**October 4, Monday**
**Conference Hall of BLTP JINR**
**Plenary Session**

Chairman V. Voronov

10.00 ***Malakhov A., Burov V.*** (JINR)
Opening
10.20 ***Itkis M.*** (JINR)

***Quantum Chromodynamics at the Large Distances***

10.40 ***Prokhorov L.*** (Russia)
On Nature of Symmetries

***Coffee break 11.00 – 11.30***

Chairman V. Burov

11.30 ***Musakhanov M.*** (Uzbekistan)
Heavy-light Quark Systems in the Instanton Vacuum
12.00 ***Voutier E.*** (France)
Polarized Electrons and Positrons for Hadron Imaging
12.30 ***Konopleva N.*** (Russia)
Gauge Fields and Gravity

***Break 13.00 – 14.00***

***Progress in experimental studies at the high energy accelerators***

Chairman A. Malakhov

14.00 ***Punjabi V.*** (USA)
New Measurements of $G_{Ep}/G_{Mp}$ to high $Q^2$ at Jefferson Lab
14.30 ***Perdrisat C.F.*** (USA)
Measurements of $G_{Ep}/G_{Mp}$ to high $Q^2$ with 11 GeV Electrons at Jefferson Lab
15.00 ***Boucher J.*** (France)
Time-like Electromagnetic Proton Form Factors
15.30 ***Wojtsekhowski B.*** (USA)
Review of Neutron Form Factors

***Break 16.00 – 16.10***



XX ISHEPP, October 4 - 9, 2010 | Scientific Programme

**October 4, Monday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Relativistic Heavy Ion Collisions.***
***Structure Functions of Hadrons and Nuclei****

Chairman V. Lukyanov

16.10 ***Malakhov A.*** (JINR)
Asymptotics in Relativistic Nuclear Physics
16.30 ***Baldin A.*** (JINR)
Collective Effects in Relativistic Nuclear Physics:
Historic Survey and Prospects
17.00 ***Karmanov V.*** (Russia)
Solving Bethe-Salpeter Equation in Minkowski Space
17.25 ***Dorkin S.*** (JINR)
Heavy mesons in Bethe-Salpeter Approach
17.45 ***Rogochaya E.*** (JINR)
Bethe-Salpeter Approach with the Covariant Separable
Kernel for the Electrodisintegration of the Deuteron
18.05 ***Bondarenko S.*** (JINR)
Relativistic Properties of the Deuteron in the Bethe-Salpeter Approach
18.25 ***Molochkov A.*** (Russia)
Relativistic Structure of Nuclei

18.50 End of the session

19.00 ***Welcome Party (BLTP Cafeteria)***

* ***Session in Honor of the 61th Birthday of Professor V. Burov***

**October 5, Tuesday**
**Conference Hall of BLTP JINR**
**Parallel Session**

***Relativistic Heavy Ion Collisions***

Chairman C. Perdrisat

9.00 ***Vechernin V.*** (Russia)
Long-range Rapidity Correlations in the Model with Independent Emmiters

9.20 ***Vokal S.*** (Slovakia)
Pseudorapidity Spectra of Relativistic Particles Emitted
in the Au and Pb Induced Reactions at High Energies

9.40 ***Tchuvil'sky Yu.*** (Russia)
Pauli Repulsion Energy and the Properties of Door-Way States
in Relativistic Central Heavy Ion Collisions

***Coffee break 10.40 – 11.10***

***Hadron spectroscopy***

Chairman S. Gerasimov

11.10 ***Aslanyan P.*** (JINR)
J-PARC P02 project: "The Study of Exotic Multiquark States
in Systems with Λ-Hyperons, $K^0_S$ -Mesons and γ - Quanta"

11.50 ***Khrykin A.*** (JINR)
The Case for the NN-decoupled Dibaryon $d^*_1(1956)$

12.10 ***Dineykhan M.*** (JINR)
Determination of the Mass Spectrum of (cb) Mesons
with Relativistic Corrections

12.30 ***Uzikov Yu.*** (JINR)
Formation of the $^1S_0$ Diproton in the Reaction $pp \to pp_S\pi^0$

12.50 ***Jerusalimov A.*** (JINR)
Study of the Reaction $np \to np\pi^+\pi^-$ at Intermediate Energies

***Break 13.10 – 15.00***





**October 5, Tuesday**
**Blokhintsev Auditorium of BLTP JINR**
**Parallel Session**

***Multiparticle dynamics***

Chairman M. Tokarev

9.00 ***Abramovsky V.A.*** (Russia)
The Different in Inclusive Spectra of Proton-Proton
and Proton-antiproton Collisions at √S = 900 GeV

9.20 ***Alakhverdyants A.*** (JINR)
The Kinematical Fit for Neutral Strange Particle Reconstruction

9.40 ***Zborovsky Im.*** (Czech Republic)
Saturation of Hadron Production in Proton-(anti)Proton Collisions at Low $P_T$

10.20 ***Dedovich T.*** (JINR)
P-adic Coverage Method in Fractal Analysis of Showers

***Coffee break 10.40 – 11.10***

Chairman V. Glagolev

11.10 ***Slowinski B.*** (Poland)
Impact Parameter Estimation in Hadron-Nucleus Interactions
at Intermediate Energies

11.30 ***Eliseev S.*** (JINR)
Finite Formation Time of Hadrons and QGP Production: to be or not to be?

11.50 ***D'yachenko A.*** (Russia)
On the Harderning of the Spectrum of High-Energy Particles Formed
in Heavy Ion Collisions Considered within the Framework
of the Hydrodynamic Approach

12.10 ***Tokarev M.*** (JINR)
Search for Signature of Phase Transition and Critical Point
in Heavy Ion Collisions

12.30 ***Feofilov G.*** (Russia)
Long-range (Forward-backward) Pt and Multiplicity Correlations
in ALICE in pp Collisions at 900 GeV

12.50 ***Filinov V.*** (Russia)
Stochastic Simulations of Thermodynamic and Kinetic Properties
of Strongly Coupled Quark-Qluon Plasmas in Feynman and Wigner
Representation of Quantum Statistical Mechanics

13.10 ***Knyazev N.*** (Russia)
Equation of State of Multi-Component Hadronic Gas with Van der Waals
Correction and Phase Transition to Quark-Qluon Plasma

***Break 13.30 – 15.00***

**October 5, Tuesday**
**Conference Hall of BLTP JINR**
**Parallel Session**

***Polarization phenomena and spin physics***

Chairman V. Ladygin

15.00 ***Piyadin S.*** (JINR)
First Results on the Study of dp -> ppn Reaction
at Internal Target Station at Nuclotron

15.20 ***Ladygina N.*** (JINR)
Study of the dp-Elastic Scattering at Relativistic Energies

15.40 ***Salmina E.*** (JINR)
Longitudinal Polarization of the Lambda and Antilambda Hyperons
in DIS at COMPASS (2003-2004)

16.00 ***Krasnov V.*** (JINR)
Polarization Effects in Charge Pion Production
at the NUCLOTRON Internal Target

16.20 ***Lomov V.*** (Russia)
Generalized Dynamics of Rarita-Schwinger Field

16.40 ***Silenko A.*** (Belarus)
Spin-tensor Effects at Channeling and a Potential
for Measuring Quadrupole Moments of Unstable Nuclei

***Coffee break 17.00 – 17.30***

***Hadron spectroscopy***

Chairman V. Karmanov

17.30 ***Kaloshin A.*** (Russia)
Mixing of Fermion Fields of Opposite Parities and Baryon Resonances

17.50 ***Barabanov M.*** (JINR)
Application of High Quality Antiproton Beam with Momentum Ranging
from 1 GeV/c to 15 GeV/c to Study Charmonium and Exotics

18.10 ***Radzhabov A.*** (Russia)
Light-by-light Contribution of Scalar Mesons to (g-2) of the Muon

18.30 ***Kuraev E .*** (JINR)
Three jet production in peripherical $\bar{p}\,(p) - p$ collisions

18.50 ***Egorov O.*** (Russia)
Diffraction Dissosiation (DD) Phenomena
after Neutrino Nuclei Interactions and Cumulative Processes

19.10 ***Troyan A.*** (JINR)
Search for and Study of Low-Mass Scalar Mesons
in the Reaction $np \rightarrow np\pi^+\pi^-$ at the Impulse of Neutron Beam 3.83 GeV/c

19.30 End of the session





**October 5, Tuesday**
**Blokhintsev Auditorium of BLTP JINR**
**Parallel Session**

***Applied use of relativistic beams***

Chairman A. Baldin

15.00 ***Chilap V.*** (Russia)
Basic Principles of a New Scheme of Electronuclear Method
of Energy Production and Transmutation of Long-Lived Radioactive Wastes
of Nuclear Power Plants Based on Nuclear Relativistic Technologies

15.20 ***Bielewicz M.*** (Poland)
Measurement Relevant to High Energy Neutron Spectrum by Application
Yttrium Detectors in the U/Pb-Assembly Using 4 GeV Deuteron Beam
from JINR Nuclotron (Dubna)

15.40 ***Indrigh A.*** (JINR)
Reaction Rates in 237-Np Exposed to Spallation Neutrons
in Pb Target and U-blanket System by Relativistic Deuterons of 4 GeV

16.00 ***Kilim S.*** (Poland)
A Method of Spallation Neutron Energy Spectrum Reconstruction
with Yttrium Sample Activation

16.20 ***Slowinski B.*** (Poland)
Profiles and Fluctuations of Electromagnetic Cascades Produced
by 100-3500 MeV Gamma Quanta in Heavy Amorphous Media

***Coffee break 17.00 – 17.30***

Chairman S. Tiutiunnikov

17.30 ***Wagner V.*** (Czech Republic)
Measurement of Neutron Field Produced Around Pb/U Setup Irradiated
by Relativistic Light Ions

17.50 ***Pronskikh V.*** (JINR)
(n,xn) and (n,γ) Reaction Rates in Iodine-129 Exposed
to Spallation Neutrons of GAMMA-3 Setup

18.10 ***Szuta M.*** (Poland)
Once Through Thorium Based Fuel Cycle Analysis
of Acceleration Driven System for Energy Producction
and Radioactive Waste Trasmutation-Impact on Economy Improvement

18.30 ***Safronova A.*** (Belarus)
Experimental Study of Neutron-Physical Characteristics
of the U/Pb Assembly of Electronuclear Setup “Energy+Transmutation”
under 1.6 and 4 GeV Deuterons Beam Irradiation

18.50 ***Patapenka A.*** (Belarus)
Method and Results of the $^{nat}$Pb(d,f), $^{209}$Bi(d,f) and $^{209}$Bi(d,xnyp)
Reaction Cross Sections Measurements at 1.6 and 4 GeV Deuterons Beam

19.10 End of the session

**October 6, Wednesday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Hadron spectroscopy***

Chairman O. Teryaev

9.00 ***Achasov N.*** (Russia)
Life of Light Scalar Mesons: past, present, future
9.30 ***Gerasimov S.*** (JINR)
Why Polarized Photonuclear Absorption Sum Rules Could be Interesting?
9.50 ***Efimov G.*** (JINR)
Bound states and Quantum Fielf Theory
10.20 ***Surovtsev Yu.*** (JINR)
The $f_2$- and $\rho_3$-Mesons from Analysisof Multi-Channel Pion-Pion Scattering
10.40 ***Uzikov Yu.*** (JINR)
Two Pion Production in the Reaction pd -> pd$\pi^+\pi^-$

***Coffee break 11.00 – 11.30***

***Polarization phenomena and spin physics***

Chairman A. Kovalenko

11.30 ***Tomasi-Gustafsson E.*** (France)
Opportunities for QCD Studies with Exclusive Processes Induced by Antiprotons
11.50 ***Teryaev O.*** (JINR)
New Manifestations of Axial Anomalies
12.30 ***Bystritskiy Yu.*** (JINR)
Bremsstrahlung and Pair Production Processes at Low Energies: Multidifferential Section and Polarization Phenomena
12.50 ***Ladygin V.*** (JINR)
Recent Results with Polarized Deuterons and Polarimetry at NUCLOTRON-NICA
13.10 ***Reznikov S.*** (JINR)
Deuteron Beam Polarimetry at NUCLOTRON-NICA
13.30 ***Sharov V.*** (JINR)
Measurement of Spin-dependent np Observables Using High Intensity Polarized Deuteron Beams at the Nuclotron-M

***Break 13.50 – 15.00***



XX ISHEPP, October 4 - 9, 2010 | Scientific Programme

**October 6, Wednesday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Polarization phenomena and spin physics***

Chairman N. Piskunov

15.00 ***Annand J.*** (UK)
Recoil Neutron Polarimetry at High Momenta
15.20 ***Kunne F.*** (France)
Overview of Experimental Results on Nucleon Spin Structure from COMPASS
16.00 ***Glagolev V.*** (JINR)
Differential Cross Section and Vector Analyzing Power in d-p Elastic Scattering at 2.0 GeV
16.20 ***Gurchin Yu.*** (JINR)
Study of dp-elastic scattering with internal and extracted Nuclotron beams

***Coffee break 16.40 – 17.10***

***Structure functions of hadrons and nuclei***

Chairman P. Zaribin

17.10 ***Nedorezov V.*** (Russia)
New GRAAL Data on Nucleon Photoabsorption in the Nucleon Resonance Energy Region
17.40 ***Tomio L.*** (Brazil)
The Nucleon Structure Function in a Statistical Quark Model
18.10 ***Kotikov A.*** (JINR)
Small-x Behavior of the Structure Function $F^c_2$
18.40 ***Gamzova E.*** (Russia)
The Electromagnetic Structure of Composite Systems at the Large Momentum Transfer
19.00 ***Kudinov M.*** (Russia)
The Relativistic Electromagnetic Structure of the Nucleon

19.20 End of the session

**October 7, Thursday**
**Conference Hall of BLTP JINR**
**Parallel Session**

***Relativistic heavy ion collisions***

Chairman G. Feofilov

9.00 ***Fadeev N.*** (JINR)
Asymptotic Freedom in Mechanics of Hadron Collisions at High Energies
9.20 ***Krutenkova A.*** (Russia)
Cumulative to Evaporation Ratio in $^{12}$C Fragmentation
9.40 ***Vasiliev T.*** (JINR)
High Pt Pion Spectra and Dihadron Correlations at CBM@SIS100
10.00 ***Krylov A.*** (Russia)
Violation of Unitarity of the tree Approximation
to the Glauber AA-Scattering Amplitude
10.20 ***Mikhailov K.*** (Russia)
Femtoscopy Application of the New EPOS Model to the STAR Experiment
10.40 ***Lyuboshitz V.*** (JINR)
Possible Effect of Mixed Phase and Deconfinement upon Spin Correlations in
the ($\Lambda\ \overline{\Lambda}$) Pairs Generated in Relativistic Heavy-Ion Collisions

***Coffee break 11.00 – 11.30***

Chairman V. Toneev

11.30 ***Musulmanbekov G.*** (JINR)
On Hypernuclear State in High Energy Heavy Ion Collisions
12.00 ***Radchenko N.*** (Russia)
Nucleus-Nucleus Collisions at Low Energies.
The Effects from non Vacuum Exchange
12.20 ***Baldina El.*** (Russia)
Relativistic Description of Particle Production
and Acceleration by Ion and Laser Beams
12.40 ***Rogachevsky O.*** (JINR)
The Fractal Dimension Estimations
for the Events of Au(Pb)+Emu Interactions
13.20 ***Litvinenko A.*** (JINR)
The Centrality Determination for the NICA/MPD
13.40 ***Bubelev En.*** (JINR)
On the Physical Improbability of the Nuclei Mutual Longitudinal Compression
in Collisions at High and Moreover Super High Energies

***Break 14.00 – 15.00***





**October 7, Thursday**
**Blokhintsev Auditorium of BLTP JINR**
**Parallel Session**

***Quantum Chromodynamics at the Large Distances***

Chairman St. Gmuca

9.00 ***Kobushkin A.*** (Ukraine)
Two-photon exchange in electron deuteron scattering
9.20 ***Galilo B.*** (JINR)
Weyl group, CP and the kink-like field configurations
in the effective SU(3) gauge theory
9.40 ***Koryakin V.*** (Russia)
To the Question on the Theory of Magnetic Charges
and Quantum Chromodynamics at Large Distances
10.10 ***Amalsky G.*** (Russia)
Explanation of Empirical Ratios $\sigma_{tot} \approx 5\sigma_{el}$ and $\sigma_{tot} \approx \sigma^0_{tot}\ (\sqrt{s}/\sqrt{s_0})^{1/5}$ of N-N
Cross-Sections at Energies $\sqrt{s} = 5 - 10^4$ GeV and $\sqrt{s} > \sqrt{s_0}$, $\sqrt{s_0} \sim 70$ GeV
10.40 ***Pestov I.*** (JINR)
Mathematical Principles Unifying General Relativity and Quantum Mechanics

***Coffee break 11.00 – 11.30***

***Studies of exotic nuclei in relativistic beams***

Chairman V. Nedorezov

11.30 ***Krivenkov D.*** (JINR)
Peripheral Dissociation of Relativistic $^9$C Nuclei in Nuclear Track Emulsion
11.50 ***Afanasiev S.*** (JINR)
Search Results for Eta-Mesic Nuclei in the d + C Reaction in JINR
12.10 ***Gmuca St.*** (Slovakia)
Density Dependent Couplings in RMF Approach
12.30 ***L'vov A.*** (Russia)
Search for Eta-Mesic Nuclei at the LPI Synchrotron
12.50 ***Majling L.*** (Czech Republic)
Delayed Clusters Accompanying Non-Mesonic Weak Decay
of the Hypernuclei. One- and Two-Nucleon Induced Processes
13.20 ***Rossiyskaya N.*** (JINR)
Formation of Heavy Hyperons and Antihyperons in DIS
at the COMPASS Experiment

***Break 13.40 – 15.00***

**October 7, Thursday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Quantum Chromodynamics at the Large Distances***

Chairman A. Shebeko

15.00 ***Makhaldiani N.*** (JINR)
Renormdynamics, Multiparticle Production, Negative Binomial Distribution and Riemann Zeta Function
15.30 ***Kochelev N.*** (JINR)
Soft Pomeron Structure and Chromomagnetic Quark-Gluon Interaction
16.00 ***Bogolubsky I.*** (JINR)
Gluon lumps revisited ?
16.20 ***Ganbold G.*** (JINR)
Infrared Behavior of QCD Running Coupling

***Coffee break 16.40 – 17.10***

Chairman A. Sorin

17.10 ***Kosmachev O.*** (JINR)
Universal Constituents for Description of a Structure Both the Leptons and Hadrons
17.30 ***Machavariani A.*** (JINR)
Two Body and three Body Field Theoretical Equations with and Without Quark Degrees of Freedom

17.50 End of the session

**19.00 Concert (Dubna Music School)**





**October 8, Friday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Quantum Chromodynamics at the Large Distances***

Chairman Br. Slowinski

9.00 ***Shebeko A.*** (Ukraine)
Relativistic Interaction for Meson-Nucleon Systems in the Clothed-Particle Representation
9.25 ***Nikolaev N.*** (Germany)
QCD Unitarily Cutting Rules for Nuclear Collisions
9.50 ***Savin I.*** (JINR)
Azimutal assymmetries in hadron production from longitudinal polarization target
10.20 ***Smolyansky S.*** (Russia)
Role of Vacuum Polarization in the Annihilation Channel at the Presence of a Strong Laser Field
10.40 ***Pervushin V.*** (JINR)
Universe as a Higgs Boson Factory

***Coffee break 11.00 – 11.30***

***Progress in experimental studies at the high energy accelerators***

Chairman V. Kekelidze

11.30 ***Abraamyan Kh.*** (JINR)
Resonance Structure in the $\gamma\gamma$ and $\pi^0\,\pi^0$ Systems
12.00 ***Suleimanov M.*** (JINR)
Search for a Signal on Phase Transition of Strongly Interacting Matter applying the random matrix approach
12.20 ***Dryablov D.*** (JINR)
Identification of Xe Bunch at the JINR NUCLOTRON-M Accelerator by the Track Length Measurement Method
12.40 ***Kurilkin A.*** (JINR)
Single and Double Pion Production in the np-Collisions at 1.25 GeV with HADES
13.00 ***Kurilkin P.*** (JINR)
Cross Section for dp-Elastic Scattering at 1.25 GeV/u

***Break 13.20 – 15.00***

**October 8, Friday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Progress in experimental studies at the high energy accelerators***

Chairman S. Vokal

15.00 ***Feofilov G.*** (Russia)
Onset of ridge phenomena in AA and pp collisions and percolation string model

15.20 ***Maggiora M.*** (Italy)
Transverse Parton Distribution Functions in Drell-Yan Processes at FAIR

15.40 ***Kovalenko A.*** (JINR)
First Results on the SPS Beam Collimation with Bent Crystals

***Coffee break 16.10 – 16.40***

***Relativistic Heavy Ion Collisions.***
***Cumulative processes***

Chairman A. Vodopyanov

16.40 ***Shimanskiy S.*** (JINR)
Study of the Cold Dense Baryonic Matter with Nonpolarized and Polarized Beams

17.20 ***Titov A.*** (JINR)
Cumulative effects in strong electromagnetic fields

17.40 ***Stavinskiy A.*** (Russia)
Dense Cold Matter Study with special trigger at TWA, Nuclotron, NICA and FAIR

18.00 ***Sharkov G.*** (Russia)
FLINT Experimental Data on Dense Gold Matter Search with Special Trigger

18.40 End of session

19.00 **Banquet (Scientists' Club)**





**October 9, Saturday**
**Conference Hall of BLTP JINR**
**Plenary Session**

***Accelerator facilities: status and perspectives.***
***Progress in experimental studies at the high energy accelerators***

Chairman E. Tomasi-Gustafsson

9.00 ***Zarubin P.*** (JINR)
Clustering in Dissociation of Relativistic $^{9}$Be, $^{9}$C, $^{10}$C, and $^{12}$N nuclei

9.40 ***Zelenski A.*** (USA)
Polarized Proton Beams in RHIC

10.20 ***Vodopyanov A.*** (JINR)
Status of the LHC

10.50 ***Rukoyatkin P.*** (JINR)
External beams at the Nuclotron facility: status and nearest tasks

11.10 ***Kovalenko A.*** (JINR)
Nuclotron-M: Status and Perspectives

***Break 11.30 – 11.40***

Chairman V. Burov

11.40 ***Malakhov A.*** (JINR)
Proton-Ion Complex "PROTION"

12.00 ***Akulinichev S.*** (Russia)
Novel Accelerator Technologies for Radiation Therapy

12.40 ***Krasavin E.*** (JINR)
Biological Effect of Accelerated Heavy Ions

13.20 ***Burov V., Malakhov A.*** (JINR)
Closing

13.30 **Coffee**