

16th SHCE

10th CMM

September 19, Sunday

17:00 — 21:00, RUBIN hotel

REGISTRATION

19:00 — 22:00, RUBIN hotel

Welcome party

September 20, Monday

8:30 — 16:00, RUBIN hotel

REGISTRATION

September 20, Monday

09:00 — 09:20, Conference Hall of the RUBIN hotel

OPENING CEREMONY

09:20 — 09:50

Review Lecture "Fast Pulsed Power Generators Based on LTD Stages", Prof. N. Ratakhin

(Institute of High Current Electronics SB RAS, Tomsk, Russia)

09:50 — 10:20

Review Lecture "Versatile Device for in-situ Multiple Coatings of Long, Small Diameter Tubes",

Dr. A. Hershcovitch

(Brookhaven National Laboratory, USA)

10:25 — 10:30

PHOTOGRAPHING

16th SHCE: Conference Hall of the Institute of High Current Electronics

10th CMM: Conference Hall of the RUBIN hotel

10:40 - 11:00 Coffee break

11:00 — Start of 16th SHCE and 10th CMM Sessions

16th International Symposium on High Current Electronics

September 20, Monday

11:00 – 12:40, 15:00 – 18:20

Oral Session 1. Pulsed power technology

11:00 - 11:40 Invited	<p>SHCE-3-0-00074 The High Current, Fast, 100ns, Linear Transformer Driver (LTD) Development Project at Sandia National Laboratories</p> <p><u>M.G. Mazarakis</u>, A.A. Kim*, K.R. LeChien, W.E. Fowler, V.A. Sinebryukhov*, W. Long, M.K. Matzen, D.H. McDaniel, R. McKee, J.L. Porter, K.W. Struve, W.A. Stygar, P.E. Wakeland**, K.S. Ward**, J.R. Woodworth</p> <p>Sandia National Laboratories, Albuquerque, USA *Institute of High Current Electronics SB RAS, Tomsk, Russia **Ktech Corporation, Albuquerque, NM, USA</p>
11:40 - 12:00	<p>SHCE-3-1-01143 Investigation of a Linear Transformer of Megaampere Level at Operation on Resistive-Inductive Load</p> <p><u>A.V. Kharlov</u>, B.M. Koval'chuk, E.V. Kumpyak, A.A. Zherlitsyn, V.B. Zorin, G.V. Smorudov, F. Bayol*, F. Lassalle**</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia *ITHPP, Thégra, France **Centre d Etudes de Grama, Gramat, France</p>
12:00 - 12:20	<p>SHCE-3-1-00862 Energy Loss due to Eddy Current in LTD Cores</p> <p><u>A.A. Kim</u>, M.G. Mazarakis*, V.I. Manylov, V.A. Vizir, W.A. Stygar*</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia *Sandia National Laboratories, Albuquerque, USA</p>
12:20 - 12:40	<p>SHCE-3-0-00394 Electron Accelerator with Plasma-Filled Diode</p> <p><u>A. Zherlitsyn</u>, B.M. Koval'chuk, N.N. Pedin</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
12:40 – 14:00 Lunch	
14:00 – 15:00 Poster Session	
15:00 - 15:20	<p>SHCE-3-1-00515 Adapting of a Plasma Opening Switch with a Load Current Multiplier in Experiments on the GIT-12 Generator</p> <p><u>V.A. Kokshenev</u>, B.M. Koval'chuk, N.E. Kurmaev, F.I. Fursov, N.A. Ratakhin, A.V. Shishlov</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
15:20 - 15:40	<p>SHCE-3-1-00574 High-Power Picosecond Current Switching by Si Sharpener Based on Successive Breakdown of Structures at Electric Field up to 1 MV/cm</p> <p><u>S.N. Tsyranov</u>, S.K. Lyubutin, S.N. Rukin, B.G. Slovikovsky</p> <p>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</p>

15:40 - 16:00	<p>SHCE-3-1-01070 High-Power Low-Frequency Generator with Programmable Voltage Shape and Amplitude, Based on Starter Accumulators</p> <p><u>A. Perminov</u>, <u>S.V. Voevodin</u>, <u>A.S. Kirzhaev</u>, <u>A.V. Limonov</u>, <u>P.V. Suchkov</u>, <u>A.A.Trenkin</u></p> <p><i>RFNC All-Russian Research Institute of Experimental Physics, Sarov, Russia</i></p>
16:00 - 16:20	<p>SHCE-3-1-00966 High-Voltage Pulse Transformer</p> <p><u>I.V. Lavrinovich</u>, <u>V.F. Feduschak</u>, <u>A.A. Erfort</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
16:20 – 16:40 Coffee Break	
16:40 - 17:00	<p>SHCE-3-1-00967 Compact Nanosecond Pulse Generator</p> <p><u>I.V. Lavrinovich</u>, <u>N.V. Zharova</u>, <u>V.F. Feduschak</u>, <u>A.A. Erfort</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17:00 - 17:20	<p>SHCE-3-1-01550 A Compact 700 kV/100 Hz Dual-Resonant Air Core Pulse Transformer</p> <p><u>M. Barati</u>, <u>S.M. Pedramrazi</u>, <u>J. Safaei</u>, <u>K. Hojatzadeh</u>, <u>M.H. Rahdan</u>, <u>H. Khadem</u></p> <p><i>Electronic & Communication Research Center, Tehran, Iran</i></p>
17:20 - 17:40	<p>SHCE-3-1-01538 A Compact 500 kV/50 ns High Voltage Resistive Probe with High Division Ratio</p> <p><u>S.J. Mousavi</u>, <u>G.H. Rahimi</u>, <u>H. Khadem Kalan</u>, <u>J. Safaei</u>, <u>M. Barati</u></p> <p><i>Electronic & Communication Research Center, Tehran, Iran</i></p>
17:40 - 18:00	<p>SHCE-3-1-01542 Design and Construction of 30kV Capacitor Charger Using of Series Resonant Converter</p> <p><u>H.R. Hafezi</u>, <u>S.J. Mousavi</u>, <u>M. Barati</u>, <u>M.H. Rahdan</u></p> <p><i>Electronic & Communication Research Center, Tehran, Iran</i></p>

September 20, Monday

14:00 – 18:00

Poster Session 1.1. Pinches, plasma focus and capillary discharge

1	<p>SHCE-2-2-00079 Current Amplification by Magnetic Flux Compression <u>S.A. Sorokin</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
2	<p>SHCE-2-1-00366 Investigation of the Electric Strength Recovery Process in the Source of EUV Radiation Based on a Pseudospark Discharge <u>N.V. Landl, Yu.D. Korolev, O.B. Frants, V.G. Geyman, R.V. Ivashov, I.A. Shemyakin</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
3	<p>SHCE-2-0-00486 Plasma Streams Formation and Acceleration in Long Coaxial Gun <u>A. Zhukeshov, A.U. Amrenova, D.R. Beysenev</u> <i>Scientific Research Institute of Experimental and Theoretical Physics of Al-Farabi Kazakh National University, Almaty, Republic of Kazakhstan</i></p>
4	<p>SHCE-2-1-00598 Influence of Instabilities Development on the Current Sheath Motion <u>N.A. Labetskaya, S.A. Chaikovsky, A.Yu. Labetsky, A.V. Shishlov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
5	<p>SHCE-2-2-00614 Optical Characteristics and Structure of the Plasma Channel during the Discharge of the High-Voltage Source with the Subnanosecond Voltage Pulse Front <u>K. Nagayev, S.V. Barakhvostov, M.B. Bochkarev, N.B. Volkov, E.A. Chingina</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
6	<p>SHCE-2-2-00742 Marple 3D: New Numerical Technologies in 3D Z-Pinch Simulations <u>S.V. Dyachenko, V.A. Gasilov, A.S. Boldarev, E.L. Kartasheva, O.G. Olkhovskaya, S.N. Boldyrev, G.A. Bagdasarov, I.V. Gasilova, V.A. Shmyrov*, I.S. Grishkov*, J. Grunenwald**, Th. Maillard**</u> <i>M.V. Keldysh Institute of Applied Mathematics RAS, Moscow, Russia</i> <i>*Moscow State Technological University "Stankin", Moscow, Russia</i> <i>**Centre d'Etudes de Gramat, Gramat, France</i></p>

7	<p>SHCE-2-1-01286 Measurements of X-Pinch Soft X-Ray Source Parameters <u>A. Artyomov</u>, S.A. Chaikovsky, A.V. Fedunin, V.I. Oreshkin <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
8	<p>SHCE-2-0-01338 Pulse Electrical Breakdown in Crystalline Quartz and Yttrium-Aluminum Garnet <u>I.F. Punanov</u>, R.V. Emlin, A.S. Gilev, V.D. Kulikov*, S.O. Cholakh** *<i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> *<i>Tomsk Agricultural Institute, Tomsk, Russia</i> **<i>Ural State Technical University, Ekaterinburg, Russia</i></p>
9	<p>SHCE-2-2-01583 X-Pinch Based EUV Source for Lithography <u>S.M. Hassan</u>, C. Petridis, E.L. Clark, J. Chatzakis, G. Androulakis, E. Tzianaki, E.O. Baronova**, V.V. Vikhrev**, P. Lee*, M. Tatarakis CPPL-Technological Educational Institute of Crete, Chania-Crete, Greece *<i>NIE - Nanyang Technological University, Singapore</i> **<i>RRC Kurchatov Institute, Moscow, Russia</i></p>
10	<p>SHCE-2-2-01584 Study of Soft X-Ray Emission in Table-Top X-Pinch <u>S.M. Hassan</u>, C. Petridis, E.L. Clark, J. Chatzakis, G. Androulakis, E. Tzianaki, E.O. Baronova**, V.V. Vikhrev**, P. Lee*, M. Tatarakis CPPL-Technological Educational Institute of Crete, Chania-Crete, Greece *<i>NIE - Nanyang Technological University, Singapore</i> **<i>RRC Kurchatov Institute, Moscow, Russia</i></p>
11	<p>SHCE-2-2-01598 Structure Of Dusty Plasma Clusters in Confinement Field of Different Configuration <u>A. Abdrashitov</u>, K.P. Zolnikov, S.G. Psakhie <i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
12	<p>SHCE-2-2-90044 DD- microfusion and Anode Surface Morphology along Nanosecond Vacuum Discharge of Low Energy <u>Yu.K. Kurilenkov</u>, M. Skowronek*, S.Yu. Guskov**, G.A. Val'vano, V.T. Karpukhin <i>Joint Institute for High Temperatures RAS, Moscow, Russia</i> *<i>Laboratoire des Plasmas Denses, Université Pierre et Marie, Curie, France</i> **<i>P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>

Poster Session 1.2. Pulsed power applications

13	<p>SHCE-5-2-00102 Specifics of Electric Discharge Lithotripsy of Human Pathologic Organomineral Concretions</p> <p><u>L. Ivanova</u>, M. Lerner*, V. Chernenko*</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i></p>
14	<p>SHCE-5-2-00342 Pulse Plasmachemical Synthesis of Nanodispersed Oxides SiO₂ and TiO₂</p> <p><u>D.V. Ponomarev</u>, G.E. Remnev, A.I. Pushkarev, R.V. Sazonov</p> <p><i>High Voltage Research Institute of Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>SHCE-5-2-01014 Concentration Profiles of Implanted Aluminum Ions in Depends of Titanium Grain Size</p> <p><u>I. Kurzina</u>, Yu.P. Sharkeev*, I.A. Bozhko, T.V. Vakhnii**, G.A. Vershinin**</p> <p><i>Tomsk State University of Architecture and Building, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**Omsk F.M. Dostoevsky State University, Omsk, Russia</i></p>
16	<p>SHCE-5-2-01062 Impact of High-Energy Pulsed Electron Beams on Organic Materials in the Condensed State: Influence of the Structure of Initial Substance on Variety of End-Products</p> <p><u>I. Filatov</u></p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
17	<p>SHCE-5-1-01302 Pulsed Electric Discharge in a Layer of Metallic Pieces and Its Technological Applications</p> <p><u>Ja. Kornev</u>, A.I. Galanov, N.A. Yavorosky, F.E. Saprykin, G.E. Osokin, V.A. Mit'kina</p> <p><i>Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18	<p>SHCE-5-1-00911 Development of a Pulsed Electromagnet with Lower Power for Industrial Applications</p> <p><u>D.Hemmert</u>, J. Mankowski*</p> <p><i>HEM Technologies, Lubbock, USA</i> <i>*Center for Pulsed Power & Power Electronics, Texas Tech University, Lubbock, USA</i></p>
19	<p>SHCE-5-0-00902 Use of High-current Nanosecond Relativistic Electron Beam as a Shock-Wave Generator for Investigation of High Strain Rate and Spall Fracture of Hadfield Steel</p> <p><u>S.F. Gnusov</u>, V.P. Rotshtein*, S.D. Polevin*, S.A. Kitsanov*, A.E. Mayer**, A.P. Yalovets***</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

	<p>**Chelyabinsk State University, Chelyabinsk, Russia ***South-Ural State University, Chelyabinsk, Russia</p>
20	<p>SHCE-5-2-01602 Generation of Electron Beam for Ionization of Hypersonic Air Flow <u>V. Devyatkov, N.N. Koval, V.P. Fomichev*, A.B. Schevchenko*</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>S.A. Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia</i></p>
21	<p>SHCE-5-2-01502 Changes of Structure, Phase Composition and Mechanical Properties of Surface Layers of Titanium, Chromium and Molybdenum Nitrides on Hard Alloy after High Power Pulse Ion Beams Influence <u>A. Kuleshov, V.V. Uglov, G.E. Remnev*, M.S. Saltymakov*</u> <i>Belarusian State University, Minsk, Belarus</i> <i>*Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
22	<p>SHCE-5-2-01078 Effect of Streamers Dynamics on Ultraviolet and X-Ray Radiation of Long Spark Discharge in Air <u>A. Oginov, E.V. Akkuratova, K.V. Shpakov, S.A. Chaikovsky*</u> <i>P.N. Lebedev Physical Institute RAS, Moscow, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
23	<p>SHCE-5-1-01138 Research of Interaction Features of Nanosecond Laser Radiation Pulse with Hardened Material Surface <u>D. Lubenko, N.G. Ivanov, V.F. Losev, N.N. Koval, I.V. Lopatin</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
24	<p>SHCE-5-1-01214 Multigas Efficient Discharge Pulse-Repetition Rate Laser <u>V. Dudarev, Yu.N. Panchenko, V.F. Losev, I.N. Konovalov, N.G. Ivanov, A.V. Pavlinsky, A.V. Puchikin</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
25	<p>SHCE-5-1-00182 Generator with Inductive Energy Storage for Laser Application <u>A.N. Panchenko, A.E. Tel'minov, V.F. Tarasenko, D.E. Genin</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
26	<p>SHCE-5-1-01222 Research of Efficiency Increasing Possibility of a Discharge KrF Laser <u>Yu. Panchenko, V.V. Dudarev, V.F. Losev, S.A. Yampolskaya, A.G. Yastremskii</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
27	<p>SHCE-5-1-01190 Single-Pulse CO₂-Laser with Frequency Doubler Based on GaSe and GaSe_{0.7}S_{0.3} Single Crystals <u>A.G. Sitnikov, A.N. Panchenko, A.E. Telminov, D.E. Genin, S.Yu. Sarkisov*, S.A. Bereznyaya*, Z.V. Korotchenko*</u>,</p>

	<p>A.V. Kazakov* <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Siberian Physical-Technical Institute of Tomsk State University, Tomsk, Russia</i></p>
28	<p>SHCE-5-1-00942 Simulation of Processes in the Discharge-Pumped KrF Laser <u>A.G. Yastremsky, Yu.I. Bychkov, S.A. Yampolskaya</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
29	<p>SHCE-5-1-01226 Research of Femtosecond Laser Pulse Amplification in Photochemically Driven XeF (C-A) Active Medium <u>A. Puchikin, N.G. Ivanov, V.F. Losev, G.A. Mesyats*, L.D. Mikheev, N.A. Ratakhin, A.G. Yastremsky</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*P.N.Lebedev Physical Institute, Moscow, Russia</i></p>
30	<p>SHCE-5-2-01198 UV Lasing in Nitrogen Pumped by a Runaway-Electron-Preionised Diffuse Discharge <u>A. Burachenko, E.Kh. Baksht, V.F. Tarasenko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
31	<p>SHCE-5-2-01210 Properties of the Nanosecond Discharge Formed in Nitrogen at High Overvoltages in Interelectrode Gap <u>D. Sorokin, M.I. Lomaev, V.F. Tarasenko, Yu.V. Shutko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
32	<p>SHCE-5-2-01146 Radiation Characteristics of Argon, Krypton and Xenon Excited with Nanosecond Diffuse Discharge at Preionization by Runaway Electrons <u>M.I. Lomaev, D.V. Rybka, V.F. Tarasenko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
33	<p>SHCE-5-2-00184 X-Ray Emission from a Spark Gap with Laser Triggering <u>A.N. Panchenko, V.F. Tarasenko, A.E. Tel'minov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
34	<p>SHCE-2-2-01606 Study of Transitions Optic on the Solid Surface in the Hydrogen Atoms <u>Yu.I. Tyurin, V.D. Khoruzhii, Yu.A. Sivov</u> <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
35	<p>SHCE-5-1-00930 Some Objective Laws of Biological Effects of the Repetitive Pulsed Microwave and X-Ray <u>L.P. Zharkova, I.R. Knyazeva***, M.A. Bolshakov**, O.P. Kutenkov, V.V. Rostov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Tomsk State University, Tomsk, Russia</i> <i>** Siberian State Medical University, Tomsk, Russia</i></p>

September 21, Tuesday

9:00 – 12:40, 15:00 – 18:20

Oral Session 2. Pinches, plasma focus and capillary discharge

9:00 - 9:30 Invited	<p>SHCE-2-1-00230 Scattering of Laser Radiation on Wires and Fibres at Wire Array Implosion on Angara 5-1</p> <p><u>E.V. Grabovskij</u>, V.V. Aleksandrov, A.N. Gribov, A.N. Gritsuk, J.N. Lauhin, S. Medovshchikov, K.N. Mitrofanov, G.M. Olejnik, I.N. Frolov</p> <p><i>SRC RF Troitsk Institute for Innovation and Fusion Research, Troitsk, Russia</i></p>
9:30 - 9:50	<p>SHCE-2-1-00743 3D Numerical Modelling of Plasma Ablation in Multiwire Arrays</p> <p><u>S.V. Dyachenko</u>, V.A. Gasilov, O.G. Olkhovskaya, A.S. Boldarev, E.L. Kartasheva, P.V. Sasorov*, S.I. Tkachenko**, J. Grunenwald***, Th. Maillard***</p> <p><i>M.V. Keldysh Institute of Applied Mathematics RAS, Moscow, Russia</i> <i>*SSC RF Institute for Theoretical and Experimental Physics, Moscow, Russia</i> <i>**Moscow Institute of Physics and Technology, Dolgoprudny, Russia</i> <i>***Centre d'Etudes de Gramat, Gramat, France</i></p>
9:50 - 10:10	<p>SHCE-2-1-90047 Investigation of the Transport Properties of Metals in the Biphase Region</p> <p><u>V.I. Oreshkin</u>, A.G. Russkikh, S.A. Chaikovsky</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
10:10 - 10:30	<p>SHCE-2-1-90007 Laboratory Astrophysics Experiments on High Pulsed Power Devices at CEA Gramat</p> <p><u>A. Loyer</u>, H. Calamy, F. Zucchini, S. Bland*, N. Niasse*, S. Lebedev*, A. Ciardi**, C. Stehle**</p> <p><i>CEA GRAMAT, Gramat, France</i> <i>*Imperial College, London, United Kingdom</i> <i>**LERMA, Observatoire de Paris, Meudon, France</i></p>
10:40 – 11:00 Coffee Break	
11:00 - 11:20	<p>SHCE-2-1-01514 Status of a MJ Plasma-Focus Experiment</p> <p><u>M. Scholz</u>, L. Karpinski, M. Paduch, T. Pisarczyk, M. Sadowski*, P. Kubes**</p> <p><i>Institute of Plasma Physics and Laser Microfusion, Warsaw, Poland</i> <i>*The Andrzej Soltan Institute for Nuclear Studies, Otwock-Swierk, Poland</i> <i>**Czech Technical University, Prague, Czech Republic</i></p>

11:20 - 11:40	<p>SHCE-2-2-00523 Planar Wire Array Experiments on the GIT-12 Generator with a Load Current Multiplier</p> <p><u>A.V. Shishlov</u>, V.A. Kokshenev, B.M. Koval'chuk, N.E. Kurmaev, F.I. Fursov, N.A. Ratakhin, A.Yu. Labetsky, A.G. Rousskikh</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
11:40 - 12:00	<p>SHCE-2-1-00590 Investigation of the Periphery of the Hollow Gas Shell Implosion</p> <p><u>A.Yu. Labetsky</u>, N.A. Labetskaya, A.V. Shishlov, S.A. Chaikovsky*</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> *P.N. Lebedev Physical Institute RAS, Moscow, Russia</p>
12:00 - 12:20	<p>SHCE-2-2-90048 Methods of Time-resolved X-ray Spectroscopy Registration in Pulsed-power Plasmas Experiments</p> <p><u>S.S. Anan'ev</u>, S. Danko, Yu. Kalinin</p> <p><i>RRC Kurchatov Institute, Moscow, Russia</i></p>
12:20 - 12:40	<p>SHCE-2-1-90046 Study of Magnetoinduced Iodine Sorption at Dielectric Surface</p> <p><u>S.I. Krivosheev</u>, V.V. Platonov*, V.D. Selemir*, O.M. Tatsenko*, G.A. Shneerson, A.V. Filippov*</p> <p><i>St.-Petersburg State Polytechnic University, St.-Petersburg, Russia</i> *RFNC All-Russian Research Institute of Experimental Physics, Sarov, Russia</p>
12:40 – 14:00 Lunch	
14:00 – 15:00 Poster Session	
15:00 - 15:30 Invited	<p>SHCE-2-1-00218 Underwater Electrical Wire Explosion</p> <p><u>Ya.E. Krasik</u>, A. Fedotov-Gefen, S. Efimov, D. Sheftman, D. Shafer, A. Sayapin, D. Veksler, V.Tz. Gurovich, G. Bazalitski, A. Grinenko*, V. Oreshkin**</p> <p><i>Physics Department, Technion, Haifa, Israel</i> *University of Warwick, Coventry, United Kingdom **Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
15:30 - 15:50	<p>SHCE-2-1-00222 Study of Distribution of Plasmas in the Discharge Channel upon Aluminum Wire Explosion in Vacuum</p> <p><u>S.I. Tkachenko</u>, V.M. Romanova*, A.R. Mingaleev*, A.E. Ter-Oganesyan*, T.A. Khattatov, S.A. Pikuz*, V.G. Novikov**, O.G. Olhovskaya**, A.Yu. Krukovskij**, V.A. Gasilov**</p> <p><i>Moscow Institute of Physics and Technology, Dolgoprudny, Russia</i> *P.N. Lebedev Physical Institute RAS, Moscow, Russia **Institute for Mathematical Modeling RAS, Moscow, Russia</p>
15:50 - 16:05	<p>SHCE-2-1-00894 Small-Sized Vacuum-Arc-Discharge X-Ray Radiograph</p> <p><u>A.G. Rousskikh</u>, A.V. Shishlov, A.S. Zhigalin, V.I. Oreshkin, S.A. Chaikovsky, R.B. Baksht*</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> *Tel Aviv University, Tel Aviv, Israel</p>

16:05 - 16:20	<p>SHCE-2-1-00898 Experimental Research of Fine Foils Explosion <u>A.S. Zhigalin, A.G. Rousskikh, V.I. Oreshkin, S.A. Chaikovsky</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
16:20 – 16:40 Coffee Break	
16:40 - 17:00	<p>SHCE-2-1-01282 Dense Metal Plasma Instabilities in Fast-Rising Megagauss Magnetic Fields <u>S.A. Chaikovsky, V.I. Oreshkin, N.A. Labetskaya, I.M. Datsko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
17:00 - 17:20	<p>SHCE-2-1-00790 Capillary Discharge for Laser Beam Guiding <u>L. Aranchuk, C. Rechatin, O. Lundh, J. Faure, J. Larour, V. Malka</u> <i>Ecole Polytechnique, Palaiseau, France</i></p>
17:20 - 17:40	<p>SHCE-2-1-00618 Microwire Destruction and Plasma Channel Formation Mechanisms during the High Voltage Source with the Subnanosecond Pulse Front Discharge <u>N.B. Volkov, S.V. Barakhvostov, M.B. Bochkarev, K.A. Nagayev, O.R. Timoshenkova, E.A. Chingina</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
17:40 - 18:00	<p>SHCE-2-1-00818 Gas Density Influence on Characteristics of High-Current Discharge <u>M.E. Pinchuk, A.A. Bogomaz, A.V. Budin, S.Yu. Losev, A.A. Pozubenkov, Ph.G. Rutberg</u> <i>Institute for Electrophysics and Electric Power RAS, St. Petersburg, Russia</i></p>
18:00 - 18:20	<p>SHCE-2-1-00367 Mechanism of Radiating Region Formation in the Source of EUV Radiation Based on a Pseudospark Discharge <u>N.V. Landl, Yu.D. Korolev, O.B. Frants, V.G. Geyman, R.V. Ivashov, I.A. Shemyakin, A.V. Bolotov, A.A. Enenko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

September 21, Tuesday

14:00 – 18:00

Poster Session 2. Pulsed power technology

1	<p>SHCE-3-0-00338 High Voltage Subnanosecond Generator of Monocycle Pulses Based on Compression Scheme</p> <p><u>M.R. Ulmaskulov</u>, V.G. Shpak, S.A. Shunailov, K.A. Sharypov, M.I. Yalandin</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
2	<p>SHCE-3-0-00710 Generation of Bipolar High-Voltage Pulses of Nanosecond Duration in the Electric Circuits with High-Pressure Spark Gaps</p> <p><u>A. Efremov</u>, Yu. D. Korolev, B.M. Koval'chuk</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
3	<p>SHCE-3-0-01263 Stabilization of Self-Breakdown Mode in a High Pulse Repetition Rate Spark Gap with a Switching Energy up to 450 J and Switching Voltage up to 300 kV</p> <p><u>Yu.D. Korolev</u>, B.M. Koval'chuk, E.V. Kumpyak</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
4	<p>SHCE-3-2-01262 Switching Stability of High-Pressure Spark Gap in Microsecond and Nanosecond Ranges of Gap Voltage Rise Time</p> <p><u>Yu.D. Korolev</u>, N.M. Bykov, D.N. Bykov, A.V. Bolotov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
5	<p>SHCE-3-2-00198 High Voltage Pulser Based on a Tesla Transformer with a Pulse-Forming Line Using an Open Ferrite Magnetic Core</p> <p><u>A. Sinyakov</u>, A.I. Klimov, O.B. Koval'chuk, V.V. Rostov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
6	<p>SHCE-3-2-00298 Simulation of the High-Voltage Generator of Microsecond Pulses</p> <p><u>A. Mashchenko</u></p> <p><i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
7	<p>SHCE-3-2-00299 Optimization of Parameters of a Linear Induction Accelerator with Magnetic Commutation</p> <p><u>A. Mashchenko</u></p> <p><i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

8	<p>SHCE-3-2-00330 Automated Control System for Electron Beam Accelerator URT-0.5</p> <p><u>S. Scherbinin</u>, M.E. Balezin, V.A. Skotnikov, S.Yu. Sokovnin <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
9	<p>SHCE-3-2-00331 The X-Ray Generator Based on the Bridge Triphase High Voltage Power Supply</p> <p><u>S. Scherbinin</u>, P.N. Malykh <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
10	<p>SHCE-3-2-00410 Switching Structure Based on Threshold Switching Elements</p> <p><u>S. Kladukhin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
11	<p>SHCE-3-2-00427 Nanosecond Pulse Generator Based on Comber-Type Coaxial Line with Built-In Charging Transformer</p> <p><u>S. Khramtsov</u>, S.V. Kladukhin, V.V. Kladukhin, V.Y. Yalov, P.Y. Zagulov <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
12	<p>SHCE-3-2-00458 Design of a Control and Triggering System for an All Solid State Repetitive Marx Generator</p> <p><u>Tian Qing</u>, Chuanwei Wang, Hongtao Li, Shuping Feng, Weiping Xie <i>Institute of Fluid Physics CAEP, Mianyang, China</i></p>
13	<p>SHCE-3-2-00464 Pulsed Voltage Generator of the Nanosecond Duration with the Electro-Explosive Contact-Breaker of the Current</p> <p><u>G.G. Kanaev</u>, G.V. Melnikov, A.G. Zherlitsyn <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
14	<p>SHCE-3-2-00514 Investigation of MPOS-LCM cascade circuits on the GIT-12 generator</p> <p><u>V.A. Kokshenev</u>, B.M. Koval'chuk, N.E. Kurmaev, F.I. Fursov, A.V. Shishlov <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15	<p>SHCE-3-2-00682 Formation of Rep-Rated Electron Beam, X-Ray, Discharge Plasma and Laser Radiation with the Use of Multi-Purpose Laboratory Installation</p> <p><u>D. Kuznetsov</u>, Yu.S. Surkov, V.V. Uvarin, I.E. Filatov, Yu.N. Novoselov* <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
16	<p>SHCE-3-2-00694 Driver for High-Power IGBT Module</p> <p><u>A. Ponomarev</u>, A.I. Gusev <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>

17	<p>SHCE-3-2-00770 Multi-Channel Gas-Filled Discharger Launched by Electric Field Distortion <u>I. Yegorov, M.I. Kaikanov, G.E. Remnev, A.V. Stepanov</u> <i>Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18	<p>SHCE-3-2-00842 High-Power Current Pulse Generator for Inductive-Resistive Load Operation <u>E.N. Abdullin, Yu.P. Bazhenov, V.N. Kiselev, A.V. Morozov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
19	<p>SHCE-3-2-00874 Numerical Simulation of Electric Field Distribution in Multichannel Multigap Gas Switches <u>A. Kharlov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
20	<p>SHCE-3-2-01150 High-Stabilized High-Current Pulse Generator for the Ion Source Supply <u>A. Petrov, P.S. Ananin, A.A. Sinebryukhov, Yu.P. Usov</u> <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
21	<p>SHCE-3-2-01322 Plasma Investigation in a High-Power Impulse Magnetron Discharge from a Compound Target Ti-Si <u>A. Odivanova, N.S. Sochugov, V.G. Podkoviroy, K.V. Oskomov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
22	<p>SHCE-3-2-01407 High Voltage Pulsed Power Supplies with Modular Design <u>N.S. Sochugov, V.G. Podkoviroy*, R.E. Spirin, V.O. Oskirko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Applied Electronics Ltd, Tomsk, Russia</i></p>
23	<p>SHCE-3-2-01414 Arkadyev-Marx Generator with Output Voltage Doubling <u>V. Tatur, N.G. Mutnitsky</u> <i>Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia</i></p>
24	<p>SHCE-3-2-01415 Voltage Amplitude Stabilization Using a Storage Capacitor <u>V. Tatur</u> <i>Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia</i></p>
25	<p>SHCE-3-2-01582 A Low-Jitter High-Voltage Trigger Generator <u>S.M. Hassan, J. Chatzakis, C. Petridis, E.L. Clark, G. Andrulakis, E. Tzianaki, P. Lee*, M. Tatarakis</u> <i>CPPL-Technological Educational Institute of Crete, Chania-Crete, Greece</i> <i>*NIE - Nanyang Technological University, Singapore</i></p>

26	<p>SHCE-3-2-90013 Reprate Ion Beam Accelerator with Intermediate Capacitive Storage</p> <p><u>V. Bystritskij</u>, <u>I. Isakov</u>, <u>A.V. Petrov*</u>, <u>P.S. Anan'in*</u>, <u>V.B. Karpov*</u>, <u>A.A. Sinebryukhov*</u>, <u>K. Waters**</u>, <u>M. Anderson**</u>, <u>P. Feng</u>, <u>J. Yampolsky**</u></p> <p>University of California, Irvine, Irvine, USA *Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia **TriAlpha Energy, Inc., Foothill Ranch, CA, USA</p>
27	<p>SHCE-3-2-90014 Repetitively Pulsed High-Voltage Generator Based on the Linear Transformer and SFL with Discrete LC-Elements for Accelerators of Powerful Ion Beams</p> <p><u>P.S. Anan'in</u>, <u>V.M. Bystritskii</u>, <u>A.V. Petrov</u>, <u>V.B. Karpov</u>, <u>Yu.P. Surikov</u>, <u>A.A. Sinebryukhov</u>, <u>V.M. Matvienko*</u>, <u>Yu.P. Usov</u>, <u>J. Yampolskii**</u></p> <p>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia *University of California, Irvine, USA **Tri Star Alpha Energy, Inc., Foothill Ranch, USA</p>
28	<p>SHCE-3-2-01658 High-Voltage Generator Multimodule Synchronization of EMIR-2 Accelerator</p> <p><u>R.V. Protas</u>, <u>V.Yu. Kononenko</u>, <u>B.N. Lavrentyev</u>, <u>D.E. Pavlovskih</u>, <u>R.R. Hafizov</u></p> <p>RFNC Zababakhin All-Russia Research Institute of Technical Physics, Snezhinsk, Russia</p>
29	<p>SHCE-3-2-90015 Repetitively-Pulsed High-Voltage Generator Based on Linear Transformer and SFL with Discrete LC-Elements for Powerful Ion Beam Accelerator</p> <p><u>P.S. Anan'in</u>, <u>V. Bystritskii*</u>, <u>A.V. Petrov</u>, <u>V.B. Karpov</u>, <u>Yu.P. Surikov</u>, <u>A.A. Sinebryukhov</u>, <u>V.M. Matvienko*</u>, <u>Yu.P. Usov</u>, <u>J. Yampolskii**</u></p> <p>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia *University of California, Irvine, Irvine, USA **TriAlpha Energy, Inc., Foothill Ranch, CA, USA</p>
30	<p>SHCE-3-2-90016 Complex of Pulsed Supply Sources of the Diode System for Generation of Powerful Ion Beams in a Frequency Mode</p> <p><u>P.S. Anan'in</u>, <u>V. Bystritskii*</u>, <u>A.V. Petrov</u>, <u>S.V. Dektyarev</u>, <u>V.M. Matvienko*</u>, <u>A.A. Sinebryukhov</u>, <u>V.B. Karpov</u>, <u>Yu.P. Surikov</u></p> <p>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia *University of California, Irvine, Irvine, USA</p>

31	<p>SHCE-3-2-90017 Formation of RF Plasma Transport Channel in External B-Field</p> <p><u>Ping Feng</u>, V. Bystritskii*, I. Isakov**, V. Matvienko***, J.K. Walters*</p> <p><i>University of California, Irvine, USA</i> <i>*Tri Alpha Energy, Inc., California, USA</i> <i>**Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>***Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
32	<p>SHCE-3-2-90031 High-Voltage Pulsed Electron IGUR-3.5 Accelerator</p> <p><u>V.Yu. Kononenko</u>, A.I. Kormilitsyn, E.N. Koloskov</p> <p><i>RFNC Zababakhin All-Russia Research Institute of Technical Physics, Snezhinsk, Russia</i></p>

September 22, Wednesday

9:00 – 12:40, 15:00 – 18:20

Oral Session 3. Intense electron and ion beams

9:00 - 9:20	<p>SHCE-1-1-00219 Plasma Parameters in a Diode with Ferroelectric Plasma Source Assisted Hollow Anode Discharge <u>Ya. Krasik, V. Vekselman, J. Gleizer, S. Yatom, D. Yarmolich, V. Tz. Gurovich, G. Bazalitski, V. Bernshtam*</u> <i>Physics Department, Technion, Haifa, Israel</i> <i>*Physics Department, Weizmann Institute of Science, Rehovot, Israel</i></p>
9:20 - 9:40	<p>SHCE-1-1-01142 Electron Accelerator for Pumping of the Xe₂ Lamp <u>A. Kharlov, B.M. Koval'chuk, S.N. Volkov, A.A. Zherlitsyn, A.N. Bastrikov, V.B. Zorin, V.N. Kiselev, G.V. Smorudov, N.V. Tsoy</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
9:40 – 10:00	<p>SHCE-1-1-90049 ITP Development of Ion Beams for Innovative Technologies <u>T.V. Kulevoy</u> <i>SSC RF Institute for Theoretical and Experimental Physics, Moscow, Russia</i></p>
10:00 - 10:20	<p>SHCE-1-1-00906 Diagnostics of Cathode Sheath Expansion during Interruption of the High-Current AC Vacuum Arc <u>A. Schneider, S. Popov, A. Batrakov, G.Sandolache*, S. Rowe*</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Schneider Electric Centre de Recherche, Grenoble, France</i></p>
10:20 - 10:40	<p>SHCE-1-1-00502 Modeling of Motion of the Multi Component Plasma Flow through a Plasma Optics Transport System <u>V. Paperny, V.I. Krasov</u> <i>Irkutsk State University, Irkutsk, Russia</i></p>
10:40 – 11:00 Coffee Break	
11:00 - 11:20	<p>SHCE-1-1-01258 An Influence of Grid Fields on Beam Characteristics in a Diode with Grid Stabilization of Plasma Emitting Surface <u>V.T. Astrelin, A.V. Burdakov, S.V. Grigoriev*, I.V. Kandaurov**, N.N. Koval*, A.D. Teresov*</u> <i>G.I. Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>**Novosibirsk State University, Novosibirsk, Russia</i></p>

11:20 - 11:40	<p>SHCE-1-1-01358 Generation of Submillisecond Electron Beam in the Diode with the Grid Plasma Cathode and the Plasma Anode Generated by the Asymmetrical Reflective Discharge</p> <p><u>S.V. Grigoryev</u>, <u>V.T. Astrelin*</u>, <u>V.N. Devjatkov</u>, <u>I.V. Kandaurov**</u>, <u>N.N. Koval</u>, <u>A.V. Kozyrev</u>, <u>P.V. Moskvina</u>, <u>A.D. Teresov</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*G.I. Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i> <i>**Novosibirsk State University, Novosibirsk, Russia</i></p>
11:40 - 12:00	<p>SHCE-1-1-00422 Fore-Vacuum Pulsed Plasma Electron Source</p> <p><u>A.V. Medovnik</u>, <u>E.M. Oks</u>, <u>Yu.G. Yushkov</u></p> <p><i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
12:00 - 12:20	<p>SHCE-1-1-00666 Formation and Focusing of Electron Beams in Electron-Optical System with the Plasma Emitter in a Magnetic Field</p> <p><u>S.Y. Kornilov</u>, <u>N.G. Remppe</u></p> <p><i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
12:20 - 12:40	<p>SHCE-1-2-01478 Methods of Emittance Evaluation</p> <p><u>E. Koleva</u>, <u>K. Vutova</u>, <u>G. Mladenov</u>, <u>D. Todorov</u></p> <p><i>Academician Emil Djakov Institute of Electronics, Bulgarian Academy Of Sciences, Sofia, Bulgaria</i></p>
12:40 – 14:00 Lunch	
14:00 – 15:00 Poster Session	
15:00 - 15:20	<p>SHCE-1-2-00058 Mass Analysis of the Plasma Generated by Low-Energy Electron Beam in Low Pressure N₂-Ar Mixtures</p> <p><u>O.A. Bureyev</u>, <u>N.V. Gavrilov</u></p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
15:20 - 15:40	<p>SHCE-1-2-01206 Modes of Runaway Electron Emission in Nitrogen and Helium under 25 kV Gap Voltage</p> <p><u>E.H. Baksht</u>, <u>A.G. Burachenko</u>, <u>V.F. Tarasenko</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
15:40 - 16:00	<p>SHCE-1-1-01238 Spectrum of Fast Electrons in Nanosecond Breakdown of Air at Atmospheric Pressure</p> <p><u>A.V. Kozyrev</u>, <u>E.H. Baksht</u>, <u>A.G. Burachenko</u>, <u>V.Yu. Kozhevnikov</u>, <u>I.D. Kostyrya</u>, <u>V.F. Tarasenko</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
16:00 - 16:20	<p>SHCE-1-2-90037 Influence of Emissive Ability of Cathode on Runaway Electrons Beam Formation in Gas-field Diode with Heterogeneous Electric Field</p> <p><u>V.A. Shklyayev</u>, <u>V.V. Ryzhov</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

16:20 – 16:40 Coffee Break	
16:40 - 17:00	<p>SHCE-1-1-00450 Investigation of an Ion Current Density Enhancement Effect in the Diode with Magnetic Self-Insulation</p> <p><u>A.I. Pushkarev</u>, Y.I. Isakova, D.V. Vahrushev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
17:00 - 17:20	<p>SHCE-1-1-01026 Theoretical and Experimental Investigation of Virtual Cathode Behavior under Breakup of "Compressed" State of Electron Beam</p> <p><u>R.V. Tsygankov</u>, S.Ya. Belomyttsev, A.A. Grishkov, S.A. Kitsanov, I.K. Kurkan, V.V. Ryzhov, S.D. Polevin</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
17:20 - 17:40	<p>SHCE-1-1-00078 Investigation of the Plasma-Filled Rod-Pinch Diode on the MIG Generator</p> <p><u>S.A. Sorokin</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

September 22, Wednesday

14:00 – 18:00

Poster Session 3. High power microwaves

1	<p>SHCE-4-0-01558 3-D PIC Simulation of Effect of Energy-Dependent Mesh Transparency and Determine Correspondence between Foil and Mesh Anode in a Virtual Cathode Oscillator Device</p> <p><u>Khadem Kalan Hassan</u> <i>Electronic & Communication Research Center, Tehran, Iran</i></p>
2	<p>SHCE-4-1-00206 Characterization of Active Vector Receiving Antenna</p> <p><u>E.V. Balzovsky, Yu.I. Buyanov, V.I. Koshelev</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
3	<p>SHCE-4-1-00319 Radiators of Powerful UWB Pulses Developed by AIHT of RAS</p> <p><u>V.M. Fedorov, V.E. Ostashev, E.F. Lebedev, A.V. Ul'yanov</u> <i>Institute for High Energy Densities of Associated Institute for High Temperatures RAS, Moscow, Russia</i></p>
4	<p>SHCE-4-2-00038 A Relativistic Magnetron with Cavities Coupled via Waveguide Slit Array</p> <p><u>I. Vintizenko, S.S. Novikov*</u> <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Tomsk State University, Tomsk, Russia</i></p>
5	<p>SHCE-4-2-00094 Comparative Characteristics of Relativistic Millimeter-Band BWOs with a Pulsed and Highly-Coercivity Magnetic System: Simulations and Experiment</p> <p><u>K. Sharypov, A.E. Ermakov*, S.V. Zhakov*, V.G. Shpak, S.A. Shunailov, M.I. Yalandin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of Metal Physics UD RAS, Ekaterinburg, Russia</i></p>
6	<p>SHCE-4-2-00095 Some Peculiarities of Peak Power Measurements of a Short HPM Pulses</p> <p><u>K. Sharypov, M.R. Ulmaskulov, V.G. Shpak, S.A. Shunailov, M.I. Yalandin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
7	<p>SHCE-4-2-00114 Microwave Pulse Series Compression with Second Stage Cavity Being Transmission – Type One</p> <p><u>S. Artemenko, V. Avgustinovich, S. Novikov, P. Chumerin, Y. Yushkov</u> <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>

8	<p>SHCE-4-2-00118 Series Compression of Microwave Pulses by Using Two Coupled Modes of Overmode Cavity <u>V. Igumnov, V. Avgustinovich, S. Artemenko, S. Novikov, Y. Yushkov</u> <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
9	<p>SHCE-4-2-00158 X-Band Nanosecond Microwave Gunn Generator <u>A.I. Klimov, V.P. Gubanov, O.B. Koval'chuk, V.Yu. Konev, V.V. Rostov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
10	<p>SHCE-4-2-00162 Experimental Setup for Investigation of Ka-Band Superradiative Pulses Compression in the Mode of Amplification by Electron Beam at Cherenkov-Type Interaction <u>S.A. Shunailov, A.G. Reutova, M.R. Ulmaskulov, K.A. Sharypov, V.G. Shpak, M.I. Yalandin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
11	<p>SHCE-4-2-00195 Numerical Investigation of Resonance Electromagnetic Oscillations in Slow-Wave Structures of MWCG with Diffraction Reflector <u>M.P. Deichuly, V.I. Koshelev</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
12	<p>SHCE-4-2-00266 Source of High-Power Ultrawideband Picosecond Pulses with 16-Element Array <u>V.V. Plisko, Yu.A. Andreev, A.M. Efremov, V.I. Koshelev, B.M. Koval'chuk, K.N. Sukhushin</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
13	<p>SHCE-4-2-00318 Diagram of Directivities of Flat Aperture Antenna as a Radiator of UWB Pulses <u>V. Fedorov, V.Ye. Ostashev, A.V. Ulyanov</u> <i>Institute for High Energy Densities of Associated Institute for High Temperatures RAS, Moscow, Russia</i></p>
14	<p>SHCE-4-2-00334 Experimental Study of Harmonic Response of Personal Computer to External Microwave Radiation <u>P. Chumerin, Yu.G. Yushkov</u> <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
15	<p>SHCE-4-2-00426 Relativistic BWO with High-Current Multijet Electron Beam <u>V.V. Kladukhin, S.V. Kladukhin, S.P. Khramtsov, V.Y. Yalov, N.F. Kovalev*</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i></p>

16	<p>SHCE-4-2-00434 The Investigation of Spectrum of Electromagnetic Radiation in Coaxial Triode with Virtual Cathode with Divergent Beam</p> <p><u>R. Rahmatullin</u>, V.P. Grigoriev</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
17	<p>SHCE-4-2-00462 The Coaxial Vircator with an Asymmetric Electron Beam</p> <p><u>A.L. Marchenko</u>, T.V. Koval, N.M. Tuan</p> <p><i>Institute Cybernetic Centre of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18	<p>SHCE-4-2-00463 The Research of the Coaxial Vircator with a Symmetric Converging Electron Beam</p> <p><u>N.M. Tuan</u>, T.V. Koval, G.V. Melnikov*, A.G. Zherlitsyn*</p> <p><i>Institute Cybernetic Centre of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p> <p><i>*Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
19	<p>SHCE-4-2-00610 3D Computer Simulation of the Non-Stationary Processes in Multiwave Cherenkov Generator</p> <p><u>V. Kornienko</u>, V.A. Cherepenin</p> <p><i>V.A. Kotel'nikov Institute of Radio Engineering and Electronics RAS, Moscow, Russia</i></p>
20	<p>SHCE-4-2-01374 Experimental Investigation of the Relativistic Cherenkov Microwave Oscillator without a Guiding Magnetic Field at the Electron Energy 0.5 MeV</p> <p><u>E. Totmeninov</u>, A.I. Klimov, V.V. Rostov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
21	<p>SHCE-4-2-01446 Experimental Study and Numerical Modeling of Plasma Relativistic Microwave Amplifier</p> <p><u>I. Ivanov</u>, I.L. Bogdankevich, P.S. Strelkov</p> <p><i>A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</i></p>
22	<p>SHCE-4-2-01447 Hot-Carrier-Effect-Based Coaxial Broadband Detector of High-Power Nanosecond Microwave Pulses</p> <p><u>I. Ivanov</u>, P.S. Strelkov, D.V. Shumeiko</p> <p><i>A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</i></p>
23	<p>SHCE-4-2-01494 Chaotic Oscillations in the Auto-Oscillator System with Resonant Couplings</p> <p><u>S. Novikov</u>, A.A. Usjukevitch</p> <p><i>Tomsk State University, Tomsk, Russia</i></p>
24	<p>SHCE-4-2-01495 Instabilities of Coherent Processes in the Self-Oscillating System with Wave Coupling Channels</p> <p><u>S. Novikov</u>, A.A. Usjukevitch</p> <p><i>Tomsk State University, Tomsk, Russia</i></p>

25	<p>SHCE-4-2-01614 Frequency of High Power RF-Generation in Non-Linear Transmission Lines with Saturated Ferrite</p> <p><u>I. Romanchenko</u>, V.V. Rostov</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
----	---

September 23, Thursday

9:00 – 12:40, 15:00 – 18:20

Oral Session 4. High power microwaves

9:00 - 9:30 Invited	SHCE-4-1-90025 Pulse-Periodic Nanosecond HPM Sources <u>V.V. Rostov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
9:30 - 10:00 Invited	SHCE-4-0-00066 70% Efficient Relativistic Magnetron with Axial Extraction Through a Horn Antenna <u>E. Schamiloglu, M.I. Fuks</u> <i>The University of New Mexico, Albuquerque, USA</i>
10:00 - 10:20	SHCE-4-1-00220 Improvement in S-Band Relativistic Magnetron <u>Ya.E. Krasik, A. Sayapin, Y. Hadas, T. Kweller, I.I. Vintzenko*</u> <i>Physics Department, Technion, Haifa, Israel</i> <i>*Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i>
10:20 - 10:40	SHCE-4-1-00314 Experimental Study of Amplification and Nonlinear Compression of Superradiance Microwave Pulses by Quasi-Stationary Electron Beams <u>I.V. Zotova, N.S. Ginzburg, A.S. Sergeev, E.R. Kocharovskaya, M.I. Yalandin*, A.G. Reutova*, M.R. Ulmaskulov*, A.K. Sharypov*, S.A. Shunailov*</u> <i>Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i> <i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>
10:40 – 11:00 Coffee Break	
11:00 - 11:30 Invited	SHCE-4-1-00594 Masers and Lasers with Two-Dimensional Distributed Feedback <u>N.S. Ginzburg</u> <i>Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i>
11:30 - 11:50	SHCE-4-1-00706 A Cascade Backward-Wave Amplifier Driven by Relativistic Electron Beam <u>A.P. Konyushkov, E.B. Abubakirov, A.N. Denisenko, E.I. Soluyanov, V.V. Yastrebov</u> <i>Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i>
11:50 - 12:10	SHCE-4-1-00918 Experimental Demonstration of Coherent Power Summation for Relativistic X-band HPM Oscillators <u>A.A. Elchaninov, A.I. Klimov, O.B. Koval'chuk, G.A. Mesyats*, I.V. Pegel, I.V. Romanchenko, V.V. Rostov, K.A. Sharypov**, M.I. Yalandin**</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i> <i>**Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>

12:10 - 12:30	<p>SHCE-4-1-01510 Repetitively-Rated Plasma Relativistic Microwave Oscillator with Tunable Radiation Frequency in Every Pulse</p> <p><u>D.K. Ulyanov</u>, I.L. Bogdankevich, I.E. Ivanov, O.T. Loza, P.S.Strelkov, K.S.Bekhovskaya, D.V. Shumeiko</p> <p>A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</p>
12:30 - 12:50	<p>SHCE-4-1-00302 Investigation of Microwave Radiation in the Coaxial Reflective Triode</p> <p><u>V. Grigoriev</u>, T.V. Koval, R.R. Rahmatullin</p> <p>National Research Tomsk Polytechnic University, Tomsk, Russia</p>
12:50 – 14:00 Lunch	
14:00 – 15:00 Poster Session	
15:00 - 15:20	<p>SHCE-4-1-00194 Increasing Stability and Efficiency of High-Power Ultrawideband Radiation Sources</p> <p><u>V.I. Koshelev</u>, Yu.A. Andreev, A.M. Efremov, B.M. Koval'chuk, V.V. Plisko, K.N. Sukhushin, S. Liu*</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia *National Research Tomsk Polytechnic University, Tomsk, Russia</p>
15:20 - 15:40	<p>SHCE-4-1-01610 Comparison and Time Domain Analysis of Two Common Bipolar Forming Methods in UWB Radiators</p> <p><u>K. Hojatzadeh</u></p> <p>Electronic & Communication Research Center, Tehran, Iran</p>
15:40 - 16:00	<p>SHCE-4-1-00998 S-Band Coaxial Vircator with Electron Beam Premodulation Based on the Compact LTD</p> <p><u>R.V. Tsygankov</u>, S.A. Kitsanov, B.M. Koval'chuk, S.D. Polevin, M.Yu. Suhov, A.A. Zherlitsyn</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
16:00 - 16:20	<p>SHCE-4-1-01098 Testing of Acoustic Sensor of Powerful Nanosecond Pulses</p> <p><u>V.A. Vdovin</u>, V.G. Andreev*, K.V. Afanasev**, A.A. Elchaninov**, A.I. Klimov**</p> <p>V.A. Kotel'nikov Institute of Radio Engineering and Electronics RAS, Moscow, Russia *M.V. Lomonosov Moscow State University, Moscow, Russia **Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
16:20 – 16:40 Coffee Break	
16:40 - 17:00	<p>SHCE-4-1-00335 Perspectives of Means Based on Microwave Pulse Compression Technique for Functional Injury of Electronic Systems</p> <p><u>P. Chumerin</u>, Yu.G. Yushkov, V.N. Slinko, A.Yu. Hovaev, I.A. Sirbu*, A.A. Volkov*</p> <p>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</p>

	<p><i>*Federal Research Center of Radio Electronics, Voronezh, Russia</i></p>
17:00 - 17:20	<p>SHCE-4-1-00374 Theoretical Investigations of the Flat-Coaxial Reflex Triode with Virtual Cathode <u>G.V. Melnikov, V.P. Grigoriev*</u>, T.V. Koval, A.L. Marchenko <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
17:20 - 17:40	<p>SHCE-4-1-00050 Ultra-Wideband Picosecond High Power Radiators <u>V. Fedorov, E.F. Lebedev, V.E. Ostashev, A.V. Ul'yanov</u> <i>Institute for High Energy Densities of Associated Institute for High Temperatures RAS, Moscow, Russia</i></p>
17:40 - 18:00	<p>SHCE-4-1-00110 Resonant Microwave Compressor with More Than One Output Element for Energy Extraction <u>S.N. Novikov, V.A. Avgustinovich, S.N. Artemenko, V.L. Kaminsky, Yu.G. Yushkov</u> <i>Research Institute of Nuclear Physics of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
18:00 - 18:20	<p>SHCE-4-1-00262 Beam Steering in a UWB Linear Antenna Array <u>Yu.A. Andreev, V.I. Koshelev, V.V. Plisko</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>

September 23, Thursday

14:00 – 18:00

Poster Session 4. Intense electron and ion beams

1	<p>SHCE-1-0-01218 Time-Resolved Light Emission of a Cathode Spot Ignited in Vacuum and under Plasma</p> <p><u>A. Batrakov</u>, R. Methling*, S. Popov, D. Uhrlandt*, K.D. Weltmann*</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Leibniz Institute for Plasma Science and Technology (INP), Greifswald, Germany</i></p>
2	<p>SHCE-1-0-01219 Anode Spot Appearance Versus the Electrode Material at the High-Current Vacuum Arc</p> <p><u>A. Batrakov</u>, S. Popov, A. Schneider, S. Rowe*, G. Sandolache*, A. Markov, L. Zjulkova</p> <p><i>Institute of High-Current Electronics SB RAS, Tomsk, Russia,</i> <i>*Schneider Electric Centre de Recherche, Grenoble, France</i></p>
3	<p>SHCE-1-1-00130 Mathematical Modeling of Coaxial Magneto Plasma Accelerator</p> <p><u>O.V. Vasileva</u>, A.A. Sivkov, Yu.N. Isaev, V.A. Kolchanova, A.A. Evdokimov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
4	<p>SHCE-1-1-00402 Investigation of Charge and Current Neutralization of Low-Energy High-Current Electron Beam in External Magnetic Field at Injection in Plasma</p> <p><u>E.S. Vagin</u>, V.P. Grigoriev, V.V. Ofitserov</p> <p><i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
5	<p>SHCE-1-1-00667 Energy Parameters of Electron Beams in Source with Plasma Emitter and Distributed Gas Flow in a High-Voltage Accelerating Gap</p> <p><u>S.Y. Kornilov</u>, N.G. Rempe</p> <p><i>Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia</i></p>
6	<p>SHCE-1-1-00670 On the Generation Mechanism of Supershort Avalanche Electron Beams during a Nanosecond Discharge in High Pressure Gases</p> <p><u>V.F. Tarasenko</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
7	<p>SHCE-1-1-00674 Transportation of Powerful Pulsed Electron Beam in High Pressure Gases</p> <p><u>R.V. Sazonov</u>, N.Yu. Novoselov*, G.E. Kholodnaya, B.S. Kochkorov, D.V. Ponomarev, G.E. Remnev, A.P. Yalovets**, O.P. Razumeyko</p>

	<p><i>Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i> <i>**South-Ural State University, Chelyabinsk, Russia</i></p>
8	<p>SHCE-1-1-00722 Plasma Channel Formation by a Low-Energy Electron Beam in the Low-Pressure Argon <u>I.L. Zvigintsev</u>, <u>V.P. Grigoriev</u>, <u>A.V. Kozlovskih</u> <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
9	<p>SHCE-1-1-01318 Investigation of Characteristics of Sub-Millisecond Electron Source with the Plasma Cathode and the Opened Boundary of Anode Plasma <u>A.D. Teresov</u>, <u>V.T. Astrelin*</u>, <u>V.N. Devjatkov</u>, <u>N.V. Gavrilov**</u>, <u>S.V. Grigoriev</u>, <u>I.V. Kandaurov***</u>, <u>N.N. Koval</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*G.I. Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i> <i>**Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>***Novosibirsk State University, Novosibirsk, Russia</i></p>
10	<p>SHCE-1-1-01326 Research of Chemical Composition of Nanodispersed Silicon Dioxide Synthesized by Plasma Chemical Method Initiated by Pulsed Electron Beam <u>R.V. Sazonov</u>, <u>A.M. Hashhash</u>, <u>G.E. Kholodnaya</u>, <u>B.S. Kochkorov</u>, <u>N.N. Nikitenko</u>, <u>N.Yu. Novoselov*</u>, <u>D.V. Ponomarev</u>, <u>G.E. Remnev</u>, <u>O.P. Razumeyko</u> <i>Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
11	<p>SHCE-1-2-00106 Plasma Electron Source for Space Charge Lens Testing <u>V.I. Gushenets</u>, <u>A.S. Bugaev</u>, <u>E.M. Oks</u>, <u>A.A. Goncharov*</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Institute of Physics NAS of Ukraine, Kyiv, Ukraine</i></p>
12	<p>SHCE-1-2-00138 The Stability of Runaway Electron Beam Characteristics in Gas Diode with Non-Uniform Electric Field <u>A. Reutova</u>, <u>G.A. Mesyats*</u>, <u>K.A. Sharypov</u>, <u>V.G. Shpak</u>, <u>S.A. Shunailov</u>, <u>M.I. Yalandin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i></p>
13	<p>SHCE-1-2-00146 Electron Emission from Plasma of High - Current Discharge <u>S. Nikulin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
14	<p>SHCE-1-2-00242 On the Mechanism of Plasmoid Motion Through Transverse Magnetic Field <u>A. Timoshenko</u></p>

	NSC Kharkiv Institute of Physics and Technology NAS of Ukraine, Kharkiv, Ukraine
15	SHCE-1-2-00358 Bursian Instability of Thin-Walled Electron Beam in Weakly Irregular Vacuum Transmission Channels <u>A. Gromov, M.B. Goykhman, V.V. Kladukhin*, N.F. Kovalev, A.V. Palitsin</u> <i>Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i> <i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>
16	SHCE-1-2-00370 Nonlinear Waves in Thin-Walled Electron Beams <u>A. Palitsin, M.B. Goykhman, A.V. Gromov, V.V. Kladukhin*, N.F. Kovalev</u> <i>Institute of Applied Physics RAS, Nizhny Novgorod, Russia</i> <i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>
17	SHCE-1-2-00382 Model of Cathode Attachment Zone of Constricted High Current Vacuum Arc <u>D. Shmelev</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>
18	SHCE-1-2-00383 Collective Ion Acceleration in Spark Stage of Vacuum Discharge <u>D. Shmelev, S.A. Barenholts*</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*A.M. Prokhorov General Physics Institute RAS, Moscow, Russia</i>
19	SHCE-1-2-00442 Transformation of a Circular Non-Relativistic, High-Current Electron Beam into a Rectangular One <u>Le Huy Dung, V.P. Grigoriev, T.V. Koval, G.E. Ozur,* K.V. Karlik*</u> <i>Institute Cybernetic Centre of National Research Tomsk Polytechnic University, Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i>
20	SHCE-1-2-00503 Energy Distributions of Ions of Distinct Masses and Charge States after Travelling of the Curved Magnetic Field <u>V. Paperny, N.V. Lebedev</u> <i>Irkutsk State University, Irkutsk, Russia</i>
21	SHCE-1-2-00586 Electron Plasma Emitter Based on the Cold Hollow Cathode Discharge <u>G. Derevyankin, A.V. Burdakov, A.A. Butov</u> <i>G.I. Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</i>
22	SHCE-1-2-00622 Work Function of the Explosive Electron Emission Cathode at the Metal-Plasma Transition <u>I.V. Uimanov, G.A. Mesyats*, I.N. Sivkov</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i> <i>*P.N. Lebedev Physical Institute RAS, Moscow, Russia</i>

23	<p>SHCE-1-2-00671 Modes of Generation of Runaway Electron Beams in Gases at a Pressure of 1 – 760 Torr</p> <p><u>V.F. Tarasenko, E.H. Baksht, A.G. Burachenko, M.I. Lomaev, D.A. Sorokin, Yu.V. Shut'ko</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
24	<p>SHCE-1-2-00734 The Dimensional Effect of the Space Charge of the Emitted Electrons on the Strength of the Self-Consistent Electric Field at the Cathode Surface</p> <p><u>I. Uimanov</u></p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
25	<p>SHCE-1-2-00866 Powder Composite Materials "Metal–Nonmetal" for Explosive-Emitting Cathodes</p> <p><u>A. Savitskij, G.A. Pribytkov, M.I. Vagner, O.P. Kutenkov*</u></p> <p><i>Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>*Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
26	<p>SHCE-1-2-00878 Study of Explosive Emission Initiation under Laser Ablation Plasma</p> <p><u>S. Popov, N. Marochkin, E. Nefedtsev, A. Batrakov, D. Proskurovsky, I. Uimanov*</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
27	<p>SHCE-1-2-00922 The High-Current Electron Gun with a Plasma Anode Based on a Combined Discharge</p> <p><u>G.E. Ozur, A.V Razin</u></p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
28	<p>SHCE-1-2-01030 Research of an Anode Foil Stability of the High-Current Electron Accelerator</p> <p><u>V.V. Ezhov*</u>, Ye.V. Krastelev, G.E. Remnev</p> <p><i>International Institute for Applied Physics and High Technology, Moscow, Russia</i> <i>*Research Institute of High Voltages of National Research Tomsk Polytechnic University, Tomsk, Russia</i></p>
29	<p>SHCE-1-2-01094 High Speed Imaging of the Initial Stage of Vacuum Breakdown</p> <p><u>M.B. Bochkarev</u></p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
30	<p>SHCE-1-2-01095 Development of the Cathode and Anode Plasma of the 300 kV Vacuum Spark</p> <p><u>M.B. Bochkarev, Y. Zemskov, I Uimanov</u></p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>

31	<p>SHCE-1-2-01274 A Prototype Long-Pulse Electron Beam Injector for GOL-3 Multimirror Plasma Trap</p> <p><u>Yu.A. Trunev</u>, A.P. Avrorov, V.T. Astrelin*, A.V. Burdakov**, P.V. Bykov, G.E. Derevyankin, I.V. Kandaurov, V.A. Yarovoy</p> <p>G.I. Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</p> <p>*Novosibirsk State University, Novosibirsk, Russia</p> <p>**Novosibirsk State Technical University, Novosibirsk, Russia</p>
32	<p>SHCE-1-2-01310 Effect of the External Magnetic Field on Electron Beam Generation in a Multi-Aperture Source with Arc Plasma Emitter</p> <p><u>I. Kandaurov</u>, Yu.A. Trunev, V.V. Kurkuchekov*</p> <p>G.I. Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia</p> <p>*Novosibirsk State University, Novosibirsk, Russia</p>
33	<p>SHCE-1-2-01638 Experimental Study of the Kinetic Characteristics of Laser Plasma Stream from a Liquid Ga-In Alloy</p> <p><u>S.A. Popov</u>, A.N. Panchenko, A.V. Batrakov, F.N. Ljubchenko*, V.V. Mataibaev*</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia</p> <p>*Central Research Institute of Engineering of Russian Federation, Korolev, Russia</p>
34	<p>SHCE-1-2-01654 Nanosecond Discharge-Based X-Ray Source in Atmospheric Pressure Air with a Subnanosecond Pulse Duration</p> <p><u>I.D. Kostyrya</u>, V.F. Tarasenko</p> <p>Institute of High Current Electronics SB RAS, Tomsk, Russia</p>
35	<p>SHCE-1-0-00274 Generation of Pulsed High-Current Electron Beam and High-Density Anode Plasma in Low-Voltage Diode with Gridded Plasma Cathode</p> <p><u>N.V. Gavrilov</u>, A.I. Menshakov</p> <p>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</p>
36	<p>SHCE-1-2-00019 Bremstrahlung Radiation of Fast Electrons in Long Air Gaps</p> <p><u>E.V. Oreshkin</u>, S.A. Chaikovsky, A.V. Oginov, K.V. Shpakov</p> <p>P.N. Lebedev Physical Institute RAS, Moscow, Russia</p>
37	<p>SHCE-1-2-90023 Giant Cathode-Heating Units for Relativistic Electron Injectors and Powerful Electronics Devices</p> <p><u>V.I. Alekhina</u>, A.N. Ermilov, Y.A. Kovalenko, S.V. Korolev, A.L. Shapiro, A.P. Shumilin</p> <p>Federal State Unitary Enterprise "All-Russia Electronic Technical Institute named after V.I. Lenin</p>

38	<p>SHCE-1-0-01586 Cathode Plasma Influence on Breakdown Formation in Plasma-Anode Explosive-Emission Source <u>E. Abdullin, G.P. Bazhenov, Yu.P. Bazhenov, A.V. Morozov</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i></p>
39	<p>SHCE-1-2-90024 ILL Posed Problems Field Emission Periodic Nanostructures <u>Yu. Kovalenko, S. Korolev</u> <i>Federal State Unitary Enterprise "All-Russia Electronic Technical Institute named after V.I. Lenin</i></p>
40	<p>SHCE-1-2-00090 Simulation of the Stark Effect in ArII Emission Spectra in an Alternating Electric Field <u>E. Koryukina</u> <i>Tomsk State University, Tomsk, Russia</i></p>
41	<p>SHCE-1-2-90043 Charged Particle Emission from Various Volume-charged Emitters <u>V.N. Kukharev</u> <i>V.E. Zuev Institute of Atmospheric Optics SB RAS, Tomsk, Russia</i></p>

September 24, Friday

9:00 - 13:00

Oral Session 5. Pulsed power applications

9:00 - 9:40 Invited	SHCE-5-1-90026 Thin Film, Materials Modification and New Applications <u>K. Uemura</u> <i>ITAC Ltd, Niigata, Japan</i>
9:40 - 10:00	SHCE-5-1-00910 Pulsed Power Generated Shockwaves in Liquids from Exploding Wires and Foils for Industrial Applications <u>D. Hemmert, V.I. Smirnov, R. Awal*, S. Lati*, A. Shetty*</u> <i>HEM Technologies, Lubbock, USA</i> <i>*Texas Tech University, Lubbock, USA</i>
10:00 - 10:20	SHCE-5-1-00414 Principles of Radiochemical Technology for Production of Silver Nanopowders <u>M.E. Balezin, S.Yu. Sokovnin</u> <i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i>
10:20 - 10:40	SHCE-5-1-00726 Metal Target Spall Fracture under Nanosecond and Sub-Nanosecond Electron Irradiation <u>A. Mayer, V.S. Krasnikov</u> <i>Chelyabinsk State University, Chelyabinsk, Russia</i>
10:40 – 11:00 Coffee Break	
11:00 - 11:20	SHCE-5-0-00934 Physical-Mechanical Properties and the Hydrogen Absorption of Irradiated by a Pulsed Electron Beam Zirconium Alloy Zr-1% Nb <u>A. Lider, I.P. Chernov, Yu.P. Cherdantsev, N.S. Pushilina, O. Stepanova, G.V. Garanin</u> <i>National Research Tomsk Polytechnic University, Tomsk, Russia</i>
11:20 - 11:40	SHCE-5-1-01346 The Obtainment of Silicon from Silicon Tetrafluoride under the Impact of the High-Energy Electron Beam <u>M.S. Vorobyov, N.N. Koval, V.V. Shugurov, A.I. Suslov, V.V. Denisov, V.V. Yakovlev, G.P. Khandorin, A.K. Ledovskikh*, A.A. Galata*, A.P. Murlyshev, V.S. Volchkov*</u> <i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Siberian Chemical Plant, Seversk, Russia</i>
11:40 - 12:00	SHCE-5-1-01382 Electro Discharge Destruction of Non-Conducting Materials. Simulation and Experimental Investigation <u>N. Kuznetsova, V.V. Burkin, V.V. Lopatin</u> <i>Research Institute of High Voltages of National Research Tomsk</i>

	<i>Polytechnic University, Tomsk, Russia</i>
12:00 - 12:20	<p>SHCE-5-1-01626 Deposition of Polymer FluoroOrganic Films with Use of Polymerization of Monomers Initiated by Electron-Beam</p> <p><u>V.V. Shugurov</u>, N.N. Koval, S.G. Psakhie*, V.V. Denisov, V.V. Yakovlev, M.S. Vorobyov, A.I. Lotkov*, L.L. Meisner*, V.E. Platonov**</p> <p><i>Institute of High Current Electronics SB RAS, Tomsk, Russia</i> <i>*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia</i> <i>**N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry SB RAS, Novosibirsk, Russia</i></p>
12:20 - 12:40	<p>SHCE-5-2-00578 Plasma-Catalytic Conversion of Methane Promoted by Nanosecond Electron Beams and Gas Discharges</p> <p><u>V.V. Uvarin</u>, D.L. Kuznetsov, I.E. Filatov</p> <p><i>Institute of Electrophysics UD RAS, Ekaterinburg, Russia</i></p>
13:00 – 13:30 Closing Ceremony (Rubin Hotel)	