

**NIGHTEENTH LOMONOSOV CONFERENCE ON
ELEMENTARY PARTICLE PHYSICS**

**THIRTEENTH INTERNATIONAL MEETING ON
PROBLEMS OF INTELLIGENTSIA:
"The Heritage and Future of the Intelligentsia"**

Moscow State University, Moscow, 22 – 28 August, 2019

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

**Dedicated to the 150th Anniversary
of the Mendeleev's Periodic Table
of Chemical Elements**

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Programme of the 19th Lomonosov Conference on Elementary Particle Physics

/duration of 25 (20/15) min talks includes 5 (3) minutes for discussion/

22 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
Welcome on behalf of Ministry of Science and Higher Education of Russia (TBC)
Andrey Fedyanin, Vice Rector of Moscow State University
Richard Lednický, Vice Director of Joint Institute for Nuclear Research
Grigory Rubtsov, Vice 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 R.Lednický (JINR) *The overview of JINR* (25 min)

09.55 Y.Wang (IHEP, Beijing) *The high energy programme of IHEP(China)* (25 min)

10.20 A.Duperrin (CNRS) *High Luminosity yellow report: what does HL-LHC physics look like?* (25 min)

10.45 T.Koseki (J-PARC/KEK) *Status and future prospect of J-PARC accelerator* (25 min)

11.10 – 11.40 Tea break

11.40 I.Bozovic Jelisavcic (Univ. of Belgrade) *Higgs physics at future $e+e-$ colliders* (25 min)

12.05 J.van den Brand (Nikhef) *Status of gravitational waves with the Virgo experiment* (25 min)

12.30 F.Ferrini (Cherenkov Telescope Array Observatory) *Status of the Cherenkov Telescope Array Observatory* (25 min)

12.55 M.Rebelo (Univ. of Lisbon) *Hot topics in Neutrino Physics* (25 min)

13.20 S.-H.Seo (Seoul Nat. Univ.) *Review on the sterile neutrino experiments* (25 min)

13.20 – 15.00 Lunch

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

15.00 S.Vitale (Univ. of Trento) *Gravitational wave astronomy within ESA science programme* (25 min)

15.25 A.Renzi (INFN, Padua) *Status and perspectives of the Euclid mission* (25 min)

15.50 B.Patricelli (INFN & Univ. of Pisa) *Gravitational waves and multi-messenger astronomy: the new exploration of the Universe* (25 min)

16.15 – 16.45 Tea break

16.45 A.Castellina (INAF, Torino) *Ultra high energy cosmic rays: Experimental results and open questions in the multi messenger era* (25 min)

17.10 M.Taiuti (Univ. of Genoa & INFN, Genoa) *The KM3NeT neutrino telescope* (25 min)

17.35 R.Feidenhans'l (European XFEL GmbH) *European XFEL: Status and first results after two years of operation* (25 min)

18.00 G.Dattoli (ENEA, Frascati) *Fundamental physics and free electron laser* (25 min)

18.25 A.Karpov (JINR) *Synthesis of superheavy elements: Present and future* (25 min)

18.50 – 23.30 **SPECIAL SESSION** (40⁰)

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**

23 August, Friday

08.30– 13.30 MORNING SESSION (Conference Hall)

08.30 T.Ruhe (Univ. of Dortmund) *Recent results from IceCube* (25 min)

08.55 S.King (Queen Mary Univ.) *Recent results and perspectives from the T2K experiment* (25 min)

09.20 A.Garfagnini (INFN, Padua) *Present and future experiments for neutrinoless double beta decay searches* (25 min)

09.45 J.Cao (IHEP, Beijing) *Reactor neutrino anomalies* (25 min)

10.10 Ph.Kampmann (Forsch. Jülich GmbH) *Status and physics of JUNO* (25 min)

10.35 A.Izmaylov (Inst. of Particle Phys., Valencia) *Physics program and status of the DUNE neutrino project* (25 min)

11.00 – 11.30 Tea break

11.30 J.Kim (Kyung Hee Univ.) *History of neutrino magnetic moment* (25 min)

11.55 F.Capozzi (Max Planck Inst., Munich) *Global constraints on neutrino masses and their ordering* (25 min)

12.20 A.Palazzo (Univ. of Bari) *Probing light sterile neutrinos with LBL experiments* (25 min)

12.45 M.Mezzetto (INFN, Padua) *Prospects for the measurement of the neutrino mass ordering and leptonic CP violation* (25 min)

13.10 Y.Kuno (Osaka Univ.) *Overview of charged lepton flavour violation* (25 min)

13.35 – 15.00 Lunch

15.00 – 19.20 AFTERNOON SESSION (Conference Hall)

15.00 M.Dracos (IPHC, Strasbourg) *Project for leptonic CP violation discovery based on the European Spallation* (25 min)

15.25 A.Guglielmi (INFN, Padova) *ICARUS at Fermilab SBN program* (25 min)

15.50 D.Marfatia (Univ. of Hawaii at Manoa) *Nonstandard neutrino interactions* (25 min)

16.15 R.Bernabei (INFN & Univ. of Rome - II) *Enlightening the dark Universe* (25 min)

16.40-17.10 Tea break

SESSION 23.08. A (Neutrinos)

17.10 E.Akhmedov (Max Planck Inst. for Nuclear Phys., Heidelberg) *Relic neutrino detection through angular correlations in inverse beta-decay* (20 min)

17.30 P.Spillantini (ASI, Italy) *The program of the JEM-EUSO consortium and its possible extension to the observation of UHE neutrinos* (20 min)

17.50 Yu.Gornushkin (JINR) *A review of OPERA results* (20 min)

18.10 A.Minotti (Annecy-le-Vieux Part. Phys. Lab.) *Status of the SuperNEMO Experiment* (20 min)

18.30 I.Nutini (Univ. of Milano-Bicocca) *Recent results from the CUORE experiment* (20 min)

18.50 W.-L.Guo (IHEP, Beijing) *Low energy neutrinos from stopped muons in the Earth* (15 min)

19.05 A.Ariga (Univ. of Bern) *Study of tau-neutrino production at the CERN SPS - the DsTau project* (15 min)

SESSION 23.08. B (Physics at Colliders)

- 17.10 A.Solodkov** (IHEP, NRC "Kurchatov Inst.") *Performance and upgrade of the ATLAS Tile Calorimeter* (20 min)
17.30 F.Ellinghaus (Univ. of Wuppertal) *Searches for new phenomena beyond the Standard Model at ATLAS detector* (20 min)
17.50 A.Sidoti (INFN, Bologna) *Search for BSM physics using challenging signatures with the ATLAS* (20 min)
18.10 G.Salamanna (Univ. of Rome-III) *Top quark measurements with the ATLAS detector* (20 min)
18.30 L.Zivkovic (Inst. of Phys., Belgrade) *Searches for exotic Higgs production and decays with ATLAS* (20 min)

SESSION 23.08. C (Dark Matter)

- 17.10 W.Rau** (TRIUMF) *Direct detection of dark matter - tightening the net around the WIMPs* (20 min)
17.30 Y.Suvorov (Univ. of Naples Federico II) *Darkside project, present and future* (20 min)
17.50 M. Yamashita (Univ. of Tokyo & Kamioka Observ.) *Direct dark matter search with liquid xenon detectors* (20 min)
18.10 Y.Genolini (Univ. Libre de Bruxelles) *Dark matter searches with cosmic rays* (20 min)
18.30 M.Olmi (Gran Sasso Science Inst.) *CRESST-III: A low-mass Dark Matter detector* (20 min)

SESSION 23.08. D (Theory)

- 17.10 M.Vasiliev** (Lebedev Phys. Inst., Moscow) *Progress in Higher-Spin Theory* (20 min)
17.30 C.Schubert (Michoacan Univ. of Saint Nicholas of Hidalgo) *Multiloop QED in the Euler-Heisenberg approach* (20 min)
17.50 D.Gitman (Lebedev Phys. Inst., Moscow) *Particle creation by peak electric field* (20 min)
18.10 T.Adorno (Hebei Univ.) *Violation of vacuum stability by inverse square electric fields* (20 min)
18.30 N.Ahmadinia (Helmholtz-Zentrum Dresden-Rossendorf) *Reducible contributions to quantum electrodynamics in external fields* (20 min)
18.50 V.Bagrov (Tomsk State Univ., Inst. of High Current Electronics) *New properties of indicatrix of instantaneous angular distribution of synchrotron radiation* (15 min)
19.05 S.Boychenko (Adygea State Univ.) *The features radiation of a charged particle moving along an arc of a circle* (15 min)

19.30 – 22.30 Sight-seeing bus excursion in Moscow

24 August, Saturday

08.35– 13.30 MORNING SESSION (Conference Hall)

08.30 A.Salamon (INFN, Rome) *Recent results from the NA62 experiment* (25 min)

08.55 M.Gazdzicki (Goethe-Univ., Frankfurt/Main) *Critical structures in strong interactions* (25 min)

09.20 S. Ricciarini (Institut. of Applied Phys., Florence) *Review of LHCf measurements and results* (25 min)

09.45 N.Serra (Univ. of Zurich) *Highlights from LHCb* (25 min)

10.10 A.Guskov (JINR) *The COMPASS experiment at CERN* (25 min)

10.35 – 11.05 Tea break

11.05 P.Lukin (Budker Inst. of Nucl. Phys.) *Recent results of the hadronic cross section measurements with the CMD-3 detector* (25 min)

11.30 G.Colangelo (Univ. of Bern) *Hadronic contributions to the muon g-2* (25 min)

11.55 L.Li (Shanghai Jiao Tong Univ.) *The first physics run of muon g-2 experiment at Fermilab* (25 min)

12.20 B.Shwartz (Budker Inst. of Nucl. Phys.) *Status of the muon g-2/EDM experiment at J-PARC* (25 min)

12.45 H.Peng (Univ. of Science. and Techn. of China) *Overview of BESIII experiment* (25 min)

13.10 M. Bracko (Univ. of Maribor & J. Stefan Inst., Ljubljana) *The Belle II experiment: first data and physics prospect* (25 min)

13.35 – 15.00 Lunch

15.00 – 19.00 AFTERNOON SESSION

SESSION 24.08. A (Neutrinos)

15.00 N.Okateva (Lebedev Phys. Inst., Moscow) *The SHiP experiment: search for New Physics in neutrino sector* (20 min)

15.20 A.Cocco (INFN, Naples) *Status of the PTOLEMY project for cosmic neutrino background detection* (20 min)

15.40 A.Ariga (Univ. of Bern) *Study of high-energy neutrinos in the FASER experiment at the LHC* (20 min)

16.00 S.Qian (IHEP, Beijing) *The R&D of the MCP-PMT for particle detector* (20 min)

16.20 D.Berguno (Auton. Univ. of Madrid) *The Hyper-Kamiokande photodetectors anti-implosion protective covers* (15 min)

16.35 I.Bredikhin (Gammatech LCC) *Digital systems for the multiparametric analysis from CAEN: New results and new equipment 2018-2019* (10 min)

SESSION 24.08. B (Physics at Colliders)

15.00 V.Riabov (PNPI, Gatchina) *Overview of light flavor hadron production in ALICE at the LHC* (25 min)

15.25 J.Matias (Auton. Univ. of Barcelona) *Updated patterns of new physics in $b \rightarrow sll$ transitions after Moriond 2019* (25 min)

15.50 A.Matyja (Inst. of Nucl. Phys., Polish Acad. of Scien.) *What can we learn from production of light neutral probes in the ALICE experiment?* (20 min)

16.10 F.Dordei (INFN, Cagliari) *CP violation results from LHCb* (20 min)

16.30 V.Chekelian (Max Planck Inst. for Physics, Munich) *First look at the time-dependent CP violation using early Belle II data* (20 min)

SESSION 24.08. C (Axions studies)

15.00 F.Nguyen (ENEA, Frascati) *Proposal to search for axion-like particles with FEL oscillators* (20 min)

15.20 A.Matlashov (Inst. for Basic Science, Korea) *Wide-band SQUID amplifiers for axion search experiments* (20 min)

15.40 D.Montanino (Univ. of Salento) *Spectral hardening of cosmic TeV photons and photon-axion conversions in extragalactic magnetic field* (20 min)

16.00 A.Gangapshev (BNO INR RAS, Baksan) *Search for solar axions in BNO INR RAS* (20 min)

16.45 – 17.10 Tea break

SESSION 24.08. D (Neutrinos)

17.10 S.Zhou (IHEP, Beijing) *Matter effects on neutrino oscillations and renormalization-group equations* (20 min)

17.30 I.Volobuev (SINP MSU) *Quantum field-theoretical description of neutrino oscillations in terms of plane waves* (20 min)

17.50 O.Kharlanov (MSU) *Nonlinear flavor instabilities in multiangle frameworks of collective neutrino oscillations* (20 min)

18.10 M.Dvornikov (Inst. of Terrestrial Magnetism, Ionosphere and Radiowave Propagation) *Relativistic quantum mechanics description of neutrino spin-flavor oscillations in various external fields* (20 min)

18.30 A.Lobanov (MSU) *Neutrino oscillations in the S-matrix formalism* (15 min)

18.45 A.Chukhnova (MSU) *Quantum-field theoretical description of neutrino propagation in dense matter and electromagnetic field* (15 min)

SESSION 24.08. E (Physics at Colliders)

17.10 D.Kirpichnikov (INR RAS) *Sensitivity of NA64 experiment to detect hidden sector particles* (20 min)

17.30 D.Madigozhin (JINR) *NA48/2 results on rare kaon decays* (20 min)

17.50 V.Petrov (IHEP, Protvino) *LHC hunting the odderon: Is it really caught?* (20 min)

18.10 C.Merlassino (Univ. of Bern & Oxford Univ.) *Searches for supersymmetry with the ATLAS detector* (20 min)

18.30 Y.Wu (Univ. of Science and Techn. of China) *Tests of the electroweak sector with diboson final states at the ATLAS experiment* (20 min)

SESSION 24.08. F (Cosmic rays and cosmology)

17.10 D.Ejlli (Novosibirsk State Univ.) *Magneto-optic effects of the CMB and its circular polarization* (25')

17.35 Y.Srivastava (Northeastern Univ.) *Critical indices for particle production in cosmic ray* (25 min)

18.00 A.Ejlli (Cardiff Univ.) *Upper limits on the amplitude of ultra-high-frequency gravitational waves from graviton-photon mixing* (25 min)

18.25 M.Fil'chenkov (RUDN Univ., Moscow) *Gravitational radiation from miniholes and graviatoms* (15')

18.40 P.Spirin (MSU) *Vacuum polarization near pointlike source with a zero-range potential: self-adjoint extension* (15 min)

25 August, Sunday

9.00 – 19.00 Bus excursion to Sergiev Posad

26 August, Monday

08.30 – 13.20 MORNING SESSION (Conference Hall)

- 08.30 F.Nemes** (CERN) *Elastic and total cross-section measurements by TOTEM* (25 min)
08.55 J.Strologas (Univ. of Ioannina) *CMS results on Standard Model physics* (25 min)
09.20 L.Brenner (DESY) *Higgs precision measurements with ATLAS* (25 min)
09.45 J. Pinfeld (Univ. of Alberta) *The search of new physics and the LHC with dedicated detectors* (25 min)
10.10 U.Schneekloth (DESY) *Axion Search Experiments at DESY* (25 min)
10.35 K.Lipka (DESY) *Probing QCD at the LHC: the special role of the top quark production* (25 min)

11.00 – 11.30 Tea break

- 11.30 M.Yokoyama** (Univ. of Tokyo) *Hyper-Kamiokande* (25 min)
11.55 J.Zalesak (Inst.of Physics, Czech Acad. of Scien.) *Results from the NOvA Experiment* (25 min)
12.20 P.Loaiza (Univ. Paris-Sud, CNRS) *Current status of neutrinoless double beta decay experimental searches* (25 min)
12.45 Z.Bagdasarian (Forsch. Jülich GmbH) *Borexino: Latest results and future opportunities* (25 min)
13.10 H.Seo (Seoul Nat. Univ.) *Recent results from RENO* (25 min)

13.35 – 15.00 Lunch

15.00 – 19.00 AFTERNOON SESSION (Conference Hall)

SESSION 26.08. A (Neutrinos)

- 15.00 A.Serebrov** (St. Petersburg Nucl. Phys.Inst., NRC "Kurchatov Inst.") *Present status and future prospect of Neutrino-4 experiment search for sterile neutrino* (20 min)
15.20 Y.Malyshkin (INR RAS) *Baksan experiment on sterile transitions* (20 min)
15.40 W.Wang (Sun Yat-sen University) *The quest for neutrino mass ordering* (20 min)
16.00 A.Oralbaev (NRC "Kurchatov Inst.") *Latest results from Double Chooz* (20 min)
16.20 M.Fertl (Johannes Gutenberg Univ., Mainz) *Project 8: A frequency-based approach to measure the absolute neutrino mass scale* (20 min)

SESSION 26.08. B (Theory)

- 15.00 A.Kataev** (INR RAS) *Pole vs running top quark mass: perturbative QCD relation and peculiar features of different theoretical approaches at the $O(\alpha_s^5)$ level and beyond* (20 min)
15.20 V.Belokurov (MSU) *Schwarzian functional integrals calculus* (20 min)
15.40 K.Stepanyantz (MSU) *NSVZ with higher derivatives* (20 min)
16.00 A.Fomin (St. Petersburg Nucl. Phys. Inst.) *Precision research of neutron beta decay and Standard Model* (20 min)
16.20 E. Isupov (SINP MSU) *Proton structure study with CLAS and CLAS12* (20 min)

SESSION 26.08. C (Physics at Colliders)

- 15.00 M.Wolke** (Uppsala Univ.) *PANDA overview* (25 min)
15.25 A.Schmidt (MIT & George Washington Univ.) *What has OLYMPUS taught us about two-photon exchange?* (25 min)
15.50 V.Riabov (PNPI, Gatchina) *Study of phi and K^* meson production in heavy ion collisions at NICA-MPD* (20 min)
16.10 A.Mudrokh (JINR) *Prospects for the study of strangeness production and fluctuations at the NICA heavy-ion collider* (15 min)
16.25 D. Ivanishchev (St. Petersburg Nucl. Phys.Inst., NRC "Kurchatov Institute") *Perspectives of neutral meson measurements in the MPD experiment at NICA* (15 min)

SESSION 26.08. D (Cosmology)

- 15.00 J.Singal** (Univ. of Richmond) *The radio synchrotron background - a cosmic conundrum* (25 min)
15.25 M.Negro (INFN, Turin) *The anisotropic gamma-ray sky* (20 min)
15.45 T.Harada (Rikkyo Univ.) *Particle creation in gravitational collapse to a horizonless compact object* (20 min)
16.05 A.Diaferio (Univ. of Turin) *A wide-angle view of galaxy cluster formation: The caustic technique* (20')
16.25 L.Hendriks (Radboud Univ.) *Machine learning and DM* (20 min)

16.45 - 17.10 Tee break

SESSION 26.08. E (Theory)

- 17.10 S.Aleshin** (Inst. for Information Transmission Probl. RAS) *The Adler D-function for $N=1$ SQCD regularized by dimensional reduction in the three-loop approximation* (20 min)
17.30 S.Novgorodtsev (MSU) *Two-loop anomalous dimension of the Faddeev-Popov ghosts in $N=1$ supersymmetric theories* (15 min)
17.45 N.Volchanskiy (Southern Federal Univ. & JINR) *Two-loop kite master integral for a correlator of two composite vertices and its QCD applications* (20 min)
18.05 V.Rodionov (Plekhanov Russian Univ. of Economics) *New estimates of the fundamental mass value in non-Hermitian theory and the neutrino masses* (15 min)
18.20 G.Kravtsova (MSU) *On mathematical aspects of modified non-Hermitian Dirac theory with γ^5 -extension* (15 min)
18.35 E.Kozlova (ITEP/MEPhI, Moscow) *Noble element simulation technique v 2.0* (15 min)

SESSION 26.08. F (Dark Matter)

- 17.10 J.Cembranos** (Complutense Univ. of Madrid) *Ultralight dark matter candidates* (25 min)
17.35 A.Alexandrov (INFN, Naples) *NEWSdm: An emulsion-based directional dark matter experiment* (25')
18.00 Zh.Liu (Nat. Tsing Hua Univ.) *Recent results of China Dark Matter Experiment* (20 min)
18.20 Y.Wang (Nat. Tsing Hua Univ.) *Recent development of CJPL and future plan of CDEX* (20 min)

SESSION 26.08. G (Neutrinos)

- 17.10 V.Sinev** (INR RAS) *Solar CNO neutrinos and 40K geoneutrinos* (20 min)
17.30 D.Rudik (ITEP, NRC "Kurchatov Inst.") *Status of the CEvNS-10 LAr detector within the COHERENT experiment* (15 min)
17.45 A.Kumpan (MEPhI, Moscow) *Development of a large liquid Argon detector to study of CEvNS* (15')
18.00 X.Huang (Shanghai Jiao Tong Univ.) *Neutron Skin in CsI and low-energy effective weak mixing angle from COHERENT data* (15 min)
18.15 S.Ilieva (Sofia Univ. "St. Kliment Ohridski") *Hadron production measurements for improving neutrino flux predictions with the NA61/SHINE spectrometer* (15 min)
18.30 V.Kornoukhov (MEPhI, Moscow) *Status and perspectives of the AMoRE experiment* (15 min)
18.45 V.Ashikhmin (INR RAS) *Joint analysis of data from neutrino detectors LVD and BUST during the event GW170817* (15 min)

SESSION 26.08. H (Physics at colliders)

- 17.10 I.Denisenko** (JINR) *Light hadron spectroscopy at BESIII* (20 min)
17.30 N.Pukhaeva (JINR) *High order Bose-Einstein correlations* (20 min)
17.50 A.Polyarush (INR RAS) *Measurement of T -odd asymmetry in radiative $Ke3\gamma$ decay using OKA detector* (20 min)
18.05 A.Seryakov (St. Petersburg State Univ.) *Multiplicity fluctuations and study of QGP phase diagram from NA61/SHINE* (15 min)
18.20 D.Prokhorova (St. Petersburg State Univ.) *Study of fluctuation and correlation pseudorapidity dependences* (15 min)

27 August, Tuesday

08.30 – 13.30 MORNING SESSION (Conference Hall)

08.30 C.Vayenas (Univ. of Patras) *Mass generation via gravitational confinement of relativistic neutrinos* (25 min)

09.00 S.Bilenky (JINR) *Neutrino masses from the point of view of economy and simplicity* (25 min)

09.25 A.Zakharov (ITEP, NRC "Kurchatov Inst.") *Constraints on gravity theories with galactic center and the center of M87 observations* (25 min)

09.50 C.Evoli (Gran Sasso Science Inst.) *Theory and interpretation of galactic cosmic rays* (25 min)

10.15 P.Salucci (SISSA, Trieste) *The nature of the dark matter from its distribution in galaxies* (25 min)

10.40 Y.Wong (Univ. of New South Wales) *Neutrinos in cosmology* (25 min)

11.05 – 11.30 Tea break

11.30 T.Murach (DESY) *Recent highlights from H.E.S.S.* (25 min)

11.55 P.Zuccon (Trento Univ.) *State and perspective of cosmic rays fluxes measurements with AMS-02* (25 min)

12.20 A.Moiseev (Univ. of Maryland NASA/GSFC, College Park) *Gamma-ray sky by Fermi and what is the next?* (25 min)

12.45 Y.Semertzidis (Korea Advanced Inst. of Science and Techn. & Inst. for Basic Science, Korea) *Axion dark matter and solar axion searches* (25 min)

13.10 P.Gianotti (INFN, Frascati) *Search of a low energy dark photon: the PADME experiment* (25 min)

13.35 – 15.00 Lunch

15.00 – 19.00 AFTERNOON SESSION (Conference Hall)

15.00 A.Gajos (Jagiellonian Univ.) *The KLOE-2 experiment at DAFNE* (20 min)

15.20 W.-F.Chang (Nat. Tsing Hua Univ.) *Gauged lepton number and implications for collider* (20 min)

15.40 A.Popov (Budker Inst. of Nucl. Phys.) *Observation of a fine structure in $e+e \rightarrow$ hadrons production at the nucleon-anti-nucleon threshold* (25 min)

16.00 Zh.Liang (IHEP, Beijing) *Precision Higgs physics at CEPC* (20 min)

16.20 – 16.40 Tea break

SESSION 27.08. A (Neutrinos)

16.40 K.Ishidoshiro (Tohoku Univ.) *Status of KamLAND-Zen* (20 min)

17.00 V.Belov (ITEP, NRC "Kurchatov Inst.") *Neutrinoless double beta decay with EXO-200 and nEXO* (20 min)

17.20 M.Shirchenko (JINR) *The status of MAJORANA experiment* (15 min)

17.35 E.Shevchik (JINR) *The Large Enriched Germanium Experiment for Neutrinoless β Decay (LEGEND)* (20 min)

17.55 D.Berguno (INFN, Milano) *Strategy for CNO solar neutrino detection with Borexino* (15 min)

18.10 M.Gromov (SINP MSU) *Borexino in the era of the multimessenger astronomy* (15 min)

18.25 A.Chudaykin (INR RAS) *Measuring neutrino masses with large scale structure: Euclid forecast based on cosmological perturbation theory* (20 min)

18.45 A.Kaloshin (Irkutsk State Univ.) *Spectral representation of neutrino propagator in media and off-shell spin properties* (20 min)

SESSION 27.08. B (Colliders)

16.40 Y.Chen (IHEP, Beijing) *CMS results on Higgs-boson physics* (20 min)

17.00 S.Tosi (Univ. & INFN, Genoa) *CMS results on top-quark physics* (20 min)

- 17.20 S.Petrushanko** (SINP MSU) *CMS results on heavy-ion physics* (20 min)
17.40 O.Kodolova (SINP MSU) *QCD physics with CMS detector* (20 min)
18.00 S.Ghosh (RWTH Aachen Univ.) *CMS results on exotic searches* (20 min)
18.20 L.Afanasyev (JINR) *Investigation of hadronic hydrogen-like atoms in DIRAC experiment at PS CERN* (20 min)

SESSION 27.08. C (Experiment, Astrophysics, cosmic rays)

- 16.40 Y.Zhezher** (INR RAS) *Overview of the Telescope Array Experiment* (25 min)
17.05 E.Pueschel (DESY) *Very-high-energy gamma-ray astronomy with the VERITAS observatory* (20 min)
17.25 G.Bigongiari (INFN, Pisa) *Calocube and TIC projects: Future solutions for high-energy cosmic-ray detection and γ -ray astronomy* (20 min)
17.45 J.Hamann (Univ. of New South Wales) *CMB constraints on light primordial black holes* (20 min)
18.05 M.Bauböck (Max Planck Inst., Munich) *GRAVITY observations of infrared flares at the Galactic center* (20 min)
18.25 V.Tioukov (INFN, Naples) *Muon radiography - studies of the internal structure of large objects using cosmic rays* (20 min)
18.45 O.Ryazhskaya (INR RAS) *LVD is the detector for study the astroparticle and cosmic ray physics and to search for neutrino radiation from collapsing stars* (20 min)

SESSION 27.08. D (Theory)

- 16.40 D.Grigoriou** (Univ. of Patras) *Computation of the masses of W, Z and H bosons via the Rotating Lepton Model* (20 min)
17.00 R.Zhohov (IHEP, Protvino & IZMIRAN, Troitsk) *Dualities of the QCD phase diagram in the framework of ab initio approach, effective models (NJL model) and lattice QCD* (20 min)
17.20 I.Goriachuk (MSU) *NSVZ relation and finite renormalizations in $N=1$ SQED* (20 min)
17.40 A.Kazantsev (MSU) *On-shell scheme for $N=1$ SQED and the NSVZ subtraction schemes* (20 min)
18.00 T.Kärkkäinen (Univ. of Helsinki) *Neutrino sector on 331-model with Froggatt-Nielsen mechanism* (20 min)
18.20 T.Khunjua (MSU) *Dense quark matter with chiral and isospin imbalance: NJL model consideration* (20 min)

28 August, Wednesday

08.30 – 13.10 MORNING SESSION (Conference Hall)

08.30 M.Giammarchi (INFN, Milan) *First observation of antimatter quantum interference* (25 min)

08.55 G.Branco (IST, Univ. of Lisbon) *Vacuum induced CP violation* (25 min)

09.20 M.De Gerone (INFN, Genoa) *An experimental review on cLFV experiments: the muon channel* (25`)

09.45 D.Guadagnoli (LAPTh, Annecy) *Lepton flavour (universality) violation: Theory status and perspectives* (25 min)

10.10 Y.Nakatsugawa (IHEP, Beijing) *The COMET experiment, search for muon to electron conversion at J-PARC* (25 min)

10.35 G.Li (IHEP, Beijing) *The status report on the CEPC* (25 min)

11.00 – 11.30 Tea break

11.30 A.Surdo (INFN, Lecce) *The DAMPE mission: performances and main results* (25 min)

11.55 F.Palma (Univ. of Rome-II) *Status of the CSES/Limadou space mission after one year in flight* (25`)

12.20 A.Galper (MEPhI & LPI RAS) *Science from PAMELA to GAMMA-400* (25 min)

12.45 Y.Srivastava (Northeastern Univ.) *Low energy nuclear reactions* (25 min)

13.10 M.Panasyuk (SINP MSU) *Astrophysical space observatory "Lomonosov": Main results of experiments* (25 min)

13.35 – 15.00 Lunch

ROUND TABLE DISCUSSION
"Frontiers of Particle Physics"
(Conference Hall)

15.00 A.Starobinsky (Landau Inst. for Theor. Phys. RAS) *The mixed R^2 -Higgs inflationary model* (25 min)

15.25 F.Pannarale (INFN & Univ. of Rome - I) *Astrophysics with gravitational-wave observations of compact binaries* (25 min)

15.50 F.Deppisch (Univ. College, London) *Neutrinos and BSM Physics* (25 min)

16.15 A.Konovalov (ITEP, NRC "Kurchatov Inst.") *Experimental program of the COHERENT collaboration* (25 min)

16.40 M.Cadeddu (INFN, Cagliari) *Neutrino charge radii from COHERENT elastic neutrino-nucleus scattering* 25 min)

16.40 – 17.00 Tea break

17.00 N. Dasgupta-Schubert (Univ. of Michoacan) *The distribution of the elements of the 6th and 7th periods of the Periodic Table in the geothermal microecological niche of Los Azufres, Mexico* (25 min)

17.25 R.Bollig (Max Planck Inst., Munich) *Neutrino-driven explosions in 3D supernova simulations* (25`)

17.50 M.Malek (Univ. of Sheffield) *Neutrinos and stars: What is left to learn?* (25 min)

18.15 K.Long (Imperial College London/STFC) *Novel accelerators for innovation, science and society* (25`)

THIRTEENTH INTERNATIONAL MEETING ON
PROBLEMS OF INTELLIGENTSIA:
"The Heritage and Future of the Intelligentsia"
(Conference Hall)

Chairman: Alexander Studenikin

18.40 J. Bleimaier (Princeton) *The evolution of the image of the intelligentsia* (25 min)

Discussion on Problems of Intelligentsia

**Closing of the 19^h Lomonosov Conference on Elementary Particle Physics and
the 13th International Meeting on Problems of Intelligentsia**

SPECIAL SESSION (40⁰)

POSTER SESSION

V. Koryukin (Mari State Univ.) *On the role of the empirical connectivity in the gravitation theory*

O.Fedorov (Irkutsk State Univ.) *Status of Tunka-21cm*

O.Fedorov (Irkutsk State Univ.) *The latest results of Tunka-Rex*

A.Karelin (MEPHI, Moscow) *The anisotropy of cosmic ray electrons with the PAMELA calorimeter*

A.Reshetnyak (Inst. of Strength Phys. and Materials Scien. of Siberian Branch RAS) *$N=2$ BRST invariant quantization of $\mathcal{N}=1$ supersymmetric gauge theories*

R.Enikeev (INR RAS) *The search for neutrino radiation from collapsing star with ASD*