



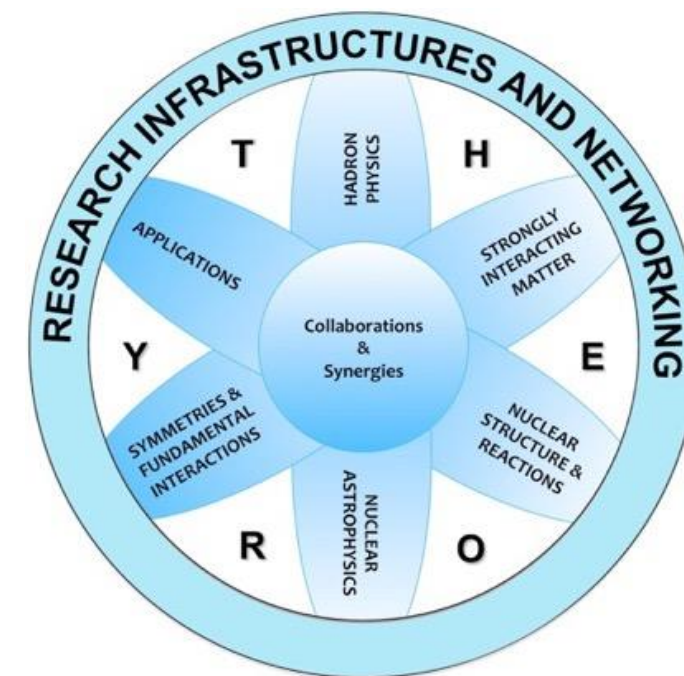
Update from NuPECC



NuPECC Long Range Plan 2024
[arXiv:2503.15575](https://arxiv.org/abs/2503.15575)

Eberhard Widmann
NuPECC Chair
Marietta Blau Institute, Vienna

WG9 AGM 15 Apr 2026
Centro Enrico Fermi, Rome



www.nupecc.org



Nuclear Physics European Collaboration Committee (NuPECC)
Is the European Expert Board for Nuclear Physics
hosted by the European Science Foundation

Representing

> 5000 scientists

Composition:

- 35 representatives from 23 countries (new: Slovakia, Slovenia, Ukraine), 3 ESFRI NP Infrastructures & ECT*

4 associated members

- CERN
- Israel
- iThemba Labs
- Nishina Center

- Croatia re-activated Membership in 2025
- Discussions with Bulgaria ongoing

- 10 observers: ALAFNA, ANPhA, APPEC, CINP, ECFA, ESF, EPS-NPD, EPS-HEPPB, IAEA, NSAC

3 regular Committee meetings/y



37 Years of NuPECC activities

Terminated 2025!

<https://nupecc.org>

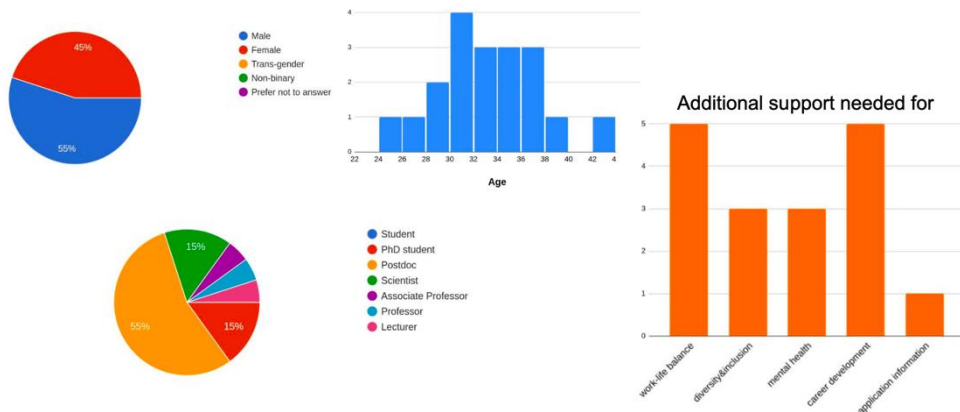


A NuPECC Forum For Early career Researchers

- Established in 2024
 - Chair: Eliana Masha e.masha@hzdr.de
 - Co-Chair: Bianca Scavino
- First activities
 - Survey on pressing problems
- Kick-off meeting during EuNPC
 - Caen 26 Sep 2025, 42 participants

• <https://nuffer.eu>

[link](#)



Mission

NuFFER operates guided by three principles -- to:

1. Support early-career researchers in nuclear physics across Europe
2. Represent their needs and interests in the NuPECC decision making
3. Inform them about opportunities for development

[Learn more about NuFFER](#)

Plan

NuFFER's action plan includes:

- Online and in-person events to bring together ECRs across Europe and build a community.
- Workshops dedicated to the personal and professional development of ECRs, including their career opportunities within and outside academia.
- Questionnaires designed to gather the opinions of ECRs on topics of importance in the European nuclear physics community

[View upcoming events](#)

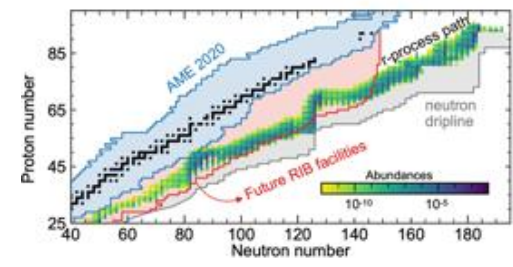
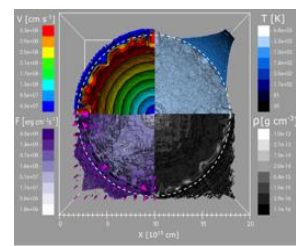
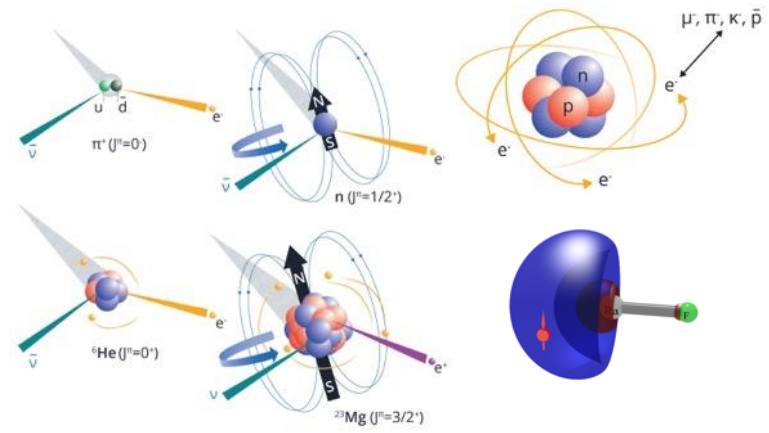
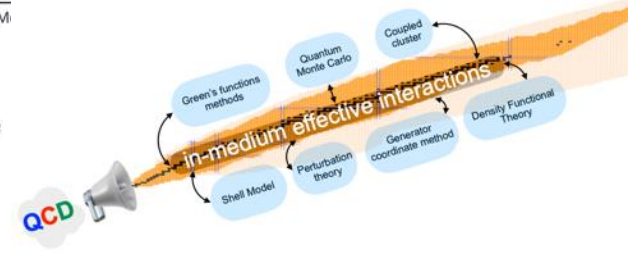
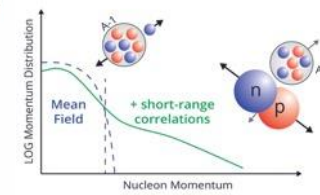
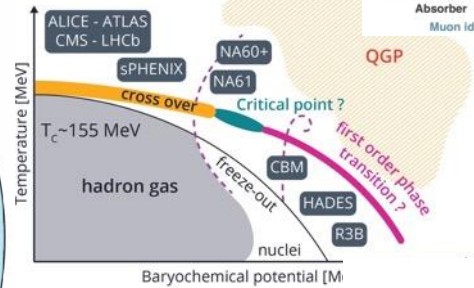
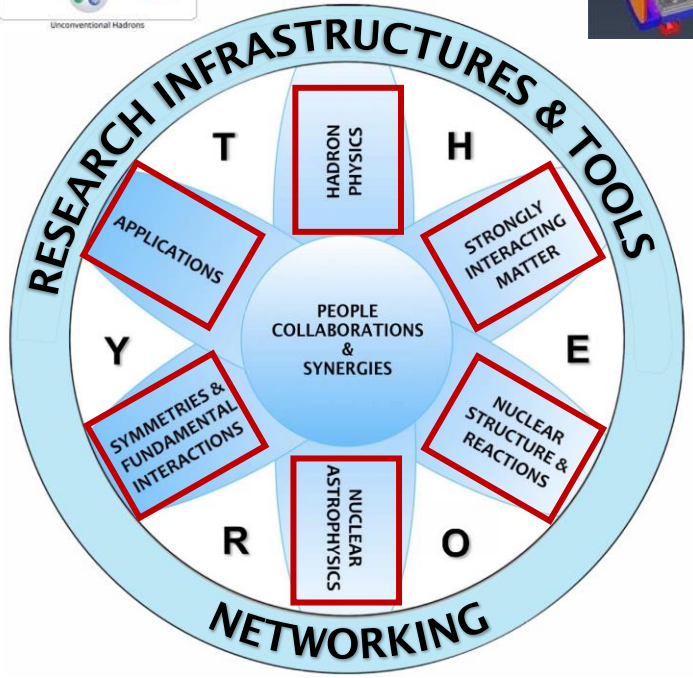
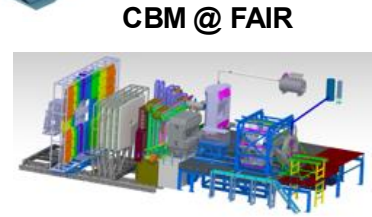
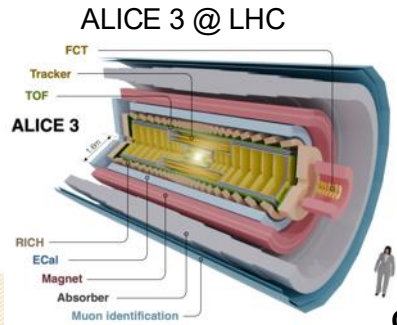
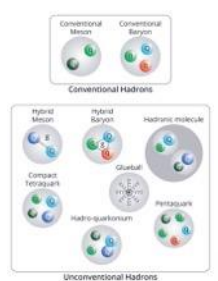
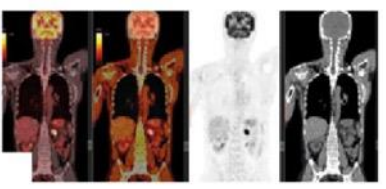
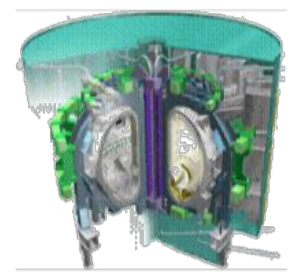
How to connect

You can connect with NuFFER by subscribing to the forum's mailing list.

[Subscribe to the NuFFER Mailing List](#)



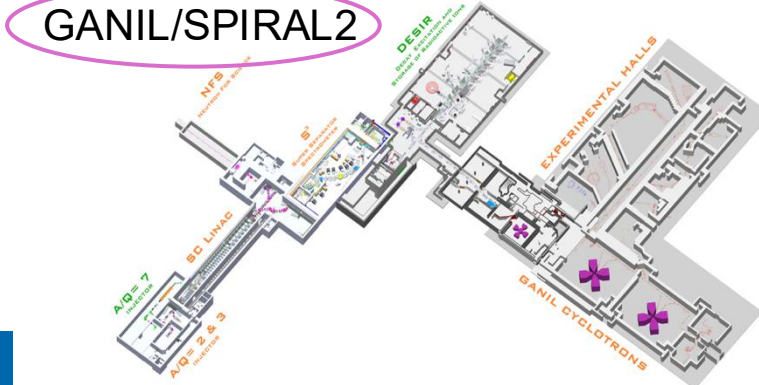
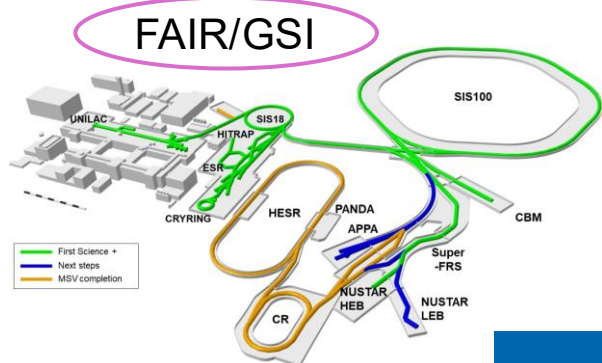
Nuclear Physics in Europe





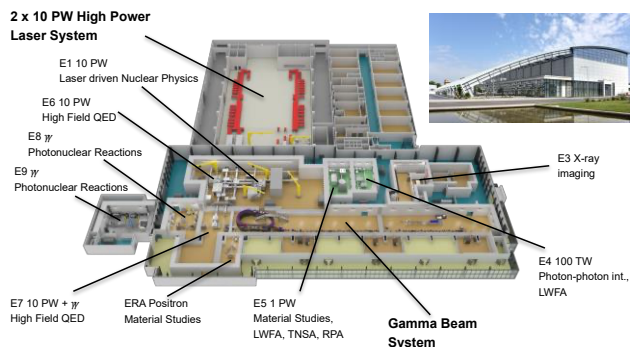
Nuclear Physics Facilities in Europe

WG9



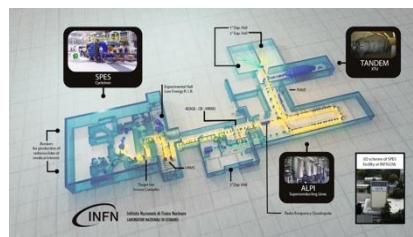
NSS

ELI/NP

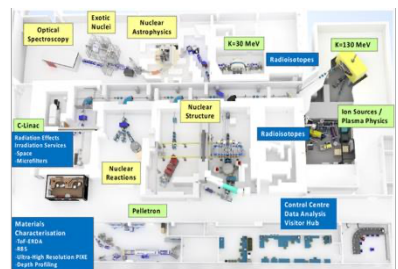
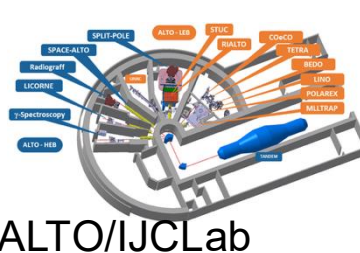


ESFRI

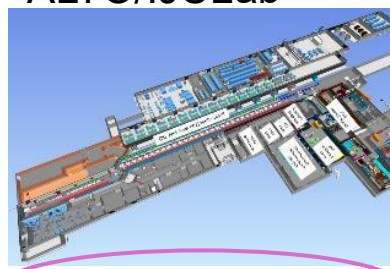
SPES/LNL



RIB facilities



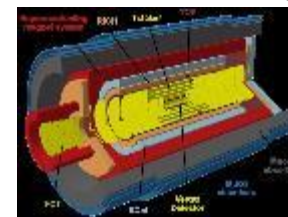
IGISOL/JYFL



ISOL@MYRRHA

E. Widmann WG9 AGM Rome

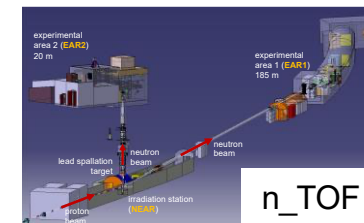
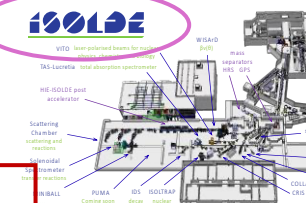
ALICE 3



AD/ELENA



ISOLDE



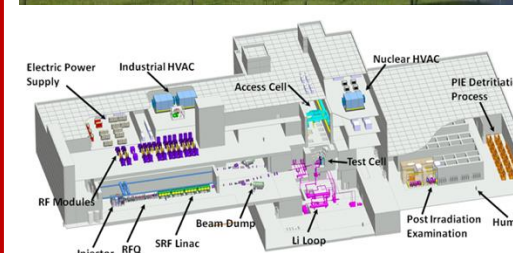
n_TOF

ILL France



n facilities

+ stable beam facilities



IFMIF-DONES Spain



NuPECC Task Force

- Meetings with the funding agencies of the Member Countries to promote the LRP and encourage its implementation
 - 9 Task Force meetings in 2017-2022
 - Task Force meetings in 2023-2025:
 - Belgium in Brussels on 31/01/2023
 - Slovenia in Ljubljana on 15/03/2023
 - Austria in Vienna on 21/04/2023
 - Germany in Bad Honnef on December 5th, 2024
 - France in Strasbourg , 11/06/2025
 - *Meetings planned in Slovakia, Hungary, Romania, Finland, Norway and Sweden*

Eberhard Widmann (NuPECC Chair)
Barbara Erazmus (NuPECC Deputy Chair)
Thomas Nilsson (GSI-FAIR)
Hervé Savajols (GANIL-SPIRAL2)
Boris Sharkov (JINR Dubna) (participation suspended)
Nicu Marginean (ELI-NP)
Lucia Popescu (MYRRHA)
Luciano Musa (CERN)
Gabriele-Elisabeth Körner (NuPECC Scientific Secretary)

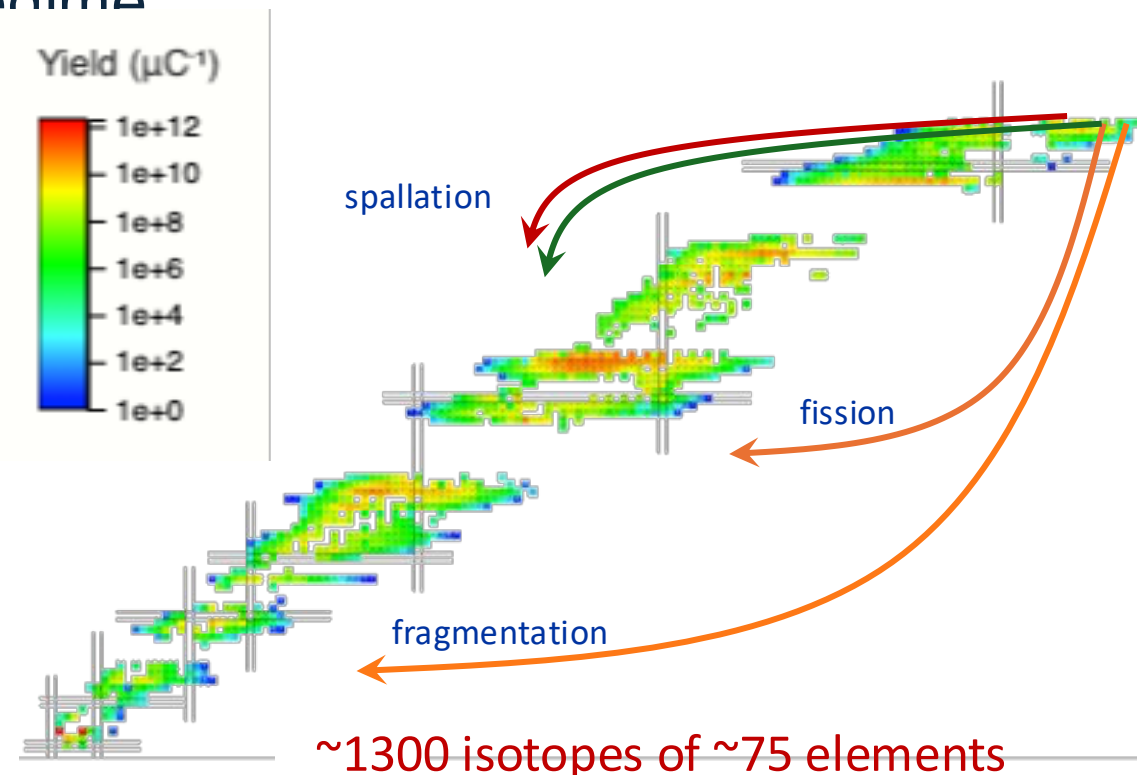


ISOLDE Flagship European ISOL Radioactive Ion Beam Facility c/o Luis Fraile

The only radioactive ion beam facility using GeV protons, giving access fission, spallation, fragmentation for RIB production. *Impact from p energy and intensity.*

Diverse within the diversity: large user community and more than 15 state-of-the-art instruments: advanced laser spectroscopy, mass traps, detector arrays, spectrometers, reactions at the few MeV/u regime

- Nuclear structure by **decay** and **reactions**
- Properties off stability, **shapes**, particle emission
- Nuclear **astrophysics** studies
- Interfacing atomic and nuclear physics
- Fundamental **interactions**, physics BSM
- Masses** for fundamental properties, astrophysics
- Fission studies by reactions
- Condensed-matter physics and **material** science
- Radioisotopes for **medical** applications
- Life sciences and **biophysics**





ISOLDE improvements programme

c/o Luis Fraile

LS3 for ISOLDE from 8 December 2025 to 8 May 2028

Offline and standalone operation of some experiments February to August 2026 to allow to continue physics programme with long-lived sources

ISOLDE improvements programme

Funding secured via MTP and consolidation

ISOLDE collaboration contributions 2025-2030 [3.75 MCHF]

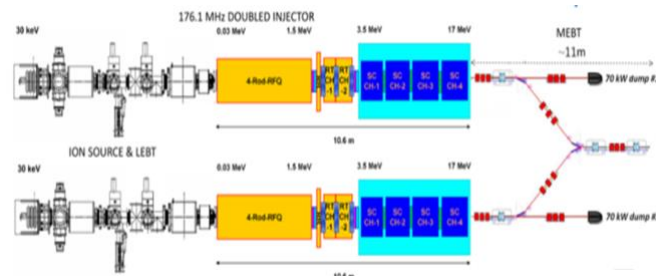
- **ISOLDE beam dump replacement project**
- Upgrade of BTY line to 2 GeV
- Mass separators and low and high energy transfer lines
- Power supplies for electrostatic beamline elements
- Superconducting HIE LINAC including manpower, **CM1** and CM5
- Primary areas ventilation upgrade
- RILIS laboratory upgrade



MYRRHA – An Accelerator Driven System

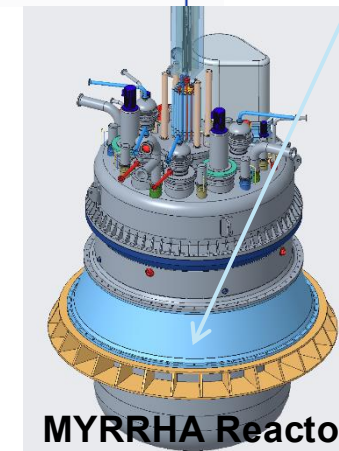
c/o Lucia Popescu

- Demonstrate the ADS concept at pre-industrial scale
- **Demonstrate transmutation of Minor Actinides**
- Fast neutron source → multipurpose and flexible irradiation facility
- Radioactive Ion Beam production facility: **ISOL@MYRRHA**



Accelerator	
<i>particles</i>	protons
<i>beam energy</i>	600 MeV
<i>beam current</i>	2.4 to 4 mA

Radioactive Ion Beam production facility
ISOL@MYRRHA



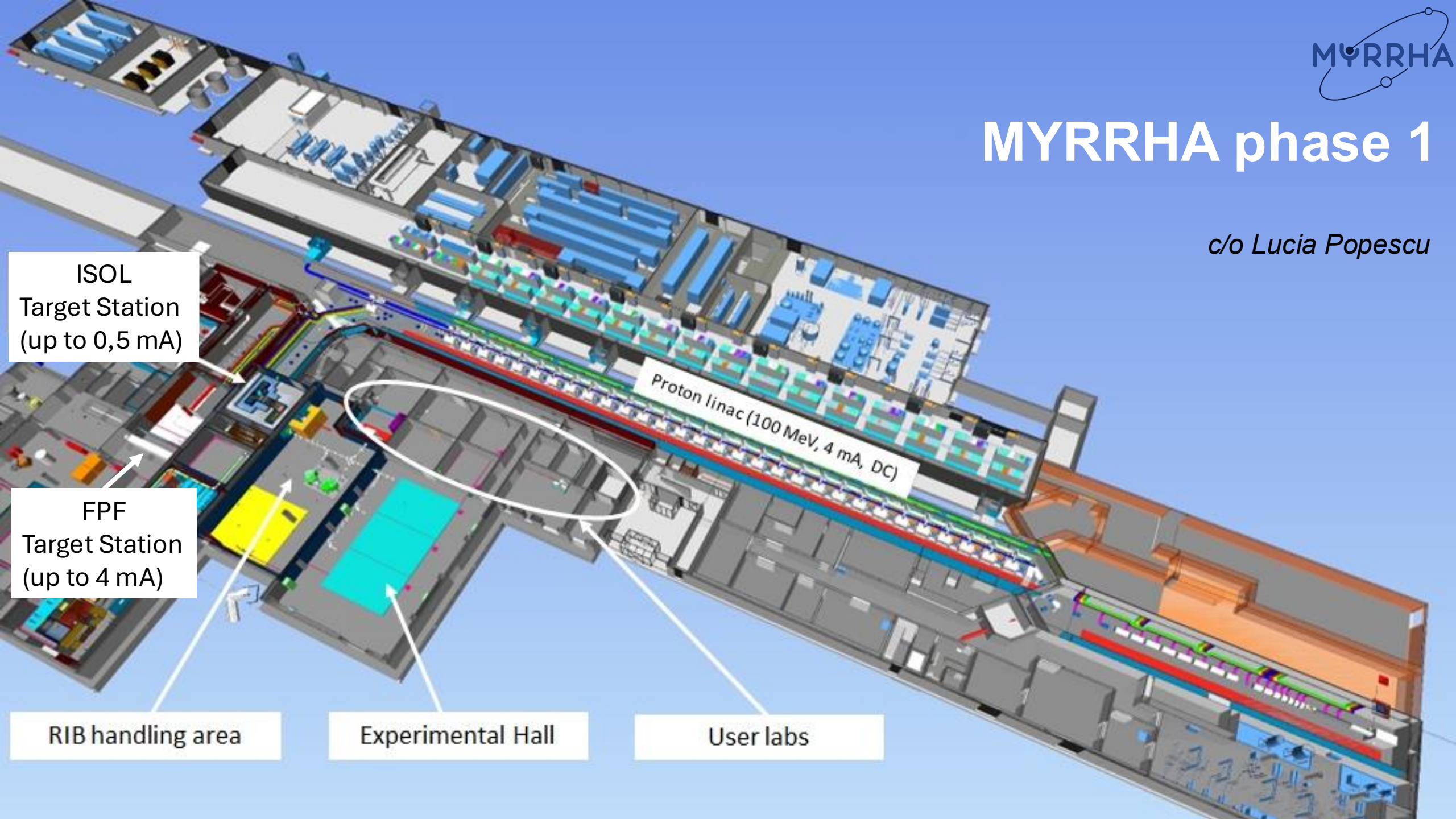
MYRRHA Reactor

Target in the center of the reactor core	
<i>main reaction</i>	spallation
<i>output</i>	$2 \cdot 10^{17}$ n/s
<i>material</i>	LBE (coolant)

Reactor	
<i>power</i>	70 MW _{th}
<i>k_{eff}</i>	0,93
<i>spectrum</i>	fast
<i>coolant</i>	LBE

MYRRHA phase 1

c/o Lucia Popescu



ISOL
Target Station
(up to 0,5 mA)

FPF
Target Station
(up to 4 mA)

Proton linac (100 MeV, 4 mA, DC)

RIB handling area

Experimental Hall

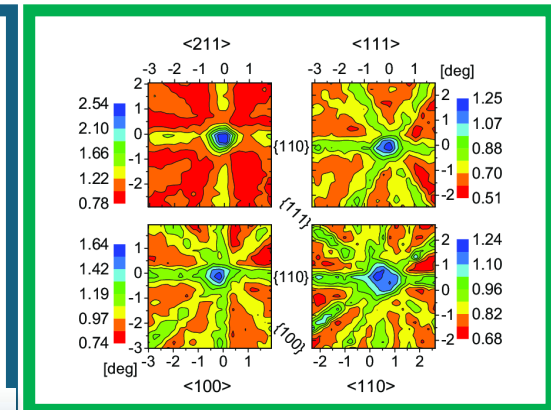
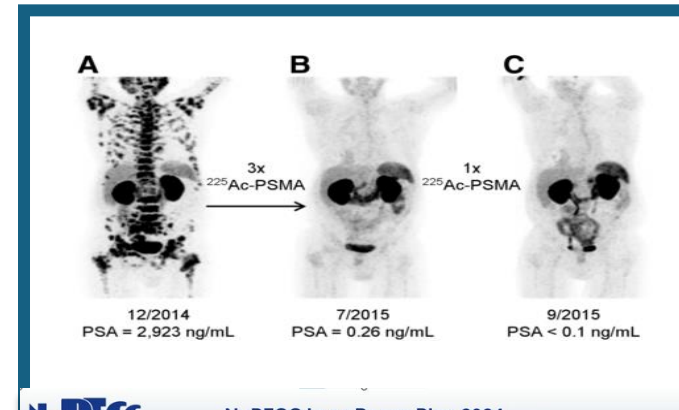
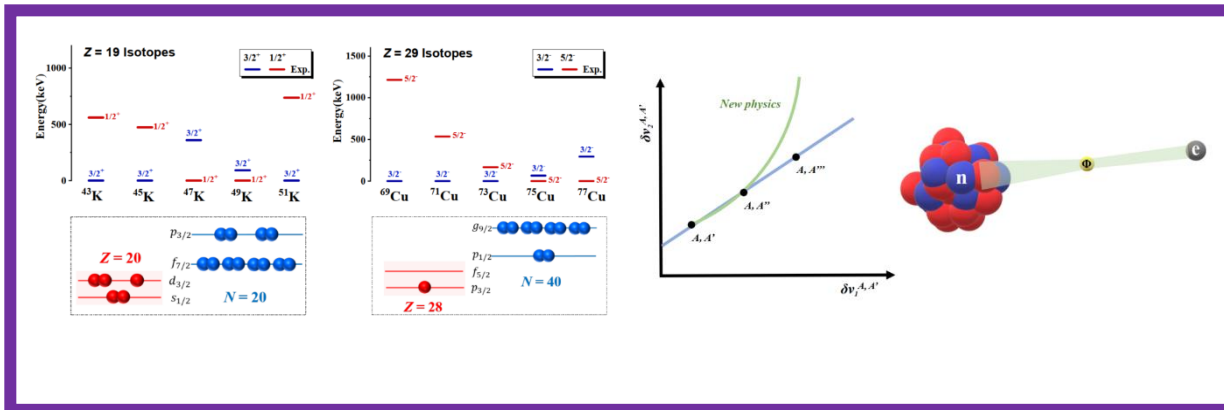
User labs

ISOL@MYRRHA – Applications & users

Fundamental nuclear physics

Innovative Medical Isotopes

Solid-state physics



- Emerging infrastructure recommended in **NuPECC Long Range Plan**

- Emerging infrastructure in **PRISMAP** (access platform with leading institutes in the supply chain for European biomedical researchers)

NuPECC Long Range Plan 2024. ISOL radioactive ion beam facilities: SPES/INL Italy, ALTO/JCLab France, IGISOL/JYFL Finland, ISOL@MYRRHA Belgium.

c/o Lucia Popescu

