

Status of the experiments at CCB from September 2025 till August 2026



*CCB-IAC meeting
August 29, 2025*

Adam Maj
IFJ PAN

Beam delivery at the Cyclotron Centre Bronowice facility

$E = 230$ MeV protons

$I =$ up to 500 nA

Experimental hall

Eye line

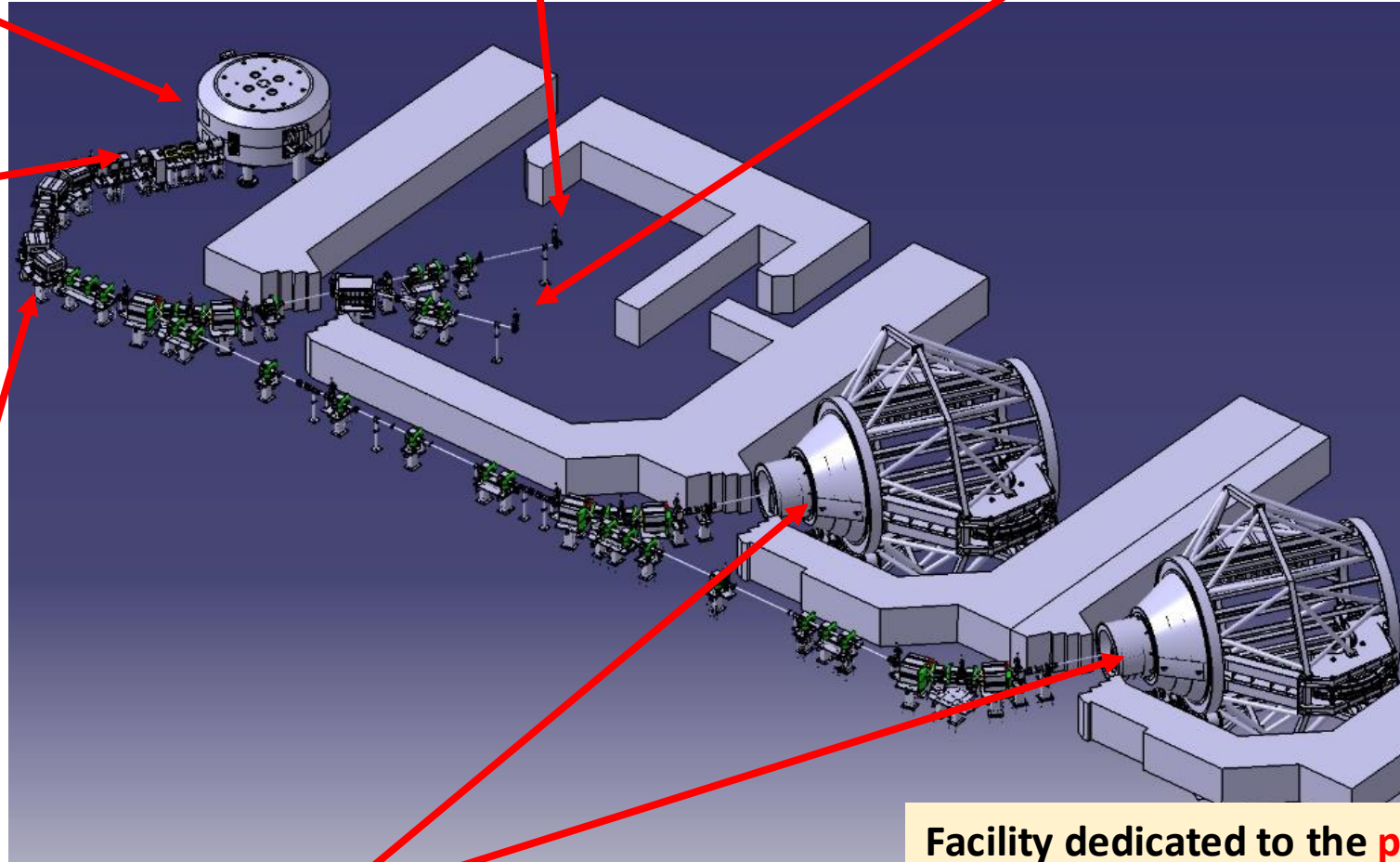
Energy degrader
- decreasing $E > 70$
MeV but also I

*Change of
beam energy
possible
within 1 s!*

Energy selector –
„monochromatization”
of the beam $\Delta E/E$

2 Rotating gantries
0-360° with Pencil
Beam Scanning

Facility dedicated to the **proton cancer therapy**
Therefore the beam-time for research is available
only **weekends** (and some **nights**)
- more or less: **500 hours/year (70 shifts)**



Previous IAC meeting: 29-30.08.2025



Experiments performed at CCB in the period September 2025-August 2026 (ca. 370 AU, 46 UTs)

- **"PDR in ^{64}Ni as systematic sequel of the study in $^{58,62}\text{Ni}$ isotopes using the inelastic proton scattering at CCB"*** - Agnese Giaz (INFN sez. Milano, Milano, Italy) and Michał Ciemała (IFJ PAN, Kraków, Poland), 17-19.01.2025 i 24-26.10.2025, 96 units / **12 shifts**;
- **"Feasibility study of a Thick GEM detector using a ^{252}Cf source for fission experiment applications"*** - Michał Ciemała (IFJ PAN, Kraków, Poland) and Alexandru State (ELI-NP, Bucharest, Romania) 23/11 – 26/11/2025; **no beam**
- **„Testing HIBEAM prototype detectors for ESS”**, M.Holl (ESS), K. Pysz (Krakow), 5-7 December 2025, 48 units/**6 shifts**
- **"Gamma decay study of the Double Isobaric Analog State in ^{48}Ti "*** - Damiano Stramaccioni (INFN LNL and University of Padova, Italy), 27/02 – 8/03/2026, 96 units / **12 shifts**;

Experiments performed at CCB in the period

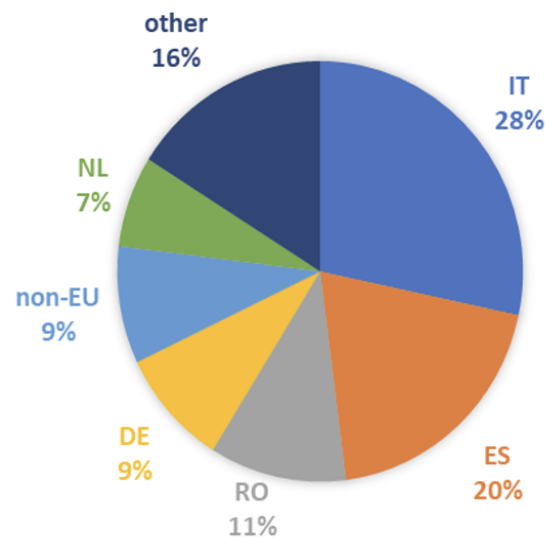
September 2025-August 2026

(ca. 370 AU, 46 UTs)

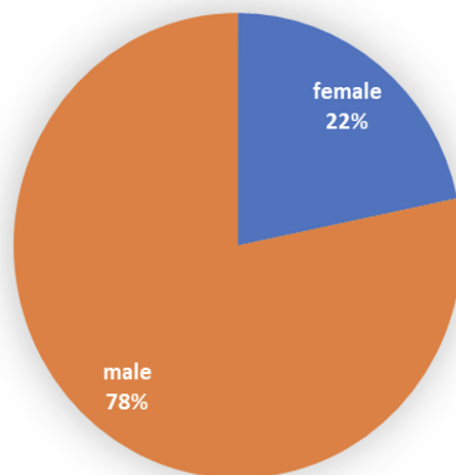
- **"Scanning of the FINGER detector for the NUSTAR/FAIR facility with a proton beam at CCB IFJ PAN Kraków : first in-beam test of experimental setup"*** - Magdalena Matejska-Minda (IFJ PAN, Kraków, Poland), 14/03/2026, 16 units / **2 shifts**; (total granted: 32 units / 4 shifts);
- **"Search for the PDR in the deformed isotope ^{64}Zn as a continuation of the systematic study of PDR in the $A=60$ mass region "****, Agnese Giaz(INFN sez. Milano, Milano, Italy) and Michał Ciemała (IFJ PAN, Kraków, Poland), 15/05/ – 31/05/2026, 96 units / **12 shifts** (total granted: 240 units / 32 shifts);
- **„Test of the drift chamber”**, Adam Kozela (Krakow), Elżbieta Stefan (Katowice), 14-15/03/2026, 16 units/ **2 shifts**.

- Total Access Units (AUs) delivered: 1360
- Planned AUs: 550
- Number of experiments executed: 15
- Number of experiments funded by EURO-LABS: 11
- Number of user groups: 15
- Number of visits supported: 62
- Number of users supported: 45
- Number of new users supported: 28 (63%)

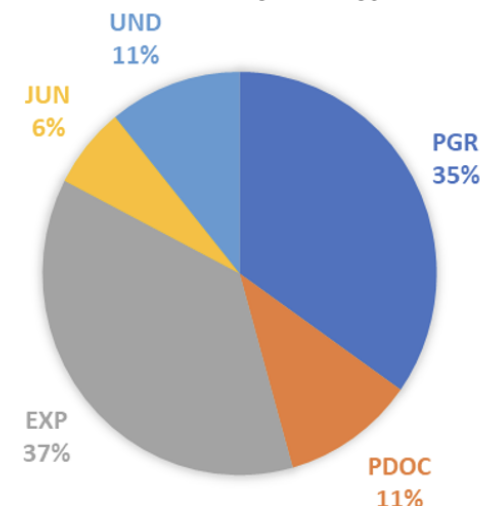
distribution by country



distribution by gender



distribution by user type



In the period September 2022-August 2026

CCB as TA facility in the EURO-LABS project

Within the EURO-LABS project IFJ PAN promised to offer access to **at least 550 hours** of beam time at the CCB facility for eligible nuclear physics experiments.

(Eligible – more than 50% participants in the experiments are coming outside of Poland)

For that we received from EC:

- a partial reimbursement for the beamtime cost (100 Euro for 1 hour, what is ca 20% of real cost),
- some money to reimburse part of the travel and staying costs of foreign users.

The **User Selections Panel**, which decides who from the foreign users will get the reimbursement, consisted in CCB of:

Muhsin Harakeh (IAC chair) and Adam Maj (main beam coordinator)

We spent **100%** of the money for the visitors and offered ca. **250%** of originally promised beam-time.

New EU project

Project 101292522 — HADRON-2030

Period: October 2026 - September 2030

**Applications will be evaluated by external User Selection Panel (?)
– only experiments related to Hadron Physics (?) can be supported**

**CCB will be partly reimbursed for 170 AU (ca. 21 shifts)
T&S – 18 kEuro (for external users)**

Backlog ca. 56 UTs

- Agnese Giaz et al., “PDR in ^{64}Zn ”, remaining 18 UTs (*scheduled for September/October 2026*)
- Magda Matejska-Minda et al., „Scanning of the FINGER detector for the NUSTAR/FAIR” – remainig 2 UTS (*scheduled for November 2026*)
- Vratislav Chudoba et al., „ALPIDE tracking station” 2 UTS (*scheduled for November 2026*)
- Ch. Schmitt, M. Ciemała et al., „Prompt fission” 19 Uts (+19UTs) (*planned for 2027*)
- Angelina Łobejko, Elżbieta Stephan et al., „Studies of induced polarisation in proton-deuteron breakup reaction”, 15 Uts (*planned for 2027*)
- P.-A. Söderström et al., “In-beam test of the ELI-NP silicon endcap detectors ” – ~~(5-UTs)~~ (*resigned*)



Present proposals

New proposals (Open session)

11:30 In-beam Commissioning and Performance Benchmark of the STRASSE Silicon Tracker Array via Proton-Proton Elastic Scattering, Alexandra Stefanescu (TU Darmstadt)



4 UTs

if accepted, could be scheduled Nov. 6-8, 2026

12:00 Experimental study of pygmy dipole resonance built on excited states in neutron-rich nucleus ^{130}Te , Ren Li (Shenzen)



21 UTs

12:30 Lol: Measurement of the $^{206}\text{Pb}(p, p'\gamma)$ Reaction to Constrain the $^{205}\text{Pb}(n, \gamma)^{206}\text{Pb}$ Cross Section Using the Surrogate Method, Bogusław Włoch (FAIR/GSI)

Working Lunch + Photo

Reports & New Proposals (Open session)

14:00 Investigation of the Pygmy Dipole Resonance in the Deformed Nucleus ^{66}Zn within the Systematic Study of the $A \approx 60$ Mass Region – status report and proposal, Agnese Giaz (Milano)



48 UTs

14:30 Studies of induced polarization in proton-deuteron breakup reaction– status report and proposal, Elżbieta Stephan (Katowice), Adam Kozela (Krakow)

38 UTs

15:00 Gamma decay study of the Double Isobaric Analog State in ^{48}Ti - status report, Damiano Stramaccioni (LNL Legnaro)

Proposals to be presented at this meeting ask for 111 UTs, so with the backlog of 56 UTs it would make ca. **167 UTs.....**

Availability of the main instrumentation for CCB:



PARIS

- in the autumn 2027 PARIS might go to LNL for experiments with AGATA,
- in the spring 2027 – it might be a run at NFS@GANIL/SPIRAL2

59th Zakopane Conference on Nuclear Physics



30 August 2026 to 6 September 2026
Europe/Warsaw timezone

Enter your search term



Organizers:

Piotr Bednarczyk,
Magdalena Matejska-Minda,
Irene Dedes

e-mail: zakopane@ifj.edu.pl

Overview
General Info
Program
Important Dates
Registration
Participation
Abstracts
Travel
Venue
Previous editions
Contact
Contact
✉ zakopane@ifj.edu.pl

The Zakopane Conference on Nuclear Physics, 59th in the series of Zakopane School of Physics, themed "*Extremes of the Nuclear Landscape*", will take place in Zakopane, Poland, from August 30 to September 6, 2026.

Organized by:

[The Henryk Niewodniczański Institute of Nuclear Physics, Polish Academy of Sciences, Kraków, Poland](#)

Local Organizing Committee:

Piotr Bednarczyk - Chairman
Magdalena Matejska-Minda - Scientific Secretary
Irene Dedes - Scientific Secretary

Members:

Michał Ciemala
Natalia Cieplicka-Oryńczak
Vratislav Chudoba
Dominik Duda
Katarzyna Gajewska
Jerzy Grębosz
Łukasz Iskra
Maria Kmiecik
Paweł Kulessa
Bogdan Sowicki
Olga Sułek-Zarosińska
Mirosław Ziębliński

Results from the CCB experiments will be presented!

<https://indico.ifj.edu.pl/event/1430>

30.08 – 6.09.2026

Next IAC meeting: 3-4 September 2027 ???



Chiara Mazzocchi

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Odpowiedz

Prześlęż

Archiwizuj

Niechciana

Usuń

Więcej



Do Adam Maj

15:05

Re: Mazurian Lakes 2027?

Uwaga: Ta wiadomość pochodzi spoza organizacji. Zachowaj ostrożność podczas korzystania z linków i otwierania załączników.
Warning: This message originated from outside the organization. Use caution when following links or opening attachments.

Dear Adam,

indeed we fixed the dates for the Mazurian 2027 conference: we start on Sunday September 5th and end on Saturday September 11th.

Cheers,

Chiara

Conclusions

Nuclear Physics experiments at CCB are running, despite the fact that more and more patients are treated. Let's hope that it will be like that for some more years

Problems to solve:

- How to accommodate the backlog (56 UTs) and new accepted experiments (up to 111 UTs?) within the usual 50-60 UTs available from CCB in the next period ?

Credits:

- Let me thank the CCB Staff for all their efforts to deliver the beam for nuclear physics experiments despite their own problems
- Special thanks to Mirek Ziębliński, Bogdan Sowicki, Piotr Pawłowski, Jerzy Grębosz and Michał Ciemała for technical help in setting up and running experiments
- Maria Kmiecik and Małgorzata Borek for helping in the EURO-LABS project.
- Financial support from IFJ PAN, Polish financial agencies and EURO-LABS EU project
- And of course CCB-IAC work and the great advices are appreciated