

Jury's Recommendations on the JINR Prizes for 2003

I. Theoretical Physics Research

First Prize

“Integrable Heisenberg–Van Vleck Chains with Variable Range Exchange”.

Author: V. Inozemtsev.

Second Prize

“Study of Higher Order Perturbative Corrections and Effects of Nontrivial Structure of the QCD Vacuum in Hadron Processes”.

Authors: V. Bytev, A. Vinnikov, A. Dorokhov, N. Kochelev, E. Kuraev, I. Cherednikov.

II. Experimental Physics Research

First Prize

“Synthesis of Elements 115 and 113”.

Authors: Yu. Oganessian, V. Utyonkov, Yu. Lobanov, F. Abdullin, A. Polyakov, I. Shirokovsky, Yu. Tsyganov, G. Gulbekian, A. Mezentsev, M. Itkis.

Second Prizes

1. “Precision Tests of the Electroweak Theory in the DELPHI Experiment at LEP”.

Authors: D. Bardin, I. Boyko, M. Nikolenko, A. Olchevski.

2. “Magnetic and Atomic Structure of CMR-Manganites: Phase Immiscibility and Isotope Effects”.

Authors: V. Aksenov, A. Balagurov, V. Pomyakushin, D. Sheptyakov, N. Babushkina, O. Gorbenko, A. Kaul.

III. Physics Instruments and Methods

First Prize

“Discovery and Study of the Electron String Phenomenon in the Electron Beam Ion Source KRION and Its Application for the Production of Ar^{16+} and Fe^{24+} Relativistic Ion Beams at the JINR Nuclotron”.

Authors: E.D. Donets, V. Vadeev, S. Gudkov, D. Donets, E.E. Donets, A. Kovalenko, V. Salnikov, E. Syresin, Yu. Tumanova, V. Shutov.

Second Prizes

1. “DELTA-SIGMA Facility for Simultaneous Measurements at 0° of the Complete Set of np Observables at the L/T Polarized Monochromatic Neutron Beam (LHE JINR), for First Direct Reconstruction of Forward NN Scattering Amplitudes at High Energies”.

Authors: L. Strunov, V. Sharov, A. Nomofilov, A. Morozov, E. Chernyh, R. Shindin, A. Livanov, V. Prytkov, N. Kuzmin, I. Zaycev.

2. “Kinematic Separator VASSILISSA-2”.

Authors: A. Belozеров, V. Chepigina, V. Gorshkov, S. Hofmann, A. Kabachenko, O. Malyshev, A. Popeko, R. Sagaidak, Š. Šaro, A. Yeregin.

3. “Radiation Effects in Materials of Neutron Cold Moderators”.

Authors: E. Shabalin, E. Kulagin, S. Kulikov, V. Melikhov, A. Belyakov, V. Golikov, A. Androsov, L. Golovanov, V. Ermilov, V. Konstantinov.

IV. Applied Physics Research

First Prize

“Biomonitoring of Atmospheric Deposition of Heavy Metals and Other Elements with the Help of Neutron Activation Analysis at the IBR-2 Reactor”.

Authors: M. Frontasyeva, S. Pavlov, S. Gundorina, E. Yermakova, O. Kulikov-Stan, T. Ostrovnaya, L. Smirnov, L. Strelkova, E. Cheremisina, V. Chinaeva.

Second Prize

“Sputtering of Crystals and Metals under Irradiation by Heavy Ions”.

Authors: V. Altynov, Yu. Cheblukov, A. Didyk, A. Halil, A. Hofman, D. Ivanov, V. Semina, A. Suvorov V. Robuk.

Encouraging Prizes

1. “Characteristics of Hyperons and Antihyperons Produced in Nucleon Beams”.

Authors: E. Goudzovski, A. Zinchenko, I. Ivanchenko, V. Kekelidze, D. Madigozhin, Yu. Potrebenikov.

2. “Development of Facilities for the Production of SiO₂ Aerogel and the Study of its Properties”.

Authors: Yu. Akimov, V. Zrelov, L. Krupa, A. Puzinin, J. Ružička, S. Filin, A. Filippov, Yu. Kharzheev.