

I. General considerations

The Scientific Council takes note of the comprehensive report by JINR Director Grigory Trubnikov, covering the decisions of the latest sessions of the Committee of Plenipotentiaries of the Governments of the JINR Member States (17, 21 March and 22 May 2022), 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 reiterates the significance and timeliness of the Statement by the JINR Committee of Plenipotentiaries (CP) on preserving the unity of the Institute, its scientific mission and international partnerships within a peaceful environment, adopted at the extraordinary session of the Committee on 17, 21 March 2022.

The Scientific Council takes note of the information about the session of the JINR Committee of Plenipotentiaries on 22 May 2022.

The Scientific Council notes with satisfaction the progress in implementing the current plan of research and development of the scientific infrastructure at JINR:

- the successful completion of the third cycle of commissioning the NICA accelerator complex in the first quarter of 2022, during which critical tasks were accomplished to ensure the simultaneous operation of the three main accelerators of the NICA complex and to accelerate and extract a beam with an energy up to 3 GeV/n;

- the progress in production of magnets and their installation in the NICA collider tunnel;

- the successful realization of the physics run with stable operation of the accelerator complex for 2150 h, during which the SRC collaboration accumulated more than 185 million interactions of carbon with a hydrogen target;

- the significant progress in constructing the Baikal neutrino telescope for observing natural neutrino fluxes: the installation and commissioning of two new clusters of optical modules in February–April 2022, which led to an increase in the effective volume of the deep-water detector to 0.5 km³;

- the continuation of experiments at the Factory of Superheavy Elements using the DGFS-2 separator, in particular the synthesis of new darmstadtium isotope ²⁷⁶Ds in the ⁴⁸Ca + ²³²Th reaction. The purpose of this experiment is to search the minimum of stability expected in this region of the nuclear map and to check the corresponding theory of nuclear masses;

– the ongoing preparations for the first experiment to study the chemical properties of elements ^{114}Fl and ^{112}Cn at the DGFS-3 (GRAND) separator scheduled for the end of 2022. First test experiments were carried out in June 2022 with mercury and nobelium isotopes produced in fusion reactions. The purpose was to test and further optimize the set-up;

– the progress in the status of the IBR-2 reactor: the affected heat exchangers have been replaced by new ones and the whole package of documentation for licensing is being formed. The reactor start-up is scheduled for the autumn of 2023, with further operation for physics experiments (first for users from FLNP, JINR and the submission of proposals within the FLNP User Programme on 1 September – 15 October 2023);

– the further active development of fundamental and applied areas of research related to life sciences and condensed matter physics, based on the development of an interlaboratory research programme at the Laboratory of Radiation Biology and of an International Nuclear Technology Innovation Centre being established at the Institute.

The Scientific Council notes the results of the JINR groups within the CERN collaborations and supports JINR's readiness to continue fulfilling all current obligations under the cooperation agreements, protocols, addenda and other documents signed with research organizations all over the world, particularly with CERN and collaborations, as long as CERN continues its cooperation with JINR.

The Scientific Council takes note of the election by the JINR Committee of Plenipotentiaries of Ana María Cetto Kramis (Mexico), Trần Chí Thành (Vietnam), and Zhao Hongwei (China) as new members of the Scientific Council.

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

The Scientific Council takes note of the Draft Seven-Year Plan for the Development of JINR for 2024–2030 presented by JINR Director Grigory Trubnikov. The Draft Plan fully follows the architecture and logic of JINR's strategic development formulated in the concept of this Seven-Year Plan presented and discussed at the 131st session of the Scientific Council in February 2022 and at the CP session on 22 May 2022. The Scientific Council underlines that the presented Draft follows a kind of optimally minimal scheme in terms of the request for the amount of human and financial resources. Further reduction of funding would mean severe cut-offs in the scientific programme and plans for the development of the research infrastructure and would be destructive for the scientific and intellectual capacity of the Institute.

The Scientific Council endorses this Draft Seven-Year Plan for the Development of JINR for 2024–2030 and recommends that the JINR Directorate submit it for consideration at the next CP session in November 2022.

III. Discussions of the Director's reports

In the course of the discussions of the Director's reports, members of the Scientific Council made the following recommendations:

- to find a way to keep cooperation between CERN and JINR including, in particular, organization of the traditional CERN–JINR School of Physics for young scientists, with possible participation of IUPAP;
- to pay additional attention to coordination and harmonization of the Seven-Year Plan with the NuPECC Long-Range Plan and other strategic documents worldwide;
- to carry out a careful analysis of the existing risks that may hinder the implementation of the Seven-Year Plan and include a special chapter on risk assessments and corresponding scenarios of updates to the Plan;
- to continue and enhance the activities aimed at strengthening the intellectual, material and financial basis of JINR and involving new associate and full Member States from different regions worldwide, including countries with strong economies, for instance China.

IV. Activities of the JINR PACs in 2023 and proposals for changes in their memberships

The Scientific Council takes note of the information about the activities of the JINR Programme Advisory Committee planned for 2023 and of the proposals for changes in their memberships, presented by JINR Vice-Director Vladimir Kekelidze on behalf of JINR Director Grigory Trubnikov.

The Scientific Council appoints the following new members of the PAC for Particle Physics for a term of three years:

- Magdalena Djordjević (IPB, Belgrade, Serbia),
- Aram Kotzinian (ANSL, Yerevan, Armenia),
- Sergey Kuleshov (UNAB, Santiago, Chile),
- Yury Tikhonov (BINP SB RAS, Novosibirsk, Russia).

The Scientific Council terminates the mandate of the current membership of the PAC for Nuclear Physics and appoints the following new members of this PAC for a

term of three years:

- Dimiter Balabanski (ELI-NP, IFIN-HH, Bucharest, Romania),
- Dmitry Eremenko (SINP MSU, Moscow, Russia),
- Mitko Gaidarov (INRNE BAS, Sofia, Bulgaria),
- Kevin Hahn (CENS, Daejeon, Republic of Korea),
- Daniyar Janseitov (INP, Almaty, Kazakhstan),
- Dmitry Klinov (IPPE, Obninsk, Russia),
- Valery Kuzminov (BNO INR RAS, Neutrino, Russia),
- Jesús Lubián Ríos (INCT-FNA, UFF, Niterói, Brazil),
- Indranil Mazumdar (TIFR, Mumbai, India),
- Zhi Qin (IMP CAS, Lanzhou, China).

The Scientific Council assumes that members of the PAC for Nuclear Physics who have suspended their participation may be invited to the new composition of this PAC to resume their work in case of their consent.

The Scientific Council appoints the following new members of the PAC for Condensed Matter Physics for a term of three years:

- Mannab Tashmetov (INP AS RUz, Tashkent, Uzbekistan),
- Dmitry Tayurskii (KFU, Kazan, Russia),
- Igor Ushakov (FMBC, Moscow, Russia),
- Nicolae Verga (UMF CD, Bucharest, Romania).

Full lists of the current and new members of the three PACs are enclosed (Appendix).

In accordance with the Regulation for the JINR Programme Advisory Committees (item 3.7), the PACs recommendations are adopted with a quorum of two thirds of their members being present at the meetings. In order to determine the required quorum, the Scientific Council resolves to proceed from the memberships of the PACs without including in them those members who have announced their temporary or complete withdrawal from the PACs.

V. Scientific report

The Scientific Council heard with interest the scientific report “Experimental programme at MPD” presented by Victor Ryabov (NRC KI PNPI, Gatchina) and thanks the speaker.

VI. Awards and prizes

The Scientific Council approves the Jury's recommendations on the award of the Venedikt Dzhelepov Prize to Pavel Apel (FLNR, JINR) for the development of a new generation of track membranes and their applications in medicine and ecology.

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

VII. Election and announcement of vacancies in the directorates of JINR Laboratories

The Scientific Council elected Dmitry Kazakov as Director of the Bogoliubov Laboratory of Theoretical Physics (BLTP) for another term of five years.

The Scientific Council announces the vacancies of positions of BLTP Deputy Directors. The endorsement of appointments will take place at the 133rd session of the Scientific Council in February 2023.

The Scientific Council announces the vacancy of the position of Director of the Dzhelepov Laboratory of Nuclear Problems. The election will take place at the 134th session of the Scientific Council in September 2023.

The Scientific Council notes that Adam Kisiel, since his election as Director of the Veksler and Baldin Laboratory of High Energy Physics (VBLHEP) at the previous session of the Scientific Council in February 2022, has not been able under force majeure circumstances to assume his office, therefore the endorsement of appointments of VBLHEP Deputy Directors cannot take place at this session and should be postponed. The Scientific Council agrees with the proposal by JINR Director Grigory Trubnikov to announce the vacancy of the position of VBLHEP Director again and to hold a new election in a year, at the 134th session of the Scientific Council in September 2023. Until the new election, the Scientific Council gives the JINR Director the right to appoint acting Director and Deputy Directors of VBLHEP proceeding from the major task to make maximum efforts and organize all work on NICA in order to start the technical launch of the collider by the end of 2023.

VIII. Next sessions of the Scientific Council

The 133rd session of the Scientific Council will be held on 16–17 February 2023.

The 134th session of the Scientific Council will be held in September 2023, the exact date to be decided at the 133rd session of the Scientific Council.

Grigory Trubnikov

Chair of the Scientific Council

Sergei Kilin

Co-Chair of the Scientific Council

Sergey Nedelko

Secretary of the Scientific Council