



# 19th International Workshop Complex Systems of Charged Particles and Their Interactions with Electromagnetic Radiation (CSCPIER-2023)

Time (UTC +3)	<b>Monday, April 10, 2023</b>	Time (UTC +3)	<b>Tuesday, April 11, 2023</b>	Time (UTC +3)	<b>Wednesday, April 12, 2023</b>	Time (UTC +3)	<b>Thursday, April 13, 2023</b>
10:00 – 10:15	Opening ceremony	10:00 – 11:45	<b>Section 2. Complex Plasmas</b>	10:00 – 11:45	<b>Section 3. Laser Plasmas</b>	10:00 – 11:45	<b>Section 4. General Plasmas</b>
10:15 – 11:45	<b>Section 1. Basic Aspects of Plasma Science</b>						
11:45 – 12:00	Coffee break	11:45 – 12:00	Coffee break	11:45 – 12:00	Coffee break	11:45 – 12:00	Coffee break
12:00 – 14:00	<b>Section 1. Basic Aspects of Plasma Science</b>	12:00 – 14:00	<b>Section 2. Complex Plasmas</b>	12:00 – 14:15	<b>Section 3. Laser Plasmas</b>	12:00 – 14:15	<b>Section 4. General Plasmas</b>
14:00 – 15:00	Lunch	13:45 – 15:00	Lunch	14:15 – 15:00	Lunch	14:15 – 15:00	Lunch
15:00 – 16:30	<b>Section 2. Complex Plasmas</b>	15:00 – 16:00	<b>Section 2. Complex Plasmas</b>	15:00 – 16:30	<b>Section 3. Laser Plasmas</b>	15:00 – 17:15	<b>Section 4. General Plasmas</b>
16:30 – 16:45	Coffee break	16:00 – 16:15	Coffee break	16:30 – 16:45	Coffee break	17:15 – 17:30	Closing ceremony
16:45 – 17:45	<b>Section 2. Complex Plasmas</b>	16:15 – 18:00	<b>Section 3. Laser Plasmas</b>	16:15 – 17:45	<b>Section 3. Laser Plasmas</b>		

**Program of the 19th International Workshop Complex Systems of Charged Particles and Their Interactions with Electromagnetic Radiation (CSCPIER-2023), April 10-13, 2023, Moscow, Vavilova street 38, GPI RAS**

**April 10 (Monday), 2023**

10:00— 10:15

Opening Ceremony of the CSCPIER-2023

**Section 1. Basic Aspects of Plasma Science**

	<b>Time (UTC +3)</b>	<b>Report type</b>	<b>Report title</b>	<b>Report authors</b>	<b>Report form</b>	<b>Affiliation</b>
1	10:15 — 10:45	Invited	Proton–boron fusion in oscillating plasmas of miniature vacuum discharge	Kurilenkov Yu.K. <sup>1,2</sup>	Offline	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia
2	10:45 — 11:00	Oral	Alfven solitary waves in cold plasmas	Krainov V.P.	Offline	Moscow Institute of Physics and Technology, Dolgoprudny, Russia
3	11:00 — 11:15	Oral	About collisionless heat transport in electron cloud between absorbing cylindrical walls	Marusov N.A.	Online	RUDN University, Moscow, Russia
4	11:15 — 11:30	Oral	Physics principles of the evolution of open non-equilibrium dynamic systems	Somsikov V.M.	Online	Al-Farabi Kazakh National University, Almaty, Kazakhstan
5	11:30 — 11:45	Oral	Most probable distributions and distributions of extremes for particle systems with hierarchical structures	Romanovsky M.Yu. (1,2)	Offline	(1) Science and Innovation Company, Moscow, Russia (2) MIREA - Russian Technological University, , Moscow, Russia
	11:45 — 12:00	<b>Coffee Break</b>				
6	12:00 — 12:30	Invited	To the problem of classical limit for quantum statistical variables	Trigger S.A.	Offline	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
7	12:30 — 12:45	Oral	Interaction of structured light with charged particles	Dmitriev E.O., Korneev Ph.A.	Offline	P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia
8	12:45 — 13:00	Oral	Transport characteristics of the electron drift in argon with	G.B. Ragimhanov(1) , R.I. Golyatina(2), Z. R.	Online	(1) Dagestan State University, Makhachkala, Russia

			aluminum and iron vapor	Halikova(1), <u>S.A. Maiorov</u> (3)		(2) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (3) Joint Institute for High Temperatures of the Russian Academy of Science, Moscow, Russia
9	13:00 — 13:15	Oral	Observational data corresponding to assumption about emission of high-energy photons by ball lightning	Shmatov M.L.	Online	Ioffe Institute, Saint Peterburg, Russia
10	13:15 — 13:30	Oral	Kinetic theory of a multicomponent cathode plasma expansion process in a planar vacuum diode	Kozhevnikov V.Yu., Kozyrev A.V., Semeniuk N.S., Kokovin A.O.	Online	Institute of High Current Electronics of the Siberian Branch of the Russian Academy of Sciences, Tomsk, Russia
11	13:30 — 13:45	Oral	Dynamics of microwave discharge in atomic and molecular gases	Saifutdinova A.A., Saifutdinov A.I.	Offline/Online	Kazan national Research technical university named after A.N. Tupolev, Kazan, Russia
12	13:45 — 14:00	Oral	Investigation of arc discharge with refractory and non-refractory electrodes	Saifutdinov A.I., Saifutdinova A.A.	Offline/Online	Kazan national Research technical university named after A.N. Tupolev, Kazan, Russia
	14:00 — 15:00	<b>Lunch</b>				
<b>Section 2. Complex Plasmas</b>						
1	15:00 — 15:30	Invited	Dusty plasmas in Solar system: research at the Space Research Institute RAS, Moscow, Russia	Popel S.I., Zelenyi L.M., Zakharov A.V.	Offline	Space Research Institute of the Russian Academy of Sciences, Moscow, Russia,
2	15:30 — 15:45	Oral	Lower hybrid waves in the meteoroid tails in the Earth's ionosphere	Morozova T.I., Popel S.I.	Online	Space Research Institute of the Russian Academy of Sciences, Moscow, Russia
3	15:45 — 16:00	Oral	Waves and instabilities in dusty plasma near the surface of the Moon	Morozova T.I., Popel S.I.	Online	Space Research Institute of the Russian Academy of Sciences, Moscow, Russia
4	16:00 — 16:15	Oral	Simulation experiments on the deposition of charged particles of regolith on the solar batteries of spacecraft using radiation from a powerful gyrotron	Skvortsova N.N. (1), Kozak A.K. (1), Gayanova T.E. (1), Sokolov A.S. (1), Tarazevich E.S. (2), Shishilov O.N. (3), Stepakhin V.D. (1)	Offline	(1) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (2) AO "TSNIImash", Korolev, Russia (3) MIREA - Russian

						Technological University, Moscow, Russia
5	16:15 — 16:30	Oral	Interaction of the substance of the Tsarev meteorite with the radiation from a powerful gyrotron: dusty plasma cloud formation and phase transformations	Akhmadullina N.S. (1), Borzosekov V.D. (2), Skvortsova N.N. (2), Stepakhin V.D. (2), Guseinzade N.G. (2), Malakhov D.V. (2), Voronova E.V. (2), Gayanova T.E. (2), Sokolov A.S. (2), Ishchenko A.V. (3), Weinstein I.A. (3), Grokhovskiy V.I. (3)	Offline	(1) A.A. Baikov Institute of Metallurgy and Material Science of Russian academy of sciences, Moscow, Russia (2) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (3) Ural Federal University, Ekaterinburg, Russia
	16:30 — 16:45	<b>Coffee Break</b>				
6	16:45 — 17:00	Oral	Modified Zakharov-Kuznetsov equation for description of nonlinear waves in magnetized dusty plasmas of the lunar exosphere	Kassem A.I. (1), Kopnin S.I. (3), Popel S.I. (3), Zelenyi L.M. (3)	Online	(1) Moscow Institute of Physics and Technology, Dolgoprudny, Russia (2) Mansoura University, Mansoura, Egypt (3) Space Research Institute of the Russian Academy of Sciences, Moscow, Russia
7	17:00 — 17:15	Oral	On formation of dusty plasma structures in Martian Ionosphere	Reznichenko Yu.S. (1), Dubinskii A.Yu. (2), Popel S.I.(2)	Offline	(1) Moscow Institute of Physics and Technology, Dolgoprudny, Russia (2) Space Research Institute of the Russian Academy of Sciences, Moscow, Russia
8	17:15 — 17:30	Oral	Wave processes related to dusty plasmas at Mercury	Izvekova Yu.N., Golub' A.P., Popel S.I.	Online	Space Research Institute of the Russian Academy of Sciences, Moscow, Russia
9	17:30 — 17:45	Oral	Two-dimensional description of localized structures in the dusty magnetosphere of Saturn	Shokhrin D.V. (1), Kopnin S.I. (2), Popel S.I. (2)	Online	(1) HSE University, Moscow, Russia (2) Space Research Institute of the Russian Academy of Sciences, Moscow, Russia

**April 11 (Tuesday), 2023**

**Section 2. Complex Plasmas**

	<b>Time (UTC +3)</b>	<b>Report type</b>	<b>Report title</b>	<b>Report authors</b>	<b>Report form</b>	<b>Affiliation</b>
10	10:00 — 10:30	Invited	Heat conductivity in dusty plasma	Ignatov A.M.	Offline	Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
11	10:30 — 10:45	Oral	Excess entropy scaling of transport coefficients in dusty plasma liquids	Khrapak S.	Online	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
12	10:45— 11:00	Oral	The characteristics of dusty plasma with micro- and nanoparticles in a pulsed RF discharge	Utegenov A.U. (1), Orazbayev S.A. (2), Batryshev D.G. (2), Ramazanov T.S. (1)	Online	(1) Al-Farabi Kazakh National University, Almaty, Kazakhstan (2) Kazakh-British Technical University, Almaty, Kazakhstan
13	11:00 — 11:15	Oral	Calculation of viscosity in two-dimensional dipole and screened dipole systems	Djienbekov N.E.	Online	Al-Farabi Kazakh National University, Almaty, Kazakhstan
14	11:15 — 11:30	Oral	Structural and dynamical properties of dust particle chain structures: numerical study	Kolotinskii D.A. (1,2), Timofeev (2)	Offline	(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 (3) National Research University Higher School of Economics, Moscow, Russia
15	11:30— 11:45	Oral	Relevance of the Wigner–Seitz cell approximation for the Coulomb clusters	Shpil’ko E.S., Zhukhovitskii D.I.	Offline	(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
	11:45 — 12:00	<b>Coffee Break</b>				
16	12:00 — 12:30	Invited	Formation of a Ring-like Structure in a Dusty Plasma	Karasev V.Yu., Dzlieva E.S., Pavlov S.I., Novikov L.A.	Offline	Saint Petersburg State University, Saint Peterburg,

			during Rapid Rotation			Russia
17	12:30 — 12:45	Oral	Observation of a double dust structure in an inhomogeneous magnetic field	Novikov L.A., Dзлиeva E.S., Pavlov S.I., Yanitsin D.V., Karasev V.Yu.	Offline	Saint Petersburg State University, Saint Peterburg, Russia
18	12:45 — 13:00	Oral	Rotation mechanisms of dust particles structures under the action of a magnetic field in the region of a narrowing glow discharge current channel	Dyachkov L.G. (1), Dзлиeva E.S. (2), Novikov L.A. (2), Pavlov S.I. (2), Karasev V.Yu. (2)	Offline	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) Saint Petersburg State University, Saint Peterburg, Russia
19	13:00 — 13:15	Oral	Influence of the spatial localization of high frequency particle oscillations on the vibrational properties of a Yukawa crystal	Voronov I.V. (1,2), Nikolaev V.S. (1,2), Timofeev A.V. (2,1,3)	Offline	(1) Moscow Institute of Physics and Technology, Dolgoprudny, Russia (2) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (3) HSE University, Moscow, Russia
20	13:15 — 13:30	Oral	Active Brownian motion of charged grains in gas discharge plasma	Vasiliev M.M., Kononov E.A., Statsenko K.B., Boltnev R.E., Petrov O.F.	Offline	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
21	13:30 — 13:45	Oral	Active Brownian motion of dust particles in quasi-one-dimensional (chains) structures	Svetlov A.S. (1,2), Kononov E.A.(1,2), Petrov O.F.(1,2), Vasiliev M.M.(1,2)	Offline	(1) Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia (2) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
	13:45 — 15:00	<b>Lunch</b>				
22	15:00 — 15:30	Invited	Charged micron-sized particles in a linear electrodynamic trap in air at atmospheric pressure	Vasilyak L.M., Pecherkin V. Ya., Vladimirov V.I.	Offline	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
23	15:30 — 15:45	Oral	Dynamics of a single colloidal particle in plasma	Koss X.G. (1,2), Lisina I.I. (1,2), Vasiliev M.M., Alekseevskaya A.A. (1), Kononov E.A. (1,2), Petrov	Offline	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia

				O.F. (1,2)		(2) Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia
24	15:45 — 16:00	Oral	Activity mechanism of charged globs of complex composition in colloidal systems under the external influence	Senoshenko R.V (1,2), Kononov E.A. (1,2), Vasiliev M.M. (1,2), Petrov O.F. (1,2)	Offline	(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	<b>Coffee Break</b>				
<b>Section 3. Laser Plasmas</b>						
1	16:15 — 16:45	Invited	Laboratory modelling of coronal mass ejections dynamics in strong stellar magnetic fields	Burdonov K. (1), Yao W. (2, 3), Argiroffi C. (4,5), Beard J. (6), Bolanos S.(1), Bonito R. (4), Ciardi A. (3), Filippov E. (1), Orlando S. (4), Fuchs J. (2)	Offline	(1) JIHT RAS, , Moscow, Russia (2) LULI, Ecole Polytechnique, Palaiseau cedex, France (3) LERMA, Sorbonne Université, Paris, France (4) INAF, Osservatorio Astronomico di Palermo, Palermo, Italy (5) University of Palermo, Department of Physics and Chemistry, Palermo, Italy (6) LNCMI, Toulouse, France
2	16:45 — 17:00	Oral	A new approach to optimizing of laser triggered acceleration of deuteron ions and dd neutron generation at large-volume of interaction with microdrop target	<u>Gozhev D.A.</u> (1), Bochkarev S.G. (1,2), Lobok M.G.(1,2), Brantov A.V.(1,2), Bychenkov V.Yu.(1,2)	Offline	(1) P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia (2)Center for Fundamental and Applied Research, Dukhov Research Institute of Automatics ROSATOM, Moscow, Russia
3	17:00 — 17:15	Oral	Physics of laser shock and plasma corona together with corresponding technologies	Inogamov N.A. (1,2,3), Zhakhovsky V.V. (2,3), Petrov Y.V. (1), Khokhlov V.A. (1)	Offline	(1) Landau Institute for Theoretical Physics of the Russian Academy of Sciences, Chernogolovka, Moscow Region , Russia (2) Dukhov Research Institute

						of Automatics (VNIIA), Moscow, Russia (3) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
4	17:15 — 17:30	Oral	Effect of photoelectron collisions features on electromagnetic instabilities in plasma formed by multiphoton ionization of inert gas atoms	Vagin K.Yu., Uryupin S.A.	Offline	P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia
5	17:30 — 17:45	Oral	Excitation of high-intensity terahertz surface modes of plasma slab under action of p- polarized two-frequency laser radiation	Aliev Yu. M., <u>Frolov A. A.</u>	Offline	P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia
6	17:45 — 18:00	Oral	The radiation growth regularity of counterpropagating electron with its initial energy in the field of Gaussian laser pulse	Borovsky A.V. (1), <u>Galkin A.L.</u> (2)	Offline	(1) Baikal State University, Irkutsk, Russia (2) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia



**April 12 (Wednesday), 2023**

**Section 3. Laser Plasmas**

	<b>Time (UTC +3)</b>	<b>Report type</b>	<b>Report title</b>	<b>Report authors</b>	<b>Report form</b>	<b>Affiliation</b>
7	10:00 — 10:30	Invited	Ultra-high resolution coherent x-ray radiography in studies of laser plasma extreme hydrodynamic phenomena	<u>Makarov S.S.</u> (1), Pikuz S.A. (1,2)	Offline	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) National Research Nuclear University MEPhI, Moscow, Russia
8	10:30 — 10:45	Oral	X-ray diagnostics of magnetic reconnection in collided laser-induced plasma flows	<u>E.D. Filippov</u> (1), Pikuz S.A. (1,2), Bolanos S. (3), Sladkov A. (4.), Smets R.(5), ChenS.N. (6), Grisollet A. (7), Henares J. (8), Nastasa V. (6), Riquier R. (7), Starodubtsev M.V. (4), Severin A. (3) and J. Fuchs (3)	Offline	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) National Research Nuclear University MEPhI, Moscow, Russia (3) CNRS-CEA, Ecole Polytechnique, Physique Atomique dans les Plasmas Denses, Palaiseau, France (4) Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Russia (5) Ecole Polytechnique, CNRS, Palaiseau, France (6) Horia Hulubei National Institute of Physics and Nuclear Engineering, Magurele, Romania (7) Commissariat à l'Energie Atomique, Centre DAM Ile de France, Bruyères le Châtel, France (8) Centre National de la Recherche Scientifique, Paris, France

9	10:45 — 11:00	Oral	Characteristics of the interaction of high-contrast, ultraintense laser pulses with argon clusters studied by means of X-ray spectroscopy	Ryazantsev S.N (1), Alkhimova M.A.(1), Skobelev I. Yu.(1,2), Sedov M.V. (1), Pikuz S.A. (1,2)	Online	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) National Research Nuclear University “MEPhI”, Moscow, Russia
10	11:00 — 11:15	Oral	Effective electron acceleration driven by 1 TW laser pulse in tape target	Gorlova D.A. (1,2), Tsymbalov I.N. (1,2), Savel'ev A.B (1)	Offline	(1) Lomonosov Moscow State University, Moscow, Russia (2) Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, Russia
11	11:15 — 11:30	Oral	Scattering of a 2D localized pump wave on spontaneous fluctuations due to Stimulated Mandelstam Brillouin scattering	Hobilov D.U. (1), Solikhov D.K. (2), Dvinin S.A. (3)	Online	(1) Bobojon Gafurov Khujand State University,1, Khujand, Tajikistan (2) Tajik National University, Faculty of Physics, Dushanbe, Tajikistan (3) Faculty of Physics, Lomonosov Moscow State university, Moscow, Russia
12	11:30 — 11:45	Oral	Modelling of heavy atom ionization in PIC codes for ultra-high intensity laser field diagnostics	Mironov A.A. (1), Popruzhenko S. V. (2,3)	Online	(1) LULI, Sorbonne Universite, Ecole Polytechnique, Institut Polytechnique de Paris, Paris, France (2) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (3) National Research Nuclear University MEPhI, Moscow, Russia
	11:45 — 12:00	<b>Coffee Break</b>				
13	12:00 — 12:30	Invited	On project of multi-stage laser-plasma acceleration of ultrashort lepton bunches at XCELS	Veysman M.E. (1,2), Umarov I.R. (1,2), Pugacheva D.V. (1), Andreev N.E. (1,2,3)	Online	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) Institute of Applied Physics

						of the Russian Academy of Sciences, Nizhny Novgorod Russia (3) Moscow Institute of Physics and Technology, Dolgoprudny, Russia
14	12:30 — 12:45	Oral	Efficient electron bunch generation in under-critical plasma using 1TW laser pulse	<u>Ivanov K.A.</u> (1,2), Tsymbalov I.N. (1,3), Gorlova D.A. (1,3), Shulyapov S.A. (1), Starodubtseva E.M. (1), Tsygvintsev I.P. (1,4), Kochetkov Yu.V. (1,5), Volkov R.V. (1), Savel'ev A.B. (1,2)	Online	(1) Faculty of Physics, Lomonosov Moscow State university, Moscow, Russia (2) P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia (3) Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, Russia (4) Keldysh Institute of Applied Mathematics of of the Russian Academy of Sciences, Moscow, Russia (5) National Research Nuclear University MEPhI, Moscow, Russia
15	12:45 — 13:00	Oral	Efficient schemes for ion acceleration by short laser pulses	Brantov A.V. (1,2), Bychenkov V.Y.u. (1,2),	Online	(1) P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia (2) Dukhov Automatics Research Institute, Moscow, Russia
16	13:00 — 13:15	Oral	Emission of high harmonics by gallium and indium singly-charged ions in strong laser field	<u>Magunov A.I.</u> (1), Strelkov V.V. (1), Yudin S.N. (2)	Offline	(1) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (2) Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia
17	13:15 — 13:30	Oral	Relativistic plasma transparency	<u>Alkhimova M.A.</u> (1), Pikuz	Offline	(1) Joint Institute for High

			in experiments with ultraintense laser pulses	T.A. (1), Skobelev I.Yu. (1,2), Pikuz S.A. (1,2)		Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) National Research Nuclear University MEPHI, Moscow, Russia
18	13:30 — 13:45	Oral	Generation of Electron Bunches by a Laser Pulse of Ultrarelativistic Intensity Passing Through a Blurred Boundary of a Rarefied Plasma	Kuznetsov S.V.	Online	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
19	13:45 — 14:00	Oral	Generation of pulsed terahertz radiation under electron emission in a vacuum diode	<u>Ushakov A.A.</u> , Mamaeva K.A., Dolmatov T.V., Bukin V.V.	Offline	Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
20	14:00 — 14:15	Oral	Spatial scales characterizing macroscopic properties of high harmonic generation in gases and plasma	<u>Strelkov V.V.</u> (1), Bogachev N. N. (1), Khokhlova M. A. (2,3)	Offline	(1) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (2) Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Max-Born-Straße 2A, Berlin 12489, Germany (3) King's College London, Strand, London, UK
	14:15 — 15:00	<b>Lunch</b>				
21	15:00 — 15:30	Invited	Intense sources of high energy particles and radiation in relativistic laser-matter interaction	Andreev N.E. (1,2)	Offline	(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
22	15:30 — 15:45	Oral	Interaction of pulsed laser radiation with nanostructured metal surfaces: formation of ions below plasma threshold	<u>Pento A.V.</u> , Sartakov B.G., Laptinskaya P.K., Nikiforov S.M., Simanovsky Ya.O	Offline	Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
23	15:45 — 16:00	Oral	Modeling of characteristic line emission in the interaction of	<u>Sedov M.V.</u> (1), Skobelev I.Yu. (1,2), Pikuz S.A. (1,2)	Offline	(1) Joint Institute for High Temperatures of the Russian

			femtosecond laser radiation with argon clusters			Academy of Sciences, Moscow, Russia (2) Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia
24	16:00 — 16:15	Oral	Modeling of X-ray bremsstrahlung generation under heating of solid target electrons by the Brunel mechanism	Kostenko O.F.	Online	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
25	16:15 — 16:30	Oral	Terahertz emission from microdroplets irradiated by intense bichromatic laser light	<u>Peganov E.E.</u> (1), Popruzhenko S.V. (1,2)	Offline	(1) National Research Nuclear University MEPhI, Moscow, Russia (2) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
	16:30 — 16:45	<b>Coffee Break</b>				
26	16:45 — 17:00	Oral	Guiding and energy concentration of laser triggered THz pulses on metal microwires	<u>Kuratov A.S.</u> (1,2), Brantov A.V. (1,2), Bychenkov V. Yu. (1,2)	Online	(1) Dukhov Automatics Research Institute (VNIIA, ROSATOM), Moscow, Russia (2) P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia
27	17:00 — 17:15	Oral	Relativistically Nonlinear Resonant Absorption and Higher Harmonic Generation of Laser Radiation in an Inhomogeneous Plasma	Metelskii I.I. (1,2), Kovalev V.F. (2,3), Bychenkov V. Yu. (1,3)	Offline	(1) P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia (2) Dukhov Research Institute of Automatics (VNIIA), Moscow, Russia (3) Keldysh Institute of Applied Mathematics of the Russian Academy of Science, Moscow, Russia
28	17:15 — 17:30	Oral	Approbation of the rate equations method for studying the RABBITT spectroscopy	<u>Popova M.M.</u> (1,2), Yudin S.N. (1), Gryzlova E.V. (1), Kiselev M.D. (1,2,3), Grum-Grzhimailo A.N. (1)	Offline	(1) Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia (2) Faculty of Physics,

						Lomonosov Moscow State University, Moscow, Russia (3) Laboratory for Modeling of Quantum Processes, Pacific National University, Khabarovsk, Russia
29	17:30 — 17:45	Oral	Photoionization of helium and magnesium atoms by the twisted light	Kiselev M.D. (1,2,3,4), Grum-Grzhimailo A.N. (1,2,3)	Online	(1) Lomonosov Moscow State University, Moscow, Russia (2) Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Moscow, Russia (3) School of Physics and Engineering, ITMO University, Saint Petersburg, Russia (4) Laboratory for Modeling of Quantum Processes, Pacific National University, Khabarovsk, Russia
30	17:45 — 18:00	Oral	Terahertz emission from curved laser-driven wires	<u>Bukharskii N.D.</u> , Korneev Ph.A.	Offline	P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia

April 13 (Thursday), 2023

**Section 4. General Plasmas**

	<b>Time (UTC +3)</b>	<b>Report type</b>	<b>Report title</b>	<b>Report authors</b>	<b>Report form</b>	<b>Affiliation</b>
1	10:00 — 10:30	Invited	Demixing and strong dipole-dipole association in binary dipolar 2D systems	Allahyarov E.A. (1,2,3)	Online	(1) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia (2) Heinrich-Heine University, Dusseldorf, Germany (3) Case Western Reserve University, Cleveland, USA
2	10:30 — 10:45	Oral	Influence of Dielectric Reflector Position in Axial Vircator	Shen Shou Max Chung	Online	National Penghu University of Science and Technology, Magong, Penghu, R.O.C.
3	10:45— 11:00	Oral	The Possibility Of Symmetry Breaking In Plasma-Chemical Low-Pressure High-Frequency Capacitive Reactors	Kodirzoda Z.A. (1), Dvinin S.A. (2), Sinkevich O.A.(3), Solikhov D.K. (1)	Online	(1) Tajik National University, Faculty of Physics, Dushanbe, Tajikistan (2) Lomonosov Moscow State university, Faculty of Physics, Moscow, Russia (3) National Research University MPEI, Moscow, Russia
4	11:00 — 11:15	Oral	FRC fusion collider	Mozgovoy A.G. (1,2)	Offline	(1) P. N. Lebedev Physics Institute Russian Academy of Sciences, Moscow, Russia (2) Know How Ltd, Moscow, Russia
5	11:15 — 11:30	Oral	Study of material erosion and dust formation after interaction of plasma flux with the surface of tungsten	Tazhen A.B., Dosbolayev M.K., Ramazanov T.S.	Online	Al-Farabi Kazakh National University, Almaty, Kazakhstan
6	11:30 — 11:45	Oral	Hydrodynamic Model of Plasmonic Crystal in Magnetic Field	<u>Gorbenko I.V.</u> , Kachorovskii V.Yu.	Online	Ioffe Institute, St. Petersburg, Russia
	11:45 — 12:00	<b>Coffee Break</b>				
7	12:00 — 12:15	Oral	Gradient ceramics of bismuth ferrite created by plasma exposure	<u>Gadzhimagomedov S.Kh.</u> (1), Alikhanov N.M.-R.(1), Rabadanov M.Kh.(1),	Online	(1) Dagestan State University, Makhachkala, Russia (2) Joint Institute for High

				Rabadanova A.E.(1), Gadzhiev M.Kh. (2), Ilyichev M.V.(2), Emirov R.M.(1), Palchaev D.K.(1), Murlieva Zh.Kh.(1), Saipulaev P.M.(1), Faradzhev Sh.P.(1)		Temperatures of the Russian Academy of Sciences, Moscow, Russia
8	12:15 — 12:30	Oral	Creation of gradient nanostructured HTSC materials by exposure to pulsed plasma	<u>Gadzhimagomedov S.Kh.</u> (1), Rabadanova A.E. (1), Rabadanov M.Kh. (1), Gadzhiev M.Kh.(2), Kurbanismailov V.S. (1), Ragimkhanov G.B. (1), Emirov R.M. (1), Faradzhev Sh.P. (1), Saipulaev P.M. (1)	Online	(1) Dagestan State University, Makhachkala, Russia (2) Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
9	12:30 — 12:45	Oral	About the effect of gas pumping on the gas discharge characteristics	Vasiliev M.M., <u>Maierov S.A.</u> , Petrov O.F.	Offline	Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russia
10	12:45 — 13:00	Oral	Shock waves in the initial phase of a microstructured spark discharge in air	Almazova K.I. (1), Borovkov V.V. (1), Ragimkhanov G.B. (1), Trenkin A.A. (1), Khalikova Z.R. (2)	Offline	(1) Russian Federal Nuclear Center, All Russia Research Center of Experimental Physics, Sarov, Russia (2) Dagestan State University, Makhachkala, Russia
11	13:00 — 13:15	Oral	Perturbation of the background plasma distribution function by ion-acoustic solitons	<u>Trukhachev F.M. (1,2,3)</u> , Gerasimenko N.V. (3), Vasiliev M.M. (1,2), Petrov O. F. (1,2)	Online	(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 (3) Belarusian-Russian University, Mogilev, Republic of Belarus
12	13:15 — 13:30	Oral	Wave packet molecular dynamics simulation of the electron-ion relaxation in nonideal plasmas	<u>Morozov I.V.(1,2)</u> , Lavrinenko Ya.S. (1,2), Valuev I.A. (1)	Offline	(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	
13	13:30 — 13:45	Oral	First principle studies of fully ionized strongly coupled quantum ion plasma	Baiko D.A.	Offline	Ioffe Institute, Saint Peterburg, Russia	
14	13:45 — 14:00	Oral	Radiation limit for the energy gain of the p-11B reaction	<u>Chirkov A.Yu.</u> , Kazakov K.D.	Offline	Bauman Moscow State Technical University, Moscow, Russia	
15	14:00 — 14:15	Oral	Plasma confinement and transition processes in L-2M stellarator at high power microwave heating	Vasilkov D.G. (1,2)	Offline	(1) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (2) Bauman Moscow State Technical University, Moscow, Russia	
	14:15 — 15:00	<b>Lunch</b>					
16	15:00 — 15:15	Oral	Influence of particle heating on the penetration of an electromagnetic pulse into plasma in magnetic field	<u>Grigorovich D.A.</u> (1), Uryupin S.A. (1,2), Ovchinnikov K.N. (1,2)	Offline	(1) P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia (2) National Research Nuclear University “MEPhI”, Moscow, Russia	
17	15:15 — 15:30	Oral	On the dynamics of relativistic electron beam with nonzero emittance in low-density plasma	<u>Barminova H.Y.</u> (1,2), Kak B. (2)	Offline	(1) National Research Nuclear University MEPhI., Russia (2) RUDN University, Moscow, Russia	
18	15:30 — 15:45	Oral	Evolution of an electromagnetic field spatial distribution with electron density changes in a microwave discharge in a magnetic trap	<u>Dvinin S.A.</u> (1), Korneeva M.A. (2,3)	Online	(1) Lomonosov Moscow State university, Moscow, Russia (2) RUDN University, Moscow, Russia (3) Federal State Institution «Scientific Research Institute for System Analysis» RAS, Moscow, Russia	
19	15:45 — 16:00	Oral	Beam instability in plasma microwave amplifier with absorber	<u>Kartashov I.N.</u> , Kuzelev M.V., Tumanov A.V.	Online	Lomonosov Moscow State University, Moscow, Russia	

20	16:00 — 16:15	Oral	Effect of Plasma Concentration on the Generation Efficiency and Change in the Spectrum of a Plasma Relativistic Microwave Generator	<u>Bogdankevich I.L.</u> , Andreev S.E., Gusein-zade N.G., Ulyanov D.K.	Offline	Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
21	16:15 — 16:30	Oral	Structure of low-pressure microwave discharge sustained by a surface wave	<u>Zhukov V.I.</u> , Karfidov D.M	Offline	Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
22	16:30 — 16:45	Oral	On the possibilities of controlling of the characteristics of a plasma asymmetric dipole antenna	<u>Bogachev N. N.</u> (1), Usachonak M. S.(2), Andreev S.E. (1), Simonchiik L.V. (2)	Offline	(1) Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia (2) B.I. Stepanov Institute of Physics of the National Academy of Sciences of Belarus, Minsk, Republic of Belarus
23	16:45 — 16:30	Oral	To the nonlinearity of a plasma asymmetric dipole antenna	<u>Bogachev N. N.</u> , Bogdankevich I.L., Andreev S.E., Gusein-zade N.G.	Offline	Prokhorov General Physics Institute of the Russian Academy of Sciences
	17:00 — 17:15	<b>Closing ceremony</b>				