



## JINR Newsletter #48, 24 December 2025

Dear colleagues and friends,

The first heavy xenon ion beam was injected into the collider ring of the NICA Accelerator Complex. This marks an important milestone in the implementation of the megascience project. In addition, JINR launched a cooling centre of a half-ring of the collider. With those two important events, the complex entered the key commissioning phase preceding the start of physics experiments.

JINR specialists are taking part in joint experiments on the Bion-M No. 2 biosatellite. The researchers are studying the risks associated with increased radiation levels in polar orbit, which is of particular importance for the Russian Orbital Service Station under development.

Ahead of us is a holiday season, and the Joint Institute has begun celebrating with the Christmas concert at the Synchrotron Hall. The latest JINR Newsletter features videos from the concert, the New Year giveaway, articles about recent seminars, and much more.

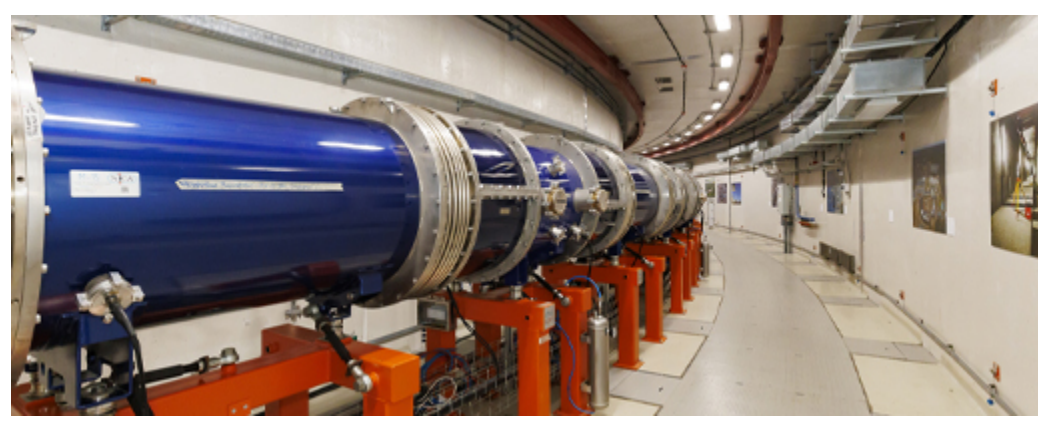
JINR Press Office



### Flagship Projects

#### First beam successfully injected into NICA Collider

JINR reached an important milestone in the implementation of the NICA Megascience Project. On 18 December, a heavy xenon ion beam was injected into the collider ring for the first time. This event marks the accelerator complex entering a key phase of commissioning, which precedes the start of physical experiments.



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#### JINR launched cooling centre of eastern NICA Collider half-ring

The Laboratory of High Energy Physics at JINR is commissioning the key components of the CC3 Cooling Centre and the WC3 Water Cooling System at the NICA Accelerator Complex. Putting this equipment into operation leads to the final stage of preparing the complex for a physics run with circulating heavy ion beams.

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#### Methods of experimental data processing and analysis discussed at NICA 2025 workshop

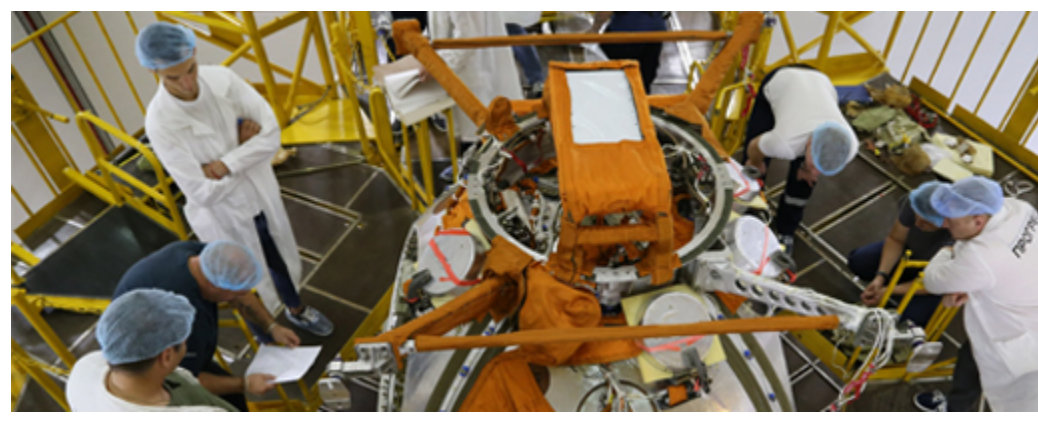
On 15–17 December, the NICA 2025 workshop organized by JINR and MEPhI took place. The event was dedicated to discussing current theoretical and experimental aspects of the physics of relativistic collisions of heavy ions, sharing experiences, and searching for new ideas to improve the effectiveness of future research.

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### Research

#### JINR in scientific programme of Bion-M No. 2

Scientists of JINR and the Institute of Biomedical Problems of the Russian Academy of Sciences are participating in joint experiments on the Bion-M No. 2 biosatellite. The main goal is a comprehensive study of the risks associated with increased radiation levels in polar orbit.



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### Education

#### Dubna University held first International School for CIS Students and Scientists

More than 40 students, young researchers, and teachers from six countries participated in the event. The school is supposed to become a platform for new connections and ideas for cooperation, showing participants the opportunities of the unique research infrastructure of JINR and the University's laboratories.

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#### English without borders: talking about science and culture

During the educational meetings with Dubna schoolchildren, JINR's English-speaking scientists and specialists talked about their homeland, culture, career path, and answered questions from the audience. The initiative continued the tradition of active cooperation between the Institute's employees and schools.



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#### First JINR school for South African teachers

The programme included an introduction to the JINR research and achievements, visits to laboratories and main facilities, lectures by JINR scientists, and workshops. The aim of the school was to give 11 participants from South Africa opportunities to adapt and use the gained experience at home.

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### Tributes

#### JINR hosted seminar commemorating Albert Tavkhelidze

On 18 December, the Laboratory of Theoretical Physics held a seminar dedicated to the 95th anniversary of Albert Tavkhelidze, a JINR founding father, an organizer of scientific activities, and one of the outstanding researchers who shaped the image of the Institute.



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### Announcements

#### JINR sociological survey

The Joint Institute is conducting an annual employee satisfaction survey. Results are shared with the Directorate and published online. Take part anonymously and help make JINR better.

[ENGLISH →](#)  
[RUSSIAN →](#)

### Media

#### Christmas concert at JINR Synchrotron Hall

The State Chamber Orchestra of Jazz Music led by the People's Artist of Russia, conductor Boris Franklin performed the Memory of Heart programme marking the 80th anniversary of Victory in the Great Patriotic War and the World War II. Mariam Merabova performed solos.



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#### New Year giveaway

JINR is hosting a giveaway of branded T-shirts this year. You can find the participation terms in the Institute's Telegram channel. The winners will be announced on 26 December. Don't miss your chance to win JINR merch!

[PARTICIPATE →](#)

#### LRB employees visited Institute of Physiology of Belarus

The researchers got acquainted with opportunities for experiments and discussed cooperation in neuroscience and radiobiology. Special attention was paid to the technical equipment and current projects of the Brain Centre, the Centre for Morphological Research, and the Laboratory of Nutrition and Sports Physiology.



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#### Seminar recordings

We invite you to watch recordings of the seminars "Inclusive cross sections of direct generation of  $J/\psi$  and  $J/\psi(3686)^1$ " by Olga Bakina, "Gamma radiation effect on the scintillation properties of an inorganic BaF<sub>2</sub> scintillator"<sup>2</sup> by Ilya Vasilyev, and "Formation of the cyclotron magnetic field for particle dynamics"<sup>3</sup> by Ivan Lyapin.

[WATCH<sup>1</sup> →](#)  
[WATCH<sup>2</sup> →](#)  
[WATCH<sup>3</sup> →](#)

#### Weekly JINR Newspaper issued

A new issue of the Weekly JINR Newspaper, #49, has been published. Please note that you can read an English version on the JINR Newspaper's website.

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### Sports

#### Volleyball and air rifle shooting achievements

On Saturday, a JINR team won a volleyball tournament dedicated to an anniversary of Nikolay Tamberg. In addition, the medalists and prize-winners of the JINR championship in air rifle shooting, which took place in November, were awarded. Congratulations to our colleagues on the accomplishment!



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#### JINR in Dubna Spartakiad

A team of the Joint Institute for Nuclear Research took first place based on the year's results. We congratulate the athletes and wish them further success!

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### Upcoming Events

#### Seminars

- **25 December, 11:00 AM, DLNP** "Hybrid modules for the ATLAS HGTD detector: setup and calibration. Radiation resistance of electronic components for experiments at high luminosity colliders" by Nikolay Atanov
- **25 December, 2:00 PM, DLNP** "JUNO Experiment: 10 years later" by Dmitry Naumov
- **26 December, 12:00 PM, MLT** Employee meeting. [Results of 2025](#)
- **26 December, 3:00 PM, LRB** Seminar on the results of the laboratory's activities in 2025

#### Culture

- **11 December – 11 January**, Daily from 1:00 to 7:00 PM (except Monday). [JINR Mir Cultural Centre. Painting and handicrafts exhibition](#)
- **25 December, 6:00 PM**, JINR Universal Public Library, [English speaking club](#)
- **25 December, 7:00 PM**, JINR Universal Public Library, [Hairpin book club](#)
- **25 December, 7:00 PM**, JINR Mir Cultural Centre, [New Year concert of choir of Danilov Monastery](#)
- **26 December, 6:00 PM**, JINR Universal Public Library, [JINR Cinema Club](#)
- **27 December, 6:00 PM**, JINR Universal Public Library, [Gutenberg's Smoking Room meeting](#)
- **29 December, 7:00 PM**, JINR Universal Public Library, [Genealogical club's meeting](#)

#### Sports

- **27 December, 3:00 PM**, JINR Sports Club, [Open New Year's weightlifting competition in memory of A. M. Weinstein](#)

[ALL JINR EVENTS →](#)