

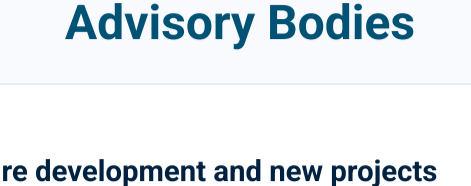
JINR Newsletter #23, 25 June 2025

Dear colleagues and friends,

JINR recently hosted meetings of the Programme Advisory Committees for Nuclear and Particle Physics. Committee members discussed the Institute's ongoing and new research projects and further infrastructure development. Topping the agendas were experiments at the NICA Accelerator Complex, studies at the Superheavy Element Factory, prospective FLNP and DLNP facilities, and much more.

Dubna continues to host events dedicated to celebrating the 20th anniversary of the Institute's scientific partnership with South Africa, bringing together international researchers. Following last week's South Africa Days at JINR, the Laboratory of Theoretical Physics is hosting the RSA–JINR workshop on theoretical and computational physics.

Among the important scientific results is an article by the Institute's geneticists who studied extremophiles near the IBR-2 core, where radiation levels exceed lethal doses for humans. Read about this and much more in the latest JINR Newsletter.



Advisory Bodies

PAC NP 61: infrastructure development and new projects

On 19–20 June, the 61st meeting of the Programme Advisory Committee for Nuclear Physics took place at JINR. The PAC NP members got acquainted with the latest research results at the Superheavy Element Factory, the modernisation of the EG-5 Accelerator, and projects of new FLNP and DLNP facilities.



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PAC PP 62: development of NICA experiments and participation in international projects

The meeting of the JINR Programme Advisory Committee for Particle Physics took place on 23 June. The PAC members discussed the implementation of the NICA Megascience Project, the results of the MPD, BM@N, and SPD Collaborations, and reports on the work of JINR teams in external international particle physics projects.

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61st meeting of JINR PAC for Condensed Matter Physics

The event will take place on 26 June at the JINR International Conference Centre. The PAC members will discuss the resumption of the IBR-2 Research Reactor after a long shutdown and development of its experimental facilities.

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Cooperation

RSA–JINR workshop on theoretical and computational physics taking place at BLTP

The event is taking place from 23 to 27 June, following the last week's South Africa Days at JINR. The programme includes talks on nuclear structure, particles and quantum fields, atoms and their interactions, solid state theory, and artificial intelligence methods.



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18th internship for young CIS scientists and specialists finished

From 25 May to 23 June, Dubna hosted the 18th International Internship for Young Scientists and Specialists from countries of the Commonwealth of Independent States. The programme included tours of the Institute's laboratories, lectures and consultations by leading JINR scientists, visits to Dubna enterprises, and much more.

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Conferences

Alushta-2025: unlimited science

On 8–15 June, the 14th International Youth Conference, organized by the Association of Young Scientists and Specialists of JINR (AYSS JINR), took place at the Dubna Resort Hotel (Alushta, Crimea). This year, 56 representatives of Russia, Cuba, Egypt, India, Kazakhstan, Romania, and Vietnam attended the event.



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Celebrations

20th anniversary of Laboratory of Radiation Biology celebrated at JINR

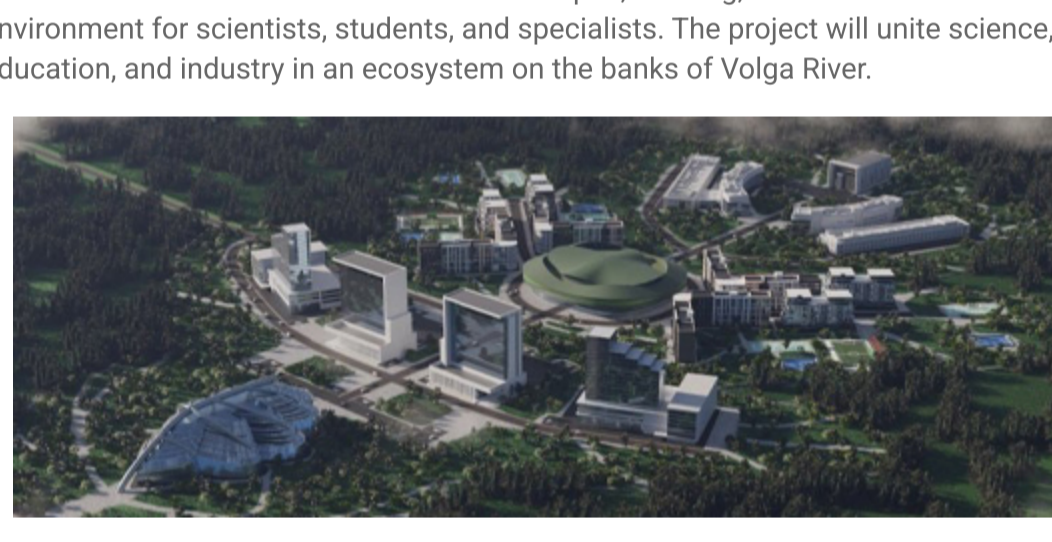
On 17 June, the JINR Scientists' Club hosted the anniversary seminar entitled "Radiation biology: where fundamental sciences meet. 20 years in focus". The event brought together not only LRB employees, many of whom received awards, but also their colleagues from leading scientific centres collaborating with the laboratory.

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Research

JINR scientists found radioresistant fungi near IBR-2 Reactor's active zone

DLNP geneticists discovered several species of extremophile fungi at the facility using an automatic box. The researchers are examining the genetic mechanisms enabling the fungi to survive under extreme conditions. The results will open up opportunities for creating new technologies in medicine, ecology, space exploration, and other fields.



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Publications

JINR News bulletin #2 2025 issued

The publication provides information on the latest scientific results obtained at the JINR Laboratories, updates on large-scale experiments, construction of new facilities, discoveries, inventions, etc. JINR's social life is presented extensively.

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Announcements

Registration opens for Lipnya 2025 summer school

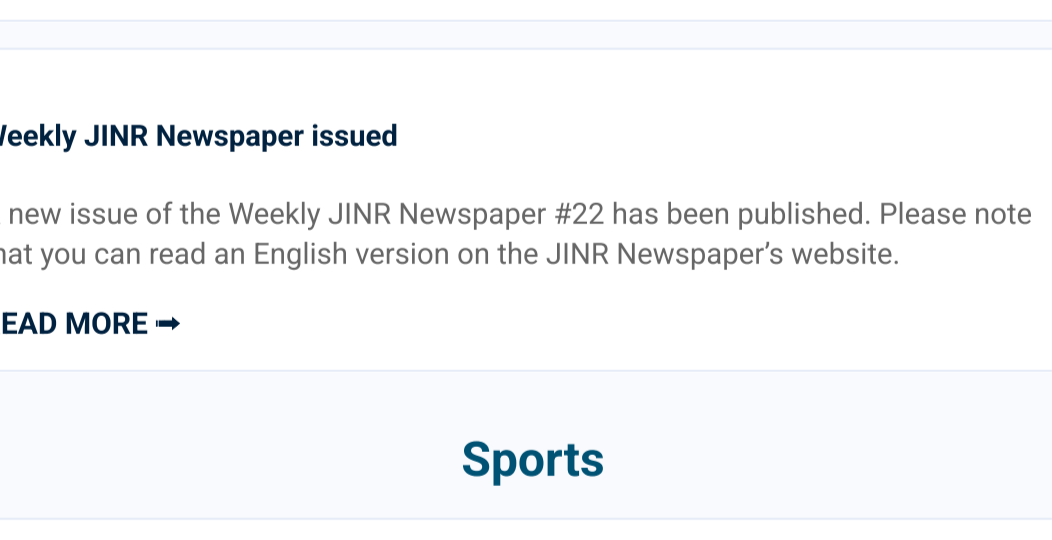
From 18 to 20 July, the 29th Summer School for Young Scientists and Specialists will take place at the JINR tourist resort on Lipnya Island. Young scientists and specialists of JINR and Dubna enterprises under 36 are invited. Applications are accepted [via the link](#) until 3 July.

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Media

International Park of Science and Technology to be created in Dubna

A unique project led by JINR, Dubna State University, and the Dubna Special Economic Zone aims to create a modern campus, housing, and a comfortable environment for scientists, students, and specialists. The project will unite science, education, and industry in an ecosystem on the banks of Volga River.



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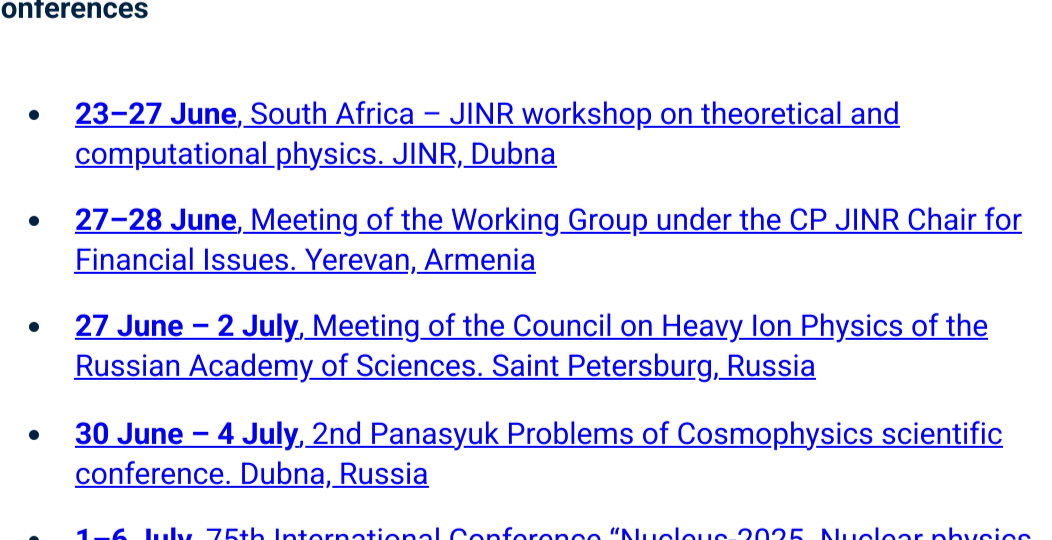
Opening of Vladimir Ananyev Square near IBR-2 Reactor entrance

On 25 June, the opening ceremony of the square named in memory of the distinguished expert in reactor engineering and the first IBR-2 Chief Engineer took place near the IBR-2 Reactor building at JINR. Please enjoy a recording of the ceremony.

[WATCH →](#)

Courses on Quantum Field Theory and Standard Model by Dmitry Naumov

The Teach-in platform offers access to courses Introduction to Quantum Field Theory and The Standard Model by DLNP Deputy Director Dmitry Naumov. These lectures explore the fundamental principles of modern physics, covering topics like particle interactions, field quantisation, and the Higgs mechanism. The videos are available [via the link](#).



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Ghost particle: neutrinos in Lake Baikal

On 20 June, DLNP Deputy Director Dmitry Naumov discussed neutrinos on Radio of Russia. He explained their elusive nature, why they are studied at Lake Baikal, and highlighted the role of the Baikal-GVD Neutrino Telescope in detecting these mysterious particles vital to understanding the universe's fundamental processes.

[LISTEN →](#)

Seminar recording

We invite you to watch a recording of the seminar "Machine learning methods for intelligent analysis and processing of experimental data in high energy physics" by Gennady Ososkov.

[WATCH →](#)

Weekly JINR Newspaper issued

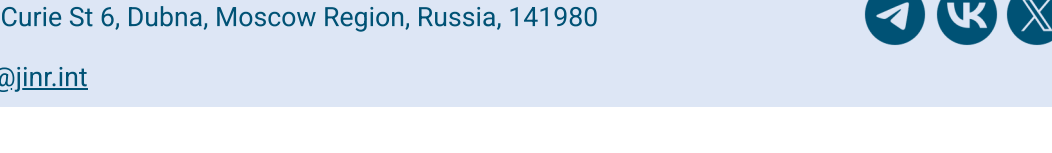
A new issue of the Weekly JINR Newspaper #22 has been published. Please note that you can read an English version on the JINR Newspaper's website.

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Sports

JINR employee won table tennis championship in Europe

A JINR Sports Complex employee Inna Tikhomirova won gold in the European Veterans Championship in table tennis held in Novi Sad, Serbia. EVC 2025 is the premier European tournament for veteran players, bringing together experienced athletes from across the continent. Congratulations to our colleague on her success!



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Upcoming Events

Advisory Bodies

- [26 June, 61st Meeting of the Programme Advisory Committee for Condensed Matter Physics, JINR International Conference Centre, Dubna](#)

Conferences

- [23–27 June, South Africa – JINR workshop on theoretical and computational physics, JINR, Dubna](#)
- [27–28 June, Meeting of the Working Group under the CP, JINR Chair for Financial Issues, Yerevan, Armenia](#)
- [27 June – 2 July, Meeting of the Council on Heavy Ion Physics of the Russian Academy of Sciences, Saint Petersburg, Russia](#)
- [30 June – 4 July, 2nd Panasyuk Problems of Cosmophysics scientific conference, Dubna, Russia](#)
- [1–6 July, 75th International Conference "Nucleus-2025. Nuclear physics, elementary particle physics, and nuclear technologies", Saint Petersburg State University, Russia](#)

Training

- [16 June – 4 July, Stage I of International Student Internship in the JINR Fields of Research for Students from South Africa and Egypt, JINR, Dubna](#)
- [30 June – 4 July, Complex Systems and Advanced Materials International School, BLTP, JINR](#)
- [30 June – 4 July, International School on Nuclear Methods and Applied Research in Environmental, Material, and Life Sciences \(NUMAR-Gobi 2025\), Ulaanbaatar, Mongolia](#)
- [2–12 July, Element 105 summer school and workshop, Dubna](#)

Seminars

- [26 June, 11:00 AM, FLNR, "Plans for experimental tasks using U400 beams for autumn 2025. Manifestation of cluster structures in \$^{12}\text{C} + ^9\text{Be}\$ reaction channels" by Aidos Azhibekov](#)
- [26 June, 11:30 AM, VBLHEP, VBLHEP Dissertation Council, "Simulation of the birth of light nuclei and hypernuclei in heavy ion collisions using thermodynamic approach implemented in the THESEUS Generator" by Marina Kozhevnikova](#)
- [26 June, 2:30 PM, BLTP, "Quantum groups in two-dimensional logarithmic conformal field theory" by Ilya Tipunin](#)
- [26 June, 3:00 PM, FLNR, "Fabrication of nuclear thin film targets: methods, challenges, and significance in experimental nuclear physics" by Sizwe Buwa](#)
- [27 June, 11:30 AM, VBLHEP, "Summa technologies for the creation of HTS magnets at VBLHEP at JINR" by Mikhail Novikov, "Multicomponent superconductivity, fractional vortices, and four-fermion order parameters in condensed matter physics" by Vadim Grinenko](#)

Culture

- [17 June – 13 July, Daily from 1:00 to 7:00 PM \(except Monday\), JINR Mir Cultural Centre, Art exhibition by Anastasia Verner and Arina Belyaeva](#)
- [26 June, 6:30 PM, JINR Universal Public Library, JINR Cinema Club](#)
- [27 June, 6:30 PM, JINR Universal Public Library, Guttenberg's Smoking Room meeting](#)
- [28 June, 6:00 PM, JINR Mir Cultural Centre, JINR Fusion Vibe international concert](#)
- [29 June, 6:00 PM, JINR Mir Cultural Centre, Concert "Midsummer Night's Dream"](#)

Sports

- [28 June, 12:30 PM, Archimedes Swimming Pool, Swimming competition dedicated to 54th anniversary of Archimedes Swimming Pool](#)

[ALL JINR EVENTS →](#)