

Institute for Nuclear Research
of the Russian Academy of Sciences

Joint Institute for Nuclear Research

QUARKS-2018

20th International Seminar on High Energy Physics
Valday, Russia, May 27 — June 2, 2018.

Preliminary program

Moscow, 2018

Sunday, May 27

Afternoon: Registration

Plenary Session. 18:00

1. *Opening.*
2. Sergey Sibiryakov (EPFL, Lausanne & CERN & INR RAS)
Ultra-light scalar dark matter: Motivation, Dynamics, Probes. — 30 min.
3. Alexander Zakharov (ITEP, Moscow & BLTP JINR, Dubna)
Constraints on alternative theories of gravity with observations of the Galactic Center. — 30 min.
4. Shinji Mukohyama (Yukawa Inst., Kyoto U.)
Horava-Lifshitz cosmology revisited. — 30 min.
5. Eugeny Babichev (LPT Orsay)
Scalar-tensor theories after GW170817. — 30 min.

Monday, May 28

Plenary Session. 10:00

1. Alexander Studenikin (Moscow State U.)
Overview on electromagnetic properties of neutrino. — 30 min.
2. Nikolay Krasnikov (INR RAS, Moscow)
Search for light dark matter at accelerators. NA64 experiment. — 30 min.
3. Alexander Nozik (INR RAS, Moscow)
Status and perspectives of the Troitsk nu-mass experiment. — 30 min.

Coffee Break. 11:30 – 11:50

4. Zhan-Arys Dzhilkibaev (INR RAS, Moscow)
Baikal-GVD project: current status and prospects. — 30 min.
5. Dmitry Zaborov (CPPM, Marseille)
KM3NeT: Neutrino oscillation and astroparticle research in the Mediterranean sea. — 30 min.
6. Rodion Burenin (IKI RAS, Moscow)
Current cosmological constraints on linear perturbations amplitude, neutrino mass and number of relativistic species . — 30 min.

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

1. Andrei Smilga (Nantes U.)
Classical and quantum dynamics of higher-derivative theories. — 30 min.
2. Masahide Yamaguchi (Tokyo Inst. of Technology)
Ghost-Free Theory with Third-Order Time Derivatives. — 30 min.
3. Mikhail Volkov (U. of Tours IDP)
Massive spin-2 field in arbitrary spacetimes – the detailed derivation. — 30 min.
4. Stanislav Alexeyev (Sternberg Astronomical Inst., Moscow)
Constraints on Extended Gravity at Galaxy Clusters Scales. — 30 min.

Coffee Break. 17:00 – 17:30

5. Sergey Sushkov (Inst. of Physics, Kazan Federal U.)
Cosmological perturbations during the kinetic inflation in the Horndeski theory. — 30 min.
6. Emil Akhmedov (MIPT & ITEP, Moscow)
Ultraviolet phenomena in AdS self-interacting quantum field theory. — 30 min.
7. Victoria Volkova (INR RAS, Moscow)
Cosmological bounce in Horndeski theory and beyond. — 20 min.
8. Evgeny Kholupenko (Ioffe Inst., St.Petersburg)
The Possible Lost Anisotropy of the Unruh radiation. — 30 min.

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

1. Alexei Yung (PNPI & St.Petersburg State U.)
Non-Abelian vortex in four dimensions as a critical superstring. — 30 min.
2. Evgenii Ievlev (St.Petersburg State U.)
Non-Abelian strings in $N = 1$ supersymmetric QCD. — 30 min.
3. Joseph Minahan (Uppsala U.)
Mass deformed super Yang-Mills on spheres. — 30 min.
4. Fedor Levkovich-Maslyuk (Ecole Normale Supérieure, Paris)
Quantum spectral curve and structure constants in $N = 4$ super Yang-Mills. — 30 min.

Coffee Break. 17:00 – 17:30

5. Dmitri Kazakov (JINR, Dubna)
The Structure of UV Divergences in Maximally Supersymmetric Gauge Theories. — 30 min.
6. Konstantin Stepanyantz (Moscow State U.)
Supersymmetry, quantum corrections, and the higher derivative regularization. — 30 min.
7. Lubomir Martinovic (Inst. of Physics SAS, Bratislava & BLTP JINR, Dubna)
Non-vanishing of vacuum diagrams in light-cone perturbation theory. — 30 min.

8. Valeria Akhmedova (HSE, Moscow)
Reductions of the dispersionless DKP hierarchy. — 20 min.

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

1. Peter Lukin (Budker Inst. & Novosibirsk State U.)
Measurements of the $e^+e^- \rightarrow$ hadrons cross sections with the CMD-3 detector at VEPP-2000 collider. — 30 min.
2. Marat Khabibullin (INR RAS, Moscow)
Recent results from the T2K experiment. — 30 min.
3. Oleg Samoylov (JINR, Dubna)
A review on latest NOvA results. — 30 min.
4. Ksenia Ptitsyna (INR RAS, Moscow)
Cosmic rays in Galaxy. — 30 min.

Coffee Break. 17:00 – 17:30

5. Denis Shlenev (Yaroslavl Higher Military School of Air Defense)
Photon splitting in strongly magnetized medium with taking into account positronium influence. — 20 min.
6. Igor Krasnov (INR RAS, Moscow)
Numerical estimate of minimal active-sterile neutrino mixing for sterile neutrinos at GeV scale. — 20 min.
7. Andrey Lobanov (Moscow State U.)
Quantum field-theoretical description of neutrino behavior in dense matter. — 20 min.
8. Aleksandra Chukhnova (Moscow State U.)
Stationary and non-stationary solutions of the evolution equation for neutrino in matter. — 30 min.

Parallel Section #4 (Hall #4). 15:00

1. Evgeny Zabrodin (Oslo U.)
Relaxation to local equilibrium in relativistic heavy ion collisions. — 30 min.

2. Boris Kerbikov (ITEP, Moscow)
Sound in quark matter. — 30 min.
3. Tamaz Khunjua (Moscow State U.)
Dense quark matter with chiral imbalance: NJL-model consideration. — 30 min.
4. Roman Zhokhov (IHEP Protvino)
Charged pion condensation in dense quark matter with isospin and chiral imbalance. — 30 min.

Coffee Break. 17:00 – 17:30

5. Aleksandr Iakubovich (St.Petersburg State U.)
QCD motivated meson models with a chiral imbalance. — 30 min.
6. Alyona Putilova (St.Petersburg State U.)
Exotic meson decays and polarization asymmetry in hadron environment with a chiral imbalance. — 30 min.
7. Ivan Sobolev (DESY & Moscow State U.)
Corrections to the Higgs mass in the MSSM: resummation of bottom quarks contributions. — 20 min.

Tuesday, May 29

Plenary Session. 10:00

1. Mikhail Kirsanov (CERN)
Search for Dark Matter in CMS at the LHC. — 30 min.
2. Evgenii Baldin (Budker Inst., Novosibirsk)
ATLAS status & overview. — 30 min.
3. Kirill Chilikin (Lebedev Inst. RAS, Moscow)
Overview of Belle results. — 30 min.

Coffee Break. 11:30 – 11:50

4. Nikita Belyi (U. of Chinese Academy of Sciences)
Tests of Lepton-flavour universality and related anomalies at LHCb. — 30 min.
5. Eduard Boos (Skobeltsyn Inst., Moscow State U.)
Progress in Top Quark Physics. — 30 min.
6. Yury Kudenko (INR RAS, Moscow)
Study of oscillations with accelerator and reactor neutrinos. — 30 min.

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

1. Alexander Vikman (Inst. of Physics, Prague)
Superconducting Dark Matter. — 30 min.
2. Michel Tytgat (Université Libre de Bruxelles)
Clockwork Dark Matter. — 30 min.
3. Kenichi Saikawa (Max-Planck-Institute for Physics)
Axion dark matter and cosmology. — 30 min.
4. Anton Chudaykin (INR RAS, Moscow)
Light scalar field dark matter with $O(1)$ keV sterile neutrino. — 30 min.

Coffee Break. 17:00 – 17:30

5. Igor Tkachev (INR RAS, Moscow)
Phenomenology of axion miniclusters. — 30 min.
6. Dmitry Levkov (INR RAS, Moscow)
Gravitational Bose condensation of dark matter axions. — 30 min.
7. Alexander Panin (INR RAS, Moscow)
Laser effect for cosmic axions. — 30 min.
8. Mikhail Kirsanov (CERN)
Search for a new X boson and Dark Photons in NA64 at the CERN SPS. — 20 min.
9. Victor Romanenko (KBSU)
Axion search and neutron dipole moment in cryogenic experiments with quantum data receiver. — 20 min.

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

1. Oleg Zaslavskii (Karazin Kharkov National U., Ukraine)
Ultra-high energy particle collisions in strong gravitational field and super-Penrose process. — 30 min.
2. Maxim Fitkevich (INR RAS & MIPT, Moscow)
Failure of mean field approximation in weakly-coupled dilaton gravity. — 20 min.
3. Valery Marachevsky (St.Petersburg State U.)
Casimir repulsion and attraction due to presence of Chern-Simons layers at the surfaces of dielectrics and metals. — 30 min.
4. Yuki Amari (Tokyo U. of Science)
Solitons in the SU(3) Faddeev-Niemi model. — 30 min.

Coffee Break. 17:00 – 17:30

5. Maxim Kurkov (U. of Naples "Federico II")
Parity anomaly in four dimensions. — 30 min.
6. Oleksandr Diatlyk (HSE, Moscow)
Massive quantum scalar field in presence of moving mirror. — 20 min.

7. Oleg Novikov (St.Petersburg State U.)
Inhomogeneous perturbations in the pseudo-Hermitian quantum cosmology. — 20 min.
8. Boris Latosh (Dubna U.)
Three Waves for Quantum Gravity. — 20 min.

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

1. Pavel Kovtun (Victoria U.)
Relativistic thermodynamics and magneto-hydrodynamics. — 30 min.
2. Maxim Dvornikov (IZMIRAN, Troitsk)
Electric current of massive fermions induced by a magnetic field in the equilibrium. — 30 min.
3. Roman Nevzorov (ITEP, Moscow)
Generation of Baryon Asymmetry in the E6 inspired composite Higgs model. — 30 min.
4. Mikhail Dolgoplov (Samara U.)
Critical temperatures in extensions of Higgs sector. — 30 min.

Coffee Break. 17:00 – 17:30

5. Petr Satunin (INR RAS, Moscow)
One-loop corrections to photon velocity in Lorentz-violating QED. — 30 min.
6. Konstantin Astapov (INR RAS, Moscow)
On photon splitting in Lorentz-violating QED. — 20 min.
7. Aleksandr Ivanov (St.Petersburg State U.)
The asymptotic approach to renormalization of the Yang-Mills theory. — 20 min.
8. Natalia Kharuk (St.Petersburg State U.)
Modifying the theory of gravity by changing independent variables. — 20 min.
9. Vjacheslav Prokopov (Moscow State U.)
Black hole shadow in tidal charge extended models. — 20 min.

Parallel Section #4 (Hall #4). 15:00

1. Irina Aref'eva (Steklov Math. Inst., Moscow)
Holography for Heavy Ions Collisions at LHC and NICA. — 30 min.
2. Alexander Gorsky (IITP, Moscow)
Metal or insulator? Dirac operator spectrum in holographic QCD. — 30 min.
3. Vladimir Vechernin (St.Petersburg State U.)
Short- and long-range rapidity correlations in the model with a lattice in transverse plane. — 30 min.
4. Dmitry Ageev (Steklov Math. Inst., Moscow)
Holographic local quench: quantum complexity and entanglement. — 30 min.

Coffee Break. 17:00 – 17:30

5. Anastasia Golubtsova (BLTP JINR, Dubna)
Holographic RG flow at zero and finite temperatures. — 20 min.
6. Pavel Slepov (Moscow State U.)
Holographic study of Wilson loop in the anisotropic background with confinement /deconfinement phase transition. — 20 min.
7. Mikhail Khramtsov (Steklov Math. Inst., Moscow)
1/N diagrammatics in SYK model beyond the conformal limit . — 20 min.
8. Maria Tikhanovskaya (Steklov Math. Inst., Moscow)
New large N solutions of the SYK model. — 20 min.
9. Kristina Rannu (RUDN, Moscow)
Holographic anisotropic background with confinement-deconfinement phase transition. — 20 min.

Wednesday, May 30

Excursion

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

1. Alexei Starobinsky (Landau Inst. RAS, Moscow)
Inflation and pre-inflation in R^2 and related gravity models. — 30 min.
2. Alexey Toporensky (Sternberg Astronomical Inst., Moscow)
Generality of Starobinsky inflation. — 30 min.
3. Tomislav Prokopec (Utrecht U.)
Conformal Higgs portal models. — 30 min.
4. Mikhail Ivanov (IAS, Princeton & EPFL, Lausanne)
Theory of Large Scale Structure: Successes, Challenges and Prospects. — 30 min.

Coffee Break. 17:00 – 17:30

5. Nikolai Starkov (Lebedev Inst., Moscow)
Nuclear Emulsions for WIMP Search with Directional Measurement (NEWSdm). — 30 min.
6. Sergey Godunov (ITEP, Moscow)
Evolution of a domain wall in expanding universe: inflation and after it. — 30 min.
7. Anton Baushev (JINR, Dubna)
Difficulties of N -body cosmological simulations and the physics of dark matter. — 30 min.

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

1. Evgeny Ivanov (BLTP JINR, Dubna)
New deformations of $\mathcal{N} = 4$ and $\mathcal{N} = 8$ supersymmetric mechanics. — 30 min.
2. Khazret Nirov (INR RAS, Moscow)
On representations of quantum groups and functional relations in integrable systems . — 30 min.

3. Andrey Mironov (Lebedev Inst., Moscow)
 τ -function backstage: conformal blocks, Painleve, and Dijkgraaf-Vafa solutions. — 30 min.

4. Andrey Morozov (IITP, Moscow)
Tangle blocks in knot calculus. — 30 min.

Coffee Break. 17:00 – 17:30

5. Maxim Zabzine (Uppsala U.)
5D Yang-Mills and modular triple boson. — 30 min.

6. Edvard Musaev (MIPT, Moscow)
Dynamics of exotic branes of M-theory. — 30 min.

7. Yegor Zenkevich (Milano Bicocca U. & ITEP, Moscow)
Quantum toroidal algebras and gauge theory. — 30 min.

8. Dmitri Bykov (Steklov Mathematical Inst., Moscow)
Ricci-flat metrics and Killing-Yano tensors. — 30 min.

9. Alexander Reshetnyak (ISPMS, Tomsk)
On equivalence of unconstrained and constrained BRST- BFV Lagrangian formulations for Higher Spin Fields. — 20 min.

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

1. Mikhail Vysotsky (ITEP, Moscow)
Resonances in positron scattering on a supercritical nucleus and spontaneous production of e^+e^- pairs. — 30 min.

2. Petr Satunin (INR RAS, Moscow)
Breit-Wheeler pair production in external electric field from world-line instantons. — 30 min.

3. Sergei Demidov (INR RAS, Moscow)
Constraints on multiparticle production in scalar field theory from classical simulations. — 30 min.

4. Emin Nugaev (INR RAS, Moscow)
Metastable Q-balls. — 30 min.

Coffee Break. 17:00 – 17:30

5. Leonid Bezrukov (INR RAS, Moscow)
Geoneutrinos, Earth intrinsic heat, Earth Electricity. — 30 min.
6. Natalia Agafonova (INR RAS, Moscow)
Possible explanation of the neutrino signal from SN1987A detected using the LSD. — 30 min.
7. Aleksandr Nesterenok (Ioffe Inst., St Petersburg)
Modelling C-type shocks in interstellar clouds. — 30 min.
8. Azamat Khokonov (KBSU & BNO INR RAS)
The star collapse dynamic with account of viscosity. — 20 min.

Parallel Section #4 (Hall #4). 15:00

1. Mikhail Zubkov (Ariel U., Israel & ITEP, Moscow)
Anomalous transport phenomena and momentum space topology. — 30 min.
2. Igor Bogolubsky (JINR, Dubna)
On effective gluon mass in lattice simulations. — 30 min.
3. Dmitri Peresunko (NRC Kurchatov Inst., Moscow)
Direct photons in pp and AA collisions. — 30 min.

Coffee Break. 17:00 – 17:30

4. Larissa Bravina (Oslo U.)
Anisotropic Flow in A + A at 4-200 GeV. — 30 min.
5. Oleg Teryaev (JINR, Dubna)
Rotation and spin dynamics in heavy-ion collisions and anisotropic Universe. — 30 min.

Thursday, May 31

Parallel Section #1 (Hall #1). 10:00

1. Andrei Kataev (INR RAS, Moscow)
The AVV triangle diagram in QCD and the generalized Crewter relation: scheme (in)dependent results. — 30 min.
2. Anatoly Kotikov (JINR, Dubna)
SUSY-like relation in evolution of gluon and quark jet multiplicities. — 30 min.
3. Grigory Pivovarov (INR RAS, Moscow)
Skewed Sudakov Regime. — 30 min.

Coffee Break. 11:30 – 11:50

4. Victor Molokoedov (MIPT & Landau Inst. & INR RAS, Moscow)
On the relation between pole and running masses of the heavy quarks and charged leptons. — 30 min.
5. Dmitry Karlovets (Tomsk State U.)
Scattering beyond the plane-wave approximation and probing of phases of scattering amplitudes. — 30 min.
6. Alexander Biryukov (Samara National Research U.)
Functional approach for the description of vacuum influence on electron states. — 30 min.

Parallel Section #2 (Hall #2). 10:00

1. Alexander Belavin (Landau Inst., Moscow)
The new approach to computing the Calabi-Yau moduli space geometry. — 30 min.
2. Dario Francia (Scuola Normale Superiore di Pisa)
Asymptotic symmetries and charges for arbitrary spin. — 30 min.
3. Nikita Misuna (Lebedev Inst., Moscow)
Lorentz covariance in higher-spin equations. — 30 min.

Coffee Break. 11:30 – 11:50

4. Karapet Mkrtchyan (Max Planck Inst., Potsdam)
Interactions of massless higher spin fields. — 30 min.
5. Shane Farnsworth (Max Planck Inst., Potsdam)
Particle physics from geometry. — 30 min.
6. Alexey Isaev (JINR, Dubna)
Double-spinor description of massive particles with arbitrary spins. — 30 min.

Parallel Section #3 (Hall #3). 10:00

1. Vladimir Shevchenko (NRC Kurchatov Inst., Moscow)
SHiP project as a new facility at intensity frontier. — 30 min.
2. Dmitry Matvienko (Budker Inst. RAS, Novosibirsk)
The Belle II experiment: status and physics. — 30 min.
3. Dmitry Gorbunov (INR RAS, Moscow)
Oscillations to hidden photon in reactor and accelerator experiments. — 30 min.

Coffee Break. 11:30 – 11:50

4. Eugene Zhemchugov (ITEP, Moscow)
*Equivalent photons in proton-proton collisions at LHC:
 $pp(\gamma\gamma) \rightarrow l^+l^-pp$.* — 30 min.
5. Lev Dudko (Moscow State U.)
BSM contribution to the off-shell electroweak top quark production. — 30 min.
6. Petr Mandrik (NRC Kurchatov Inst., Moscow & IHEP, Protvino)
Top FCNC searches at HL-LHC with CMS. — 30 min.

Parallel Section #4 (Hall #4). 10:00

1. Pierre Vanhove (Saclay U., Paris)
On-shell methods for classical and quantum gravity. — 30 min.
2. Andrej Arbuzov (JINR, Dubna)
Conformally Coupled General Relativity. — 30 min.

3. Andrey Shkerin (EPFL, Lausanne)
Gravity, Scale Invariance and the Hierarchy problem. — 30 min.

Coffee Break. 11:30 – 11:50

4. Anna Tokareva (INR RAS, Moscow)
A simple UV completion to the Higgs and Higgs-dilaton inflation. — 30 min.
5. Oleg Evseev (INR RAS, Moscow)
No static spherically symmetric wormholes in Horndeski theory. — 20 min.
6. Sergey Mironov (INR RAS, Moscow)
Wormhole in beyond Horndeski theory. — 30 min.

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

1. Grigory Rubtsov (INR RAS, Moscow)
Overview of Telescope Array results on ultra-high-energy cosmic rays. — 30 min.
2. Yana Zhezher (INR RAS, Moscow)
Ultra-high-energy cosmic rays mass composition studies with the Telescope Array Surface Detector data. — 20 min.
3. Gašper Kukec Mezek (Nova Gorica U.)
Mass composition of cosmic rays with energies from $10^{17.2}$ eV to 10^{20} eV using surface and fluorescence detectors of the Pierre Auger Observatory. — 30 min.
4. Alexey Malgin (INR RAS, Moscow)
Variation in the energy of cosmic ray muons underground. — 30 min.

Coffee Break. 17:00 – 17:30

5. Oleg Kalashev (INR RAS, Moscow)
Secondary signal from ultra-high energy cosmic rays produced by distant blazars. — 30 min.
6. Maxim Pshirkov (Sternberg Astronomical Inst., MSU)
Ultra-high energy cosmic rays and the strongest AGN flares. — 30 min.
7. Timur Dzhatdov (Moscow State U.)
Intergalactic electromagnetic cascades in the magnetized Universe as a tool of astroparticle physics. — 30 min.

8. Mikhail Kuznetsov (INR RAS, Moscow)
Search for ultra high energy photons with the Telescope Array experiment. — 30 min.

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

1. Andrei Khmel'nitsky (ICTP, Italy)
Light particles with spin during inflation. — 30 min.
2. Elizabeth Gould (University of Southampton, England)
Rethinking Time at the Big Bang. — 30 min.
3. Sergey Vernov (Skobel'syn Inst., Moscow State U.)
Non-local models with the Gauss-Bonnet term. — 30 min.
4. Vasilisa Nikiforova (INR RAS, Moscow)
Issues in dynamical torsion gravity. — 30 min.

Coffee Break. 17:00 – 17:30

5. Nikita Avdeev (Sternberg Astronomical Inst., Moscow)
Manifestations of Horndesky Theory in Binary Systems with Pulsars. — 20 min.
6. Yulia Ageeva (Moscow State U.)
Strong coupling in the Galilean Genesis Model. — 20 min.
7. Polina Dyadina (Sternberg Astronomical Inst., Moscow)
Post-Newtonian limit of hybrid $f(R)$ -gravity. — 20 min.
8. Ekaterina Pozdeeva (Skobel'syn Inst., Moscow State U.)
Inflationary Scenarios based on MSSM. — 20 min.

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

1. Konstantin Chetyrkin (Hamburg U.)
The structure of anomalous dimensions and $no-\pi$ theorem for massless propagators. — 30 min.
2. Alexander Penin (Alberta U.)
High energy limit of QCD. — 30 min.

3. Sven-Olaf Moch (Hamburg U.)
QCD splitting functions and cusp anomalous dimensions at four loops — 30 min.
4. Semyon Pozdnyakov (Ariel U., Israel)
NNLO classical solution for Lipatov's effective action for reggeized gluons. — 30 min.

Coffee Break. 17:00 – 17:30

5. Laszlo Jenkovszky (Bogolyubov ITP, Kiev)
The Odderon in the light of recent TOTEM/CMS (LHC) measurement of the pp forward phase at 13 TeV. — 30 min.
6. Andrei Barvinsky (Lebedev Inst., Moscow)
Renormalization of gauge theories in the background-field approach. — 30 min.
7. Alexander Reshetnyak (ISPMS, Tomsk)
Generalization of Faddeev-Popov rules for Yang-Mills theories to the case of N-parametric BRST symmetries. — 30 min.
8. Patricio Salgado-Rebolledo (Adolfo Ibaez U., Chile)
Gribov Ambiguity and Degenerate Systems. — 30 min.

Parallel Section #4 (Hall #4). 15:00

1. Alexandr Polyarush (INR RAS, Moscow)
Study of radiative kaon decay using OKA detector. — 30 min.
2. Artur Shaikhev (INR RAS, Moscow)
Search for exotics at NA62. — 30 min.
3. Nikolay Achasov (Sobolev Inst. SB RAS, Novosibirsk)
Exotics at Our Home. — 30 min.
4. Alexey Kiselev (Sobolev Inst. SB RAS, Novosibirsk)
Light scalar mesons and the data on two-kaon correlation functions. — 30 min.

Coffee Break. 17:00 – 17:30

5. Alexander Dorokhov (JINR, Dubna)
The proton size puzzle: experiment vs theory. — 30 min.

6. Sergey Kulagin (INR RAS, Moscow)
Nuclear parton distributions and applications to W/Z boson production in p + Pb collisions at LHC. — 30 min.
7. Alexey Zhevlakov (Tomsk State U.)
CP-violation decays of eta and eta-prime mesons and EDM of neutron. — 30 min.
8. Milos Dordevic (Vinca Inst., Belgrade U.)
The CMS Particle Flow algorithm. — 30 min.

Friday, June 1

Plenary Session. 10:00

1. Oleg Verkhodanov (Special Astrophysical Observatory RAS)
Advanced stream search for galaxy clusters with multifrequency microwave data. — 30 min.
2. Alexandr Dolgov (Novosibirsk State U. & ITEP, Moscow)
New astronomical data and primordial black holes. — 30 min.
3. Andrei Barvinsky (Lebedev Inst., Moscow)
Hořava gravity is asymptotically free (in 2+1 dimensions). — 30 min.

Coffee Break. 11:30 – 11:50

4. Nikolay Budnev (Irkutsk State U.)
TAIGA – a hybrid array for high energy gamma astronomy and cosmic ray physics. — 30 min.
5. Peter Lukin (Budker Inst. & Novosibirsk State U.)
Measurements of exclusive hadronic cross sections at BABAR and the implication for the muon $g-2$ calculation. — 30 min.
6. Viacheslav Duk (INR RAS, Moscow & Birmingham U.)
First results on $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ decay search from NA62. — 30 min.

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

1. Inar Timiryasov (EPFL, Lausanne)
Low-scale leptogenesis. — 30 min.
2. Sabir Ramazanov (CEICO, Czech Republic)
Dark matter and baryon asymmetry of the very dawn of Universe. — 30 min.
3. Elena Arbuzova (Dubna State U. & Novosibirsk State U.)
Impact of gravitational baryogenesis on cosmological evolution. — 30 min.

Coffee Break. 17:00 – 17:30

4. Alexander Kisselev (Logunov Inst. & NRC Kurchatov Inst., Moscow)
Bound on a flux of ultra-high energy neutrinos in a scenario with extra dimensions. — 30 min.

5. Alexander Korochkin (INR RAS, Moscow)
Constraining the star formation rate with the extragalactic background light. — 20 min.

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

1. Alexey Baskakov (Skobeltsyn Inst., Moscow State U.)
Restrictions on the mass of the KK excitation W' from the Higgs boson diphoton decay and the single top production. — 30 min.
2. Alexander Pankov (GSTU, Gomel & JINR, Dubna)
First results on precise determination of $Z - Z'$ mixing with ATLAS and CMS diboson production data at the LHC at 13 TeV and predictions for RUN II. — 30 min.
3. Anna Danilina (Moscow State U.)
Differential distributions in rare four-leptonic B -decays. — 20 min.
4. Anastasiia Kozachuk (Moscow State U.)
Charm contribution to radiative leptonic B -decays. — 20 min.
5. Elena Solovieva (MIPT & Lebedev Inst. RAS, Moscow)
Recent developments in charmed baryon spectroscopy. — 20 min.

Coffee Break. 17:00 – 17:30

6. Ivan Kharuk (INR RAS & MIPT, Moscow)
Goldstone theorem for the spontaneous breakdown of spacetime symmetries. — 20 min.
7. Andrey Shkerin (EPFL, Lausanne)
On vibrational modes of Q -balls. — 20 min.
8. Sergey Larin (INR RAS, Moscow)
Higher-derivative relativistic quantum gravity. — 30 min.
9. Alexander Popolitov (Uppsala U.)
TBA. — 30 min.
10. Yury Pismak (St.Petersburg State U.)
Dispersion relations and dynamic characteristics of bound states in the model of Dirac field interacting with a material plane. — 30 min.

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

1. Grigory Feofilov (St.Petersburg State U.)
Studies of strange and multi-strange particle production in ALICE at the LHC. — 30 min.
2. Igor Altsybeev (St.Petersburg State U.)
Event-by-event fluctuation measurements with ALICE. — 30 min.
3. Dag Larsen (Jagiellonian U.)
Open Charm measurements at the NA61 experiment at CERN SPS. — 30 min.
4. Sonia Kabana (Nantes U. & Laboratory SUBATECH)
Heavy Ion collisions at RHIC. — 30 min.

Coffee Break. 17:00 – 17:30

5. Evgeny Andronov (St.Petersburg State U.)
News from the NA61/SHINE experiment. — 20 min.
6. Andrey Seryakov (St.Petersburg State U.)
A hint of percolation threshold in heavy ion collisions at SPS energies. — 30 min.
7. Vladimir Kovalenko (St.Petersburg State U.)
Application of Bayesian Gaussian Process for Optimization of String Fusion Model Parameters. — 30 min.
8. Daria Prokhorova (St.Petersburg State U.)
Pseudorapidity dependence of multiplicity and transverse momentum fluctuations in pp collisions at the SPS energies. — 20 min.
9. Svetlana Belokurova (St.Petersburg State U.)
Asymptotes of multiplicity and transverse momentum correlation coefficients at large string density. — 20 min.

Parallel Section #4 (Hall #4). 15:00

1. Yakov Shnir (BLTP JINR, Dubna)
Broken Hopfions. — 30 min.
2. Dmitri Melikhov (Skobeltsyn Inst., Moscow State U.)
Exotic tetraquark mesons in large- N_c QCD. — 30 min.

3. Sergey Afonin (St.Petersburg State U.)
The large- N_c masses of light mesons from QCD sum rules and the scalar sigma-meson. — 30 min.
4. Victor Kim (PNPI NRC KI & St. Petersburg Polytechnic U.)
Probing cold dense baryon matter and cumulative processes. — 30 min.

Coffee Break. 17:00 – 17:30

5. Vladimir Saleev (Samara National Research U.)
From LO to NLO in the parton Reggeization approach. — 30 min.
6. Andrey Kudlis (St.Petersburg State U.)
Higher-order couplings of three-dimensional $O(n)$ -symmetric ϕ^4 theory: multiloop renormalization-group analysis. — 20 min.
7. Sergey Bitjukov (IHEP, Protvino)
On one method of comparing experimental and theoretical data. — 30 min.

Saturday, June 2

Plenary Session. 10:00

1. Alexander Kovalenko (JINR, Dubna)
Status of NICA at JINR. — 30 min.
2. Catalin-Lucian Ristea (Inst. of Space Science, Bucharest)
Recent results from the ALICE experiment at the LHC. — 30 min.
3. Valery Nesvizhevsky (Institut Laue-Langevin, Grenoble)
A new approach to improve the sensitivity to neutron-antineutron oscillations by many orders of magnitude. — 30 min.
4. *Closing.*