



## PREFACE

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We would like to offer the readers the scientific activity report of the Frank Laboratory of Neutron Physics for 2011. The first part of the report presents a brief review of the experimental and theoretical results achieved in the main scientific directions – condensed matter physics, neutron nuclear physics, applied research and development and creation of elements of neutron spectrometers for condensed matter investigations. The second part includes the reports on the modernization of the IBR-2 pulsed reactor and the development of the IREN neutron source. A list of publications for 2011, the information regarding the seminars and conferences organized in FLNP and a statistical view on the FLNP personnel structure are presented as well. The experimental reports that cover the main scientific directions in greater detail complete the report.

In 2011 the main achievements of the Laboratory were:

- power start-up of the IBR-2 reactor after modernization;
- modernization of some spectrometers at the IBR-2 reactor and continuation of the development of new facilities for neutron studies in condensed matter physics;
- receiving of more than 150 applications for beam time at the IBR-2 spectrometers during the first call for proposals announced after the IBR-2 modernization;
- development of scientific experiments at local facilities and in collaboration with other scientific centers in Russia and abroad.

FLNP has cooperation agreements in the field of neutron investigations with more than 200 scientific institutes and universities from 43 countries from all over the world. A significant contribution to this cooperation is made by the JINR Member States.

The FLNP staff consists of more than 400 employees. The scientific staff includes 70 Ph.D. and 20 D.Sci. researchers and more than 50 researchers and specialists from the JINR Member States (besides the Russian Federation) with two thirds of them under 35 years of age.

The organization of annual conferences and schools covering all research fields of the FLNP activities helps to recruit young specialists — one of the top priority tasks of the FLNP Directorate.

All these facts confirm that the Laboratory continues to develop successfully and dynamically, carrying out investigations in the interests of the JINR Member States.

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*Director*



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