

**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: 9 July 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. Kim (NRC KI - PNPI) “Higgs boson and naturalness domain of the standard model”
17:10 – 17:30	V. Voronin (NRC KI - PNPI) “Search for new nucleon-nucleon interactions using neutron scattering”
17:30 – 18:00	V. Ezhov (NRC KI - PNPI) “Neutron lifetime measurements: status and outlooks”
18:00 – 18:20	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	<b>I. Kudrov (NRC KI - IHEP) “Abelian and monopole dominance in SU(3) gluodynamics and Gribov copy effects”</b>
10:20 – 10:40	<b>R. Zhokhov (NRC KI - IHEP &amp; IZMIRAN) “Various aspects of two and three color QCD phase diagram”</b>
10:40 – 11:00	<b>Y. Heo (JINR) “QCD in the chiral SU(3) limit from baryon masses on lattice QCD ensembles”</b>
11:00 – 11:30	Coffee
11:30 – 12:00	<b>V. Fadin (BINP SB RAS) “Peculiarities of Regge cuts in QCD”</b>
12:00 – 12:20	<b>E. Kuzminskii (NRC KI - PNPI) “Reggeon model of pomeron and odderon in renormalization group approach”</b>
12:20 – 12:40	<b>Yu. Pismak (SPbSU) “On Lorentz transformations of the Majorano fermionic field and possibilities of its renormalizable interaction with elementary particles and extended objects”</b>
12:40 – 13:00	<b>A. Kotikov (JINR) “Bjorken sum rule with analytic coupling: heavy quark contribution”</b>
13:00 – 14:30	Lunch
14:30 – 15:00	<b>V. Kim (NRC KI - PNPI) “Manifestations of BFKL evolution at high energies”</b>
15:00 – 15:20	<b>V. Oreshkin (NRC KI - PNPI) “Search for BFKL evolution effects in dijet production with CMS at LHC”</b>
15:20 – 15:50	<b>A. Chernyshev (Samara Univ.) “Production of single isolated photon in the Parton Reggeization approach”</b>
15:50 – 16:10	Coffee
16:10 – 16:40	<b>M. Ryskin (NRC KI - PNPI) “Current status of the Odderon”</b>
16:40 – 17:00	<b>N. Raicevic (Montenegro Univ.) “The role of the intrinsic-kT and soft gluon contributions in Drell-Yan production”</b>
17:00 – 17:30	<b>A. Papa (Calabria Univ. &amp; INFN) “Forward Higgs production at high energies”</b>
17:30 – 18:00	<b>A. Kataev (INR RAS) “On the fine structure of the massless PT QCD series representations”</b>
18:00 – 18:30	<b>S. Brodsky (SLAC) “New perspectives for hadron physics from color-confining holographic light front QCD”</b>

<b><i>Wednesday, 10 July, St. Petersburg State University, conference-center “Mendeleev”, St. Petersburg, Nevsky avenue 1/4, 5th floor</i></b>	
<b>10:00 – 10:30</b>	<b>I. Arefeva (MI RAS) “Holography for NICA: phase transitions and energy lost”</b>
<b>10:30 – 10:50</b>	<b>A. Malakhov (JINR) “Investigation of the antiparticles and antinuclei production in relativistic nuclear interactions”</b>
<b>10:50 – 11:10</b>	<b>Coffee</b>
<b>11:10 – 11:30</b>	<b>M. Tokarev (JINR) “Entropy for system with structural constituents”</b>
<b>11:30 – 11:50</b>	<b>V. Vechernin (SPbSU) “Influence of short-range rapidity correlations on multiplicity fluctuations”</b>
<b>11:50 – 12:10</b>	<b>O. Rogachevsky (JINR) “Study of two particle correlations in 4-velocity space”</b>
<b>12:10 – 12:30</b>	<b>A. Seryakov (SPbSU) “Recent results from the NA61/SHINE experiment at CERN”</b>
<b>12:30 – 12:50</b>	<b>D. Sosnov (NRC KI – PNPI) “First measurement of forward rapidity gap events in pA collisions at the LHC with CMS experiment”</b>
<b>13:00 – 14:30</b>	<b>Lunch</b>
<b>14:30 – 15:00</b>	<b>V. Ryabov (NRC KI – PNPI &amp; JINR) “Status of the MPD experiment”</b>
<b>15:00 – 15:20</b>	<b>D. Ivanishchev (NRC KI – PNPI &amp; SPbPU) “Feasibility study for resonance reconstruction in Bi+Bi collisions at <math>\sqrt{s_{NN}} = 9.2</math> GeV in the MPD detector at NICA”</b>
<b>15:20 – 15:50</b>	<b>V. Plotnikov (JINR) “First physics results and scientific program of the BM@N experiment”</b>
<b>15:50 – 16:10</b>	<b>V. Kolesnikov (JINR) “Recent results on light nuclei production from the BM@N experiment at NICA”</b>
<b>16:10 – 16:30</b>	<b>Coffee</b>
<b>16:30 – 16:50</b>	<b>V. Kovalenko (SPbSU) “Multiplicity dependent pt-spectrum in extended multi-pomeron exchange model”</b>
<b>16:50 – 17:10</b>	<b>E. Andronov (SPbSU) “Probing collectivity in string models via machine learning”</b>
<b>17:10 – 17:30</b>	<b>D. Prokhorova (SPbSU) “Collective behaviour in small colliding systems using interacting colour string model approach”</b>
<b>17:30 – 17:50</b>	<b>M. Mamaev (JINR) “Feasibility study for anisotropic flow measurements in the BM@N and MPD-FXT experiments at Nuclotron-NICA”</b>
<b>17:50 – 18:10</b>	<b>S. Simak (SPbSU) “Accounting of energy losses in the framework of the modified Monte Carlo Glauber model”</b>

<i>Thursday, 11 July, NRC KI – PNPI, Gatchina</i>	
<b>10:00 - 10:40</b>	<b>I. Strakovsky (GW Univ.) “Puzzle for the vector meson threshold photoproduction”</b>
<b>10:40 – 11:00</b>	<b>S. Manaenkov (NRC KI – PNPI) “Comparison of SDME and amplitude methods in description of vector-meson production”</b>
<b>11:00 – 11:20</b>	<b>Coffee</b>
<b>11:20 – 11:50</b>	<b>A. Sarantsev (NRC KI – PNPI) “Spectroscopy of light hadrons: the modern status and perspectives”</b>
<b>11:50 – 12:20</b>	<b>A. Issadykov (JINR &amp; INP KZ) “Aspects of B-physics”</b>
<b>12:20 – 12:50</b>	<b>A. Dzyuba (NRC KI - PNPI) “LHCb status and recent results”</b>
<b>12:50 – 13:10</b>	<b>D. Savrina (SINP MSU &amp; NRC KI - KCTEP) “Study of the <math>\chi_{c1}(3872)</math> hadron at the LHCb”</b>
<b>13:10 – 14:30</b>	<b>Lunch</b>
<b>14:30 – 15:00</b>	<b>A. Datta (JINR) “Probing nucleon spin structure with the Spin Physics Detector (SPD) at NICA”</b>
<b>15:00 – 15:30</b>	<b>T. Liu (Shandong Univ.) “Nucleon spin structures and opportunities at the Electron-Ion Collider in China”</b>
<b>15:30 – 16:00</b>	<b>B. Ermolaev (PTI RAS) “Feasible resolution of the proton spin crisis”</b>
<b>16:00 – 16:20</b>	<b>Coffee</b>
<b>16:20 – 16:40</b>	<b>M. Malyshev (NRC KI - PNPI) “Light-front approach to QCD”</b>
<b>16:40 – 17:00</b>	<b>S. Bondarenko (JINR) “The pion properties in the Bethe-Salpeter approach with a separable kernel”</b>
<b>17:00 – 17:20</b>	<b>S. Yurev (JINR) “Relativistic equation for four-nucleon system”</b>
<b>17:20 – 17:40</b>	<b>A. Allizzi Alnakishbandey (Novosibirsk Univ.) “Transition of dimuonium through foil”</b>
<b>22:30 - 3:00</b>	<b>Boat Excursion</b>

<b>Friday, 12 July, NRC KI – PNPI, Gatchina</b>	
<b>11:30 – 11:40</b>	<b>Coffee</b>
<b>11:40 - 12:10</b>	<b>I. Nagle (Macquire Univ.) “Horizon Thermodynamics on nice slices of the causal diamond”</b>
<b>12:10 – 12:40</b>	<b>A. Belavin (ITP RAS) “4D string theory and Dark Matter”</b>
<b>12:40 – 13:00</b>	<b>M. Pokidova (NRC KI – PNPI &amp; SPbPU) “Latest results on searches for Higgs boson decays into Dark Matter particles in the ATLAS experiment”</b>
<b>13:00 – 14:30</b>	<b>Lunch</b>
<b>14:30 – 14:50</b>	<b>A. Kharlamov (BINP SB RAS) “Z boson decay into two leptons and photon in ATLAS at LHC”</b>
<b>14:50 – 15:10</b>	<b>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”</b>
<b>15:10 – 15:30</b>	<b>Yu. Khokhlov (NRC KI - IHEP) “Study of scalar resonance in the omega-phi system in pion-Be interaction at momentum 29 GeV”</b>
<b>15:30 – 15:50</b>	<b>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”</b>
<b>15:50 – 16:10</b>	<b>T. Kharlamova (BINP SB RAS) “Precise measurement of R at the KEDR detector”</b>
<b>16:10 – 16:30</b>	<b>Coffee</b>
<b>16:30 – 16:50</b>	<b>V. Druzhinin (BINP SB RAS) “Study of <math>e^+e^-</math> annihilation into hadrons with the SND detector at the VEPP-2000 collider”</b>
<b>16:50 – 17:10</b>	<b>A. Kharlamov (BINP SB RAS) “Studies of two-photon production of eta-meson with the SND detector at the e+e- VEPP2000 collider”</b>
<b>17:10 – 17:30</b>	<b>E. Solodov (BINP SB RAS) “Study of the hadron and nucleon reactions with the CMD-3 detector at the e+e- VEPP2000 collider”</b>
<b>17:30 – 17:50</b>	<b>S. Shimanskiy (JINR) “High pT physics at NICA complex”</b>
<b>17:50 – 18:10</b>	<b>A. Zelenov (NRC KI – PNPI) “Large pT baryon and exotic state production at NICA energies”</b>
<b>18:10</b>	<b>Closing</b>