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<p>ACTA REUNIÓN / MINUTES OF MEETING</p>
<p>PROVISION DE SERVICIOS ICTS-LNF <i>ICTS-LNF SERVICE PROVISION</i> January 2024 - June 2024</p>

ELABORADO/WITTEN:	REVISADO/CHECKED:	APROBADO/APPROVED:
<p>Guiomar Delgado Soria</p>	<p>María González Viada</p> <p>Nathalie Valle</p> <p>Raquel González-Arrabal</p> <p>Rafael Vila</p> <p>Alejandro Moroño</p> <p>Arturs Zarins</p> <p>Fernando Sánchez Sanz</p>	<p>Fernando Sánchez Sanz</p>

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Información de la reunión / Meeting Information	
Fecha / Date	1 July 2024
Hora / Time	12:00 p.m.
Lugar / Location	Online
Vídeo- Conferencia Video- Conference	https://us05web.zoom.us/j/87202563858?pwd=J1sDAaU9GHZthiSi5q6lSmPDIP80q.1

Asistentes / Attendance:	
<i>Nombre / Name</i>	<i>Responsabilidad/Comentarios Role / Comments</i>
A. Zarins	UL, Latvia. Committee member.
N. Valle	LIST, Luxemburg. Committee member.
R. González-Arrabal	UPM-ETSII, Spain. Committee member.
R. Vila	CIEMAT, Spain. Committee member.
A. Moroño	CIEMAT, Spain. Committee member.
M. González	CIEMAT, Spain. Committee member.
F. Sánchez	CIEMAT, Spain. Committee member.
G. D. Soria	Coordinator, CIEMAT, Spain. Committee member.

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Lista de Distribución (vía e-mail) / Distribution List (via e-mail)	
A. Zarins	UL, Latvia. Committee member.
N. Valle	LIST, Luxemburg. Committee member.
R. González-Arrabal	UPM-ETSII, Spain. Committee member.
J. Y. Pastor	UPM-ETSICPP, Spain. Committee member.
R. Vila	CIEMAT, Spain. Committee member.
A. Moroño	CIEMAT, Spain. Committee member.
M. González	CIEMAT, Spain. Committee member.
F. Sánchez	CIEMAT, Spain. Committee member.
G. D. Soria	Coordinator, CIEMAT, Spain. Committee member.

Historia del documento / Document History			
[V.R]	Fecha/Date	Descripción del documento o modificaciones <i>Description of document or changes</i>	Realizado por <i>Made by</i>
v0.1	08/07/24	Borrador	G. D. Soria

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10th SCIENTIFIC COMMITTEE ON ACCESS TO THE ICTS LNF-DTF EQUIPMENT

* ICTS stands for Scientific and Technical Singular Facility, in Spanish

* LNF-DTF stands for Fusion National Lab-Fusion Technology Division

Date: 1 July 2024, 12.00hs

To be held: online meeting

<https://us05web.zoom.us/j/87202563858?pwd=J1sDAaU9GHZthiSi5q6ISmPDIP80q.1>

Participants: A. Zarins (UL, Latvia), N. Valle (LIST, Luxemburg), R. González-Arrabal (UPM-ETSII, Spain), A. Moroño (CIEMAT), F. Sánchez (CIEMAT), R. Vila (CIEMAT), M. González (CIEMAT) and G. D. Soria (CIEMAT, coordinator).

Agenda.

i) Brief introduction



After solving the technical problems caused by the connection through the ZOOM application, all the members of the commission present were welcomed and thanked for their presence at these complicated dates for various reasons, such as the preparation of project proposals, the finalization of academic courses or the holiday season, among others. The absence of José Ygnacio Pastor from the meeting due to unforeseen personal matters was also mentioned. J.Y. Pastor will attend the next meetings of the commission as usual.

As a visual aid, a short presentation of the key points to be reported and/or discussed during the meeting is displayed.

ii) Quality certification

The achievement of the UNE ISO 9001 Quality Certificate for the Fusion Technologies Division was acquired last February. This milestone is important because it certifies the correct control and analysis of some of the techniques offered in the ICTS service. In particular, SIMS spectrometry, scanning electron microscopy (SEM-EDS) and van der Graff irradiation. This objective supports the operation of the laboratory by providing a guarantee to future applicants for the ICTS service.

This quality certification is valid for 3 years, although the entire laboratory will be audited annually to monitor the implementation of the quality system.

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In addition, the Head of the Quality Department of the National Fusion Laboratory, Mrs María Isabel García Ortiz, is recognised as the main person responsible for obtaining the certificate.

iii) Follow-up of the petitions requested in the first half of 2024

A total of 10 proposals were received during the first semester. Of these, one was from the private sector, eight were from international projects and one was from the internal CIEMAT plan (see Annex 1). Most of the international proposals are related to EUROfusion tasks, as discussed in previous meetings.

Compared to the number of proposals received in the same period last year, there are 5 fewer applications. Possible reasons for this negative trend are:

- a) The analysis costs. From November 2023, it has been decided that certain requests will be subject to a fee depending on the technique requested by measure/time. For future meetings, the criteria for determining the cost of the service for private companies and public institutions will be established.
- b) The scanning electron microscope is not operational. This may be the main reason for the decrease in petitions during this period, as a follow-up of previous years shows that 40% of the requests during the year were related to these measurements.



N.Valle was interested in the type of maintenance contracts per equipment at ICTS-LNF, in particular the condition of the microscope. Further discussion on the causes of equipment inoperability will follow.

Details of the proposals for this period are given in Annex 1. The table presented shows in the description of the proposals, the petitioner, the applicant entity, the project, the national or international origin and the access code associated with the request.

M. González inquired whether the Ministry had asked for any additional information to be included in the proposals requested and whether any extra documents were required in addition to those normally submitted. G. D. Soria explained that there were no significant differences at the moment, the only difference being that the country of the applicant had to be indicated instead of national or international origin. She also noted that, according to J. M. Fontcuberta, responsible for the ICTS corresponding to the TJ2 part, there could be changes from September.

iv) Condition of equipment

Scanning electron microscope. Out of service since mid-August 2023, with some extraordinary measures in October 2023. The equipment has suffered several breakdowns over the past year:

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- Compressor failure in the middle of the first term.
- High voltage module is damaged in August.
- Breakage of the column at the end of the year (December)

Therefore, after listing the problems encountered, the technique has not been able to receive a proposal during the period covered by this report. In fact, each applicant for FE-SEM automatically receives an e-mail explaining the non-operation of the instrumentation.

In response to N. Valle's question, F. Sánchez explained that there is a maintenance contract, but the replacement of the column is an exceptional situation that is not included in the regular contract and for this reason it has to be diagnosed, budgeted, cost accepted and delivered on time. He also informed that the new column will be available in mid-July, so the SEM is expected to be operational in August.

Secondary ion mas spectrometry. The equipment is working properly but there is no stock of spare turbomolecular pumps. It should be noted that the SIMS Workstation instrumentation software only communicates with Edwards turbomolecular pumps, which also have a specific serial number for the correct operation of the code. It is therefore necessary to purchase two Edwards pumps to be prepared in case one of the current ones fails: a large turbomolecular pump (240 l/h) to generate the vacuum in the measurement/main chamber, and a smaller one (85 l/h) that could be installed in one of the primary ion sources.



These acquisitions have been attempted several times since last year. However, it was not possible due to management budget problems. M. Gonzalez will order turbomolecular pumps again, with the hope that the purchases can be made in the second half of the year.

On the other hand, M. González commented on the replenishment of the primary source of cesium. As soon as this source was used up, the reservoir was sent to the company Hiden to be filled. It is expected that this cesium charge will be received and put into operation in mid-August.

v) Outsourcing ideas

The first step is to update the website so that the outsourcing service is redirected to a page that is as complete as possible. To this end, several improvements to the website are proposed:

1. A more specific description of the equipment offered by the ICTS-LNF.

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2. Include the call documents per semester of the year. It is a requirement/condition of the Ministry that the calls, together with their respective codes, are available to anyone who may be interested.
3. Link to measurement/time tariffs for each instrument. In addition, updating to prices services in the proposal.

It also discusses possible actions to be undertaken to increase visibility abroad, proposing 25-30% of instrumentation time for such requests. The following means of promotion have been identified:

- Social media. Announcements via Linkedin, Researchgate or X (Twitter). The latter is the most feasible as the National Fusion Laboratory already has an account on which it publishes news, achievements, etc. In this way, the techniques and their capabilities of the ICTS service can be recalled on a monthly basis.
- Projects. Eurofusion tasks, international collaborations or national programmes.
- Conferences. SIMS-24, 33rd SOFT 2024, CAARI-SNEAP 2024...



vi) Comments/Recommendations/Questions

R. Vila mentions that, as a work package leader in Eurofusion, he could promote the ICTS service to his European collaborators and, in a future discussion or meeting, show the possibilities of the equipment that is currently in the ICTS-LNF service. He also notes that there could be greater dissemination among CIEMAT's regular colleagues, such as the Institute of Solar Energy (IES-UPM) or the Centre for Micro-Analysis of Materials (CMAM), and that these centres in turn could drive the service to their users.

N. Valle asks about the annual conferences where they can be related to the measurements we offer and comments on their oral participation in the 24th International Conference on Secondary Ion Mass Spectrometry (SIMS-24) on Monday 9th September. G.D. Soria also comments on his oral presentation in the same conference for Tuesday 10th.

R. González-Arrabal appreciated the presentation to know the follow-up of the first semester and had no further questions.



The videoconference was closed after 40 minutes, in accordance with the restrictions of the Zoom application account. For future meetings, sessions will be opened without time limits.

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ANNEX I

Table of Granted Access in January 2024 - June 2024 period

CALL FOR PROPOSALS	DESCRIPTION	APPLICANT	APPLICANT ENTITY	PROJECT	TYPE OF PROJECT	ACCESS CODE
2024						
DTF_Proposals for time booking_2024 S1	SIMS analysis of depth profile of phosphorus concentration	Ernesto Barrera	Photonexport	Industry	Private	CA-SIMS-EBA-12-2022-1 (2024)
DTF_Proposals for time booking_2024 S1	Evaluation of the surface, crystalline structure and composition in Yttrium samples after surface treatments with HF, deuterium loading and TDS	Maika Martínez Guareño	ICTS-CIEMAT	IFMIF-DONES	International	CA-SEM-MMZ-2023-1A (2024)
DTF_Proposals for time booking_2024 S1	Yttrium sample determination post-loaded D2	Maika Martínez Guareño	ICTS-CIEMAT	IFMIF-DONES	International	CA-SEM-MMZ-2023-1B (2024)
DTF_Proposals for time booking_2024 S1	Characterization of Li content in SiC coatings submitted to PbLi chemical attack by Secondary Ion Mass Spectroscopy (SIMS)	Guillermo de la Cuerda	IFN-GV - UPM	TITANS	International	SIMS-GCV-02-2024-1

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DTF_Proposals for time booking_2024 S1	Performing Li analysis on SiC coating samples exposed to Li in the CICLO experiment	Guillermo de la Cuerda	IFN-GV - UPM	TITANS	International	CA-SIMS-GCV-2024-1
DTF_Proposals for time booking_2024 S1	Compositional study of aluminas produced by extrusion and slip casting as received.	Juan Mauricio García	ICTS-CIEMAT	EUROFUSION ENR-PRD.BB-WP4-T010-D004 (BB-4.3.1-T007-D001)	International	CA-SIMS-ÓxidosCerámicos
DTF_Proposals for time booking_2024 S1	Characterization of new ceramic compositions after PbLi testing	María González Viada	ICTS-CIEMAT	EUROFUSION PRD 4 - R&D (PRD4.FC.01-T004) == CIEMAT 22_18-PRD-4	International	SIMS-SEM-MGZ-03-2024-1
DTF_Proposals for time booking_2024 S1	Microstructural and lithium diffusion study of Chinese design alloys with high silicon content	Teresa Hernández	ICTS-CIEMAT	Collaboration IPP China - Ciemat	International	SIMS-SEM-THZ-05-2024-1
DTF_Proposals for time booking_2024 S1	In-situ induced radiation effects in funtional materials (SiO2)	Edgar León Gutiérrez	ICTS-CIEMAT	EUROfusion mat-funtional materials	International	VDG-ELN-05-2024-1
DTF_Proposals for time booking_2024 S1	Characterization of soldered joints in the presence of lead-lithium (PbLi)	Teresa Hernández	ICTS-CIEMAT	Internal ICTS-CIEMAT	National	SIMS-SEM-THZ-05-2024-2