

P R E F A C E

I would like to introduce the report on the scientific activity of the Frank Laboratory of Neutron Physics (FLNP) of the Joint Institute for Nuclear Research (JINR) in 1997. The report consists of two parts. The first is a brief review of the result of experimental and theoretical investigations in condensed matter physics, nuclear physics and applied research. The second contains experimental reports that provide more detailed information on the conducted research. The list of 1997 publications completes the picture.

The 1997 year was a difficult one for FLNP. The February cycle of the IBR-2 pulsed reactor was cancelled because of financial difficulties. From June to November, IBR-2 was shut down due to malfunctioning of the fast alarm system.

Further development of User Policy aimed at attracting a larger number of physicists, chemists, biologists, and specialists in materials science to carry out experiments at IBR-2 was one of the main objectives in the reported year. As a result, 152 proposals for experiments were received in 1997 and the total amount of experiments conducted with IBR-2 from 1995, the year of the launch of IBR-2 user policy, to 1997 is over 460. Proposals came from 25 countries, including JINR nonmember states. On the average, the requested beam time was 2.5 time larger than available.

The financial situation in FLNP remains unstable. A lot of works on the project for IBR-2 modernization have been suspended. The IREN projected has practically been frozen up.

At the same time, in the reported year, FLNP managed to put into operation the new spectrometer SKAT, include into user policy the REFLEX spectrometer and continue the construction of the KOLHIDA spectrometer for neutron nuclear physics and the FSD instrument for strain measurements.

In spite of the difficult economical situation in its host country, FLNP JINR retains the position of one of the leading neutron centers in Europe thanks to continued effort aimed at development of new and improvement of the existing experimental and theoretical facilities.

V.L.Aksenov
Director



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