

PRZYSZŁOŚĆ FIZYKI JĄDROWEJ NISKICH ENERGII W POLSCE A ROZWÓJ KRAJOWEJ INFRASTRUKTURY BADAWCZEJ

14-15 stycznia 2019

Środowiskowe Laboratorium Ciężkich Jonów UW

- Very well attended conference – **117** participants from all nuclear physics labs in Poland and several from abroad in 2-day conference!
- **52** talks + summary + discussion (>1000 slides!)
- Strong and multi-disciplinary nuclear science community in Poland
- Many new clever ideas for science and projects
- Intense discussions & diverse opinions

In the following: my personal view but based on many discussions before and during the conference

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- The new project should be:
 - sufficiently ambitious to attract big part of the Polish community, international collaborations and ... politicians
 - attractive for the young generation of scientists
 - multi-disciplinary with an important component of applied sciences
- Play an important role in the education and training (universities & nuclear energy)
- Provide a lot of beamtime (ensure running costs!) in a wide range of ions and energies

Nuclear Science and facilities in Poland

Existing/Financed Facilities

Science

(as presented at the conference)

New Projects/Opportunities

Theory of nuclear structure and dynamics (national organisation? relation to new projects?)

250MeV Proton cyclotron - CCB
Kraków

HI-cyclotron & proton cyclotron
- SLCJ Warszawa

20keV Light-ion accelerator - Sz.
Univ.

Reactor "Maria" - NCBJ Świerk

30MeV alpha cyclotron
financed at CERAD Świerk

Fundamental interactions

Astrophysics and nucleosynthesis

From isomers to giant resonances

Few body systems

Superheavy elements

Mechanisms of nuclear reactions in
simple and complex system

Gamma-ray spectroscopy

Nuclear physics applications

High-intensity HI cyclotron?

High Intensity proton LINAC?
or

50-70 MeV H- proton cyclotron
(2 simultaneous beams)?

Important upgrade of "Maria"
reactor?

Neutron generator

EU & JINR accelerators to be taken into account

Smaller-scale specialized NP facilities?

Specialized Instrumentation to be built or attract! Spectrometers, AGATA, PARIS, NEDA, FAZIA, ULESE...

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Nuclear Science and facilities in Poland

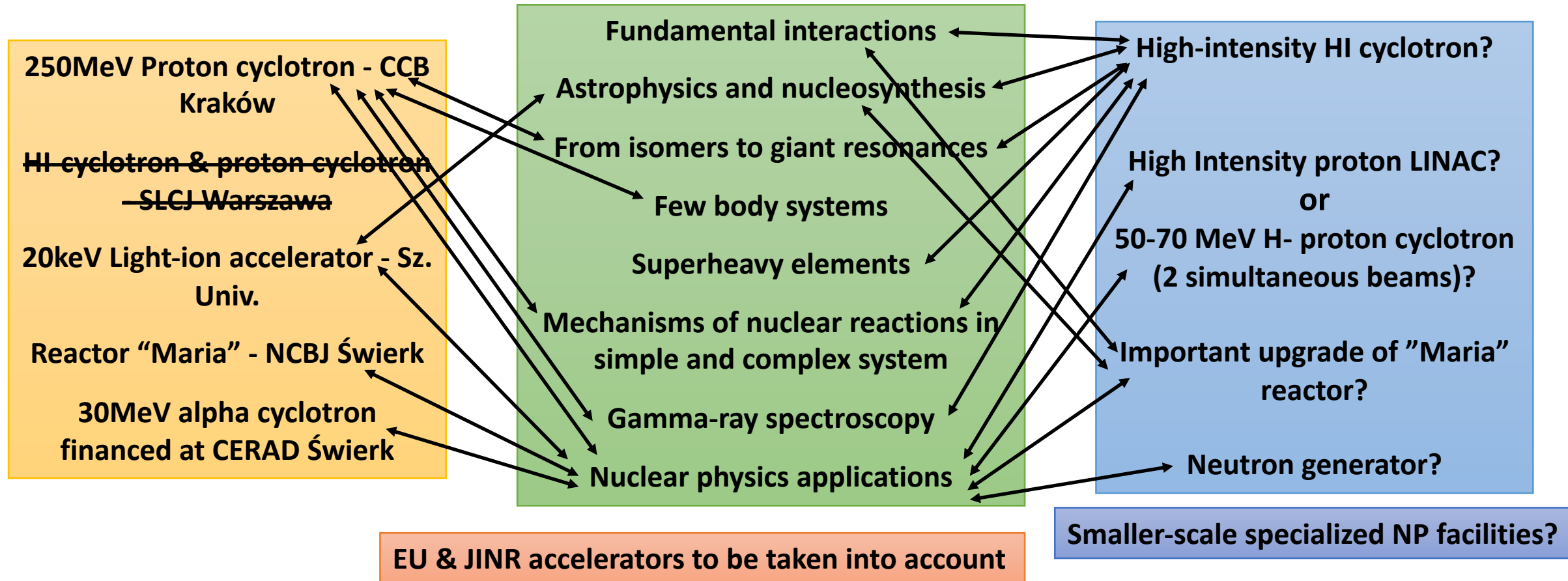
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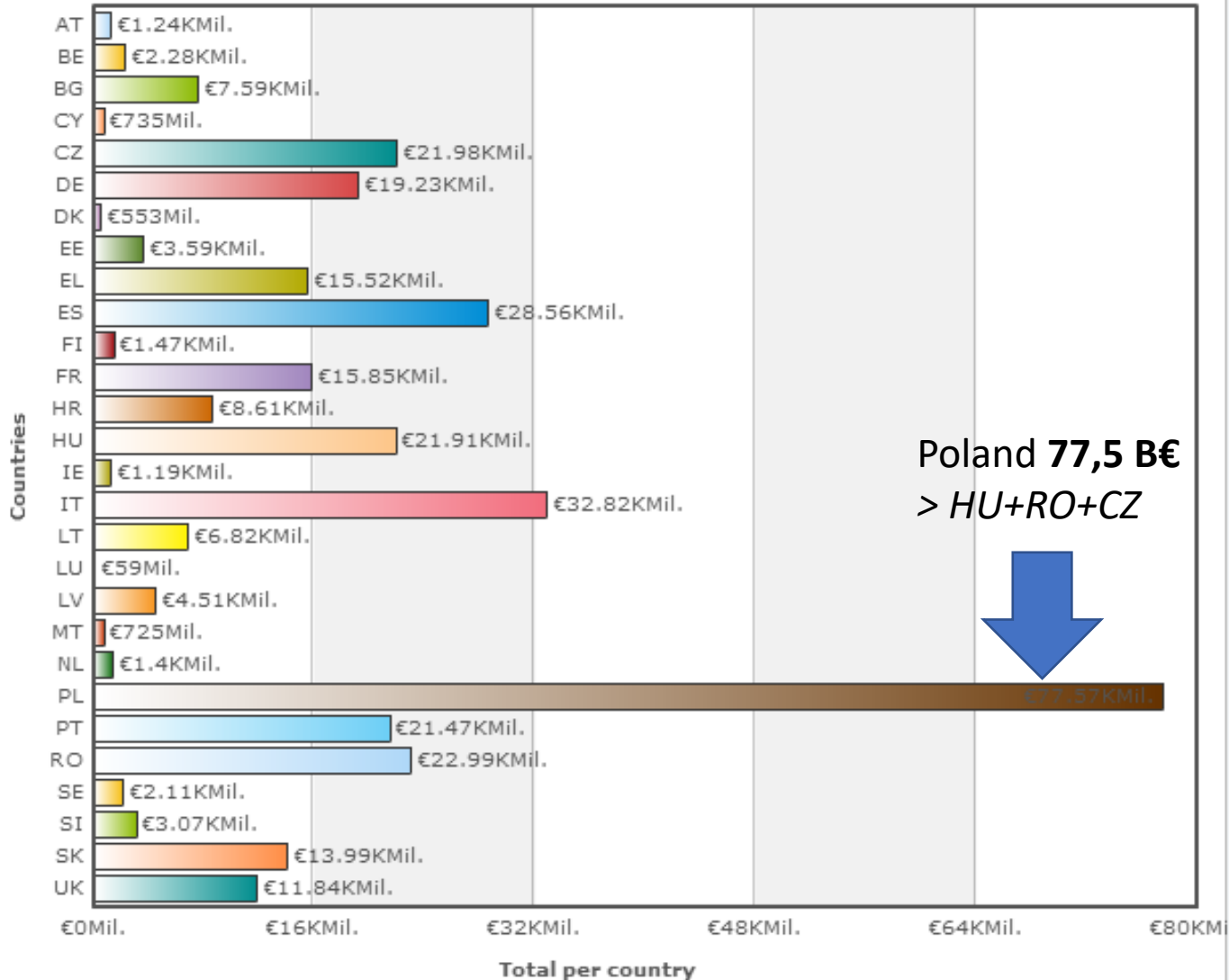
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How to get funded a new project?

EU Structural funds

Total EU allocations of Cohesion Policy 2014-2020* (million €, current prices)



- Use EU Structural funds like it was done for CCB, SOLARIS, eLBRUS, UW infrastructures,...
- 2021-2027 EU budget not decided yet
- There is “enough” to have an ambitious, scientifically sound project and to convince politicians!



- **Strong participation of Poland in all major (ESFRI list and others) nuclear physics infrastructures & projects in Europe**
- **There is a room for specialized and ambitious new infrastructure(s) in Poland, complementary to the ESFRI ones**

But

everything depends on You and Your ability to convince