

JINR Newsletter #26, 6 July 2023

Dear colleagues and friends,

At the past meeting of the JINR Science and Technology Council, Director of the Joint Institute Grigory Trubnikov presented an overview of the results of the Institute's work for the first half of 2023. The Association uniting more than 1,000 young scientists and specialists of JINR presented its activities and future plans.

In the new issue of the JINR Newsletter find an article about the past meeting of the JINR Programme Advisory Committee for Nuclear Physics. Read also about new publications and studies, as well as big successes of the JINR scientific youth highlighted with prestigious awards.

JINR Press Office



Advisory Bodies

STC JINR reviewed results of institute's work for half a year and report by youth organization

On 5 July, the JINR Science and Technology Council meeting chaired by Elena Kolgaitkova took place. The STC members heard a report by JINR Director Grigory Trubnikov on the results of the Institute's activities for the first half of 2023, as well as considered a report on the activities of the JINR Association of Young Scientists and Specialists.



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PAC NP meeting took place at JINR. Synthesis of new elements at the top of the agenda

On 29 – 30 June, the 57th meeting of the Programme Advisory Committee for Nuclear Physics took place at JINR. Participants of the event got acquainted with reports on the JINR flagship projects and considered proposals for their extension. Reports on new projects and subprojects were made.



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Cooperation

Joint Coordination Committee on RSA – JINR Cooperation

On 20 June, the 22nd meeting of the Joint Coordination Committee (JCC) on Cooperation of the Republic of South Africa with JINR took place. The central matter addressed by the Committee was the strategy for developing cooperation and, in particular, joint strategic-level projects.



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Research

DLNP JINR developed unique vGeN experimental facility to study reactor antineutrino properties

The vGeN experimental facility developed by the scientists from DLNP JINR is operating at the Kalinin Nuclear Power Plant (KNPP). The experiment is aimed at the search for coherent elastic neutrino scattering, the neutrino magnetic moment, and other rare processes using antineutrinos from the nuclear reactor.



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Conferences

Distributed computing and GRID technologies being discussed at MLT JINR

The 10th anniversary International Conference GRID'2023 is taking place at MLT JINR. Participants are discussing the issues of distributed computing and GRID technologies. In addition to plenary and sectional reports, the programme of the Conference includes two working meetings, two round tables, and a student scientific session, which takes place for the first time in GRID series history.



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Summer intensive school on physics and technology of accelerators started at JINR

The Summer science intensive school "Physics and Technology of Accelerators" began in Dubna. The event, jointly organized by JINR and Tomsk Polytechnic University, is aimed at 3-4 year engineering and physics students of technical universities of the JINR Member States interested in modern accelerator technologies.

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Education

Results of the JINR UC practice for young RSA scientists

27 university students and young employees of research centres from South Africa participated in the International Student Practice at the JINR University Centre.

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JINR hosts 35th Anniversary Summer International Computer School for children

Since the beginning of July, the 35th Summer International Computer School (ICS - 2023) is taking place at the JINR Resort Hotel "Batimino". Within two weeks, 5 – 11 grade school students will work on research or engineering projects under the guidance of experienced mentors. The ICS also includes special courses by choice, lectures, rich cultural programme, and team games.



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Publications

Finding mass of charged particle according to shape of its trajectory, and hypothesis of anomalous lepton existence test

We offer to your attention a preprint "Finding the mass of a charged particle according to the shape of its trajectory, and hypothesis of anomalous lepton existence test" P1-2023-22 issued by the JINR Publishing Department. The author is Alexander Belyaev.

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Recovery of software and hardware complex for film information processing (FIP) for bubble chambers

We offer to your attention a preprint "Recovery of the software and hardware complex for film information processing (FIP) for bubble chambers" P10-2023-18 issued by the JINR Publishing Department. The authors are Anton Baldin, Alexander Belyaev, Alexey Beloborodov, Victor Rikhlitsky, Alexander Troyan.

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JINR Youth

Young JINR scientist won a RAS medal

A DLNP JINR researcher Ludmila Kolupaeva received a RAS medal with a prize for young scientists and students for outstanding scientific achievements as a result of the 2022 competition. Ludmila won in the Nuclear Physics nomination with a series of scientific papers. We congratulate the winner and wish her further academic success!



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JINR scientist won student research paper competition

A DLNP engineer Anna Stepanova won the Rem Khokhlov Student Research Paper Competition. The first-degree diploma was awarded to the JINR scientist based on the results of the defense of her Master's thesis. The work by Anna Stepanova is devoted to one of the most interesting and promising areas of modern particle physics, that is neutrino physics.

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Application call for Presidential Prize continues

A call for applications for the Prize of the President of the Russian Federation in the fields of science and innovation for young scientists for 2023 continues. Applications for the award are accepted until 15 October. The Russian Science Foundation carries out the scientific assessment of the applications for the Prize.

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Lipnya-2023 JINR School to take place on 14 – 16 July

XXVII Summer School for Young Scientists and Specialists "Lipnya 2023" will take place at JINR from 14 to 16 July. The participants will learn more about the technical and engineering tasks being solved at JINR and Dubna enterprises. Two plenary lectures with representatives of the JINR University Centre and JINR Press Office will take place. The traditional round table with the JINR Directorate and representatives of the Dubna city administration and enterprises will be held.

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JINR Community

JINR Cinema Club

This Friday, on 7 July, at 6:00 PM, you can watch a neo-noir drama film "Fallen Angels" (1995). All are kindly invited! Please note that the JINR Cinema Club will be held at the JINR Universal Public Library.



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Media

Interview with JINR Scientific Leader Victor Matveev

The seventh part of an interview with JINR Scientific Leader Victor Matveev "Childhood. Boyhood. Youth" has been issued. He spoke about his parents and the influence they had on his life, his fascination for radio engineering and mathematics, entering university in Vladivostok, and much more!



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Video about PAC for Nuclear Physics

Please watch a video about the 57th Meeting of the Programme Advisory Committee for Nuclear Physics, which took place on 29 – 30 June.

[WATCH →](#)

Distributed computing and GRID technologies being discussed at MLT JINR

Please watch a video about the 10th anniversary international conference GRID'2023, which is taking place this week.



[WATCH →](#)

Filming at DLNP

Scientists of the DLNP Sector of Molecular Genetics of the Cell have managed to increase the resistance of fruit flies and human cultured cells to radiation and oxidative stress using the unique protein of tardigrades. They told about it today to the crew of the Vesti programme of the Russia-1 TV channel.

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DLNP seminar record

We invite you to watch a record of the seminar "Spin observables of scattering processes of polarized protons, deuterons, and ³He nuclei on polarized deuterons" by Yuri Uzkov.

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Video about past week JINR events

We offer you to watch bright past week events from the life of JINR and the city covered in one video.

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JINR Weekly Newspaper issued

A new issue of the JINR Weekly Newspaper #25 has been published.

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Recalling founders

Bruno Pontecorvo

22 August marks the 110th anniversary of the birth of Bruno Pontecorvo, an outstanding Italian and Soviet scientist who worked at JINR. The DLNP Group of Scientific Communication has prepared a series of publications on Pontecorvo's biography. This publication is about Pontecorvo's teachers Enrico Fermi and Frédéric Joliot-Curie.



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Upcoming Events

Advisory Bodies

- **10 – 11 July**, Meeting of the Working groups under the Committee of Representatives Chairman on financial issues of JINR, Kuzkuz

Conferences

- **1 – 18 July**, 35th Summer International Computer School (ICS – 2023), JINR Resort Hotel "Batimino", Dubna
- **2 – 7 July**, International Scientific School for Physics Teachers at JINR, JINR, Dubna
- **3 – 7 July**, 10th International Conference "Distributed computing and Grid technologies in science and education", MLT JINR, Dubna
- **3 – 8 July**, Summer science intensive school "Physics and Technology of Accelerators", JINR University Centre, Dubna
- **6 – 16 July**, Multidisciplinary School-Seminar "Summer School" and Workshop "Element 105", Recreation Centre "Volga", Dubna
- **11 – 15 July**, International workshop "Superconducting and Magnetic Hybrid Structures", BLTP JINR, Dubna
- **11 – 18 July**, XXIII Baikal International Summer School on Physics of Elementary Particles and Astrophysics, devoted to the 110th anniversary of Bruno Pontecorvo, Bolshie Koty, Irkutsk Region, Russia

Seminars

- **7 July, 11:30 AM**, YBLHEP: "Central moments of the elliptic flow distribution and the initial states in nuclear collisions", by Jovana Milosevic
- **7 July, 3:00 PM**, FLNP: Meeting of FLNP Dissertation Council: "Features of helium swelling in ferritic alloys" by Nguyen Van Tieg
- **10 July, 11:00 AM**, BLTP: "Reconstructing the spatial structure of quantum correlations" by Pavel Makalimov
- **12 July, 11:00 AM**, DLNP: "DLNP computer cluster: history, current state, and development prospects" by Yuri Ivanov
- **12 July, 11:00 AM**, YBLHEP: "Time-of-Flight particle identification system in the MAgS/SHINE Experiment at CEBAF" by Andrei Zaslavsky
- **12 July, 3:00 PM**, MLT: "Algorithms and software for reconstruction of charged particle trajectories in the detector systems upstream the analyzing magnet of the BM@N Experiment" by Vasilisa Lenivko
- **13 July, 3:00 PM**, MLT: "Numerical results of thermal processes occurring in materials under the action of femtosecond laser pulses" by Irakliin Sakhadov and "On the corner structure of the set of absolutely separable states and their relation to Wigner positivity" by Vaqon Abovyan

Culture

- **5 July – 20 August**, daily from 1:00 to 7:00 PM, except Mondays, JINR Cultural Centre "Mir", Summer art exhibition
- **6 July, 7:00 PM**, JINR Universal Public Library, Book club "Summer Reading List": discussing a novel "Lyubimov" by Andrei Sinavsky
- **7 July, 6:00 PM**, JINR Universal Public Library, English speaking club
- **7 July, 6:00 PM**, JINR Universal Public Library, JINR Cinema Club
- **7 July, 6:30 PM**, JINR Universal Public Library, Dubna intellectual games' club

[ALL JINR EVENTS →](#)