



The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences



Prof. Tadeusz Lesiak
Director General

IFJ PAN in a nutshell



Instytut
kategorii



KNOV

Krajowy Naukowy Ośrodek Wiodący

hr

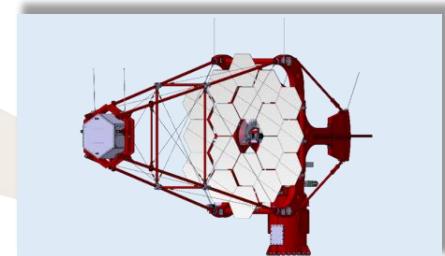
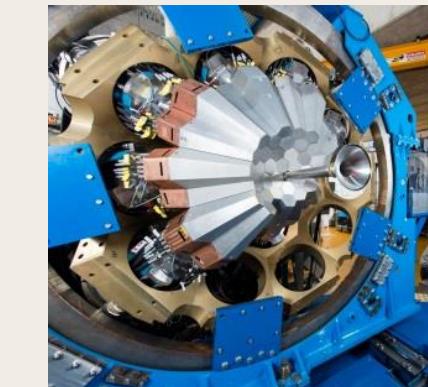
HR EXCELLENCE IN RESEARCH

141 position in the National Taiwan University Ranking (2020)

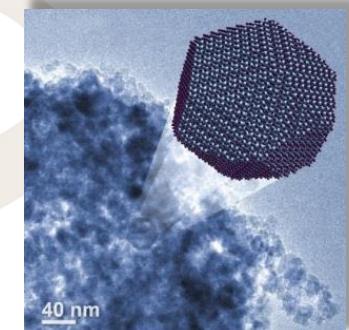
- ❖ Personnel: **572**
- ❖ Prof. **29**, Assoc. Prof. **65**,
Ph.D. **98**, engineers/technicians **122**
- ❖ PhD studies – **83** students
- ❖ **6** scientific divisions: **26** departments
- ❖ **4** accredited laboratories
- ❖ Division of Scientific Equipment
and Infrastructure Construction
- ❖ The Cyclotron Centre Bronowice
- ❖ ~**650** publications/year
- ❖ Doctoral school



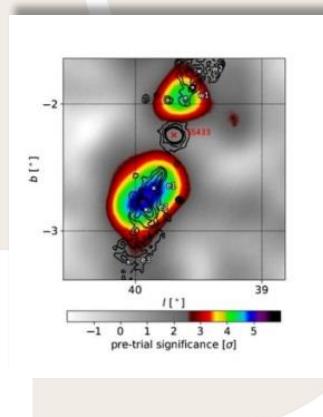
**Particle physics
and astrophysics**



**Nuclear and strong
interactions physics**



Condensed matter physics



**Interdisciplinary and applied
research**



Theoretical physics

Particle and Astroparticle Physics



CERN experiments : LHC, HL-LHC

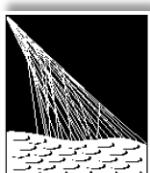


BNL: RHIC, EIC



EIC
BNL

Astroparticle observatories



PIERRE
AUGER
OBSERVATORY

CREDO
THE QUEST FOR UNEXPECTED



Projects for future accelerators



Theory: Monte Carlo generators, QFT calculations for LHC, tau physics, hadron physics

Participation in the Construction of Large Research Infrastructures



Division of Scientific Equipment and Infrastructure Construction
66 people (43 eng. and 13 technicians)

projects in 2017 - 2021

Project	FTE
LHC - Long Shutdown 2	~47
LHC - HL	~15
Thermonuclear fusion: (ITER) – Cadarache, Francja	~8
Support of the Cyclotron Centre Bronowice (CCB)	10
European Spallation Source (ESS)	~68
Local cryogenic infrastructure (IFJ PAN)	35



Cryomodules for ESS



New systems of diagnostic

projects accomplished

W7-X Wendelstein, E-XFEL Hamburg

Future activities

FAIR, PIP2@FNAL

Budget of ongoing projects >100 mln PLN



Local cryogenic infrastructure

Centrum Cyklotronowe Bronowice (CCB)



AIC-144 cyclotron

Start of operation :
2005 – 2010
Treatment of first
patient with eye
melanoma

Proteus-235
cyclotron IBA



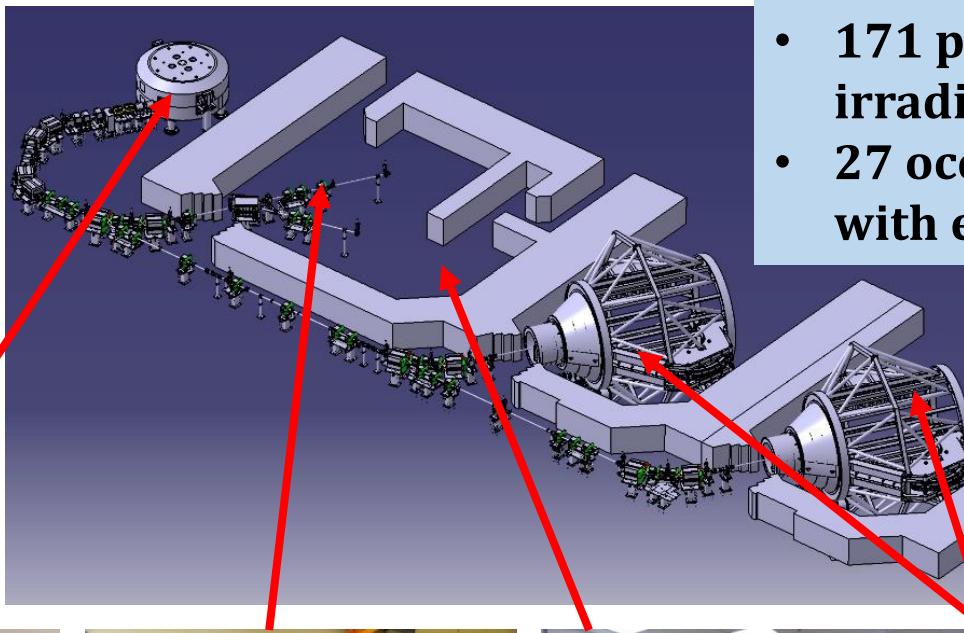
Tadeusz Lesiak

Construction 2010-15;
the 1st patient: October 2016
Cost: 265 mln PLN



2021:

- 171 patients finished irradiation in gantries
- 27 ocular patients with eye melanoma



Two dedicated
scanning gantries



Eye treatment



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