QUARKS-2006

14th International Seminar on High Energy Physics
Pepino, St. Petersburg, Russia, May 19 — 25, 2006.

Preliminary Program

Moscow,2006

Friday, May 19

Morning: Registration

Plenary Session. 14:00

1. *Opening* — 15 min.
2. Tavkhelidze, A. (INR RAS, Moscow)
   The quantum number color, colored quarks and QCD (dedicated to the 40th anniversary of quantum number color) — 45 min.
3. Shirkov, D. (JINR, Dubna)
   QCD at low energies — 30 min.
4. Csaki, C. (Cornell U.)
   The super-little Higgs — 30 min.

Coffee Break. 16:00 – 16:30

5. Yung, A. (NPI, St. Petersburg)
   Bulk brane duality in field theory — 30 min.
6. Arefeva, I. (Steklov Mathematical Institute, Moscow)
   Superstings and models of cosmological dark energy — 30 min.
7. Starobinsky, A. (Landau Inst.)
   Dark energy models in scalar-tensor and f(R) gravity — 30 min.

Coffee Break. 18:00 – 18:30

8. Grojean, C. (Saclay)
   EW phase transition and production of gravitational waves — 30 min.
9. Mukohyama, S. (Tokyo U.)
   Gravity in a Higgs phase — 30 min.

Saturday, May 20

Morning Sessions.

Parallel Section #1. 10:00

1. Piette, B. (Durham U.)
   Mass term in the Skyrme model — 25 min.

2. Shunderyuk, A. (INR, Moscow)
   Pentaquarks as chiral solitons and as multiquark states — 25 min.

3. Krusch, S. (Kent U.)
   Quantization of skyrmions — 25 min.

4. Kuraev, E. (JINR, Dubna)
   Some application of reggeon lagrangian. Muon production and triple muon vertices — 20 min.

Coffee Break. 11:40 – 12:00

5. Vysotsky, M. (ITEP, Moscow)
   B—¿pi pi decays: branching ratios and CP asymmetries — 25 min.

6. Faustov, R. (Computing Ctr., Moscow)
   Masses of heavy tetraquarks in the relativistic quark model — 25 min.

7. Shevchenko, V. (ITEP, Moscow)
   Selected applications of covariant perturbation theory to B-physics — 25 min.

8. Efimov, G. (JINR, Dubna)
   Meson spectrum in QCD with analytic confinement — 25 min.

Parallel Section #2. 10:00

1. Koyama, K. (Portsmouth U.)
   Modified gravity models alternative to dark energy — 30 min.

2. Dubovsky, S. (Harvard U. & INR, Moscow)
   Superluminal propagation and constraint on effective field theories — 30 min.

3. Rubakov V. (INR, Moscow)
   Phantom without UV pathologies — 30 min.

Coffee Break. 11:30 – 12:00

4. Tanaka, T. (Kyoto U.)
   Ghost in the accelerating universe — 30 min.

5. Tynyakov, P. (Brussels U. & INR, Moscow)
   Phenomenological implications of massive gravity — 30 min.

6. Vikman, A. (Munich U.)
   Escaping from the black hole? — 30 min.

7. Volovich, I. (Steklov Math. Inst., Moscow)
   Finite action Klein-Gordon solutions and cosmological landscape — 30 min.

Parallel Section #3. 10:00

1. Vasiliev, M. (Lebedev Inst., Moscow)
   New results in higher spin gauge theory — 30 min.

2. Isaev, A. (JINR, Dubna)
   Multi-loop feynman integrals and conformal quantum mechanics — 25 min.

3. Vernov, Yu. (INR, Moscow)
   Haag's Theorem in $SO(1,3)$ and $SO(1,1)$ invariant theories — 25 min.

4. Fursaev, D. (JINR, Dubna)
   Entanglement entropy in critical phenomena and quantum gravity — 25 min.

Coffee Break. 11:45 – 12:00

5. Losev, A. (ITEP, Moscow)
   BV master equations in modern quantum field theory — 30 min.

6. Krotov, D. (INR, Moscow)
   Gauge theory as a singularity in Chern-Simons — 30 min.

7. Belavin, A. (Landau Inst.)
   Veneziano amplitudes in minimal Polyakov string theory — 45 min.

Plenary Session. 15:00

1. Hearty, C. (BABAR Collaboration)
   Recent highlights from BaBar — 30 min.

2. Aushev, T. (ITEP, Moscow)
   Recent results from Belle experiment — 30 min.

3. Nir, Y. (Weizmann Inst.)
   Highlights of B factories — 30 min.

4. Wetterich, C. (Heidelberg U.)
   Chiral freedom and the scale of weak interactions — 30 min.

Coffee Break. 17:30 – 18:00

5. Kazakov, D. (JINR, Dubna)
   The supersymmetric interpretation of the EGRET excess of diffuse Galactic gamma rays — 30 min.

6. Nesvizhevsky, V. (ILL, Grenoble)
   Short overview of current experiments with slow neutrons at the ILL, Grenoble — 30 min.

7. Achasov, N. (Sobolev Inst. Math., Novosibirsk)
   Properties of the light scalar mesons face experimental data — 30 min.

8. Lipatov, L. (NPI, St. Petersburg)
   Anomalous dimensions of twist-2 operators and Pomeron in the $N = 4$ supersymmetric gauge theory — 30 min.

Sunday, May 21

Visit to Peterghoff and Kronshtadt

Monday, May 22

Morning Sessions.

Parallel Section #1. 10:00

1. Mueller-Preussker, M. (Humboldt U., Berlin)
   Lattice QCD in the infrared: Landau gauge ghost and gluon propagators and the running coupling — 30 min.
2. Rebbi, C. (Boston U.)
   Hadron spectroscopy with overlap quarks — 30 min.
3. Zakharov, V. (ITEP, Moscow)
   Shrinking fermionic zero modes in Yang-Mills theories — 30 min.

Coffee Break. 11:30 – 12:00

4. Narodetskiy, I. (ITEP, Moscow)
   Pentaquark and Lambda production in pp and Sigma p collisions at high energies — 25 min.
5. Alekhin S. (IHEP, Serpukhov)
   Isospin asymmetry of the sea parton distribution at small x and the value of Gottfried integral — 25 min.
6. Saleev, V. (Samara State U.)
   Heavy quarkonium production in Regge limit of QCD — 25 min.
7. Ermolaev, B. (Ioffe Phys. Tech. Inst., St. Petersburg)
   Total resummation of the leading logarithms of x vs standard approach for the polarized deep-inelastic scattering — 25 min.

Parallel Section #2. 10:00

1. Balev, S. (JINR, Dubna)
   Search for direct CP-violation in K–¿pipi0pi0 decays — 30 min.
2. Bolotov, V. (INR, Moscow)
   The study of rare decays with P-326 (CERN) experiment — 30 min.

3. Duk, V. (INR, Moscow)
Rare kaon decays at ISTRA+ setup — 30 min.

Coffee Break. 11:30 – 12:00

4. Polyarush, A. (INR, Moscow)
Study of $K \to e - \pi - \nu - \gamma$ decay with ISTRA+ — 30 min.

5. Parkhomenko, A. (Yaroslavl State U.)
$B \to (\rho, \omega)\gamma$ Decays and CKM Phenomenology — 30 min.

6. Sidorova, M. (Moscow State U.)
Rare meson decays in R-parity-violating SUSY theories — 30 min.

Parallel Section #3. 10:00

1. Smilga, A. (SUBATECH, Nantes)
Superconformal higher-dimensional field theories and the Theory of Everything — 30 min.

2. Nirov Kh. (INR, Moscow)
On conservation laws in integrable systems — 25 min.

3. Spiridonov,V. (JINR, Dubna)
On particular solutions of the elliptic Calogero-Sutherland type models — 25 min.

Coffee Break. 11:30 – 12:00

4. Bezrukov, F. (INR, Moscow)
One fermion creation in 1+1d theories — 25 min.

5. Marshakov, A. (Lebedev Inst., Moscow)
Gauge-string duality and the origin for the Seiberg-Witten theory — 30 min.

6. Samsonov, I. (Tomsk Polytechnic U.)
On renormalizability of non-anticommutative theories with N=(1,0) supersymmetry — 25 min.

7. Kotikov, A. (JINR, Dubna)
Anomalous dimensions of the Wilson operators in $N = 4$ SUSY Yang-Mills model — 25 min.

8. Gorsky, A. (ITEP, Moscow)
From YM Lagrangian to MHV diagram technique — 25 min.

Evening Sessions.

Parallel Section #1. 15:30

1. Ainutdinov, V. (INR, Moscow)
   Baikal neutrino project — 30 min.
2. Naumann, C. (Erlangen - Nuremberg U.)
   Status of the ANTARES neutrino telescope — 30 min.
3. Dokuchaev, V. (INR, Moscow)
   Dark matter annihilation in the Galaxy — 25 min.
4. Gvozdev, A. (Yaroslavl State U.)
   Giant flare of a magnetar SGR 1806-20 — 25 min.
5. Zakharov, A (ITEP, Moscow)
   Measuring the black hole parameters with space missions — 30 min.

Coffee Break. 17:45 – 18:00

6. Eroshenko, Yu (INR, Moscow)
   Dark matter distribution in Galaxy — 25 min.
7. Fairbairn, M. (Stockholm U.)
   The prospects for the indirect detection of dark matter — 25 min.
8. Strokov, V. (MIPT & Lebedev Inst., Moscow)
   Lagrangian formalism in the cosmological perturbation theory — 25 min.

Parallel Section #2. 15:30

1. Mauger, F. (LPC Caen/ENSICAEN & Univ. of Caen)
   Neutrinoless double beta decay and the NEMO experiments — 30 min.
2. Gladyshev, A. (JINR, Dubna)
   Selected scenarios for slepton production at LHC — 30 min.

3. Kim, V. (PNPI, Gatchina)
   Diffractive Higgs production at LHC — 30 min.

4. Nugaev, E. (INR, Moscow)
   Higgs boson with single generation — 30 min.

Coffee Break. 17:30 – 18:00

5. Kirsanov, M. (INR, Moscow)
   Search for a heavy Majorana neutrino in CMS at LHC — 30 min.

6. Pankov, A. (Gomel State Tech. U.)
   Distinguishing new physics scenarios at ILC — 25 min.

7. Akhmetzyanova, E. (Samara State U.)
   Evidences of CP violation in the supersymmetric models at linear colliders — 25 min.

8. Smirnov, A. (Yaroslavl U.)
   On mass limits for leptoquarks from $K_L^0 \to e^{\mp}\mu^{\pm}, B^0 \to l_i^+ l_j^-$ *decays.* — 25 min.

Parallel Section #3. 15:30

1. McKeon, D. (Western Ontario U.)
   Using the renormalization group — 30 min.

2. Marachevsky, V. (St. Petersburg State U.)
   Attractive Casimir forces for perfectly conducting cavities and waveguides: recent results. — 20 min.

3. Grigoriev, D. (NUIM, Maynooth)
   Real-time dynamics of proton decay — 25 min.

4. Vereshagin,V. (NPI, St. Petersburg)
   Effective theories: aspects of renormalization — 20 min.

5. Akhmedov, Emil (ITEP, Moscow)
   On the alternative formulation of 2D field theory — 25 min.

Coffee Break. 17:35 – 18:00

6. Abrikosov, A. (ITEP, Moscow)
Integral boundary conditions for the modified spectral bag — 25 min.

7. Alexeev, S. (Sternberg Astron. Inst., Moscow State U.)
Black hole solutions in $N > 4$ Gauss-Bonnet Gravity — 25 min.

8. Zhuk, A. (Odessa State U.)
Conventional cosmology from multidimensional models — 25 min.

9. Vernov, S. (SINP, Moscow State U.)
Crossing the cosmological constant barrier in string inspired models — 25 min.

Evening: Concert

Tuesday, May 23

Visit to St.Petersburg and Hermitage State Museum

Night sessions.

Parallel Section #1. 20:30

1. Metsaev, R. (Lebedev Inst., Moscow)
   Light-cone formulation of conformal field theory adapted to AdS/CFT correspondence — 30 min.
2. Grigoriev, M. (Lebedev Inst., Moscow)
   Parent form for higher spin fields on AdS space — 30 min.
3. Krykhtin, V. (Tomsk Polytechnic U.)
   BRST approach to higher spin field theory — 30 min.

Parallel Section #2. 20:30

1. Shinkevich, S. (Moscow State U.)
   Relativistic theory of inverse beta-decay of polarized neutron in strong magnetic field — 30 min.
2. Rumyantsev, D. (Yaroslavl State U.)
   Compton scattering in a strongly magnetized plasma — 30 min.

Parallel Section #3. 20:30

1. Shnir, Ya. (Oldenburg U.)
   Non-self dual axially symmetric caloron solutions of SU(2) Yang-Mills theory — 30 min.
2. Khokonov, A. (Kabarda-Balkar State U., Nalchik)
   Stochastical study of vacuum stability — 30 min.

Wednesday, May 24

Morning Sessions.

Parallel Section #1. 10:00

1. Novozhilov, V. and Novozhilov, Yu. (St. Petersburg State U.)
   Color bosonization, chiral parametrization of gluonic field and low energy QCD action — 30 min.
2. Popov, S. (Sternberg Astron. Inst., Moscow State U.)
   Neutron star cooling constraints for color superconductivity in hybrid stars — 25 min.
3. Cherednikov, I. (JINR, Dubna)
   Instanton contributions to the Sivers function: single-spin asymmetries in SIDIS — 25 min.
4. Paston, S. (St. Petersburg State U.)
   QED(1+1) on the light front and implications for semiphenomenological methods in QCD(3+1) — 25 min.

Coffee Break. 11:40 – 12:00

5. Petti, R. (CERN & South Carolina U.)
   Modeling electron and neutrino scattering: from high to low Q^2 — 30 min.
6. Kulagin, S. (INR, Moscow)
   QCD, nuclear effects and the Weinberg angle in neutrino DIS. — 25 min.
7. Sidorov, A. (JINR, Dubna)
   The role of higher twist and positivity constraints in polarized DIS — 25 min.
8. Lee, R. (BINP, Novosibirsk)
   Two-loop vertex integrals in general kinematics — 25 min.

Parallel Section #2. 10:00

1. Buchmueller, W. (DESY)
   The supersymmetric Standard Model from the heterotic string — 30 min.

2. Bajc, B. (Stefan Inst., Ljubljana)
   Realistic renormalizable SO(10) — 30 min.

3. Nesti, F. (Aquila U.)
   SUSY SO(10) for fermion massses and mixings — 30 min.

Coffee Break. 11:30 – 12:00

4. Demidov, S. (INR, Moscow)
   Nonminimal split supersymmetry — 30 min.

5. Dolgopolov, M. (Samara State U.)
   The physical basis and effective self-couplings of Higgs bosons in the CPX scenario — 30 min.

6. Povarov, A. (Yaroslavl State U.)
   Scalar leptoquark contributions into the magnetic moment of neutrino in the minimal model with the four-color symmetry. — 30 min.

Parallel Section #3. 10:00

1. Barvinksy, A. (Lebedev Inst., Moscow)
   Creation from nothing revisited: some like it hot — 30 min.

2. Baacke, J. (Dortmund U.)
   Hybrid inflation — 30 min.

3. Mikheeva, E (Ledede v Inst.)
   Current constraints on inflation — 30 min.

Coffee Break. 11:30 – 12:00

4. Mironov, A. (ITEP, Moscow)
   Possibility of experimental realization of the TeV-scale gravity — 30 min.

5. Nesterov, D. (Lebedev Inst., Moscow)
   Quantum effective action in spacetimes with branes — 30 min.

6. Singleton, D. (Fresno State U.)
   Avoiding cosmological chaos with S-branes — 30 min.
7. Pirogov, Yu. (IHEP, Serpukhov)
   Violating the general covariance — 30 min.

Evening Sessions.

Parallel Section #1. 15:30

1. Braun, M. (St. Petersburg State U.)
   Nucleus-nucleus interaction in the perturbative QCD — 30 min.
2. Kerbikov, B. (ITEP, Moscow)
   Bose-Einstein crossover and Anderson transition in dense quark matter — 30 min.
3. Gromov, N. (NPI, St. Petersburg)
   Fermionic and bosonic determinants in QCD at finite temperature and relations among them — 25 min.
4. Slizovskiy, S. (NPI, St. Petersburg)
   Fermionic determinant of SU(N) caloron — 25 min.
5. Novikov, V (ITEP, Moscow)
   Quadrupolar contact terms and hyperfine structure in hadronic atoms — 30 min.

Coffee Break. 17:35 – 18:00

6. Braguta, V. (IHEP, Serpukhov)
   Double charmonium meson production in e+e- annihilation at energy 10.6 GeV — 30 min.
7. Zayakin, A. (JINR, Dubna)
   Analytic perturbation theory for practitioners and Upsilon decay — 25 min.
8. Scherbakova, E. (JINR, Dubna)
   Application of QCD structure function method to calculation of NLO corrections to Bhabha scattering — 25 min.

Parallel Section #2. 15:30

1. Studenikin,A. (Moscow State U.)
   Neutrino in matter and external fields — 30 min.

2. Kuznetsov, A. (Yaroslavl State U.)
   Neutrino dispersion in external magnetic fields — 25 min.

3. Mikheev, N. (Yaroslavl State U.)
   Neutrino chirality flip in a supernova and the bound on the neutrino magnetic moment — 25 min.

4. Rashba, T. (Max Planck Inst., Munich)
   Probing non standard neutrino interactions with coherent scattering off nuclei — 25 min.

5. Ognev, I. (Yaroslavl State U.)
   Neutrino heating of a shock wave within magnetorotational model — 25 min.

Coffee Break. 17:45 – 18:00

6. Jaeckel, J. (DESY)
   Entropy growth and the equation of state of dark energy — 30 min.

7. Andrianov, V. (St. Petersburg State U.)
   Induced gravity and Universe generation on domain walls in five-dimensional space-time — 30 min.

8. Sibiryakov, S. (INR, Moscow)
   Spontaneous breaking of Lorentz invariance, black holes and perpetuum mobile of the 2nd kind — 30 min.

9. Smolyakov, M. (SINP, Moscow State U.)
   A stabilized brane world in five-dimensional Brans-Dicke theory — 25 min.

Parallel Section #3. 15:30

1. Thomson, G. (Rutgers U.)
   Results from the HiRes Experiment — 30 min.

2. Shinozaki, K. (AGASA Collaboration)
   Observation of UHECRs by AGASA — 30 min.

3. Pravdin, M. (Cosmophys. Res. Inst., Yakutsk)
   Properties of giant air showers and the problem of energy estimation of an initial particle — 30 min.

4. Belov, K. (Utah U.)
   Experimental measurement of the energy dissipation rate of primary particle in EAS. — 25 min.

Coffee Break. 17:30 – 18:00

5. Rubtsov, G. (Moscow State U. & INR, Moscow)
   Upper limit on the ulta-high-energy photon flux — 25 min.
6. Kalashev, O. (INR, Moscow)
   Photons and the origin of the highest energy cosmic rays — 25 min.
7. Dedenko, L. (Moscow State U.)
   Various approaches of energy estimation of giant air showers — 25 min.
8. Tkachev, I. (INR, Moscow & CERN)
   Quantifying expectations of UHECR - BL Lacs correlations — 25 min.

Conference Dinner

Thursday, May 25

Plenary Session. 10:00

1. McLerran, L. (Brookhaven)
   The high energy limit of QCD — 30 min.

2. Diakonov, D. (NPI, St. Petersburg)
   3,5,7... - quark wave functions in ordinary baryons and the narrow width of the exotic Theta+ baryon — 30 min.

3. Gherghetta, T. (Minnesota U.)
   Emergent 4D gravity — 30 min.

Coffee Break. 11:30 – 12:00

4. Pomarol, A. (Autonoma U., Barcelona)
   Composite Higgs — 30 min.

5. Lukash, V. (Lebedev Inst., Moscow)
   Problems of cosmology — 30 min.

6. Tomaras, T. (Crete U. & FORTH, Heraklion)
   Brane-bulk energy exchange: A model with the present Universe as a global attractor — 30 min.

7. Zheng, H. (MINOS Collaboration)
   MINOS update — 30 min.

8. Gorbunov, D. (INR, Moscow)
   Studies of UHECRs: past, present and future — 30 min.

9. *Closing*