

QUARKS-2010

16th International Seminar on High Energy Physics
Kolomna, Russia, June 6 — 12, 2010.

Preliminary program

Moscow, 2010

Sunday, June 6

Morning: Registration

Plenary Session. 18:00

1. Matveev V. (INR, Moscow)
Opening — 20 min.
2. Shirkov D. (JINR, Dubna)
Imagery of Symmetry in Current Physics — 30 min.
3. Popov A. (IHEP, Protvino) on behalf of the DZero collaboration
Latest results from Tevatron collider experiments — 30 min.
4. Matthews J. (Utah U.)
First Results from the Telescope Array Experiment — 30 min.

Monday, June 7

Plenary Session. 10:00

1. Uglov T. (ITEP, Moscow) on behalf on the Belle collaboration
Recent news from Belle — 30 min.
2. Godang R. (South Alabama U.) on behalf of the BaBar collaboration
Hot Topics From BABAR — 30 min.
3. Kuehn J. (Karlsruhe Inst. of Technology)
Quark Masses from Sum Rules — 30 min.

Coffee Break. 11:30 – 11:50

4. Zakharov V. I. (ITEP, Moscow & MPI, Munich)
Two-component-liquid model of the quark-gluon plasma — 30 min.
5. Diakonov D. (PNPI, St. Petersburg)
Ordinary and exotic baryons, strange and charmed, in the relativistic mean field approach — 30 min.
6. Dremin I. (Lebedev Physics Inst., Moscow)
Macroscopic QCD and quark-gluon plasma. — 30 min.

Evening Sessions.

Parallel Section #1 (Hall #1). 15:00

1. Polikarpov M. (ITEP, Moscow)
Interference of strong and electromagnetic interactions in heavy ion collisions — 30 min.
2. Andrianov A. (St. Petersburg State U. & ICC, Barcelona U.)
Abnormal enhancement of dilepton yield in central heavy-ion collisions from local parity breaking — 30 min.
3. Leonidov A. (Lebedev Phys. Inst., Moscow & ITEP, Moscow)
Cherenkov radiation of gluon current in in-medium QCD — 30 min.

4. Kerbikov B. (ITEP, Moscow)
Quark polarization operator at finite temperature and density in magnetic field — 30 min.
5. Kirakosyan M. (Lebedev Physics Inst., Moscow)
Transient like radiation quenching mechanism — 20 min.

Coffee Break. 17:20 – 17:40

6. Buividovich P. (Joint Inst. Power Nucl. Res., Minsk & ITEP, Moscow)
Magnetic-Field-Induced insulator-conductor transition in quenched lattice gauge theory — 30 min.
7. Zayakin A. (ITEP, Moscow & Munich U.)
New results in holography with condensates — 30 min.
8. Kopnin P. (ITEP, Moscow & MIPT, Moscow)
On the Chiral Magnetic Effect in Soft-Wall AdS/QCD — 20 min.
9. Wulzer A. (EPFL, Lausanne)
5d models of Mesons and Baryons — 30 min.
10. Krikun A. (ITEP, Moscow)
Perturbative calculations in holographic QCD: magnetic susceptibility of the vector current — 20 min.

Parallel Section #2 (Hall #2). 15:00

1. Belavin A. (Landau Inst., Moscow)
2-d Gravity in genus one in Matrix Model and topological approaches — 30 min.
2. Marshakov A. (Lebedev Physics Inst., Moscow & ITEP, Moscow)
Strong versus Weak Coupling Confinement in Supersymmetric QCD — 30 min.
3. Ivanov E. (BLTP, JINR, Dubna)
Generalized Super-Landau Models — 30 min.
4. Grigoriev M. (Lebedev Physics Inst., Moscow)
Universal first order formulation for general gauge field theories — 30 min.

Coffee Break. 17:00 – 17:20

5. Metsaev R. (Lebedev Physics Inst., Moscow)
Gauge invariant approach to anomalous conformal currents and shadow fields — 30 min.
6. Didenko V. (Lebedev Physics Inst., Moscow)
Black holes in higher spin gauge theory — 30 min.
7. Bykov D. (Steklov Math. Inst., Moscow & TCD, Dublin)
Worldsheet low-energy limit of the $AdS_4 \times CP^3$ superstring — 20 min.
8. Akhmedov E. (ITEP, Moscow)
An exact result for Wilsonian and Holographic renormalization group. — 20 min.
9. Burda F. (ITEP, Moscow)
A simple way to take into account back reaction on pair creation — 20 min.

Parallel Section #3 (Hall #3). 15:00

1. Novoselov A. (IHEP, Protvino)
A study of charm hadron production in e^+e^- annihilation — 30 min.
2. Novikov V. (ITEP, Moscow)
Again on the fourth generation of quarks and leptons — 30 min.
3. Krasnikov N. (INR, Moscow)
Fields with continuously distributed mass - possible LHC signatures — 30 min.
4. Martynov M. (Yaroslavl State U.)
Forward-Backward Asymmetry in t -anti- t Production in The Model with Four Color Symmetry — 30 min.

Coffee Break. 17:00 – 17:20

5. Smolyakov M. (SINP MSU, Moscow)
Searches for W' and Z' in models with large extra dimensions — 20 min.
6. Kirpichnikov D. (INR, Moscow)
Models with particle escape from our brane — 20 min.

7. Astakhov D. (INR, Moscow)
Collider signatures of particle escape from our brane — 20 min.
8. Povarov A. (Yaroslavl State U.)
Scalar Leptoquark Contributions into $l \rightarrow l'\gamma$ Processes. — 20 min.

Tuesday, June 8

Plenary Session. 10:00

1. Voloshin M. (ITEP, Moscow & FTPI, Minnesota)
Induced semiclassical processes with defects and electrons — 30 min.
2. Shaposhnikov M. (EPFL, Lausanne)
Asymptotic safety of gravity and the Higgs boson mass — 30 min.
3. Antoniadis I. (CERN)
Non-linear supersymmetry and brane dynamics — 30 min.

Coffee Break. 11:30 – 11:50

4. Peloso M. (Minnesota U.)
Breaking statistical isotropy — 30 min.
5. Fiore S. (Sapienza U. di Roma & INFN, Roma)
KLOE physics results and future prospects — 30 min.
6. Sirignano C. (INFN & Salerno U.) on behalf of the OPERA collaboration
The OPERA experiment at LNGS — 30 min.
7. Kameda J. (ICRR, Tokyo) on behalf of the T2K collaboration
Overview of T2K experiment — 30 min.

Evening Sessions.

Parallel Section #1. 15:00

1. Faustov R. (Computing Ctr., Moscow)
Light meson spectroscopy and Regge trajectories in the relativistic quark model — 30 min.
2. Kiselev A. (Sobolev IM, Novosibirsk)
Analytical properties of the $\pi\pi$ scattering amplitude and the light scalar mesons — 20 min.

3. Matveev M. (PNPI, St. Petersburg)
Quark-diquarks systematics of baryons — 30 min.
4. Penin A. (Alberta U. & INR, Moscow)
Hyperfine splitting in quarkonium and η_b mass puzzle — 30 min.
5. Shestakov G. (Sobolev IM, Novosibirsk)
Nature of Light Scalar Mesons in Bright Light of Photon-Photon Collisions — 20 min.

Coffee Break. 17:10 – 17:30

6. Braguta V. (IHEP, Protvino)
Double charmonium production in exclusive bottomonia decays — 30 min.
7. Efimov G. (JINR, Dubna)
Bound states in quantum electrodynamics — 20 min.
8. Mitrjushkin V. (JINR, Dubna)
 $SU(2)$ lattice gluon propagator: continuum limit, finite-volume effects and infrared mass scale — 20 min.
9. Zubkov M. (ITEP, Moscow)
The vicinity of the phase transition in the lattice Weinberg Salam Model — 30 min.
10. Pimikov A. (JINR, Dubna)
Endpoint behavior of the pion distribution amplitude — 20 min.

Parallel Section #2. 15:00

1. Volovich I. (Steklov Math. Inst., Moscow)
A new approach to the problem of black hole and cosmological singularities — 30 min.
2. Yung A. (PNPI, St. Petersburg)
Non-Abelian confinement in $N=2$ supersymmetric QCD — 30 min.
3. Shnir Ya. (Durham U.)
Skyrmion-Antiskyrmion Chains — 30 min.
4. Khmel'nitsky A. (INR, Moscow)
Interpreting dualities from superconformal index identities — 20 min.

Coffee Break. 16:50 – 17:10

5. Chekhov L. (Steklov Math. Inst., Moscow & ITEP, Moscow)
Symplectic invariants of quantum surfaces — 30 min.
6. Vernov Yu. (INR, Moscow)
*Haag's Theorem in Spaces of Arbitrary Numbers of
Commutative and Noncommutative Coordinates* — 20 min.
7. Mnatsakanova M. (SINP, Moscow)
One Rigorous Negative Result in QFT — 20 min.
8. Alexeyev S. (Sternberg Astron. Inst., Moscow)
Brane black holes — 20 min.

Parallel Section #3. 15:00

1. Gorbunov D. (INR, Moscow)
Scaloron the Mighty — 30 min.
2. Ramazanov S. (Moscow State U.)
Standard Model in adS slice with UV-localized Higgs field — 20 min.
3. Eroshenko Yu. (INR, Moscow)
Superdense dark matter clumps from superheavy particles — 20 min.
4. Frolov A. (Simon Fraser U., Vancouver)
*Primordial non-Gaussianity from Preheating and the
WMAP Cold Spot* — 30 min.

Coffee Break. 16:50 – 17:10

5. Rubakov V. (INR, Moscow)
*Cosmological density perturbations from conformal field:
global anisotropy and non-Gaussianity* — 30 min.
6. Babichev E. (Ludwig-Maximilian's U.)
The Vainshtein mechanism and k -mouflage model — 20 min.
7. Klimai P. (INR, Moscow)
*Density perturbations in braneworld cosmology and
primordial black holes* — 20 min.

8. Pirogov Yu. (IHEP, Protvino)
Heteron dark matter — 30 min.
9. Polev I. (MIPT, Moscow)
Dark halos of scalar-gravitons: numerical study — 20 min.

Wednesday, June 9

Excursion to Kolomna

Evening Sessions.

Parallel Section #1. 15:00

1. Gorsky A. (ITEP, Moscow)
Domain wall decays in the magnetic field — 30 min.
2. Demidov S. (INR, Moscow)
Soliton-antisoliton pair production in collisions of high energy particles — 30 min.
3. Bagrov A. (Steklov Mathematical Inst., Moscow)
Black holes production in transplanckian collisions in $A(dS)$ — 20 min.
4. Chetyrkin K. (INR, Moscow & Karlsruhe U.)
Adler functions, DIS sum rules and the Crewther relations in order α_s^4 — 30 min.

Coffee Break. 16:50 – 17:10

5. Bakulev A. (JINR, Dubna)
Two-loop resummation of perturbative series in (Fractional) Analytic Perturbation Theory — 30 min.
6. Arbuzov A. (JINR, Dubna)
Precision of the Drell-Yan scattering description at LHC — 30 min.
7. Achasov N. (Sobolev IM, Novosibirsk)
The $Z \rightarrow \gamma\gamma^$ interaction and the $Z \rightarrow \gamma\psi$ (or Υ) decays* — 30 min.
8. Parkhomenko A. (Yaroslavl State U.)
Light-Cone Wave Functions of Heavy Baryons — 20 min.

Parallel Section #2. 15:00

1. Berezin V. (INR, Moscow)
Classical analog of quantum Schwarzschild black hole and the mystery of $\log 3$ — 20 min.
2. Akhmedov E. (ITEP, Moscow)
Real or Imaginary? (On pair creation in de Sitter space) — 20 min.
3. Barvinsky A. (Lebedev Physics Inst., Moscow)
Tunneling state in cosmology and SM Higgs inflation — 30 min.
4. Zenhausern D. (EPFL, Lausanne)
A cosmological model based on scale invariance and unimodular gravity — 30 min.
5. Vernov S. (SINP, Moscow)
Nonlocal Cosmological Models and Exact Solutions — 20 min.

Coffee Break. 17:00 – 17:20

6. Koshelev A. (Brussel U.)
Recent progress in String Field Theory. Dynamical Dark Energy model. — 20 min.
7. Dokuchaev V. (INR, Moscow)
Back reaction of accretion onto black hole — 30 min.
8. Rannu K. (Sternberg Astron. Inst., Moscow)
Internal structure of Maxwell-Gauss-Bonnet black hole — 20 min.
9. Timofeev S. (IHEP, Protvino & MIPT, Moscow)
Quasiattractor in models of new and chaotic inflation — 20 min.
10. Stokov V. (ASC Lebedev Physical Inst., Moscow)
Non-perturbative formulation of the cosmological perturbation theory — 30 min.

Parallel Section #3. 15:00

1. Dedenko L. (Moscow State U.)
Study of the Energy Spectrum and the Composition of the Primary Cosmic Radiation at Superhigh Energies — 30 min.
2. Rubtsov G. (INR, Moscow) on behalf of the TA collaboration
Ultra-high energy photon flux limit using Telescope Array surface detector data — 20 min.

3. Tinyakov P. (INR, Moscow & Brussels U.)
Analysis of large-scale anisotropy of ultra-high energy cosmic rays in HiRes data — 30 min.
4. Kalashev O. (INR, Moscow)
Secondary photons and neutrinos from cosmic rays produced by distant blazars — 20 min.

Coffee Break. 16:40 – 17:00

5. Kirsanov M. (INR, Moscow)
Search for WR and heavy neutrino of the left-right symmetric model in CMS and first data at LHC — 30 min.
6. Gvozdev A. (Yaroslavl State U.)
Lower limit of the magnetic field strength from a giant flare on SGR — 30 min.
7. Okrugin A. (Yaroslavl State U.)
Reexamination of a Bound on the Dirac Neutrino Magnetic Moment from the Supernova Neutrino Luminosity — 20 min.
8. Lychkovskiy O. (ITEP, Moscow)
TeV-scale dileptons, see-saw type II and lepton flavor violation in core-collapse supernova — 20 min.

Conference Dinner. 20:00

Thursday, June 10

Plenary Session. 10:00

1. Arefeva I. (Steklov Math. Inst., Moscow)
Search for Catalysis of Black Holes/Wormholes Formation in High Energy Collisions. — 30 min.
2. Studenikin A. (Moscow State U.)
Electromagnetic properties of neutrino — 30 min.
3. Strumia A. (Pisa University & INFN & CERN)
Dark Matter Interpretations of the Electron/Positron Excesses after FERMI — 30 min.

Coffee Break. 11:30 – 11:50

4. Slavnov A. (Steklov Math. Inst., Moscow)
The study of ambiguity in non-Abelian gauge theories — 30 min.
5. Lipatov L. (PNPI, St. Petersburg)
Intergrability of high energy scattering Intergrability of high energy scattering amplitudes in $N = 4$ SUSY — 30 min.
6. Starobinsky A. (Landau Inst., Moscow)
Recent progress in $f(R)$ models of inflation and dark energy — 30 min.

Evening Sessions.

Parallel Section #1. 15:00

1. Vysotsky M. (ITEP, Moscow)
Super B: $D=4$ versus $D=2$ — 30 min.
2. Kim V. (PNPI, St. Petersburg)
Dijet production in BFKL and search for new physics at the LHC — 30 min.

3. Kozhevnikov A. (Sobolev IM, Novosibirsk)
Troubles of describing multipion production in chiral dynamics — 20 min.
4. Pivovarov A. (INR, Moscow)
 $B^0 - \bar{B}^0$ mixing at NLO of $1/m_b$ expansion — 20 min.

Coffee Break. 16:40 – 17:00

5. Ioffe B. (ITEP, Moscow)
Weak interaction contribution to the inclusive hadron-hadro scattering cross sections at high p_T — 30 min.
6. Jafarov R. (Baku State U.)
Multiquark functions in effective models — 30 min.
7. Kataev A. (INR, Moscow)
Possible similarities in structures of analytical multiloop effects in perturbative quenched QED and in $N = 4$ SUSY Yang-Mills Theory. — 20 min.
8. Lipatov A. (SINP, Moscow)
Prompt photon production at HERA with kt -factorization — 30 min.
9. Saleev V. (Samara State U.)
Jet and dijet production in the Regge limit of quantum chromodynamics — 30 min.

Parallel Section #2. 15:00

1. Tkachev I. (INR, Moscow)
Universal properties of Dark Matter halos — 30 min.
2. Postnov K. (Sternberg Astron. Inst.)
Observing gravitational wave signature from supermassive black hole mergings — 20 min.
3. Semikoz V. (IZMIRAN, Troitsk & Valencia U.)
Hypermagnetic field as a seed of Maxwellian field in early Universe: magnetic helicity transfer — 20 min.
4. Malyshev D. (New York U.)
Gamma-ray Haze via Dark Matter and Millisecond Pulsars — 30 min.

5. Kauts V. (ASC Lebedev Physical Inst., Moscow)
Dark matter annihilation in the vicinity of neutron star — 20 min.

Coffee Break. 17:00 – 17:20

6. Vikman A. (New York U.)
Cosmology with Kinetic Gravity Braiding — 30 min.
7. Berezin V. (INR, Moscow)
Global geometry of Brane Universe models — 30 min.
8. Barvinsky A. (Lebedev Physics Inst., Moscow)
Local curvature expansion in brane induced gravity models — 30 min.
9. Chernov S. (Lebedev Physics Inst., Moscow)
Wave function of gravitating shell — 20 min.
10. Bulatov N. (Moscow State U.)
Null Energy Condition Violation and Classical Stability in the Bianchi I Metric — 20 min.

Parallel Section #3. 15:00

1. Kudenko Yu. (INR, Moscow)
Study of neutrino oscillations in accelerator experiments. — 30 min.
2. Dzhilkibaev Zh. (INR, Moscow)
Gigaton Volume Detector in Lake Baikal: status of the project — 30 min.
3. Bednyakov A. (JINR, Dubna)
Some two-loop threshold corrections and three-loop renormalization group analysis of the MSSM — 30 min.
4. Babich A. (Gomel State Technical University, Belarus)
Determination of characteristic Z' bosons beyond the SM at the LHC — 30 min.
5. Pivovarov G. (INR, Moscow)
New renormalization group equations and the naturalness problem — 20 min.

Coffee Break. 17:20 – 17:40

6. Dolgoplov M. (Samara State U.)
MSSM finite-temperature Higgs potential — 20 min.
7. Narynskaya E. (Yaroslavl State U.)
Neutrino magnetic moment in a magnetized plasma — 20 min.
8. Lokhov A. (Moscow State U.)
Analysis of particles masses effects in spin light of neutrino and related processes — 20 min.
9. Chistyakov M. (Yaroslavl State U.)
Neutrino-driven stream instability in strongly magnetized plasma — 30 min.
10. Grigoriev A. (Moscow State U.)
Neutrino quantum states in moving matter — 20 min.

Friday, June 11

Plenary Session. 10:00

1. Espriu D. (Barcelona U.)
Axions and cosmic rays — 30 min.
2. Dubovsky S. (Stanford U. & INR, Moscow)
Exploring the string axiverse with astrophysical black holes — 30 min.
3. Shevchenko V. (ITEP, Moscow)
Towards quantum theory of chiral magnetic effect — 30 min.

Coffee Break. 11:30 – 11:50

4. Kataev A. (INR, Moscow)
Conformal Symmetry and its Breaking Effects in Gauge Theories with Fermions: New Perturbative Consequences — 30 min.
5. Madigozhin D. (JINR, Dubna) on behalf of the NA48/2 collaboration
Precision Measurement of $\pi\pi$ Scattering Lengths in $K\pi 4$ Decays — 30 min.
6. Tomasi-Gustafsson E. (CEA, Saclay)
Test of QCD through hadron form factors measurements at large momentum transfer — 30 min.

Evening Sessions.

Parallel Section #1. 15:00

1. Gruzinov A. (New York U.)
Cosmic Ray Bursts — 30 min.
2. Dudko L. (SINP, Moscow)
Top Quarks Physics at the Tevatron — 30 min.

3. Gladyshev A. (JINR, Dubna)
Higgs masses and constraints on the parameter space in the R-broken SUSY model with right-handed neutrinos — 30 min.
4. Kiselev V. (IHEP, Protvino)
Cosmological constraint on the Higgs boson mass in the SM minimally coupled to the gravity — 20 min.

Coffee Break. 16:50 – 17:10

5. Smirnov A. (Yaroslavl State U.)
Chiral color symmetry and G' -boson mass limit from Tevatron data on $t\bar{t}$ - production — 30 min.
6. Kurlovich A. (INR, Moscow)
Search for axion-like particles and hidden-sector photons in the resonant regeneration experiment SOLA — 20 min.
7. Skachkova A. (JINR, Dubna)
Scalar top pair production in polarized gamma-gamma collisions at ILC — 30 min.

Parallel Section #2. 15:00

1. Nirov Kh. (INR, Moscow)
On Integrable Systems and the Universal R-matrix — 30 min.
2. Skvortsov E. (Lebedev Physics Inst., Moscow)
String inspired frame-like formulation for fields of mixed-symmetry — 20 min.
3. Trnka Ja. (Princeton U.)
Grassmanians and $N = 4$ SYM — 30 min.
4. Ponomarev D. (Lebedev Physical Inst., Moscow)
Frame-Like Action and Unfolded Formulation for Massive Higher-Spin Fields — 20 min.
5. Olshanetsky M. (ITEP, Moscow)
Monopoles and integrable spin chains — 30 min.

Coffee Break. 17:10 – 17:30

6. Alkalaev K. (Lebedev Physics Inst., Moscow)
Unified BRST description of AdS gauge fields — 30 min.
7. Konyushikhin M. (Nantes U. & ITEP, Moscow)
SQM with Non-Abelian Self-Dual Fields: Harmonic Superspace Description — 20 min.
8. Stepanyantz K. (Moscow State U.)
Quantum corrections in supersymmetric theories with the higher covariant derivative regularization — 20 min.
9. Asadov V. (Neurok, Moscow)
Generation of Arrow of Time and Effective Gravity in Modified Spinor Dynamics — 20 min.

Parallel Section #3. 15:00

1. Duk V. (INR, Moscow)
Extraction of kaon formfactors from $K \rightarrow \mu\nu\gamma$ decay at ISTRAP setup — 30 min.
2. Khudyakov A. (INR, Moscow)
Study of rare decays at experimental setups OKA (Protvino) and NA62 (SPS, CERN) — 30 min.
3. Damanik A. (Sanata Dharma U.)
Neutrino Masses via a Seesaw Mechanism with Heavy Majorana and Dirac Mass Matrices from Discrete Subgroup $\Delta(27)$ of $SU(3)$. — 30 min.
4. Kopeliovich V. (INR, Moscow)
On the "field theoretical approach" to the neutron-antineutron oscillations in nuclei — 20 min.

Coffee Break. 16:50 – 17:10

5. Mikheev N. (Yaroslavl State U.)
Dirac neutrino magnetic moment and time evolution of supernova neutrino signal — 30 min.
6. Kuznetsov A. (Yaroslavl State U.)
A decay of the ultra-high-energy neutrino $\nu \rightarrow e^-W^+$ in a magnetic field and its influence on the shape of the neutrino spectrum — 30 min.

7. Balantsev I. (Moscow State U.)
Neutrino energy quantization in rotating medium — 20 min.
8. Romyantsev D. (Yaroslavl State U.)
Resonant $\gamma \rightarrow a$ transition in magnetar magnitosphere — 20 min.
9. Shaykhiev A. (INR, Moscow)
The search for heavy neutrino in kaon decays — 20 min.

Saturday, June 12

Plenary Session. 10:00

1. Ioffe B. (ITEP, Moscow)
Chirality violating condensates in QCD and their connection with zero mode solutions of quark Dirac equations — 30 min.
2. Boos E. (SINP MSU, Moscow)
BSM physics with the top quark — 30 min.
3. Belz J. (Utah U.)
The Composition of the Highest Energy Cosmic Rays — 30 min.

Coffee Break. 11:30 – 11:50

4. Dolgov A. (ITEP, Moscow & Ferrara U. & INFN, Ferrara)
Condensation of charged bosons in plasma physics and cosmology. — 30 min.
5. Mironov A. (Lebedev Physics Inst., Moscow)
Conformal field theories vs. SUSY gauge theories: the AGT conjecture — 30 min.
6. Sibiryakov S. (EPFL, Lausanne & INR RAS, Moscow)
Non-relativistic approach to quantum gravity — 30 min.
7. *Closing* — 20 min.