

**The 9th International Conference
“Hadron Structure and Fundamental Interactions”**



<http://hepd.pnpi.spb.ru/hsfi/>

**Petersburg Nuclear Physics Institute
National Research Centre “Kurchatov Institute”
8 – 12 July 2024, Gatchina, St. Petersburg**



Updated: 24 June 2024

Monday, 8 July, NRC KI – PNPI, Gatchina

10:45 - 11:15	Registration
11:15 – 11:30	Opening
11:30 – 12:10	A. Serebrov (NRC KI - PNPI) “Analysis of experimental data on neutron decay for the possibility of the existence of right vector boson W_R ”
12:10 – 12:50	Yu. Kudenko (INR RAS) “Neutrino oscillations: precision measurements and discovery potential”
13:00 – 14:30	Lunch
14:30 – 14:50	R. Samoilo (NRC KI - PNPI) “Testing the Neutrino-4 experiment result at a new level of accuracy”
14:50 – 15:20	E. Samigulin (NRC KI) “Recent results of the DANSS experiment”
15:20 – 15:50	D. Kirpichnikov (INR RAS) “Probing light dark matter with NA64mu and NA64e”
15:50 – 16:20	D. Peshekhonov (JINR) “Latest results of NA64 experiment at CERN”
16:20 – 16:40	Coffee
16:40 – 17:10	V. Voronin (NRC KI - PNPI) “Search for new nucleon-nucleon interactions using neutron scattering”
17:10 – 17:40	V. Ezhov (NRC KI - PNPI) “Neutron lifetime measurements: status and outlooks”
17:40 – 18:00	G. Koroteev (MIPT) “Neutrino capture cross section as function of GT excitations at accelerator energies”

<i>Tuesday, 9 July, NRC KI – PNPI, Gatchina</i>	
10:00 - 10:20	I. Kudrov (NRC KI - IHEP) “Gribov copy effects in the maximal abelian gauge”
10:20 – 10:40	R. Zhokhov (NRC KI - IHEP & IZMIRAN) “ Various aspects of two and three color QCD phase diagram”
10:40 – 11:00	Y. Heo (JINR) “QCD in the chiral SU(3) limit from baryon masses on lattice QCD ensembles”
11:00 – 11:30	Coffee
11:30 – 12:00	V. Fadin (BINP SB RAS) “Peculiarities of Regge cuts in QCD”
12:00 – 12:30	Yu. Pismak (SPbSU) “On Lorentz transformations of the Majorano fermionic field and possibilities of its renormalizable interaction with elementary particles and extended objects”
12:30 – 13:00	A. Kotikov (JINR) “Bjorken sum rule with analytic coupling. Heavy quark contribution”
13:00 – 14:30	Lunch
14:30 – 14:50	V. Kim (NRC KI - PNPI) “Manifestations of BFKL evolution at high energies”
14:50 – 15:10	V. Oreshkin (NRC KI - PNPI) “Search for BFKL evolution effects in dijet production with CMS at LHC”
15:30 – 15:50	A. Chernyshev (Samara Univ.) “Production of single isolated photon in the Parton Reggeization approach”
15:50 – 16:10	E. Kuzminskii (NRC KI - PNPI) “Reggeon model of pomeron and odderon in renormalization group approach”
16:10 – 16:30	Coffee
16:30 – 17:00	M. Ryskin (NRC KI - PNPI) “Current Status of the Odderon”
17:00 – 17:30	A. Papa (Calabria Univ. & INFN) “Forward Higgs production at high energies”
17:30 – 18:00	A. Kataev (INR RAS) “On the fine structure of the massless PT QCD series representations”
18:00 – 18:30	S. Brodsky (SLAC) “New Perspectives for Hadron Physics from Color-Confining Holographic Light Front QCD”

<i>Wednesday, 10 July, St. Petersburg State University, St. Petersburg, Nevsky 1</i>	
10:00 - 10:20	O. Teryaev (JINR) “Gravitational effects in QCD matter”
10:20 – 10:40	I. Arefeva (MI RAS) “Holography for NICA: phase transitions and energy lost”
10:40 – 11:00	A. Malakhov (JINR) “Investigation of the antiparticles and antinuclei production in relativistic nuclear interactions”
11:00 – 11:20	G. Feofilov (SPbSU) “Initial state effects in relativistic heavy-ion collisions”
11:20 – 11:40	Coffee
11:40 – 12:00	V. Vechernin (SPbSU) “Influence of short-range rapidity correlations on multiplicity fluctuations”
12:00 – 12:20	M. Tokarev (JINR) “Entropy for system with structural constituents”
12:20 – 12:40	O. Rogachevsky (JINR) “Study of two particle correlations in 4-velocity space”
12:40 – 13:00	A. Seryakov (SPbSU) “Recent results from the NA61/SHINE experiment at CERN”
13:00 – 13:20	D. Sosnov (NRC KI – PNPI) “First measurement of forward rapidity gap events in pA collisions at the LHC with CMS experiment”
13:20 – 14:30	Lunch
14:30 – 14:50	V. Ryabov (NRC KI – PNPI & JINR) “Status of the MPD experiment”
14:50 – 15:10	V. Ivanishev (NRC KI – PNPI) “Feasibility study for resonance reconstruction in Bi+Bi collisions at $\sqrt{s_{NN}} = 9.2$ GeV in the MPD detector at NICA”
15:10 – 15:30	V. Plotnikov (JINR) “First physics results and scientific program of the BM@N experiment”
15:30 – 16:10	V. Kolesnikov (JINR) “Recent results on light nuclei production from the BM@N experiment at NICA”
16:10 – 16:30	Coffee
16:30 – 16:50	V. Kovalenko (SPbSU) “ Multiplicity dependent pt-spectrum in extended multi-pomeron exchange model”
16:50 – 17:10	E. Andronov (SPbSU) “Probing collectivity in string models via machine learning”
17:10 – 17:30	D. Prokhorova (SPbSU) “ Collective behaviour in small colliding systems using interacting colour string model approach”
17:30 – 17:50	M. Mamaev (JINR) “Feasibility study for anisotropic flow measurements in the BM@N and MPD-FXT experiments at Nuclotron-NICA”
17:50 – 18:10	Q.T. Le (JINR & Dau Tan Univ.) “Coupling of UrQMD 3.4 and SMM models for simulation of neutron and nuclear fragment productions in nucleus- nucleus”
18:10 – 18:30	A. Simak (SPbSU) “Accounting of energy losses in the framework of the modified Monte Carlo Glauber model”

<i>Thursday, 11 July, NRC KI – PNPI, Gatchina</i>	
10:00 - 10:40	I. Strakovsky (GW Univ.) “Puzzle for the vector meson threshold photoproduction”
10:40 – 11:00	S. Manaenkov (NRC KI – PNPI) “Comparison of SDME and amplitude methods in description of vector-meson production”
11:00 – 11:20	Coffee
11:20 – 11:50	A. Issadykov (JINR & INP KZ) “Aspects of B-physics”
11:50 – 12:10	G. Ganbold (JINR) “Four-quark, molecular-type interpretation of the state $Y(4230)$”
12:10 – 12:40	A. Dzyuba (NRC KI - PNPI) “LHCb status and recent results”
12:40 – 13:00	D. Savrina (SINP MSU) “Study of the $\chi_{c1}(3872)$ hadron at the LHCb”
13:00 – 14:30	Lunch
14:30 – 15:00	A. Datta (JINR) “Probing nucleon spin structure with the Spin Physics Detector (SPD) at NICA”
15:00 – 15:30	T. Liu (Shandong Univ.) “Nucleon spin structures and opportunities at the Electron-Ion Collider in China”
15:30 – 16:00	B. Ermolaev (PTI RAS) “Feasible resolution of the proton spin crisis”
15:50 – 16:10	M. Malyshev (NRC KI - PNPI) “Light-front approach to hadron properties”
16:10 – 16:30	Coffee
16:30 – 16:50	S. Bondarenko (JINR) “The pion properties in the Bethe-Salpeter approach with a separable kernel”
16:50 – 17:10	S. Yurev (JINR) “Relativistic equation for four-nucleon system”
17:10 – 17:30	X. Li (Shandong Univ.) “Polarized helium-3 in high magnetic fields”
17:30 – 17:50	N. Tung (JINR) “Spin polarization of electrons by means of quantum ring with Rashba interaction in the regime of strong light-matter coupling”
17:50 – 18:10	A. Allizzi Alnakishbandey (Novosibirsk Univ.) “Transition of dimuonium through foil”
	Excursion TBA

<i>Friday, 12 July, NRC KI – PNPI, Gatchina</i>	
11:00 – 11:20	Coffee
11:20 – 11:50	I. Nagle (Macquire Univ.) “Horizon Thermodynamics on nice slices of the causal diamond”
11:50 – 12:10	Yu. Naryshkin (NRC KI – PNPI) “Observation of quantum entanglement in spin correlations of top and anti-top quarks pair in the ATLAS experiment at LHC”
12:10 – 12:30	A. Kharlamov (BINP SB RAS) “Z boson decay into two leptons and photon in ATLAS at LHC”
12:30 – 12:50	M. Pokidova (NRC KI – PNPI & SPbPU) “Latest results on searches for Higgs boson decays into Dark Matter particles in the ATLAS experiment”
13:00 – 14:30	Lunch
14:30 – 14:50	Yu. Khokhlov (NRC KI - IHEP) “Study of scalar resonance in the omega-phi system in pion-Be interaction at momentum 29 GeV”
14:50 – 15:10	V. Dorofeev (NRC KI - IHEP) “Study of the phi-pi0 system production in the charge exchange reaction of the 29 GeV pion beam with the berrilium target of the VES setup”
15:30 – 15:50	T. Kharlamova (BINP SB RAS) “Precise measurement of R at the KEDR detector”
15:50 – 16:10	A. Druzhinin (BINP SB RAS) “Study of e^+e^- annihilation into hadrons with the SND detector at the VEPP-2000 collider”
16:10 – 16:30	Coffee
16:30 – 16:50	A. Kharlamov (BINP SB RAS) “Studies of two-photon production of eta-meson with the SND detector at the e+e- VEPP2000 collider”
16:50 – 17:10	E. Solodov (BINP SB RAS) “Study of the hadron and nucleon reactions with the CMD-3 detector at the e+e- VEPP2000 collider”
17:10 – 17:30	S. Shimanskiy (JINR) “High pT physics at NICA complex”
17:30 – 17:50	A. Zelenov (NRC KI – PNPI) “Large pT baryon and exotic state production at NICA energies”
17:50	Closing