



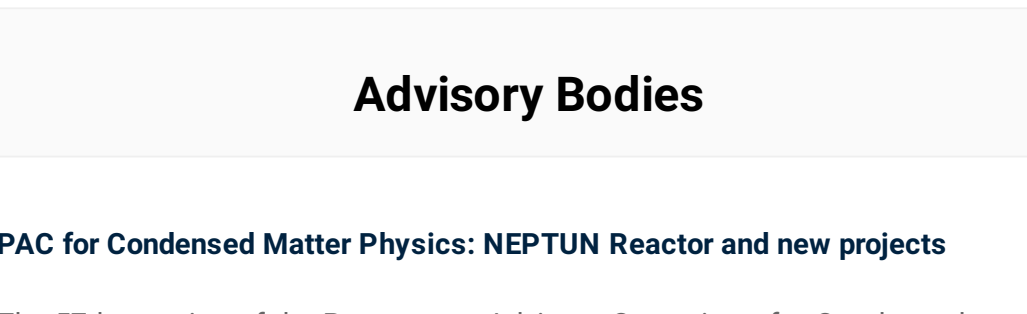
JINR Newsletter #24, 22 June 2023

Dear colleagues and friends,

One of the key topics of this week's central event, that is, a meeting of the Programme Advisory Committee for Particle Physics of JINR, was the status of the NICA Megascience Project. A new partner from Russia, the North Ossetian State University, joined the ARIADNA Collaboration that is launching a program of applied studies in NICA. The university also hosts a meeting devoted to NICA and a large IT School of JINR.

Research of the Institute, events of the Youth Association of JINR, rich Media sector are waiting for you in the fresh issue of the JINR Newsletter.

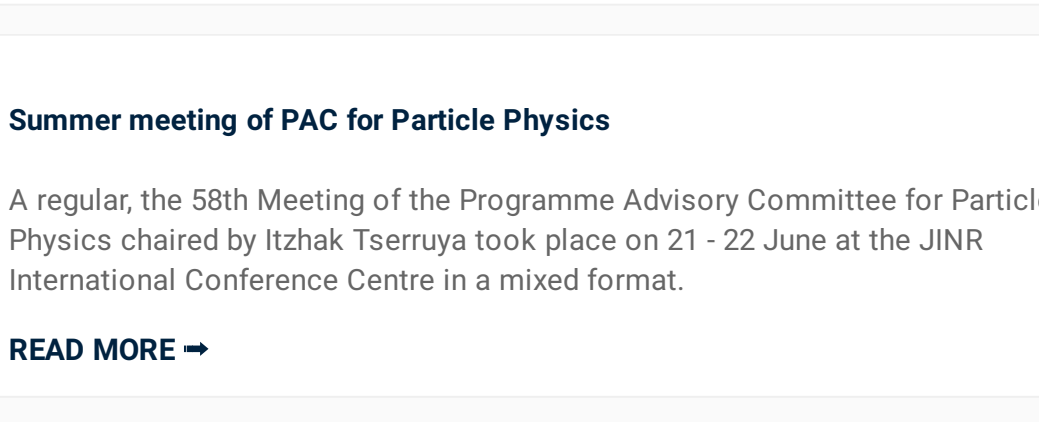
JINR Press Office



Advisory Bodies

PAC for Condensed Matter Physics: NEPTUN Reactor and new projects

The 57th meeting of the Programme Advisory Committee for Condensed Matter Physics of JINR took place on 15-16 June. During the two-day meeting, the participants considered proposals for the opening and extension of projects. The programme of the event included a meeting with the JINR Directorate and poster presentations by young JINR scientists.



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Summer meeting of PAC for Particle Physics

A regular, the 58th Meeting of the Programme Advisory Committee for Particle Physics chaired by Itzhak Tserruya took place on 21-22 June at the JINR International Conference Centre in a mixed format.

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Cooperation

NOSU joined ARIADNA Applied Research Collaboration at NICA

On 17 June, a festive signing of the Memorandum of Understanding took place in Vladivostok on the admission of the K. L. Khetagurov North Ossetian State University to the ARIADNA Collaboration for carrying out the applied research programme at the NICA Accelerator Complex. The ceremony took place at the JINR Information Centre at NOSU.

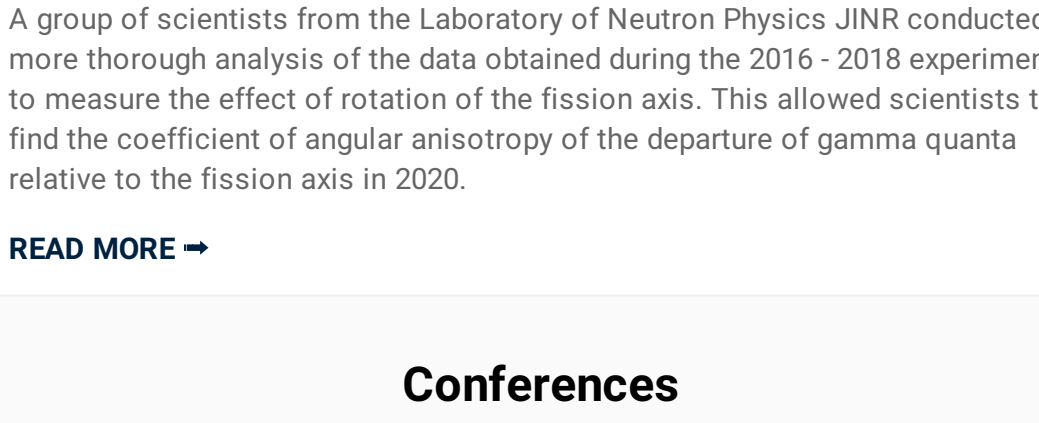


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Research

In search of causes of Alzheimer's disease: JINR scientists recorded effect of temperature on cell membrane structure

FLNP JINR scientists have discovered that the integrity of the cell lipid membrane is undermined when the temperature changes in the presence of amyloid-beta peptide. The peptide fragmentation effect on the membrane may be a crucial aspect for understanding the role of membrane-peptide interactions in Alzheimer's disease.



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JINR scientists study promising gold deposits in the Eastern Desert of Egypt

FLNP JINR scientists together with colleagues from Mansoura University studied rock samples from gold mines in Egypt. Scientists determined the elemental composition of ores using neutron activation analysis. According to the obtained results, scientists found out that the studied territories are of interest to the mining industry of Egypt.

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JINR have obtained coefficient of angular anisotropy of gamma-ray emission relative to fission axis

A group of scientists from the Laboratory of Neutron Physics JINR conducted a more thorough analysis of the data obtained during the 2016-2018 experiment to measure the effect of rotation of the fission axis. This allowed scientists to find the coefficient of angular anisotropy of the departure of gamma quanta relative to the fission axis in 2020.

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Conferences

About results of meeting on applied research at NICA Complex in Vladikavkaz

On 19 June, the workshop "Applied research at the NICA Complex: prospects for RNO-Alania – JINR cooperation" finished in Vladikavkaz. During the meeting, the parties made proposals for cooperation, participants delivered reports on the status of the NICA project, the ARIADNA scientific programme, completed and planned studies using accelerated ion beams.

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XXX International Seminar "Nonlinear Phenomena in Complex Systems" started

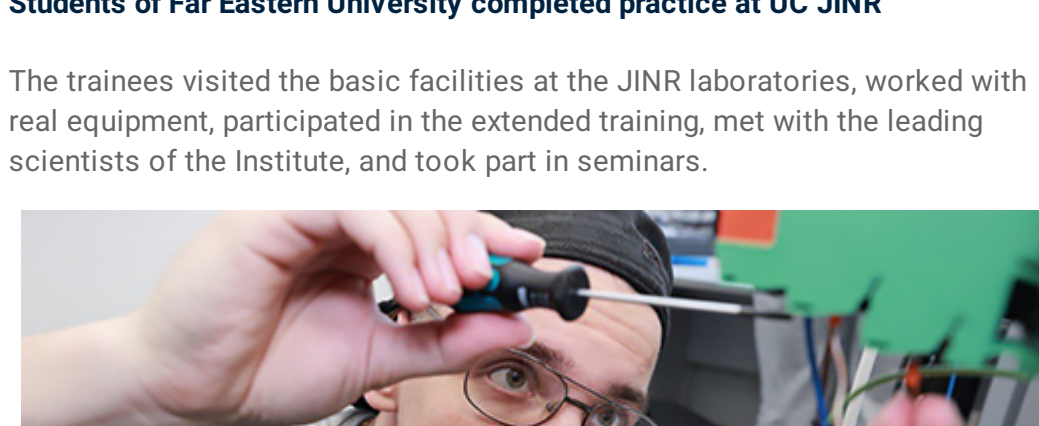
The 30th Anniversary International Seminar "Nonlinear Phenomena in Complex Systems" (NPSCS) is taking place from 19 to 23 June at the Joint Institute for Power and Nuclear Research – Sosny of the National Academy of Sciences of Belarus. JINR co-organized the seminar. The event gathered scientists and specialists from scientific centres of Belarus and Russia on its site.

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JINR Youth

First JINR School on Accelerator Physics on Lipnya Island

From 19 to 23 June, AYSS JINR is holding the first School on Accelerator Physics. Young specialists gathered at the JINR Tourist Base "Lipnya" to learn more about accelerator physics and get acquainted with the latest achievements in science and technology in the field of charged particle beam physics and accelerator technology.



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Alushta-2023: Seven-Year Plan and impressions of JINR youth

From 4 to 11 June, the XII Conference of Young Scientists and Specialists ("Alushta-2023") took place at the Resort Hotel "Dubna". This time, representatives of 6 countries attended it. Participants shared their impressions of the event.

READ MORE →

Russian Congress of Councils of Young Scientists and Student Scientific Societies

On 21 June, the XI Russian Congress of Councils of Young Scientists and Student Scientific Societies started in Nizhny Novgorod. The AYSS JINR delegation is taking part in it. Participants are attending lectures and round tables dedicated to programmes to support young researchers, communicating with representatives of other Councils from all over Russia.

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Education

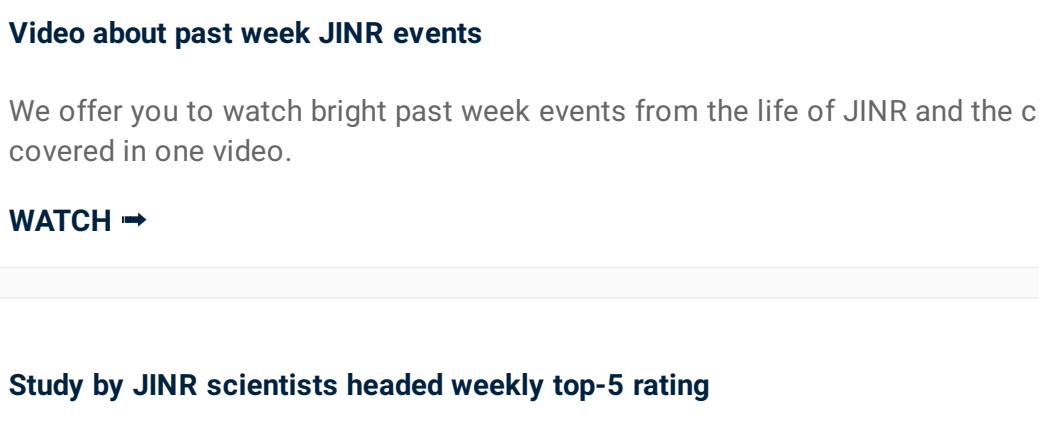
IT School with wide participation finished in Vladikavkaz

On 15-17 June, North Ossetian State University hosted the 5th anniversary International Summer School for Young Scientists "Modern information technologies for solving scientific and applied problems". More than 100 students and young scientists came to Ossetia to participate in the School.

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Students of Far Eastern University completed practice at UC JINR

The trainees visited the basic facilities at the JINR laboratories, worked with real equipment, participated in the extended training, met with the leading scientists of the Institute, and took part in seminars.



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Media

Grigory Trubnikov, "Most of our partners are wiser than politicians"

Is there healthy rivalry in science? How to make the profession of a scientist more attractive? Is science beyond politics? Find the answers to these and other questions in an interview with JINR Director Academician Grigory Trubnikov for the Vedomosti newspaper.

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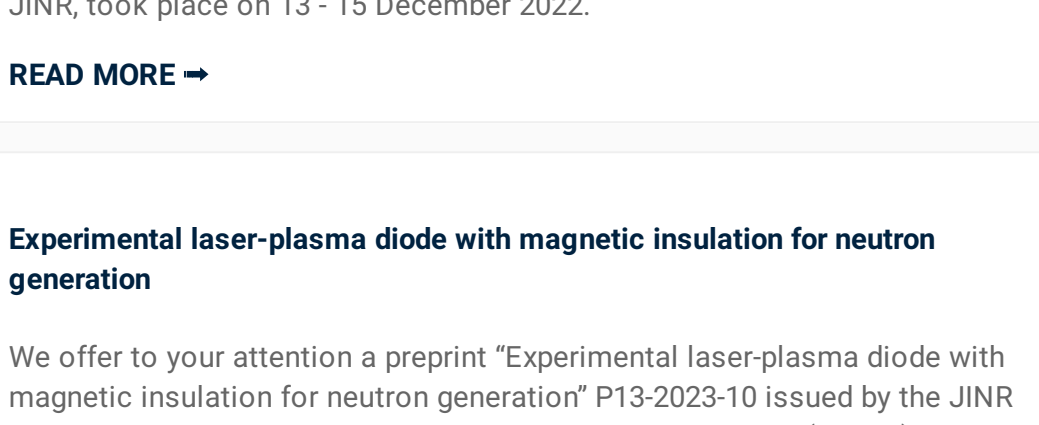
Interview with JINR Scientific Leader Victor Matveev

The fifth part of an interview "About science" with JINR Scientific Leader Victor Matveev has been issued. He spoke about the role of mathematics in physics, told whether progress in science would ever end, shared the most important unanswered questions in physics, and much more!

WATCH →

Video about PAC for Particle Physics

Please watch a video about the 58th Meeting of the Programme Advisory Committee for Particle Physics, which took place on 21-22 June.



WATCH →

Video about PAC for Condensed Matter Physics

The 57th meeting of the Programme Advisory Committee for Condensed Matter Physics of JINR finished 16 June. We kindly invite you to watch a video to learn more about it!

WATCH →

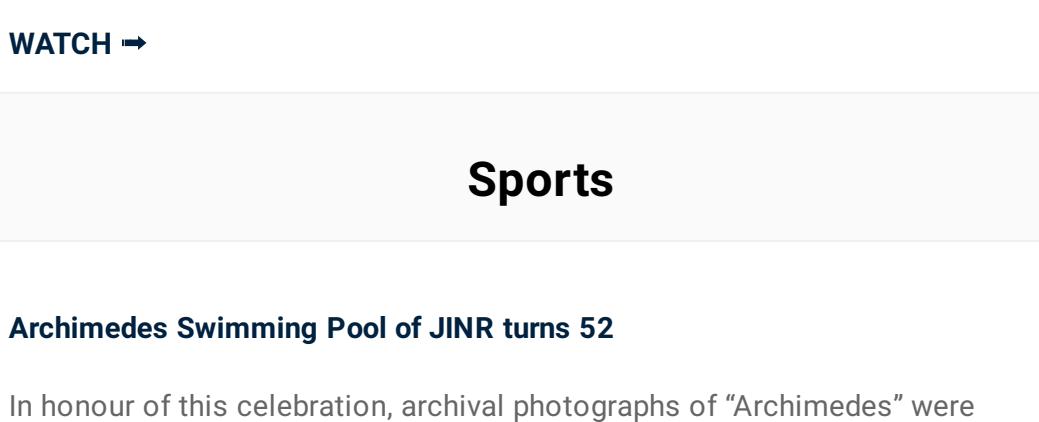
Video about past week JINR events

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

WATCH →

Study by JINR scientists headed weekly top-5 rating

The study of frescos of ancient Russian cathedrals, which is conducted by JINR, headed the weekly top-5 rating according to the programme "The Wonder of Technology" released on 11 June on NTV channel! The coverage starts from 37:45.



WATCH →

Neutron activation analysis in Moscow Kremlin

FLNP JINR scientists studied frescoes of the Cathedral of the Dormition of the Moscow Kremlin. Watch the coverage by the 360 TV channel to learn how ancient frescoes are being reconstructed using nuclear technologies.

WATCH →

JINR Weekly Newspaper issued

A new issue of the JINR Weekly Newspaper #23 has been published.

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Publications

Proceedings of NICA-2022 seminar published in special issue of prestigious magazine

The proceedings of the international online seminar on methods of data analysis and processing in experiments at the NICA Accelerator Complex (NICA-2022) have been published in a special issue of the Particles 2023, 6(2) journal. The international seminar NICA-2022, organized jointly by MEPhI and JINR, took place on 13-15 December 2022.

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Experimental laser-plasma diode with magnetic insulation for neutron generation

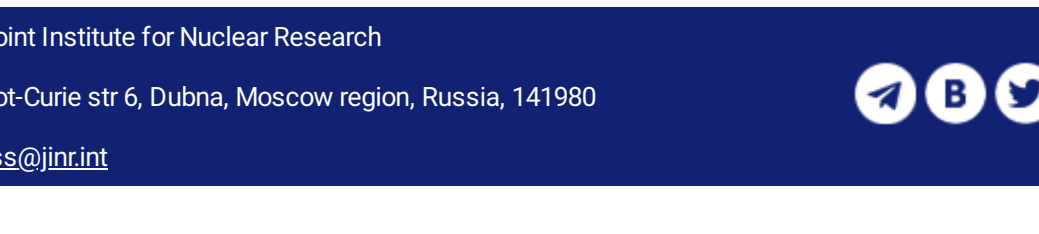
We offer to your attention a preprint "Experimental laser-plasma diode with magnetic insulation for neutron generation" P13-2023-10 issued by the JINR Publishing Department. The authors are Evgeny Vovchenko (MEPhI), Anton Isaev (MEPhI), Konstantin Kozlovskiy (MEPhI), Konstantin Levterov (VBLHEP), Valery Shvetsov (FLNP), and Alexander Shikanov (MEPhI).

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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 important discoveries and scientific achievements.



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Announcements

Notification by CPED JINE on conclusion of JINR agreement with Mosobleirits for residents - Stage 3

JINR concluded an agreement on the organization of payments for utilities with Mosobleirits LLC. In this regard, the cost of payment for heating, hot and cold water supply, as well as sanitation will be included in the single payment document of Mosobleirits LLC for residents of 26 blocks of flats.

WATCH →

Sports

Archimedes Swimming Pool of JINR turns 52

In honour of this celebration, archival photographs of "Archimedes" were published. You can find the images in the "Sports at JINR" VK community posts. Scroll down to see unique photos of JINR scuba divers, an exterior of the pool after a major renovation, Soviet posters, school competitions at Archimedes, and much more!

WATCH →

Upcoming Events

Advisory Bodies

- 29 – 30 June, 57th Meeting of the Programme Advisory Committee for Nuclear Physics, JINR International Conference Centre, Dubna

Conferences

- 19 – 23 June, AYSS School of accelerator physics, JINR Tourist Base "Lipnya", Lipnya Island, Ivankovskoe reservoir, Tver region
- 19 – 23 June, XXX Anniversary International Seminar Nonlinear Phenomena in Complex Systems, Joint Institute for Power and Nuclear Research – Sosny of the National Academy of Sciences of Belarus, Minsk

Seminars

- 23 June, 11:00 AM, DLNP, Seminar "Medical Physics and Radiobiology"
- 26 June, 11:00 AM, BLTP, "Motivating motives" by Maxim Bezuglov
- 26 June, 11:00 AM, ELNP, "Multi-purpose fast research reactor MBIR with sodium coolant. Technical characteristics of the reactor. Experimental possibilities inside and outside the core" by Dmitry Klyonov
- 26 June, 3:30 PM, BLTP, "Fusion reactions in collisions of neutron halo nuclei with heavy targets" by Jesus Lubian
- 27 June, 11:00 AM, JINR Scientists' Club, "Correction of leading magnetic field of NICA Booster" by Mikhail Shandov
- 27 June, 11:00 AM, VBLHEP, "Synchrotron motion and focusing restrictions at the collision point" from the series "Colliders" by Valery Lebedev
- 28 June, 11:00 AM, BLTP, "Multiparticle birth in the theory of $\Lambda\phi^4$ quasi-classical research methods and new numerical results" by Bulat Farhtidinov
- 29 June, 4:00 PM, BLTP, "Scale of new physics for the standard axion see-saw Higgs portal inflation model and the Higgs trilinear coupling" by Chitta Banjan Das

Culture

- 30 May – 2 July, daily from 1:00 to 7:00 PM, except Mondays, JINR Cultural Centre "Mir", Exhibition of Interior paintings
- 22 June, 7:00 PM, JINR Cultural Centre "Mir", Evgeny Grishkovets concert
- 23 June, 6:00 PM, JINR Universal Public Library, "Guttenberg's Smoking Boom" meeting
- 23 June, 6:00 PM, JINR Universal Public Library, English speaking club
- 23 June, 6:30 PM, JINR Universal Public Library, Dubna intellectual games' club
- 29 June, 7:00 PM, JINR Universal Public Library, Book club "Hairpin"

Sports

- 24 June, 12:30 PM, Archimedes Swimming Pool of JINR, Swimming competitions dedicated to 52nd anniversary of Archimedes Swimming Pool

ALL JINR EVENTS →