Welcome to Prague

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Institute of Experimental and Applied Physics
Czech Technical University in Prague

PICO Collaboration Meeting, August 19-23, 2024

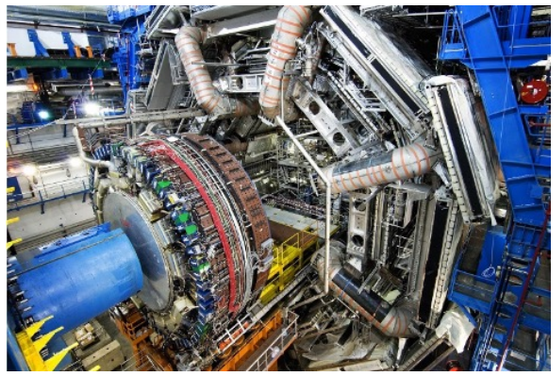
IEAP - general information

- Institute of Experimental and Applied Physics (IEAP) of the Czech Technical University (CTU) in Prague
  - Founded in 2002 as a scientific and educational institute.
  - Focused on research in particle physics.
  - R&D in instrumentation.
  - Participates in experiments based on research in subatomic physics.
  - 89 employees (~60 FTE), including ~30 foreigners and ~10 PhD students.
  - Majority of employees are young researchers.
  - Basics research institution with a high level of self-funding.
- Research infrastructure: : Van de Graaff accelerator, LSM underground laboratory (France)

Bethlehem Chapel was founded in 1391 by the burgher Jan Kříž

Research activities

- R&D of new semiconductor pixel detectors and sensor materials (GaAs, CdTe, SiC) within the Medipix collaboration at CERN, including the development of readout systems.
- Improving particle detection, tracking, and discrimination methodologies, including 3D track reconstruction.
- Applications:
  - X-ray radiography and tomography with very high resolution for imaging biological objects, materials, and applications in art.
  - In collider experiments, ATLAS, MoEDAL at CERN.
  - Timepix detectors in space (ISS, PROBA-V ESA, SWIMMER).



- Participation in underground experiments for double beta decay, neutrino physics, and dark matter searches including projects like SuperNEMO, LEGEND, ICARUS, and PICO.
  - Focus on ultra-low background technologies.
  - Development of plastic scintillating detectors.

- Measurement of extremely low radon concentrations, including radon diffusion, emanation, and air purification for ultra-sensitive experiments.
- Research in theoretical nuclear, particle, and astroparticle physics, including quantum field theory, neutrino physics, HEP phenomenology, physics beyond the Standard Model.

Outreach activities

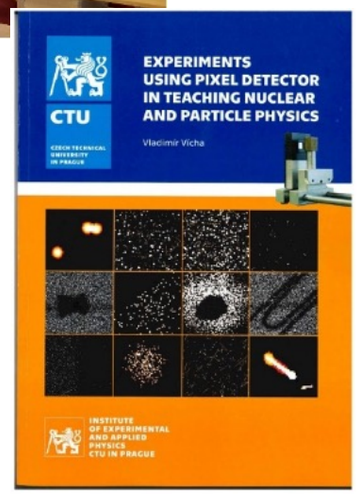
- We organize two courses (education activity for senior citizens) .
  - Secrets of Microworld and Laws of Microworld
  - Aimed at nuclear and particle physics and corresponding history

- Courses on using the Medipix/Timepix toolkit for secondary school teachers.

- Seminars and summer activities for secondary school students.

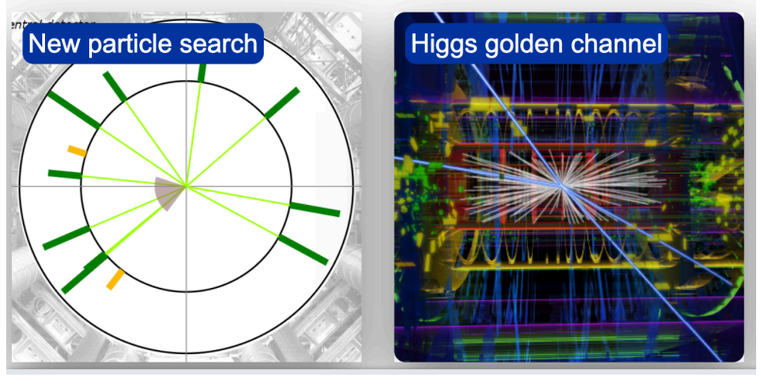
- Long-term internships for university students (IAESTE).

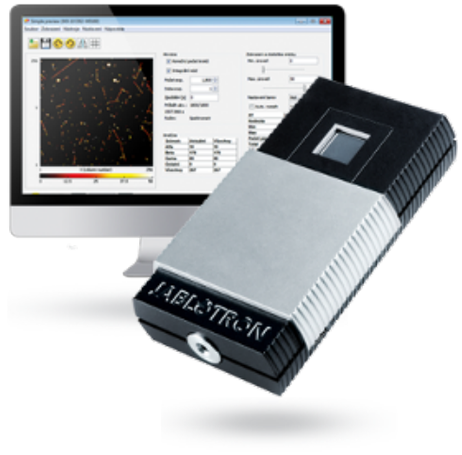
- IEEE international schools on using the Medipix/Timepix detectors for university students.



- Czech particle physics project (collection of particle physics learning materials) link.

- Supervise students with their bachelor's, master's, and Ph.D theses.



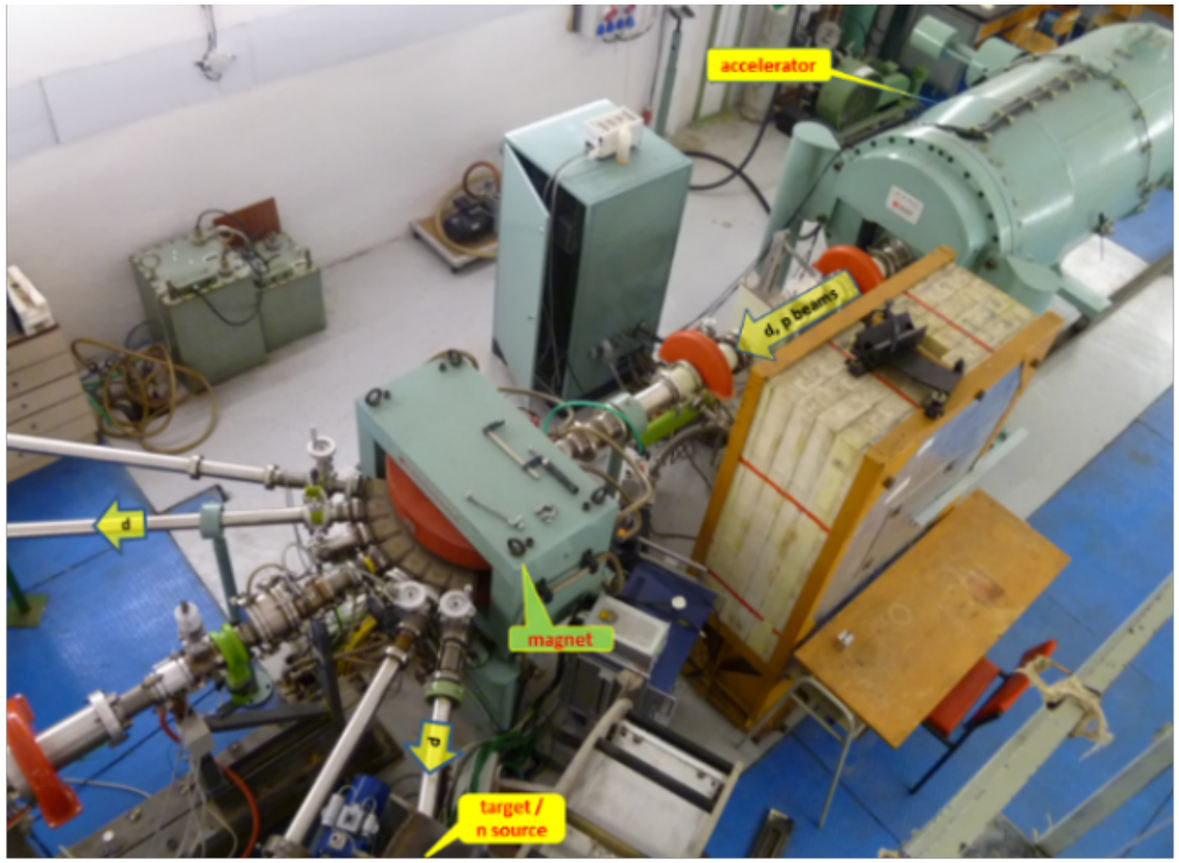


Practical information

- The conference room is available for the entire week.
- WIFI network: UTEF-GUEST
- Please upload your presentations to the Indico page and to DocDb.
- Regular Zoom line (link provided on the Indico page) for those connecting remotely.
- The board meeting can be held in a different room.
- If you have a question or comment for the speaker, please use the microphone.
- Snacks and coffee/tea are available each day.

Visits to IEAP and VdG research facility

- The IEAP visit will be on Tuesday, 20 August, at 13:00.
- The VdG research facility visit will be on Wednesday, 21 August, at 11:00.
  (We will leave at 10:30 from the conference room).
- You are welcome to join both visits If you are interested.



VdG research facility

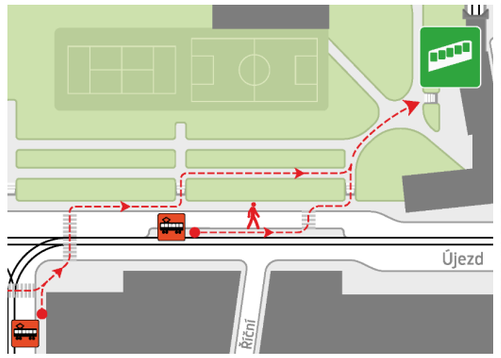
Collaboration dinner

Collaboration dinner at restaurant nebozizek on Thursday, 22 August, at 19:00.

https://www.nebozizek.cz/en

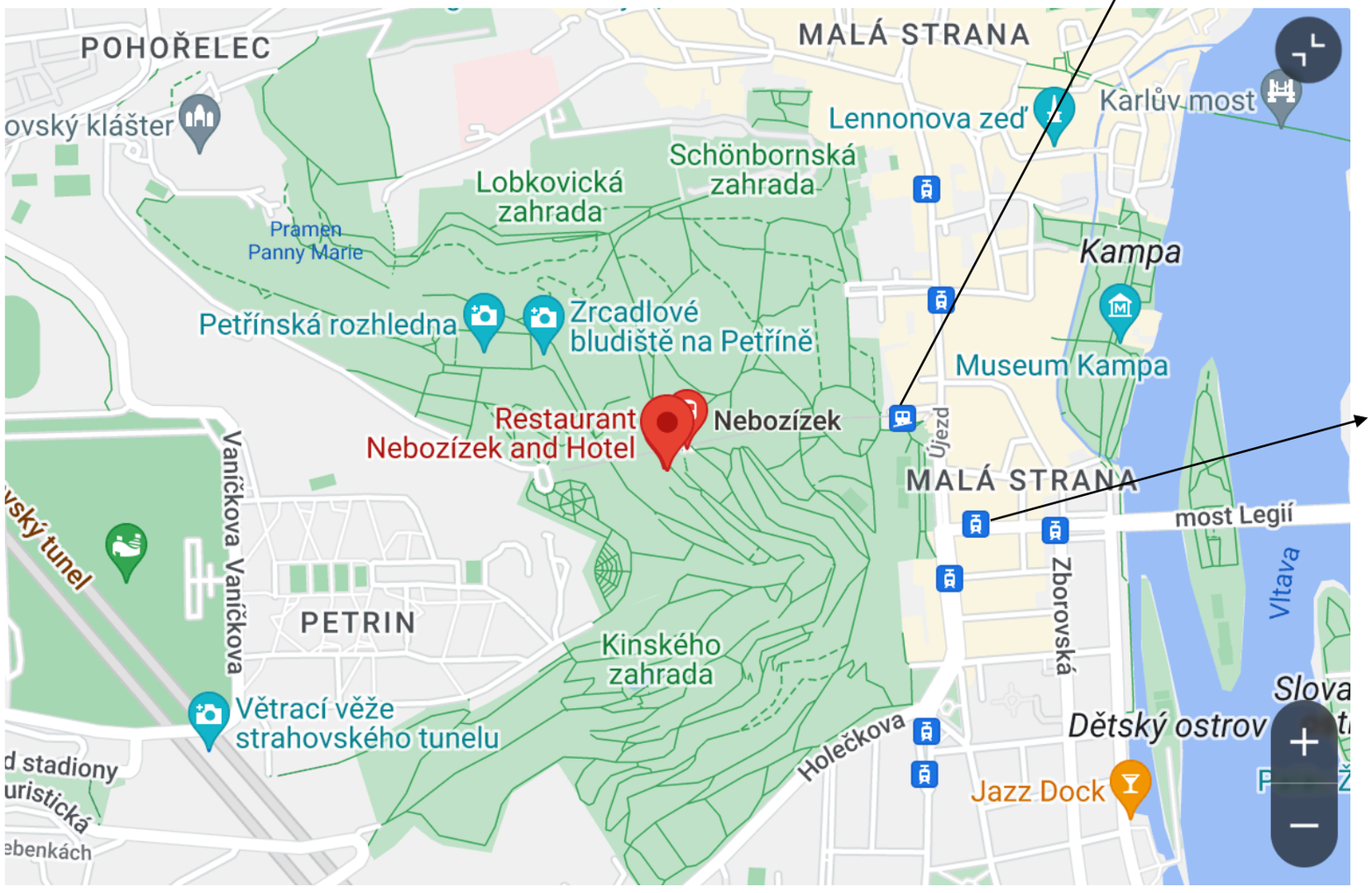
Petřínské sady 411

118 00 Praha 1 - Malá Strana



Funicular

(stop nebozizek)



Tram stop Újezd

Tram numbers 9, 22, 23

Restaurants and Cafés

Restaurant and café options near us, offering a daily menu from 11:00 to 14:00.

Cafe Louvre (map)

https://www.cafelouvre.cz

U dvou kocek (map)

https://udvoukocek.cz

Cafe Platyz (map)

https://www.cafeplatyz.cz

U Parlamentu (map)

https://uparlamentu.cz/

Café Louvre, which opened in 1902, was often visited by Albert Einstein

Kavarna Adria (map)

https://www.caffeadria.cz/

Vapiano (map)

https://vapiano.cz/en/

Delicacies:

Libeřské Lahůdky (map)

ovocný světozor (map)

Thank you to all of you who have traveled to Prague and to those participating remotely. If you have any questions or concerns, please don't hesitate to reach out to the local organisers (Ivan, Robert and Babar).

A very warm welcome to Prague!

Let's have a productive meeting