



## Experiment Report Form

**The double page inside this form is to be filled in by all users or groups of users who have had access to beam time for measurements at the ESRF.**

Once completed, the report should be submitted electronically to the User Office via the User Portal:  
<https://www.esrf.fr/misapps/SMISWebClient/protected/welcome.do>

### Deadlines for submission of Experimental Reports

Experimental reports must be submitted within the period of 3 months after the end of the experiment.

#### Experiment Report supporting a new proposal (“relevant report”)

If you are submitting a proposal for a new project, or to continue a project for which you have previously been allocated beam time, you must submit a report on each of your previous measurement(s):

- even on those carried out close to the proposal submission deadline (it can be a “*preliminary report*”),
- even for experiments whose scientific area is different from the scientific area of the new proposal,
- carried out on CRG beamlines.

You must then register the report(s) as “relevant report(s)” in the new application form for beam time.

### Deadlines for submitting a report supporting a new proposal

- 1<sup>st</sup> March Proposal Round - **5<sup>th</sup> March**
- 10<sup>th</sup> September Proposal Round - **13<sup>th</sup> September**

The Review Committees reserve the right to reject new proposals from groups who have not reported on the use of beam time allocated previously.

#### Reports on experiments relating to long term projects

Proposers awarded beam time for a long term project are required to submit an interim report at the end of each year, irrespective of the number of shifts of beam time they have used.

#### Published papers

All users must give proper credit to ESRF staff members and proper mention to ESRF facilities which were essential for the results described in any ensuing publication. Further, they are obliged to send to the Joint ESRF/ ILL library the complete reference and the abstract of all papers appearing in print, and resulting from the use of the ESRF.

Should you wish to make more general comments on the experiment, please note them on the User Evaluation Form, and send both the Report and the Evaluation Form to the User Office.

#### Instructions for preparing your Report

- fill in a separate form for each project or series of measurements.
- type your report in English.
- include the experiment number to which the report refers.
- make sure that the text, tables and figures fit into the space available.
- if your work is published or is in press, you may prefer to paste in the abstract, and add full reference details. If the abstract is in a language other than English, please include an English translation.



	<b>Experiment title:</b> "The oldest ornithischian dinosaur perinate from Europe and the palaeobiology of basal iguanodontian dinosaurs"	<b>Experiment number:</b> ES-1225
<b>Beamline:</b>	<b>Date of experiment:</b> from: 11/10/2022 to: 12/10/2022 and from: 2/11/2022 to: 4/11/2022	<b>Date of report:</b> 08/02/2023
<b>Shifts:</b>	<b>Local contact(s):</b> Vincent Fernandez	<i>Received at ESRF:</i>
<b>Names and affiliations of applicants</b> (* indicates experimentalists): Filippo Maria Rotatori, GEOBIOTEC, Department of Earth Sciences, NOVA School of Science and Technology, Universidade NOVA de Lisboa, Campus de Caparica, P-2829 516 Caparica , Portugal Miguel Moreno-Azanza, Grupo Aragosaurus-IUCA, Facultad de Ciencias, Universidad de Zaragoza, 50009, Zaragoza, Spain		

## Report:

The experiment ES-1225 has been performed in two phases: the first one, from 11/10/2022 to 12/10/2022 and the second from 2/11/2022 to 4/11/2022 for a total of 9 shifts. The present report refers to the second session, although they were strictly linked together. The object of the experiment is a small dinosaur, one of the smallest of Europe, encased into a sandstone block.

The second session of the experiment aimed to investigate inner anatomical structure of key ROIs located in the previous session. The region we investigated are: (1) femoral shaft, (2) jaw internal anatomy and (3) dental thin sections. The ROI (1) aimed to produce histological thin sections to look for rates of growth, the ROI (2) to examine replacement rates of teeth and ROI (3) rates of amelogenesis.

Despite the complex acquisition we managed to assemble a very comprehensive dataset, which is currently under examination by our team. The thin sections of the femoral shaft evidenced the presence of spongy bones inside the femur, as expected in very young individuals. Maxillary and dentary teeth thin sections highlight patterns that are currently being examined.

The potential of this dataset it is great and our team aim to produce a high impact paper from its elaboration.

Hereafter we show some preliminary results of the ongoing elaboration process:

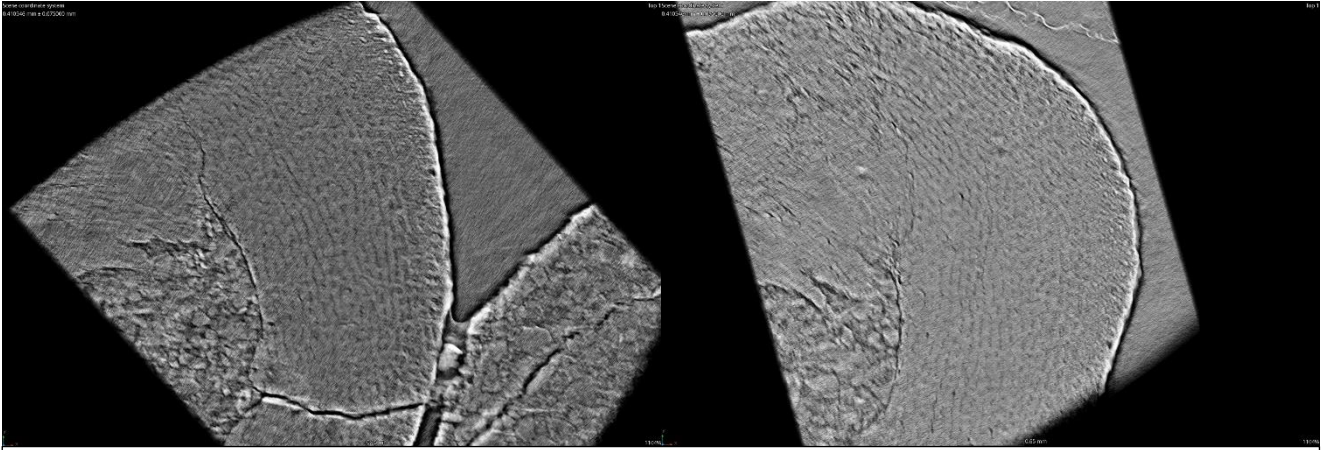


Fig. 1: cross sections of the femoral shaft. It is possible to notice spongy bone.