

JINR Newsletter #22, 19 June 2024

Dear colleagues and friends,

A momentous event took place at JINR last week: the technological commissioning of the superconducting *collider* of the NICA Accelerator Complex were officially initiated. President of the Russian Federation Vladimir Putin personally authorized the launch. On the same day a meeting of the Council for Science and Education chaired by the President took place at JINR.

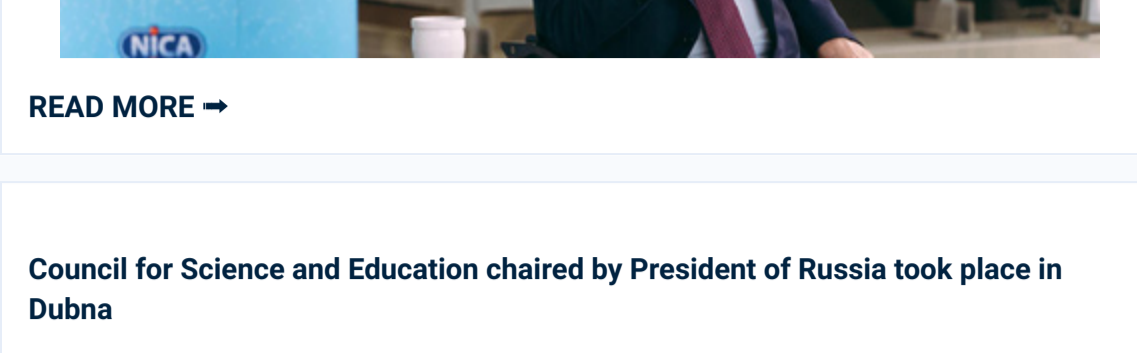
The scientific life of the Institute was active as well. Summer meetings of the JINR Programme Advisory Committees on Nuclear Physics and Particle Physics were held. A scientific webinar was organized at the JINR Information Centre in Tbilisi, and an AVSS JINR conference took place in Alushta. Read about this and much more in the latest issue of the JINR Newsletter.



Breaking News

President of Russia initiates technological run of NICA Collider

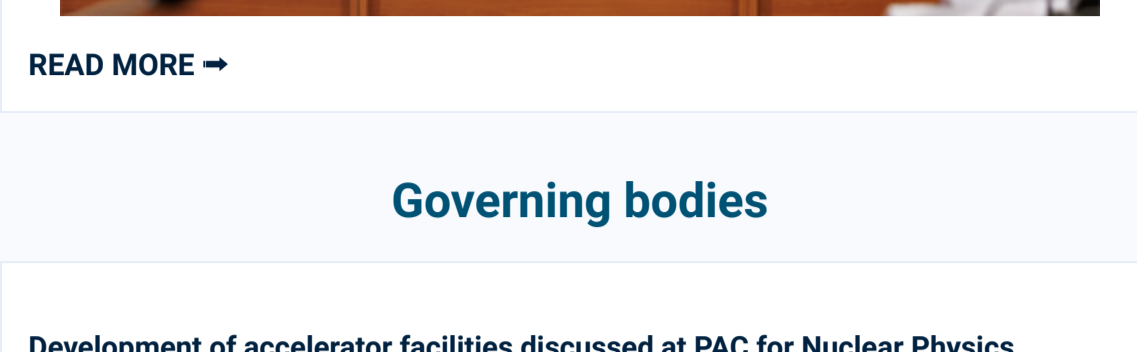
On 13 June 2024, Vladimir Putin visited Dubna. He toured the NICA Complex and held a meeting with leading scientists from Russia and other countries and winners of mega-grants for scientific research. As part of the visit, the President authorized the supply of a test current to the NICA magnetic system.



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Council for Science and Education chaired by President of Russia took place in Dubna

On 13 June, Vladimir Putin held a meeting of the Council for Science and Education at JINR to discuss the establishment and implementation of national projects supporting technological sovereignty. Following the meeting, a decree approving the key areas of the scientific development of Russia will be signed.



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Governing bodies

Development of accelerator facilities discussed at PAC for Nuclear Physics

On 13–14 June, the 59th Meeting of the Programme Advisory Committee for Nuclear Physics took place at JINR. Scientific reports and presentations on the topics of LNR, DLNP, and MLT JINR research were made.



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PAC for Particle Physics: present and future research at NICA

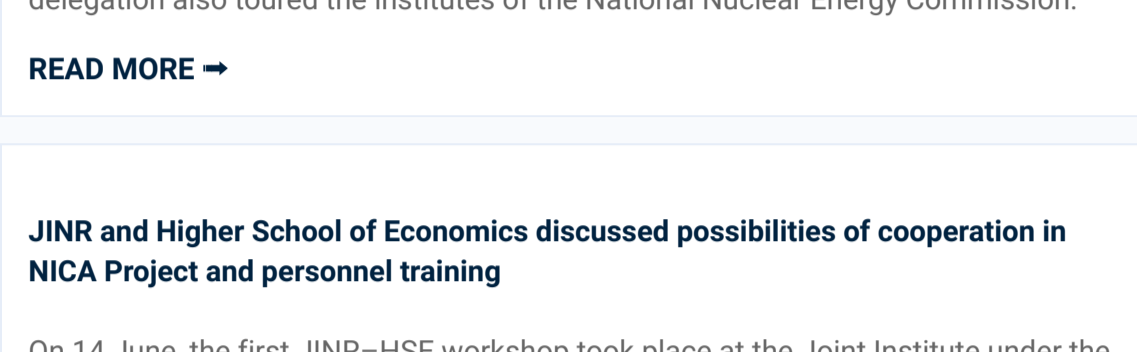
17 June marked the 60th meeting of the Programme Advisory Committee for Particle Physics. Participants heard reports on the particle physics projects with JINR participation, with a special focus on the NICA Complex. New initiatives and proposals to prolong the finishing JINR projects were reviewed.

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Cooperation

JINR delegation visits Brazil: new steps and areas of cooperation

In the second half of May, JINR representatives participated in the Autumn Meeting of the Brazilian Physical Society in Florianópolis and a seminar of the Faculty of Physics of the Federal University of Santa Catarina. As part of the visit, the delegation also toured the institutes of the National Nuclear Energy Commission.



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Issues of radiation cytogenetics discussed at Arab Atomic Energy Agency

In the second half of May, JINR representatives participated in the Autumn Meeting of the Brazilian Physical Society in Florianópolis and a seminar of the Faculty of Physics of the Federal University of Santa Catarina. As part of the visit, the delegation also toured the institutes of the National Nuclear Energy Commission.

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JINR and Higher School of Economics discussed possibilities of cooperation in NICA Project and personnel training

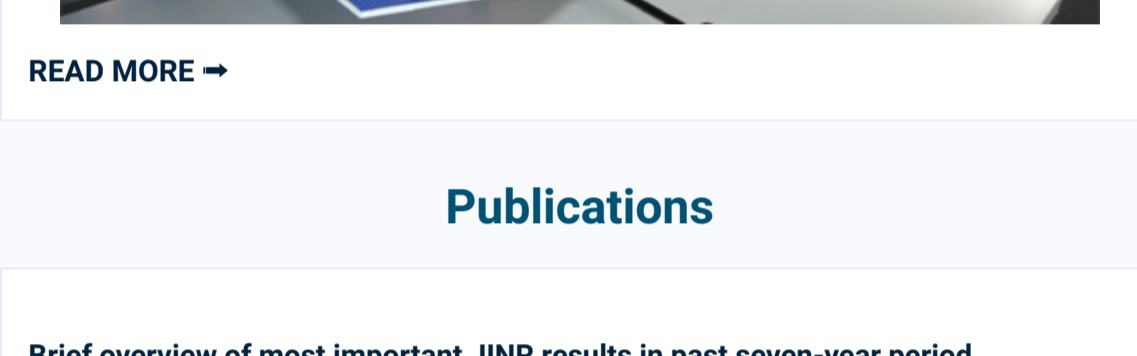
On 14 June, the first JINR–HSE workshop took place at the Joint Institute under the cooperation agreement signed in March. The parties discussed potential joint work in science, conference organization, and culture, and exchanged experiences.

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Seminars

Seminar in memory of Nikolai Plakida held at BLTP JINR

On 6 June, a seminar commemorating the 87th anniversary of the birth of the Honorary JINR Employee, Doctor of Physics and Mathematics, Professor Nikolai Plakida (1937–2022) took place.

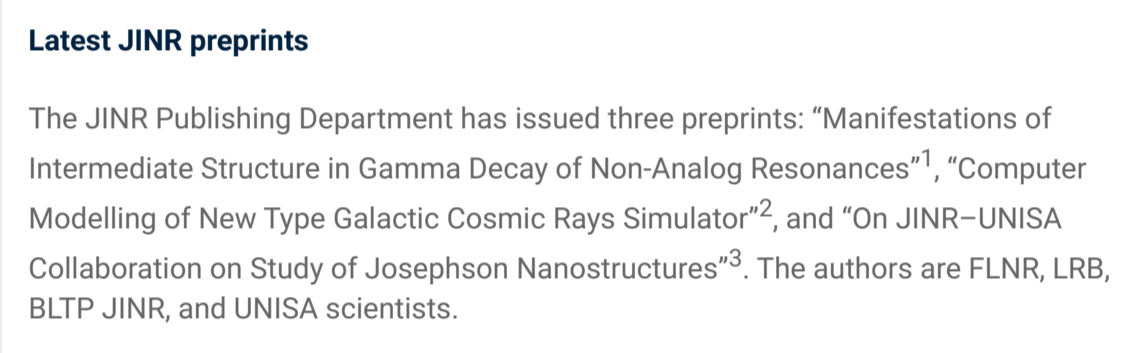


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Research

JINR scientists preparing for astrobiology experiment

LRB at JINR together with the RAS Institute of Biomedical Problems will study the possibility of synthesizing prebiotic compounds from a mixture of formamide and ancient rocks in outer space. The results of this research may provide new insights into possible mechanisms for the origin of life on Earth and other planets.



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Publications

Brief overview of most important JINR results in past seven-year period

An overview of JINR achievements in science and development of research infrastructure in 2017–2023 has been published. It presents progress made in JINR projects, statistics related to the institute's work, and awards received by JINR scientists.



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Latest JINR preprints

The JINR Publishing Department has issued three preprints: "Manifestations of Intermediate Structure in Gamma Decay of Non-Analog Resonances"¹, "Computer Modelling of New Type Galactic Cosmic Rays Simulator"², and "On JINR–UNISA Collaboration on Study of Josephson Nanostructures"³. The authors are FLNR, LRB, BLTP JINR, and UNISA scientists.

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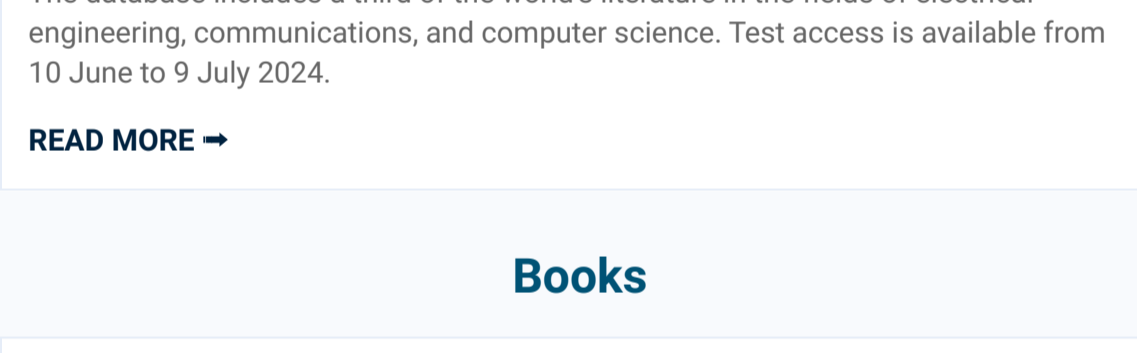
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Conferences

Stage of Regional Rosatom–IAEA School took place at JINR

On 3–4 June, international experts from 11 countries visited JINR as part of the school on research reactors organized by Rosatom and the International Atomic Energy Agency (IAEA). At the Frank Laboratory of Neutron Physics, they discussed the use of modern neutron sources to solve problems in reactor physics.



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Annual youth conference in Alushta

The 15th AVSS–JINR Conference of Young Scientists and Specialists took place on 9–16 June 2024. 45 participants from the Czech Republic, Egypt, Vietnam, Kazakhstan, and Russia attended the event. This year, the conference is dedicated to the modern achievements of medical physics.

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Development of science cities discussed at JINR

On 14 June, on the Day of Science Cities of the Moscow Region, JINR hosted a conference "Science cities of Russia: current objectives". At the event, JINR Director Grigory Tsubnikov presented the project of the International Innovation Park of Science and Technology, which is planned to be built in Dubna.

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Registration for MMCP 2024 International Conference opens

The "Mathematical Modeling and Computational Physics–2024" (MMCP-2024) conference will take place in Yerevan, Armenia, on 21–28 October 2024. The working language of the event is English. Registration is available until 31 August [via the link](#).

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JINR Social

JINR employees acquired test access to resources of IEEE Electronic Library (IEL)

The database includes a third of the world's literature in the fields of electrical engineering, communications, and computer science. Test access is available from 10 June to 9 July 2024.

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Books

New Book Acquisitions exhibition in S&T Library

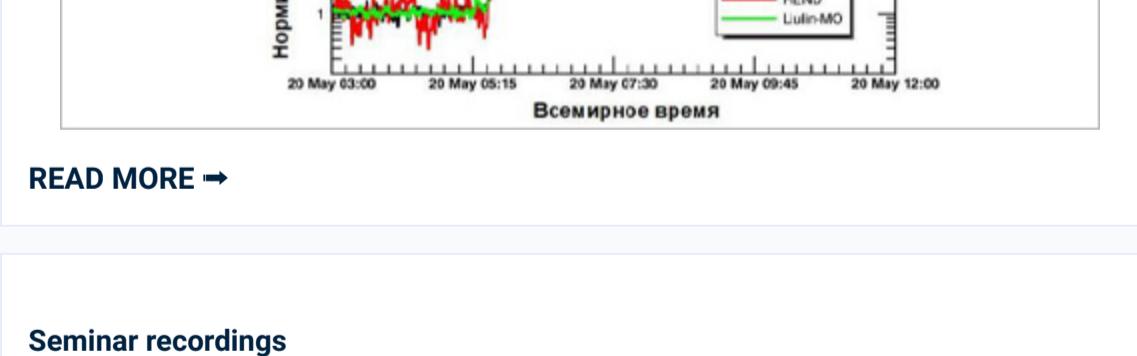
On 10–28 June, the JINR Science and Technology Library is hosting the New Book Acquisitions exhibition. Among books on mathematics, geometry, thermodynamics, etc., the exhibition features the Physicist and Time brochure dedicated to the 90th anniversary of the outstanding JINR scientist, Professor Vladimir A. Nikitin.

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Announcements

Master's course for future specialists at megascience projects

Novosibirsk State University invites bachelors in physics, chemistry, geology, and biology to join the Master's course in megascience. Enrolment is available until 5 August. More information is available [via the link](#).

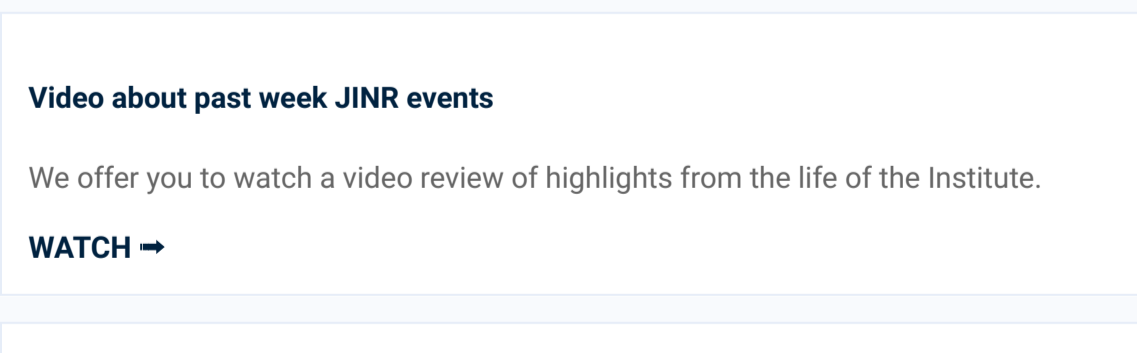


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Media

NICA Megascience Project

We offer you a video dedicated to the construction of NICA (Nucleon-based Ion Collider Facility) at JINR.



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Video on PAC for Nuclear Physics

Please enjoy a video about the 59th Meeting of the Programme Advisory Committee for Nuclear Physics, which took place on 13–14 June.

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Video on Rosatom–IAEA Research Reactor School

We offer to your attention a video about the Regional School organized by Rosatom and the International Atomic Energy Agency, a stage of which JINR recently hosted.

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Series of articles dedicated to DLNP JINR anniversary

This December, DLNP celebrates 75 years since the launch of the synchrocyclotron and the Laboratory's foundation. Every Friday, a new article will be published on the DLNP website as part of the series dedicated to the accelerator, the scientists who worked on it, and the development of other fields of research.

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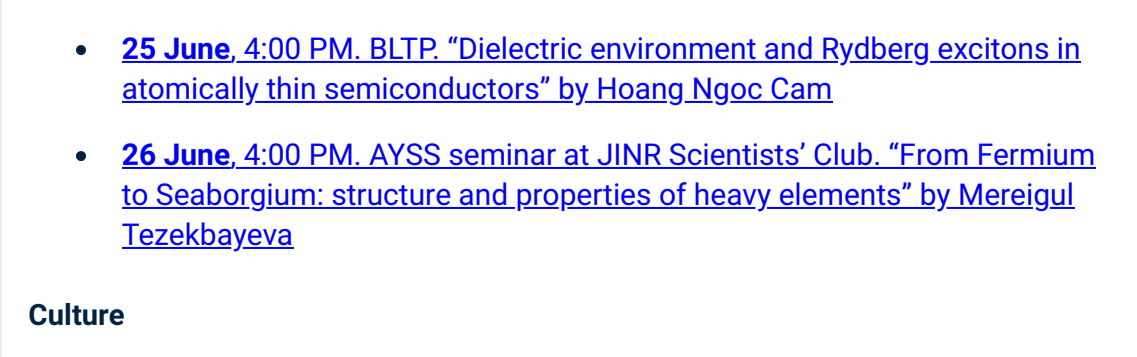
Photo exhibition by DLNP JINR researcher

The exhibition by Bair Shepobov dedicated to Baikal-GVD is taking place on 10–24 June at the Twelve Collegia, Saint Petersburg.

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Massive solar outburst strikes Mars

The outburst was registered by the nuclear instruments of the RAS Space Research Institute developed in collaboration with JINR. The natural phenomenon is a clear example of the significant and damaging impact that solar activity could have on future manned missions to Mars.



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Seminar recordings

We offer you to watch recordings of seminars "Revelation of bipolar short-pulse shaping unit"¹ by Oleg Seroshnikov and "Creation of neural network models for image classification on a small dataset using the example of plant disease classification"² by Alexander Uzhinsky.

[WATCH¹ →](#)

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JINR News bulletin #2, 2024 issued

The JINR News bulletin is issued four times a year, providing information on new scientific results obtained at JINR laboratories, updates on large-scale experiments, construction of new facilities, discoveries, inventions, etc. JINR social life is also presented extensively.

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Video about past week JINR events

We offer you to watch a video review of highlights from the life of the Institute.

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JINR Weekly Newspaper issued

A new issue of the JINR Weekly Newspaper #23 has been published. Please note that you can read an English version on the JINR Newspaper's website.

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Sports

JINR successes in running and swimming competitions

On 12 June, Milena Kalina won the 4th race of the Running Around the Golden Ring of Russia half-marathon. On the same day, Maria Aikina won the SVZK SWIM Competition in Muzhaysk. Congratulations to the athletes on the successful performance!

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Upcoming Events

Conferences

- **1 June – 30 November.** Student programme STARP 2024. JINR, Dubna
- **2 – 21 June.** Stage 1 of International Students Practice in Research for students from RSA. JINR, Dubna
- **19 – 21 June.** 8th International Conference on Deep Learning in Computational Physics, Moscow, Russia
- **24 – 25 June.** 59th Meeting of the Programme Advisory Committee for Condensed Matter Physics. JINR, Dubna
- **24 – 26 June.** Scientific School for Schoolchildren of Tomsk Region. JINR, Dubna
- **24 – 28 June.** XXXI International Seminar Nonlinear Phenomena in Complex Systems. Minsk, Belarus

Seminars

- **20 June, 10:00 AM.** VBLHEP. "Energy evacuation key from superconducting magnets of power supply system of VBLHEP JINR test bench" by Alexey Ruzhishin
- **20 June, 10:30 AM.** BLTP. "Analysis of the proton armillature of scattering on the bounded nuclear nucleus basing on the proton-nucleus scattering data" by Ibrahim Abdulmajid
- **20 June, 11:00 AM.** VBLHEP. "Trigger generation system at the BM@N and SRC Experiments. Slow control system for the MPD Facility and the FFD Detector" by Sergey Stetsko
- **20 June, 11:30 AM.** VBLHEP. "Discussion on Council "Correction of helical magnetic field of NICA Booster" by Mikhail Shandrov
- **20 June, 3:00 PM.** MLT. "Size, Shape, and Deformation of Nuclei" by Genniy Musulmanbekov
- **25 June, 4:00 PM.** BLTP. "Dielectric environment and Rydberg excitons in atomically thin semiconductors" by Hoang Ngoc Cam
- **26 June, 4:00 PM.** AVSS seminar at JINR Scientists' Club. "From Fermium to seaborgium: structure and properties of heavy elements" by Merouajel Tezkaeva

Culture

- **19 June – 14 July.** Daily from 1:00 to 7:00 PM (except Monday). JINR Cultural Centre "Mir". Exhibition of wood carving and painting
- **20 June, 7:00 PM.** JINR Universal Public Library. Summer Reading List Book Club
- **21 June, 6:00 PM.** JINR Universal Public Library. English speaking club
- **21 June, 6:00 PM.** JINR Universal Public Library. JINR Cinema Gallery
- **23 June.** JINR Scientists' Club. Excursion to the Tretyakov Gallery
- **25 June, 4:30 PM.** JINR Scientists' Club. "Islamic world and Russia: development prospects" lecture

Sports

- **22 June, 12:30 PM.** JINR Archimedes Swimming Pool. Swimming competitions

[ALL JINR EVENTS →](#)