

**2nd International Conference on
QUANTUM ELECTRODYNAMICS AND STATISTICAL PHYSICS
QEDSP2006
19 – 23 September 2006
NSC KIPT, Kharkov, Ukraine**

CONFERENCE PROGRAM

Monday, September 18

16-00 — 20-00 **Registration of QEDSP2006 participants (Small Hall)**

Tuesday, September 19

8-00 — 17-00 **Registration of QEDSP2006 participants (Small Hall)**

PLENARY SESSION

Large Hall

10-00 — 10-30 **Opening of the Conference**

Chairman N.Shul'ga

10-30 — 10-55 I.Bandos, D.Sorokin
PLA1 Aspects of D-brane Dynamics in Supergravity Backgrounds

11-00 — 11-25 A.V.Chechkin, V.Yu.Gonchar, J.Klafter, R.Metzler
PLF2 Fundamentals of Levy Flights

11-30 — 12-00 Coffee Break

Chairman X.Artru

12-00 — 12-25 E.Tomasi-Gustafsson, G.I.Gakh, A.P.Rekalo
PLB2 From theory to experiment: hadron electromagnetic form factors in space-like and time-like regions

12-30 — 12-55 P.I.Fomin
PLA2 Vacuum Condensates, Dynamical Masses, Ether Wind

13-00 — 13-15 V.V.Tikhomirov
OC2 On the beam extraction from high-energy superconducting proton colliders

13-30 — 14-30 Lunch

Tuesday, September 19

PARALLEL SESSION

Section E. Nonlinear dynamics
Section C. High-energy electrodynamics in matter
Section G. Phase transitions in condensed matter
 Large Hall

Chairman Yu.Bolotin

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|----------------------|---|
| 14-40 — 14-55 OE6 | <u>Yu.P.Virchenko</u> , T.V.Karabutova Construction of probabilistic solutions of the Boltzman equation |
| 15-00 — 15-15 OE8 | D.Kopiychenko, <u>P.O.Mchedlov-Petrosyan</u> , G.Khomenko Nonlinear theory of mass transfer and heterogeneous consecutive reactions in aerosol systems |
| 15-20 — 15-35 OE4 | J. Bazargan Direct and inverse scattering on the line for one-dimensional Schrödinger equation |
| 15-40 — 15-55 OC7 | A.M.Gurin On the internal field with non-uniform potential, excited by thermal fluctuations of atoms in crystal |
| 16-00 — 16-20 | Coffee Break |

Chairman V.D.Rusov

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|-----------------------|---|
| 16-20 — 16-35 OE5 | <u>I.N.Belyaeva</u> , A.N.Makarenko, <u>N.A.Chekanov</u> Solution of the eigenvalue problem for one-dimensional anharmonic oscillators by the Frobenius method |
| 16-40 — 16-55 OE7 | A.V.Vodyanitskii Nonlinear evolution of hypersonic waves with Akhiezer damping in crystals |
| 17-00 — 17-15 OG8 | A.Yatsenko, <u>S.Shulga</u> Some superfluid states with singlet and triplet pairing studied using the Fermi liquid theory |
| 17-20 — 17-35 OG11 | G.R.Vakili-Nejad, <u>M.Salavati-Niassary</u> Thermodynamic Properties of C ₆₀ |

18-00 — 21-00 **Visit to Kharkov National University**
Welcome Party

Wednesday, September 20

PLENARY SESSION

Large Hall

Chairman E.A.Kuraev

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|----------------------|--|
| 9-00 — 9-25 PLD2 | V.M.Kontorovich The dice and pulsars |
| 9-30 — 9-55 PLE1 | H.Sekimoto Candle Burnup in a Fast Reactor Core and Relating Nolinear Problems |
| 10-00 — 10-15 OC3 | S.P.Fomin, Yu.P.Mel'nik, <u>V.V.Pilipenko</u> , N.F.Shul'ga Self-sustained regime of nuclear burning wave in fast reactor |
| 10-20 — 10-35 OA3 | <u>Yu.A.Sitenko</u> , A.V.Solovyov, N.D.Vlasii Magnetic monopole and CP violation at finite temperature |
| 10-40 — 10-55 OD2 | A.Nikishov Graviton scattering on a Newtonian center as a restriction on possible 3-graviton vertices |
| 11-00 — 11-20 | Coffee Break |

Chairman P.I.Fomin

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|-----------------------|--|
| 11-20 — 11-45 PLB1 | <u>X.Artru</u> , K.Benhizia The high-Z hydrogen-like atom: a model for polarized structure functions |
| 11-50 — 12-15 PLE4 | <u>V.P.Silin</u> , P.V.Silin Theory of the bifurcation phenomenon of the circular polarization degree of harmonics which are generated by Bremsstrahlung of pump field in Plasmas |
| 12-20 — 12-35 OG1 | A.V.Babich, S.V.Berezovskiy, <u>V.F.Klepikov</u> Spontaneous parity breaking in the theory of modulated structures |
| 12-40 — 12-55 OF1 | A.I.Sokolovsky To kinetics of boson systems with non-zero boson field |
| 13-00 — 13-15 PB8 | A.V.Afanasev, M.I.Konchatnij, <u>N.P.Merenkov</u> Single-spin asymmetries in electron-proton and photon-proton scatterings in the Bethe-Heitler processes induced by loop corrections |
| 13-30 — 14-30 | Lunch |

Wednesday, September 20

PARALLEL SESSION

Section A. Quantum field theory
Large Hall

Chairman J.A.de Azcárraga

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|-----------------------|--|
| 14-40 — 14-55 OA6 | A.J.Nurmagambetov LEGO of Dynkin diagrams in dimensionally reduced supergravities |
| 15-00 — 15-15 OA9 | D.V.Soroka, <u>V.A.Soroka</u> Grassmann-odd Nambu Bracket on Grassmann algebra |
| 15-20 — 15-35 OA1 | <u>I.A.Bandos</u> , J.A.de Azcárraga, C.Miquel-España On (super)twistor string and its superspace(time) formulation |
| 15-40 — 15-55 OA11 | V.D. Gershun Integrable string models of hydrodynamical type in terms of chiral currents |
| 16-00 — 16-20 | Coffee Break |

Chairman M.S.Plyushchay

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|-----------------------|--|
| 16-20 — 16-35 OA13 | K.Ilyenko Group properties of $Osp(2/1;C)$ gauge transformations |
| 16-40 — 16-55 OA8 | <u>V.Yu.Korda</u> , A.V.Shebeko Clothed particles and mass renormalization in quantum field theory |
| 17-00 — 17-15 OA12 | A.A. Isayev Correlation functions in BCS-BEC transition region of nuclear matter |
| 17-20 — 17-35 OA10 | <u>I.E.Ovcharenko</u> , Yu.P.Stepanovsky On some properties of 2-d Weyl equation for charged massless spin S particle |
| 17-40 — 18-00 | Coffee Break |

18-00 — 19-10 **Public lecture and film**

Wednesday, September 20

PARALLEL SESSION

Section G. Phase transitions in condensed matter

Section H. Physics of quantum liquids

Small Hall

Chairman A.I.Sokolovsky

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|----------------------|---|
| 14-40 — 14-55 OG5 | <u>A.S.Abyzov</u> , J.W.P.Schmelzer Nucleation and Spinodal Decomposition in Finite Domains |
| 15-00 — 15-15 OG6 | V.N.Kondratyev Droplet critical evolution induced by shock waves |
| 15-20 — 15-35 OG7 | G.G.Sergeeva Quantum nature of non-fermi charge carriers for pseudogap state of high- T_c superconductors |
| 15-40 — 15-55 OH2 | <u>V.D.Khodusov</u> , D.M.Litvinenko Consideration the influence of electric field on the propagation of first and second sound waves in superfluid helium |
| 16-00 — 16-20 | Coffee Break |

Chairman M.Y.Kovalevsky

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|-----------------------|--|
| 16-20 — 16-35 OH5 | A.N.Tarasov Spin-triplet superfluidity of neutron matter with the Skyrme forces in strong magnetic field near T_c |
| 16-40 — 16-55 OG12 | A.B.Beznosov Magnetic ordering in manganites: super-exchange versus double exchange |
| 17-00 — 17-15 OH3 | I.N.Adamenko, <u>Yu.A.Kitsenko</u> , K.E.Nemchenko, V.A.Slipko, A.F.G.Wyatt Relaxation caused by one phonon decay into three in anisotropic and isotropic phonon systems of He II |
| 17-20 — 17-35 OH6 | I.N.Adamenko, K.E.Nemchenko, <u>I.V.Tanatarov</u> Creation of phonons and rotons in superfluid helium by a solid's phonons incident normal to the interface |

Thursday, September 21

PLENARY SESSION

Large Hall

Chairman E.Tomasi-Gustafsson

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|----------------------|--|
| 9-00 — 9-25 PLD1 | A.P.Potylitsyn Polarization phenomena in a multiple Compton backscattering process |
| 9-30 — 9-55 PLC1 | N.F.Shul'ga Coherent processes at interaction of high-energy particles with crystals and narrow bunches of relativistic particles |
| 10-00 — 10-15 OA2 | A.A.Zheltukhin Noncommutative geometry and Lorentz symmetry in supersymmetric spaces |
| 10-20 — 10-35 OC1 | <u>G.N.Afanasiev</u> , M.V.Lyubchenko, Yu.P.Stepanovsky Polarization properties of the Vavilov-Cherenkov radiation |
| 10-40 — 10-55 OF2 | <u>T.Bryk</u> , I.Mryglod Kinetic collective excitations in liquids: Theory and computer simulations |
| 11-00 — 11-20 | Coffee Break |

Chairman D.P.Sorokin

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|-----------------------|---|
| 11-20 — 11-45 PLA3 | I.Bandos, <u>J. de Azcárraga</u> BPS preons and M-theory |
| 11-50 — 12-15 OA5 | M.S.Plyushchay Hidden supersymmetry in quantum bosonic systems |
| 12-20 — 12-35 OB1 | O.B.Zaslavskii N-spheres in general relativity: black holes, wormholes and gravastars |
| 12-40 — 12-55 OB3 | <u>V.I.Demchik</u> , V.V.Skalozub The spontaneous generation of magnetic fields at high temperature in SU(2)-gluodynamics on a lattice |
| 13-00 — 13-15 OE2 | V.S.Dryuma The geodesics of ten-dimensional the Ricci-flat Riemannian spaces |
| 13-30 — 14-30 | Lunch |

Thursday, September 21

PARALLEL SESSION

Section B. Elementary particle theory

Section C. High-energy electrodynamics in matter

Large Hall

Chairman N.P.Merenkov

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|----------------------|--|
| 14-40 — 14-55 OB6 | <u>A.V.Gulov</u> , V.V.Skalozub New model-independent analysis of LEP2 data for Bhabha process and searching for Z' signals |
| 15-00 — 15-15 OB5 | A.K.Ganguly Pseudo-scalar photon mixing in a magnetized medium |
| 15-20 — 15-35 OB8 | <u>Yu.V.Kulish</u> , E.V.Rybachuk Elimination of Power Divergences in Consistent Model for Spinless and High-Spin Particle Interactions |
| 15-40 — 15-55 OC5 | <u>Yu.P.Kunashenko</u> , Yu.L.Pivovarov Production of relativistic positronium atom by relativistic channeled positron |

16-10 — 18-30 **Excursion to city of Kharkov**

19-00 — 21-00 **Conference Dinner**

Friday, September 22

PLENARY SESSION

Large Hall

Chairman H.Sekimoto

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|-----------------------|---|
| 9-00 — 9-25 PLA4 | A.Shebeko The method of unitary clothing transformations in quantum field theory: the bound-state problem and the S-matrix |
| 9-30 — 9-55 PLE2 | <u>V.D.Rusov</u> , A.V.Glushkov, V.N.Vaschenko, T.N.Zelentsova, O.T.Mihalus, M.Chochlov, A.N.Kolos Galactic cosmic rays – clouds effect and bifurcation model of global climate of the Earth |
| 10-00 — 10-25 PLG3 | V.L.Kulinskii, <u>N.P.Malomuzh</u> Canonical formalism for the description of critical phenomena |
| 10-30 — 10-55 PLE3 | <u>Yu.L.Bolotin</u> , V.V.Yanovsky The World of Chaos |
| 11-00 — 11-20 | Coffee Break |

Chairman A.A.Zheltukhin

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|-----------------------|--|
| 11-20 — 11-45 PLG1 | A.S.Bakai On the role of frustration in formation of the heterogeneous liquid phase |
| 11-50 — 12-15 PLB3 | E.A.Kuraev Application of the Drell-Yan form of the cross section to colliders. Relativistic generalization of black disk optical theorem |
| 12-20 — 12-35 OD4 | E.D.Gazazian, <u>K.A.Ispirian</u> , M.K.Ispirian, D.K.Kalantaryan, D.A.Zakaryan Femtosecond Scanning, Chopping and Length measurement of Electron Bunches by Laser Pulses and Principles of Femtosecond Oscilloscopes |
| 12-40 — 12-55 OG3 | B.I.Lev Selection of states and fluctuations under the first order phase transition |
| 13-00 — 13-15 OF9 | V.Blavats'ka, C. von Ferber, <u>Yu.Holovatch</u> Entropy-induced separation of star polymers in a porous medium |
| 13-30 — 14-30 | Lunch |

Friday, September 22

PARALLEL SESSION

Section F. Kinetic theory

Section G. Phase transitions in condensed matter

Section H. Physics of quantum liquids

Large Hall

Chairman A.V.Chechkin

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|----------------------|--|
| 14-40 — 14-55 OF6 | A.A.Stanislavsky Relationship between fractional mechanics and stable probabilistic distributions |
| 15-00 — 15-15 OH1 | P.I.Fomin, <u>A.P.Fomina</u> On Zone Theory of Super-Fluid He-II |
| 15-20 — 15-35 OF3 | V.D.Rusov, V.A.Tarasov, V.I.Skalozubov, <u>V.N.Bolshakov</u> , D.A.Litvinov, S.I.Kosenko, D.N.Saranyuk, Yu.G.Kondratyev, O.A.Byegunova 3-D simulation of Feoktistov fast reactor kinetics |
| 15-40 — 15-55 OG9 | <u>A.A.Turkin</u> , A.S.Bakai Modeling the precipitation kinetics in systems with strong heterophase fluctuations |
| 16-00 — 16-20 | Coffee Break |

Chairman Yu.V.Slyusarenko

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|-----------------------|--|
| 16-20 — 16-35 OF7 | <u>S.F.Lyagushyn</u> , Yu.M.Salyuk, A.I.Sokolovsky To kinetics of emitters in a crystal taking into account their motion |
| 16-40 — 16-55 PF14 | A.I.Sokolovsky, <u>A.A.Stupka</u> Kinetics theory of electromagnetic processes in medium |
| 17-00 — 17-15 OF10 | V.D.Rusov, V.N.Pavlovich, V.N.Vaschenko, V.A.Tarasov, T.N.Zelentsova, V.N.Bolshakov, <u>D.A.Litvinov</u> , S.I.Kosenko, O.A.Byegunova About possibility of the slow nuclear burning on the boundary of the liquid and solid phases of the earth's core and geoneutrino spectrum |
| 17-20 — 17-35 OH4 | <u>A.S.Peletminskii</u> , S.V.Peletminskii On microscopic theory of spin-S Bose-Einstein condensate in a magnetic field |

Friday, September 22

PARALLEL SESSION

Section D. QED processes in strong fields
Small Hall

Chairman A.P.Potylitsyn

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|----------------------|---|
| 14-40 — 14-55 OD5 | <u>I.D.Feranchuk</u> , S.I.Feranchuk Self-localized excitation in large-alpha quantum electrodynamics |
| 15-00 — 15-15 OD8 | G.M.Filippov New perturbation theory in QED |
| 15-20 — 15-35 OD7 | <u>S.P.Roshchupkin</u> , S.S.Starodub The electron scattering by a nucleus in the strong pulsed laser field |
| 15-40 — 15-55 OD6 | P.I.Fomin, <u>R.I.Kholodov</u> Resonant photoproduction of e^+e^- pair with photon emission in strong magnetic field |
| 16-00 — 16-20 | Coffee Break |

Chairman M.K.Ispirian

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|-----------------------|--|
| 16-20 — 16-35 OD9 | A.S.Kubankin, V.A.Likhachev, <u>N.N.Nasonov</u> , P.N.Zhukova New possible areas of the development of PXR physics |
| 16-40 — 16-55 OD10 | A.V.Shchagin Focusing of radiation from relativistic particle |
| 17-00 — 17-15 OD11 | <u>V.V.Syshchenko</u> , N.F.Shul'ga Eikonal approximation in the transition radiation theory |
| 17-20 — 17-35 OD12 | <u>A.I.Voroshilo</u> , S.P.Roshchupkin, O.I.Denisenko Resonant two-photon emission of an electron in the field of an electromagnetic wave |

Saturday, September 23
PLENARY SESSION
 Large Hall

Chairman A.Nikishov

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|----------------------|--|
| 9-00 — 9-25 PLC2 | S.P.Fomin Multiple Scattering Effect on Radiation in Matter (LPM and Similar Effects) |
| 9-30 — 9-55 PLG2 | <u>V.G.Baryakhtar</u> , E.D.Belokolos, A.V.Dmitriev, A.V.Samar On the theory of electron motion in crystal |
| 10-00 — 10-15 OE3 | V.A.Cherkaskiy Numerical methods for quantum chaos problems in 2d potential systems |
| 10-20 — 10-35 OC6 | G.N.Afanasiev, M.V.Lyubchenko, <u>Yu.P.Stepanovsky</u> Quantum theory of the Vavilov-Cherenkov radiation by particle with arbitrary spin |
| 10-40 — 10-55 OC4 | <u>V.V.Fedorov</u> , I.A.Kuznetsov, E.G.Lapin, S.Yu.Semenikhin, V.V.Voronin New effects in neutron optics of noncentrosymmetric crystals. New way for nEDM search |
| 11-00 — 11-20 | Coffee Break |

Chairman A.S.Bakai

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|----------------------|--|
| 11-20 — 11-35 OB4 | S.A.Ivashyn, <u>A.Yu.Korchin</u> Charged and neutral kaon production in electron-positron annihilation |
| 11-40 — 11-55 OG2 | <u>M.Y.Kovalevsky</u> , L.V.Logvinova, V.T.Matskevych Dynamic theory of condensed matter with regard to the molecules size and shape |
| 12-00 — 12-15 OA4 | S.V.Peletninskii, <u>Yu.V.Slyusarenko</u> Second quantization method in the presence of bound states of particles in non-relativistic quantum electrodynamics and statistical physics |
| 12-20 — 12-35 OG4 | V.V.Slezov Solid phase adiabatic nucleation in supercooled liquids |
| 13-10 — 13-30 | Closing of the Conference |
| 13-30 — 15-00 | Farewell coffee/tea |

Wednesday, September 20

POSTER SESSION 1

Lobby (14-30 — 16-00; the posters may be displayed beginning 10-00)

Chairman: A.I.Kirdin

Sections E, F

Section E. Nonlinear dynamics

- PE1 Dynamic chaos rise in the systems of large number of nonlinear coupled oscillators
V.A.Buts, I.K.Kovalchuk, D.V.Tarasov
- PE2 Intermittency in Hamiltonian systems
S.V.Slipushenko, A.V.Tur, V.V.Yanovsky
- PE3 Entanglement dynamics of three-qubit system in magnetic field
E.A. Ivanchenko
- PE4 Rabi oscillations in deformed magnetic field
E.A.Ivanchenko, A.P.Tolstoluzhsky
- PE5 Regular and chaotic dynamics in multi-well potentials
V.P.Berezovoj, Yu.L.Bolotin, G.I.Ivashkevych
- PE6 An investigation of quantum motion with Clifford algebra
A. Kilic
- PE7 Influence of the falling and reflected potential wave on evolution of the point vortex at the solid wall
K.N.Kulik, A.V.Tur, V.V.Yanovsky
- PE8 Levy flights over quantum paths
N. Laskin
- PE9 Cooperative radiation of Ising-like interacting atoms
S.P.Lukyanets, D.A.Bevzenko
- PE10 Polymorphous billiard – a new type of billiards with chaotic ray dynamics
S.V.Naydenov, Yu.N.Maslovsky, V.V.Yanovsky
- PE11 Chaos in ray splitting ring billiards
V.G.Baryakhtar, S.V.Naydenov, V.V.Yanovsky
- PE12 Spectral properties of the two-dimensional multiwell potential
N.A.Chekanov, E.V.Shevchenko
- PE13 A generalized Kramers' problem for a Levy particle
A.Yu.Slyusarenko, A.V.Chechkin
- PE14 Numerical analysis of nonlinear chemical reaction depending on fractional derivative in time
A.A.Stanislavsky
- PE15 Quantum chaos in smooth 2d potential systems
V.A.Cherkaskiy, Yu.L.Bolotin, V.P.Berezovoj
- PE16 Anatomy of the function of a matrix
V.N.Robuk
- OE1 Regular and chaotic motion of charged particles in constant magnetic field and in field of electromagnetic wave
V.A.Buts
- OE9 Nonrelativistic free electron lasers
V.A.Buts, A.M.Egorov, E.A.Kornilov, V.I.Marekha, A.P.Tolstoluzhsky

Section F. Kinetic theory

- PF1 Statistical mechanics in noncommutative spaces
S.A.Alavi
- PF2 Dependence of physical properties of nucleotides solute in water on their placement in codons and determinative degree
A.Yu.Berezhnoy, S.A.Duplij
- PF3 Probabilistic dynamical model of fragmentation process in size space
R.E.Brodskij, Yu.P.Virchenko

- PF4 On the Pulsar Secondary Electron-Positron Plasma Production in Low-Energy Region
V.M.Kontorovich, A.B.Flanchik
- PF5 Hydrodynamic-type transport equation hierarchy for a fluid with a smooth central interparticle interaction
Y.A.Humenyuk, M.V.Tokarchuk
- PF6 The possibility of registration of second sound waves in isotopic enriched diamond single crystal
V.D.Khodusov, D.M.Litvinenko
- PF7 Universal behavior of thermal conductivity in a large vicinity of a critical point
D.Yu.Ivanov
- PF8 Orientational Brownian motion in macromolecular solutions under heterogeneous conditions
J.A.Kupriyanova, A.V.Zatovsky
- PF9 Magnetoelastic coupling and magnons in the anisotropic half-metal
A.B. Beznosov, E.S.Orel, A.A.Loginov
- PF10 Reduced description method in dynamic theory of particles interacting with medium
S.O.Nikolayenko, Yu.V.Slyusarenko
- PF11 Statistical physics methods in economic theory: about the use of characteristic numbers of technological process in production systems classification
O.M.Pignasty
- PF12 Description of diffusion process in disordered media by interface stochastic equation of motion
Z.Rezaee, R.Torabi
- PF13 Correlation analysis of noise diagnostics of in-core reactor equipment
V.A.Rudakov
- OF5 Electromagnetic field correlations and sound waves
A.I.Sokolovsky, A.A.Stupka
- PF15 Verification of the Bogolyubov functional hypothesis for an exact solvable model
A.I.Sokolovsky, Z.Yu.Chelbaevsky
- PF16 Generalized phonon hydrodynamics
S.A.Sokolovsky, I.M.Chernenko
- PF17 Temporal randomization to the interaction of normalized and anomalous transport
A.A.Stanislavsky
- PF18 The theory of the dissipative structures of the defect kinetic system of a nonlinear physical system "metal+load+irradiation"
V.A.Tarasov, T.L.Borikov, T.V.Kryzhanovskaja, S.A.Chernegenko, V.D.Rusov
- PF19 The thermal neutron waves excitation in multiplied media bounded by absorber
A.V.Vodyanitskii, Yu.V.Slyusarenko
- PF20 On the kinetic theory of field transport by charged particles coherent distributions
A.V.Vodyanitskii

Thursday, September 21

POSTER SESSION 2

Lobby (14-30 — 16-00; the posters may be displayed beginning 10-00)

Chairman: S.P.Fomin

Sections D, G, H

Section D. QED processes in strong fields

- PD1 Path integral quantization of electromagnetic field in dispersive dielectrics
A. Bechler
- PD2 Resonant two-photon annihilation of an e^-e^+ pair in the laser field
O.I. Denisenko, S.P.Roshchupkin
- PD3 Orientation dependence of the multiple scattering of relativistic particles in wolfram and germanium crystals: a computer experiment
V.I.Efremov, Yu.L.Pivovarov

- PD4 The interpretation of wave function in quantum electrodynamics
V.V.Musakhanyan
- PD5 On pressure in expanding Universe model
S.S.Sannikov-Proskuryakov
- PD6 Some problems in a theory of early Universe evolution
S.S.Sannikov-Proskuryakov
- PD8 Circular polarization of the high energy electron bremsstrahlung with account of the second Born approximation
V.V.Syshchenko, N.F.Shul'ga
- PD9 Interference effect in the light amplification phenomenon in the Coulomb scattering of nonrelativistic electrons in a two-mode laser field
V.A.Tsybul'nik, S.P.Roshchupkin, S.S.Starodub
- OD3 Radiative Corrections in High Energy Compton Scattering
M.I.Konchatnij, N.P.Merenkov

Section G. Phase transitions in condensed matter

- PG1 A general method for solution of some problems of motion stabilization and destabilization
V.G.Baryakhtar, E.D.Belokolos, A.V.Samar
- PG2 Coexistence Phenomenon of Low Temperature Magnetism and Superconductivity in Bi-Pb-Sr-Ca-Cu-O-I High Temperature Superconductors
V.V.Bunda
- PG3 Molecular dynamics simulation of the phase transitions in liquid carbon
M.S.Byshkin, A.A.Turkin, A.S.Bakai
- PG4 Transient kinetics of homogeneous nucleation
M.P.Fateev
- PG5 Crystal lattice, electronic structure and charge ordering in $\text{Nd}_{2/3}\text{Ca}_{1/3}\text{MnO}_3$
E.L.Fertman, D.V.Sheptyakov, A.B.Beznosov, V.A.Desnenko
- PG7 The low-temperature phase of the disordered finite-size 2D XY model
O.Kapikranian, B.Berche, Yu.Holovatch
- PG8 On the universality class of 3D magnets with long-range-correlated disorder
D.Ivaneyko, B.Berche, J.Ilnytskyi, Yu.Holovatch
- PG9 About crossover's number near a critical point of real systems
D.Yu.Ivanov
- PG10 Magnetodynamics for nuclear magics in magnetar crusts
V.N.Kondratyev, I.M.Kadenko
- PG11 Explosive nucleosynthesis at strong stellar magnetization
V.N.Kondratyev, I.M.Kadenko
- PG12 Cluster formation in the system of gravitating Fermi and Bose particles
B.I.Lev, K.V.Grigorishin
- PG13 Melting of ultrathin lubricant film with deformational defect of shear modulus
A.V.Khomenko, I.A.Lyashenko
- PG14 On the quantum-field description of many-particle system with the spontaneously broken symmetries
Y.M.Poluektov
- PG15 Phonon dynamics of CsH_2PO_4 crystal at phase transitions
Ya.Shehur
- PG16 The ideal gas of hydrogen-like atoms response to the perturbation by the external electromagnetic field
Yu.V.Slyusarenko, A.G.Sotnikov
- PG17 The Structure Deformation Influence on the Correlated Motion of Tetrahedral Groups in $[\text{N}(\text{CH}_3)_4]_2\text{MeCl}_4$ (Me=Zn, Cu, Mn) crystals
S.A.Sveleba, I.M.Katerynychuk, O.V.Semotyuk, I.M.Kunyo, I.V.Karpa, Yu.I.Pankivsky
- PG18 Paramagnetic tunneling state concept of the low-temperature magnetic anomalies of insulating glasses
A.A.Borisenko, A.S.Bakai

Section H. Physics of quantum liquids

- PH1 About magnetic properties of superfluid dense neutron matter with the Skyrme interactions at zero temperature
A.N.Tarasov
- OH7 On the microscopic theory of undamped flows in Bose-systems
A.P.Ivashin, Yu.M.Poluektov

Friday, September 22

POSTER SESSION 3

Lobby (14-30 — 16-00; the posters may be displayed beginning 10-00)

Chairman: A.P.Rekalo

Sections A, B, C

Section A. Quantum field theory

- PA1 On E11 of M-theory and its dynamical realization
A.J.Nurmagambetov
- PA2 To the theory of a non-linear neutral scalar field with spontaneous broken symmetry
Y.M.Poluektov
- PA3 Clothed particle representation in quantum field theory: boost generators of the Poincare group
V.Yu.Korda, P.A.Frolov
- PA4 Vertex clothing in quantum field theory
V.Yu.Korda, I.V.Yeletsikh
- PA5 Electronic properties of disclinations in carbon nanostructures
Yu.A.Sitenko, N.D.Vlasii
- PA6 The symmetry, connecting the processes in 2- and 4-dimensional space-times, and the value $\alpha_0 = \frac{1}{4} \pi$ for the bare fine structure constant
V.I.Ritus
- PA7 Regular set-theoretical supermatrix solutions for quantum Yang-Baxter equation
A.Sadovnikov
- PA8 On investigations of the systems of Einstein-Maxwell-Dirac-Yang-Mills equations beyond the perturbation theory
V.P.Olyeynik
- PA9 Pseudo-Majorana Spinors and Supersymmetry
A.N.Petrash
- PA10 Phenomenological potential, model wave function and diffraction interaction of four-nucleon-nuclei with heavy nuclei
Yu.A.Berezhnoy, V.Yu.Korda, A.G.Gakh
- PA11 On supermatrix models and noninvertible analog of superdeterminant
O.Kotulska
- PA12 On six-dimensional Dirac equation and some relations between polarisations of the spin $\frac{1}{2}$ particles
M.V. Lyubchenko, Yu.P.Stepanovsky
- PA13 Tensionless super p-branes in extended superspaces
D.V.Uvarov, A.A.Zheltukhin

Section B. Elementary particle theory

- PB1 Photon-photon scattering and a search for light pseudoscalars
A.V.Afanasev
- PB2 Covariant spin amplitudes in relativistic fermion scattering
M.V.Bondarenko
- PB3 Some Attempts at Systematizing the Masses of the Elementary Particles
E.Cerven
- PB4 On the uniqueness of the Born-Infeld action
D.J.Cirilo-Lombardo
- PB5 New higher spin multiplets
S.A.Fedoruk, E.A.Ivanov
- PB6 Polarization phenomena in processes $eN \rightarrow eN$ and $e^+e^- \leftrightarrow N\bar{N}$ in presence of two-photon exchange
G.I.Gakh, E.Tomasi-Gustafsson
- PB7 Parity nonconservation in trinucleon bound states
V.V.Kotlyar
- PB9 Quantum computations: fundamentals and algorithms
S.A.Duplij, I.I.Shapoval
- PB10 Radiation reaction and renormalization for a photon-like charged particle
Yu.Yaremko
- PB11 Atom-Field Interaction in Noncommutative Space
C.Yuce
- PB12 About neutron acceleration in uniform electromagnetic fields
Yu.P.Stepanovsky, Y.Y.Zanimonskiy
- PB13 2-body Dirac equation and light meson spectra
A.Duviryak
- OB7 T-odd correlations in $B_{\pm} \rightarrow D^* K^{*\pm}$ decays
V.A.Kovalchuk

Section C. High-energy electrodynamics in matter

- PC1 Spin effects in the electron planar channeling
A.A. Babaev
- PC2 Application of finite-zone potential method for the calculation of radiation spectrum of weak-relativistic electrons channeling in monocrystals
M.V.Maksyuta, S.A.Dzyan
- PC3 Coherent e^+e^- pair photoproduction in crystal
Yu.P. Kunashenko
- PC4 Angular distribution of e^+e^- pair created by a photon near threshold
Yu.P.Kunashenko, Yu.L.Pivovarov, E.O.Pozdeeva
- PC5 Mechanism of the hadron inelastic scattering cross-section growth in multiperipheral model within the framework of perturbation theory
I.V.Sharf, V.D.Rusov
- PC6 Dynamical parametric X-ray radiation from polycrystalline grains at moderate electron energy
A.V.Shchagin
- PC7 The effects of rainbow scattering and orbiting of fast electrons by crystal atomic string, by nanotube field and by the field of highly charged ions
N.F.Shul'ga, V.I.Truten'
- PC8 Significance of the coherent length in radiation processes at beam-beam collisions
N.F.Shul'ga, D.N.Tyutyunnik
- PC9 Angular and polarization characteristics of ultrarelativistic electron radiation in a thin crystal
A.S.Fomin, S.P.Fomin
- PC10 Trident production in crystals under planar channeling conditions
M.G.Shatnev