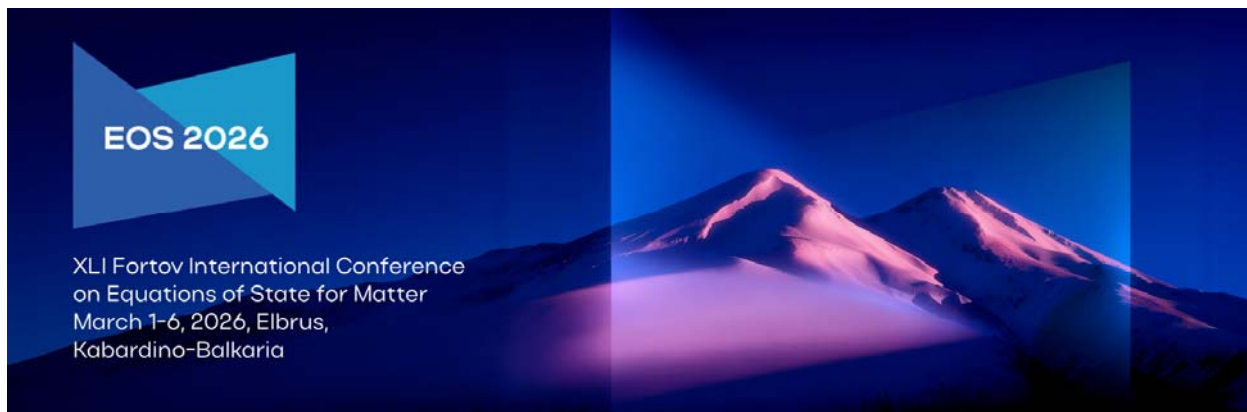




## Conference Program, March 1, 2026

### Opening Ceremony 15:00

Introduction by O.F.Petrov, I.V.Lomonosov, S.Yu.Khashirova, P.R.Levashov, K.V.Khishchenko

Chairperson

Professor I.V. Lomonosov

15:30—16:30     Petrov Oleg Fedorovich (JIHT RAS, Moscow, Russia) *From strongly coupled dusty plasma to active Brownian motors: State of the art and future prospects* (plenary)

16:30—16:45     **Conference Photo (Outside)**

16:45—17:00     **Coffee Break**

Chairperson

Academician O.F. Petrov

17:00—18:00     Sergeev Aleksandr Mikhailovich (NCPHM, Sarov, Russia) *In search for sources of energy and matter* (plenary)

18:00—18:30     Lomonosov Igor Vladimirovich (FRC PCP MC RAS, Chernogolovka, Russia), Mintsev V.B. *Physics of extreme states of matter in the works of V.E. Fortov and his school* (plenary)

18:30—19:00     Khishchenko Konstantin Vladimirovich (JIHT RAS, Moscow, Russia) *Study of the equations of state for materials under extreme conditions at high pressures and temperatures: Outlook* (plenary)

19:00—20:00     **Supper Time**

20:00—23:00     **Welcome Party**



## Conference Program, March 2, 2026

### Oral Session 14:00

Chairperson

Doctor K.V. Khishchenko

- 14:00—14:30 Loboda Petr Anatolyevich (FSUE RFNC-VNIITF, Snezhinsk, Russia), Ovechkin A.A., Falkov A.L., Korolev A.S., Letunov A.Yu., Novikov A.A., Karlykhanov N.G., Sapozhnikov P.A., Kolchugin S.V., Berezovskaya M.E. *Theoretical modeling of thermophysical and X-ray spectral properties of dense ionized matter* (plenary)
- 14:30—14:45 Shpatakovskaya Galina Vasilyevna (KIAM RAS, Moscow, Russia) *Approximation of correction functions in the refined Thomas–Fermi model*
- 14:45—15:00 Kadatskiy Maksim Alekseyevich (JIHT RAS, Moscow, Russia), Khishchenko K.V. *The thermodynamically consistent model of ionic and electronic subsystems within the average-atom framework*
- 15:00—15:15 Seredkin Nikolai Nikolaievich (JIHT RAS, Moscow, Russia), Khishchenko K.V. *Equation of state for aluminum oxide and mixtures on its basis at high pressures and temperatures in shock waves*
- 15:15—15:30 Boyarskikh Kseniya Aleksandrovna (JIHT RAS, Moscow, Russia), Khishchenko K.V. *Equation of state for the liquid phase of scandium based upon a simple thermodynamic model*
- 15:30—15:45 Paramonov Mikhail Anatolyevich (JIHT RAS, Moscow, Russia), Minakov D.V., Galtsov I.S., Onegin A.S., Levashov P.R. *Ab initio investigation of liquid sodium thermodynamics in near-critical states*
- 15:45—16:00 Fokin Vladimir Borisovich (JIHT RAS, Moscow, Russia), Minakov D.V., Demyanov G.S., Levashov P.R. *First-principles calculation of resistivity for neon at high pressure and high temperature*
- 16:00—16:15 Galtsov Ilya Sergeyevich (JIHT RAS, Moscow, Russia), Minakov D.V., Levashov P.R. *Ab initio extracting of separate electronic contributions to transition metals' transport properties*

- 16:15—16:30 Kolesnikova Olga Pavlovna (NIISI, Moscow, Russia), Malsagov M.Yu., Mikhailchenko E.V., Karandashev I.M. *Influence of the Jacobian spectrum on the accuracy of neural network approximation of chemical kinetics*
- 16:30—16:45 **Coffee Break**
- Chairperson Doctor M.A. Kadatskiy
- 16:45—17:00 Volosnikov Dmitriy Vladimirovich (ITP UB RAS, Ekaterinburg, Russia), Skripov P.V. *Peculiarities of water boiling in case of local pulse heating*
- 17:00—17:15 Mochalova Valentina Mikhailovna (FRC PCP MC RAS, Chernogolovka, Russia), Utkin A.V., Nikolaev D.N., Akhmetova M.A., Mochalova E.I., Misuragin Z.V. *Shock response of carbon–aramid composite up to 200 GPa*
- 17:15—17:30 Zhakhovsky Vasily Viktorovich (VNIIA(S), Moscow, Russia), Tereshkin V.S., Levashov V.Yu. *Condensation shock wave in supersaturated gas*
- 17:30—17:45 Garkushin Gennady Valeryevich (FRC PCP MC RAS, Chernogolovka, Russia), Savinykh A.S., Cherepanov I.A., Breykina V.E., Razorenov S.V. *Impact response of high-strength ( $\alpha+\beta$ ) titanium alloy Ti–5Al–5Mo–5V over 300–900 K temperature range*
- 17:45—18:00 Abduvaleeva Anna Vladimirovna (FSUE RFNC-VNIIEF, Sarov, Russia), Badagov Ya.V., Volodina N.A., Voronkov R.A., Georgievskaya A.B., Zubusov P.V., Zanein I.V., Knyazev V.N., Shestakov E.E., Shuvalova E.V. *Kinetic model of combustion of coarse-grained gunpowder and its parametric identification*
- 18:00—18:15 Karsanova Tatiana Vladimirovna (FSUE RFNC-VNIIEF, Sarov, Russia), Badagov Ya.V., Georgievskaya A.B., Kryuchkov D.V., Shmakova M.I., Yavtushenko A.P., Yagovkin A.O. *Interaction of a particle flow formed as a result of shock wave ejection with a counter shock wave propagating in gas*
- 18:15—18:30 Georgievskaya A.B., Manachkin S.F., Davydov N.B., Degtyarev A.V., Zarya Nikita Konstantinovich (FSUE RFNC-VNIIEF, Sarov, Russia), Artemyan D.K., Makarov A.A., Bazarov Yu.B., Sedov A.A., Kozlov G.A., Yavtushenko A.P., Yagovkin A.O. *Gas-dynamic generation of high-speed plasma jets by cylindrical explosive device*
- 18:30—18:45 Starodubtseva Ekaterina Mikhailovna (MSU, Moscow, Russia), Tsymbalov I.N., Ivanov K.A., Savel'ev A.B. *Controlled generation of collimated quasi-monoenergetic electron beams*
- 18:45—19:00 Chaschin Mikhail Viktorovich (NRC KI, Moscow, Russia), Shcheglov P.A., Tausenev A.A., Semenov T.A., Nazarov M.M. *Nitrogen gas-cluster target as coherent terahertz radiation source under relativistic laser–plasma interaction*
- 19:00—20:00 **Supper Time**
- 20:00—23:00 **Poster Sessions 1 and 2**



## Conference Program, March 3, 2026

### Oral Session 14:00

Chairperson

Professor N.A. Inogamov

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| 14:00—14:30 | <u>Khokhlov Victor Aleksandrovich</u> (ITP RAS, Chernogolovka, Russia) <i>Impact of ultra-short laser pulses on metals and two-temperature hydrodynamics</i> (plenary)                                                  |
| 14:30—15:00 | <u>Dedov Aleksey Viktorovich</u> (NRU MPEI, Moscow, Russia), Fedorovich S.D., Budaev V.P. <i>Testing of plasma-facing components of a fusion reactor</i> (plenary)                                                      |
| 15:00—15:15 | <u>Bleko Vitold Vladislavovich</u> (JINR, Dubna, Russia), Bleko Ver.V., Baldin A.A., Korovkin D.S. <i>International FLAP collaboration: From fundamental research to applied solutions in accelerator physics</i>       |
| 15:15—15:30 | <u>Gorevoy Alexey Vladimirovich</u> (LPI RAS, Moscow, Russia), Smirnov N.A., Paholchuk P.P., Rimskaya E.N., Gulina Yu.S., Zhu J., Kudryashov S.I. <i>Mid-infrared resonant laser swelling of biocompatible polymers</i> |
| 15:30—15:45 | <u>Vais Olga Evgenyevna</u> (VNIIA(S), Moscow, Russia), Lobok M.G., Bychenkov V.Yu. <i>Optimization of a synchrotron radiation source in the relativistic self-trapping regime</i>                                      |
| 15:45—16:00 | <u>Komlenok Maxim Sergeyevich</u> (GPI RAS, Moscow), Kononenko V.V., Kononenko T.V., Dolmatov T.V., Bolshakov A.P., Konov V.I. <i>A powerful THz radiation source based on a diamond photoconductive antenna</i>        |
| 16:00—16:15 | <u>Gulina Yulia Sergeyevna</u> (LPI RAS, Moscow, Russia), Zhu J., Gorevoy A.V., Dolzhenko N.I., Danilov P.A. <i>Nonlinear optical interaction of 1030-nm ultrashort laser pulses with biocompatible polymers</i>        |
| 16:15—16:30 | <b>Coffee Break</b>                                                                                                                                                                                                     |

- 16:30—17:00 Inogamov Nail Alimovich (ITP RAS, Chernogolovka, Russia) *Mandelstam–Brillouin oscillations in specially prepared 3D film metamaterials* (plenary)
- 17:00—17:15 Zhukhovitskii D.I., Perevoshchikov Egor Evgenyevich (JIHT RAS, Moscow, Russia) *Thermodynamic limit of the Coulomb system in the model of a bounded one-component plasma*
- 17:15—17:30 Shevchenko Mikhail Aleksandrovich (LPI RAS, Moscow, Russia), Maresev A.N., Tcherniega N.V., Voronova V.V., Umanskaya S.F. *Plasmonic ordered submicron substrate for increasing the sensitivity of the Laser-Induced Breakdown Spectroscopy method*
- 17:30—17:45 Zamorin Denis Aleksandrovich (JIHT RAS, Moscow, Russia), Syrovatka R.A., Koss X.G., Vasiliev M.M., Petrov O.F. *Structures of active Brownian particles in a monolayer of colloidal plasma under laser irradiation*
- 17:45—18:00 Mizeva Ksenia Alekseyevna (JIHT RAS, Moscow, Russia), Koss X.G., Zamorin D.A., Vasiliev M.M., Petrov O.F. *Dynamical properties of small clusters of Janus particles in RF-discharge plasma*
- 18:00—18:15 Sametov Eduard Aleksandrovich (JIHT RAS, Moscow, Russia), Lisin E.A. *Spectral density of oscillations of inertial active Brownian particles in a harmonic trap*
- 18:15—18:30 Yakovenko Ivan Sergeyevich (JIHT RAS, Moscow, Russia), Luguev S.G. *Self-propulsion of suspension microdroplets driven by active microparticles dynamics*
- 18:30—18:45 Baldin Anton Aleksandrovich (JINR, Dubna, Russia) *Experimental station SHINE for research in the field of nuclear energy technologies at the accelerator complex NICA JINR*
- 18:45—19:00 Khokonov Azamat Khazret-Alievich (INR RAS, Moscow, Russia) *Estimation of hadronic matter viscosity from atomic nuclei spectroscopy and neutron stars observation data*
- 19:00—20:00 **Supper Time**
- 20:00—23:00 **Poster Sessions 3, 4 and 5**



## Conference Program, March 4, 2026

### Oral Session 14:00

Chairperson

Doctor D.V. Volosnikov

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| 14:00—14:15 | Grigoryev S.Yu., Zhakhovsky V.V., <u>Inogamov Nail Alimovich</u> (ITP RAS, Chernogolovka, Russia) <i>Elastoplastic formation of the laser crater and the rollers around it are completely in the solid state</i>                                                                                                                                 |
| 14:15—14:30 | <u>Kudryashov Sergey Ivanovich</u> (LPI RAS, Moscow, Russia) <i>New insights into challenging physics of hydrodynamic melt removal at high-intensity nanosecond laser ablation of metals</i>                                                                                                                                                     |
| 14:30—14:45 | <u>Pomazkin Daniil Andreyevich</u> (LPI RAS, Moscow, Russia), Danilov P.A., Vins V.G., Skorikov M.L., Vyatkin S.V., Kudryashov S.I. <i>Study of photo-physical characteristics of H3 centers in diamond</i>                                                                                                                                      |
| 14:45—15:00 | <u>Petrov Mikhail Aleksandrovich</u> (MPU, Moscow, Russia), Rogalin V.E., Malinskiy T.V., Isakov V.V., Kostritsa S.A., Elesin D.A. <i>Laser sheet forming for straightening and relief forming of metal foils</i>                                                                                                                                |
| 15:00—15:15 | <u>Nazarov Maxim Mikhailovich</u> (NRC KI, Moscow, Russia), Semenov T.A., Shcheglov P.A., Chaschin M.V., Tausenev A.A., Shuvatova V.G., Zhirnik A.S., Romanovskii Ya.O., Mitrofanov A.V., Sidorov-Biryukov D.A., Gordienko V.M. <i>Ultrashort pulses of laser-accelerated relativistic electrons for radiobiology and metrology applications</i> |
| 15:15—15:30 | <u>Alkhimova Mariya Andreyevna</u> (JIHT RAS, Moscow, Russia), Sedov M.V. <i>New approaches in X-ray spectroscopy for experiments with femtosecond PWt laser facilities</i>                                                                                                                                                                      |
| 15:30—15:45 | <u>Mamedov Nikita Vadimovich</u> (NIITM JSC, Moscow, Russia), Danilov M.D., Ralnikov A.K., Tretyakov E.V., Devyataykina T.A., Pavlyuchenko V.A., Starostenko A.A. <i>Spatial-angular characteristics analysis of ion beam profile on ion implanter wafer</i>                                                                                     |

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| 15:45—16:00 | <u>Khokhlov Victor Aleksandrovich</u> (ITP RAS, Chernogolovka, Russia), Nelasov I.V., Manokhin S.S., Kolobov Yu.R., Zhakhovskiy V.V., Perov E.A., Inogamov N.A., Petrov Yu.V., Rogalin V.E. <i>Evolution of the microstructure of the near-surface copper layer during thermal cycling by nanosecond laser pulses</i> |
| 16:00—16:15 | Obruchkova L.R., Belkheeva R.K., Boyarskikh K.A., <u>Seredkin Nikolai Nikolaievich</u> (JIHT RAS, Moscow, Russia), Khishchenko K.V. <i>Thermodynamic properties of nickel in a wide range of specific volumes and specific internal energies under shock compression of solid and porous samples</i>                  |
| 16:15—16:30 | <u>Chtchelkatchev Nikolay Mikhailovich</u> (JINR, Dubna, Russia), Magnitskaya M.V., Ryltsev R.E. <i>Transfer learning for predicting the dynamics of complex atomic ensembles</i>                                                                                                                                     |
| 16:30—19:00 | <b>Break</b>                                                                                                                                                                                                                                                                                                          |
| 19:00—24:00 | <b>Banquet</b>                                                                                                                                                                                                                                                                                                        |



## Conference Program, March 5, 2026

### Oral Session 14:00

Chairperson

Doctor D.N. Nikolaev

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| 14:00—14:15 | <u>Gusev Maksim Aleksandrovich</u> (LLC Horocycle, Dubna, Russia), Aleksandrov V.A., Arkhipov E.V., Astakhov V.I., Baldin A.A., Beloborodov A.V., Bushmina E.A., Korovkin D.S., Saltovskaya A.Kh., Safonov A.B., Chetverikov S.A., Khar'yuzov P.R. <i>SCADA "HoroCycle" for automation and control of complex experimental facilities: The profilometer system for beam control in Booster and Nuclotron and beam transportation to collider rings of the NICA JINR accelerator complex</i> |
| 14:15—14:30 | <u>Popov Vladimir Andreyevich</u> (BINP SB RAS, Novosibirsk, Russia), Kasatov A.A., Skovorodin D.I. <i>Influence of thermoelectric effects in near-surface equilibrium non-ideal tungsten plasma on melt rotation during pulse electron beam heating</i>                                                                                                                                                                                                                                    |
| 14:30—14:45 | <u>Klein Yulia Sergeyevna</u> (HSE, Moscow, Russia), Semena A.N., Mereminskiy I.A., Molkov S.V., Shtykovsky A.E., Lutovinov A.A. <i>The origin of super-Eddington flares in the high-mass x-ray binary LMC X-4</i>                                                                                                                                                                                                                                                                          |
| 14:45—15:00 | <u>Veysman Mikhail Efimovich</u> (JIHT RAS, Moscow, Russia), Umarov I.R., Andreev N.E. <i>Laser generated x-ray and gamma-ray sources and their scalings</i>                                                                                                                                                                                                                                                                                                                                |
| 15:00—15:15 | <u>Tausenev Aleksandr Antonovich</u> (NRC KI, Moscow, Russia), Semenov T.A., Epifanov E.O., Mareev E.I., Minaev N.V., Asadchikov V.E. <i>The effect of nanoparticles on x-ray generation during irradiation of a solid-state target with an MHz femtosecond laser</i>                                                                                                                                                                                                                       |
| 15:15—15:30 | <u>Isakov Vladimir Vladimirovich</u> (FAI CIAM, Moscow, Russia), Kostritsa S.A., Korolev D.D., Kozhevnikov G.D., Tokachev D.A., Zybenko E.V., Lyakhovetsky M.A., Petrov M.A. <i>Dynamic stability and simulation of the laser shock peening of titanium samples obtained by laser additive technology and welding</i>                                                                                                                                                                       |
| 15:30—15:45 | <u>Fadeev Maksim Sergeyevich</u> (MIPT, Dolgoprudny, Russia), Dremov V.V., Levashov P.R. <i>Ab initio study of the optical properties of LiF</i>                                                                                                                                                                                                                                                                                                                                            |

- 15:45—16:00 Galyuzov Andrey Andreyevich (VNIIA(S), Moscow, Russia), Kosov M.V. *Accounting for gamma-quanta absorption reactions in the  $^{235}\text{U}$  fission chain reaction modeling by the TPT3 program*
- 16:00—16:15 Nikishin Andrey Mikhailovich (MIPT, Dolgoprudny, Russia), Markov A.A. *Violation of the Luttinger's theorem in fractional Chern insulators*
- 16:15—16:30 Romanovskii Yaroslav Olegovich (NRC KI, Moscow, Russia), Tausenev A.A., Semenov T.A., Shcheglov P.A., Chaschin M.V., Mitrofanov A.V., Sidorov-Biryukov D.A., Nazarov M.M., Gordienko V.M. *MeV-level multi-charged ion generation in relativistic laser plasma based on gas clusters*
- 16:30—16:45 **Coffee Break**
- Chairperson Professor P.R. Levashov
- 16:45—17:00 Baidin Ivan Sergeyevich (LPI RAS, Moscow, Russia), Batrakov P.K., Bolotov Ya.K., Gasratov F.K., Rodionov A.A., Starovoitova P.A., Oginov A.V. *Features of localization of polarized sources of microwave radiation flashes of extended spark discharge*
- 17:00—17:15 Maystrenko Dmitry Aleksandrovich (SSC RF KRC, Moscow, Russia), Shagayda A.A. *Advanced probe diagnosis system development for the low-temperature plasma plumes investigation*
- 17:15—17:30 Sedov Maksim Vladimirovich (JIHT RAS, Moscow, Russia), Scobelev I.Yu. *Production of Kr nuclear isomers using laser-driven electrons in a gas-cluster jet*
- 17:30—17:45 Brantov Andrey Vladimirovich (LPI RAS, Moscow, Russia), Kuratov A.S., Bychenkov V.Yu. *Charging wave assisted electron bunch guiding along a laser irradiated wire*
- 17:45—18:00 Bochkarev Sergey Gennadyevich (LPI RAS, Moscow, Russia), Castillo A.J., Lobok M.G., Bychenkov V.Yu. *Electron and proton acceleration in the regime of relativistic self-trapping of an intense Joule-class ultrashort laser pulse*
- 18:00—18:15 Remizov Sergey Valeryevich (VNIIA(S), Moscow, Russia), Plyashechnik A.S., Elistratov A.A., Lebedev A.V. *Quantum properties of radiation propagating in a nonlinear medium*
- 18:15—18:30 Zyablitseva Ekaterina Dmitrievna (VNIIA(S), Moscow, Russia), Prokuratov I.A., Il'ichev I.V., Sadilkin A.G., Lemeshko B.D., Mikhailov Yu.V. *Generation of neutron radiation in an inertial electrostatic plasma confinement tube*
- 18:30—19:00 **Closing Ceremony**  
Concluding words by I.V. Lomonosov, P.R. Levashov, K.V. Khishchenko