



**INTERNATIONAL
WORKSHOP**
on Production of Intense Beams
and Highly Charged Ions

7 – 9 April 2025
Acitrezza (Catania), Italy

SCIENTIFIC PROGRAMME

Fundamental processes
Production of highly charged ion beams
Production of high intensity ion beams
Microwave coupling for future ECRIS
Beam formation and extraction
Magnetic system for future ECRIS
Controls and diagnostics
Codes and simulations
Transport of intense beams
Emerging technologies

INTERNATIONAL ADVISORY COMMITTEE

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Olli Tarvainen	STFC UKRI, UK
Thomas Thuiller	LPSC, France
Richard C. Vondrasek	ANL, USA
Hong-Wei Zhao	IMP, China



Second Announcement

agenda.infn.it/e/pibhi2025



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Richard C. Vondrasek	(ANL, USA)
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LOCAL ORGANIZING COMMITTEE

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Gino Sorbello	(Univ. of Catania and INFN-LNS)
Giuseppe Torrisi	(INFN-LNS)

Conference presentation

The International Workshop on Production of Intense Beams and Highly Charged Ions (PIBHI2025) will be held in Acitrezza, a small fishing village overlooking the Ionian Sea at 10 km from Catania placed at the foot of the Etna Volcano – the highest and most active of Europe.

The workshop will take place in the halls of the [Grand Hotel Faraglioni](#), with several archaeological and cultural attractions situated in the nearby.

The [Laboratori Nazionali del Sud](#) of [Istituto Nazionale di Fisica Nucleare](#) (INFN-LNS) is in charge of the organization of this event, aimed to tackle specific issues of Ion Sources Science & Technology able to address the solutions to the request of high intensity beams and to reinforce the common ground and synergies among the different actors in the field.

About 100 experts in the field of ion sources, particle accelerators, ion implantation, beam optics, fusion research, etc. are expected from all over the world.

Scientific programme

The PIBHI 2025 scientific programme will cover themes of ion source science and technology that are relevant to the production of beams for scientific research and for applications.

Hereinafter the main topics are reported:

- Fundamental processes;
- Production of highly charged ion beams;
- Production of high intensity ion beams;
- Microwave coupling for future ECRIS;
- Beam formation and extraction
- Magnetic system for future ECRIS;
- Controls and diagnostics;
- Codes and simulations;
- Transport of intense beams;
- Emerging technologies;

This workshop aims to gather scientists involved in those tasks, to compare different experiences, aiming to solve the problem of the stable and reproducible production of such intense beams as well as of the extraction and transport of space-charge-dominated beams.

The main scope of the workshop is to stimulate the discussions among the attendees on a several topics of interest by the community, in dedicated round tables which usually are not part of the programme of classical conferences like ICIS or ECRIS.

A tentative agenda of the workshop is included in the following. Participants are encouraged to contribute to one or more topic under discussion collegially in the round tables in agreement with the Chairperson of each topic.

Due to the nature of the workshop, the publication of proceedings is not foreseen, however track of the given presentations and discussions will be kept in the [INDICO page of the workshop](#).

Final agenda with the indication of chairpersons will be issued by the end of February.

	<i>Sunday 6 Apr.</i>	<i>Monday 7 Apr.</i>	<i>Tuesday 8 Apr.</i>	<i>Wednesday 9 Apr.</i>
08:30		Registration		
9:00 - 9:30		Opening session		
9:30 - 10:30		Open challenges in the ion sources	High frequency ECRIS: first results and developments	Availability, reproducibility and stability of HCI of metallic ion beam production
10:30 - 11:00		Coffee Break	Coffee Break	Coffee Break
11:00 - 12:30		Beam Emittance: role of magnetic fields and other contributions	Magnetic systems for future ECRIS	Plasma simulations
12:30 - 14:30		Lunch break	Lunch break	Lunch break
14:30 - 16:00		Plasma investigations and Diagnostics	New microwave coupling techniques for future ECRIS	Extraction and transport of intense ion beams
16:00 - 16:30		Coffee break	Coffee break	Coffee break
16:30 - 18:30		TBD	TBD	Conference excursion
18:30 - 20:00	GET TOGETHER	LNS VISIT	IAC dinner	Banquet & Closing
20:00 - 22:30		Dinner offered by LNS		

Round tables

All round tables will take place from Monday to Wednesday in the hall of the [Grand Hotel Faraglioni](#). The following presentation devices will be made available: LCD screen projector displaying the presentations, a laptop computer operating under Windows will be available for uploading the presentations from memory stick and a laser pointer.

To present and share contributions it is recommended to use the most common software tools such as the MS Office Suite and Adobe Acrobat.

You can upload your presentation onto the conference laptop during the workshop, but all the speakers will be requested to upload the presentations (at the very latest) one session before their scheduled presentation time. Session chairmen will coordinate with the speakers and the assigned working staff. Please contact them just before the session with your talk starts.

Monday morning session speakers are pleased to upload your presentation during the get-together Welcome Reception on April 6th or not later than 8:30 in April 7th.

The complete technical programme as well as the details of the conference events, will be available by the end of February.

Registration & Hotel accommodation

The registration form will be also by following the appropriate link in the PIBHI2025 website. The conference fee is payable in Euro (€) and it includes:

- materials of the conference,
- the welcome reception (Sunday 6th),
- coffee breaks,
- the conference excursion (Wednesday 9th)
- the conference banquet (Wednesday 9th),
- visit of the Laboratori Nazionali del Sud of INFN in Catania (Monday 7th) . (Dinner offered by LNS Director).



International Workshop on Production of Intense Beams and Highly Charged Ions

SECOND ANNOUNCEMENT

The full fee is € 250,00 (€ 200,00 before March 10th) while the discounted fee for students and retiree is € 150,00 (€ 100,00 before March 10th).

Students must send to the address: pibhi2025@lns.infn.it, along with their registration form, a letter of support by their Head of Department or Supervisor, specifying their status and eligibility. The accompanying person registration fee is € 150,00 and it includes coffee breaks and all the social events.

The payments should be made exclusively in Euro by credit card following the information reported in the PIBHI website or by bank transfer. On-site payment will be also available.

Numerous solutions are available for the hotel accommodation: several structures are close to the Conference Venue and may be reserved through smart travel assistants. However, a limited number of reduced rate rooms are pre-booked at the Conference venue and at a partner structure [Hotel Malavoglia](#) for 95€ per night breakfast included and tourist tax (a few euros) excluded. The supplement for a second guest in the room is € 35 per night. To book this rooms please contact the hotel via mail: hotel@grandhotelfaraglioni.com citing that the reservations is for the PIBHI 2025 workshop.

We encourage you to proceed with hotel reservations submitting before than ***February 28th***. After this date, the requests will be handled on "first come, first served basis" and will be subject to availability.

The conference venue is around 200 m from the Acitrezza Terminal Bus which can be reached from the Catania "V. Bellini" airport through public transportation. In particular, from the airport, it is needed to use the "ALIBUS" service up to the end of the line "Catania Central Station" (Piazza Giovanni XXIII) and from here the regular bus "534" again up to the end of the line "Acitrezza Terminal Bus".

The ALIBUS is a cheap (€4,00), frequent (20 min.) and almost direct connection service (only a few stops) between Airport and Catania Downtown, while the 534 is a regular bus (€1,20) with much more stops and therefore needing around 60 min. to reach the Acitrezza Terminal Bus.

For this reason the Organization is evaluating a shuttle service, more details will be given in the final announcement.

Conference venue

The peculiar landscape of Aci Trezza with its Faraglioni and the proximity to the majestic Mount Etna has nurtured legends and myths over the centuries. The Greek poet Homer, in the IX book of the Odyssey, sets in the Sicilian village the unfortunate encounter between Odysseus and Polyphemus.

Another legend that has reached us is the one where the monstrosity of Polyphemus is linked with the Sicilian village, is the myth of Acis and Galatea. Right on the strip of land between Mount Etna and the Ionian Sea lived a beautiful nymph named Galatea, daughter of Neptune.



The marvelous creature fell in love with the shepherd Acis, and despite being from different worlds, they fell in love. Polyphemus, who lived in those areas, had also fallen in love with Galatea, and once he learned of their love, blinded by jealousy, uprooted trees and hurled a gigantic rock at poor Acis, smashing his body into pieces. It is said that the nymph shed all her tears, to the point of moving the Gods to pity. So they transformed Acis into a river and the nymph into sea foam, so they could embrace for eternity.

Greek mythology also inspired the name of the Cyclopean Isles, mighty basalt sea stacks emerging from the sea in its namesake marine protected area. At sunset, their silhouette against the fiery sky makes for a picture-perfect view.

Don't miss the Baroque-style Church of San Giovanni Battista and the Norman Castle, standing tall above the village. After climbing the steep steps to the castle, you can replenish your energy with a "nivi cunzata", the typical Sicilian granita, or the fresh fish available at the fish market.

VISA Information

The conferences on ion sources is usually attended by scientists coming from several Countries of the five continents. Participants coming from European Union (EU) can travel in Italy with normal passport or regular identification document. Visitors who come from nations which do not belong to EU must be present in Italy under an appropriate visa. The information presented here will help you to identify the appropriate documentation and to apply for necessary visas.

Several non European Countries have stipulated special agreements protocols with the Italian government, and they do not need any visa. A definitive list of these nationals is not available, because Countries can be added or removed from the list according to the political situation and diplomatic relationships. Citizens of USA, Canada, Japan, Australia and some countries of east Europe and north Africa do not need any visa to enter Italy and Countries of the Schengen area.

We definitely suggest to visit the following link to check if you need a visa:

<http://vistoperitalia.esteri.it/home/en>

The website will give all the instructions to get the visa for your trip.

Please, take note that for some Countries the time needed to get the visas is of the order of 2 months. In any case, visa for tourism purposes should be required. They allow a permanence of 90 days in Italy or other EU Countries.

On request, an official letter of invitation will be sent to any participant for obtaining visa, provided that it does not imply any obligation or funding.

Weather

Catania enjoys a mild and comfortable climate throughout the year with average temperatures ranging from 5°C during the winter to 32°C in the summer. The weather conditions in April are fairly nice, with temperatures ranging from 14°C to 22°C.

Social events and entertainment

WELCOME RECEPTION

The welcome reception will be held on Sunday April 6, 2025, 8.30 p.m., at the conference ste.

VISIT

A visit to the Laboratori Nazionali del Sud, Catania, will be organized on Monday April 7th, 2025. After the Laboratory visit an informal buffet will be given.

CONFERENCE EXCURSION AND DINNER

The conference banquet and excursion will be organized for the attendees and their companions on Wednesday April 9th, 2025. More details will be given in the Final Announcement.

A dinner will be organized in a typical Sicilian farm and wine tasting will be a nice ingredient of the excursion. More details will be available in the Final Announcement, but not everything will be disclosed: Sicily a land of Phoenicians, Greek and Roman myths and legends and you will find additional surprises.

Updated information and news will be posted on the website, please check it periodically.

Post conference tours can be arranged on demand: most of the old city of Catania is included by UNESCO in the World Cultural Heritage list: the “Late Baroque Towns of the Val di Noto (South-Eastern Sicily)”. Moreover, Agrigento has been elected as Italian Capital of Culture 2025 with timeless beauty of the Temples and natural wonder such as “Scala dei Turchi”.

Insurance

Attendees have to take care of their health insurance. No responsibility can be taken by the organizers.

Contact information

For any question, please contact the organization to the e-mail address: pibhi2025@lns.infn.it.