

JINR Newsletter #44, 9 November 2023

Dear colleagues and friends,

This week, the session of the JINR Committee of Plenipotentiaries, the central event of the Institute's life, is taking place. As usual, a November visiting session of CP will begin in Almaty, Kazakhstan, tomorrow, on 10 November. Today, the JINR Finance Committee has taken place. The day before, a JINR delegation headed by Grigory Trubnikov met with the Minister of Energy and the Minister of Science and Higher Education of the Republic of Kazakhstan.

In this issue of the JINR Newsletter, you will find cooperation news, new publications and events, as well as a big new interview with our outstanding colleague, Academician Yuri Oganessian.

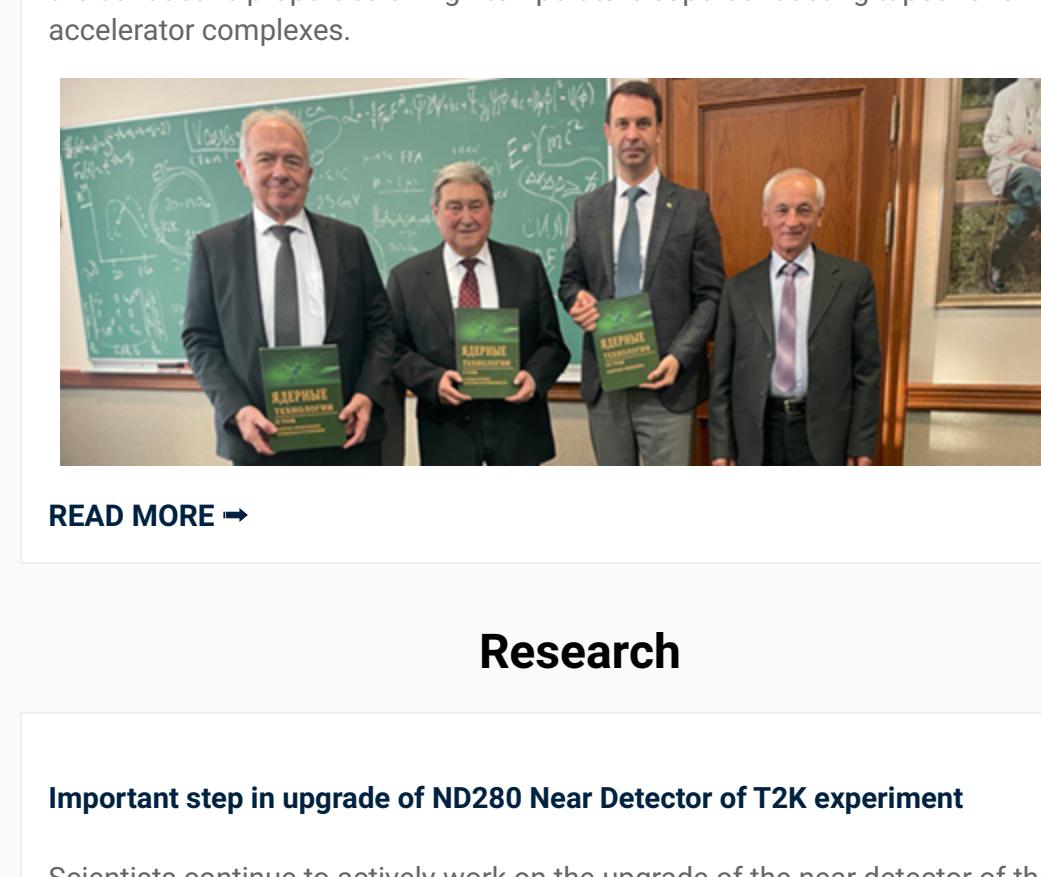
JINR Press Office



Breaking News

JINR Finance Committee summed up results of seven-year period

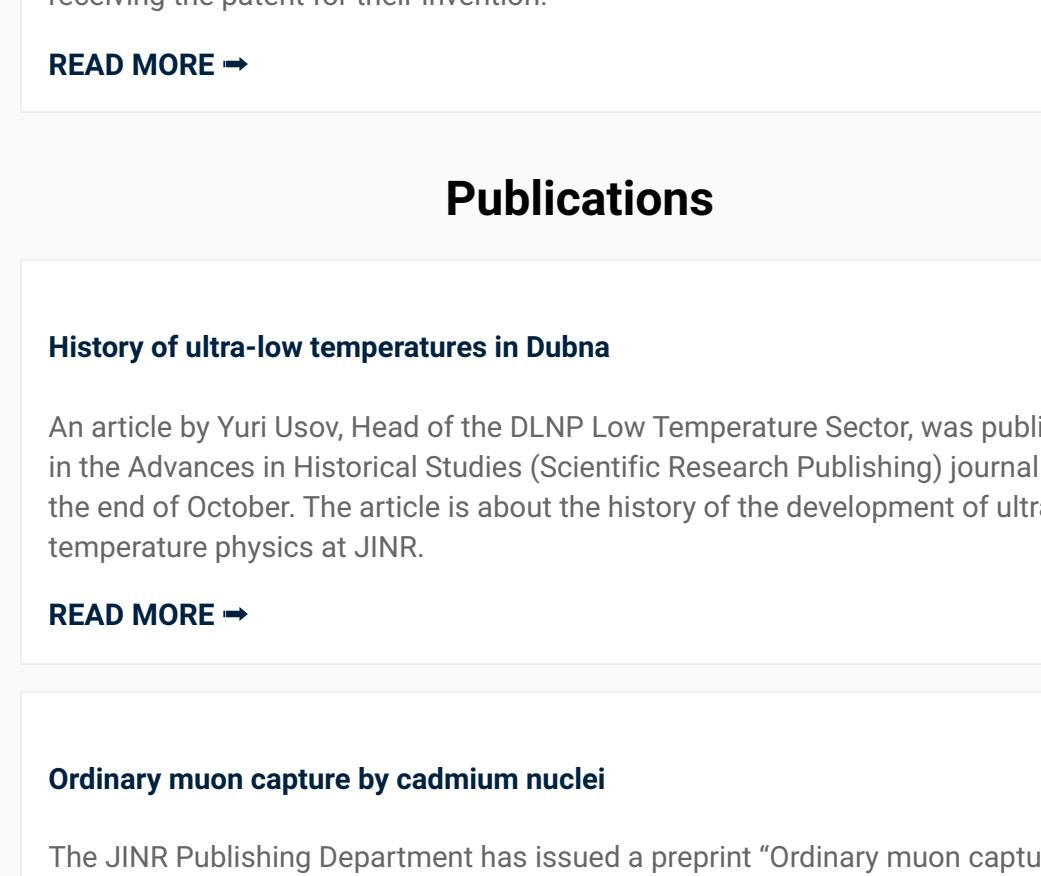
On 9 November, a meeting of the JINR Finance Committee took place in Almaty. The results of the meeting will be presented at the session of the Committee of Plenipotentiaries of the Governments of the JINR Member States on 10 November.



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Meetings with Minister of Energy and Minister of Science and Higher Education of Kazakhstan

On 9–11 November, meetings of the Finance Committee and the Committee of Plenipotentiaries of the Governments of the JINR Member States will take place in Almaty, Kazakhstan. Before the CP meeting in Kazakhstan, JINR Director Grigory Trubnikov held a number of high-level meetings in Almaty.



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Cooperation

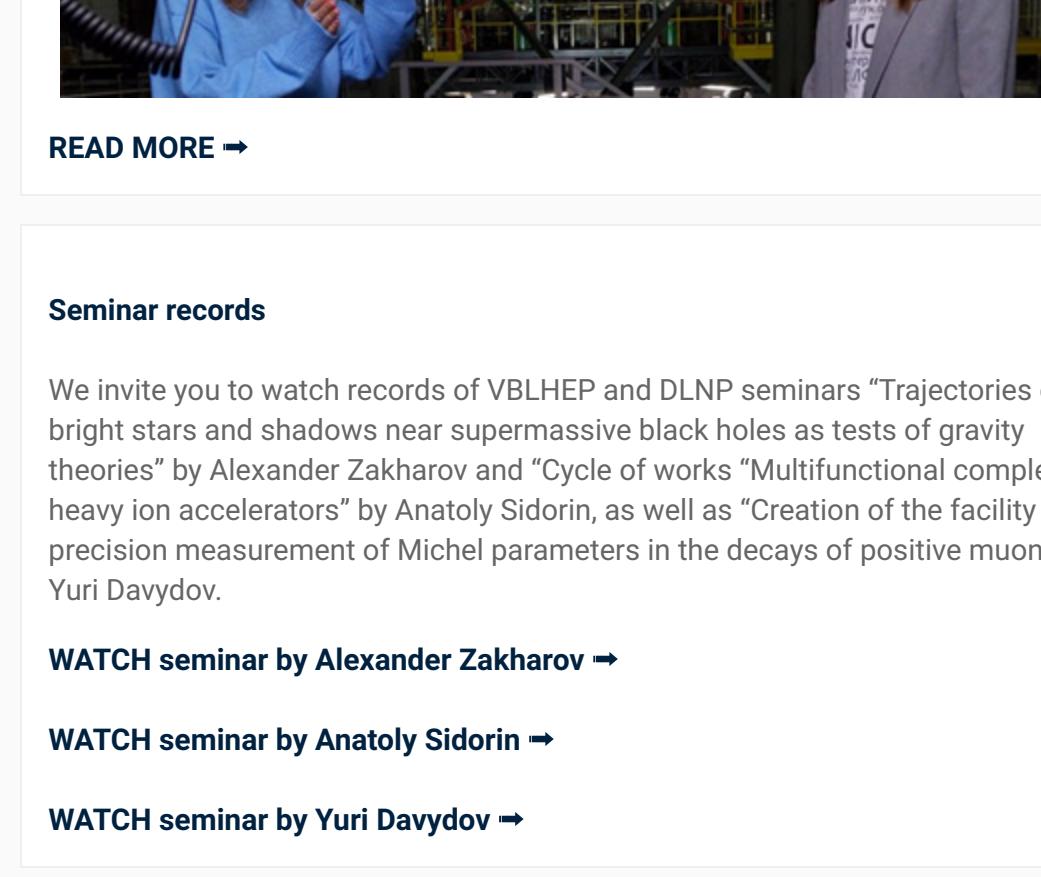
JINR research presented to scientific community of Kazakhstan

Young JINR scientists from the Republic of Kazakhstan have spoken about their research in the laboratories of the Joint Institute at the Institute of Nuclear Physics in Almaty. Listeners learned about synthesis of superheavy elements, NICA and Baikal-GVD megascience projects, research in materials science, and JINR computing facilities.

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JINR and Uzbekistan to conduct joint work in materials science

JINR Director Grigory Trubnikov met with President of the Academy of Sciences of Uzbekistan Bekhzod Yuldashev at the Directorate of the Joint Institute. They reached an agreement on the implementation of a joint research programme with INP of the Academy of Sciences of Uzbekistan on the radiation modification of the conductive properties of high-temperature superconducting tapes for JINR accelerator complexes.

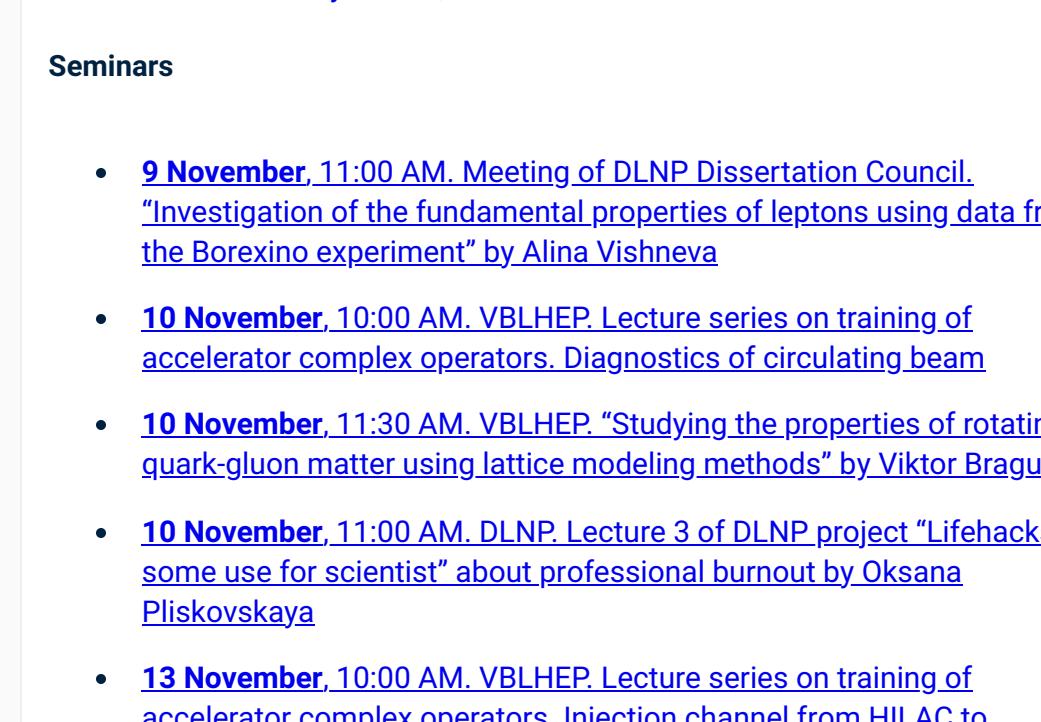


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Research

Important step in upgrade of ND280 Near Detector of T2K experiment

Scientists continue to actively work on the upgrade of the near detector of the T2K experiment for the study of neutrino oscillations in the J-PARC International Scientific Centre, Japan. Staff members of the Laboratory of Nuclear Problems at JINR are making a major contribution to the upgrade.



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Patent for cold neutron storage ring received at JINR

The Joint Institute for Nuclear Research has got a patent for the invention "Cold neutron storage ring". The authors are Yuri Nikitenko and Viktor Aksenenko from the Laboratory of Neutron Physics at JINR. JINR staff congratulates the authors on receiving the patent for their invention!

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Publications

History of ultra-low temperatures in Dubna

An article by Yuri Usov, Head of the DLNP Low Temperature Sector, was published in the Advances in Historical Studies (Scientific Research Publishing) journal at the end of October. The article is about the history of the development of ultra-low temperature physics at JINR.

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Ordinary muon capture by cadmium nuclei

The JINR Publishing Department has issued a preprint "Ordinary muon capture by cadmium nuclei" P4-2023-41. The authors are Vladimir Kuz'min and Tatjana Tetereva.

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Media

Yuri Oganessian in new episodes of MEPhI podcast

FLNR JINR Scientific Leader Yuri Oganessian has participated in the fourth and fifth episodes of the third season of the MEPhI Code podcast. Yuri Oganessian spoke about the way how dreams of being an architect transformed into great discoveries, as well as about a world without nuclear physics, and work on the discovery of new elements.

[WATCH episode 1 →](#)

[WATCH episode 2 →](#)

NAUKA0+ 2023 Festival

Watch a video about the NAUKA0+ 2023 Festival, where JINR scientists participated. The event took place on 6 – 8 October in Moscow.

[WATCH →](#)

Film crew at JINR

A film crew of the In the World of Scientists media project has recently worked at the Laboratory of High Energy Physics at JINR. VBLHEP employees Vasiliya Lenivenko and Sergei Merts told the team about research at the NICA Complex, their work, and the everyday life of scientists in and outside the laboratory.

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Seminar records

We invite you to watch records of VBLHEP and DLNP seminars "Trajectories of stars and shadows near supermassive black holes as tests of gravity theories" by Alexander Zakharov and "Cycle of works "Multifunctional complex of heavy ion accelerators" by Anatoly Sidorin, as well as "Creation of the facility and precision measurement of Michel parameters in the decays of positive muons" by Yuri Davydov.

[WATCH seminar by Alexander Zakharov →](#)

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JINR Weekly Newspaper issued

A new issue of the JINR Weekly Newspaper #42 has been published. Please note that you can read an English version on the JINR Newspaper's website.

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Upcoming Events

Governing and Advisory Bodies

- [9 November, Meeting of the JINR Finance Committee, Almaty, Republic of Kazakhstan](#)

- [10 – 11 November, Session of the Committee of Plenipotentiaries of the Governments of the JINR Member States, Almaty, Republic of Kazakhstan](#)

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Conferences

- [16 – 20 November, Autumn School on Physics of Quark-Gluon Matter, JINR University Centre, Dubna](#)

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Seminars

- [9 November, 11:00 AM, Meeting of DLNP Dissertation Council, "Investigation of the fundamental properties of leptons using data from the Borexino experiment" by Alina Vishneva](#)

- [10 November, 10:00 AM, VBLHEP Lecture series on training of accelerator complex operators, Diagnostics of circulating beam](#)

- [10 November, 11:30 AM, VBLHEP "Studying the properties of rotating quark-gluon matter using lattice modeling methods" by Viktor Braguta](#)

- [10 November, 11:00 AM, DLNP Lecture 3 of DLNP project "Lifehacks of some use for scientist" about professional burnout by Oksana Piskovskaya](#)

- [13 November, 10:00 AM, BLTP Journal Club, "Genus drop in hyperelliptic Feynman integrals" by Maxim Bezuglov](#)

- [13 November, 3:30 PM, BLTP "Theoretical analysis of pion-nucleus scattering at energies of the \(3;3\) pion-nucleon resonance" by Valery Lukyanov](#)

- [14 November, 4:00 PM, BLTP "Resonance fluorescence in two-level quantum system with broken symmetry" by Nikolay Bogoliubov Jr., Andrey Soldatov](#)

- [15 November, 11:00 AM, DLNP "Flash algorithms in particle physics" by Milhai Dima](#)

- [15 November, 11:00 AM, FLNP "Estimation of water mass fraction in Mars regolith based on data of monitoring neutron radiation of surface with DAN device on board the Curiosity Mars rover" by Sergey Nikiforov](#)

- [15 November, 11:00 AM, BLTP "Generalised renormalisation group equations in non-renormalisable quantum field theory" by Denis Tolkaev](#)

- [16 November, 3:00 PM, MLIT "Modeling the evolution of cooling of neutron stars" by Hovik Grigorian](#)

- [16 November, 11:00 AM, DLNP "Cylindrical and hyperbolic multiwire coordinate detectors for spectrometers ARES \(JINR\) and MEG \(PSI\)" by Nikolay Kravchuk](#)

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Culture

- [16 October – 1 December, daily from 2:00 PM to 7:00 PM \(except Saturday and Sunday\), JINR Scientists' Club, "Artist paints Dubna" exhibition](#)

- [9 November, 7:00 PM, JINR Universal Public Library, Summer Reading List club; discussing a novel "History of a town" by Mikhail Saltykov-Schedrin](#)

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