



# Institute of Nuclear Research

of the Hungarian Academy of Sciences

Founded in 1954

## Mission

The mission Atomki is to perform *fundamental research* in experimental and theoretical atomic, nuclear and particle physics, and to *apply the physical methods* and knowledge in other fields of science like materials research, environmental and earth sciences, biological and medical research etc. Strong emphasis is laid on the development of techniques and instruments for fundamental and applied research, and on solving practical problems for industry, agriculture and medicine. The Institute is strongly involved in undergraduate and graduate *physics education*. The Department of Environmental Physics is run jointly by the Institute and by the University of Debrecen. The activity of the researchers of Atomki is rapidly increasing in knowledge and technology transfer. The Institute is hosting a European Research Council (ERC) Starting Grant in the field of nuclear astrophysics.

Fundamental Research

Education

Application

## Organization

### Division of Nuclear Physics

Section of Experimental Nuclear Physics

Section of Ion Beam Physics

→ Nuclear Astrophysics Group

→ Laboratory of Ion Beam Applications

Theoretical Physics

### Division of Atomic Physics

Section of Atomic Collisions

Section of Electron Spectroscopy and Materials Science

→ Laboratory of Secondary Ion/Neutral Mass Spectrometry

### Division of Applied Physics

Section of Environmental and Earth Sciences

→ Hertelendi Laboratory of Environmental Studies

→ Radon Group

→ K-Ar Laboratory

→ QMS Laboratory

UD—ATOMKI Department of Environmental Physics

Section of Cyclotron Applications

Section of Electronics

→ Computational Group

### Accelerator Centre

→ Cyclotron Laboratory

→ Laboratory of Electrostatic Accelerators

→ ECR Laboratory

→ Isotope Separator Laboratory



Meeting room



AMS

↓ C-14 Accelerator Mass Spectrometer for environmental research.



SNMS-XPS

↑ X-ray Photoelectron Spectrometer linked to Secondary Neutral Mass Spectrometer.



Cyclotron

↓ A particle accelerator for basic research, applications and education.

## Contact

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**GRID**  
 ↑ Member of the Worldwide LHC Computing Grid (WLCG) to analyse LHC data from CERN.



**Microprobe**  
 ↑ The Scanning Ion Microprobe is used in various interdisciplinary applications.



**DIAMANT**  
 ↑ A detector system used for the study of nuclei of strongly elongated shapes.



**Radiochemistry**  
 ↑ Synthesis boxes for preparation of  $^{11}\text{C}$ - and  $^{18}\text{F}$ -labelled radiopharmaceuticals.



**mini-PET**  
 ↓ A small animal PET for pre clinical use developed by Atomki.



**ECR**  
 ↓ An ion source designed to produce highly charged plasmas and ion beams.



**ESA-22**  
 ↓ A spectrometer developed by Atomki for the study of photo- and Auger electrons.



**Lecture Hall**

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 Debrecen