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Experimental Infrastructure of the Frank Laboratory of Neutron Physics for Research

Monday, 26 May 2025 10:00 (30 minutes)

The Frank Laboratory of Neutron Physics (FLNP) of the Joint Institute for Nuclear Research (JINR) is one of the leading centers for neutron physics in the JINR Member States. FLNP scientists conduct research in the fields of condensed matter physics and nuclear reactions with neutrons, as well as to solve a wide range of applied problems using nuclear physics techniques. The basic facility of the Laboratory is the unique periodic pulsed reactor IBR-2. Most modern research methods using neutron scattering are realized at neutron beams of the reactor, as well as neutron activation analysis and studies of radiation effects from neutrons and gamma-rays. FLNP has accumulated a significant amount of state-of-the-art laboratory equipment, which provides information, supplementary to neutron investigations, about the studied samples using various physical methods. This makes it possible to obtain comprehensive information about objects under study. The User Program implemented in the Laboratory provides a unique opportunity for scientists from all over the world to gain access to the research infrastructure of the IBR-2 reactor.
The source of resonance neutrons based on the IREN electron accelerator and the EG-5 electrostatic generator, as well as fast neutron generators, expand the range of possible studies with neutrons in both fundamental and applied research.
The report will provide information about the experimental infrastructure available at FLNP, including examples of research, as well as information on how to access the infrastructure through the User Program.

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