

**I. General considerations**

The Scientific Council takes note of the comprehensive report by JINR Director G. Trubnikov, covering the decisions of the latest session of the Committee of Plenipotentiaries of the Governments of the JINR Member States (24–25 March 2023), the progress of implementation of the current Seven-Year Plan for the Development of JINR (2017–2023) as well as recent events in JINR's international cooperation.

The Scientific Council welcomes the signing of the Protocol between the Ministry of Science and Technology of the People's Republic of China, the Ministry of Science and Higher Education of the Russian Federation, the Chinese Academy of Sciences and the Joint Institute for Nuclear Research on strengthening cooperation in the field of basic scientific research at the governmental level in March 2023, and endorses the establishment of the JINR–China Joint Coordination Committee and the practical measures taken by the Committee to enhance JINR's collaboration with scientific organizations and universities in China.

The Scientific Council notes with satisfaction the progress in implementing the current plan of research and development of the scientific infrastructure at JINR and JINR's achievements in the international collaboration projects and international cooperation:

- for the first time at JINR, the entire computing infrastructure integrated by DIRAC was successfully used for the complete reconstruction of the raw experimental data recorded during the long-term stable operation of the accelerator complex of the BM@N experiment in full configuration, when more than 550 million events with the Xe beam were registered;

- the successful work of the MPD collaboration and the VBLHEP team on the construction of all the components of the MPD detector, including the cryogenics, control and power supply systems, detector subsystems, and other equipment;

- the dynamic development of the ARIADNA collaboration, whose applied research programme was launched at the NICA complex in the beginning of 2023, and based on the results of the experiments, a series of publications is being prepared;

- the successful participation of the Institute in the work of collaborations at CERN, in particular in the NA64 experiment, as well as the high level of JINR's activity in the

fulfilment of its obligations under the programme for the second phase of upgrade of the ATLAS, CMS, and ALICE detectors at the LHC, CERN;

- the progress in developing the Baikal-GVD deep-water neutrino telescope, installation of 576 optical modules and 2 bottom cable lines in 2023, as well as an effective volume approaching 0.6 km<sup>3</sup>, which ensures the Baikal-GVD status as the largest neutrino telescope in the Northern Hemisphere;

- the successful continuation of experiments at the Factory of Superheavy Elements, in particular, the first experiment on  $\alpha$ -,  $\beta$ -,  $\gamma$ -spectroscopy and the discovery of a new isotope <sup>227</sup>Pu;

- the progress in developing the DRIBs-III accelerator complex with the modernization of U-400M being close to the final stage, the completion of the first stage of construction work for DC-140, as well as the beginning of construction work in the new experimental hall of U-400R;

- the successful implementation of the work plan to prepare for the continuation of the regular operation of the IBR-2 reactor, and the progress in developing the concept of an intense source of ultracold neutrons (UCN) at a pulsed reactor of moderate power, which is based on the idea of pulsed filling of a trap for UCN;

- the progress in preparations for the commissioning of the LINAC-200 linear accelerator at JINR, a new facility at DLNP constructed to provide electron beams to carry out particle detectors R&D for NICA and other projects, biological studies, applied research, and student training;

- the further active development of fundamental and applied areas of research related to life sciences and condensed matter physics based on the development of the interlaboratory research programme on the basis of the Laboratory of Radiation Biology;

- the successful work of the Bogoliubov Laboratory of Theoretical Physics and interesting selected results in particle, nuclear, condensed matter physics, and advanced mathematical physics, presented in the report by the JINR Director;

- the successful development of the JINR MICC, including extension of the Govorun supercomputer, as a result of which its total peak performance reached 1.7 PFlops with double precision. In terms of Tier1 productivity, in 2023 JINR ranked second in the world among other Tier1 centres for the CMS experiment; the DIRAC distributed platform is used to support the collaborations of the NICA experiments: MPD, BM@N, SPD, as well as the Baikal-GVD neutrino telescope;

- the successful development of the JINR Digital EcoSystem platform for the integration of the existing and future services to support scientific, administrative, financial

and economic activities, and maintain the engineering and IT infrastructure of the Institute.

## **II. Draft Seven-Year Plan for the Development of JINR for 2024–2030**

The Scientific Council notes with satisfaction the report on the main achievements of JINR in 2017–2023 and prefinal revision of the Draft Seven-Year Plan for the Development of JINR for 2024–2030 presented by JINR Director G. Trubnikov.

The Scientific Council emphasizes that despite the difficult working conditions associated with Covid and the dramatic deterioration of the geopolitical situation, in 2017–2023 JINR achieved impressive results both in the development of the Institute’s large research infrastructure and scientific research based on this infrastructure. The JINR’s significant contribution to international collaborations, especially at CERN, should be also mentioned. The human potential of the Institute is steadily increasing. JINR is successfully developing as an international intergovernmental scientific organization establishing new integration ties with leading scientific organizations in the world. An undoubted achievement of recent years is the creation and continuous development of international experimental collaborations on the basis of the JINR’s large research infrastructure, which opens a new stage of scientific research in Dubna. The Scientific Council considers it timely and extremely necessary to extend and upscale the direction of frontier studies and developments in beam physics and accelerators, and supports the preparatory work of JINR on restructuring the JINR Topical Plan with opening the corresponding interlaboratory theme. In general, these achievements have established a very solid foundation for the further development of the Institute in the new seven-year period. The Council considers it important to prepare and publish an information booklet dedicated to the achievements of JINR in 2017–2023.

The Scientific Council appreciates the comprehensive consideration of the draft Seven-Year Plan for the Development of JINR for 2024–2030 by the joint working group of all three JINR Programme Advisory Committees, final examination of the scientific programme of the Plan and taking into account the constructive comments of this working group by the JINR Directorate when preparing the current version of the Plan. The Scientific Council notes that the Plan has been improved in comparison with its previous version.

The Scientific Council supports the submission of the current version of the Plan, possibly with minor editorial corrections, to the CP session in November 2023 for final approval for implementation in 2024–2030.

### **III. Discussions of the Director's reports**

In the course of the discussions of the reports by JINR Director G. Trubnikov, members of the Scientific Council expressed the following ideas and concerns.

M. Spiro, as a member of CERN, IUPAP and IDSSD, appreciated the joint activities of JINR and CERN on the GRID school and expressed the hope that these activities will continue, therefore JINR and CERN will have more bilateral initiatives.

A. M. Cetto has noted that the programme of the next seven-year plan is ambitious but not overambitious, the Institute is productive and successful, the quality of the results is high and some positive results are even unexpected, and asked the Director to highlight not only achievements but also the expectations of JINR, which have not been met.

JINR Director's reply:

The commissioning of NICA had to be shifted not only because of the restrictions related to Covid or logistical reasons caused by the geopolitical problems, but also due to the fact that during 6 years of the construction of NICA, a lot of new physics appeared from BNL and CERN. JINR needed to adjust parameters of the collider and detector in order to have the best facility by the time of its commissioning. We have started several R&Ds which we did not plan 7 years ago in 2016. The project meets the requirements of the time, it remains flexible.

The second problem is that JINR planned much more active participation in CERN experiments. This reduction has produced an adverse impact not only on JINR, but also on CERN. The projects with Germany, Switzerland, and France were stopped. For example, the detector for ultra-precise studies of the chemical properties of superheavy elements has been constructed, but stays undelivered in Germany without a possibility to transfer it to Dubna.

Thirdly, due to the expiring lifetime of supplying cooling systems of the IBR-2 reactor, it was paused nearly two years ago. The reactor will be restarted, according to our plan, in the fourth quarter of 2024, but the User programme at IBR-2 has suffered a lot. Of course, we do research using X-rays and secondary neutron sources, but if we had neutron beams, we would have more opportunities for scientific research.

Fourthly, in neutrino physics, high energy physics and oscillation neutrino experiments, JINR has achieved even greater results than expected, for example in the Baikal-GVD and joint collaboration with Chinese and American partners. But in low energy neutrino experiments, many projects with Italy, France and Germany have been delayed or suspended.

As for the staff of the Institute, the main problem is a certain reduction of employees from European countries. The planned number of personnel with non-Russian citizenship was previously about 500–600 people, now in fact it is 300–400. In general, expanding the Institute’s scientific staff is the main task for the next few years. JINR is actively working at solving this problem by strengthening cooperation with Member States and new partners from China, India, and other countries.

C. Borcea expressed concern about the current status of JINR’s collaboration with the FAIR project, which is a competitor for NICA and a collaborator at the same time, and asked whether JINR would be able to fulfil its obligations in FAIR and was still interested in PANDA.

JINR Director:

FAIR suspended cooperation with JINR due to the geopolitical situation. JINR has fulfilled all its obligations but does not have the technical possibility to deliver the equipment to Germany. JINR hopes that cooperation with FAIR will be restarted when the doors are open again.

#### **IV. Recommendations of the Programme Advisory Committees taken at the meetings in June 2023**

The Scientific Council takes note of the recommendations made by the PACs at their meetings in June 2023, as reported at this session by I. Tserruya, Chair of the PAC for Particle Physics, V. Nesvizhevsky, Chair of the PAC for Nuclear Physics, and D. L. Nagy, Chair of the PAC for Condensed Matter Physics.

The Scientific Council thanks the PACs for their recommendations to open new projects and themes as well as extend the most important research contributed by the laboratories to the Seven-Year Plan for the Development of JINR for 2024–2030, discussed and supported at the meetings of the committees.

##### Particle physics

The Scientific Council recognizes the PAC’s support of the steps taken by the JINR Directorate to increase the participation of Mexican researchers in JINR activities, strengthen cooperation with scientific organizations and universities in China, maintain a high level of cooperation with research organizations from all European countries in order to promote the international status of the Institute and overcome the difficulties of this challenging time.

The Scientific Council congratulates the accelerator team of the Nuclotron-NICA complex for the very successful 4th technical run. The Scientific Council takes note of the

development of the VBLHEP infrastructure, resulting in the doubling of the available power to 40.8 MW. It also notes the various delays due to the current geopolitical situation, among them the delays in the completion of infrastructure work at the collider building and in the construction of transfer lines from the Nuclotron to the NICA collider. The Scientific Council acknowledges the efforts of the JINR and NICA managements to mitigate these delays and takes note of the resulting revised schedule, according to which the first beams at the NICA collider are now expected by 2025.

The Scientific Council notes that the production of the MPD detector is progressing and the work is ongoing towards the commissioning of the large superconducting solenoid of MPD. Although the schedule is delayed due to problems with supplies of many components from European companies, all components of the MPD first-stage detector remain on track to be installed in 2024.

The Scientific Council congratulates the BM@N Collaboration for the first and successful physics run of the BM@N detector in its full configuration with Xe beams and seconds the PAC in encouraging the BM@N team to concentrate its efforts on getting first physics results from the Xe run data.

The Scientific Council seconds the PAC in reiterating its recommendation to the JINR management on the need to resume the activities of the international SPD Detector Advisory Committee, which will allow the SPD team to proceed further with the preparation of the TDR.

The Scientific Council acknowledges the contribution of the JINR participants to obtaining physical results and upgrading the detectors in the experiments at the LHC.

The Scientific Council appreciates the involvement of the JINR team in the NA64 project, its theoretical motivation, its responsibilities in the detector operation, the development and support of the straw tracker, the DAQ operation, and the data taking and analysis. It endorses the PAC's recommendation to continue the participation of the JINR team in the NA64 experiment for 2024–2026 with ranking A.

The Scientific Council supports the decision of the PAC to postpone the approval of the SCAN-3 project and to request the JINR team to present at the next session of the PAC a clear proposal outlining the original goals of the project, the achievements over the past four years, and its plans for the requested extension period.

The Scientific Council appreciates the important contributions of the JINR group in the BES-III experiment at IHEP (Beijing, China), and supports the plans to continue the study of charmed quarks in the future SPD experiment at NICA. It endorses the PAC's

recommendation to continue the JINR group's participation in the BES-III project for 2024–2028 with ranking A.

The Scientific Council notes the important role of the JINR team in the TAIGA collaboration for the development and production of Imaging Atmospheric Cherenkov Telescopes (IACT). It supports the PAC in encouraging the JINR TAIGA team to collaborate with the JINR Baikal-GVD team in the data analysis, in particular in the search for events with similar and complementary characteristics. The Scientific Council endorses the PAC's recommendation to continue the participation in the TAIGA project for 2024–2028 with ranking A.

The Scientific Council appreciates the important contributions and the visible participation of the JINR team in the JUNO reactor neutrino experiment, which is at the commissioning stage, and supports the PAC's recommendation to continue the JINR's participation in JUNO for 2024–2027 with ranking A.

The Scientific Council acknowledges the significant contribution made by the JINR group in the current accelerator neutrino NOvA experiment and the plans to contribute to the construction of the Near Detector of the new generation DUNE experiment. Members of the JINR team hold prominent positions in the NOvA collaboration, coordinating the processing of experimental data and analysis of exotic channels. The Scientific Council appreciates the important scientific missions of the NOvA and DUNE experiments, and the strength of the JINR team participating in these two projects. The Scientific Council endorses the PAC's recommendation to continue the JINR's participation in the NOvA experiment and supports the preparation work for the DUNE project for 2024–2027 with ranking A.

The Scientific Council appreciates the efforts aimed at providing modern computing facilities to the JINR scientists on the basis of the project "Multifunctional Information and Computing Complex (MICC)" including the Tier1 and Tier2 grid sites, cloud infrastructure, hyperconverged supercomputer "Govorun", multi-layer data storage system, network infrastructure, power supply and climate control systems. The Scientific Council supports the PAC's recommendation to extend the MICC project for 2024–2030 with ranking A.

The Scientific Council recognizes, together with the PAC, the ever-growing role that software, algorithms, machine learning techniques, and computational physics play in modern science, including high-energy physics, nuclear physics, and related fields. The Scientific Council endorses the PAC's recommendation to open a new project "Mathematical methods, algorithms and software for modelling physical processes and experimental facilities, processing and analysing experimental data" aimed at developing

general mathematical methods and software, targeting, first of all, the experiments of the JINR flagship project NICA and the JINR neutrino programme for 2024–2027 with ranking A.

The Scientific Council takes note of the new project for JINR's participation in the AMBER fixed target experiment at the CERN SPS, dedicated to the study of the internal structure and properties of hadrons. The Scientific Council, taking into account the synergy between the rich physics programmes of the AMBER and NICA SPD experiments, including the benefit of training young researchers in the AMBER experiment while the SPD is under construction, endorses the PAC's recommendation on the participation of the JINR team in the AMBER experiment for 2024–2026 with ranking A.

#### Nuclear physics

The Scientific Council supports the extension of the theme “Theory of Nuclear Systems”, which includes four new projects: “Low-energy nuclear dynamics and properties of nuclear systems”, “Microscopic models for exotic nuclei and nuclear astrophysics”, “Quantum few-body systems”, and “Relativistic nuclear dynamics and nonlinear quantum processes”.

The Scientific Council highly appreciates the current state of research within the framework of the theme and the scientific programmes of the projects proposed for implementation in 2024–2028, namely: structural features of nuclei far from the line of stability, structure of superheavy nuclei, interaction of nuclei at low energies, dynamics of fusion and fission, astrophysical reactions, systems of low-energy particles, nuclear dynamics at relativistic energies, properties of hot and dense nuclear matter, nonlinear quantum processes in strong polarized electromagnetic fields.

The main directions of scientific research of the theme “Synthesis and Properties of Superheavy Elements, the Structure of Nuclei at the Limits of Nucleon Stability” for the period 2024–2030 are related to the study of the superheavy nuclei and atoms, as well as light nuclei far from the  $\beta$ -stability line. Research in the field of the superheavy nuclei will be aimed at the synthesis of new elements of the periodic table and their isotopes, the study of the properties of radioactive decay using nuclear spectroscopy ( $\alpha$ -,  $\beta$ -,  $\gamma$ -spectroscopy), the study of the chemical properties of new elements, as well as the study of the mechanisms of nuclear reactions leading to the formation of new, still unknown nuclei. The Scientific programme includes studies of the structure of the lightest nuclei at the nucleon stability boundary and the mechanisms of their formation. The Scientific Council supports the extension of this theme for the next seven years.



Within the framework of this theme, the Scientific Council supports the opening of two new projects until the end of 2028: “Investigation of heavy and superheavy elements” and “Light exotic nuclei at the borders of nuclear stability”, the main tasks of which are the synthesis and study of the nuclear and atomic (chemical) properties of the heaviest elements, as well as the study of mechanisms of nuclear reactions leading to the formation of such elements and to the study of the structure and properties of the decay of isotopes of light elements located near the boundaries of nuclear stability.

The Scientific Council notes the high quality of the obtained scientific results in: 1) the study of violations of fundamental symmetries in the interactions of neutrons with nuclei, obtaining nuclear data; 2) studies of the fundamental properties of the neutron, the physics of ultracold and very cold neutrons; 3) applied and methodical work. — and supports the opening of a new theme “Nuclear Physics with Neutrons” and a new project “Investigations of neutron nuclear interactions and properties of the neutron” until the end of 2028 as well as extending the project “TANGRA” until the end of 2028 and the project “Modernization of the accelerator EG-5 and its experimental infrastructure” until the end of 2026.

The Scientific Council recommends extending the projects “Accelerator driven subcritical reactor (ADSR)” until the end of 2027 and “Study of the nucleon spin structure in strong and electromagnetic interactions (GDH&SPASCHARM&NN)” until the end of 2028 and opening new projects “Radiochemistry and spectroscopy for astrophysics and nuclear medicine”, “Investigations of reactor neutrinos on a short baseline”, and “Nuclear spectrometry for the search and investigation of rare phenomena” until the end of 2028.

The Scientific Council endorses the proposal of the JINR Directorate to reform the themes and projects into large research infrastructure (LRI), in particular: LRI “Development of the FLNR Accelerator Complex and Experimental Facility (DRIBs-III)”, which includes the projects “Construction of the U-400R accelerator complex” and “Development of the experimental setups to study the chemical and physical properties of superheavy elements”, and LRI “Baikal-GVD”, which represents the Baikal-GVD gigaton neutrino detector, the largest operating neutrino telescope in the Northern Hemisphere, and includes infrastructure aimed at studying astrophysical neutrino fluxes.

#### Condensed matter physics

The Scientific Council notes the PAC efforts in evaluating the projects proposed for inclusion in the Topical Plan for JINR Research and International Cooperation from 2024.

The Scientific Council supports the PAC's recommendation to open a new large research infrastructure (LRI) "Pulsed Neutron Source and Spectrometer Complex" and a project "Development of the IBR-2 facility with a complex of cryogenic moderators". The Scientific Council took note of the main objective of the project, which is to increase the efficiency of using of the IBR-2 nuclear research facility while implementing the experimental research programme, to ensure the operational reliability and safety of the reactor. During the period of implementation of the project, scientific and technical support services will be provided to ensure the safe operation of the reactor facility, and a large amount of scientific and technical work and experimental studies related to the commissioning of the cryogenic moderator complex will be performed.

The Scientific Council endorses the PAC's opinion to open a project "New advanced neutron source at JINR", noting that in accordance with the work plans, the following activities are being carried out: study of the pulsed reactor dynamics, development of neptunium nitride fuel and the fuel rods based on it, optimization of the design of the reactivity modulator and the reactor vessel in terms of reducing thermal loads and shape changing, development and implementation of a list of R&D to support the development of a preliminary design, including the main systems of the reactor facility, a complex of cryogenic moderators, development of a scientific programme, and a complex of spectrometers based on it.

The Scientific Council supports the PAC's recommendation to open a project "Scientific and methodological research and developments for condensed matter investigations with IBR-2 neutron beams", dedicated to improving the parameters and performance of experimental setups, expanding the scope of their applications as well as to the development of their elements and components.

Together with the PAC, the Scientific Council supported the opening of a project "Investigations of functional materials and nanosystems using neutron scattering" with subprojects "Study of the structure and dynamics of functional materials and nanosystems at the IBR-2 spectrometer complex" and "Development of an inelastic neutron scattering spectrometer in inverse geometry BJN (Bajorek–Janik–Natkaniec) at the IBR-2 reactor". The Scientific Council also noted that the results of the authors, obtained since the beginning of 2021, have demonstrated the high efficiency of neutron scattering.

The Scientific Council shares the PAC's opinion to open a new project "Nanobiophotonics" and considers its research programme to be interdisciplinary in nature and aimed at both fundamental and applied studies.

The Scientific Council supports the PAC's recommendation to extend the project "Novel semiconductor detectors for fundamental and applied research", noting that the project team is highly qualified and has a long-term experience in international cooperation and activities within the Medipix Collaboration.

Following the PAC recommendation, the Scientific Council supports the extension of the project "Precision laser metrology for accelerators and detector complexes", as well as the goals of the project being the long-term monitoring of the surface under the NICA accelerator and of the influence of microseismic noise, and installation of a network of inclinometers in the regions of seismic activity.

The Scientific Council shares the PAC's opinion on extending the project "Development of experimental techniques and applied research with slow monochromatic positron beams (PAS)". The Scientific Council concurs with the PAC that the implementation of the programme presented in the project will bring this facility to a qualitatively new level, opening up new opportunities for experimental research in the field of condensed matter physics and materials science.

Taking into account the PAC's recommendation, the Scientific Council supports the opening of a project "Design and development of a test zone for methodological studies of detectors at the linear electron accelerator in DLNP", dedicated to the development of scientific infrastructure for experimental studies with accelerated electron beams of the LINAC-200 accelerator.

The Scientific Council shares the PAC's opinion on the opening of a project "Protection against physical and chemical stresses with tardigrade proteins (TARDISS)", noting the ambitious goals of studying the radio- and cryoprotective properties of the Dsup protein in living systems and in vitro and perspectives for the development of model living systems with induced expression of the Dsup protein and high-tech materials modified with this protein.

The Scientific Council supports the PAC's recommendation to open projects "Molecular, genetic and organismal effects of ionizing radiation with different physical characteristics" and "Radiation biophysics and astrobiological research". The aim of the first of these projects is to study the regularities and mechanisms of molecular, genetic and organismal effects of ionizing radiation with different physical characteristics. The second project is aimed at solving a number of problems in radiobiology and astrobiology and tasks related to the radiation medicine.

The Scientific Council supports the opening of projects "Radiation tolerance of materials to high intensity heavy ion beams impact" and "Nanocomposite and functional

track-etched membranes”. The Scientific Council especially notes that the existing and future heavy-ion accelerator facilities at FLNR, JINR offer unique opportunities for interdisciplinary research, particularly in the field of materials science and nanotechnology, as well as for applications in nanofluidics, sensing technologies, green energy harvesting, and biomedicine.

The Scientific Council supports the PAC’s recommendation regarding written reports on the projects “Methods of computational physics for the study of complex systems”, “Complex materials”, “Mathematical models of statistical physics of complex systems”, “Nanostructures and nanomaterials” and “Quantum field theory methods in complex systems”.

#### Reports by young scientists

The Scientific Council followed with interest the reports by young scientists, selected by the PACs for presentation at this session: “The correction system of the NICA Booster guiding magnetic field”, by M. Shandov (VBLHEP), and “Proximity effects at superconducting and ferromagnetic heterostructures”, by V. Zhaketov (FLNP). The Scientific Council thanks the speakers and welcomes such selected reports in the future.

### **V. Membership of the PACs**

On the proposal by the representative to the JINR Committee of Plenipotentiaries from the Republic of South Africa, I. Patel, presented by JINR Director G. Trubnikov, the Scientific Council appoints M. V. Tshivhase (iThemba LABS, Somerset West, South Africa) as a member of the PAC for Nuclear Physics for a term of three years. The Scientific Council thanks Z. Vilakazi (Wits University) for his dedicated work as member of this PAC since 2009.

### **VI. Regulation on the procedure for awarding JINR annual prizes**

The Scientific Council endorses the new edition of the Regulation on the procedure for awarding JINR annual prizes, proposed by the JINR Directorate (Appendix), and recommends its approval at the next CP session in November 2023.

### **VII. Awards and prizes**

The Scientific Council approves the proposal of JINR Director G. Trubnikov to award the title “Honorary Doctor of JINR” to D. L. Nagy (Hungary) and V. Sadovnichy (Russia).

The Scientific Council welcomes the Jury's decision presented by its Chair, A. Sergeev, to award the Oganesson Prize to A. M. Cetto Kramis, M. Shvydkoy, V. Semin, and V. Pershina.

The Scientific Council congratulates BLTP Director D. Kazakov on the award of the N. N. Bogoliubov Prize for his outstanding contributions to the development of quantum field theory, renormalization theory and renormalization group revealing the renormalization properties of supersymmetric field theories; for his pioneering papers on multiloop calculations in quantum field theory.

The Scientific Council congratulates the winners of JINR annual prizes for best scientific, methodological, technological, and applied research papers.

### **VIII. Election and announcement of vacancies in the directorates of JINR Laboratories**

The Scientific Council elected E. Yakushev as Director of the Dzhelepov Laboratory of Nuclear Problems (DLNP) for a term of five years. The Scientific Council thanks V. Bednyakov for his successful tenure as Director of this Laboratory.

The Scientific Council endorsed the appointments of Yu. Kopatch and S. Kulikov as Deputy Directors of the Frank Laboratory of Neutron Physics (FLNP) until the completion of the term of service of the current FLNP Director, E. Lychagin.

The Scientific Council endorsed the appointments of O. Chuluunbaatar, D. Podgainy, and N. Voytishin as Deputy Directors of the Meshcheryakov Laboratory of Information Technologies (MLIT) until the completion of the term of service of the current MLIT Director, S. Shmatov.

The Scientific Council announces the vacancies of positions of DLNP Deputy Directors. The endorsement of appointments will take place at the 135th session of the Scientific Council in February 2024.

The Scientific Council announces the vacancy of the position of Director of the Laboratory of Radiation Biology. The election will take place at the 136th session of the Scientific Council in September 2024.

The Scientific Council supports the proposal of JINR Director G. Trubnikov to open the third position of FLNP Deputy Director and announces the vacancy of this position. The endorsement of appointment will take place at the 135th session of the Scientific Council in February 2024.

## IX. Next sessions of the Scientific Council

The 135th session of the Scientific Council will be held on 15–16 February 2024.

The 136th session of the Scientific Council will be held in September 2024, the exact date to be decided at the 135th session.



G. Trubnikov

Chair of the Scientific Council



S. Kilin

Co-chair of the Scientific Council



S. Nedelko

Secretary of the Scientific Council

## REGULATION

### on the procedure for awarding JINR annual prizes

1. Prizes are awarded for outstanding theoretical, experimental, methodological, and applied papers on the Institute's topics completed within 12 months after the end of the previous application for JINR prizes.

2. Each author of the awarded paper is given a diploma, along with the diploma, the author or the team of authors of the awarded paper is given a cash prize:

a) for theoretical research papers:

first prize	-	one prize
second prize	-	two prizes

b) for experimental research papers:

first prize	-	one prize
second prize	-	two prizes

c) for methodology, research and technology papers:

first prize	-	one prize
second prize	-	two prizes

d) for applied research and technology papers:

first prize	-	one prize
second prize	-	two prizes

The Jury has the right to award third prizes in all sections (no more than three in total).

The amount of cash prizes is established by the JINR Director's order.

3. Submission of papers for JINR prizes is carried out by the Science and Technology Councils of JINR Laboratories in electronic form on the specialized Indico website at the link [https://indico.jinr.ru/e/JINR\\_Prizes](https://indico.jinr.ru/e/JINR_Prizes) with the attachment of the necessary documents when filling out the registration form at the link <https://indico.jinr.ru/event/3934/manage/registration/456/form/>.

4. The paper is submitted in the form of one or a series of articles published or accepted for publication. In case of submission of several articles, they must be accompanied by an abstract.

5. Only papers performed by JINR staff members can be submitted for JINR prizes. The Science and Technology Councils of the Laboratories nominate by secret

ballot only the main authors of the papers who have made a decisive contribution. The team of authors should not exceed 10 persons.

*Note:* Papers performed with the participation of employees of other institutes can be submitted for JINR prizes. The Jury has the right to determine the degree of participation of JINR staff in these papers.

6. Materials submitted for JINR prizes include:

a) full texts of articles and abstract of the series of articles;

b) decision of the Science and Technology Council of the Laboratory with a detailed justification for the submission and the composition of the team of authors.

Documents for each paper separately are submitted electronically on the specialized JINR website **no later than 1 December of the current year**.

7. Every year, for consideration of the submitted papers, the JINR Directorate forms and appoints a jury of 11 people, including the Secretary (without the right to vote). The Jury consists of representatives of the JINR Directorate and leading scientists. The composition of the Jury, **no later than 5 December**, is approved by the JINR Director and published on the specialized JINR website.

*Note:* Jury members cannot be authors of papers submitted for JINR prizes.

8. Distribution of papers to reviewers is carried out by the Secretary **no later than 15 December**, and the collection of reviews – **no later than 25 January**. The recommendations on awarding JINR prizes are adopted at the Jury meeting by open or secret (by the Jury's decision) voting **no later than 10 February**. The recommendations are considered adopted if more than half of the Jury members agree with them.

*Note:* a) it is not obligatory to award all prizes annually;

b) one person cannot be awarded more than one prize annually.

9. The Jury's recommendations on awarding the prizes come into force after their approval by the JINR Scientific Council at the winter session.

10. Submission of papers for JINR prizes does not exclude their submission for prizes established in the JINR Member States as well as for international prizes.

11. The approved Jury's recommendations on awarding the JINR prizes is published in the press and on the specialized JINR website.

12. The team of authors within two weeks after the approval of the Jury's recommendations by the Scientific Council may submit proposals to the JINR Accounts Department on the distribution of the prize remuneration among its members. In the absence of such a proposal, the distribution of the prize remuneration among the members of the team of authors is deemed equal.