

JINR Newsletter #6, 16 February 2023

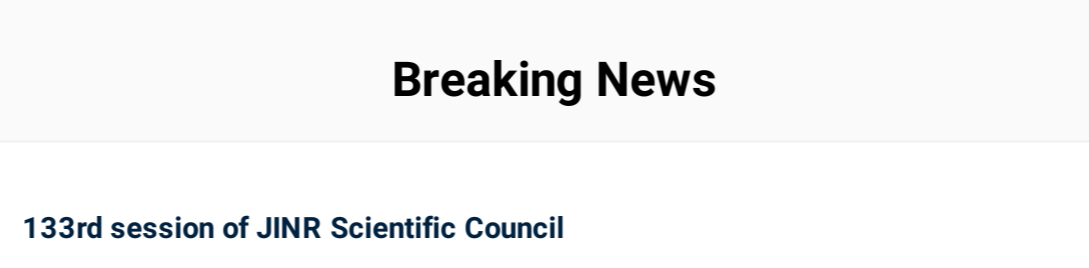
Dear colleagues and friends,

The JINR Scientific Council has started today. Scientists from the Member States and international experts have gathered to discuss the scientific policy and development directions of the Institute. Today, at the session, a Joint Declaration of Intent has been signed between the National Council for Science and Technology of Mexico (CONACYT) and the Joint Institute for Nuclear Research.

The launch of the regular expedition to build the Baikal-GVD Deep Underwater Neutrino Telescope is another bright event of this week. Our scientists together with colleagues from other scientific organizations went to Lake Baikal. We wish them success!

In the new issue of the JINR Newsletter, we have prepared many more interesting things. Enjoy reading!

JINR Press Office



Breaking News

133rd session of JINR Scientific Council

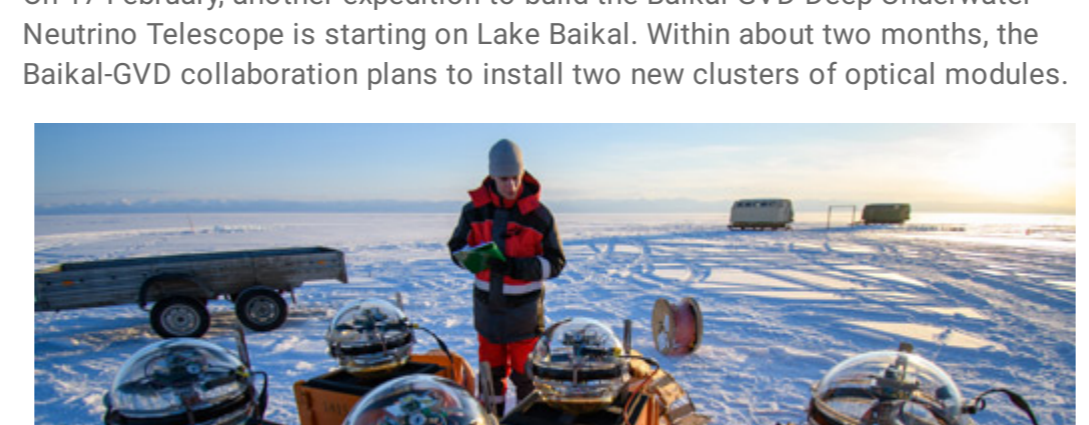
Today, on 16 February, the 133rd regular session of the Scientific Council of the Joint Institute is being held in a hybrid format. Participants are considering the results of the previous sessions of the Committee of Plenipotentiaries and Programme Advisory Committees of JINR, as well as the status and prospects for the development of the Institute's projects.



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Mexico and JINR signed intergovernmental agreement

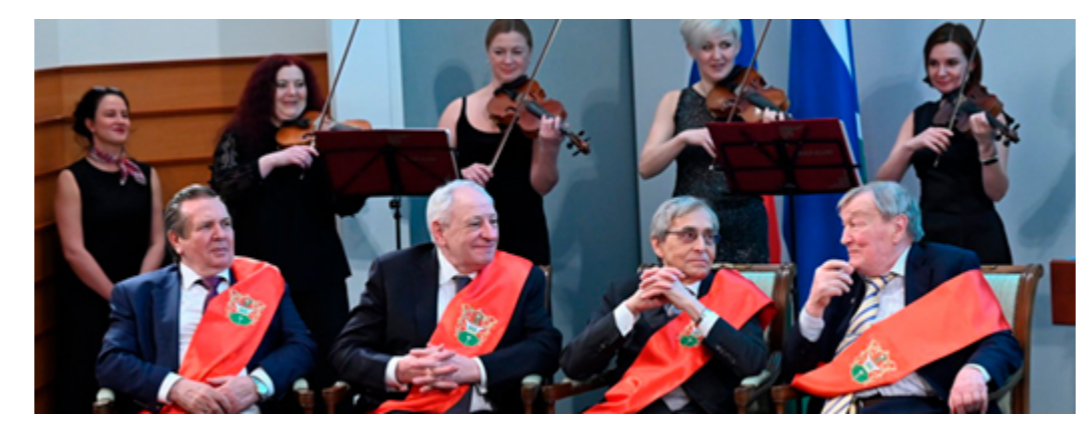
The Joint Declaration of Intent between the National Council for Science and Technology of Mexico (CONACYT) and the Joint Institute for Nuclear Research reflects plans to work together on frontier, fundamental, and applied research. The signing ceremony took place on 16 February at the 133rd session of the JINR Scientific Council in the presence of Ambassador Extraordinary and Plenipotentiary of the United Mexican States to Russia Eduardo Villegas Megias.



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Let the expedition begin!

On 17 February, another expedition to build the Baikal-GVD Deep Underwater Neutrino Telescope is starting on Lake Baikal. Within about two months, the Baikal-GVD collaboration plans to install two new clusters of optical modules.

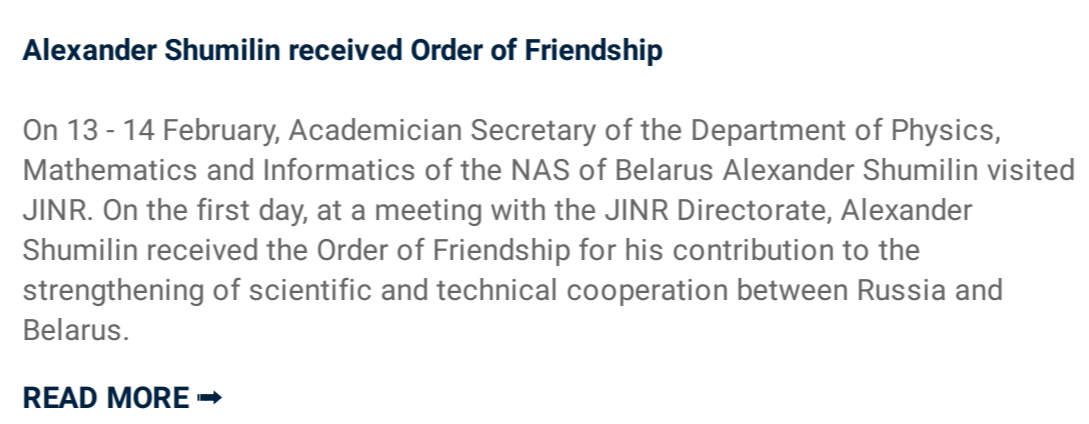


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Awards

Demidov Prize awarded to Alexey Rozanov

Academician Alexey Rozanov (LRB) won the Demidov Prize 2022 in the category "Biology". He received the Prize for his significant contribution to the development of paleontology. An awarding ceremony of the Demidov Prize, one of the most prestigious Russian awards for scientists, took place in the residence of the Governor of the Sverdlovsk Region on 10 February.



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Cooperation

Meeting with new Plenipotentiary Representative of Republic of Kazakhstan

On 14 February, JINR Director Grigory Tsubnikov met with new Plenipotentiary Representative of the Government of Kazakhstan in JINR Sayabek Sakhyev as part of the Kazakhstan's visit to JINR. They discussed possibilities of holding joint events and development of the infrastructure of the Institute of Nuclear Physics, as well training of staff for scientific centres of Kazakhstan.

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Alexander Shumilin received Order of Friendship

On 13 - 14 February, Academician Secretary of the Department of Physics, Mathematics and Informatics of the NAS of Belarus Alexander Shumilin visited JINR. On the first day, at a meeting with the JINR Directorate, Alexander Shumilin received the Order of Friendship for his contribution to the strengthening of scientific and technical cooperation between Russia and Belarus.

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JINR at meeting in preparation for G20 events

On 8 February 2023, in Kolkata, India, an inception meeting was held in preparation for the G20 Research and Innovation Ministers' Meeting. Research and innovations for a just society were the main topic of discussion. Scientific Secretary of the Laboratory of Nuclear Reactions JINR Alexander Karpov took part in the meeting.

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Research

JINR used DIRAC platform to triple speed of scientific tasks implementation

The DIRAC Interware open platform made it possible to accelerate the processing of large sets of tasks by about three times. At the moment, the DIRAC-based service is used to solve the tasks of collaborations of all three experiments at the Accelerator Complex of the NICA Megascience Project: NPS, BM@N, and SPD, as well as the Baikal-GVD Neutrino Telescope.

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Formulas linking physics at different scales obtained in BLTP

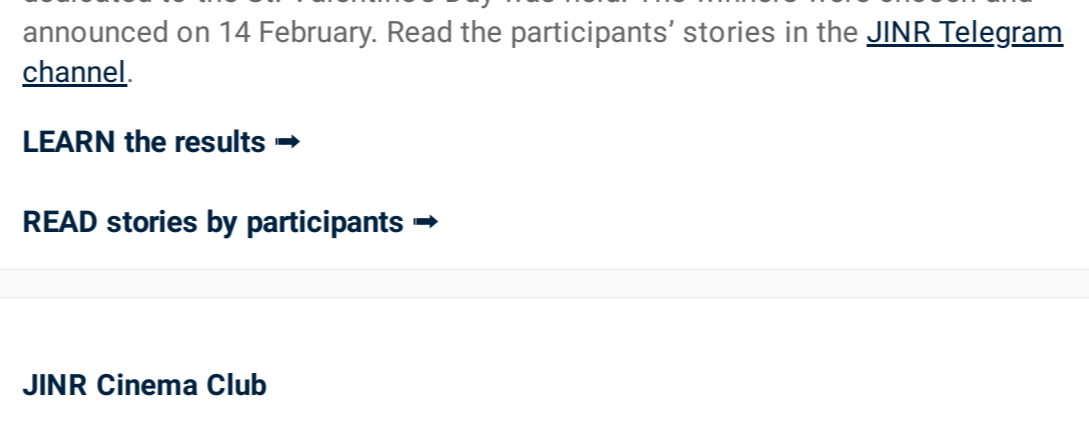
The staff of the Laboratory of Theoretical Physics JINR derived the most general formulas that make it possible to obtain multi-loop renormalization group equations in an arbitrary generalization of the Standard Model without the need for explicit calculation of millions of Feynman diagrams arising in the higher orders of the perturbation theory.

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Education

World of tiniest fractions. Lecture by Yuri Oganesian at MSU

On the Day of Russian Science, 8 February, FLNR JINR Scientific Leader Yuri Oganesian delivered a lecture "The mass boundaries of atomic nuclei" at MSU. He spoke about the prospects of research in the field of synthesis of elements that do not exist in nature, further development of the Superheavy Element Factory, and answered numerous questions from the audience.



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Scientific comics about Institute's research

JINR scientists took part in the School of Scientific Comics by the Future Time Foundation. Participants drew scientific comics about the Institute's research. Inga Zinicoscaia (FLNP) told participants about ecological studies with the use of neutrons, and Yuri Severyukhin (LRB) explained how radiation influences living organisms on the example of rodents.

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Day of Russian Science at Kadyshesky Lyceum

On 8 February, JINR scientists took part in the events organized by the Physics and Mathematics Lyceum named after Academician V. G. Kadyshesky as part of the Day of Russian Science. More than 200 students got acquainted with the major scientific projects implemented at the Institute.

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JINR Community

Female Face of Science

11 February marks the International Day of Women and Girls in Science. The Laboratory of Nuclear Problems JINR prepared a series of publications about female researchers working at the Laboratory. The first three articles are about a DLNP junior researcher Maria Lavrova, a DLNP senior researcher Katherin Stejejer Diaz, and a DLNP researcher Ayagoz Baimukhanova.

[READ about Maria Lavrova](#)

[READ about Katherin Stejejer Diaz](#)

[READ about Ayagoz Baimukhanova](#)

Competition for Valentine's Day

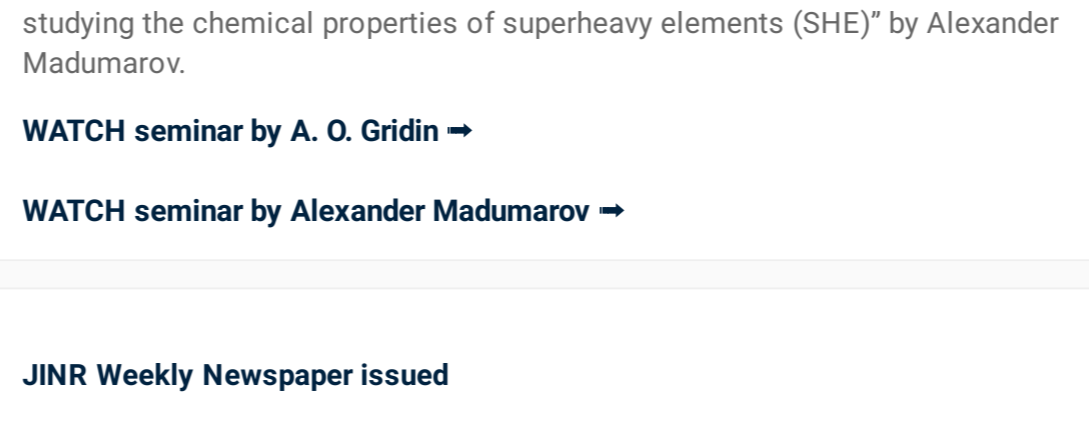
On 10 - 14 February, a Joint Hearts competition for the Institute's employees dedicated to the St. Valentine's Day was held. The winners were chosen and announced on 14 February. Read the participants' stories in the [JINR Telegram channel](#)!

[LEARN the results](#)

[READ stories by participants](#)

JINR Cinema Club

This Friday, on 17 February, at 6:00 PM, you can enjoy an interesting film "Mirror" (1974). All are kindly invited! Please note that the JINR Cinema Club will be held in the JINR Universal Public Library.



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Media

Celebrating International Day of Women and Girls in Science

We kindly invite you to watch the video portraying female scientists of the Laboratory of Nuclear Problems.

[WATCH](#)

JINR scientist at round table of Argumenty i Fakty publishing house

A VBLHEP JINR leading researcher Sergei Merets took part in a round table dedicated to the Week of Science in the Russian Federation. Participants discussed ways to attract young people to science and increase the prestige of the scientist's profession. Watch the video to learn how it was.



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[WATCH](#)

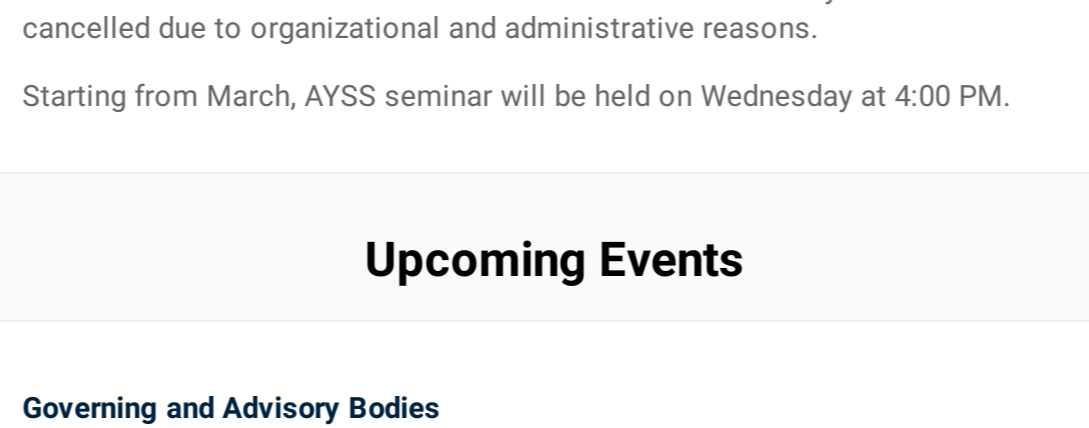
New podcast by RIA Novosti with JINR scientists

DLNP JINR researchers Alena Yakhnenko, Kirill Tarasov, and Mikhail Zarubin took part in the podcast "We will all die. But we are not sure". Scientists spoke about the discovery of a new type of extremophile bacterium and its features, as well as what sequencing and polymerase are, and how it helps "read DNA".

[LISTEN](#)

New documentary with JINR scientists

On 10 February, Anna Afanas'yeva's documentary "Trans-Siberian Railway. Moving air" premiered. Young JINR researchers, participants of the Baikal-GVD project Maksim Sorokovikov, Nikita Gorshkov, and Victoria Dik were filmed.



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Seminar recordings

We kindly invite you to watch recordings of seminars "Study of the J/psi pair production in pion-nucleon interactions" by A. O. Gridin and "Methods for studying the chemical properties of superheavy elements (SHE)" by Alexander Madumarov.

[WATCH seminar by A. O. Gridin](#)

[WATCH seminar by Alexander Madumarov](#)

JINR Weekly Newspaper issued

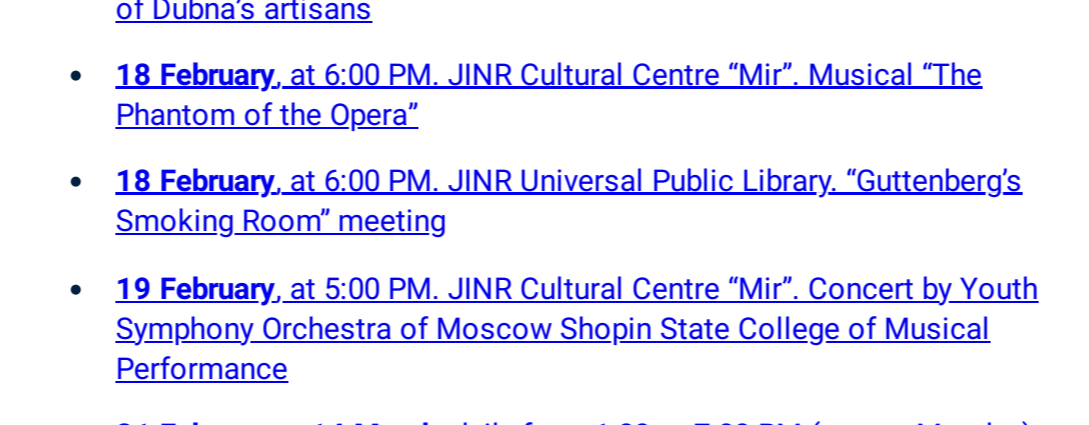
A new issue of the JINR Weekly Newspaper #6 has been published. Please note that you can read an English version on the JINR Newspaper's website.

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Recalling founders

Venedikt Dzhelepov

The Laboratory of Nuclear Problems continues to post publications about an outstanding organizer of science and talented physicist Venedikt Dzhelepov on the eve of his anniversary. The article is about school years of the scientist and contains photographs of archive materials.



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Publications

Brief review of topmost JINR scientific results of 2022

A review of topmost scientific results obtained in 2022 at JINR published. Scientific results are presented in the following areas: theoretical physics, particle physics, low-energy heavy-ion physics, neutron nuclear physics, condensed matter physics, radiation and radiobiological research, accelerator topics, information technology and computer physics, educational activities.

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New issue of Particles & Nuclei

The sixth issue of the review journal Physics of Elementary Particles and Atomic Nuclei #1 has been published. In this eminent journal, review articles examine elementary particle physics, problems of vacuum in quantum field theory, condensed matter problems, symmetries in physics, etc.

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Announcements

Registration for School on Physics of Quark-Gluon Matter opened

From 30 March to 3 April, the Joint Institute will host the School on Physics of Quark-Gluon Matter by JINR and MIPT. The programme includes lectures on theoretical image of the microworld. Participants will have excursions to the JINR laboratories. Registration is open until 1 March.

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AYSS seminar cancelled

Please note that the AYSS seminar scheduled for 16 February 2023 has been cancelled due to organizational and administrative reasons. Starting from March, AYSS seminar will be held on Wednesday at 4:00 PM.

Upcoming Events

Governing and Advisory Bodies

- 16 - 17 February, 133rd session of the JINR Scientific Council, JINR International Conference Centre, Dubna

Conferences

- 6 - 17 February, School for students and young scientists on physics at NICA collider complex at JINR, Yerevan, Armenia
- 18 - 19 February, Technical hackathon "Dubna 2023", Moscow, Belozerskaya and Mathematics Lyceum named after V. G. Kadyshesky, Dubna
- 20 - 22 February, JINR Armenian workshop "Supersymmetry in Integrable Systems (SIS'23)", Bopolubov Laboratory of Theoretical Physics, JINR

Seminars

- 16 February, at 11:00 AM, DLNP, "From measuring distribution of particle fluxes in ATLAS cavern towards computer tomography" by Georgiy Chelkov
- 17 February, at 11:00 AM, VBLHEP, "Profilometers based on microchannel plates for the VBLHEP JINR accelerator complex. Results and operating experience" by Pavel Kharyuzov
- 20 February, at 11:00 AM, BLTP, "The 2020 skyrmionics roadmap" by Raulshat Kumar Kesharski

Culture

- 26 January - 19 February, daily from 1:00 to 7:00 PM (except Monday), JINR Cultural Centre "Mir", Exhibition "The art of chessmen"
- 16 February, at 6:15 PM, JINR Universal Public Library, Open psychological workshop at "Bokthink"
- 16 February, at 7:00 PM, JINR Cultural Centre "Mir", Performance based on play by Marc Camoletti
- 16 February, at 7:00 PM, JINR Universal Public Library, Book club "Summer Reading List", discussing a science fiction novel "An Awkward Age" by Anna Starobinets
- 17 February, at 6:00 PM, JINR Universal Public Library, English Speaking Club
- 17 February 2023, at 6:00 PM, JINR Universal Public Library, JINR Cinema Club
- 17 February, at 7:00 PM, JINR Scientists' Club, Classical music concert
- 18 February, from 1:00 PM till 5:00 PM, JINR Cultural Centre "Mir", Fair of Dubna's artists
- 18 February, at 6:00 PM, JINR Cultural Centre "Mir", Musical "The Phantom of the Opera"
- 18 February, at 6:00 PM, JINR Universal Public Library, "Gutenberg's Smoking Room" meeting
- 19 February, at 5:00 PM, JINR Cultural Centre "Mir", Concert by Youth Symphony Orchestra of Moscow Shoolin State College of Musical Performance
- 21 February - 14 March, daily from 1:00 to 7:00 PM (except Monday), JINR Cultural Centre "Mir", "Bacha season" art exhibition

Sports

- 16 February - 26 March, JINR Sports Complex, XXIV JINR Sports Games
- 23 February, JINR Sports Club, Open kettlebell lifting tournament

For Kids

- 16 February, at 6:30 PM, JINR Universal Public Library, Detective Club for teenagers
- 18 February, at 3:00 PM, JINR Universal Public Library, Meetings "In touch", "Engineering", and "Let's READers"

[ALL JINR EVENTS](#)