

JINR Newsletter #20, 29 May 2024

Dear colleagues and friends,

Summer season is always the time for numerous scientific conferences and meetings. The Laboratory of Information Technologies at JINR has hosted the Workshop on Mathematical Problems in Quantum Information Technologies in a hybrid format. The International School of Accelerator Physics: Cyclotrons for young researchers has announced the start of registration.

Bright scientific publications, educational cooperation with National Research Nuclear University MEPhI, popular science lectures, events for children, and much more in the latest issue of the JINR Newsletter.



Conferences

Discussing mathematical problems in quantum information technologies at MLIT at JINR

On 27–28 May 2024, the Laboratory of Information Technologies at JINR hosted the Workshop on Mathematical Problems in Quantum Information Technologies (MPQIT-2024). During the meeting, researchers from the JINR Member States and partner countries specialising in mathematical problems of quantum information science shared their experience and results of their research.



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Registration opens for International School of Accelerator Physics: Cyclotrons

A JINR School for young researchers under 35 will be held on 25–30 August. The School will examine in detail the operating principles, design, and maintenance of cyclotrons with a special focus on FLNR JINR facilities. Registration is open from 27 May to 24 June [via the link](#).

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Research

Two programs for REGATA Facility at IBR-2 Reactor registered

On 17 May, JINR received two certificates of state registration of software titled "Control program for the REGATA Pneumatic Transport Unit at the IBR-2 Reactor" and "Software package: "Neutron activation analysis at the REGATA Facility at the IBR-2 Reactor". The authors are FLNP JINR researchers Dmitry Grozdov and Vladimir Galustov.

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Publications

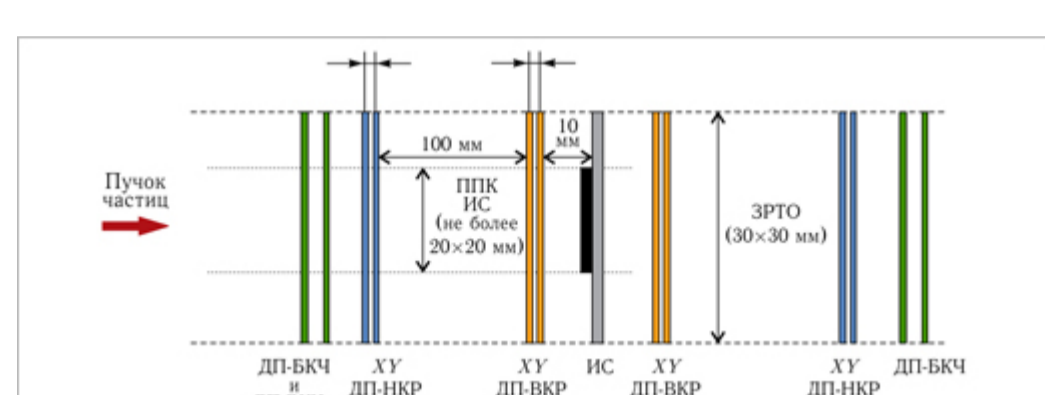
Review of Particles & Nuclei journal, #3 (Vol. 55) 2024

The JINR Publishing Department has issued the third part of this year's volume of "Physics of Elementary Particles and Atomic Nuclei", a journal constituting of review articles by leading physicists from the JINR Member States and scientists from all over the world.

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Methodology of experimental detector alignment in SDC-NICA Project

The article of the team of authors from JINR and Skobeltsyn Institute of Nuclear Physics at MSU was published in the Particles and Nuclei, Letters journal. You can find out more information about the article on the JINR's website.



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Scintillation muon shielding for low-background experiments

The second issue of the Particles and Nuclei, Letters journal features an article by the DLNP JINR employees on the development of the technique for producing, adjusting, and testing of large-area scintillation detectors used in low-background experiments. The detectors developed make it possible to create modular shielding systems with different coverage areas.

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Awards

Study of international collaboration with JINR participation wins award

A team of authors from the Geant4-DNA International Collaboration with JINR participation received the Galileo Galilei Award 2023 of the European Journal of Medical Physics for their work "Prediction of DNA rejoining kinetics and cell survival after proton irradiation for V79 cells using Geant4-DNA". We congratulate the authors and wish them further success!

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JINR scholarships for MEPhI students and postgraduates

The results of the competition for JINR scholarships for students and postgraduates of the National Research Nuclear University MEPhI were published. In the 2023/2024 academic year, 16 students became scholarship holders. We congratulate the winners and wish them further academic victories!

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Announcements

Educational festival for children to take place in Dubna

On 1 June, JINR and Lyceum No. 6 invite schoolchildren from grades 3 to 9 to Physics Days 2024. How do particles travel in the detector? What is a vortex cannon? How does a Tesla coil work? Schoolchildren will learn this and much more during master classes, entertaining experiments, and quick quizzes.



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MEPhI announces enrolment for Master's course

National Research Nuclear University MEPhI invites students to a Master's course with in-depth competencies in IT for megascience projects such as NICA, PIK, LHC experiments, etc. The course is co-organized by JINR and a number of Russian scientific organizations. You can find out more at the [webinar](#) for applicants on 30 May.

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Registration for 24th Baikal Summer School continues

The school of physics of elementary particles and astrophysics will take place from 10 to 17 July in Irkutsk Region. Bachelors, masters and postgraduate students are welcome to participate in the event to learn more about neutrino physics, the Standard Model, neutrino astronomy, etc. You can register until 31 May [via the link](#).

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10% discount for JINR employees at Baryon Restaurant

The Baryon Restaurant provides a 10% discount for JINR employees upon presentation of a pass. The discount can be applied for a company of up to four people. Please note that the discount is not valid for a set lunch menu.

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Media

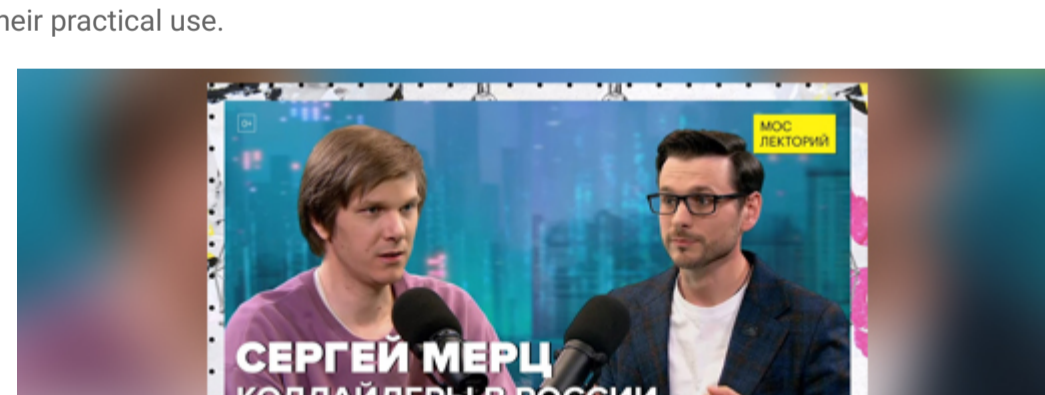
Mathematical problems of quantum information science discussed at JINR

The video about MPQIT-2024 workshop, which took place on 27–28 May, features interviews by MLIT JINR Director Sergei Shmatov, MLIT JINR Scientific Leader Vladimir Korenkov, and Plenipotentiary Representative of Georgia to JINR, MLIT JINR Sector Head Arsen Khvedelidze.

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JINR science in Moscow Lecture Hall educational project

In the new episode, VBLHEP JINR Leading Researcher Sergei Merts spoke about the aim of particle accelerators, their operation principle, and presented examples of their practical use.



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Seminar recordings

We would like to offer you to watch recordings of the seminars "Research of module characteristics in the creation of a liquid argon hadron end-cap calorimeter of the ATLAS Detector"¹ by Andrey Shalyugin and "Organization and style of a scientific article in English"² by Mikhail Potapov.

[WATCH¹ →](#)

[WATCH² →](#)

Video about past week JINR and Dubna events

We offer you to watch a video review of highlights from the life of the institute and Dubna.

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JINR Weekly Newspaper issued

A new issue of the JINR Weekly Newspaper #20 has been published. Please note that you can read an English version of the JINR Newspaper's website.

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Upcoming Events

Conferences

- [31 May, ARIADNA Collaboration Workshop, VBLHEP JINR, Dubna](#)
- [3 – 21 June, Stage 1 of International Students Practice in JINR Fields of Research for students from RSA, JINR, Dubna](#)
- [4 – 7 June, "Baikal" Collaboration Meeting, JINR, Dubna](#)

Seminars

- [30 May, 11:00 AM, VBLHEP, "Creation of wide-aperture silicon track systems in VBLHEP JINR: status and prospects \(5-year report\)" by Yuri Murin, "Status of some parts of the TPC for the MPD/NICA Experiment" by Aleksey Bazhazhin](#)
- [30 May, 11:30 AM, VBLHEP Dissertation Council, "Production of \$n^0\$ and \$n\$ mesons in proton-nucleus interactions at momenta from 4.5 to 5.5 GeV/c per nucleon and nucleus-nucleus interactions at momenta from 1.7 to 5.5 GeV/c per nucleon" by Khachik Abraamyan](#)
- [30 May, 4:00 PM, BLTP, "Radiative corrections to dilepton production at LHC: the Drell-Yan process vs the Photon Fusion mechanism" by Vladimir Zykunov](#)
- [31 May, 11:00 AM, FLNP, "Catalysts for production of hydrogen and carbon nanomaterials from methane" by Alexander Bannov](#)
- [31 May, 2:30 PM, BLTP, "Horndeski-Palatini models" by Andrey Kulkov](#)
- [3 June, 3:30 PM, BLTP, "Computational chemistry assisting experiments with superheavy elements" by Miroslav Illia](#)
- [4 June, 11:00 AM, MLIT, "JINR Repository of scientific publications on the Dspace platform. \(Pilot version\)" by Tatiana Zaikina, "Workload Management System for SPD Online filter" by Nikita Gheben](#)

Culture

- [22 May – 16 June, daily from 1:00 to 7:00 PM \(except Monday\), JINR Mir Cultural Centre, Exhibition of watercolour illustrations](#)
- [30 May, 4:00 PM, AYSS seminar at JINR Young Scientists' Club, "On the Presidential Prize in Science and Innovation for Young Scientists" by Nadezhda Chubova](#)
- [30 May, 7:00 PM, JINR Universal Public Library, Hairpin book club](#)
- [31 May, 6:00 PM, JINR Universal Public Library, English speaking club](#)
- [31 May, 7:00 PM, JINR Mir Cultural Centre, Stand-up performance](#)
- [1 June, 11:00 AM, JINR Mir Cultural Centre, Children's day at Cultural Centre "Mir"](#)
- [1 June, 12:00 PM, JINR Mir Cultural Centre, Cinderella musical performance](#)
- [2 June, 4:00 PM, JINR Mir Cultural Centre, Dance show by flamenco school](#)

For Kids

- [30 May, 5:00 PM, JINR Universal Public Library, Little Owls children's book club](#)
- [31 May, 4:00 PM, JINR Universal Public Library, Times and Epochs children's history project](#)
- [1 June, Physics day 2024, Academician Fierov Lyceum No. 6, Dubna](#)

[ALL JINR EVENTS →](#)