



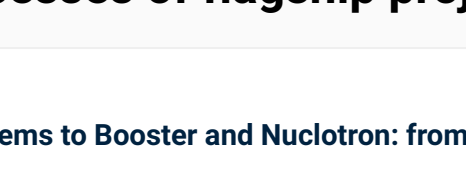
JINR Newsletter #33, 24 August 2023

Dear colleagues and friends,

This week, JINR has celebrated the 110th anniversary of the birth of Bruno Pontecorvo. By this date, the Institute has published a number of materials about this outstanding Italian and Soviet physicist. Two exhibition have been opened at the JINR Cultural Centre "Mir" and the JINR Administrative building. A brochure has been published with the memoirs of Vladimir Komarov, a colleague of the famous physicist. Yuri Oganessian and Mikhail Sapozhnikov shared their memories of "Mr. Neutrino" on Russian TV.

We would like to show you overviews of major tasks solved in JINR flagship projects, and recently published JINR preprints. A new issue of the project bulletin will tell you about the latest news of the NICA Megascience Project.

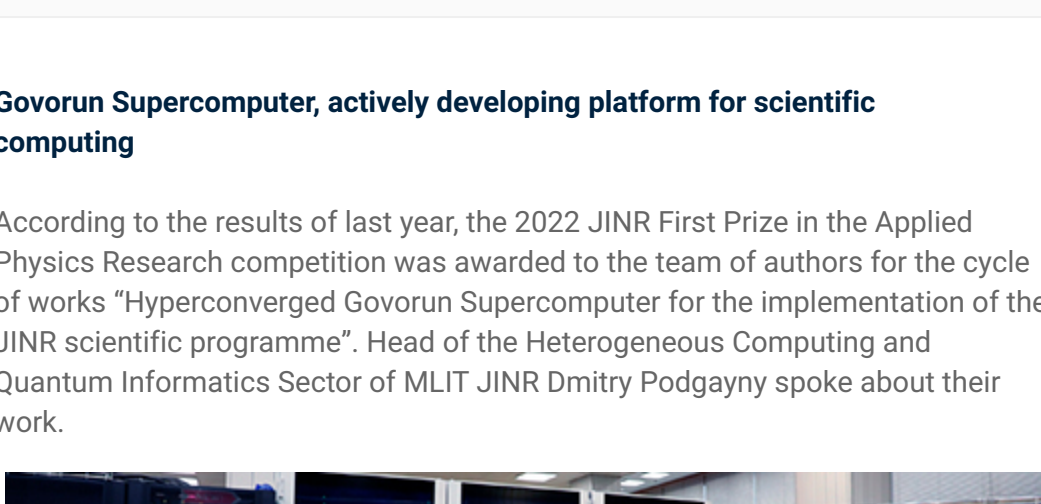
JINR Press Office



Successes of flagship projects

Ion beam transfer systems to Booster and Nuclotron: from design to first runs

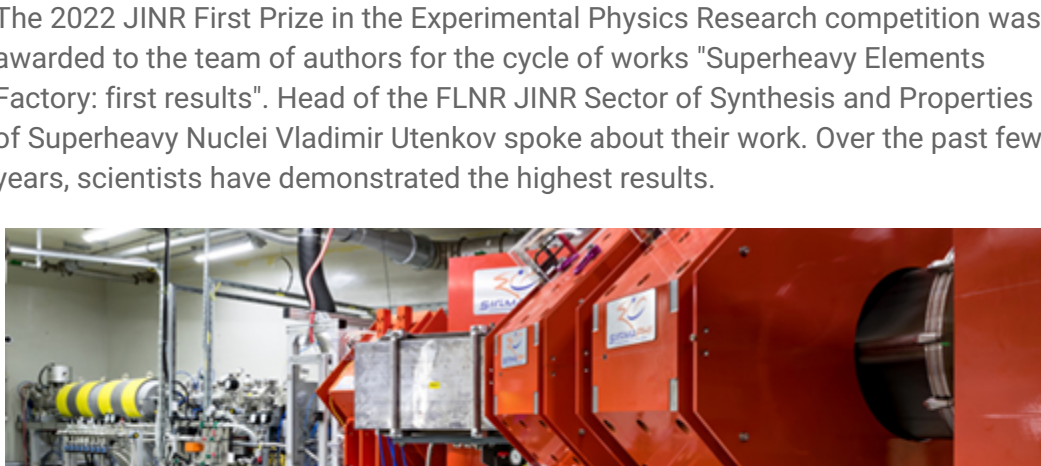
In 2022, a team of VBLHEP employees was awarded the JINR First Prize for a cycle of work on the NICA Accelerator Complex. The cycle contains more than 30 scientific articles on the development of methods of beam injection into the Booster and the Nuclotron, the creation of beam transportation channels, commissioning, etc.



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Govorun Supercomputer, actively developing platform for scientific computing

According to the results of last year, the 2022 JINR First Prize in the Applied Physics Research competition was awarded to the team of authors for the cycle of works "Hyperconverged Govorun Supercomputer for the implementation of the JINR scientific programme". Head of the FLNR JINR Sector of Synthesis and Properties of Superheavy Nuclei Vladimir Utenkov spoke about their work. Over the past few years, scientists have demonstrated the highest results.



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Overview of results obtained at Superheavy Elements Factory

The 2022 JINR First Prize in the Experimental Physics Research competition was awarded to the team of authors for the cycle of works "Superheavy Elements Factory: first results". Head of the FLNR JINR Sector of Synthesis and Properties of Superheavy Nuclei Vladimir Utenkov spoke about their work. Over the past few years, scientists have demonstrated the highest results.



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Cooperation

Strong ties with JINR Member States: Uzbekistan

JINR Director RAS Academician Grigory Trubnikov has received a personal commendation from President of the Republic of Uzbekistan Shavkat Mirziyoyev. Cooperation between JINR and Uzbekistan, which has lasted all the years of the Institute's existence since its foundation, is actively expanding now.

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Visit of delegation from Obninsk Institute for Nuclear Power Engineering

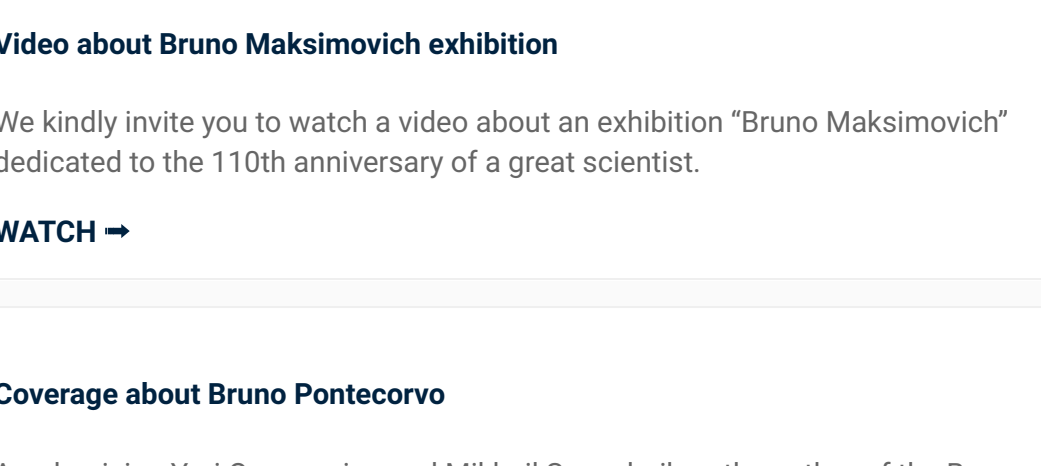
Representatives of the Obninsk Institute for Nuclear Power Engineering arrived in Dubna. They discussed the development of cooperation with leaders of Dubna University and also visited the Laboratory of Nuclear Reactions and the Dubna SEZ.

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Celebrating 110th anniversary of Bruno Pontecorvo

On 110th anniversary of birth of Bruno Pontecorvo

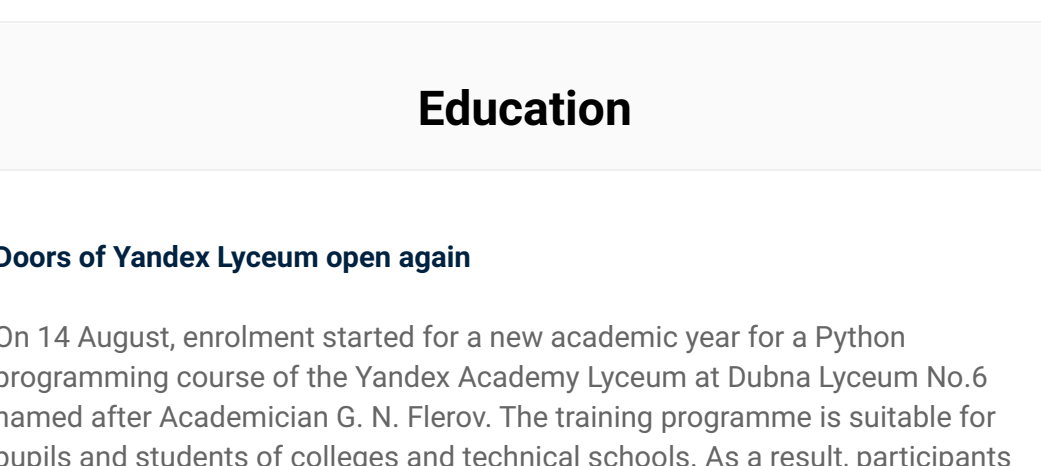
22 August marks the 110th anniversary of the birth of one of the JINR founders. Bruno Pontecorvo. He was the first in the world to put forward the idea of neutrino oscillations, gave the world a method of oil and gas exploration, the neutron logging, and co-authored the discovery of the neutron deceleration effect.



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Exhibition dedicated to Bruno Pontecorvo opened in Dubna

On 22 August, an exhibition "Bruno Maksimovich" opened at the JINR Cultural Centre "Mir". It is dedicated to the 110th anniversary of the birth of an outstanding Italian and Soviet physicist Bruno Pontecorvo. The exhibition presents friendly caricatures by Mikhail Bilenky, photos of different years by Yuri Tumanov, and documents from the scientist's memorial office.



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Video about Bruno Maksimovich exhibition

We kindly invite you to watch a video about an exhibition "Bruno Maksimovich" dedicated to the 110th anniversary of a great scientist.

[WATCH →](#)

Coverage about Bruno Pontecorvo

Academician Yuri Oganessian and Mikhail Sapozhnikov, the author of the Bruno Pontecorvo's biography, have recalled an extraordinary, bright, and interesting life of the legend of the world of physics. You can hear their stories in the Calendar programme by the Public Television of Russia TV channel, released for the anniversary of a great physicist on 22 August.

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Conferences

21st Lomonosov Conference started

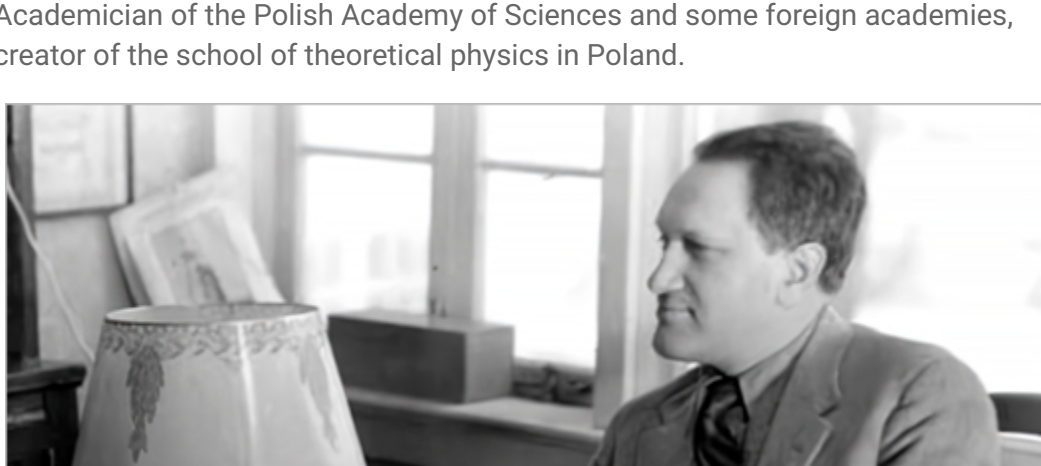
The event is taking place at the MSU Faculty of Physics. It is dedicated to the 90th anniversary of the MSU Faculty of Physics, the 270th anniversary of MSU, and the 300th anniversary of the Russian Academy of Sciences. As part of the scientific programme of the Conference, the 15th International School on Neutrino Physics and Astrophysics will be held, dedicated to the 110th anniversary of the birth of Bruno Pontecorvo. JINR scientists will deliver 26 reports at the Conference.

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Education

Doors of Yandex Lyceum open again

On 14 August, enrolment started for a new academic year for a Python programming course of the Yandex Academy Lyceum at Dubna Lyceum No.6 named after Academician G. N. Flerov. The training programme is suitable for pupils and students of colleges and technical schools. As a result, participants will learn the fundamentals of Python and learn how to make forecasts, build charts, and conduct analytics.

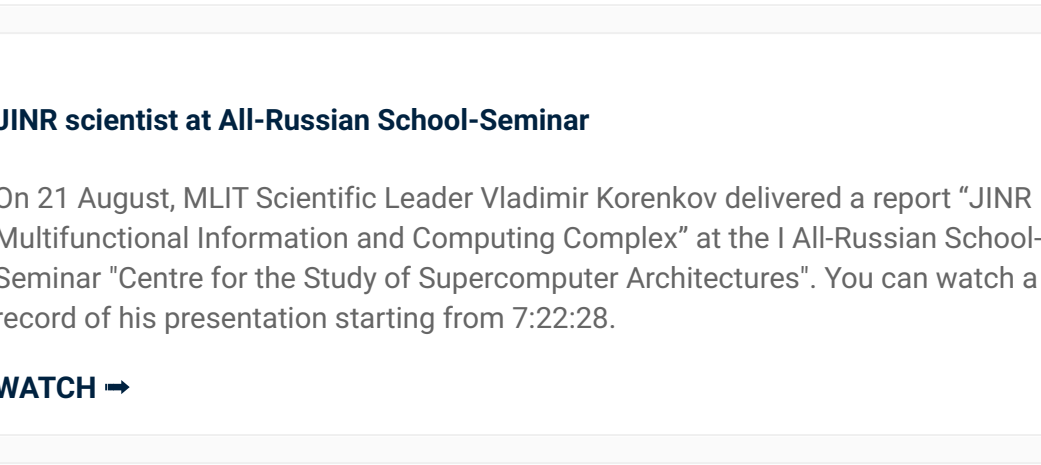


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Publications

Fresh NICA Bulletin

The tenth issue of the NICA Bulletin has been published reviewing the progress of the implementation of the JINR flagship international project "NICA Complex". The headlines of the new issue: bringing milestones into step, results of the 58th Meeting of the Programme Advisory Committee for Particle Physics, prospects for the accelerator complex development, etc.



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Kinematic fitting in restored film information processing (FIP) in pictures from bubble chambers

The JINR Publishing Department has issued a preprint "Kinematic fitting in the restored film information processing (FIP) in pictures from bubble chambers" P10-2023-21. The authors are Alexander Belyaev (VBLHEP JINR) and Victor Rikhsitsky (MLIT JINR).

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Research of response of neutron dosimeter DVGN-01 in field of DC-280 to correct its readings

We offer to your attention a preprint "Experimental research of the response of the albedo individual neutron dosimeter DVGN-01 in the field of the accelerator DC-280 to correct its readings" P16-2023-24 issued by the JINR Publishing Department. The authors are Yuri Mokrov et al.

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Accumulator of cold and very cold neutrons

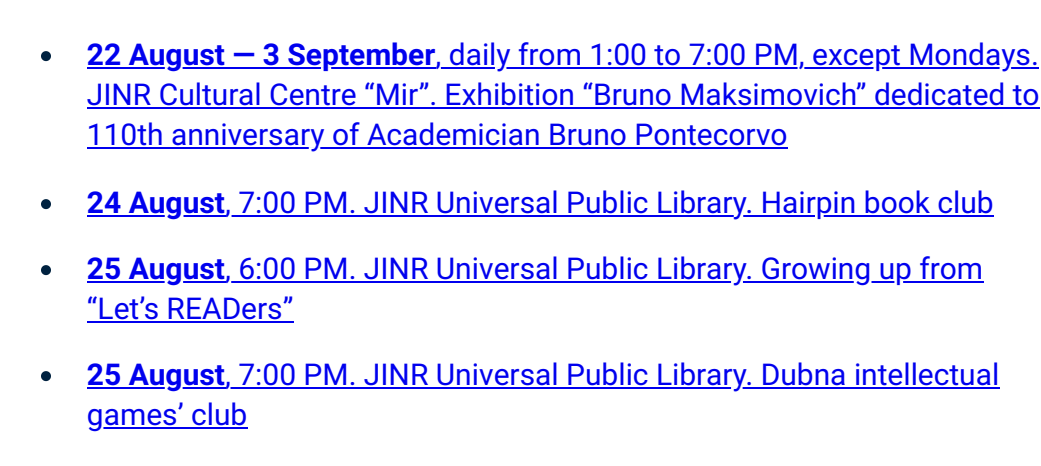
We would like to offer you one more preprint "Accumulator of cold and very cold neutrons" P13-2023-28 issued by the JINR Publishing Department. The author is Yuri Nikitenko.

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Recalling founders

Leopold Infeld, world-class theoretical physicist and peace fighter

20 August marks the 125th anniversary of the birth of a famous theoretical physicist, one of the JINR founders Leopold Infeld (1898 – 1968). He was an Academician of the Polish Academy of Sciences and some foreign academies, creator of the school of theoretical physics in Poland.



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Media

Filming about study of fossilised microorganisms

On 22 August, LRB hosted the filming of a documentary project on cosmobiology for the Science 2.0 TV channel. JINR scientists Mikhail Karpalov and Anton Ryumin told journalists about the study of fossilised microorganisms discovered in the Orgueil meteorite.

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JINR scientist at All-Russian School-Seminar

On 21 August, MLIT Scientific Leader Vladimir Korenkov delivered a report "JINR Multifunctional Information and Computing Complex" at the I All-Russian School-Seminar "Centre for the Study of Supercomputer Architectures". You can watch a record of his presentation starting from 7:22:28.

[WATCH →](#)

New podcast by RIA Novosti with JINR scientist

How do scientists look for "mysterious" dark matter particles? Why would there not only be no people without dark matter, but also no universe as we observe it? A BLTP staff member Anton Baushev answered these and other questions in a new episode of the popular science podcast "We will all die. But we are not sure".

[LISTEN →](#)

Video about Science Through the Looking Glass exhibition

19 August marks World Photography Day. This is a good reason to recall the Science Through the Looking Glass exhibition on the Mendelev Embankment. Visitors could look into the scientific world of the Joint Institute and see how scientists work. Citizens, exhibition's organizers, and JINR employees have shared their impressions.

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Video about past week JINR events

We offer you to watch a video review of recent events from the life of the Institute and Dubna.

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JINR Weekly Newspaper issued

A new issue of the JINR Weekly Newspaper #31 has been published. Please note that you can read an English version on the JINR Newspaper's website.

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Upcoming Events

Conferences

- **24 – 30 August, 21st Lomonosov Conference on Elementary Particle Physics, MSU, Moscow**
- **27 August – 3 September, XV International School-Conference "Actual Problems of Microworld Physics", Minsk, Belarus**
- **28 – 29 August, The use of new methods for processing data of a physical experiment. Application of machine learning methods on the NICA Complex, St. Petersburg**

Seminars

- **24 August, 4:00 PM, BLTP, "Collinear logarithms and IBP reduction in parametric representation" by Roman Li**
- **28 August, 11:00 AM, BLTP, "Exploring QCD matter in extreme conditions with Machine Learning" by Chitta Ranjan Das**
- **31 August, 3:00 PM, BLTP, "Antiworlds and primordial black holes" by Alexander Dolgov**

Culture

- **22 August – 3 September, daily from 1:00 to 2:00 PM, except Mondays, JINR Cultural Centre "Mir", Exhibition "Bruno Maksimovich" dedicated to 110th anniversary of Academician Bruno Pontecorvo**
- **24 August, 7:00 PM, JINR Universal Public Library, Hairpin book club**
- **25 August, 6:00 PM, JINR Universal Public Library, Growing up from "Let's READers"**
- **25 August, 7:00 PM, JINR Universal Public Library, Dubna intellectual games' club**

[ALL JINR EVENTS →](#)