The 8th p-process workshop

2024, BUDAPEST, HUNGARY

National Research, Development and Innovation Office

KONKOLY

IReNA

CHETEC INFRA

Welcome to the 8th p-process workshop

Scientific Rationale

- Beyond iron, a number of rare, neutron-deficient, stable isotopes, is made of proton-rich isotopes, the p-nuclei. They constitute a small fraction in mass of the heavy nuclear species, but a clear understanding of their production still remains a fundamental challenge for nuclear astrophysics.
- The γ-process is the most established scenario for the production of the p-nuclei, through a sequence of (γ,n), (γ,p) and (γ,α) reactions on pre-existing heavy seed material in core-collapse supernovae and in thermonuclear supernovae. However, not all the heavy proton-rich isotopes are made exclusively by the γ-process. Some of them like ^{152}Gd and ^{164}Er can be made by neutron-capture processes. Others, like light-p nuclei, may require the contribution of neutrino winds nucleosynthesis components or the α-rich freeze-out. Neutrino spallation is expected to be relevant for the production of ^{138}La and ^{180}Ta. Major puzzles remain to account for the solar abundances of p-nuclei in the Mo-Ru region.
- In order to understand the production of the p-nuclei in stars, the contribution from different disciplines is needed: from nuclear physics to provide the relevant nuclear reaction rates far from the valley of stability; from stellar simulations to provide the conditions where the nucleosynthesis is taking place; from galactic chemical evolution to simulate the abundance of the p-nuclei in the Galaxy and in the Sun; and from observations of the p-nuclei in solar material, including isotopic anomalies in meteorites and presolar grains.

Previous editions

- 1st edition: Vravron, Greece (2002)

[… 7 years …]

- 2nd edition: Munich, Germany (2009)
- 3rd edition: Istanbul, Turkey (2011)
- 4th edition: Debrecen, Hungary (2013)
- 5th edition: Limassol, Cyprus (2015)
- 6th edition: Notre Dame, Indiana, United States (2017)
- 7th edition: Serralunga d'Alba, Italy, (2019)

[… 5 years …]

- 8th edition: **Budapest, Hungary (2024)**
- 9th edition: ???

The LOC


Lorenzo


Marco


Maria


Borbála


Gábor

Evelin

Program

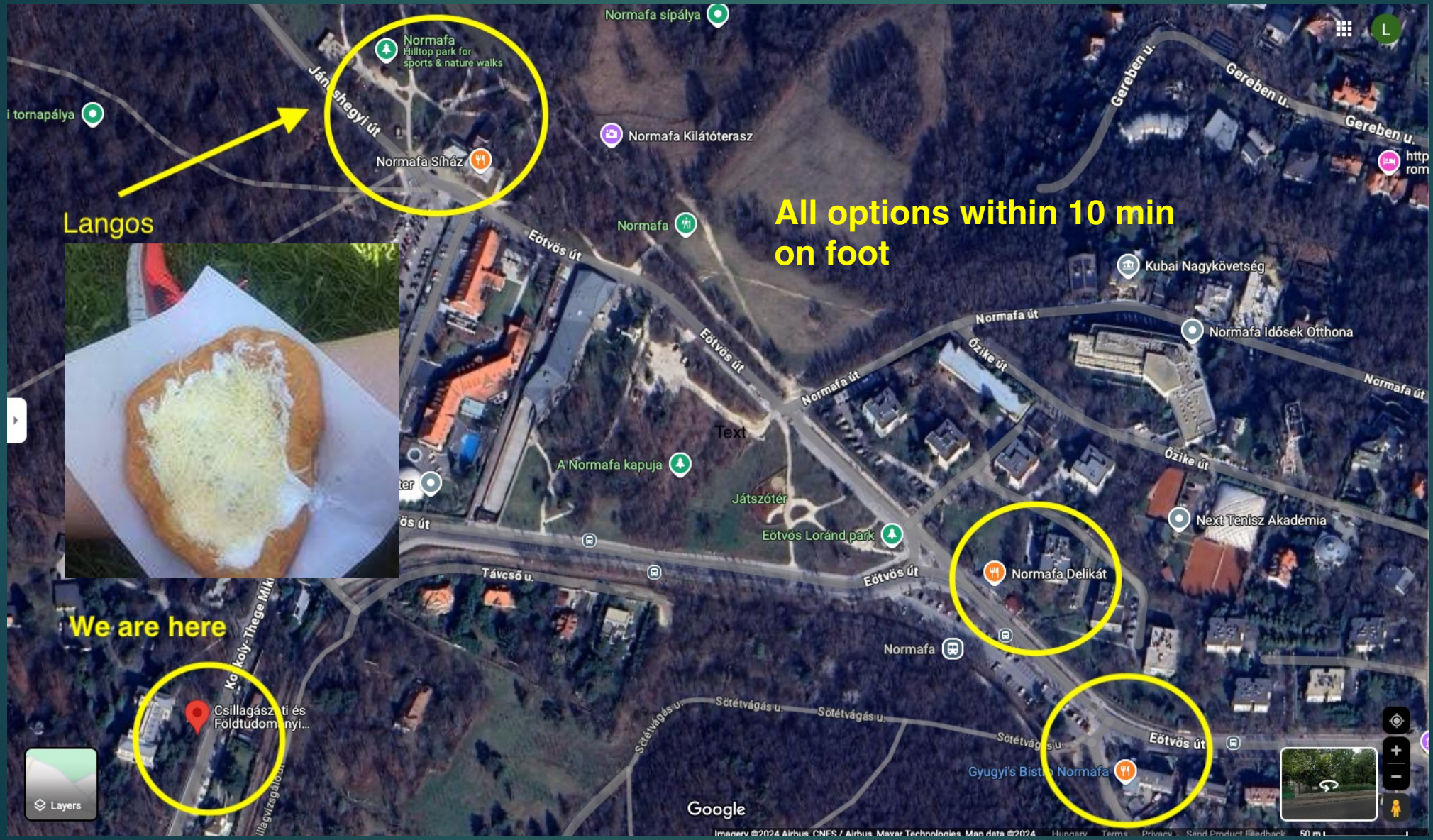
Thanks to our sponsors (**IReNA**, **ChETEC-INFRA**, **Lendület Program**, **NKFI**) the conference fee has been covered for all participants.

- 56 hybrid participants (34 in person, 22 online)
- 31 talks (check the timetable here)
- Several topics: nuclear physics data (theory and experiments), stellar and explosion models, meteorites, presolar grains and radioactives
- We start with coffee breaks!
- Long lunch breaks
- Closing on Friday around lunchtime

Lunch break


Normafa sípálya
Normafa
Hilltop park for sports & nature walks
Jánoshegyi út
Normafa Síház
Normafa Kilátóterasz
Langos
Normafa
Eötvös út
All options within 10 min on foot
Gereben u.
Kubai Nagykövetség
Normafa út
Normafa Idősek Otthona
Ozike út
Normafa Parkoló
Text
A Normafa kapuja
Normafa Retreat Center
Játszótér
Eötvös Loránd park
Next Tenisz Akadémia
Normafa Delikát
Távcső u.
We are here
Normafa
Sötétvágás u.
Gyugyi's Bistro Normafa
Layers
Google

Lunch break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Social dinner

- Szegedi Halászcsárda étterem, Thursday 17th October, 7:30 pm

  (Budapest, Belgrád rakpart 23817/2 hrsz., Nemzetközi Hajóállomás, 1056)

Final remarks

- Please upload your presentation on the website!
- Conference photo: Thursday before the lunch break
- Get in touch if you need a signed certificate of attendance!
- Code of conducts: you can find the code of conducts here
- Any participant who wishes to report a violation of the code of conducts is encouraged to speak to any member of the LOC