

20th International Workshop
Complex Systems of Charged Particles and
Their Interactions with Electromagnetic Radiation
Moscow, Russia, April 8-12, 2024

PROGRAM

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**Complex Systems of Charged Particles and
Their Interactions with Electromagnetic Radiation**
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PROGRAM

April 8, 2024

9:30-10:00 Gathering of the Workshop participants

10:00-10:30 Opening Ceremony of the CSCPIER-2024

SECTION-1 April 8 BASIC ASPECTS OF PLASMA SCIENCE (GPI RAS)

10:30-11:00

**PLASMA DYNAMIC PROCESSES IN QUASI-STATIONARY HIGH-CURRENT PLASMA
ACCELERATORS OF A NEW GENERATION (*Invited*)**

V.M. Astashynski, O.G. Penyazkov

The A.V. Luikov Heat and Mass Transfer Institute of the National Academy of Sciences of Belarus, Minsk, Belarus

11:00-11:15

**FORMATION AND COLLISION IN LOW PRESSURE AIR THE PLASMA DIFFUSE
JETS WITH DIFFERENT DIAMETERS**

V.F. Tarasenko, V.A. Panarin, V.S. Skakun, N.P. Vinogradov

Institute of High Current Electronics SB RAS, Tomsk, Russia

11:15-11:30

**IONIZATION-DISSOCIATION PHASE TRANSITIONS OF THE FIRST ORDER.
(ON A NEW CLASS OF FIRST-ORDER PHASE TRANSITIONS)**

G.E. Norman^{1,2,3}, I.M. Saitov^{2,3}

¹*National Research University Higher School of Economics, Moscow, Russia*

²*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

³*Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Moscow region, Russia*

11:30-11:45

**ON COLLISIONLESS DAMPING OF ELECTROMAGNETIC WAVES IN A CLOUD OF
PLASMA ELECTRONS**

V.M. Somsikov

IETP Al-Farabi Kazakh National University, Almaty, Kazakhstan

11:45-12:00 Coffee Break

12:00-12:30

PUMPING OF PLASMA WAVES BY A REB IN A MAGNETIZED PLASMA COLUMN FOR PLASMA HEATING AND RADIATION FLUX GENERATION (*Invited*)

A.V. Arzhannikov^{1,2}

¹*Budker Institute of Nuclear Physics of Siberian Branch Russian Academy of Sciences (BINP SB RAS), Novosibirsk, Russia*

²*Novosibirsk State University, Novosibirsk, Russia*

12:30-12:45

ON THE CORRESPONDENCE OF A RADIATION FLUX FREQUENCY SPECTRUM FROM A BEAM-PLASMA SYSTEM TO THE SPECTRUM OF PLASMA ELECTRONIC OSCILLATIONS PUMPED BY A BEAM

D.A. Samtsov¹, A.V. Arzhannikov^{1,2}, S.L. Sinitsky¹, S.S. Popov¹, P.V., Kalinin^{1,2}, E.S. Sandalov^{1,2}, M.G. Atluhanov¹, V.D. Stepanov^{1,2}, K.N. Kuklin¹, I.V. Timofeev¹

¹*Budker Institute of Nuclear Physics of Siberian Branch Russian Academy of Sciences (BINP SB RAS), Novosibirsk, Russia*

²*Novosibirsk State University, Novosibirsk, Russia*

12:45-13:00

DIPOLE EFFECTS IN THE VLASOV KINETIC EQUATION

P.A.Andreev

Department of General Physics, Faculty of physics, Lomonosov Moscow State University, Moscow, Russian Federation

13:00-13:15

ON THE PHYSICS OF DENSE PLASMAS

A.D. Rakhel

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

13:15-13:30

KINETIC THEORY OF PLASMA EXPANSION IN VACUUM DIODE

A.O. Kokovin, V.Yu. Kozhevnikov, A.V. Kozyrev, N.S. Semeniuk

Institute of High Current Electronics SB RAS, Tomsk, Russia

13:30-13:45

ON THE PROTON-BORON FUSION IN OSCILLATING PLASMAS OF NANOSECOND VACUUM DISCHARGE

Yu.K.Kurilenkov^{1,2}, A.V. Oginov¹, S.Yu.Gus'kov¹, I.S.Samoylov²

¹*P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia*

²*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

13:45-14:00

ION-ACOUSTIC SOLITON IN A COLLISIONLESS NONISOTHERMAL PLASMA

S.V. Kuznetsov

Joint Institute for High Temperature of the Russian Academy of Science, Moscow, Russia

14:00-15:00 Lunch

15:00-15:30

MEASUREMENT OF ELECTRIC FIELD IN ATMOSPHERIC PRESSURE DISCHARGES USING STARK POLARIZATION SPECTROSCOPY
(Invited)

B.M. Obradović¹, N. Cvetanović², S.S. Ivković¹, G.B. Sretenović¹, V.V. Kovačević¹, I.B. Krstić¹, and M. M. Kuraica¹

¹Faculty of Physics, University of Belgrade, Belgrade, Serbia

²Faculty of Transport and Traffic Engineering, University of Belgrade, Belgrade, Serbia

15:30-15:45

FEATURES OF THE DYNAMICS OF MICROWAVE DISCHARGES IN ATOMIC AND MOLECULAR GASES

A.I. Saifutdinov¹, A.A. Saifutdinova¹

¹Kazan National Research Technical University named after A.N. Tupolev – KAI, Kazan, Russia

15:45-16:00

FEATURES OF THE KINETICS OF FAST ELECTRONS IN A PLASMA OF NEGATIVE GLOW OF A SHORT GLOW DISCHARGE AND ITS APPLICATIONS

A.I. Saifutdinov¹, S.S. Sysoev²

¹Kazan National Research Technical University named after A.N. Tupolev – KAI, Kazan, Russia

²Saint-Petersburg State University, St Petersburg, Russia

16:00-16:15

ON MODELING ELECTRON RUNAWAY IN GASES BY THE PARTICLE METHOD

S. A. Maiorov^{1,2}, R.I. Golyatina³, and G.K. Omiraliyeva²

¹Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

²Institute for Experimental and Theoretical Physics, Al-Farabi Kazakh National University, Almaty, Kazakhstan

³Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

16:15-16:30

PATTERNS OF THE IONIZATION POTENTIALS OF MULTICHARGED IONS

G.V. Shpatakovskaya

Keldysh Institute of Applied Mathematics, Russian Academy of Sciences, Moscow, Russia

16:30-16:45 Coffee Break

16:45-17:15

64 YEARS OF PLASMA CRYSTALLIZATION STUDIES IN WHITE DWARFS (Invited)

D.A. Baiko

Ioffe Institute, Saint Petersburg, Russia

17:15-17:30

JEANS INSTABILITY IN THE SYSTEM WITH DIFFERENT GRAVITATIONAL MASSES AND THE ALPHA-G EXPERIMENT

S.A. Trigger

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

17:30-17:45

TREATMENT OF QUANTUM NUCLEAR EFFECTS VIA PATH INTEGRAL MOLECULAR DYNAMICS

N.D. Kondratyuk^{1,2,3}

¹Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Moscow Region, Russian Federation

²Joint Institute for High Temperatures RAS, Moscow, Russian Federation

³HSE University, Moscow, Russian Federation

17:45-18:00

ON THE MOST PROBABLE ENERGY RELEASE IN STRUCTURED MEDIA

M.Yu.Romanovsky^{1,2,3}

¹*PI "Science and Innovation", Moscow, Russia*

²*National Center for Physics and Mathematics, Moscow, Russia*

³*Pirogov Russian National Research Medical University, Moscow, Russia*

SECTION-2 April 9 COMPLEX PLASMAS (GPI RAS)

10:00-10:30

COMET DUSTY PLASMAS (*Invited*)

S.I. Popel, A.P. Golub', L.M. Zelenyi

Space Research Institute of the Russian Academy of Sciences, Moscow, Russia

10:30-10:45

LUNAR DUSTY PLASMAS: BASIC PHYSICS PROCESSES AND EXPERIMENTAL DATA OF LUNA-25

S.I. Popel, L.M. Zelenyi, A.V. Zakharov, I.A. Kuznetsov, G.G. Dol'nikov, A.N. Lyash, I.A. Shashkova, A.A. Kartasheva, M.E. Abdelaal, Yu.S. Reznichenko

Space Research Institute of the Russian Academy of Sciences, Moscow, Russia

10:45-11:00

NONLINEAR PERIODIC WAVE STRUCTURES IN THE EARTH'S DUSTY IONOSPHERE

Yu.N. Izvekova, S.I. Popel, T.I. Morozova, S.I. Kopnin

Space Research Institute of the Russian Academy of Sciences, Moscow, Russia

11:00-11:15

ELECTROSTATICALLY FORMED DUSTY PLASMAS ABOVE THE SURFACE OF ENCELADUS

D.V. Shokhrin¹, S.I. Kopnin², S.I. Popel²

¹*National Research University Higher School of Economics, Moscow, Russia*

²*Space Research Institute of the Russian Academy of Sciences, Moscow, Russia*

11:15-11:30

VIBRATIONAL MODEL OF TRANSPORT PROPERTIES IN YUKAWA FLUIDS (COMPLEX PLASMAS)

S. A. Khrapak

Joint Institute for High Temperatures of the Russian Academy of Sciences, 125412 Moscow, Russia

11:30-11:45 Coffee Break

11:45-12:15

DUSTY PLASMA IN AN INDUCTIVE RF DISCHARGE IN A MAGNETIC FIELD (*Invited*)

V.Yu. Karasev, E.S. Dzljeva, M.S. Golubev, M.A. Gasilov, L.A. Novikov, S.I. Pavlov

Saint Petersburg State University, Saint Peterburg, Russia

12:15-12:30

THE VELOCITY OF SPIN-MOTION OF DUST PARTICLES DEPENDING ON THE TYPE OF INERT GAS

L.A. Novikov, E.S. Dzljeva, V.Yu. Karasev, S.I. Pavlov

Saint Petersburg State University, Saint Peterburg, Russia

12:30-12:45

ULTRAFAST ROTATION OF DUST STRUCTURES IN GLOW DISCHARGES UNDER THE MAGNETIC FIELD INFLUENCEL.G. Dyachkov¹, E.S. Dzlieva², L.A. Novikov², S.I. Pavlov², V.Yu. Karasev²¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*²*Saint Petersburg State University, Saint Petersburg, Russia*

12:45-13:00

INFLUENCE OF WAKE FIELD INHOMOGENEITY ON THE VIBRATION SPECTRA OF TWO DUST PARTICLES IN A RF DISCHARGEE.A. Sametov, E.A. Lisin, R.A. Syrovatka, M.M. Vasiliev, O.F. Petrov*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

13:00-13:15

NUMERICAL STUDY OF THE PARAMETERS OF DUST PARTICLES CHAINS LEVITATED IN A GAS DISCHARGE PLASMAA.V. Fedoseev¹, M.V. Salnikov²¹*Joint Institute for High Temperatures RAS, Moscow, Russia*²*Institute of Termophysics SB RAS, Novosibirsk, Russia*

13:15-13:30

DISPERSION OF LATTICE WAVES IN A TWO-LAYER CRYSTAL IN A COMPLEX DUST PLASMAA.V. Zobnin, A. M. Lipaev, V. N. Naumkin, R. A. Syrovatka, A. D. Usachev*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

13:30 -13:45

OBTAINING A PLASMA-DUST CLOUD FROM ILMENITE CONCENTRATE USING A MICROWAVE DISCHARGEV. D. Borzosekov^{1,2}, N. S. Akhmadullina³, A. S. Sokolov¹, T. E. Gayanova¹, A. D. Rezaeva^{1,2}, V. D. Stepakhin¹, D. V. Malakhov¹, E. V. Voronova¹, V. P. Logvinenko^{1,2}, A. V. Knyazev¹, E. A. Obraztsova^{1,4}, N. N. Skvortsova¹¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*²*RUDN University, Moscow, Russia*³*Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences, Moscow, Russia*⁴*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

13:45 -14:00

CHAIN REACTIONS IN A PROCESSES INITIATED BY MICROWAVE OF HIGH POWER GYROTRON: STRUCTURE AND CYTOTOXICITYN.N. Skvortsova^{1,5}, E.A. Obraztsova^{1,2}, V.D. Stepakhin¹, E.M. Konchekov¹, D.A. Skvortsov³, D.A. Lukianov³, N.G. Gusein-zade¹, N.S. Ahmadullina⁴, O.N. Shishilov^{1,5}¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*²*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*³*Moscow State University, Faculty of Chemistry, Moscow, Russia*⁴*A.A. Baikov Institute of Metallurgy and Material Science of Russian Academy of Sciences, Moscow, Russia*⁵*MIREA – Russian Technological University, Institute of Fine Chemical Technologies, Moscow, Russia***14:00-15:00 Lunch**

15:00-15:30

TECHNIQUES FOR TWO- AND THREE-DIMENSIONAL DIAGNOSTICS OF MICROPARTICLES IN COLLOIDAL PLASMAS (*Invited*)

R.A. Syrovatka, K.B. Statsenko, A.S. Svetlov, M.M. Vasiliev, D.A. Zamorin, O.F. Petrov
Joint Institute for High Temperatures of Russian Academy of Sciences, Moscow, Russia

15:30-15:45

EVOLUTION OF THE TRAJECTORY OF A COLLOIDAL PARTICLE IN A CHAIN IN DC-DISCHARGE

X.G. Koss^{1,2}, A.V. Erilin², E.A. Kononov^{1,2}, M.M. Vasiliev^{1,2}, O.F. Petrov^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

15:45-16:00

ACTIVITY MECHANISM OF CHARGED GLOBS OF COMPLEX COMPOSITION IN COLLOIDAL SYSTEMS UNDER THE EXTERNAL INFLUENCE

R.V. Senoshenko^{1,2}, E.A. Kononov¹, M.M. Vasiliev¹, O.F. Petrov¹

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*

16:00-16:15

STRUCTURAL TRANSITION IN STRONGLY COUPLED COULOMB CLUSTERS

D.I. Zhukhovitskij, E.E. Perevoshchikov

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

16:15-16:30

EXTERNAL ELECTRIC FIELD INFLUENCE ON THE MOTION OF COULOMB STRUCTURES IN A LINEAR ELECTRODYNAMIC TRAP

M.S. Dobroklonskaya

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

16:30 -16:45 Coffee Break

16:45-17:15

TWO-DIMENSIONAL BROWNIAN MOTION OF ACTIVE PARTICLE ON THE FREE SURFACE OF SUPERFLUID HELIUM (*Invited*)

R.E. Boltnev, M.M. Vasiliev, O.F. Petrov

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

17:15-17:30

MULTISCALE SELF-CONSISTENT SIMULATION OF COMPLEX PLASMA SYSTEM WITH ION FLOW

D.A. Kolotinskii^{1,2}, A.V. Timofeev^{1,2}

¹*Joint Institute for High Temperatures of Russian Academy of Sciences (JIHT), Moscow, Russia*

²*Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Moscow Region, Russia*

17:30-17:45

GENERALISED EQUIPARTITION THEOREM AS A NATURAL MEASURE OF NON-RECIPROCITY IN COMPLEX PLASMAS

D.A. Kolotinskii^{1,2}, A.V. Timofeev^{1,2}

¹*Joint Institute for High Temperatures of Russian Academy of Sciences (JIHT), Moscow, Russia*

²*Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Moscow Region, Russia*

³*National Research University Higher School of Economics, Moscow, Russia*

17:45-18:00

WAVES AND INSTABILITIES IN PLASMA OF METEOROID TAILS

T.I. Morozova, S.I. Popel

Space Research Institute of the Russian Academy of Sciences, Moscow, Russia

SECTION-3 April 10 LASER PLASMAS (GPI RAS)

10:00-10:30

TOWARDS INTENSE ATTOSECOND XUV PULSES PRODUCTION: FROM HIGH-HARMONIC GENERATION TO HIGH-ORDER FREQUENCY MIXING (Invited)

V. V. Strelkov¹, S. A. Bondarenko^{2,1}, M. A. Khokhlova³

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*National Research Nuclear University "MEPhI", Moscow, Russia*

³*King's College London London, United Kingdom*

10:30-10:45

GAUGE EFFECTS IN HIGH HARMONIC GENERATION CHARACTERISTICS OF GA⁺ IONS IN LASER FIELD

A.I. Magunov^{1,2}, S.N. Yudin³

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia*

³*Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University, Moscow, Russia*

10:45-11:00

IMPACT OF HIGH-POWER BEAM ON SECOND HARMONIC GENERATION IN COLLISIONLESS MAGNETIZED PLASMA

T. Singh

Department of Physics, DAV University, Jalandhar, India

11:00-11:15

EMISSION OF TERAHERTZ PULSES FROM NEAR-CRITICAL PLASMA SLAB UNDER ACTION OF P-POLARIZED LASER RADIATION

A.A. Frolov

P.N. Lebedev Physical Institute RAS, Moscow, Russia

11:15-11:30

MODELLING THE ELECTRON WAKEFIELD FOR ULTRA-RELATIVISTIC LASER INTENSITIES TAKING IONISATION INTO ACCOUNT

M.V. Sedov¹, S.N. Ryazantsev¹, I.Yu. Scobelev^{1,2}, S.A. Pikuz^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*National Research Nuclear University MEPhI, Moscow, Russia*

11:30-12:00 Coffee Break

12:00-12:30

EXPERIMENTS AND MODELING ON LASER ACCELERATION OF ELECTRONS AND X-RAYS GENERATION AT VARIOUS PARAMETERS OF LASER-PLASMA INTERACTION (Invited)

N.E. Andreev^{1,2}

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

12:30-12:45

ON THE ROLES OF DIFFERENT FREEDOM DEGREES IN THE WATER COULOMB EXPLOSION INITIATED BY A INTENSE X-RAY PULSE

S.N. Yudin, A.V. Bibikov, M.M. Popova, M.D. Kiselev, E.V. Gryzlova, A.N. Grum-Grzhimailo
Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia

12:45-13:00

ULTRASHORT PULSE LASER TECHNOLOGIES: FROM OPTICAL TO X-RAY

N.A. Inogamov^{1,2,3}, V.V. Zhakhovsky^{2,3}, Y.V. Petrov¹, V.A. Khokhlov¹, S.S. Makarov³, T.A. Pikuz⁴

¹*Landau Institute for Theoretical Physics, RAS, Chernogolovka, Russia*

²*L.N. Dukhov All-Russia Research Institute of Automatics, Moscow, Russia*

³*Joint Institute for High Temperatures, RAS, Moscow, Russia*

⁴*Institute for Open and Transdisciplinary Research Initiatives, Osaka University, Osaka, Japan*

13:00-13:15

NOTES ON INVERSE COMPTON SCATTERING

Yu.V. Popov^{1,2}, I.P. Volobuev¹, K.A. Bornikov³

¹*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

²*Bogoliubov Laboratory of Theoretical Physics, Joint Institute for Nuclear Research, Dubna, Russia*

³*Physics Faculty, Lomonosov Moscow State University, Moscow, Russia*

13:15-13:30

IONIZATION OF HELIUM ATOMS BY METAL TRIPLY-CHARGED IONS IN LASER PLASMA

R.E. Boltnev^{1,2}, A.V. Karabulin^{1,3}, I.N. Krushinskaya², A.A. Pelmenev², and V.I. Matyushenko²

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Branch of Semenov Federal Research Center for Chemical Physics, Russian Academy of Sciences, Chernogolovka, Moscow region, Russia*

³*Federal Research Center for Problems of Chemical Physics and Medicinal Chemistry, Russian Academy of Sciences, Chernogolovka, Moscow region, Russia*

13:30 -13:45

ELECTRON BEAM GENERATION IN LASER-PLASMA INTERACTION WITH LIQUID TARGET

S.A. Shulyapov¹, K.A. Ivanov^{1,2}, I.N. Tsymbalov^{1,3}, D.A. Gorlova^{1,3}, R.V. Volkov¹, I.P. Tsygvintsev⁴, A.B. Savel'ev^{1,2}

¹*Faculty of Physics, M.V. Lomonosov MSU, Moscow, Russia*

²*P.N. Lebedev Physical Institute, RAS, Moscow, Russia*

³*Institute for Nuclear Research, RAS, Moscow, Russia*

⁴*Keldysh Institute of Applied Mathematics, RAS, Moscow, Russia*

13:45-14:00

GENERATION OF ELECTRON-POSITRON PLASMA IN SELFSUSTAINED QED CASCADES WITH ULTRA-HIGH INTENSITY LASERS

A.A. Mironov

LULI, Sorbonne Université, CNRS, CEA, École Polytechnique, Institut Polytechnique de Paris Paris, France
Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

14:00-15:00 Lunch

15:00-15:30

CHARACTERIZATION OF HOT ELECTRONS GENERATED BY LASER-PLASMA INTERACTION AT SHOCK IGNITION INTENSITIES (*Invited*)

E. D. Filippov¹, M. Khan², A. Tentori³, P. Gajdos⁴, A. S. Martynenko^{1,5}, R. Dudzak^{4,6}, P. Koester⁷, G. Zeraouli⁸, D. Mancelli^{9,10}, F. Baffigi⁷, L. A. Gizzi⁷, S. A. Pikuz^{1,11}, Ph.D. Nicolai³, N. C. Woolsey², R. Fedosejevs¹², M. Krus⁴, L. Juha⁶, D. Batani³, O. Renner^{4,6,13} and G. Cristoforetti⁷

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*York Plasma Institute, School of Physics, Engineering and Technology, University of York, York, United Kingdom*

³*Université de Bordeaux, CNRS, CEA, CELIA, Talence, France*

⁴*Institute of Plasma Physics of the CAS, Prague, Czech Republic*

⁵*Plasma Physics Department, GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany*

⁶*Institute of Physics of the CAS, Prague, Czech Republic*

⁷*Intense Laser Irradiation Laboratory, INO-CNR, Pisa, Italy*

⁸*Centro de Laseres Pulsados (CLPU), Edificio M5, Parque Científico, Salamanca, Spain*

⁹*Institute of Plasma Physics and Lasers - IPPL, Centre of Research and Innovation, Hellenic Mediterranean University, Rethymnon, Greece*

¹⁰*Department of Electronic Engineering, Hellenic Mediterranean University, Chania, Greece*

¹¹*National Research Nuclear University MEPhI, Moscow, Russia*

¹²*University of Alberta, Edmonton, Alberta, Canada*

¹³*The Extreme Light Infrastructure ERIC, ELI Beamlines Facility, Dolní Brezany, Czech Republic*

15:30-15:45

CONCEPTUAL DESIGN AND SCIENTIFIC PROGRAM OF THE EXPERIMENTAL STATION "MATTER IN EXTREME CONDITIONS" FOR THE RUSSIAN XFEL (PROJECT "SYLA")

S.S. Makarov^{1,2}, K.F. Burdonov^{2,3}, A.V. Lobanov^{2,4}, V.V. Kravchenko^{2,4}, G.S. Lagodich^{2,4}, A.V. Targonsky², S.A. Pikuz¹

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*National Research Center "Kurchatov Institute", Moscow, Russia*

³*Institute of Applied Physics, Russian Academy of Sciences, Nizhny Novgorod, Russia*

⁴*Institute of Laser and Plasma Technologies, National Research Nuclear University MEPhI, Moscow, Russia*

15:45-16:00

GENERATION OF EXTREME QUASI-STATIC MAGNETIC FIELDS IN PLASMA TARGETS IRRADIATED BY CROSSED PETAWATT LASER BEAMS

T.V. Liseykina¹, E.E. Peganov², S.V. Popruzhenko^{2,3}

¹*Institute of Computational Mathematics and Mathematical Geophysics of Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia*

²*National Research Nuclear University Moscow Engineering Physics Institute, Moscow, Russia*

³*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

16:00-16:15

ANGULAR MOMENTUM TRANSFER IN THE INTERACTION OF INTENSE CIRCULARLY POLARIZED LASER PULSES WITH STRUCTURED TARGETS

E.G. Gelfer¹, E.E. Peganov², S.V. Popruzhenko^{2,3}

¹*ELI-Beamlines, Dolni Brezany, Czech Republic*

²*National Research Nuclear University Moscow Engineering Physics Institute, Moscow, Russia*

³*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

16:15-16:30

ANALYSIS OF L-SPECTRA OF MULTIPLY CHARGED IRON IONS FORMED IN EXPERIMENTS WITH INTENSE LASER PULSES

M.A. Alkhimova, I.Yu. Skobelev, S.S. Makarov, S.N. Ryazantsev and E.D. Filippov

Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

16:30 - 16:45 Coffee Break

16:45-17:15

TABLE TOP LASER PLASMA ELECTRON ACCELERATION (*Invited*)

A.B. Savel'ev, I.N.Tsymbalov, K.A.Ivanov, D.A.Gorlova, A.Yu.Zavorotny, R.V.Volkov, S.A.Shulyapov
Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia

17:15-17:30

ACCELERATION OF NEUTRAL ATOMS BY STRONG SHORT-WAVELENGTH SHORT-RANG ELECTROMAGNETIC PULSES

V.S. Melezhik, S. Shadmehri

Joint Institute for Nuclear Research, Dubna, Moscow Region, Russia

17:30-17:45

EFFICIENT LASER ACCELERATION OF ELECTRONS AND IONS FROM TARGETS WITH CONTROLLED PREPLASMA

A.V. Brantov^{1,2}, M.A. Rakitina¹, S.I. Glazyrin¹

¹*Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia*

²*Dukhov Research Institute of Automatics (VNIIA), Moscow, Russia*

17:45-18:00

LASER PULSE POLARIZATION INFLUENCE ON EMISSION BY AN ELECTRON FROM THE FOCUS

A.V. Borovskiy¹, A.L. Galkin²

¹*Baikal State University, Irkutsk, Russia*

²*Prokhorov General Physics Institute, Russian Academy of Sciences, Moscow, Russia*

SECTION-3 April 11 LASER PLASMAS (GPI RAS)

10:00-10:30

EFFECTS OF QUASI-PHASE MATCHING IN COHERENT RADIATION GENERATION BY ATOMIC SYSTEMS IN TWO-COLOR LASER FIELDS (*Invited*)

S.Yu. Stremoukhov^{1,2}

¹*Moscow State University, Moscow, Russia*

²*National Research Center "Kurchatov Institute", Moscow, Russia*

10:30-10:45

CONDUCTION BAND DYNAMICS IN SOLIDS INDUCED BY NEAR- AND MID-IR FEMTOSECOND LASER FIELDS

K.V. Lvov^{1,2}, S.Yu. Stremoukhov^{1,2}

¹*Moscow State University, Moscow, Russia*

²*National Research Center "Kurchatov Institute", Moscow, Russia*

10:45-11:00

EXPERIMENTAL INVESTIGATION OF OPTICAL ANISOTROPY DURING FEMTOSECOND LASER-INDUCED AIR BREAKDOWN IN NARROW INTENSITY RANGE

A.A. Ushakov¹, P.A. Chizhov^{1,2,3}, V.V. Bukin¹, T.V. Dolmatov¹, S.V. Garnov¹

¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

²*Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia*

³*Russian Institute for Scientific and Technical Information of the Russian Academy of Sciences, Moscow, Russia*

11:00-11:15

VECTOR PARAMETERS IN ATOMIC IONIZATION BY TWISTED BESSEL RADIATION

¹*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

²*School of Physics and Engineering, ITMO University, Saint Petersburg, Russia*

³*Laboratory for Modeling of Quantum Processes, Pacific National University, Khabarovsk, Russia*

11:15-11:30

NUMERICAL MODELLING OF PLASMA PERIODIC SUBWAVELENGTH STRUCTURES UNDER THE FOCUSED ULTRASHORT LASER PULSE EXPOSURE IN THE VOLUME OF SOLID DIELECTRICS

A.V. Bogatskaya^{1,2}, E.A. Volkova³, A.M. Popov^{1,2}

¹*Physics Department, Moscow State University, Moscow, Russia*

²*Lebedev Physical Institute, Russian Academy of Sciences, Moscow, Russia*

³*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia*

11:30-11:45 Coffee Break

SECTION-5 April 11 SOLID STATE PLASMAS (GPI RAS)

11:45-12:15

DEMIXING IN NANOCOMPOSITES OF HIGHLY POLARIZABLE INCLUSIONS (*Invited*)

E. Allahyarov^{1,2,3} and H. Löwen¹

¹*Institut für Theoretische Physik II: Weiche Materie, Heinrich-Heine Universität Düsseldorf, Düsseldorf, German*

²*Theoretical Department, Joint Institute for High Temperatures, Russian Academy of Sciences (IVTAN), Moscow, Russia*

³*Department of Physics, Case Western Reserve University, Cleveland, Ohio, United States*

12:15-12:30

ANALYTICAL DESCRIPTION OF CYCLOTRON PLASMA RESONANCES IN MONOLAYER GRAPHENE

V.P. Krainov

Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia

12:30-12:45

EDGE PLASMON MODE EXCITATION IN GRAPHENE RECTANGLES BY INCIDENT TERAHERTZ WAVE

K.V. Mashinsky¹, V.V. Popov¹, D.V. Fateev^{1,2}

¹*Kotelnikov Institute of Radio Engineering and Electronics of the Russian Academy of Sciences (Saratov Branch), Saratov, Russia*

²*Saratov State University, Saratov, Russia*

12:45-13:00

ELECTRON-HOLE PLASMA, FREE EXCITONS AND ELECTRON-HOLE LIQUID IN SYNTHETIC DIAMOND UNDER ULTRAVIOLET LASER EXCITATION

E.I. Lipatov^{1,2}, D.E. Genin^{1,2}, D.S. Voitenko¹, A.S. Popova¹

¹*Tomsk State University, Tomsk, Russia*

²*Institute of High-Current Electronics, Tomsk, Russia*

13:00-13:15

MECHANISM OF ULTRAFAST DECAY CAUSING PERIODIC DAMAGE OF METALS BY FEMTOSECOND LASER PULSES

I.V. Oladyshkin, D.A. Fadeev

Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia

13:15-13:30

FORMATION OF SOLID-STATE PLASMA IN FERROELECTRIC SEMICONDUCTORS NEAR THE PHASE TRANSITION TEMPERATURE

D.V. Kuzenko

Federal State Budgetary Scientific Institution "Scientific Research Institute "Reaktivelectron", Donetsk, Russia

13:30-13:45

EXCITATIONS IN SOLID-STATE PLASMA WITHIN THE POLAR MODEL

L.M. Svirskaya^{1,2}

¹*South Ural State Humanitarian and Pedagogical University, Chelyabinsk, Russia*

²*South Ural State University (National Research University), Chelyabinsk, Russia*

13:45-14:00

SOLID-STATE PLASMA MODEL OF ELECTRICAL BREAKDOWN OF POLYMER DIELECTRICS

V.A. Pakhotin¹, N.T. Sudar², S.E. Semenov¹

¹*Ioffe Institute, Saint-Petersburg, Russia*

²*Peter the Great Saint-Petersburg Polytechnic University, Saint-Petersburg, Russia*

14:00-14:15

HYDROGEN DIFFUSION ALONG THE BOUNDARIES OF TUNGSTEN GRAINS IN CONTACT WITH HYDROGEN

M.G. Urazaliev

M.N. Mikheev Institute of Metal Physics of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia

14:15-15:00 Lunch

SECTION-4 April 11 GENERAL PLASMAS (GPI RAS)

15:00-15:30

EXPERIMENTAL INVESTIGATION OF AN ANOMALOUS ABSORPTION OF THE ORDINARY WAVE IN THE PULSE DISCHARGE PLASMA FILAMENT (*Invited*)

E.Z. Gusakov², A.Yu. Popov², L.V. Simonchik¹, M.S. Usachonak¹

¹*Stepanov Institute of Physics of NAS of Belarus, Minsk, Belarus*

²*Ioffe Institute, Saint-Petersburg, Russia*

15:30-15:45

PLASMA AND GAS-DYNAMIC PROCESSES IN A NANOSECOND DISCHARGE IN AIR AT ATMOSPHERIC PRESSURE IN THE GAP WITH THE "PIN-TO PLATE" GEOMETRY

S.A. Maiorov¹, G.B. Ragimkhanov², A.A. Trenkin³

¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*

²*Dagestan State University, Makhachkala, Russia*

³*Russian Federal Nuclear Center, All Russia Research Center of Experimental Physics, Sarov, Russia*

15:45-16:00

NUMERICAL MODELING OF A CAPACITIVE RADIOFREQUENCY DISCHARGE WITH LARGE ELECTRODES

Z.A. Qodirzoda¹, S.A. Dvinin², D.K. Solikhov¹

¹*Tajik National University, Faculty of Physics,*

²*Lomonosov Moscow State University, Faculty of Physics, Moscow, Russia*

16:00-16:15

EXPLOSIVE ELECTRON EMISSION IN HIGH-CURRENT FIELD CATHODES BASED ON DIAMOND GRAPHITE FILM STRUCTURES

R.K. Yafarov

*Saratov Branch of the Kotelnikov Institute of Radioengineering and Electronics of the Russian Academy of Sciences, Saratov, Russia***16:15 - 16:30 Coffee Break**

16:30-16:45

UNEXPECTED EFFECT OF RARE-EARTH ORGANOMETALLIC COMPOUNDS ON THE DEVELOPMENT OF PLASMA CHEMICAL PROCESSES IN THE MIXTURES OF METAL AND DIELECTRIC POWDERSA.S. Sokolov¹, N.S. Akhmadullina^{1,2}, V.D. Borzosekov¹, T.E. Gayanova¹, A.K. Kozak¹, A.E. Petrov¹, D.O. Pozdnyakov³, V.D. Stepakhin¹¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*²*A.A. Baikov Institute of Metallurgy and Material Science of Russian Academy of Sciences, Moscow, Russia*³*MIREA — Russian technological university, Moscow, Russia*

16:45-17:00

DEPOSITION OF SILVER NANOPARTICLES ON DIELECTRIC SURFACES IN A PLASMA-CHEMICAL PROCESS INITIATED BY GYROTRON RADIATIONE.A. Obraztsova^{1,2}, N.N. Skvortsova¹, V.D. Stepakhin¹, V.D. Borzosekov¹, A.V. Sokolov¹, V.D. Malakhov¹, A.V. Knyazev¹, E.G. Voronova¹, N.K. Kharchev¹, N.S. Akhmadullina, O.N. Shishilov³, N.G. Gusein-zade¹¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow 119991, Russia, Vavilova st. 38*²*Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia*³*A.A. Baikov Institute of Metallurgy and Material Science, Russian Academy of Sciences, Moscow, Russia*⁴*MIREA – Russian Technological University, Institute of Fine Chemical Technologies, Moscow, Russia*

17:00-17:15

PLASMA CHEMICAL SYNTHESIS OF OXYNITRIDE CERAMICS DOPED WITH TB³⁺ IONS USING A MICROWAVE DISCHARGEN.S. Akhmadullina¹, S.N. Gusein-zade², N.N. Skvortsova³, V.D. Stepakhin³, V.D. Borzosekov³, N.G. Gusein-zade³, T.É. Gayanova³, A.S. Sokolov³, A.D. Rezaeva³, A.K. Kozak³, D.V. Malakhov³, E.V. Voronova³, A.V. Knyazev³, O.N. Shishilov²¹*A.A. Baikov Institute of Metallurgy and Material Science of Russian Academy of Sciences, Moscow, Russia*²*MIREA – Russian Technological University, Institute of Fine Chemical Technologies, Moscow, Russia*³*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

17:15-17:30

EXCITONIC NATURE OF PLASMA PHASE TRANSITION KINETICS IN DENSE MOLECULAR FLUIDSI.D. Fedorov^{1,2,3}, V.V. Stegailov^{1,2,3}¹*Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia*²*Moscow Institute of Physics and Technology National Research University, Dolgoprudny, Russia*³*National Research University Higher School of Economics, Moscow, Russia***SECTION-4 April 12 GENERAL PLASMAS (GPI RAS)**

10:00-10:30

OBLIQUE MAGNETOSOUND SOLITONS (*Invited*)A.M. Ignatov*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*

10:30-10:45

THE INFLUENCE OF EDGE LOCALIZED MODES ON THE SPECTRUM OF ELECTROMAGNETIC RADIATION SCATTERED BY PLASMA FLUCTUATIONS ON THE GLOBUS-M2 TOKAMAK

A.Yu. Tokarev¹, A.Yu. Yashin^{1,2}, K.A. Kukushkin¹, G.S. Kurskiev², V.B. Minaev², Yu.V. Petrov², A.M. Ponomarenko¹, N.V. Sakharov², N.S. Zhiltsov²

¹*Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia*

²*Ioffe Institute, St. Petersburg, Russia*

10:45-11:00

GENERATION OF A HIGH-ENERGY SPECTRUM OF IONS AT THE FINAL STAGE OF THE Z-PINCH COMPRESSION

A.Yu. Chirkov, E.A. Morkhova, A.Yu. Frolov

Bauman Moscow State Technical University, Moscow, Russia

11:00-11:15

INFLUENCE OF NUCLEAR QUANTUM EFFECTS ON THE EQUATION OF STATE OF FLUID HYDROGEN AT HIGH PRESSURES

N.D. Kondratyuk^{1,2,3}, V.G. Lukianchuk^{1,2}, I.M. Saitov^{1,2}

¹*Joint Institute for High Temperatures RAS, Moscow, Russia*

²*National Research University Higher School of Economics, Moscow, Russia*

³*Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia*

11:15-11:30

ELECTRON-ION RELAXATION IN NONIDEAL PLASMAS: MOLECULAR DYNAMICS SIMULATIONS

I.V. Morozov, Ya.S. Lavrinenko, I.A. Valuev

Joint Institute for High Temperatures of Russian Academy of Sciences, Moscow, Russia

11:30-11:45

ON THE PHYSICAL NATURE OF SUBHARMONICS OF THE ELECTRON EMISSION FROM ULTRACOLD PLASMAS

Yu.V. Dumin^{1,2}

¹*Lomonosov Moscow State University, Sternberg Astronomical Institute, Moscow, Russia*

²*Space Research Institute of the Russian Academy of Sciences, Moscow, Russia*

11:45-12:00 Coffee Break

12:00-12:30

FORMATION OF EXTENDED TUBULAR PLASMA IN ARGON AT LOW PRESSURE AND IN A WEAK LONGITUDINAL MAGNETIC FIELD (*Invited*)

Yu.S. Akishev, V.P. Bakhtin, A.B. Buleyko, O.T. Loza, A.V. Petryakov, A.A. Ravaev, E.A. Fefelova

SRC «Troitsk Institute for Innovative and Thermonuclear Research», Moscow, Russia

12:30-12:45

MICROWAVE METHOD FOR MEASURING PLASMA CONCENTRATION IN A TUBULAR PLASMA SOURCE FOR A PLASMA MASER

A.V. Ponomarev, D.K. Ul'yanov

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

12:45-13:00

NUMERICAL SIMULATION: HIGH CURRENT IN A PLASMA RELATIVISTIC GENERATOR WITH INVERSE GEOMETRY

S.E. Andreev, I.L. Bogdankevich, N.G. Gusein-zade

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

13:00-13:15

NONLINEAR DYNAMICS OF BEAM-PLASMA INSTABILITY IN A PLASMA MICROWAVE AMPLIFIER IN THE PRESENCE OF AN ABSORBER

I.N. Kartashov, M.V. Kuzelev, A.V. Tumanov

Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia

13:15-13:30

MULTI-WAVE AMPLIFICATION OF ELECTROMAGNETIC WAVES IN COAXIAL DIELECTRIC WAVEGUIDES

A.V. Ershov, M.V. Kuzelev

Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia

13:30-13:45

SIMULATION OF A MINIATURE VIRCATOR AS A THZ SOURCE

R. Zamani¹, B. Shokri²

¹*Faculty of Physics, Shahid Beheshti University, Tehran, Iran*

²*Physics Department and Laser-Plasma Research Institute Shahid Beheshti University Evin, Tehran, Iran*

13:45-14:00

MUTUAL INFLUENCE OF PLASMA ANTENNAS WITH DIFFERENT EXCITATION FREQUENCIES

I.M. Minaev, Sergeichev., Tikhonovich O.V., Karfidov D.M., Zhukov V.I.

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

14:00-14:15

NUMERICAL PIC SIMULATION OF THE EFFECT OF PLASMA ON THE CHARACTERISTICS OF THE PLASMA ANTENNA

N.N. Bogachev, I.L. Bogdankevich, V.P. Stepin, S.E. Andreev, N.G. Gusein-zade

Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia

14:15-15:00 Lunch

15:00-15:30

COMPARATIVE ANALYSIS OF ELECTROMAGNETIC PHENOMENA IN THE ATMOSPHERES OF EARTH, MARS, AND VENUS (*Invited*)

M.E. Abdelaal^{1,2}, A.V. Zakharov²

¹*Moscow Institute of Physics and Technology, Dolgoprudny, Russia*

²*Space Research Institute of the Russian Academy of Sciences, Moscow, Russia*

15:30-15:45

EFFECT ON THE IONOSPHERIC PLASMA TO POWERFUL HIGH-FREQUENCY RADIO EMISSION AS A METHOD FOR STUDYING OF THE NEUTRAL ATMOSPHERE

N.V. Bakhmetieva, G.I. Grigoriev, I.N. Zhemyakov, E.E. Kalinina

Radiophysical Research Institute, Lobachevsky State, University of Nizhny Novgorod, Nizhny Novgorod, Russia

15:45-16:00

RADIO OCCULTATION STUDIES IN THE EARTH'S IONOSPHERE DURING STRONG MAGNETIC STORMS IN MARCH AND JUNE 2015

V.N. Gubenko, V.E. Andreev, I.A. Kirillovich

Kotelnikov Institute of Radio Engineering and Electronics RAS, Fryazino, Moscow region, Russia

16:00-16:15

PRODUCTION OF ARTIFICIAL BALL LIGHTNING USING A CAPILLARY PLASMA GENERATOR

V.L. Bychkov, D.E. Sorokovykh, D.V. Bychkov
Lomonosov Moscow State University, Moscow, Russia

16:15-16:30

A MODEL OF BALL LIGHTNING WITH A CHARGED SOLID SHELL AND A GASEOUS CORE

V.L. Bychkov, D.E. Sorokovykh, D.V. Bychkov
Lomonosov Moscow State University, Moscow, Russia

16:30 - 16:45 Coffee Break

16:45-17:15

DIELECTRIC BARRIER DISCHARGES IN CONTACT WITH LIQUIDS (*Invited*)

V.V. Kovačević, G.B. Sretenović, B.M. Obradović, M.M. Kuraica
University of Belgrade, Faculty of Physics, Belgrade, Serbia

17:15-17:30

EXPERIMENTAL STUDY OF THE TRANSFER PROCESSES FROM THE SPHERICAL WATER DROPLET SURROUNDED BY SPARK DISCHARGE PLASMA CHANNEL FLOW

I.A. Shorstkii
Advanced technologies and new materials laboratory, Kuban State Technological University, Russia

17:30-17:45

PARAMETERS OF THE MULTISPARK HIGH-VOLTAGE DISCHARGE WITH GAS INJECTION THROUGH THE GAP BETWEEN DURALUMIN ELECTRODES

M.A. Zimina^{1,2}, K.V. Artem'ev¹, A.M. Davydov¹, I.V. Moryakov¹, V.D. Borzosekov^{1,2}, V.V. Gudkova^{1,2}
¹*Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia*
²*Peoples' Friendship University of Russia (RUDN University), Moscow, Russia*

17:45-18:00

ELIMINATING MATRIX EFFECTS IN AN INDUCTIVELY COUPLED PLASMA MASS SPECTROMETER

T.K. Nurubeyli^{1,2}, N.Sh. Cafar¹
¹*Institute of Physics of the Ministry of Science and Education, Republic of Azerbaijan, Baku, Azerbaijan*
²*Azerbaijan State University of Oil and Industry, Baku, Azerbaijan*

18:00-18:15 Closing Ceremony of the CSCPIER-2024