

TWENTIETH LOMONOSOV CONFERENCE ON ELEMENTARY PARTICLE PHYSICS

Moscow State University, Moscow, 19-25 August, 2021

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

**Dedicated to the Year of Science
and Technology**

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Programme of the 20th Lomonosov Conference on Elementary Particle Physics
(duration of 25 (20/15) min talks includes 5 (3) minutes for discussion)
Please note that the program schedule is indicated in **CERN zone time**
(Central European Summer Time)

19 August, Thursday

09.00 – 09.30 Opening
Central European Summer Time

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

Welcome on behalf of Moscow State University, Andrey Fedyanin

Welcome on behalf of JINR, Victor Matveev

Welcome on behalf of Ministry of Science and Higher Education of Russia, Andrey Romanov

Welcome on behalf of INR RAS, Grigory Rubtsov

PLENARY SESSIONS (9.30-15.15)

09.30 – 13.20

Chair: Valery Rubakov

09.30 V.Matveev (JINR) *On the 65 anniversary of JINR: Present status and Development strategy* (25 min)

09.55 Y.Wang (IHEP, Beijing) *Particle and Astroparticle physics in China* (25 min)

10.20 C.Vallee (CPPM, Marseille) *Physics Beyond Colliders prospects at CERN* (25 min)

10.45 I.Bozovic Jelisavcic (Univ. of Belgrade) *Higgs physics with future linear colliders* (25 min)

11.10 – 11.25 Tea break

Chair: Gioacchino Ranucci

11.25 J.W.F.Valle (IFIC, CSIC-Univ. Valencia) *Neutrinos as a new physics pathfinder* (25 min)

11.50 J.A.Formaggio (Massachusetts Inst. of Techn.) *Direct measurements of neutrino mass* (25 min)

12.15 M.Klasen (Univ. of Münster) *Absolute neutrino mass as the missing link to the dark sector* (25 min)

12.40 R.Dvornicky (JINR & Comenius Univ.) *Neutrino telescope in Lake Baikal: The recent status and future perspectives* (25 min)

13.05 – 13.35 Lunch

Chair: Francesca Di Lodovico

13.35 A.Castellina (INAF, Torino) *The quest for the sources of ultra-high energy cosmic rays: Results and perspectives* (25 min)

14.00 J.Berdugo (CIEMAT) *Latest results of the Alpha Magnetic Spectrometer on the International Space Station* (25 min)

14.25 K.Scholberg (Duke Univ.) *Present and future of CEvNS* (25 min)

14.50 C.Giunti (INFN Torino) *Theoretical overview on coherent elastic neutrino-nucleus scattering* (25`)

15.15-15.30 Tea break

PARALLEL SESSIONS (15.30-18.00)

Central European Summer Time

SESSION 19.08. A (Collider Physics)

Chair: Lidija Zivkovic

15.30 H.Ahmed (Univ. of Victoria & St. Francis Xavier University) *Tests of the Standard Model by means of $\Upsilon(3S)$ decays with the BaBar detector* (15 min)

15.45 I.Altysbeev (St.Petersburg State Univ.) *Overview of recent ALICE results on particle correlations and fluctuations* (15 min)

16.00 P.Gandini (INFN, Milan) *Spectroscopy at LHCb* (15 min)

16.15 R.Wang (Harvard Univ.) *Measurements of multi-boson productions including vector-boson fusion and vector-boson scattering at ATLAS* (15 min)

16.30 S.Petrushanko (SINP MSU) *Heavy-ion physics at CMS* (15 min)

16.45 N.Vukasinovic (VINCA Ins. of Nucl. Sciences) *CP violation in Higgs production in ZZ-fusion at 1 TeV ILC* (15 min)

17.00 A.Ahmad (CERN) *The ATLAS Tile Calorimeter performance and its upgrade towards the High-Luminosity LHC* (15 min)

17.15 T.Karavicheva (INR RAS) *ALICE upgrade overview for Run 3 and 4 at the CERN LHC* (15 min)

17.30 D.Budnikov (Russian Federal Nucl. Centre, Sarov) *RFNC-VNIIEF works at CERN for creation of the PHOs Spectrometer (PHOS/ALICE): mechanical design and temperature control* (15 min)

17.45 M.Arsentyeva (Budker Institute of Nucl. Phys.) *Advanced accelerator concepts for future accelerators* (10 min)

SESSION 19.08. B (Neutrino Experiments)

Chair: Yury Gornushkin

15.30 J.H.Jo (Yale Univ.) *Latest results from MicroBooNE* (20 min)

15.50 A.Norricks (FNAL) *Latest neutrino oscillation results from NOvA* (20 min)

16.10 N.Rossi (LNGS, INFN) *First detection of solar neutrinos from the CNO cycle with Borexino* (20 min)

16.30 S.Zavatarelli (INFN, Genoa) *Geoneutrino detection and other non-solar physics achievements of Borexino* (20 min)

16.50 Yu.Kudenko (INR RAS) *Physics and status of the SuperFGD detector for the T2K experiment* (20 min)

17.10 M.Torti (Univ. of Milano Bicocca & INFN Milano Bicocca) *The NP06/ENUBET project: towards a monitored neutrino beam* (20 min)

17.30 S.Qian (IHEP, CAS) *The R&D of the Ultra Fast 8X8 Readout MCP-PMTs* (20 min)

17.50 A.Yukhimchuk (Russian Federal Nucl. Centre, Sarov) *Highly intensive antineutrino tritium source: Specifics of physical experiment* (10 min)

20 August, Friday

PLENARY SESSIONS (8.30-16.45)

Central European Summer Time

Chair: Yury Kudenko

08.30 A.Lokhov (Univ. of Münster & INR RAS) *Recent results and perspectives from the KATRIN experiment* (25 min)

08.55 L.Gastaldo (Heidelberg Univ.) *Ho-163 experiments for neutrino mass determination* (25 min)

09.20 G.Ranucci (INFN, Milan) *Deciphering the solar neutrino flux and properties with Borexino* (25 min)

09.45 T.Vladislavljevic (Rutherford Appleton Lab.) *Results and prospects from the T2K Experiment* (25 min)

10.10 C.Guo (IHEP, CAS) *Prospects and status of the JUNO detector* (25 min)

10.35 P.Lasorak (Univ. of Sussex) *The DUNE neutrino experiment physics* (25 min)

11.00 F.Di Lodovico (King's College London) *Hyper-Kamiokande: physics potential and status* (25 min)

11.25 – 11.40 Tea break

Chair: Jose W.F. Valle

11.40 C.Ternes (INFN, Turin) *Current status of neutrino oscillations* (25 min)

12.05 T.Bezerra (Univ. of Sussex) *Review on reactor neutrino present and future* (25 min)

12.30 S.H.Seo (Inst. for Basic Science, Korea) *Review on the sterile neutrino experiments* (25 min)

12.55 F.Deppisch (Univ. College London) *Double-beta decay and exotic neutrino interactions* (25 min)

13.20 M.Redchuk (Univ. of Padua) *Status of the LEGEND experiment* (25 min)

13.45 – 14.15 Lunch

Chair: Carlo Giunti

14.15 P.Fileviez Perez (Case Western Reserve Univ.) *Probing the nature of neutrinos with New Forces* (25 min)

14.40 S.Jana (Max Planck Inst. for Nuclear Phys., Heidelberg) *Non-standard interactions in radiative neutrino mass models* (25 min)

15.05 L.Merlo (Autonomous Univ. of Madrid) *The data driven flavour model* (25 min)

15.30 S.Pokorski (Univ. of Warsaw) *Searching for BSM physics in Yukawa couplings and flavour symmetries* (25 min)

15.55 Z.Liu (Univ. of Minnesota) *Millicharged particles in liquid argon neutrino experiments* (25 min)

16.20 A.Parada (Univ. of Santiago de Cali) *Sensitivity to the neutrino electric millicharge of experiments involving elastic neutrino-electron and coherent elastic neutrino-nucleus processes* (25 min)

16.45-17.00 Tea break

PARALLEL SESSIONS (17.00-18.50)
Central European Summer Time

SESSION 20.08. A (Sterile Neutrinos)

Chair: Seon-Hee Seo

17.00 A.Minotti (Univ. of Milano Bicocca & INFN) *Status of the search for light sterile neutrinos at short baselines* (20 min)

17.20 M.Danilov (Lebedev Physical Ins.) *Five years of sterile neutrino searches with DANSS* (20 min)

17.40 A.Serebrov (NRC «Kurchatov Institute» - PNPI) *The experiment Neutrino-4 on the search for sterile neutrino at SM-3 reactor* (20 min)

18.00 R.Samoilov (NRC «Kurchatov Institute» - PNPI) *Prospects of the Neutrino-4 experiment on the search for sterile neutrino* (15 min)

18.15 A.Fomin (NRC «Kurchatov Institute» - PNPI) *Monte Carlo simulation of Neutrino-4 experiment* (15`)

18.30 R.Ruiz (Inst. of Nucl. Phys. PAN) *A theory perspective on sterile neutrinos at colliders* (20 min)

SESSION 20.08. B (Physics at Colliders – Higgs boson)

Chair: Vladimir Petrov

17.00 A.Tarek Abouelfadl Mohamed (Michigan State Univ.) *Measurement of Higgs boson properties using the ATLAS detector* (15 min)

17.15 G.Kole (Univ. of Cyprus) *Searches for additional Higgs bosons at CMS* (15 min)

17.30 G.Mitselmakher (Univ. of Florida) *H(125) measurements at CMS* (15 min)

17.45 F.Martynenko (Samara National Research Univ.) *Relativistic corrections to the decay width of the Higgs boson into a pair of Bc mesons* (15 min)

21 August, Saturday

PLENARY SESSIONS (8.30-16.45)

Central European Summer Time

Chair: Luca Merlo

08.30 S.Davidson (CNRS) *To change the flavour of a lepton* (25 min)

08.55 R.E.Shrock (Stony Brook Univ.) *Some recent results on physics beyond the Standard Model* (25 min)

09.20 J.Miller (Boston University) *Charged lepton flavor violation experiments* (25 min)

09.45 S.Di Falco (INFN Pisa) *The Mu2e experiment* (25 min)

10.10 L.Calibbi (Nankai Univ.) *LFV decays into axion-like particles* (25 min)

10.35 D.Guadagnoli (CNRS) *Motivation for and status of lepton-flavour violation searches in meson decays* (25 min)

11.00 – 11.10 Tea break

Chair: Diego Guadagnoli

11.10 M.Incagli (INFN, Pisa) *First results from the muon $g-2$ experiment at Fermilab* (25 min)

11.35 Th.Blum (Univ. of Connecticut) *Hadronic contributions to the muon anomalous magnetic moment* (25 min)

12.00 C.A.Manzari (Univ. of Zurich) *Hadronic vacuum polarization: ($g-2$) versus global electroweak fits* (25 min)

12.25 K.Beloborodov (Budker Institute of Nuclear Physics) *Overview of recent results from SND experiment at the VEPP-2000 collider* (25 min)

12.50 E.Solodov (Budker Inst. of Nucl. Phys.) *Recent BaBar results on measurement of exclusive hadronic cross sections* (25 min)

13.15 S.Heinemeyer (Inst. of Theor. Phys., CSIC/UAM Madrid) *BSM phenomenology in the light of the recent ($g-2$)_{mu} result* (25 min)

13.40 R.Dermisek (Indiana Univ.) *Muon $g-2$ and other observables in models with extended Higgs and matter sectors* (25 min)

14.05 J.Kawamura (Inst. for Basic Science) *Complete vectorlike fourth family and new $U(1)'$ for muon anomalies* (25 min)

14.30 – 14.55 Lunch

Chair: Robert Shrock

14.55 L.Vale Silva (Univ. of Valencia) *Using dipole processes to constrain the flavor of New Physics effective interactions* (25 min)

15.20 K.Shiori (KEK) *Search for rare kaon decays at the J-PARC KOTO experiment* (25 min)

15.45 J.Matias (Auton. Univ. of Barcelona) *Theoretical status of the B-Flavour anomalies* (25 min)

16.10 A.Tulupov (Nation. Research Nucl. Univ. MEPhI) *B physics results from CMS* (20 min)

16.30 R.Mandal (Univ. of Siegen) *Addressing B-anomalies with leptoquarks* (20 min)

16.50 – 17.00 Tea break

PARALLEL SESSIONS (17.00-18.50)

Central European Summer Time

SESSION 21.08. A (Physics at Colliders – NICA)

Chair: Seyoung Han

17.00 A.Guskov (JINR) *SPD experiment at the NICA collider* (15 min)

17.15 D.Ivanishchev (NRC «Kurchatov Inst.» - PNPI) *Feasibility of thermal photon measurements in the future MPD experiment at NICA* (15 min)

17.30 M.Malaev (NRC «Kurchatov Inst.» - PNPI) *Study of the centrality and collision energy dependence of resonance production using the MPD detector at NICA* (15 min)

17.45 P.Batyuk (JINR) *The fixed target BM@N experiment for studies of heavy nucleus interactions at NICA* (15 min)

18.00 P.Parfenov (Nation. Research Nucl. Univ. MEPHI) *Anisotropic flow measurements in MPD experiment using two- and three-particle correlation scalar product method* (10 min)

18.10 D.Idrisov (Nation. Research Nucl. Univ. MEPHI) *Centrality Determination in Heavy-ion Collisions with MPD detector at NICA* (10 min)

18.20 V.Luong (Nation. Research Nucl. Univ. MEPHI) *Comparison of methods for elliptic flow measurements at NICA energy range* (10 min)

SESSION 21.08. B (Theory)

Chair: Konstantin Kouzakov

17.00 M.Dvornikov (Inst. of Terrestrial Magnetism, Ionosphere and Radiowave Propagation) *Neutrino oscillations in gravitational fields and astrophysical applications* (20 min)

17.20 S.Luo (Xiamen Univ.) *Neutrino oscillation in dense matter* (15 min)

17.35 M.Petropavlova (Czech Technical Univ.) *Correction to the photon index of refraction due to relic neutrinos with magnetic moment* (10 min)

17.45 P.Satunin (INR RAS) *Probing nonlinear electrodynamics with a single superconducting radio-frequency cavity* (15 min)

18.00 P.Kazinski (Tomsk State Univ.) *Transition radiation from a Dirac particle wave packet traversing a mirror* (10 min)

18.10 T.Adorno (Hebei Univ.) *Creation of neutral fermions with anomalous magnetic moments from the vacuum by magnetic steps* (10 min)

18.20 N.Pozdnyakov (Novosibirsk State Univ.) *Baryogenesis from asymmetric capture of baryons by primordial black holes* (10 min)

18.30 G.Kravtsova (MSU) *Quantum electrodynamics with gamma-5 modified Dirac field* (10 min)

22 August, Sunday

PLENARY SESSIONS (8.30-16.35)

Central European Summer Time

Chair: Somnath Choudhury

08.30 C.Royon (Univ. of Kansas) *The odderon discovery by the D0 and TOTEM collaboration* (25 min)

08.55 P.Jackson (Univ. of Adelaide) *Overview of LHC results (ATLAS and CMS)* (25 min)

09.20 S.Shmatov (JINR) *Highlights from the CMS experiment* (25 min)

09.45 E.Graverini (EPFL, Lausanne) *LHCb highlights* (25 min)

10.10 L.Musa (CERN) *ALICE: Highlights and perspectives* (25 min)

10.35 V.Petrov (Logunov Inst. for HEP NRC KI) *New features of strong interactions revealed at the LHC* (25 min)

11.00 – 11.10 Tea break

Chair: Paul Jackson

11.10 K.Lipka (DESY) *Towards new physics through precision* (25 min)

11.35 D.Kirpichnikov (INR RAS) *Recent results from the NA64 experiment at CERN SPS* (25 min)

12.00 R.Schwienhorst (Michigan State Univ.) *Single top-quark measurements at the Tevatron and the LHC* (25 min)

12.25 F.Cardillo (Univ. of Valencia) *Highlights of top quark measurements with the ATLAS experiments* (20')

12.45 H.Liao (IHEP, Beijing) *Recent results by the CMS collaboration on top quark physics* (20 min)

13.05 X.Lyu (Univ. of CAS) *Physics overview on the BESIII experiment* (25 min)

13.30 C.Z.Yuan (IHEP, Beijing) *New experimental results on exotic XYZ states* (25 min)

13.55 – 14.15 Lunch

Chair: Ivanka Bozovic

14.15 M.Ruan (IHEP, Beijing) *CEPC physics at glance* (25 min)

14.40 A.Blondel (CERN) *FCCee physics highlight* (25 min)

15.05 J.List (DESY) *Straight to the future: Physics opportunities at the ILC* (25 min)

15.30 D.Jeans (KEK) *Measuring the CP state of tau lepton pairs from Higgs decay at the ILC* (25 min)

15.55 A.Robson (Univ. of Glasgow) *The CLIC physics potential* (25 min)

16.20 – 16.30 Tea break

PARALLEL SESSIONS (16.30-19.00)
Central European Summer Time

SESSION 22.08. A (Colliders: New Physics)

Chair: Sergei Shmatov

- 16.30 D.Wang** (PKU) *Recent results of new physics searching at BESIII* (15 min)
16.45 A.Cocco (INFN, Genoa) *The FASER experiment at the CERN LHC* (15 min)
17.00 J.Babbar (Panjab Univ.) *Search for New Resonance in Photon and Jet final State using CMS Data* (15 min)
17.15 A.K.Virdi (Panjab Univ.) *Exotic physics signatures at CMS* (15 min)
17.30 M.Faraj (Shanghai Jiao Tong Univ.) *Searches for new phenomena with the ATLAS detector* (15 min)
17.45 T.Saito (Univ. of Tokyo) *Searches for supersymmetry with the ATLAS detector* (15 min)
18.00 B.Mellado (Univ. of the Witwatersrand and iThemba LABS) *Overview of multi-lepton anomalies at the LHC and implications* (15 min)
18.15 J.Cerasoli (Aix Marseille Univ, CNRS/IN2P3, CPPM) *Rare decays at LHCb* (15 min)
18.30 M.Zamkovsky (Univ. Catholique de Louvain) *Measurement of the very rare K^+ to $\pi^+ \nu \bar{\nu}$ decay* (15 min)

SESSION 22.08. B (Neutrinos – double-beta decay)

Chair: Frank Deppisch

- 16.30 V.Biancacci** (Univ. of Padua) *The GERDA experiment in the search for neutrinoless double-beta decay* (15 min)
16.45 L.Imbert (IJCLab, CNRS, Univ. Paris-Saclay) *CUPID-Mo: A new world leading limit on neutrinoless double beta decay of ^{100}Mo* (15 min)
17.00 P.T.Surukuchi (Yale Univ.) *Latest results from the CUORE experiment* (15 min)
17.15 A.Armato (CEA DRF/IRFU/DPhP) *BINGO: Bi-isotope $0\nu 2\beta$ next generation observatory* (15 min)

SESSION 22.08. C (Theory)

Chair: Maxim Dvornikov

- 16.30 K.Stepanyantz** (MSU) *NSVZ beta-function and NSVZ scheme with the higher covariant derivative regularization in the non-Abelian case* (20 min)
16.50 R.Zhokhov (IHEP, Protvino & IZMIRAN, Troitsk) *Dualities of QCD phase diagram: Three and two-color cases* (15 min)
17.05 J.Edwards (Michoacan Univ. of Saint Nicholas of Hidalgo) *Obtaining fully polarized amplitudes in gauge invariant form* (15 min)
17.20 J.Nicasio (Michoacan Univ. of Saint Nicholas of Hidalgo) *The generalized LKF transformations for arbitrary N-point fermion correlators in QED* (15 min)
17.35 A.Gajos (Jagiellonian Univ.) *Test of the CPT symmetry in positronium annihilations at sub-permil precision using the J-PET tomography device* (15 min)
17.50 A.Mandel (MSTU "STANKIN") *Explanation of the properties of lepton doublets of the Standard Model in the framework of non-Hermitian theory with fundamental mass* (10 min)

23 August, Monday

PLENARY SESSIONS (8.30-14.10)

Central European Summer Time

Chair: Dmitry Galtsov

09.00 V.Domcke (CERN/EFPL) *Probing the scale of grand unification with gravitational waves* (25 min)

09.25 G.Carullo (INFN, Pisa) *Constraints on modified theories of gravity from the latest LIGO-Virgo black hole ringdown observations* (25 min)

09.50 V.Korol (Univ. of Birmingham) *Listening to the Universe with LISA* (25 min)

10.15 A.Smetana (Czech Technical Univ.) *Background for gravitational wave signal at LISA from refractive index of solar wind plasma* (25 min)

10.40 – 10.50 Tea break

Chair: Marco Giammarchi

10.50 A.Starobinsky (Landau Inst.) *The simplest models of inflation: recent results and expected discoveries* (25 min)

11.15 F.Eisenhauer (Max Planck Inst. for Astrophysics, Garching) *An experimentalists view on black holes and gravity - the Galactic Center black hole* (25 min)

11.40 A.Zakharov (NRC «Kurchatov Institute» – ITEP) *Orbits of bright stars near the Galactic Center as a tool to test gravity theories* (25 min)

12.05 J.Singal (Univ. of Richmond) *Mechanics and evolution of supermassive black holes with AGN population studies* (25 min)

12.30 V.Dokuchaev (INR RAS) *Visualization of black hole images* (25 min)

12.55 A.Dolgov (Novosibirsk State Univ.) *Antistars in the Galaxy* (25 min)

13.20 N.Shah (Wayne State Univ.) *Wimps and missing energy signals and the Galactic centre excess* (25`)

13.45 J.Kim (Kyung Hee Univ.) *Blackhole information* (25 min)

14.10 –14.30 Lunch

PARALLEL SESSIONS (14.00-17.45)

Central European Summer Time

SESSION 23.08. A

Chair: Alexander Zakharov

14.30 O.Kwon (Univ. of Chicago) *The Holometer: Measurements of spacelike coherent fluctuations of space-time* (20 min)

14.50 L.Panasenko (Novosibirsk State Univ.) *Gravitational waves over arbitrary background* (20 min)

15.10 Yu.Grats (MSU) *Zero-range potentials: Delta-like barrier versus self-adjoint extension* (20 min)

15.30 P.Spirin (MSU) *Gravitational interaction of the cosmic string with pointlike particles* (20 min)

15.50 M.Fil`chenkov (RUDN Univ.) *Field interpretation of general relativity revisited* (20 min)

16.10 S.Bhattacharjee (Birla Inst. of Technology Mesra) *Quantum cosmology with a distinct hint of condensed-matter physics* (20 min)

SESSION 23.08. B (Neutrino - Experiment)

Chair: Alexey Lokhov

14.30 M.De Gerone (INFN) *A direct neutrino mass measurement with ^{163}Ho : The HOLMES experiment* (20 min)

14.50 L.Pasqualini (Univ. & INFN, Bologna) *The SAND detector in the DUNE Near Detector system* (20 min)

15.10 Y.Gornushkin (JINR) *Study of tau neutrino production in NA65 experiment* (20 min)

15.30 T.Inada (Tsinghua Univ.) *High-energy neutrino studies with FASERnu at the LHC* (20 min)

15.50 N.Agafonova (INR RAS) *Search for neutrino radiation from the collapse of stellar cores using an LVD detector* (20 min)

16.10 M.Kochkarov (BNO INR RAS) *Muon-induced neutron background at the Baksan Underground Scintillation Telescope* (15 min)

16.25 V.Kazalov (BNO INR RAS) *Search for $2K$ -capture of Xe-124 at the Baksan Neutrino Observatory* INR RAS (15 min)

16.40 V.Romanenko (INR RAS) *The recent result of the Carpet-2 facility and status of the Carpet-3 facility* (10 min)

16.50 S.Yakimenko (BNO INR RAS) *Simulation of the neutron sources in a granite tunnel* (10 min)

SESSION 23.08. C (Physics at Colliders)

Chair: Dmitry Kirpichnikov

14.30 O.Kodolova (SINP MSU) *QCD Physics with CMS detector* (15 min)

14.45 P.Podlaski (Univ. of Warsaw) *Overview of the results from the NA61/SHINE strong interaction program* (15 min)

15.00 A.Barton (Lancaster Univ.) *Recent heavy flavour results from ATLAS* (15 min)

15.15 D.Blau (NRC «Kurchatov Inst.») *Overview of direct photon and neutral mesons measurements with ALICE at the LHC* (15 min)

15.30 V.Riabov (NRC «Kurchatov Inst.», PNPI) *Recent results on light flavor hadron production in the ALICE experiment at the LHC* (15 min)

15.45 Y.Huang (IHEP, Beijing) *Progresses on light hadron physics* (15 min)

16.00 – 16.10 Tea break

- 16.10 S.Han** (Center for Extreme Nuclear Matters, Seoul) *Flow measurement of small collisions systems measured by PHENIX experiment at RHIC* (15 min)
- 16.25 V.Borisov** (Peter the Great St.Petersburg Polytech. Univ.) *Exploring hadron spectra in small collision systems at PHENIX* (15 min)
- 16.40 Z.Sun** (Univ. of Debrecen) *Study of high- p_T direct photons in small systems at PHENIX* (15 min)
- 16.55 D.Larionova** (Peter the Great St.Petersburg Polytech. Univ.) *PHENIX results on hadron production in large collision systems* (15 min)
- 17.10 A.Lanyov** (JINR) *Electroweak measurements at CMS* (15 min)
- 17.25 V.Pozdniakov** (JINR) *Recent results on ultra-peripheral collision studies with ALICE at LHC* (15')
- 17.40 A.Isakov** (Nucl. Phys. Inst., Czech Rep.) *Analysis of b jets production in p -Pb and pp at $\sqrt{s_{NN}} = 5$ TeV with ALICE* (15 min)

24 August, Tuesday

PLENARY SESSIONS (8.30-14.10)
Central European Summer Time

Chair: Antonella Castellina

08.30 F.Palma (INFN, Rome Tor Vergata) *Status of the CSES/Limadou space mission after three years in flight* (25 min)

08.55 F.Alemanno (GSSI & INFN LNGS) *The DAMPE space mission: status and main results* (25 min)

09.20 V.Formato (INFN, Rome Tor Vergata) *Observation of Fine Time Structures in the primary cosmic rays light nuclei fluxes* (25 min)

09.45 H.Shin (Univ. of Tokyo) *Recent Results from the Telescope Array Experiment* (25 min)

10.10 A.Petrukhin (National Research Nuclear Univ. MEPhI) *Muon puzzle in cosmic rays* (25 min)

10.35 – 10.50 Tea break

Chair: Grigory Rubtsov

10.50 N.Fornengo (Univ. of Torino) *Overview of particle dark matter searches through cross-correlation* (25 min)

11.15 Y.Suvorov (Univ. of Naples) *Review talk on DarkSide collaboration* (25 min)

11.40 A.Alexandrov (INFN & Univ. of Naples) *Directional dark matter search with NEWSdm* (25 min)

12.05 R.Bernabei (INFN & Univ. of Rome – II) *Recent results from DAMA/LIBRA and comparisons* (25`)

12.30 M.Martinez (Univ. of Zaragoza) *Dark matter annual modulation with ANAIS-112: Three years result* (25 min)

12.55 F.Wagner (Inst. of High Energy Phys., Austrian Academy of Sciences) *COSINUS: Dark matter search with cryogenic scintillating sodium iodide calorimeters* (25 min)

13.20 – 14.10 Lunch

PARALLEL SESSIONS (14:10-17:30)

Central European Summer Time

SESSION 24.08. A (Dark Matter)

Chair: Rita Bernabei

14.10 V.Caracciolo (INFN & Univ. of Rome – II) *Crystal scintillators for the DM directionality approach* (20 min)

14.30 L.Thormaehlen (Institute for Theoretical Physics, Heidelberg) *Hidden photon dark matter in the light of XENON1T and stellar cooling* (20 min)

14.50 A.Kopylov (INR RAS) *PHELEX - present status* (20 min)

15.10 M.Savina (JINR) *Dark matter searches at CMS* (20 min)

15.30 Z.Wang (Univ. of Michigan) *Dark Matter searches with the ATLAS Detector (joint with SUSY, Higgs, HDBS, Exotics)* (20 min)

15.50 E.Hill (Univ. of British Columbia) *Latest results on the dark sector and tau physics at Belle II* (20`)

16.10 G.-L.Lin (National Chiao-Tung Univ.) *Polarization effects in the search for dark vector boson at e^+e^- colliders* (20 min)

16.30 S.Gori (Univ. of California Santa Cruz) *Cosmology and accelerator tests of strongly interacting dark matter* (25 min)

SESSION 24.08. B (Colliders)

Chair: Mikhail Barabanov

14.10 A.Dbeyssi (Helmholtz Inst. Mainz) *The PANDA experiment at FAIR* (20 min)

14.30 E.Zherebtsova (INR RAS) *Study of spectator distributions in the HADES experiment* (20 min)

14.50 D.Kereibay (JINR) *Search for heavy neutral lepton production in NA62* (20 min)

15.10 A.Polyarush (INR RAS) *Coherent formation of a $K^+ \pi^0$ system on copper nuclei in a beam of charged kaons at the OKA* (15 min)

15.25 A.Borucka (Warsaw Univ. of Technology) *Multiplicity and net-charge fluctuations in ion+ion collisions at the SPS energie* (10 min)

15.35 – 15.45 Tea break

15.45 N.Karpushkin (INR RAS) *Machine learning approach for centrality determination in heavy ion reactions with segmented forward hadron calorimeters* (15 min)

16.00 A.Popescu (Univ. of Cambridge) *NNLO QCD study of polarised W^+W^- production at the LHC* (15`)

16.15 B.Kosyakov (Russian Federal Nucl. Centre, Sarov) *How to detect the lightest glueball* (15 min)

16.30 H.Khanpour (Inst. for Research in Fundamental Sciences, Tehran) *Nuclear parton distribution functions with uncertainties in the general mass variable flavor number scheme* (15 min)

16.45 A.Taranenko (National Research Nuclear Univ. MEPhI) *Evolution of anisotropic flow of produced particles from Au+Au collisions at 3 - 200 GeV in a transport models* (15 min)

17.00 M.Tokarev (JINR) *Self-similarity of K_S^0 -meson production in Au+Au collisions at RHIC* (15`)

25 August, Wednesday

Morning PARALLEL SESSIONS (8.30-10.10)
Central European Summer Time

SESSION 25.08. A (Charm Physics)

Chair: Alexey Petrov

- 8.30 H.Li** (Henan Normal Univ.) *Recent results of charm physics at BESIII* (20 min)
8.50 X.Qin (Fudan Univ.) *Recent searches for exotic charmonium-like states at BESIII* (20 min)
9.10 E.Waheed (KEK) *Latest results on beauty and charm hadron decay at Belle II* (20 min)
9.30 P. Krokovny (Budker Inst. of Nucl. Phys) *The Belle II prospects for charmonium and bottomonium studies* (20 min)
9.50 S.Ek-In (EPFL, Lausanne) *Charm physics at LHCb* (20 min)

SESSION 25.08. B (Axions)

Chair: Lorenzo Calibbi

- 8.30 Y.Soreq** (Technion, Haifa) *Photoproduction of axionlike particles* (20 min)
8.50 C.Royon (Univ. of Kansas) *Extending the constraint for axion-like particles as resonances at the LHC and laser beam experiments* (20 min)
9.10 K.-S.Isleif (DESY) *Any light particle search: The ALPS II experiment at DESY* (20 min)
9.30 D.Salnikov (MSU) *Examining axion-like particles with superconducting radio-frequency cavity* (20 min)
9.50 G.Servant (DESY & Univ. of Hamburg) *Gravitational waves from a spinning axion* (20 min)

SESSION 25.08. C (Dark Matter theory)

Chair: Vyacheslav Dokuchaev

- 8.30 H.-B.Yu** (Univ. of California, Riverside) *Self-Interacting dark matter* (20 min)
8.50 G.Busoni (Max Planck Inst. for Nuclear Phys., Heidelberg) *Capture of DM in compact stars* (20 min)
9.10 R.Garani (INFN, Florence) *Neutron star probes dark matter interactions with muons* (20 min)
9.30 E.Arbuzova (Dubna State Univ. & Novosibirsk State Univ.) *New options for SUSY-kind dark matter* (20 min)
9.50 I.Kharuk (INR RAS) *Emergent Planck mass and dark energy from affine gravity* (20 min)

10.10 – 10.25 Tea break

PLENARY SESSIONS (10.25-19.05)
Central European Summer Time

Chair: Sacha Davidson

- 10.25 A.Teixeira** (LPC Clermont, CNRS/IN2P3) *Flavour physics and neutrinos* (25 min)
10.50 Yu.Efremenko (Univ. of Tennessee) *Coherent neutrino scattering, status and perspectives* (25 min)
11.15 S.Agarwalla (Inst. of Phys., Bhubaneswar) *BSM searches in neutrino experiments* (25 min)
11.40 S.Chatterjee (Durham Univ.) *Neutrino non-standard interactions: a possible solution to the NOvA and T2K tension* (25 min)

12.05 – 13.00 Lunch

Chair: Alexander Zakharov

13.00 G.Losurdo (INFN, Pisa) *Doing science with gravitational waves. Where we are, where we are going?* (25 min)

13.25 D.Gorbunov (INR RAS) *Problems and puzzles in modern cosmology* (25 min)

13.50 G.Arcadi (Univ. of Rome III) *Leptogenesis* (25 min)

14.15 O.Palamara (FNAL) *Signatures for New Physics in Short-Baseline Liquid Argon Neutrino Experiments* (25 min)

14.40 F.Mantovani (INFN, Ferrara) *Geoneutrino: state of the art and prospects* (25 min)

15.05 F.Nguyen (ENEA, Frascati) *The XLS-CompactLight design study* (25 min)

15.30 – 15.45 Tea break

Chair: Katerina Lipka

15.45 M.Giammarchi (INFN, Milan) *Low energy antimatter physics* (25 min)

16.10 A.A.Petrov (Wayne State Univ.) *Theoretical developments in the physics of charm quarks* (25 min)

16.35 R.Lebed (Arizona State Univ.) *All-heavy tetraquarks: The dynamical diquark model and other approaches* (25 min)

17.00 S.Gourlay (PNTZ Consulting Group, LLC) *Landscape of modern and future accelerators and the Snowmass'21 Planning Process* (25 min)

17.25 M.Crispim Romao (LIP, Minho) *Deep Learning Models in searches for new physics at colliders* (25 min)

17.50 S.Su (Univ. of Arizona) *MSSM at future Higgs factories* (25 min)

18.15 B.Echenard (CALTECH) *Searches for hidden-sector particles with BaBar* (25 min)

Closing of the 20th Lomonosov Conference on Elementary Particle Physics