

SCIENCE BRINGS NATIONS TOGETHER



JOINT INSTITUTE FOR NUCLEAR RESEARCH

## JINR Newsletter #7, 12 May 2022

*Dear colleagues and friends!*

*"Don't put off making scientific discoveries since science is moving forward by the efforts of young people," former JINR Director Vladimir Kadyshevsky said. JINR celebrated the 85th anniversary of the birth of this outstanding theoretical physicist on 5 May. The Institute is actively attracting the youth to science, including by creating a network of information centres. The most Eastern of them has recently opened in Petropavlovsk-Kamchatsky.*

*Lots of new things are happening in our joint home on the bank of the Volga River. While scheduled maintenance of the IBR-2 reactor is underway, JINR is developing a research programme at the new Xeuss 3.0 X-ray scattering station. A new palliative care unit has been created in Medical Unit No. 9 with the participation of JINR.*

*Find also new preprints, comics series, and much more in the new issue of the JINR Newsletter.*

**JINR Press Office**



**Telegram**  
**@jinrofficial**

### Information of JINR Directorate on current situation

Please, get acquainted with an official information of the Directorate of the Joint Institute for Nuclear Research on the current situation. Latest update: 28 April 2022.

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## Breaking News

### High State Award

Subsequent to the Decree of the President of the Russian Federation, JINR Director Grigory Trubnikov was awarded the Order of Friendship for his great contribution to the development of science and many years of conscientious work.

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### On the way to creating new JINR cyclotron

On 29 April, during the visit of the JINR delegation to St. Petersburg, an agreement with NIIIEFA was signed on the development and production of an accelerator complex based on the MSC-230 superconducting cyclotron for proton radiation therapy of oncological diseases.



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## JINR Information Centres

### Heading East: new JINR Information Centre opened

On 4 May 2022, the JINR Information Centre was opened on the basis of Vitus Bering Kamchatka State University in Petropavlovsk-Kamchatsky. The opening ceremony was preceded by a meeting of the JINR delegation with the Deputy Chair of the Government of the Kamchatka region.



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On 4 – 6 May, the Natural Science School was held on the platform of the new JINR Information Centre in KamGU. Within the event, heads and leading scientists of JINR delivered lectures on a wide range of the Institute's activities.

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### NICA for the Far East

VBLHEP leading researcher Sergey Merts gave an online lecture “NICA: Back to the Future” for the JINR InfoCentre at the Kamchatka State University named after Vitus Bering and students of 9-11 grades of the Physics and Mathematics Lyceum “Technical” in Vladivostok.

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### Arkhangelsk in the orbit of JINR

The first online lecture was held in the framework of cooperation with the JINR Information Centre on the basis of the Northern (Arctic) Federal University n.a. M. V. Lomonosov. Head of the FLNP Sector Inga Zinicovskaia told school students about the use of neutron activation analysis in ecological studies.

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## Conferences

### **JINR-Russia-Serbia: in search for new projects at intersection of IT, physics, and biology**

On 28 April 2022, the Workshop “Computational biology and physics” was held, at which issues of scientific cooperation between the Laboratory of Radiation Biology JINR, the Laboratory of Information Technologies JINR, and scientific organisations of Serbia were discussed.

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## Research

### **New facility of X-ray scattering in FLNP**

The IBR-2 research reactor has been shut down since October 2021 for scheduled maintenance and repair. Physical experiments at the facility are scheduled to resume only by the autumn of 2023. However, a unique instrument has appeared in the Frank Laboratory of Neutron Physics, which makes it possible to continue a whole range of research for the time, as well as to build new cooperation.



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### **Different genome study approaches**

Radiation geneticists of the Dzhelepov Laboratory of Nuclear Problems JINR have compared two different approaches to the evaluation of genetic consequences in the offspring of irradiated parents. It has revealed that results of classical analysis of inherited radiation induced mutations in individual genes can be obtained much faster and more fully using next-generation genome-wide sequencing.

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### **New preprints**

We offer to your attention preprints published by the JINR Publishing Department.

“Estimation of the Yield and Angular Distribution of Neutrons for Calculating the Biological Protection of Reconstructed Heavy Ion Accelerators with Energies from 1 to 6 MeV/nucleon” P9-2022-10. The authors are Teterev Yu. G. et al.

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“Enhancement of Experiment Control in the Sonix+ Software Package” P10-

2022-4. The authors are Kirilov A. S., Truntova L. A.

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## Education

### Hackathon “Dubna-2022”

The Moscow Regional Physics and Mathematics Lyceum named after Academician V. G. Kadyshevsky became the venue for the final round of the V Technical Hackathon “Dubna-2022” for secondary school students.



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### School students at JINR

High school students of the Physics and Mathematics classes of Vologda Secondary School No. 13 and students of the “House of Scientific Collaboration” Centre at the Vologda State University visited JINR.

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Several days later, students of the Physics and Mathematics class of Moscow School No. 1514 had an excursion to JINR, visited the interactive exhibition “JINR Basic Facilities”, DLNP, and VBLHEP.

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### JINR invites to Workshop “Element 105”

Until 31 May, registration will be open for the Workshop “Element 105”. The event will take place from 16 to 26 July 2022 on the bank of the Volga River not far from Dubna within the Summer School. The event will be held in the “Volga” recreation centre. Students, postgraduates, and graduates of courses in natural sciences and engineering are kindly invited to participate.

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## People of JINR

### Remembering founders

On 5 May, the Joint Institute celebrated the 85th anniversary of the birth of an outstanding man, famous theoretical physicist and science organiser, JINR Director (1992 – 2005), RAS Academician Vladimir Georgievich Kadyshevsky.



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## Social

### JINR participating in socially significant urban project

On 26 April, the opening of the palliative care unit created with active participation of JINR took place in Dubna Medical Unit No.9 of the FMBA of Russia.



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## Media

### A new series of comics: Newborn Earth

There are places on Earth where everyone can easily imagine conditions on the planet four billion years ago while it was just forming. One of such locations is the underground Baksan Neutrino Observatory.



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### JINR Weekly Newspaper issued

New issue of the JINR Weekly Newspaper #17 has been published. Please note that you can read an English version on the JINR Newspaper's website.

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## Upcoming Events



## Seminars

- [12 May 2022](#), at 11:00 AM, FLNP. "Dynamic bending of a fuel rod. Motion equation" by A. E. Verhoglyadov
- [13 May 2022](#), at 11:00 AM, MLIT. "Flash algorithms in polymorphic C++" by Mihai-Tiberiu Dima and Maria Dima
- [13 May 2022](#), at 11:30 AM, VBLHEP. "Femtoscscopy" by E. P. Rogochaya
- [16 May 2022](#), at 11:00 AM, BLTP, Blokhintsev Conference Hall (4th floor). BLTP Journal Club
- [17 May 2022](#), at 2:30 PM, BLTP. "Null (massless) cosmic strings: their properties and possible astrophysical implications" by E. A. Davydov
- [17 May 2022](#), at 3:00 PM, FLNP. "Unusual magnetism in rare-earth ion systems with strong electron correlations" by P. S. Savchenkov
- [17 May 2022](#), at 4:00 PM, BLTP. "Electronic properties of heavily doped semiconductor nanostructures" by K.V. Reich

## Culture

- [13 May 2022](#), at 6:00 PM. JINR Cultural Centre "Mir". Exhibition "The play of reflections" of ceramics
- [14 May 2022](#), at 6:00 PM. Blokhinka. Meeting of "Guttenberg's Smoking Room" (retellings of non-fiction books)
- [16 May 2022](#), at 6:30 PM. JINR Universal Public Library. Lecture "Home Reading in Medieval Russia" by Tatiana Strokovskaya
- [18 May 2022](#), at 7:00 PM. JINR Cultural Centre "Mir". Recital of a theater and film actor Alexander Nosik "It's time to think about your soul..."
- [19 May 2022](#), at 7:00 PM. JINR Universal Public Library. Meeting of the book club "Hairpin": discussing the book "The Air You Breathe" by Frances de Pontes Peebles
- [19 May 2022](#), at 7:00 PM. JINR Cultural Centre "Mir". Premiere concert "Choir World"

## Sports

- [14 May 2022](#), "Archimedes" Swimming Pool. City Swimming Championship among amateur sports teams
- [14 May 2022](#), at 11:30 AM. JINR Sports Club. Open weightlifting championship dedicated to the 66th anniversary of JINR foundation

## For Kids

- [14 May 2022](#), at 3:00 PM. JINR Cultural Centre "Mir". Concert of dance troupe "Fantasia"
- [14 May 2022](#), at 5:00 PM and 6:00 PM. Family book gatherings "Let's READers" and "Little owls"

ALL JINR EVENTS →