

SCIENCE BRINGS NATIONS TOGETHER



JOINT INSTITUTE FOR NUCLEAR RESEARCH

JINR Newsletter #10, 2 June 2022

Dear colleagues and friends,

The main news is that summer has finally come to Dubna! The whole city is in bloom!

A delegation of science diplomats from Brazil, Korea, Vietnam, and Uganda arrived in Dubna without fear of freezing. We will tell you about this and other events in our Newsletter today.

The time of vacations and holidays is coming. But Dubna students and schoolchildren keep their interest in science. The academic year has ended with a regular Open Olympiad of the Physics and Mathematics Open Classroom with the support of JINR. High school students have VI Summer School "Physics. Mathematics. IT" ahead, which is a joint project of the University "Dubna" and JINR. Their older friends will soon have the Summer School with the JINR workshop "Element 105".

Young JINR researchers also enter this summer with a large scientific event. On 5 June, the XI annual Conference of Young Scientists and Specialists "Alushta-2022" will start.

Read, watch, and listen about all the interesting events of the past and the next weeks in the new issue of the JINR Newsletter.

JINR Press Office



Telegram
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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: 26 May 2022.

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Visits

JINR: science diplomacy in action

On 26 – 27 May 2022, a visit of science diplomats from Brazil, Korea, Vietnam, and Uganda took place. In addition, the delegation of the Analytical Centre for Innovations in Science, Technology, and Education took part in the visit.



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Towards opening new JINR Information Centre

During the JINR visit to the Far-Eastern Federal University, the parties discussed further plans on interaction with the international scientific cluster based on the future JINR Information Centre at FEFU and training of the staff for work at megascience facilities, including the RIF synchrotron.

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Research

JINR presented prototype device for mobile carbon analysis in soil

The presentation took place on 24 May at the opening of “Way Carbon”, the first carbon test site in the North Caucasus. The device has been developed on the basis of the tagged neutron method and can be mobile without delivering samples to a laboratory.



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Search for dark matter continues

A JINR group is taking part in searching for light dark matter at extracted secondary beams of the SPS accelerator, named as the NA64 experiment (CERN). The team is developing and constructing coordinate detectors based on thin-walled straw tubes.

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Xeuss 3.0 in operation

A joint research programme for nanopowders, gels, and other nanomaterials has been launched at the new Xeuss 3.0 X-ray scattering station in FLNP JINR with scientists from Petersburg Nuclear Physics Institute.

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Daya Bay has produced the most precise measurement

The Daya Bay International Reactor Antineutrino Experiment (China), in which JINR has been actively participating from the very beginning, has obtained the most precise measurement of θ_{13} . It is a key parameter necessary to find out how neutrinos change their flavors.



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JINR's events

Celebrating together

On 26 May, leaders of JINR, the city, and the Moscow region, as well as the Russian Academy of Sciences congratulated the Flerov Laboratory of Nuclear Reactions JINR on the 65th anniversary at a festive seminar. In the frames of the seminar, RAS Academician Yu.Ts. Oganessian presented the report “Boundaries and structure of atomic nuclei”.



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Education

Kazan Federal University: pre-defense of Master theses

On 16 May, preliminary defense of theses written by Master students of the JINR-based department “Nuclear-Physical Materials Science” of the Institute of Physics, Kazan (Volga region) Federal University, took place at the JINR University Centre.

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Moscow school students visit JINR

On 23-24 May 2022, students from Moscow School No. 1514 and the “Vtoraya Shkola” Lyceum got acquainted with JINR. The schoolchildren attended the interactive exhibition “JINR basic facilities”, JINR Museum and visited the laboratories of the Institute.



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Publications

Review journal *Particles & Nuclei*, #3 (Vol. 53) 2022

Published by leading physicists from Member States of JINR, as well as scientists from all over the world, review articles in this eminent journal examine elementary particle physics, problems of vacuum in quantum field theory, condensed matter problems, symmetries in physics, string theories and gravity, nuclear physics, automatic processing of experimental data, accelerators and related instrumentation, accelerator-based transmutation studies, ecological implications of present nuclear and conventional energy sources, energy amplifiers based on accelerators.

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Review of the journal “*Particles and Nuclei, Letters*”, #3 2022

The journal *Physics of Elementary Particles and Atomic Nuclei, Letters* publishes the articles with results of the original theoretical, experimental, scientific-technical, methodical and applied research. Subject-matter of articles covers the principal fields of research at JINR.

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People of JINR

AYSS seminar to search for new physics

On 2 June, at the AYSS seminar in the JINR Scientists’ Club, you can find out about deviations from the Standard Model, possible and existing experiments, and ideas for finding and limiting the coupling parameters of dark matter particles and the Standard Model. Alexey Zhevlakov (BLTP) will make a presentation “Search for new physics”.



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Time's witnesses: Yuri Andreevich Usov

Interview with Yuri Andreevich Usov, Candidate of Technical Sciences, Head of the Sector of Low Temperatures of DLNP JINR.

WATCH ➡

Announcement

Dear colleagues,
if you are interested in art, you draw or have wanted for a long time, but did not know where to start, we kindly invite you to the JINR artists club. Here we paint, draw, organise creative workshops, get acquainted with artists and creative people! All are kindly invited! The workshop club is located at the JINR Stadium "Nauka".

Contact phone: +796859520922

e-mail: knopiwe@mail.ru

Sincerely, Anastasia Zlobina

Interview

Evgeny Krasavin: We need to train researchers and creators

RAS Corresponding Member, LRB Scientific Leader, and Head of the Department of Biophysics at the State University "Dubna" Evgeny Krasavin tells the student newspaper about his childhood, devotion to science, space, astrobiology, research in cancer therapy, and the history of the department.



READ MORE ➡

Alexey Rozanov about origin of life on Earth

RAS Academician Alexey Yurievich Rozanov, the Head of the Astrobiology Sector in LRB JINR, gave an interview for "Scientific Russia". The scientist is sure that life did not originate on Earth, but was brought from space during the largest bombardment by meteorites and comets about 4 billion years ago.

READ MORE ➡

Valery Rubakov: Neutrino sky mapping got underway

Chief researcher of the RAS Institute for Nuclear Research, member of the JINR Scientific Council Valery Rubakov told a correspondent of the Russian Academy of Sciences about the main results of the project "Neutrino and particle astrophysics".

READ MORE ➡

Media

JINR on Russia Culture TV channel

On 29 May, the scientific and educational programme “Image of the world with Mikhail Kovalchuk” was on the air of the Russia Culture TV channel. In this issue: the interview with JINR Director Grigory Trubnikov, as well as stories about the history of Dubna and JINR, the NICA complex, and neutrino detectors.



WATCH →

Video: at CP JINR session

The video is about the way the session of the Committee of Plenipotentiary Representatives of the Governments of the JINR Member States was held on 25 May. There are also comments on the event by JINR Director RAS Academician Grigory Trubnikov.

WATCH →

New podcast by “Sputnik” Radio with JINR scientist

LRB employee Yuri Severyukhin speaks about the discovery of cosmic rays, radiation environment in space, as well as about the way galactic radiation may influence human organism. He also explains how space radiation is modelled on Earth and what protection measures are developed.

LISTEN →

Yuri Oganessian on Armenian TV

The First Channel of Armenian TV has aired a new episode of the programme “Our people” with Yuri Oganessian in Armenian. The TV programme is dedicated to Armenian people living abroad who have succeeded in business or cultural areas. The new episode with Yuri Tsolakovich contains rare photos from the personal archive.

WATCH →

JINR Weekly Newspaper issued

New issue of the JINR Weekly Newspaper #20 has been published. Please note that you can read an English version on the JINR Newspaper’s website.

READ MORE →

Announcement

A new episode of the Wonders of Technology programme by Sergey Malozemov on NTV channel will present the NICA collider under construction at JINR! Watch the new episode this Sunday, on 5 June, at 11:00 AM.

WATCH →

Upcoming Events

Conferences

- [5 – 12 June 2022, Alushta, Crimea. XI Conference of Young Scientists and Specialists "Alushta-2022"](#)

Seminars

- [2 June 2022, at 2:00 PM, MLIT. "Research of multipath routing methods to ensure the quality of the network service" by Evgeniy Stepanov](#)
- [2 June 2022, at 4:00 PM, JINR Scientists' Club. AYSS seminar series: "Search for new physics" by Alexey Zhevlakov](#)
- [3 June 2022, at 11:30 AM, VBLHEP. Reporting seminar of VBLHEP scholarship holders](#)
- [6 June 2022, at 11:00 AM, BLTP, Blokhintsev Conference Hall \(4th floor\). BLTP Journal Club](#)
- [6 June 2022, at 3:00 PM, JINR Scientists' Club. Seminar of the Section of Physics of Charged Particle Beams and Accelerator Equipment](#)
- [8 June 2022, at 11:00 AM, FLNP. "Ion beam positioning and stabilization system for the EG-5 accelerator" by V. N. Semenov](#)
- [8 June 2022, at 3:30 PM, FLNR. "Creation of the ACCULINNA-2 fragment separator for experiments with radioactive beams at energies of 15-45 MeV/nucleon" by S. A. Krupko](#)
- [8 June 2022, at 11:00 AM, VBLHEP. "Analysis of a possible experiment to search for the proton electric dipole moment at the NICA collider in the spin transparency mode" by Yu. Filatov](#)

Culture

- [2 June 2022, at 7:00 PM. JINR Cultural Centre "Mir". Concert of laureates of international competitions](#)
- [2 June 2022, at 7:00 PM. JINR Universal Public Library. Meeting of the book club "Hairpin": discussing the book "James Miranda Barry" by Patricia Duncker](#)
- [3 June 2022, at 6:30 PM. JINR Universal Public Library. Lecture "Empress Maria Alexandrovna: epistolaries and fate" by Irek Suleymanov](#)
- [5 June 2022, at 3:00 PM. JINR Cultural Centre "Mir". Reporting concert of dance studio "Art Laboratory"](#)
- [6 June 2022, at 7:00 PM. JINR Cultural Centre "Mir". "The Queen of Spades with the orchestra" of the cycle "Acquaintance through music. Musical heritage of the JINR Member States"](#)

Sports

- [3 June 2022, "Archimedes" Swimming Pool. Swimming competitions dedicated to the end of training year 2021 - 2022](#)

For Kids

- [On 1 – 3 June 2022, Lyceum named after V. G. Kadyshevsky. Days of Physics – 2022](#)
- [3 June 2022, at 6:00 PM. Lecture "Russian beauties in paintings by Russian artists" by Olga Trifonova](#)

- [4 June 2022, at 10:00 AM. Joliot-Curie square. Children's holiday](#)

ALL JINR EVENTS →

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