## International Conference on Selected Problems of Modern Physics Dubna, June 8 – 11, 2003

## List of Talks

(Section I)

Alphabetical

Last updated: June 6, 2003

# 1 Talk by: G. A. Alekseev

Title: Colliding plane waves of massless fields in general relativity and in the

low energy string gravity model

Date/Time: June 9, 17:40

Section: Gravity & Cosmolgy Auditory: Lecture Hall  $2^{nd}$  floor

# 2 Talk by: D. V. Anchishkin

Title: Radiation of lepton pairs from finite thermal fireball

Date/Time: June 11, 18:00 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall at 4th floor

# 3 Talk by: A. A. Andrianov, V. A. Andrianov, P. Giacconi, and

R. Soldatti

Title: Domain wall generation by fermion self-interaction

Date/Time: June 9, 16:00

Section: Quantum Field Theory

Auditory: Conference Hall

# 4 Talk by: A. A. Andrianov, V. A. Andrianov, S. Afonin

Title: Large- $N_c$  QCD, Operator Product Expansion and string-like meson

spectra

Date/Time: June 9, 16:00 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 5 Talk by: A. B. Arbuzov

Title: Precision test of weak interactions in muon decay spectrum

Date/Time: June 8, 18:00 Section: Hadron Physics

# 6 Talk by: B. A. Arbuzov

Title: Effective non-local theories as a result of symmetry breaking

Date/Time: June 9, 15:30

Section: Quantum Field Theory

Auditory: Conference Hall

#7 Talk by: I. Ya. Arefeva

Title: Superstrings, Born-Infeld action, and rolling tachyon solution

Date/Time: June 10, 10:50 Section: Plenary Session Auditory: Conference Hall

# 8 Talk by: S. Azakov

Title: The Schwinger model on the Torus: Hamiltonian approach

Date/Time: June 9, 18:50

Section: Quantum Field Theory

Auditory: Conference Hall

# 9 Talk by: J. Baacke

Title: Scalar O(N) quantum field theory beyond leading order approxima-

tions — in and out of equilibrium

Date/Time: June 9, 13:20 Section: Plenary Session Auditory: Conference Hall

# 10 Talk by: O. V. Babourova

Title: Dark matter as matter with dilaton charge

Date/Time: June 9, 18:00

Section: Gravity & Cosmolgy Auditory: Lecture Hall  $2^{nd}$  floor

# 11 Talk by: A. P. Bakulev

Title: Pion distribution amplitude and QCD vacuum: recent results from

CLEO and E791 experiments

Date/Time: June 10, 18:40

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 12 Talk by: V. V. Belokurov, O. A. Khrustalev, V. A. Sadovnichy,

O.D.Timofeevskaya

Title: Systems and subsystems in quantum mechanics

Date/Time: June 10, 10:50 Section: Plenary Session Auditory: Conference Hall # 13 Talk by: **D. Blaschke** 

Title: Color superconductivity in compact stars

Date/Time: June 11, 10:10 Section: Plenary Session Auditory: Conference Hall

# 14 Talk by: I. L. Bogolubsky

Title: Nonperturbative solutions with  $S^2$ -valued scalar fields

Date/Time: June 10, 18:00

Section: Quantum Field Theory

Auditory: Conference Hall

# 15 Talk by: V. N. Bolotov

Title: The Study of Kaon Decays at ISTRA setup

Date/Time: June 11, 17:40 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 16 Talk by: M. Bordag

Title: On the vacuum polarization of the Nielsen-Olesen string

Date/Time: June 9, 17:40

Section: Quantum Field Theory

Auditory: Conference Hall

# 17 Talk by: O. A. Borisenko

Title: QCD on the lattice at finite baryon density in the field-strength for-

mulation

Date/Time: June 9, 17:00

Section: Quantum Chromodynamics Auditory: Lecture Hall  $2^{nd}$  floor

# 18 Talk by: N. A. Chernikov and N. S. Shavokhina

Title: Accounting of the light speed in the Galilean problem of a particle

falling on a plane

Date/Time: June 11, 15:30 Section: Gravity & Cosmolgy

Auditory: Conference Hall

# 19 Talk by: A. Di Giacomo

Title: A review of color confinement

Date/Time: June 10, 12:00
Section: Plenary Session
Auditory: Conference Hall

# 20 Talk by: M. Dineykhan, T.A.Kozhamkulov, S.A. Zhaugasheva, S.K.

Sakhyev

Title: Glueball mass spectrum and Regge trajectory in nonperturbative QCD

approach

Date/Time: June 9, 16:20

Section: Quantum Chromodynamics

Auditory: Conference Hall

# 21 Talk by: A. E. Dorokhov

Title: V and A correlators and nonlocal structure of QCD vacuum from

ALEPH  $\tau$  decay data

Date/Time: June 11, 16:40 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

#22 Talk by: I. M. Dremin

Title: Some problems of the perturbative QCD

Date/Time: June 10, 15:30

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 23 Talk by: S. Dubnička and A. Dubničkova

Title: An effective method in a description of electromagnetic, weak, and

strange form factors of hadrons

Date/Time: June 10, 13:20 Section: Plenary Session Auditory: Conference Hall

#24 Talk by: **D.** Ebert

Title: String representation of the dual Ginzburg-Landau theory

Date/Time: June 11, 12:00 Section: Plenary Session Auditory: Conference Hall

# 25 Talk by: G. V. Efimov

Title: Blokhintsev and nonlocal interaction

Date/Time: June 9, 10:50
Section: Plenary Session
Auditory: Conference Hall

# 26 Talk by: S. M. Eliseev

Title: DIS of leptons on nuclei: hadronization process, cumulative particles

production and Blokhintsev's flucton

Date/Time: June 8, 15:00

Section: Quantum Mechanics
Auditory: Conference Hall

#27 Talk by: L. D. Faddeev

Title: Infrared parametrization in the Yang-Mills theory

Date/Time: June 9, 9:30
Section: Plenary Session
Auditory: Conference Hall

# 28 Talk by: A. T. Filippov, V. de Alfaro

Title: Integrable models describing branes, black holes, and cosmologies

Date/Time: June 9, 12:00 Section: Plenary Session Auditory: Conference Hall

# 29 Talk by: M. Firuzabadi

Title: Subthreshold kaon production in P-A interaction

Date/Time: June 11, 18:00 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 30 Talk by: G. V. Efimov and G. Ganbold

Title: Quartic field interaction and the strong-coupling problem

Date/Time: June 10, 17:00

Section: Quantum Field Theory

Auditory: Conference Hall

# 31 Talk by: S. B. Gerasimov

Title: Sum rules for two-photon decay widths of meson resonances and quark-

gluon configuration structure of low-lying scalar mesons

Date/Time: June 8, 16:40 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 32 Talk by: A. A. Logunov, S. S. Gershtein, M. A. Mestvirishvili,

N. P. Tkachenko

Title: Graviton mass, quintessence, and oscillating behavior of Universe evo-

lution

Date/Time: June 9, 10:10
Section: Plenary Session
Auditory: Conference Hall

# 33 Talk by: I. F. Ginzburg

Title: Effects of particle instability in high energy phenomena

Date/Time: June 10, 16:00

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall  $4^{th}$  floor

# 34 Talk by: S. V. Goloskokov, P. Kroll, B. Postler

Title: Vector meson photoproduction in QCD

Date/Time: June 9, 16:40

Section: Quantum Chromodynamics

Auditory: Lecture Hall  $2^{nd}$  floor

# 35 Talk by: M. I. Gorenstein

Title: Signals of deconfinement transition in nucleus – nucleus collisions

Date/Time: June 9, 18:50 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 36 Talk by: V. K. Henner

Title: Spectrum of vector mesons and scalar  $f_0$  states. Application of wavelet

analysis.

Date/Time: June 11, 19:00 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 37 Talk by: J. Hüfner

Title: Charmonium suppression in nucleus–nucleus collisions

Date/Time: June 11, 12:40
Section: Plenary Session
Auditory: Conference Hall

# 38 Talk by: E.-M. Ilgenfritz

Title: Topological structure of Yang-Mills theory just below deconfinement

Date/Time: June 10, 16:50

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 39 Talk by: J. Bartels, A. Illarionov, A. V. Kotikov, G. Parente

Title: Small-x behaviour of parton distributions. A study of higher twist

effects

Date/Time: June 11, 17:00 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 40 Talk by: **A. P. Isaev** 

Title: Multi-loop Feynman integrals and conformal quantum mechanics

Date/Time: June 10, 16:40

Section: Quantum Field Theory

Auditory: Conference Hall

# 41 Talk by: **P. S. Isaev** 

Title: On solution of some modern problems of cosmological science

Date/Time: June 11, 15:50

Section: Gravity & Cosmolgy
Auditory: Conference Hall

# 42 Talk by: L. Jenkovszky

Title: Dual-Regge approach to generalized parton distributions and DVCS

Date/Time: June 9, 18:30 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 43 Talk by: R. Kaminski

Title: Light meson dynamics in scalar isoscalar sector below 2 GeV

Date/Time: June 8, 17:40 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 44 Talk by: E. Kapuscik

Title: D. I. Blokhintsev microworld spacetime — a modern outlook

Date/Time: June 8, 14:30

Section: Quantum Mechanics Auditory: Conference Hall

# 45 Talk by: M. O. Katanaev

Title: Geometric theory of defects in solids and three-dimensional gravity

Date/Time: June 11, 16:40 Section: Gravity & Cosmolgy

Auditory: Conference Hall

# 46 Talk by: E. Kolomeitsev

Title: Resonance states below pion-nucleon threshold in nuclear systems

Date/Time: June 8, 17:10 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 47 Talk by: V. M. Koryukin

Title: Weakly interacting particles and the Universe evolution

Date/Time: June 11, 18:50
Section: Gravity & Cosmolgy
Auditory: Conference Hall

# 48 Talk by: B. P. Kosyakov

Title: Some facts and fictions in subnuclear realm

Date/Time: June 8, 17:30

Section: Quantum Mechanics Auditory: Conference Hall

# 49 Talk by: G. A. Kotel'nikov

Title: On the faster-than-light motions in electrodynamics

Date/Time: June 10, 18:40

Section: Quantum Field Theory

Auditory: Conference Hall

#50 Talk by: P. P. Kulish

Title: Algebraic aspects of integrable models in quantum field theory

Date/Time: June 10, 15:30

Section: Quantum Field Theory

Auditory: Conference Hall

# 51 Talk by: E. A. Kuraev, V. Byt'ev

Title: Check of  $\rho - \sigma$  degeneracy by DIS experiments with two-charged-pions

production

Date/Time: June 11, 16:00 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 52 Talk by: D. S. Kuzmenko, Yu. S. Kalashnikova

Title: Hybrid mesons in the QCD string model

Date/Time: June 9, 16:30 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 53 Talk by: A. K. Likhoded

Title: Some problems in heavy quark production

Date/Time: June 10, 18:00

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

#54 Talk by: M. Lutz

Title: Chiral symmetry, strangeness and nuclear matter

Date/Time: June 11, 15:30 Section: Hadron Physics

# 55 Talk by: V. V. Lyuboshitz

Title: Lifetime and path-length of the virtual particle

Date/Time: June 9, 19:10

Section: Quantum Field Theory

Auditory: Conference Hall

# 56 Talk by: S. N. Mayburov

Title: Fuzzy space-time Geometry as novel approach to fields quantization

Date/Time: June 9, 18:20

Section: Gravity & Cosmolgy Auditory: Lecture Hall  $2^{nd}$  floor

# 57 Talk by: E. Yu. Melkumova

Title: String bremsstrahlung

Date/Time: June 9, 16:50 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 58 Talk by: E. Mihul

Title: Consequences of Lorentz Causality

Date/Time: June 9, 16:30

Section: Quantum Field Theory

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# 59 Talk by: R. Mir-Kasimov

Title: Non-commutable differential calculus and q-oscillators

Date/Time: June 9, 16:50

Section: Quantum Field Theory

Auditory: Conference Hall

# 60 Talk by: M. Musakhanov

Title: Instanton vacuum QCD effective action beyond chiral limit

Date/Time: June 9, 15:30

Section: Quantum Chromodynamics

Auditory: Lecture Hall 2<sup>nd</sup> floor

# 61 Talk by: E. G. Mychelkin

Title: Foundations of Geometrized Scalar Gravity and Physical Vacuum

Date/Time: June 11, 18:30
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Auditory: Conference Hall

# 62 Talk by: T. Nasyrov

Title: Spectroscopy of pseudoscalar and vector mesons and their leptonic

decay constants

Date/Time: June 11, 18:40 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 63 Talk by: S. D. Odintsov

Title: dS/CFT correspondence and early Universe

Date/Time: June 11, 16:10
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# 64 Talk by: V. V. Papoyan

Title: Static and stationary fields in Jordan-Brans-Dicke theory of gravitation

Date/Time: June 11, 18:10
Section: Gravity & Cosmolgy
Auditory: Conference Hall

# 65 Talk by: O. Pashaev

Title: Noncommutative, nonlinear integrable models

Date/Time: June 10, 16:00

Section: Quantum Field Theory

Auditory: Conference Hall

# 66 Talk by: O. V. Pavlovsky

Title: Chiral Born-Infeld theory, two-phase model of baryons and chiral limit

of QCD

Date/Time: June 10, 18:20

Section: Quantum Field Theory

Auditory: Conference Hall

# 67 Talk by: V. N. Pervushin

Title: Astrophysics in relative units as theory of conformal brane

Date/Time: June 11, 17:40
Section: Gravity & Cosmolgy
Auditory: Conference Hall

# 68 Talk by: **A. B. Pestov** 

Title: Space-time bag model

Date/Time: June 9, 18:40

Section: Gravity & Cosmolgy Auditory: Lecture Hall  $2^{nd}$  floor

# 69 Talk by: I. G. Pirozhenko

Title: Heat kernel expansion for dielectric like spectral problems

Date/Time: June 9, 18:10

Section: Quantum Field Theory

Auditory: Conference Hall

# 70 Talk by: L. V. Prokhorov

Title: Particles and wave functions

Date/Time: June 8, 16:40

Section: Quantum Mechanics
Auditory: Conference Hall

# 71 Talk by: A. P. Protogenov

Title: Structures of Order Parameters in Faddeev-Niemi Model

Date/Time: June 10, 16:20

Section: Quantum Field Theory

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# 72 Talk by: A. V. Radyushkin

Title: Generalized Parton Distributions

Date/Time: June 11, 13:20 Section: Plenary Session Auditory: Conference Hall

# 73 Talk by: A. E. Radzhabov and M. K. Volkov

Title: Meson model with nonlocal four-quark interaction

Date/Time: June 10, 16:30

Section: Quantum Field Theory

Auditory: Conference Hall

#74 Talk by: G. Röpke

Title: Quantum condensates in dense matter

Date/Time: June 11, 10:50 Section: Plenary Session Auditory: Conference Hall

# 75 Talk by: V. A. Saleev

Title: Charmed quark photoproduction and photon structure function in

BFKL approach

Date/Time: June 11, 18:20 Section: Hadron Physics

# 76 Talk by: V. I. Sanyuk

Title: Skyrmions and torons in nuclear physics

Date/Time: June 11, 16:20 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 77 Talk by: F. Saradzhev

Title: Particle production by a self-interacting scalar field: tachyonic regime

Date/Time: June 10, 19:00

Section: Quantum Field Theory

Auditory: Conference Hall

# 78 Talk by: T. Hallman, Yu. Panebratsev, I. A. Savin

Title: Selected Recent Results from the STAR Experiment

Date/Time: June 11, 9:30
Section: Plenary Session
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# 79 Talk by: O. Yu. Shvedov

Title: What is semiclassical field theory

Date/Time: June 8, 17:10

Section: Quantum Mechanics Auditory: Conference Hall

# 80 Talk by: Y. A. Simonov

Title: Gluon degrees of freedom in QCD spectrum and DIS

Date/Time: June 10, 12:40
Section: Plenary Session
Auditory: Conference Hall

# 81 Talk by: V. V. Skalozub

Title: Signals of the Abelian Z' gauge bosonwithin the analysis of the LEP2

data

Date/Time: June 9, 16:00

Section: Quantum Chromodynamics

Auditory: Lecture Hall 2<sup>nd</sup> floor

# 82 Talk by: A. A. Slavnov

Title: Symmetry and renormalization

Date/Time: June 10, 10:10 Section: Plenary Session Auditory: Conference Hall # 83 Talk by: A. V. Prozorkevitch, V. V. Skokov, S. A. Smolyansky

Title: Kinetic theory of quantum field systems with unstable vacuum

Date/Time: June 10, 17:40

Section: Quantum Field Theory

Auditory: Conference Hall

# 84 Talk by: L. D. Soloviev

Title: String model of hadrons. Latest results.

Date/Time: June 9, 15:30 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 85 Talk by: A. D. Sukhanov

Title: D.I. Blokhintsev and fundamental problems of quantum mechanics

Date/Time: June 8 15:20

Section: Quantum Mechanics Auditory: Conference Hall

# 86 Talk by: Yu. S. Surovtsev

Title: On the nature of  $f_0$  mesons below 1.9 GeV and lower scalar nonets

Date/Time: June 10, 18:20

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall  $4^{th}$  floor

# 87 Talk by: E. A. Tagirov

Title: Quantum Mechanics vs. different mathematical theories of quantiza-

tion

Date/Time: June 8, 18:10

Section: Quantum Mechanics Auditory: Conference Hall

# 88 Talk by: O. V. Teryaev

Title: Spin, gravity, and confinement

Date/Time: June 10, 17:40

Section: Quantum Chromodynamics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 89 Talk by: V. Toneev, Yu. B. Ivanov, E. G. Nikonov, W. Nörenberg,

V. N. Russkih

Title: Three-Fluid Hydrodynamic Model for Relativistic Heavy-Ion Collisions

Date/Time: June 9, 17:40 Section: Hadron Physics

# 90 Talk by: A. A. Tyapkin

Title: About the first two Blokhintsev's books on Quantum Mechanics

Date/Time: June 8, 15:50

Section: Quantum Mechanics Auditory: Conference Hall

# 91 Talk by: V. S. Vanyashin

Title: Positronium Bose condensate as gamma laser

Date/Time: June 8, 17:50

Section: Quantum Mechanics Auditory: Conference Hall

# 92 Talk by: Yu. S. Vernov

Title: Dispersion relations in noncommutative field theory

Date/Time: June 9, 18:30

Section: Quantum Field Theory

Auditory: Conference Hall

#93 Talk by: R. Woodard

Title: Standard Model fermion self-energies during inflation

Date/Time: June 9, 12:40
Section: Plenary Session
Auditory: Conference Hall

# 94 Talk by: D. Blaschke, M. K. Volkov, V. L. Yudichev

Title: Coexistence of color superconductivity and chiral symmetry breaking

Date/Time: June 9, 18:10 Section: Hadron Physics

Auditory: Blokhintsev's Lecture Hall 4<sup>th</sup> floor

# 95 Talk by: M. V. Yurova and G. A. Alekseev

Title: Monodromy transform approach to construction of classical solutions

in string gravity

Date/Time: June 9, 19:00

Section: Gravity & Cosmolgy Auditory: Lecture Hall  $2^{nd}$  floor