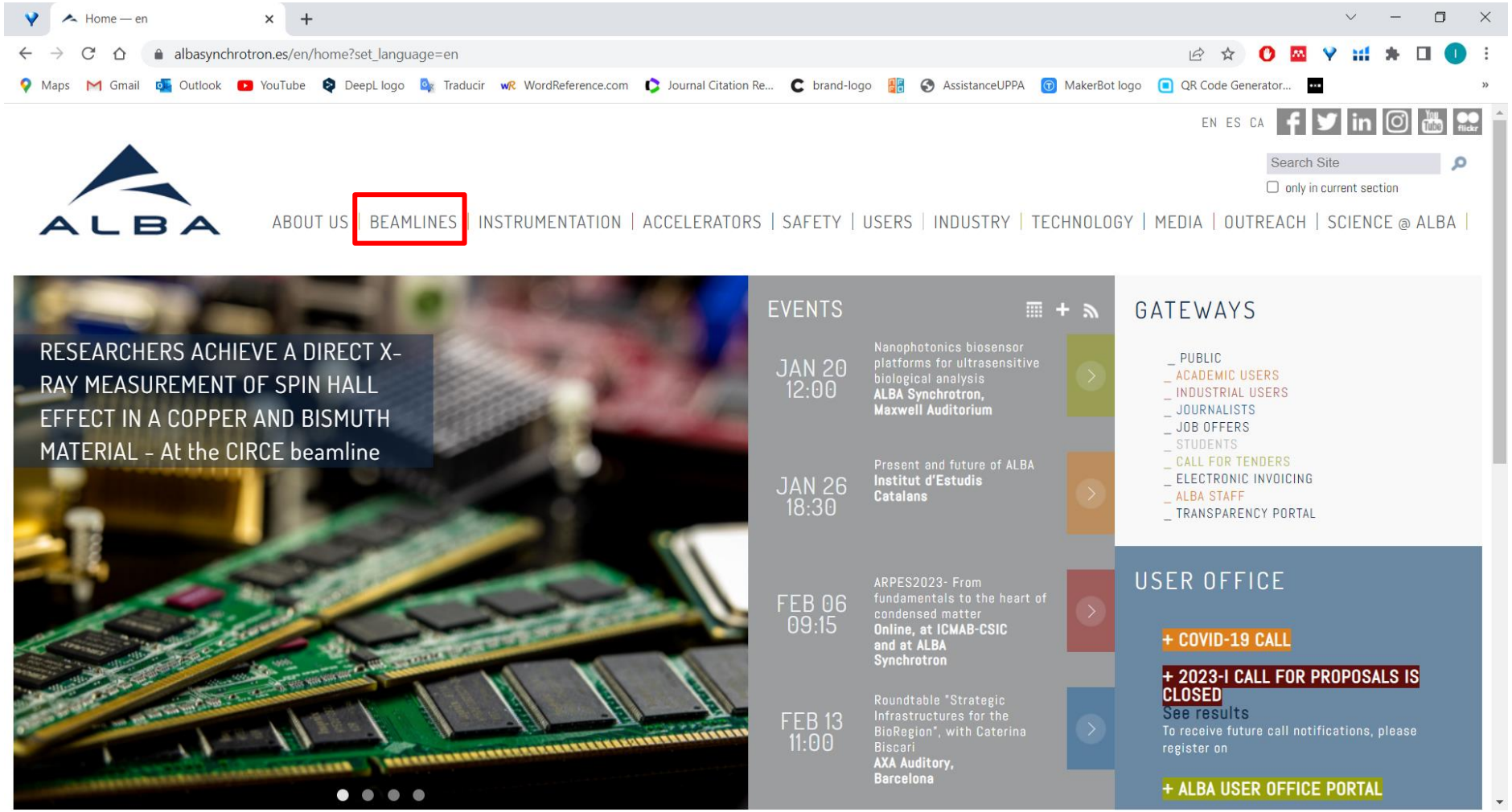
1. Understand your needs/objectives → chose appropriate technique
2. Know your sample/s (proper characterization)
3. Contact the beamline scientist
   - ➢ Discuss technical feasibility of your experiment
   - ➢ Discuss technical parameters
   - ➢ Verify if suitable sample environment set-up is available



https://www.cells.es/en/users/applying-for-beam-time

How to apply for getting beamtime at the synchrotron

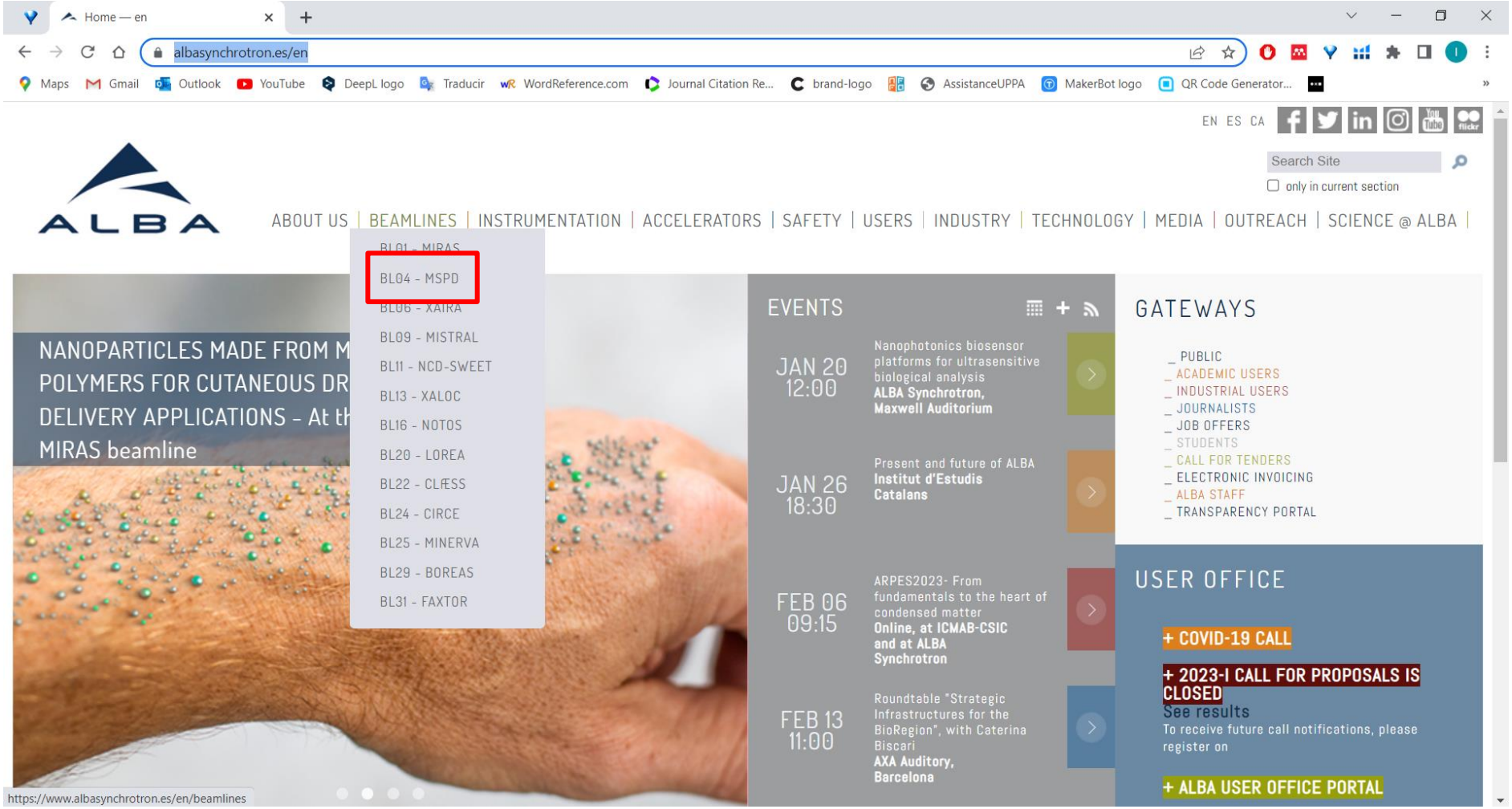
How to apply?



https://www.albasynchrotron.es/en

How to apply for getting beamtime at the synchrotron

How to apply?



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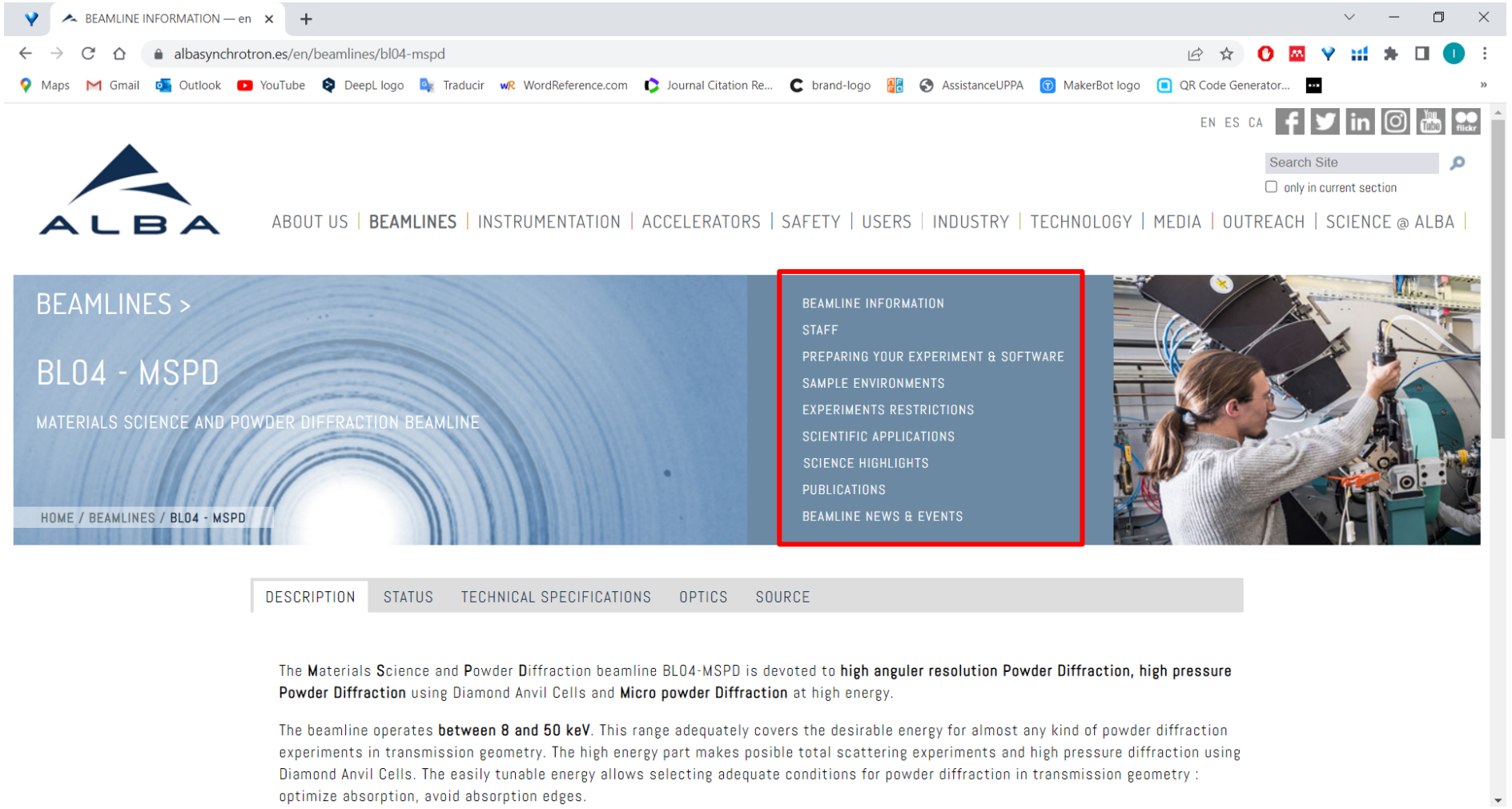
How to apply?



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How to apply for getting beamtime at the synchrotron

How to apply?

4. Register as a User and inform collaborators included in the experimental team to register too (ASAP)
5. Prepare your proposal (in English)
   - ➢ Usually 1-3 pages long (depends on the Synchrotron)
   - ➢ Clear and brief abstract
   - ➢ Description of the proposed experiment
     - Aim of the proposed experiment
     - description of the scientific case/background
     - Why is SR needed to solve the proposed scientific case?

"One of the main reasons for not obtaining the support of the panel is the lack of a clear statement on how the proposed work will result in significant advances."

- Sue Kilcoyne, University of Salford

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How to apply?

5. Prepare your proposal (in English)
    - Results of previous work/experiments (if applicable)
    - Details of the experiment
        - Experimental method(s): including the information of the proposed beamline, instrumental requirements, own equipment (if necessary), …
        - Justification of the amount of beamtime needed
        - Any issues related to safety (inc. use of gases, lasers, …)
    - Description of the results expected and their scientific relevance
    - Related own publications or other related literary references

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How to apply?

6. Submit your proposal
   - ➢ Do not leave the submission to the last minute
   - ➢ Complete the safety information required well in advance

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How to apply?

7. Evaluation procedure
   - Technical feasibility
   - Scientific merit, assessed by international experts
   - Previous record at the synchrotron facility
   - Availability of resources required
8. Proposal will be ranked and graded (e.g. ALBA synchrotron)
   - **A+: proposal is accepted**, and beam time has been granted
   - **A: Reserve list**. Proposal is accepted, but no beam time is available
   - **B: Proposal refused**

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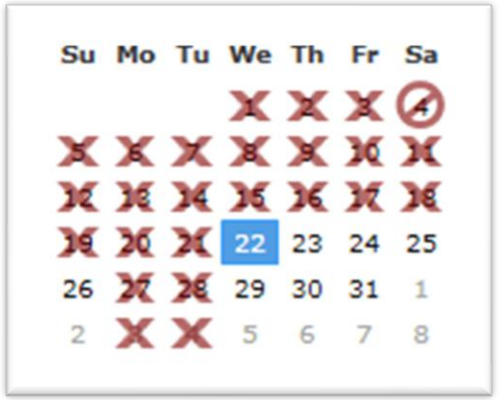
How to apply for getting beamtime at the synchrotron

Prepare your experiment

1. Schedule your experiment
   - ➢ Once the proposal is approved, the beamline scientist will contact the main proposer to schedule the experiment and register the users that will attend the experiment
   - ➢ Please, provide participants' names and emails as early as possible, and identify funded and non-funded users
   - ➢ Check User Funding Conditions



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How to apply for getting beamtime at the synchrotron

Prepare your experiment

2. Experimental risk assessment
   - Review the potential risk on your experiment and review the list of samples and their hazards
3. Pass the safety training (on-line):
   - This training will be valid for some time (ALBA, one year) and will be required for all users taking part in any experiment
   - Users will not be granted access to the facility until they have passed this exam

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Prepare your experiment

4. Shipping samples and equipment to the synchrotron

   - Users have to meet the costs of sending their samples
   - Users are responsible for doing all the paperwork involved in their shipment, including documents related to biosafety in the case of biological samples
   - Please, note that each country has its own specific regulations on these issues
   - **Inform your local contact that you are sending samples!!!**

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Remarks

1. Give your feedback
   - ➢ After your experiment, you are invited to fill in a User Feedback Questionnaire to help us improve our services
2. Submit your experimental report
   - ➢ Standard proposals shall submit their reports (via the User Office Portal) no later than three months after the experiment and, if possible, no later than the next call for proposals submission deadline
3. Publish your results and let us know
   - ➢ Applying for beamtime commits you to inform the User Office (via the User Office Portal) of any publication that may result from measurements made while at the synchrotron

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Merci!

Thank you!

¡Gracias!

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Commission européenne

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