

# EIGHTEENTH LOMONOSOV CONFERENCE ON ELEMENTARY PARTICLE PHYSICS

## TWELFTH INTERNATIONAL MEETING ON PROBLEMS OF INTELLIGENTSIA: "The Future of the Intelligentsia"

Moscow State University, Moscow, 24 – 30 August, 2017

**Under the Patronage of the Rector  
of Moscow State University  
Victor Sadovnichy**

**Dedicated to the 25<sup>th</sup> Anniversary of  
Lomonosov Conferences**

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**Programme of the 18th Lomonosov Conference on Elementary Particle Physics**  
/duration of 25 (20/15) min talks includes 5 (3) minutes for discussion/

**24 August, Thursday**

**08.00 – 09.00**      **Registration** (Hall in front of Central Physics Auditorium, Faculty of Physics, Moscow State University)

**09.00 – 09.30**      **Opening** (Conference Hall)

Chair: Alexander Studenikin, Chairman of Organizing Committee, MSU & JINR

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Leonid Kravchuk, Director of Institute for Nuclear Research RAS

Andrey Slavnov, Head of Department of Theoretical Physics of MSU

**09.30 – 13.20**      **MORNING SESSION** (Conference Hall)

**09.30 M. Giammarchi** (INFN, Milan) *The Lomonosov Conference and physics in the last 25 years* (25 min)

**09.55 S. Kostromin** (JINR) *NICA accelerator complex* (20 min)

**10.15 F. Djama** (CPPM Marseille) *Overview of the ATLAS experiment at the LHC* (25 min)

**10.40 S. Swain** (National Institute of Science Education and Research) *CMS highlight overview* (25 min)

**11.05 – 11.40**      Tea break

**11.40 E. Coccia** (GSSI & INFN) *The detection of gravitational waves: 50 years of experimental efforts* (25 min)

**12.05 S. Goswami** (Physical Research Laboratory, India) *Neutrino phenomenology* (25 min)

**12.30 C. Ott** (CalTech) *Core-collapse supernova mechanisms* (25 min)

**12.55 K. Long** (Imperial College London) *Accelerator-based neutrino physics; past, present and future* (25 min)

**13.20 – 15.00**      Lunch

**15.00 – 18.30**      **AFTERNOON SESSION** (Conference Hall)

**15.00 V. Berezhinsky** (GSSI) *Protons in UHECR* (25 min)

**15.25 P. Serpico** (LAPTh) *Entering the cosmic ray astrophysics precision era* (25 min)

**15.50 I. Maris** (Univ. Libre de Bruxelles) *Results from the Pierre Auger Observatory* (25 min)

**16.15 – 16.45**      Tea break

**16.45 I. Bozovic Jelisavcic** (Univ. of Belgrade) *Physics at the Compact Linear Collider (CLIC)* (25 min)

**17.10 B. Gavela** (Univ. Autonoma de Madrid) *On axions and ALPs* (25 min)

**17.35 A. Starobinsky** (Landau Inst.) *Recent developments in the inflationary scenario* (25 min)

**18.00 S. Mihara** (KEK) *Muon particle physics program at J-PARC* (20 min)

**18.30 – 23.30**      **SPECIAL SESSION** (40<sup>0</sup>)

Reception banquet will be held on board of a ship that will stream along the river across the central part of Moscow; the conference buses to the ship will depart from the entrance of the Faculty of Physics at **18.30**

## 25 August, Friday

### 09.00 – 13.30 MORNING SESSION (Conference Hall)

09.00 **M. Ackermann** (DESY) *Astrophysics and particle physics with IceCube neutrinos* (25 min)

09.25 **S.-H. Seo** (Seoul Nat. Univ.) *New Results from RENO & future prospects with T2HKK* (25 min)

09.50 **M. Smy** (Univ. of California, Irvine) *T2K neutrino oscillation results and constraints on delta CP* (25 min)

10.15 **C. Hagedorn** (Univ. of Southern Denmark) *Leptonic CP violation* (25 min)

10.40 **L. Ludhova** (Forschungszentrum Jülich) *Low energy neutrino physics with liquid scintillator detectors* (25 min)

### 11.05 – 11.30 Tea break

11.30 **M. Yokoyama** (Univ. of Tokyo) *Hyper-Kamiokande* (25 min)

11.55 **M. Pallavicini** (Univ. & INFN, Genoa) *The INFN program on neutrino physics* (25 min)

12.20 **A. Kouchner** (Univ. Paris Diderot - Laboratoire APC) *High-energy neutrino searches in the Mediterranean Sea* (25 min)

12.45 **A.G. Cocco** (INFN, Naples) *Relic neutrino detection* (25 min)

13.05 **J. Evans** (Univ. of Manchester) *The DUNE experiment* (25 min)

### 13.30 – 15.00 Lunch

### 15.00 – 19.10 AFTERNOON SESSION (Conference Hall)

15.00 **I. Drachnev** (PINP, Gatchina) *Review on solar neutrino studies with Borexino* (20 min)

15.20 **A. Guglielmi** (INFN, Padua) *ICARUS: from CNGS to Booster beam* (25 min)

15.45 **Y. Li** (IHEP, Chinese Academy of Sciences) *Status of light sterile neutrinos* (20 min)

16.05 **S. Zhou** (IHEP, Chinese Academy of Sciences) *Neutrino mass ordering and neutrinoless double-beta decays* (20 min)

16.25 **M. Yoshimura** (Okayama Univ.) *Neutrino mass spectroscopy* (25 min)

### 16.50 – 17.20 Tea break

### SESSION 25.08. A (Neutrinos)

17.20 **S. Nasri** (United Arab Emirates Univ.) *Neutrino Mass, Dark Matter, and Baryon Asymmetry of the Universe* (20 min)

17.40 **M. Gromov** (SINP MSU) *The SOX project* (20 min)

18.00 **D. Chiesa** (Univ. & INFN Milano-Bicocca) *The CUORE experiment at LNGS* (20 min)

18.20 **M. Ghosh** (Tokyo Metropolitan Univ.) *Sensitivity of the T2HKK experiment to the non-standard interactions* (15 min)

18.35 **S. Gariazzo** (IFIC-CSIC & Univ. de Valencia) *Neutrino clustering in the Milky Way* (15 min)

18.50 **S. Qian** (IHEP Chinese Academy of Sciences) *The R&D of the large area MCP-PMT for the neutrino Experiments* (20 min)

### SESSION 25.08. B (Physics at Colliders)

17.20 **U. Schneekloth** (DESY) *Electroweak fits to HERA data* (20 min)

17.40 **D. Boumediene** (CNRS/LPC) *Higgs precision measurements with ATLAS* (15 min)

17.55 **S. Kiselev** (ITEP) *Hadronic resonance production with ALICE at the LHC* (20 min)

18.05 **O. Zenaiev** (DESY) *xFitter* (15 min)

18.20 **N. Sasao** (Okayama Univ.) *Intense gamma radiation by accelerated quantum ions* (20 min)

18.40 **M. Ronzani** (CERN) *Searches for supersymmetry with the ATLAS detector* (15 min)

SESSION 25.08. C (Gravitation, cosmology, astrophysics)

**17.20 V. Berezin** (INR RAS) *Conformal invariance and phenomenology of cosmological particle production* (20 min)

**17.40 E. Alvarez** (Univ. Autonoma de Madrid) *Weyl invariant, first order quadratic gravity* (20 min)

**18.00 V. Dokuchaev** (INR RAS) *Global geometry of the Vaidya space-time* (20 min)

**18.20 B. Dutta** (Texas A&M Univ.) *Dark matter and SUSY* (25 min)

**18.45 E. Pozdeeva** (MSU) *Cosmological attractors in multifield inflation* (15 min)

**19.30 – 22.30 Sight-seeing bus excursion in Moscow**

## 26 August, Saturday

**09.00 – 13.20 MORNING SESSION** (Conference Hall)

**09.00 A. Drukier** (Stockholm Univ.) *Ultimate dark-matter detection* (20 min)

**09.20 I. Bilenko** (MSU) *LIGO project: status, results and future* (25 min)

**09.45 J. van den Brand** (Univ. of Amsterdam) *Status of the Advanced Virgo detector* (25 min)

**10.10 W. Del Pozzo** (Univ. of Pisa) *Fundamental physics from gravitational waves observations* (25 min)

**10.35 R. Ciolfi** (INAF, Padua) *Gravitational wave sources and multimessenger astronomy* (25 min)

**10.00 – 11.30** Tea break

**11.30 P. Spillantini** (INAF) *Direct measurements of cosmic rays* (25 min)

**11.55 R. Sparvoli** (Univ. of Rome Tor Vergata) *The CSES/Limadou mission* (20 min)

**12.15 V. Choutko** (MIT) *Latest AMS results on high energy cosmic ray measurements* (25 min)

**12.40 M. Panasyuk** (SINP MSU) *Astrophysical space observatory "Lomonosov": the first results* (25 min)

**13.05 R. Bernabei** (Univ. of Rome Tor Vergata) *Recent results and perspectives of DAMA experiments at Gran Sasso* (25 min)

**13.30 – 15.00** Lunch

**15.00 – 19.10 AFTERNOON SESSION** (Conference Hall)

**15.00 Ch. Tunnell** (Univ. of Chicago) *First results from the XENONIT Experiment* (20 min)

**15.20 J. Sola** (Univ. de Barcelona) *Current state of dynamical dark energy versus observations* (25 min)

**15.45 T. Kobayashi** (SISSA) *Spontaneous Baryogenesis and Geometric Baryogenesis* (25 min)

**16.10 C. Kouvaris** (Univ. of Southern Denmark) *Probing light dark matter* (25 min)

**16.35 – 17.00** Tea break

**17.00 P. Salucci** (SISSA) *The distribution of dark matter in galaxies and its nature* (25 min)

**17.25 Y. Srivastava** (Northeastern Univ.) *Critical indices and limits on space-time dimensions from cosmic rays* (20 min)

**17.45 R. Rangarajan** (Physical Research Laboratory, India) *Current status of warm inflation* (25 min)

**18.10 L. Yang** (Tsinghua Univ.) *Recent status of CDEX and CJPL* (20 min)

**18.30 B. Capdevila** (Institut de Física d'Altes Energies, Barcelona) *Patterns of New Physics in  $b \rightarrow sl^+l^-$  transitions in the light of recent data* (20 min)

**18.50 M. Kirsanov** (INR RAS) *Search for dark sector physics in missing energy events with NA64* (20 min)

## 27 August, Sunday

**9.00 – 19.00** Bus excursion to Sergiev Posad

## 28 August, Monday

### 09.00 – 13.35 MORNING SESSION (Conference Hall)

09.00 **T. Matsuo** (TOHO Univ.) *Results from the OPERA experiment* (20 min)

09.20 **T. Nakadaira** (KEK) *Future J-PARC neutrino beam upgrade and T2K-II experiment* (20 min)

09.40 **K.T. Knoepfle** (Max Planck Institute, Heidelberg) *Status and prospects of the search for neutrinoless double beta decay of Ge-76* (25 min)

10.05 **D. Zaborov** (CPPM, Marseille) *The KM3NeT neutrino telescope and the potential of a neutrino beam from Russia to the Mediterranean Sea* (25 min)

10.30 **J. Xu** (IHEP of Chinese Academy of Sciences) *Recent results from Daya Bay* (20 min)

10.50 **C. Vayenas** (Univ. of Patras) *Gravitationally confined relativistic neutrinos* (25 min)

### 11.15 – 11.50 Tea break

11.50 **J. Zalesak** (Institute of Physics, Czech Academy of Sciences) *Recent results from the NOvA Experiment* (25 min)

12.15 **G. Salamanna** (Univ. of Rome Tre) *Status and physics potential of the JUNO experiment* (20 min)

12.35 **T. Matsubara** (Tokyo Metropolitan Univ.) *Recent results from Double Chooz reactor neutrino experiment* (20 min)

12.55 **V. Belov** (ITEP, Kurchatov Institute) *From EXO-200 to nEXO* (20 min)

13.15 **A. Kononov** (ITEP, Kurchatov Institute) *Observation of coherent elastic neutrino-nucleus scattering at SNS* (20 min)

### 13.35 – 15.00 Lunch

### 15.00 – 19.00 AFTERNOON SESSION (Conference Hall)

#### SESSION 28.08. A (Neutrinos)

15.00 **Z. Zhao** (Liaoning Normal Univ.) *Breakings of the neutrino reflection symmetry* (20 min)

15.20 **L.V. Maret** (Univ. of Geneva) *Cross-section measurements in the T2K experiment* (20 min)

15.40 **M. Rebelo** (Univ. of Lisbon) *Neutrino physics and leptonic weak basis invariants* (25 min)

16.05 **R. Soualah** (Univ. of Sharjah) *Probing the majorana neutrinos nature at actual and future colliders* (15 min)

16.20 **A. Esmaili Taklimi** (Pontificia Univ. Catholica do Rio de Janeiro) *High energy neutrinos and dark matter* (20 min)

#### SESSION 28.08. B (BSM, Theory)

15.00 **A. Nesterenko** (JINR) *Dispersive approach to QCD and its applications* (20 min)

15.20 **M. Butenschoen** (Univ. of Hamburg) *Theory of heavy quarkonium production* (20 min)

15.40 **V. Kopeliovich** (INR RAS) *Rescaling of quantized skyrmions: from nucleon to baryons with heavy flavor* (20 min)

16.00 **V. Braguta** (ITEP) *Study of dense SU(3) QCD through lattice simulation of SU(2) QCD with chemical potential* (20 min)

16.20 **Y. Srivastava** (Northeastern Univ.) *Low energy nuclear reactions in normal and exploding batteries* (20 min)

#### SESSION 28.08. C (Physics at Colliders)

15.00 **O. Zenaiev** (DESY) *Latest tests of hard QCD at HERA* (25 min)

15.25 **M. Tokarev** (JINR) *Fractality of strange particle production in pp collisions at RHIC* (20 min)

15.45 **S. Poslavsky** (IHEP, Provtino) *PANDA physics* (20 min)

16.05 **F. Fabbri** (INFN, Bologna) *Top pair and single top production in ATLAS* (20 min)

SESSION 28.08. D (Dark matter searches)

- 15.00 P. Czodrowski** (CERN) *Constraining dark matter with ATLAS* (20 min)  
**15.20 V. Caracciolo** (LNGS, INFN) *The ADAMO project and developments* (20 min)  
**15.40 N. Ferreiro Iachellini** (Max Planck Inst. for Physics, Munich) *Light dark matter search with CRESST-III* (20 min)  
**16.00 A. Alexandrov** (INFN, Naples) *Directional detection of dark matter with a nuclear emulsion based detector* (20 min)  
**16.20 V. Solovov** (LIP) *LUX Dark Matter Experiment: the latest results* (20 min)

**16.40 - 17.10** Tee break

SESSION 28.08. E (Neutrinos)

- 17.10 V. Semikoz** (IZMIRAN, Troitsk) *Non-conservation of the lepton current and asymmetry of relic neutrinos* (20 min)  
**17.30 Ch. Das** (JINR) *Effects of BSMs on  $\theta_{23}$  determination* (15 min)  
**17.45 A. Damanik** (Sanata Dharma Univ.) *Neutrino mass sum-rule from cobimaximal neutrino mixing matrix* (20 min)  
**18.05 T. Karkkainen** (Univ. of Helsinki) *Constraining the nonstandard interaction parameters in long baseline neutrino experiments* (15 min)  
**18.20 A. Borisov & P. Sizin** (NUST MISiS) *Nonstandard neutrino interactions in a dense magnetized medium* (15 min)  
**18.35 S. Mayburov** (Lebedev Institute of Physics) *Search for periodical variations of Fe-55 nuclide weak decay parameters* (15 min)

SESSION 28.08. F (Theory: cosmic rays, cosmology)

- 17.10 V. Belokurov** (MSU) *Evolution of the Universe caused by the averaged potential of the quantum scalar field* (15 min)  
**17.25 M. Dvornikov** (IZMIRAN, Troitsk & Tomsk State Univ.) *Chiral magnetic effect and the generation of astrophysical magnetic fields* (15 min)  
**17.40 W. Chang** (National Tsinghua Univ.) *Making case for the singlet majoronic dark radiation* (20 min)  
**18.00 O. Antipin** (Institut Rudjer Boskovic) *Revisiting the decoupling effects in the running of the Cosmological Constant* (15 min)  
**18.15 O. Zenaiev** (DESY) *Astrophysical applications of PROSA PDFs* (20 min)  
**18.35 E.J. Chun** (Korea Institute for Advanced Study) *Baryogenesis and  $n-\bar{n}$  oscillation from R-parity violation (neutron-antineutron oscillations)* (20 min)

SESSION 28.08. G (Hadronic, Theory)

- 17.10 A. Issadykov** (JINR) *The study of  $b$ - $s$  anomaly decays in covariant quark model* (15 min)  
**17.25 A. Kataev** (INR RAS) *The generalized Crewther relation in  $SU(N_c)$ : the current status of investigations* (15 min)  
**17.40 M. Fil'chenkov** (Peoples' Friendship Univ. of Russia) *Quantum field theory effects on the horizons of static metrics* (20 min)  
**18.00 Yu. Grats** (MSU), **P.A. Spirin** (MSU) *Vacuum polarization in cosmic-string and global-monopole backgrounds* (20 min)  
**18.20 A. Garat** (Univ. de la Republica, Montevideo) *New tetrads in Riemannian geometry and new ensuing results in group theory, gauge theory and fundamental physics, in particle physics, general relativity and astrophysics* (20 min)  
**18.40 G. Kravtsova** (MSU) *Towards restrictions mass spectrum of fermions in non-Hermitian models using gamma-5 extensions of the mass and their implications for neutrino physics* (20 min)

**17.10 E. Soldatov** (NRNU MEPhI) *Electroweak precision measurements in ATLAS* (15 min)

**17.25 S. Poslavsky** (IHEP, Provtino) *Heavy quarkonia production at LHC* (15 min)

**17.25 F. Prokoshin** (Univ. Tecnica Federico Santa Maria, Chile) *Searches for rare and exotic Higgs decays with ATLAS* (15 min)

**17.40 A. Krutenkova** (ITEP, Kurchatov Institute) *Production of nuclear fragments in the  $^{12}\text{C}+^7\text{Be}$  collisions at intermediate energies* (15 min)

**17.55 A. Gridin** (JINR) *Search for exotic charmonium-like states at COMPASS* (20 min)



## 29 August, Tuesday

### 09.00 – 13.30 MORNING SESSION (Conference Hall)

09.00 **S. Pokorski** (Univ. of Warsaw) *Naturalness* (25 min)

09.25 **D. Jeans** (KEK) *The International Linear Collider project* (25 min)

09.50 **P. Fermani** (LNF, INFN) *Status of the KLOE-2 experiment at DAFNE* (25 min)

10.15 **A. Taranenko** (Moscow Phys. Eng. Inst.) *Recent results from PHENIX experiment at RHIC* (25 min)

10.40 **X. Shi** (IHEP of Chinese Academy of Sciences) *Overview of the CEPC Project* (20 min)

11.00 – 11.30 Tea break

11.30 **P. Lewis** (Univ. of Hawaii) *The Belle II/SuperKEKB project* (25 min)

11.55 **S. Levonian** (DESY) *Recent results on diffraction at HERA* (20 min)

12.15 **E. Bossini** (CERN & INFN, Pisa) *The TOTEM experiment: Results and perspectives* (25 min)

12.40 **I. Selyuzhenkov** (MEPhI) *Recent ALICE highlights* (25 min)

13.05 **U. Schneekloth** (DESY) *The OLYMPUS experiment - hard two-photon contribution to elastic lepton-proton scattering* (20 min)

13.30 – 15.00 Lunch

### 15.00 – 19.00 AFTERNOON SESSION (Conference Hall)

15.00 **S. Denisov** (IHEP, Protvino) *Review of the Tevatron results* (25 min)

15.25 **R. Fantechi** (INFN, Pisa & CERN) *Review of NA62 and NA48 physics results* (25 min)

15.50 **W. Gohn** (Univ. of Kentucky) *The Muon g-2 Experiment at Fermilab* (20 min)

16.15 **T. Mibe** (KEK) *J-PARC muon g-2/EDM experiment* (20 min)

16.35 **S. Serednyakov** (INP-Novosibirsk) *Recent measurements of exclusive hadronic cross sections at BABAR and the implication for the muon g-2 calculation* (20 min)

16.55 **A. Dzyuba** (Petersburg Nuclear Physics Institute) *Charm physics at LHCb* (20 min)

17.15 – 17.40 Tea break

### SESSION 29.08. A (Neutrinos)

17.40 **A. Segarra** (IFIC-Valencia) *The coherent weak charge of matter* (15 min)

17.55 **D. Grigoriou** (Univ. of Patras) *Comparison of the special relativistic and of the Schwarzschild geodesics treatments of the formation of bound rotational neutrino states stabilized via the uncertainty principle* (15 min)

18.10 **N. Agafonova** (INR RAS) *Search for supernova neutrino bursts with the LVD experiment* (15 min)

18.25 **O. Kharlanov** (MSU) *Signatures of neutrino magnetic moment in collective oscillations of supernova neutrinos* (15 min)

18.40 **S. Demidov** (INR RAS) *Influence of NSI on neutrino signal from dark matter annihilations in the Sun* (15 min)

18.55 **S. Luchuk** (INR RAS) *Study of the  $\nu_\mu$  charged-current quasi-elastic-like interactions in the NOvA near detector* (10 min)

### SESSION 29.08. B (Colliders)

17.40 **R. Sultanov** (St. Cloud State Univ.) *Influence of the  $\bar{p} - p$  nuclear interaction on the rate of the low-energy  $\bar{p} + H_\mu \rightarrow (\bar{p}p)_\alpha + \mu^-$  reaction* (20 min)

18.00 **P. Parfenov** (MEPhI) *Azimuthal anisotropic flow performance for MPD experiment at NICA* (15 min)

18.15 **A. Polyarush** (INR RAS) *Study of  $K^+ \rightarrow \pi^0 e^+ \nu$   $\gamma$ -decay with OKA setup* (15 min)

18.30 **N. Ermakov** (MEPhI) *Transverse mass dependence of kaon Bose-Einstein correlations in p+p collisions at energy  $\sqrt{s} = 200$  and 510 GeV with STAR* (15 min)

**18.45 E. Zherebtsova** (MEPhI) *Procedure for event characterization in Pb-Pb collisions at 40A GeV in the NA49 experiment at CERN SPS* (15 min)

SESSION 29.08. C (Theory)

**17.40 A. Kulikova** (Tomsk State Univ.) *Relativistic radiation theory with Hertz tensor fields* (15 min)

**17.55 T. Adorno** (Tomsk State Univ.) *Preliminary aspects of switching-on and -off effects on vacuum instability* (15 min)

**18.10 A. Shitova** (Yaroslavl State Univ.) *A decay of an ultra-high energy neutrino  $\nu_e \rightarrow e^- W^+$  in an extremely high magnetic field* (15 min)

**18.25 V. Shakhmanov** (MSU) *The three-loop contribution to beta-function quartic in the Yukawa couplings for the  $N=1$  supersymmetric Yang-Mills theory with the higher covariant derivative regularization* (15 min)

SESSION 29.08. D (Astrophysics, cosmic rays)

**17.40 N. Tomassetti** (Univ. of Perugia & INFN) *Results from the AMS experiment on low-energy cosmic rays: time-dependence of cosmic-ray fluxes and solar modulation* (20 min)

**18.00 Y. Zhezher** (INR RAS) *Chemical composition of ultra-high energy cosmic rays from the Telescope Array experiment surface detector data* (15 min)

**18.15 G. Bigongiari** (INFN, Pisa) *Calocube: a novel approach for a homogeneous calorimeter for high-energy cosmic rays detection in space* (20 min)

**18.35 Y. Khyzhniak** (MEPhI) *Measurement of cosmic rays in the STAR experiment* (15 min)

## 30 August, Wednesday

**09.00 – 12.55 MORNING SESSION** (Conference Hall)

**09.00 P. Lukin** (Budker Inst. of Nuclear Physics and Novosibirsk State Univ.) *Overview of the CMD-3 recent results at  $e+e$  collider VEPP-2000* (20 min)

**09.20 K. Suzuki** (Nagoya Univ.) *Belle II Physics Prospects* (25 min)

**09.45 Min-Zu Wang** (National Taiwan Univ.) *Recent results of rare B/D decays from Belle* (20 min)

**10.05 K. Ieki** (Univ. of Tokyo) *Search of cLFV processes with muons and others* (25 min)

**10.30 – 11.00** Tea break

**11.00 G. Gratta** (Stanford Univ.) *Tests of gravity at very large and very short distance* (25 min)

**11.25 A. Dolgov** (Novosibirsk State Univ. & ITEP Kurchatov Institute) *New problems in cosmology and primordial black holes* (25 min)

**11.50 E. Arbuzova** (Dubna State Univ. and Novosibirsk State Univ.) *Problems of spontaneous and gravitational baryogenesis* (20 min)

**12.10 A. Taketa** (Univ. of Tokyo) *Geophysics using neutrino oscillations* (20 min)

**12.30 M. Shirchenko** (JINR, Dubna) *Status and recent results of the MAJORANA DEMONSTRATOR* (20 min)

**12.45 M. Knecht** (CNRS) *Theoretical aspects of the anomalous magnetic moment of the charged leptons* (20 min)

**13.05 – 14.30** Lunch

### ROUND TABLE DISCUSSION

#### "Frontiers in Particle Physics"

(Conference Hall)

**14.30 G. Chiarelli** (INFN, Pisa) *Legacy measurements at the Tevatron* (25 min)

**14.55 J. Pinfold** (Univ. of Alberta) *The MoEDAL Experiment at the LHC - a new light on the high energy frontier* (25 min)

**15.15 M. Malek** (Univ. of Sheffield) *Neutrinos and cosmology* (25 min)

**15.40 L. Stanco** (INFN, Padua) *Neutrino mass hierarchy from oscillation* (25 min)

**16.00 M. Smy** (Univ. of California, Irvine) *Future Prospects of Solar Neutrino Measurements* (25 min)

**16.25 – 16.40** Tea break

**16.40 S. Popov** (MSU) *Fast radio bursts: new exotic puzzle in astrophysics* (20 min)

**17.00 D. Prokhorov** (Wits Univ.) *The spectrum of the core of Centaurus A with H.E.S.S. and Fermi-LAT* (20 min)

**17.20 G. Marsella** (Univ. of Salento) *Recent Results from the DAMPE experiment* (20 min)

**17.40 V. Petrov** (IHEP, Protvino) *QUO VADIS? Strong Interactions at High Energies in Historical Perspective* (25 min)

### TWELFTH INTERNATIONAL MEETING ON

#### PROBLEMS OF INTELLIGENTSIA:

#### "The Future of the Intelligentsia "

(Conference Hall)

Chairman: Alexander Studenikin

**18.30 J. Bleimaier** (Princeton) *The future of the intelligentsia* (25 min)

**Closing of the 18<sup>h</sup> Lomonosov Conference on Elementary Particle Physics  
and the 12<sup>th</sup> International Meeting on Problems of Intelligentsia**

**SPECIAL SESSION (40<sup>0</sup>)**

**POSTER SESSION**

**N. Tomassetti** (Univ. of Perugia & INFN) *Astrophysical background for dark matter search with cosmic-ray antinuclei*

**N. Tomassetti** (Univ. of Perugia & INFN) *Predicting solar modulation of cosmic-ray particles and antiparticles in the Heliosphere*

**V. Koryukin** (Mari State Univ) *On the role of quantum chromodynamics in the theory of the Universe matter evolution*

**A. Bell** (Cuban Isotopes Center) *A theoretical model for surface coalescence*

**M. Organokov** (Institut Pluridisciplinaire Hubert CURIEN) *Neutrino entanglement with magnetic field*

**J. Gornaya** (MEPhI) *Analysis of flow in the experiment NA49*

**O. Golosov** (MEPhI) *Analysis of anisotropic transverse flow in Pb-Pb collisions at 40A GeV in the NA49 experiment at CERN SPS using Qn-Corrections Framework*