

2<sup>nd</sup> International Conference on  
**QUANTUM ELECTRODYNAMICS**  
 AND  
**STATISTICAL PHYSICS**  
**QEDSP2006**

September 19-23, Kharkov, Ukraine

## PRELIMINARY PROGRAM

### Section A. Quantum field theory

#### Plenary presentations

- PLA1 Aspects of D-brane dynamics in supergravity backgrounds  
I.Bandos, D.Sorokin .....
- PLA2 Vacuum condensates, dynamical masses, ether wind  
P.I.Fomin .....
- PLA3 On BPS preons and M-theory  
I.A.Bandos, J.A. de Azcárraga .....
- PLA4 The method of unitary clothing transformations in quantum field theory: the bound-state problem and the S-matrix  
A.Shebeko.....

#### Oral presentations

- OA1 On (super)twistor string and its superspace(time) formulation  
I.A.Bandos, J.A.de Azcárraga, C.Miquel-España .....
- OA2 Noncommutative geometry and Lorentz symmetry in supersymmetric spaces  
A.A.Zheltukhin .....
- OA3 Magnetic monopole and CP violation at finite temperature  
Yu.A.Sitenko, A.V.Solovyov, N.D.Vlasii .....
- OA4 Second quantization method in the presence of bound states of particles in non-relativistic quantum electrodynamics and statistical physics  
S.V.Peletminskii, Yu.V.Slyusarenko .....
- OA5 Hidden supersymmetry in quantum bosonic systems  
M.S.Plyushchay .....

- OA6 LEGO of Dynkin diagrams in dimensionally reduced supergravities  
A.J.Nurmagambetov .....
- OA7 On geometrical relativistic actions in supermanifolds, squeezed states and relativistic wave equations  
D.J.Cirilo-Lombardo .....
- OA8 Clothed particles and mass renormalization in quantum field theory  
V.Yu.Korda, A.V.Shebeko .....
- OA9 Grassmann-odd Nambu bracket on Grassmann algebra  
D.V.Soroka, V.A.Soroka .....
- OA10 On some properties of 2-D Weyl equation for charged massless spin  $\frac{1}{2}$  particle  
I.E.Ovcharenko, Yu.P.Stepanovsky .....
- OA11 Integrable string models of hydrodynamical type in terms of chiral currents  
V.D. Gershun .....
- OA12 Correlation functions in BCS-BEC transition region of nuclear matter  
A.A. Isayev .....
- OA13 Group properties of  $osp(2|1;C)$  gauge transformations  
K.Ilyenko.....

#### Poster presentations

- 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.Zhetukhin .....

## Section B. Elementary particle theory

### Plenary presentations

- PLB1 The high-Z hydrogen-like atom: a model for polarized structure functions  
X.Artru, K.Benhizia.....
- PLB2 From theory to experiment: hadron electromagnetic form factors in space-like and time-like regions  
E.Tomasi-Gustafsson, G.I.Gakh, A.P.Rekalo .....
- PLB3 Application of the Drell-Yan form of the cross section to colliders. Relativistic generalization of black disk optical theorem  
E.A.Kuraev .....

### Oral presentations

- OB1 N-spheres in general relativity: black holes, wormholes and gravastars  
O.B.Zaslavskii .....
- OB2 Two-photon-exchange effects in electron-proton elastic scattering  
A.V.Afanasev .....
- OB3 The spontaneous generation of magnetic fields at high temperature in SU(2)-gluodynamics on a lattice  
V.I.Demchik, V.V.Skalozub .....
- OB4 Charged and neutral kaon production in electron-positron annihilation  
S.A.Ivashyn, A.Yu.Korchin .....
- OB5 Pseudo-scalar photon mixing in a magnetized medium  
A.K.Ganguly .....
- OB6 New model-independent analysis of LEP2 data for Bhabha process and searching for Z' signals  
A.V.Gulov, V.V.Skalozub .....
- OB7 T-odd correlations in  $B^\pm \rightarrow D^* K^{*\pm}$  decays  
V.A.Kovalchuk .....

- OB8 Elimination of Power Divergences in Consistent Model for Spinless and High-Spin Particle Interactions  
Yu.V.Kulish, E.V.Rybachuk .....

### Poster presentations

- 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  
Erik 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 .....
- PB8 Single-spin asymmetries in electron-proton and photon-proton scatterings in the Bethe-Heitler processes induced by loop corrections  
A.V.Afanasev, M.I.Konchatnij, N.P.Merenkov .....
- 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 .....

## Section C. High-energy electrodynamics in matter

### Plenary presentations

- PLC1 Coherent processes at interaction of high-energy particles with crystals and narrow bunches of relativistic particles  
N.F.Shul'ga .....

PLC2 Multiple scattering effect on radiation in matter (LPM and similar effects)  
S.P.Fomin.....

### Oral presentations

- OC1 Polarization properties of the Vavilov-Cherenkov radiation  
G.N.Afanasiev, M.V.Lyubchenko, Yu.P.Stepanovsky.....
- OC2 On the beam extraction from high-energy superconducting proton colliders  
V.V.Tikhomirov .....
- OC3 Self-sustained regime of nuclear burning wave in fast reactor  
S.P.Fomin, Yu.P.Mel'nik, V.V.Pilipenko, N.F.Shul'ga .....
- OC4 New effects in neutron optics of noncentrosymmetric crystals. New way for nEDM search  
V.V.Fedorov, I.A.Kuznetsov, E.G.Lapin, S.Yu.Semenikhin,  
V.V.Voronin .....
- OC5 Production of relativistic positronium atom by relativistic channeled positron  
Yu.P.Kunashenko, Yu.L.Pivovarov .....
- OC6 Quantum theory of the Vavilov-Cherenkov radiation by particle with arbitrary spin  
G.N.Afanasiev, M.V.Lyubchenko, Yu.P.Stepanovsky.....
- OC7 On the internal field with non-uniform potential, excited by thermal fluctuations of atoms in crystall  
A.M.Gurin .....

### Poster presentations

- 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.Trutne' .....

- 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 .....

### Section D. QED processes in strong fields

#### Plenary presentations

- PLD1 Polarization phenomena in a multiple Compton backscattering process  
A.P.Potylitsyn .....
- PLD2 The dice and pulsars  
V.M.Kontorovich .....

#### Oral presentations

- OD1 Mass zeros of the fermionic determinant in QED4  
M.P.Fry .....
- OD2 Graviton scattering on a Newtonian center as a restriction on possible 3-graviton vertices  
A.Nikishov .....
- OD3 Radiative corrections in high energy Compton scattering  
M.I.Konchatnij, N.P.Merenkov .....
- OD4 Femtosecond scanning, chopping and length measurement of electron bunches by laser pulses and principles of femtosecond oscilloscopes  
E.D.Gazazian, K.A.Ispirian, M.K.Ispirian, D.K.Kalantaryan,  
D.A.Zakaryan .....
- OD5 Self-localized excitation in large-alpha quantum electrodynamics  
I.D.Feranchuk, S.I.Feranchuk .....
- OD6 Resonant photoproduction of  $e^+e^-$  pair with photon emission in strong magnetic field  
P.I.Fomin, R.I.Kholodov .....
- OD7 The electron scattering by a nucleus in the strong pulsed laser field  
S.P.Roshchupkin, S.S.Starodub .....
- OD8 New perturbation theory in QED  
G.M.Filippov .....

- OD9 New possible areas of the development of PXR physics  
A.S.Kubankin, V.A.Likhachev, N.N.Nasonov, P.N.Zhukova .....
- OD10 Focusing of radiation from relativistic particle  
A.V.Shchagin .....
- OD11 Eikonal approximation in the transition radiation theory  
V.V.Syshchenko, N.F.Shul'ga .....
- OD12 Resonant two-photon emission of an electron in the field of an electromagnetic wave  
A.I.Voroshilo, S.P.Roshchupkin, O.I.Denisenko .....

### **Poster presentations**

- 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 a 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.....
- PD7 Spontaneous particle production rate in a strongly inhomogeneous field  
A.V.Zayakin.....
- 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.....

### **Section E. Nonlinear dynamics**

#### **Plenary presentations**

- PLE1 Candle burnup in a fast reactor core and relating nolinear problems  
H.Sekimoto.....

- PLE2 Galactic cosmic rays – clouds effect and bifurcation model of global climate of the Earth  
V.D.Rusov, A.V.Glushkov, V.N.Vaschenko, T.N.Zelentsova, O.T.Mihalus, M.Chochlov, A.N.Kolos .....
- PLE3 The World of Chaos  
Yu.L.Bolotin, V.V.Yanovsky .....
- PLE4 Theory of the bifurcation phenomenon of the circular polarization degree of harmonics which are generated by Bremsstrahlung of pump field in Plasmas  
V.P.Silin, P.V.Silin .....

### **Oral presentations**

- OE1 Regular and chaotic motion of charged particles in constant magnetic field and in field of electromagnetic wave  
V.A.Buts .....
- OE2 The geodesics of ten-dimensional the Ricci-flat Riemannian spaces  
V.S.Dryuma .....
- OE3 Numerical methods for quantum chaos problems in 2d potential systems  
V.A.Cherkaskiy .....
- OE4 Direct and inverse scattering on the line for one-dimensional Schrödinger equation  
J. Bazargan .....
- OE5 Solution of the eigenvalue problem for one-dimesional anharmonic oscillators by the Fröbenius method  
I.N.Belyaeva, A.N.Makarenko, N.A.Chekanov .....
- OE6 Construction of probabilistic solutions of the Boltzman equation  
Yu.P.Virchenko, T.V.Karabutova .....
- OE7 Nonlinear evolution of hypersonic waves with Akhiezer damping in crystals  
A.V.Vodyanitskii .....
- OE8 Nonlinear theory of mass transfer and heterogeneous consecutive reactions in aerosol systems  
D.Kopiychenko, P.O.Mchedlov-Petrossyan, G.Khomenko .....
- OE9 Nonrelativistic free electron lasers  
V.A.Buts, A.M.Egorov, E.A.Kornilov, V.I.Marekha, A.P.Tolstoluzhsky .....

### **Poster presentations**

- 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 .....

## Section F. Kinetic theory

### Plenary presentations

- PLF1 Quantum relaxation under the influence of non-Markovian stationary noises with infinite memory range: exact results  
I.Goychuk, P.Hänggi .....
- PLF2 Fundamentals of Levy Flights  
A.V.Chechkin, V.Yu.Gonchar, J.Klafter, R.Metzler .....

### Oral presentations

- OF1 To kinetics of boson systems with non-zero boson field  
A.I.Sokolovsky .....

- OF2 Kinetic collective excitations in liquids: Theory and computer simulations  
T.Bryk, I.Mryglod .....
- OF3 3-D simulation of Feoktistov fast reactor kinetics  
V.D.Rusov, V.A.Tarasov, V.I.Skalozubov, V.N.Bolshakov, D.A.Litvinov, S.I.Kosenko, D.N.Saranyuk, Yu.G.Kondratyev, O.A.Byegunova .....
- OF4 Quantum-kinetic description of the collective dynamics of chemically reacting particles, adsorbed at the metallic surface  
V.V.Ignatyuk .....
- OF5 Kinetic theory of electromagnetic processes in medium  
A.I.Sokolovsky, A.A.Stupka .....
- OF6 Relationship between fractional mechanics and stable probabilistic distributions  
A.A.Stanislavsky .....
- OF7 To kinetics of emitters in a crystal taking into account their motion  
S.F.Lyagushyn, Yu.M.Salyuk, A.I.Sokolovsky .....
- OF8 Derivation of Wigner distribution function  
S.Khademi, A.H.Saeid .....
- OF9 Entropy-induced separation of star polymers in a porous medium  
V.Blavats'ka, C. von Ferber, Yu.Holovatch .....
- OF10 About possibility of the slow nuclear burning on the boundary of the liquid and solid phases of the earth's core and geoneutrino spectrum  
V.D.Rusov, V.N.Pavlovich, V.N.Vaschenko, V.A.Tarasov, T.N.Zelentsova, V.N.Bolshakov, D.A.Litvinov, S.I.Kosenko, O.A.Byegunova .....

### Poster presentations

- 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.Dupli .....
- PF3 Probabilistic dynamical model of fragmentation process in size space  
R.E.Brodskii, 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 .....
- PF14 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.Chernegeko, 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 .....

## Section G. Phase transitions in condensed matter

### Plenary presentations

- PLG1 On the role of frustration in formation of the heterogeneous liquid phase  
A.S.Bakai.....
- PLG2 On the theory of electron motion in crystal  
V.G.Baryakhtar, E.D.Belokolos, A.V.Dmitriev, A.V.Samar.....

### Oral presentations

- OG1 Spontaneous parity breaking in the theory of modulated structures  
A.V.Babich, S.V.Berezovskiy , V.F.Klepikov .....
- OG2 Dynamic theory of condensed matter with regard to the molecules size and shape  
M.Y.Kovalevsky, L.V.Logvunova, V.T.Matskevych .....
- OG3 Selection of states and fluctuations under the first order phase transition  
B.I.Lev .....
- OG4 Solid phase adiabatic nucleation in supercooled liquids  
V.V.Slezov.....
- OG5 Nucleation and Spinodal Decomposition in Finite Domains  
A.S.Abyzov, J.W.P.Schmelzer .....
- OG6 Droplet critical evolution induced by shock waves  
V.N.Kondratyev .....
- OG7 Quantum nature of non-fermi charge carriers for pseudogap state of high-T<sub>c</sub> superconductors  
G.G.Sergeeva .....
- OG8 Some superfluid states with singlet and triplet pairing studied using the Fermi liquid theory  
A.Yatsenko, S.Shulga .....
- OG9 Modeling the precipitation kinetics in systems with strong heterophase fluctuations  
A.A.Turkin, A.S.Bakai.....
- OG10 Thermodynamic interpretation of the fragmentation phenomenon in nanopores  
G.R.Vakili-Nejad .....
- OG11 Thermodynamic Properties of C<sub>60</sub>  
G.R.Vakili-Nejad, M.Salavati-Niassary.....
- OG12 Magnetic ordering in manganites: super-exchange versus double exchange  
A.B.Beznosov.....

## Poster presentations

- 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 .....
- PG6 Phase transitions in moving systems: vortices in superconductors  
M.Gitterman.....
- 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.Khomenco, 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  $\text{CsH}_2\text{PO}_4$  crystal at phase transitions  
Ya.Shchur .....
- PG16 The ideal gas of hydrogen-like atoms response to the perturbation by the external electroromagnetic field  
Yu.V.Slyusarenko, A.G.Sotnikov.....

- PG17 The Structure Deformation Influence on the Correlated Motion of Tetrahedral Groups in  $[\text{N}(\text{CH}_3)_4]_2\text{MeCl}_4$  ( $\text{Me}=\text{Zn, Cu, Mn}$ ) crystals  
S.A.Sveleba, I.M.Katerynchuk, O.V.Semotyuk, I.M.Kunyo, I.V.Karpa, Yu.I.Pankivskyi .....

- 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

### Oral presentations

- OH1 On Zone Theory of Super-Fluid He-II  
P.I.Fomin, A.P.Fomina .....
- OH2 Consideration the influence of electric field on the propagation of first and second sound waves in superfluid helium  
V.D.Khodusov, D.M.Litvinenko .....
- OH3 Relaxation caused by one phonon decay into three in anisotropic and isotropic phonon systems of He II  
I.N.Adamenko, Yu.A.Kitsenko, K.E.Nemchenko, V.A.Slipko, A.F.G.Wyatt .....
- OH4 Om microscopic theory of spin-S Bose-Einstein condensate in a magnetic field  
A.S.Peletinskii, S.V.Peletinskii .....
- OH5 Spin-triplet superfluidity of neutron matter with the Skyrme forces in strong magnetic field near  $T_c$   
A.N.Tarasov .....
- OH6 Creation of phonons and rotons in superfluid helium by a solid's phonons incident normal to the interface  
I.N.Adamenko, K.E.Nemchenko, I.V.Tanatarov .....
- OH7 On the microscopic theory of undamped flows in Bose-systems  
A.P.Ivashin, Yu.M.Poluektov .....

### Poster presentations

- PH1 About magnetic properties of superfluid dense neutron matter with the Skyrme interactions at zero temperature  
A.N.Tarasov .....