

Cooperation between JINR and the National Synchrotron Radiation Centre SOLARIS (Kraków, Poland)

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The first Polish synchrotron radiation facility SOLARIS was built at the Jagiellonian University 3rd Campus in Kraków. Synchrotron is a unique man-made source of electromagnetic radiation known as synchrotron radiation. The energy range of emitted photons spans from the infrared to hard X-rays.

The Polish synchrotron is the first research infrastructure of such substantial size and potential constructed in this part of Europe. The synchrotron, being a large-scale, multiuser and multidisciplinary facility, represents a much more efficient investment in research in comparison to distributed small or medium-scale equipment by providing state-of-the-art research opportunities for many groups.

JINR and Jagiellonian University expressed an intention on joining the efforts in construction of the modern laboratory on synchrotron research with two beamlines: one of them will be a “classical” beamline called MX/BioSAXS/PD with three experimental end-stations, which will utilize the synchrotron radiation as well as the second experimental line which will be equipped with a CryoTEM microscope.

The infrastructure will be installed within the experimental hall of SOLARIS and the access to the instruments will be realized in accordance with the agreement between JINR and SOLARIS/UJ. Research methods available in these two parts of the laboratory will be complementary enabling complex structural characterization of various materials including the biological samples (proteins, protein complexes, nucleic acids etc).

The concept of the laboratory and the end-stations will be presented as well as the main directions of the proposed scientific program.