

Remembering colleagues who have passed away in 2021

This year will be remembered not only for our achievements, economic difficulties or tense struggle with covid, but also for the losses of our colleagues. 2021 took our outstanding scientists away from us:

Gert Vladimir Petrovich (21.01.1947 – 05.01.2021), MLIT

Efremov Anatoly Vasilievich (26.12.1933 – 05.01.2021), BLTP

Bogolubsky Igor Lvovich (07.11.1947 – 04.02.2021), MLIT

Peryt Marek (05.03.1950 – 23.02.2021), VBLHEP

Kharzheev Yuri Nikolaevich (15.05.1941 – 01.03.2021), DLNP

Belaga Victoria Vladimirovna (27.02.1965 – 09.03.2021), VBLHEP

Kovalenko Alexander Dmitrievich (31.10.1944 – 30.04.2021), VBLHEP

Dorokhov Alexander Evgenievich (29.05.1956 – 14.06.2021), BLTP

Donec Evgeny Denisovich (15.10.1935 – 17.06.2021), VBLHEP

Gladyshev Alexey Valerievich (30.05.1969 – 20.06.2021), VBLHEP

We would like to express our deep condolences for this loss to their families, friends and colleagues.

**Information of
the 120-th session
of the Scientific Council
(February 2021)
and
of the Committee of Plenipotentiaries
(March 2021)**



THE 129TH SESSION OF THE JINR SCIENTIFIC COUNCIL (18 FEBRUARY 2021)

(hybrid format)

co-chaired

by JINR Director **Grigory Trubnikov**

and

by Prof. **Catalin Borcea**

(Horia Hulubei National Institute of Physics
and Nuclear Engineering, Bucharest, Romania)



AGENDA

- *Director's report - **G. Trubnikov***
- *Progress of the NICA project - **V. Kekelidze***
- *First experiments at the SHE Factory - **Yu. Oganessian***
- *Program of the Radiobiology Center - **A. Bugay***
- *Proposal for updates to the 7-Year Plan - **A. Sorin***
- *PACs' recommendations*
 - ***I. Tserruya, M. Lewitowicz, D. L. Nagy***
- *Membership of the PACs - **G. Trubnikov***
- *Scientific report "SKIF project at the Budker Institute (Novosibirsk)" - **P. Logatchov***
- *Scientific report "The recent SEM and ENAA investigations of carbonaceous meteorites and their potential relevance to Astrobiology and the origin and distribution of biospheres" - **R. Hoover***
- *Awards and prizes*
- *Proposal for naming the LIT after M. Meshcheryakov*
 - ***G. Trubnikov, V. Korenkov***
- *Announcement of elections of the VBLHEP Director*
 - ***G. Trubnikov***

RESOLUTION



*The **SC** warmly thanks **V. Matveev** for his outstanding contribution to the development & success of JINR during his mandate at the head of JINR.*

*The SC takes note of the comprehensive report by the **JINR Director G. Trubnikov**,*

*The **SC** welcomes the endorsement by the **CP** of the programme of JINR development presented by **G. Trubnikov**.*

*The **SC** fully endorses the **JINR Long-Term Development Strategic Plan up to 2030 and Beyond**.*

*the **Scientific Council** :*

- strongly appreciates the success of **Booster commissioning**, the progress in **NICA** construction, and the high-quality results of the **NICA collaborations**;*
- is impressed by **the first experiment on synthesizing Moscovium isotopes at the SHE Factory** & processing the first data taken with the new **DGFRS-2** separator.*

General considerations

The Scientific Council:

- appreciates the installation of **2 clusters of the Baikal Neutrino Telescope**, reaching **35 km³** of the detector effective volume - one of the largest telescopes in the **Northern Hemisphere**;
- notes the progress of the **User Programme** with the **IBR-2 spectrometers** remaining operational even under the pandemic conditions
& supports the development of the concept of a **new neutron source for FLNP**;
- is pleased with the contribution to the **CMS** data processing by the **JINR Tier1 centre**,
which **ranks second** among the world CMS Tier1 centres;
- welcomes the publication of the scientific results achieved using the **Govorun supercomputer**;
- notes the extension of the **applied research scope of JINR**, in particular,
in order to contribute to **the COVID-19 related research** made in cooperation with partner institutions;
- welcomes the **Committee of Plenipotentiaries'** approval of
the initiative to establish an **Interlaboratory Innovation Centre of JINR**;
- highly appreciates the new steps in strengthening **the cooperation with non-member states**.

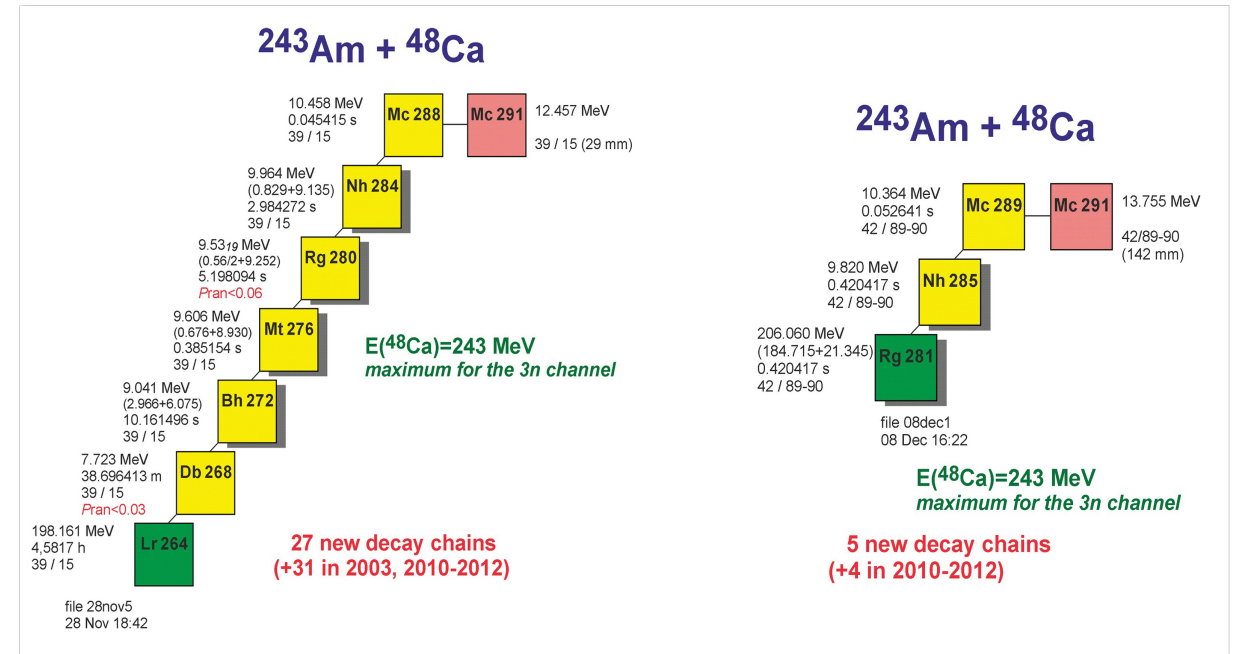
Progress of the NICA project

- *the **Scientific Council** commends **the efficiency of the regular meetings of the NICA CSRC**;*
- *the **infrastructure development** and **collider construction** are progressing at a good pace;*
- *the development of **MPD** and **BM@N** collaborations continues & the third one **SPD** is being formed;*
- *a very significant progress has been achieved in the construction of the **MPD** setup;*
- *the preparation for the **BM@N autumn run** with heavy ion beams is going on;*
- *the **resources requested for the NICA** project within the **updates of the Seven-Year Plan** are in line with the construction of the basic configuration and the implementation of the scientific programme;*
- *the **Scientific Council** agrees that, if the proposed funding profile is met,
the launch of the basic configuration of the Complex in 2022-2023 is realistic;*
- *at the same time, the **SC** admits possible **shifts** in the **plans** during 2021–2023 due to **the pandemic**.*

Experiments at the SHE Factory

The Scientific Council

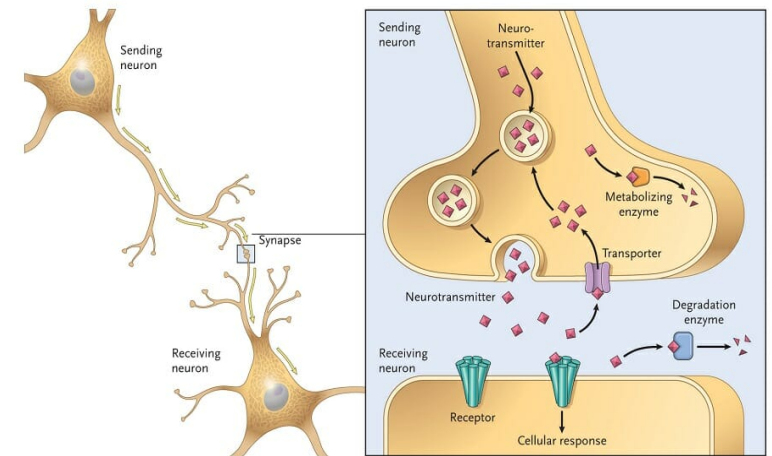
- *listened with great interest to the report of Academician Yuri Oganessian;*
- *noted the **success of the first experiments** on the synthesis of **115** (Moscovium);*
- *congratulates the team on the successful work & recommends a **high priority** for the **SHE Factory** research programme.*



Programme of the JINR Centre of Radiobiology Research

The Scientific Council

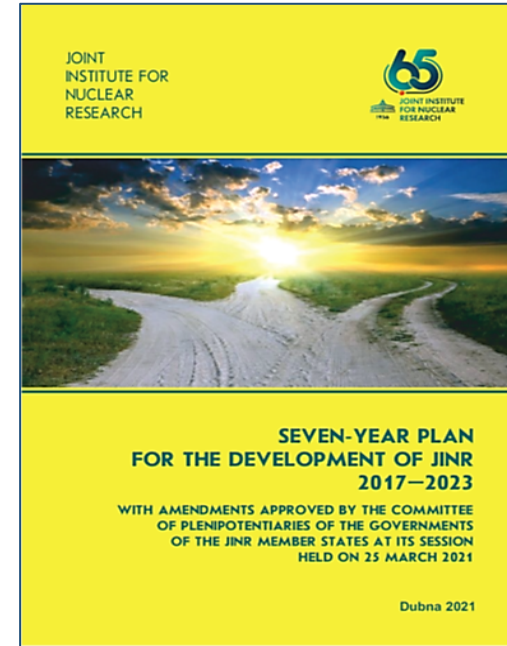
- *highly appreciated the scientific goals and strategy of the innovative research in **radiation neuroscience and clinical radiobiology** and the extension of scientific cooperation between JINR Member States in **socially relevant applied research** directions;*
- *recommends preparing a more precise project proposal with specific milestones to consider it at next **PAC meetings**.*



The Scientific Council supported in general the directions proposed for updating the 7-Year Plan.

Amendments applied to:

- **funding schedules** for the **NICA**, **DRIBs-III**, **IBR-2** with its spectrometer complex, **Baikal-GVD**, **JUNO** and **NOvA/DUNE**, **MICC**, and **Engineering infrastructure**;
- **activities** on the **NICA**, **DRIBs-III**, **new neutron source**, **SOLCRYS** Laboratory, **Baikal-GVD**, **DANSS** and **GEMMA/vGeN**, **MICC** including **Govorun** supercomputer;
- **“Innovation Activities”**, including establishment of an inter-laboratory **International Innovation Centre for Nuclear Technology Research (Innovation Centre)**;
- **strategic issues**, including new chapter **“Monitoring of the JINR Long-Term Strategy Implementation”**;
- **“Financial Support”** chapter of the **7-Year Plan**.



Recommendations in connection with the PACs

The Scientific Council

- took note of the **recommendations made by the PACs** (Jan. 2021), as reported by the PAC Chairs **Itzhak Tserruya, Marek Lewitowicz and Dénes Lajos Nagy**
- **requests the JINR Directorate to consider these recommendations**
while preparing the JINR Topical Plan for the year 2022;
- **acknowledges the measures being taken by the JINR Directorate**
to consolidate the JINR scientific programme;
- **welcomes the mandate given by the JINR Directorate to all three PACs**
to propose an approach for **prioritisation of JINR projects;**
- highly values work of the PACs **on prioritisation** of the projects within the JINR Topical Plan;
- **advises the JINR Directorate to act together with the Lab. leaders towards**
applying the PACs' recommendations for **consolidation of the intellectual and material resources.**

Particle physics

Concerning the NICA project the Scientific Council:

- *seconds the **PP PAC** in congratulating the team on the successful first beam circulation in the **Booster**;*
- *is pleased to note the progress in commissioning the **Cryogenic compressor station**,
in developing the **beam transport channels**, in the collider **cryo-magnetic system** production:*
- *supports the PAC's recommendation to extend the **Nuclotron-NICA project** until the end of **2023**.*

The Scientific Council

- *congratulates the **MPD** team on the important milestones: **the magnet yoke assembly**, the start of the installation of **MPD elements** inside the hall aiming at their commissioning in **2021–2022**;*
- *appreciates the progress of the **BM@N**, including detector preparation, simulations and development of data analysis methods for the forthcoming **runs with ion beams** in 2021.*
- *recognises the long-lasting **collaboration between JINR and GSI**
& the large synergies between the **NICA and FAIR** research programmes;*
- *endorses the PAC's recommendation on the JINR's participation in the **CBM** until the end of **2025**;*
- *notes the large similarity between the muon systems of **PANDA** and of the **SPD**
& endorses the PAC's recommendation on the JINR participation in the **PANDA** until the end of **2024**;*
- *joins the PAC in thanking the **SPD** team for the preparation of a comprehensive **CDR**.*

Nuclear physics

The **SC** congratulated the **FLNR** team on the successful **start of the SHE Factory** experimental programme;

the **first experiment** was aimed at **the synthesis of isotopes of 115 (Mc)**;

> **50 decays of 288Mc and 289Mc** were obtained during **5 weeks**,

which **doubled** the statistics of experiments using the **U-400**;

the **next round of experiments** will take advantage of the **increased intensity of 48Ca** beams on targets (up to **3.0–5.0 pμA**), a **new differential pumping** system and the **larger targets**;

the programme includes the synthesis of **flerovium** isotopes (**Fl**) via **242Pu+48Ca** reaction

and the development of a high intensity **50Ti** beam for the synthesis of elements **119** and **120**;

the first experiments at the **ACCULINNA-2 fragment separator** used the **2H(8He,3He)7H** reaction to reach nuclear structure information on the **extremely-neutron-rich** nucleus **7H**,

in which the **ground & excited states** were clearly observed;

in other reactions, excited states in exotic nuclei **7He**, **9He**, and **10Li** were investigated;

the **SC** recognises the interest of the research at **ACCULINNA-2** to the study of drip line, light exotic nuclei.

The **SC** supported the PAC's recommendation

on opening in **2022** a 1-year project **for modernisation of the EG-5** accelerator.

Neutrino physics

the Scientific Council:

- supports the PAC's recommendation to extend until the end of **2024** the theme "**Non-accelerator neutrino physics and astrophysics**";
- recognises the importance of the **Baikal-GVD** large-scale project & endorses the PAC recommendation on continuation of the scientific programme **with the highest priority;**
- congratulates the PP PAC and the NP PAC for the careful evaluation, in the **joint session** of the **5 neutrino projects** ranking as follows:
 - **Category A:** DANSS, EDELWEISS-RICOCHET, GERDA (LEGEND);
 - **Category B:** GEMMA, SuperNEMO.



Condensed matter physics

The Scientific Council:

- *appreciates the close attention to the development of **the concept for a new neutron source at FLNP** and supports further monitoring and review of the progress in this direction;*
- *shares the PAC recommendations on construction of **the SOLCRYS laboratory** at the **SOLARIS National Synchrotron Radiation Centre**.*
- *notes with satisfaction the PAC assessment on the plans for **the IBR-2 instrumentation development**, welcomes the status of the **DRV neutron diffractometer** (real-time diffraction) and a **new small-angle** neutron scattering and imaging options;*
- *agrees with the PAC that the **development of the new inelastic neutron scattering spectrometer** in inverse geometry is essential for extending the capacities in studying the dynamics and vibrational properties of condensed matter;*
- *concurs with the PAC that the development and modernization of **other instruments** are important for competitive researches & for the successful realization of the FLNP User Programme and the extension of the research scope of the **IBR-2 facility**.*
- *is pleased with **the statistics** of the **FLNP User Programme at the IBR-2 spectrometers** and the implementation of the new **Web-based** application for collecting & evaluating research proposals, even in the pandemic period and recommends **extension of the FLNP User Programm**.*

Membership of the PACs

The Scientific Council appoints

Wojciech Dominik (*Institute of Experimental Physics, Warsaw University, Poland*)
and
Alexandre Ivanov (*Institute Laue-Langevin, Grenoble, France*)



as new members of the PACs for Particle Physics and for Condensed Matter Physics respectively.

The **Scientific Council** thanks **Jan Pluta** and **Joachim Mnich**
for their dedicated work in the **PAC for Particle Physics**.

Announcement of new elections of Director of VBLHEP

The **Scientific Council** announced a vacancy for the position of **Director** of VBLHEP;
the elections will be held at the **131** session of the **Scientific Council** in **February 2022**.

Naming of the Laboratory of Information Technologies

The **Scientific Council** supported the proposal of the JINR Directorate for naming the **LIT**
after **Academician Mikhail Meshcheryakov**

Awards and prizes

The **SC** approves the proposal of JINR Director **G.Trubnikov** to award the title “**Honorary Doctor of JINR**” to Prof. **Luisa Cifarelli**, Prof. **Michael Waligórski**, and Prof. **Stanislav Dubnička**, in recognition of their outstanding contribution



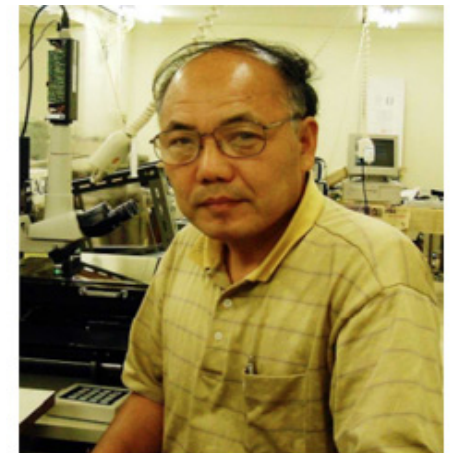
to the advancement of science and education of young scientists.

The **SC** approves the Jury’s recommendations on the award of **JINR annual prizes** for the best papers in the fields of scientific research, methodology, research and technology, and applied research.

The **SC** approves the recommendations of the Jury of awarding the Bruno Pontecorvo prize for 2020 to Prof. **Niwa Kimio** (Nagoya University, Japan)

for the development of the high-resolution nuclear emulsion technique, which led to identification of the tau neutrino

and direct observation of tau neutrino oscillations.



THE SESSION OF THE JINR COMMITTEE OF PLENIPOTENTIARIES OF THE GOVERNMENTS OF THE MEMBER STATES OF THE JOINT INSTITUTE FOR NUCLEAR RESEARCH (25 MARCH 2021)

*The representative of Romania, **Florin-Dorian Buzatu**, was elected **Chair of the CP***



Agenda

- *Report by the JINR Director - G. Trubnikov;*
- *Execution of the JINR budget for 2020 and draft of the revised budget of JINR for 2021;*
- *Results of the meeting of the JINR Finance Committee held on 22 March 2021;*
- *Endorsement of appointments of Vice-Directors, Chief Scientific Secretary and Chief Engineer of JINR ;*
- *Naming the LIT after M. Meshcheryakov;*
- *Agenda for the Year of Bulgaria with JINR and arrangements for the CP session to be held in Bulgaria (November 2021).*

Meetings with newly appointed Plenipotentiaries

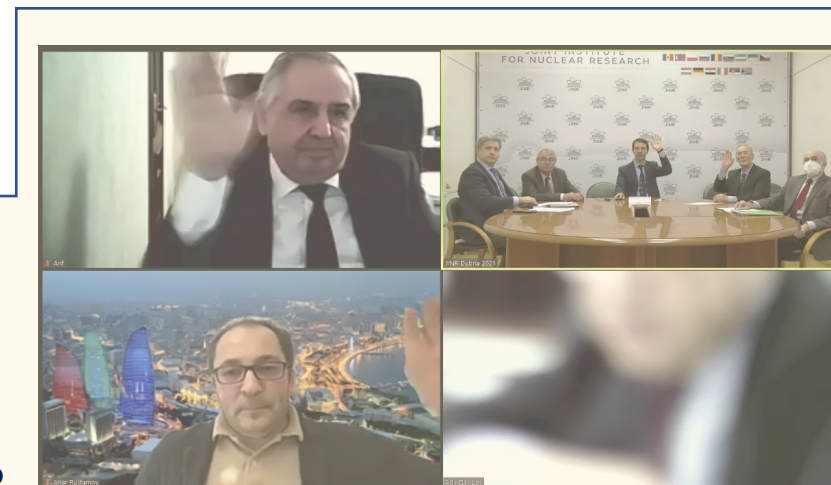


26.02.2021 / Zoom
Tsanko Bachiyiski, PP of Bulgaria

- *Year of Bulgaria in JINR;*
- *information center at Sofia Univ.*

18.03.2021 / Zoom
Arif Mamed oglu Gashimov,
PP of Azerbaijan.

- *Enhancing cooperation with NICA;*
- *Upcoming visit of delegation to JINR*



18.03.2021 / Zoom
Sargis Hayotsyan, PP of Armenia.

- *Network of PLI in Armenia;*
- *Cooperation with ERPHI*

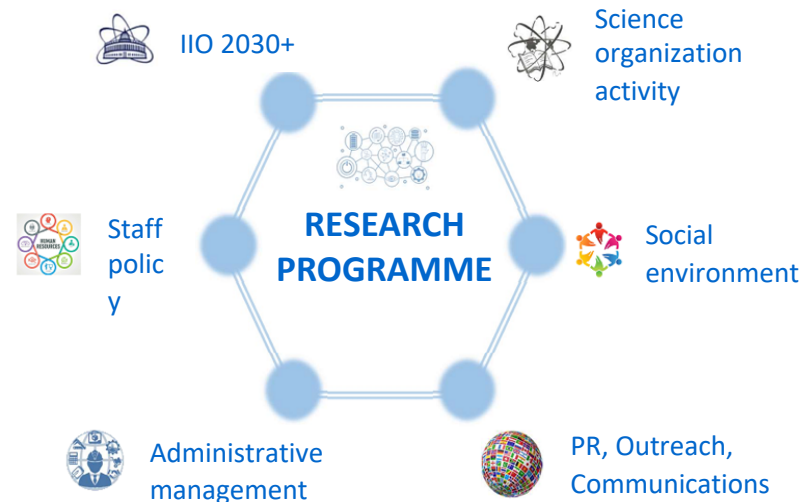
23.03.2021 / Zoom
Batyrzhan Karakozov, PP of Kazakhsta.

- *Basic facilities in RK, opening
JINR Branch*
- *AYSS conference in Kazakhstan*

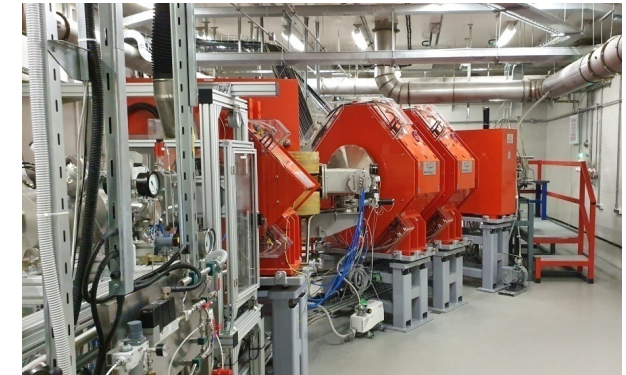


The Committee of Plenipotentiaries RESOLVED:

- To take notice on the recommendations of the **SC 129th session**, the proposal for **updates to the 7-Year Plan for 2017–2023**, the JINR management realization of the long-term strategy, the Member States' contribution to
the total performance of the large-scale projects,
and the most important events of JINR.*
- To approve the **JINR Long-Term Development Strategic Plan up to 2030 and Beyond**; to commission the Directorate to pursue the work on the **7-Year Plan for 2024–2030**.*
- To assent to the Directorate's initiative to form a **strategic development committee reporting to CP Chair** and to recommend that the Plenipotentiaries submit their appointees prior to the 1st of May of 2021.*
- To endorse the **Directorate's activities** for implementing the **Long-Term Strategic Plan** in terms of improving the management's performance, restructuring of the central management and developing a complex monitoring system of **KPIs**.*
- To approve the **amendments to the 7-Year Plan (2017–2023)**, the recommendations made by the JINR Finance Committee, and the general directions for the updates endorsed at the previous CP session of November 2020.*



6. To recognize the substantial research-and-engineering, intellectual and human resources contributed by the JINR Member States to **the realization of the large-scale projects of the Institute: MPD, BM@N u SPD collaborations**, signing the MoU on the **Baikal-GVD**, and research in neutrino astrophysics, neutrino astronomy and neutrino physics, the contribution to **the SHE Factory**, establishing the **IBR-2** international user committee, the increasing of the JINR Member States users of the **Govorun supercomputer** and new cloud components of **DICE (Distributed Information & Computing Environment)**.



7. To congratulate the JINR Directorate on the **Booster commissioned** on Nov. 20, 2020, with Russian Prime-Minister **M. Mishustin** as special guest; to note with satisfaction that generating a sustainable circulation of the He beam was achieved in strict compliance with its schedule.



8. To value highly the Directorate and Baikal-GVD team's activities for having launched **the largest deep-water neutrino telescope in the Northern hemisphere**, the commissioning ceremony of which (March 13, 2020) was involved the Plenipotentiary of the Russian Federation **V. Falkov**.

9. **To note** with satisfaction that the first experiments at **the SHE Factory** resulted in **55** decays for **Mc-288, 6 – Mc-289** , and tentative detection of **α -decay of Db-268** - first evidence a new **lawrencium-264** isotope **discovery**.
10. **To greet** the opening of the **JINR Information Centre** at the **Academy of Scientific Research & Technologies** of the **Arab Republic of Egypt** in Dec, 2020.
11. **To endorse** the JINR Directorate's for executing the agendas for the **65-year anniversary of JINR**, for the **Year of Bulgaria with JINR**, for the scope of JINR's participation in the **Year of Science and Technologies in the RF**.
12. **To welcome** the first meeting of the **Vietnam–JINR Joint Coordination Committee** as a vehicle for Vietnam's growing participation in JINR, **to note** the implementation of the CP resolution (Nov. 2019) to develop a plan of cooperation between the Vietnam Academy of Sciences and Technology, VINATOM and JINR for the execution of the project of a new **research reactor in Vietnam**
13. **To endorse** the JINR Directorate's developing a concept for **the Innovation Centre for nuclear technologies**, Its international research programme and project management plan.

The CP took notice of the information on the execution of the JINR budget for 2020, and approved the consolidated final adjustment of the income and expenditure of the JINR budget for 2020.

The CP approved the revised JINR budget of US\$ 265 825.2 k bottom line for 2021.

The CP approved the minutes of the Finance Committee meeting of 22nd of March of 2021.



With reference to the fact that the coronavirus pandemic of 2020 resulted in an international cooperation surplus on the budget, CP commissioned the JINR Directorate to consider an issue of equivalent increase of this expenditure item when budgeting for 2022 and 2023.



The CP approved the audit schedule for auditing the JINR financial results of 2020 as presented by the JINR Directorate.

Having heard and discussed the proposal for “**Endorsement of appointments**” submitted by JINR Director **G. Trubnikov**,

the Committee of Plenipotentiaries RESOLVED:

following the voting results, to confirm in office:

*Vice-Directors of JINR – **Sergey Dmitriev, Vladimir Kekelidze, Latchesar Kostov***

*Chief Scientific Secretary of JINR – **Sergey Nedelko***

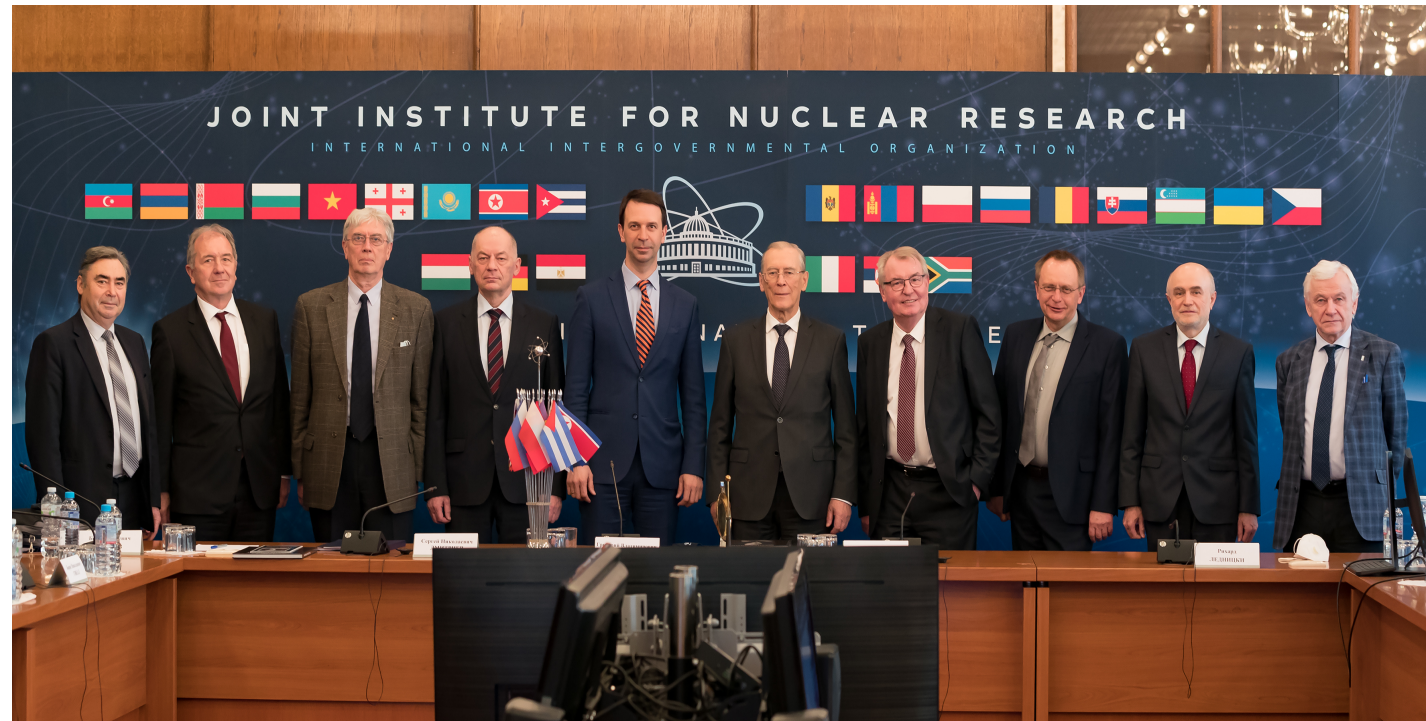
*Chief Engineer of JINR – **Boris Gikal***

*whose term of office will expire together with the Director in office on Jan. 1-st of **2026**.*

To express gratitude to

- **Richard Lednický,**
- **Boris Sharkov,**
- **Alexander Sorin**

for their continuous performance as Directorate, their huge contribution to the Institute’s achievements and the development of international research cooperation.



The Committee of Plenipotentiaries have scheduled the next session for 22–23 November 2021

The next meeting of the Finance Committee will be held on 18–19 November 2021

