

JURY'S RECOMMENDATIONS ON THE JINR PRIZES FOR 2007

I. Theoretical Physics Research

First Prize

“Investigation of the Electronic Structure of Various Shaped Carbon Nanoparticles”.

Authors: V. Osipov, E. Kochetov, M. Pudlak, R. Pincak, D. Kolesnikov.

Second Prize

“Sub-Barrier Fusion of Neutron-Rich Nuclei and Its Astrophysical Consequences”.

Authors: V. Zagrebaev, V. Samarin.

II. Experimental Physics Research

First Prize

“Chemical Identification and Study of Properties of Elements 112 and 114”.

Authors: S. Dmitriev, N. Aksenov, G. Bozhikov, G. Vostokin, A. Yeregin, V. Lebedev, E. Tereshatov, S. Shishkin, H. Gaggeler, R. Eichler.

Second Prizes

1. “Study of the Nucleon Spin Structure in the COMPASS and HERMES Experiments”.

Authors: V. Alexakhin, N. Akopov, O. Ivanov, A. Korzenev, V. Krivokhizhin, A. Nagaytsev, D. Peshekhonov, I. Savin, O. Shevchenko, E. Zemlyanichkina.

2. “Observation of Anomaly in the Distribution of Invariant Mass of Two Neutral Pions from Three-Pion Decays of Charged Kaons and the Measurement of Pion Scattering Lengths”.

Authors: S. Balev, O. Voskresenskaya, S. Gevorgyan, E. Goudzovski, V. Kekelidze, D. Madigozhin, Yu. Potrebenikov, A. Tarasov, P.L. Frabetti.

III. Physics Instruments and Methods

First Prize

“Reflectometry of Polarized Neutrons at the IBR-2 Pulsed Reactor”.

Authors: V. Aksenov, V. Bodnarchuk, Ye. Dokukin, V. Ignatovich, S. Kozhevnikov, D. Korneev, V. Lauter, K. Zhernenkov, Yu. Nikitenko, A. Petrenko.

Second Prizes

1. “The IHEP–JINR Neutrino Detector at Neutrino Beams of the U-70 Accelerator (Protvino)”.

Authors: S. Bunyatov, I. Golutvin, D. Kiss, A. Krasnoperov, Yu. Nefedov, B. Popov, V. Snyatkov, V. Terechshenko, A. Vovenko, M. Walter.

2. “Combined Detection System GABRIELA in the Focal Plane of the Separator VASILISSA. Detection of α , β , and γ Decays of Transfermium Elements”.

Authors: A. Belozerov, O. Dorvaux, A. Yerebin, A. Kabachenko, A. Lopez-Martens, O. Malyshev, A. Popeko, A. Svirikhin, V. Chepigin, A. Shutov.

IV. Applied Physics Research

First Prizes

1. “Development and Realization of the Technique of 3D Conformal Proton Radiotherapy with JINR Phasotron Beams”.

Authors: A. Agapov, Yu. Budjashov, E. Cherevatenko, V. Gaevsky, E. Luchin, A. Molokanov, M. Mumot, G. Mytsin, M. Tseytlina, S. Shvidky.

2. “The DC-60 Cyclotron Complex of Heavy Ions for Applied Research and Industrial Applications in Nanotechnologies”.

Authors: B. Gikal, G. Gulbekian, S. Dmitriev, M. Itkis, I. Kalagin, I. Kolesov, S. Pashchenko, A. Borisenko, K. Kadyrzhanov, A. Tuleushev.

Second Prize

“Application of Neutron, X-ray and Acoustic Investigations of Geological Materials and Industrial Wastes in Ecology”.

Authors: R. Vasin, E. Ermakova, T. Ivankina, H. Kern, A. Kulakovsky, D. Levin, A. Nikitin.

Encouraging Prizes

1. "First Observation of Parametric X-Ray Radiation from Relativistic Nuclei in Crystals".

Authors: S. Afanasiev, A. Kovalenko, Sh. Saifulin, A. Taratin, Yu. Pivovarov, A. Potylitsyn, S. Uglov, V. Zabaev, V. Boiko, Yu. Efremov.

2. "Phenomena in Near-Surface Layers of Semiconductors: Theoretical and Methodological Aspect, Models, Parameterization, Basis of a Critical Analysis".

Authors: Yu. Tsyganov, V. Kushniruk, V. Subbotin, A. Polyakov, A. Sukhov, A. Voinov.

3. "Development and Construction of Low-Mass Drift Chambers, Front End Electronics and Tracking Software for the HADES Spectrometer".

Authors: G. Agakichiev, S. Chernenko, O. Fateev, L. Glonti, A. Ierusalimov, C. Müntz, V. Pechenov, L. Smykov, J. Stroth, Yu. Zanevsky.

4. "Spectral Control of Quantum Systems in the Inverse Problem Approach".

Authors: B. Zakhariev, V. Chabanov.