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: **<u>A. A. Andrianov</u>, 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, <u>V. A. Andrianov</u>, 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^{th} 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
Auditory: Blokhintsev's Lecture Hall 4^{th} floor

\# 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 approximations — 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^{th} 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^{th} 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 formulation
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: **<u>M. Dineykhan</u>, 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 τ decay data
Date/Time: June 11, 16:40
Section: Hadron Physics
Auditory: Blokhintsev's Lecture Hall 4^{th} 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^{th} floor

23 Talk by: **<u>S. Dubnička</u> 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^{th} 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^{th} 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 evolution

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: **<u>S. V. Goloskokov</u>, 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^{th} 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^{th} 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^{th} floor

39 Talk by: **J. Bartels, <u>A. Illarionov</u>, 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^{th} 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^{th} 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^{th} 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^{th} 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^{th} 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^{th} 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^{th} floor

54 Talk by: **M. Lutz**

Title: Chiral symmetry, strangeness and nuclear matter

Date/Time: June 11, 15:30
Section: Hadron Physics
Auditory: Blokhintsev's Lecture Hall 4^{th} floor

\# 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^{th} floor

\# 58 Talk by: **E. Mihul**

Title: Consequences of Lorentz Causality

Date/Time: June 9, 16:30
Section: Quantum Field Theory
Auditory: Conference Hall

\# 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^{nd} floor

\# 61 Talk by: **E. G. Mychelkin**

Title: Foundations of Geometrized Scalar Gravity and Physical Vacuum

Date/Time: June 11, 18:30
Section: Gravity & Cosmolgy
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^{th} floor
# 63	Talk by:	**S. D. Odintsov**
	Title:	dS/CFT correspondence and early Universe
	Date/Time:	June 11, 16:10
	Section:	Gravity & Cosmolgy
	Auditory:	Conference Hall
# 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
Auditory: Conference Hall

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

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^{th} 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, <u>I. A. Savin</u>**

Title: Selected Recent Results from the STAR Experiment

Date/Time: June 11, 9:30
Section: Plenary Session
Auditory: Conference Hall

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^{nd} 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^{th} 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 quantization

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

# 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^{th} 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

Total number of talks: 95