

## **HIL- status and plans for the future**

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Heavy Ion Laboratory at the University of Warsaw (HIL) is the largest experimental nuclear physics laboratory in Poland, equipped with two cyclotrons – heavy ion cyclotron and p/d cyclotron. HIL is an effective “user facility” serving scientists from Poland and abroad. From March 2016 HIL is among largest European nuclear physics laboratories with Transnational Access granted by the European Union. Beam time is allocated based on the recommendations of the International Programme Advisory Committee.

An important part of HIL is Radiopharmaceutical Research and Production Centre, opened in 2012 and focused on the production and research into Positron Emission Tomography Radiopharmaceuticals. The production of long-lived radioisotopes for life-sciences applications is also carried out. Being a unit of the University of Warsaw HIL is in natural way involved in teaching. On average about 15 students/year work at HIL supervised by its staff members.

The heavy ion cyclotron has been in use at the HIL for over 25 years. It is therefore projected to replace it with a new device that would demonstrate improved parameters of energy, ion range and beam intensity. The project HIL@ECOS submitted to the Polish Road Map of Research Infrastructure will allow for a unique device to be present in Poland and in our part of Europe. It will be used to carry out fundamental research in the field of nuclear physics, including research into properties of super-heavy elements as well as a variety of applications in nuclear power, medical science, research into the properties of solid targets, astrophysics and others. A vital part of this project is the possibility to ensure the highest level of training for students and scientists by means of access to one of the top devices of this kind in the world. This project constitutes part of the implementation of the high intensity stable beams (ECOS) programme, considered by the European Program FP7 EURONS and recommended by the Nuclear Physics European Collaboration Committee (NuPECC).