

Financial Support

1. Income

Revenues of the JINR financial plan for 2017–2023 (M\$)

	2017	2018	2019	2020	2021	2022	2023	Total
Contributions of the Member States of JINR	197.3	196.9	201.0	200.2	209.2	217.0	222.4	1 444.0
Payment of arrears of the JINR Member States for the payment of contributions	47.6	0.1	30.6	12.8	0.2	0.2	0.2	91.7
Other income	9.2	8.8	8.4	5.9	2.2	0.0	0.0	34.5
Total	254.1	205.8	240.0	218.9	211.6	217.2	222.6	1 570.2

The revenues of the JINR Financial Plan are formed mainly from the contributions of the Member States. The increase in the estimated amount of contributions for 2022 and 2023 is 2.5% annually. The income also includes the payment of arrears of Member States in the payment of contributions, in accordance with the approved schedules, and the collection of other income.

Taking into account actually received funds, the total amount of revenues for 2017–2023 is planned in the amount of 1,570.2 M\$.

2. Expenditures

Expenditures of the JINR financial plan for 2017–2023 (M\$)

	2017	2018	2019	2020	2021	2022	2023	Total
Personnel	65.3	73.1	82.1	79.4	96.7	112.9	114.8	624.3
International cooperation	8.4	8.7	8.9	3.1	5.6	6.0	6.0	46.7
Material costs, external R&D, construction	96.8	103.7	100.4	91.8	108.4	106.8	76.0	683.9
Energy and water	4.8	4.9	4.9	4.2	5.3	5.5	5.8	35.4
Overhaul	9.6	10.9	13.3	15.6	11.1	10.0	10.0	80.5
Operating expenses	9.5	10.3	10.7	10.0	10.2	10.0	10.0	70.7
Total	194.4	211.6	220.3	204.1	237.3	251.2	222.6	1 541.5
Reserve for plenipotentiary grants and cooperation programs	–	–	–	–	10.0	7.0	7.0	24.0
Reserve for grants from the JINR Directorate	–	–	–	–	10.5	10.7	11.0	32.2
Total	194.4	211.6	220.3	204.1	257.8	268.9	240.6	1 597.7

Expenditures of the JINR financial plan are presented in the form of consolidated items reflecting the main directions of spending the funds. The main part of expenses is concentrated in two consolidated items: “Personnel” and “Material costs, external R&D, construction”.

The consolidated item “Personnel” includes expenses related to wages and salaries. The level

of remuneration of employees and the attractiveness of the Institute for highly qualified scientists and young specialists depend on these costs.

The consolidated item “Material costs, external R&D, construction” includes expenses for the purchase of materials, equipment, commissioning fees, payments for research and development work performed by third-party organizations, as well as expenses for the design and construction of buildings, structures and technological systems. These costs are mainly related to the implementation of scientific projects.

Also, the expenses include other consolidated items that ensure the efficient operation of JINR: “International cooperation” — expenses for business trips, reception of specialists and holding meetings and conferences; “Energy and Water” — the cost of paying for electricity, heat, water supply and wastewater; “Repair” — expenses for major and current repairs of buildings, structures and equipment; “Operational expenses” — the costs of scientific, information and engineering and technical support, payment for transport services, communications, security of facilities, social services and other service costs.

Expenditures also include reserve funds that are earmarked and are allocated to expense items throughout the year.

The total amount of expenditures for 2017–2023 is planned in the amount of 1,597.7 M\$.

3. Material costs (consolidated item "Material costs, external R&D, construction")

Expenditure for the consolidated item “Material costs, R&D, construction (M\$)

	2017	2018	2019	2020	2021	2022	2023	Total
Accelerator complex NICA	38.3	46.5	38.9	32.2	49.3	53.3	26.7	285.2
Cyclotron complex DRIBs-III	17.1	12.4	10.5	11.4	14.1	15.0	13.1	93.6
Neutrino program	12.2	9.8	13.0	9.1	7.9	5.0	3.2	60.2
IBR-2 and spectrometers	4.5	7.2	6.9	4.8	4.6	3.5	2.4	33.9
Multifunctional information and computing complex	3.1	4.7	3.0	4.0	2.9	3.1	3.3	24.1
Other scientific projects, including the Innovation Center, SOLCRYS Laboratory, “Govorun” supercomputer	9.2	9.5	12.1	10.9	8.2	10.1	10.3	70.3
Total for all research projects	84.4	90.1	84.4	72.4	87.0	90.0	59.0	567.3
Operation of basic installations	3.6	4.3	5.4	3.1	4.2	4.3	4.7	29.6
Laboratories infrastructure	2.1	1.6	3.0	3.3	4.2	3.5	3.3	21.0
JINR infrastructure	6.7	7.7	7.6	13.0	13.0	9.0	9.0	66.0
Total	96.8	103.7	100.4	91.8	108.4	106.8	76.0	683.9

A significant part of the material expenditures is aimed at financing the main scientific projects of JINR:

– establishment of the NICA accelerator complex for research in the field of high-energy heavy ion physics;

– establishment of the DRIBs-III cyclotron complex to search for new superheavy elements of the periodic table and study the properties of radioactive and exotic neutron-rich nuclei;

- development of the IBR-2 nuclear research facility and spectrometers for research in the field of condensed matter physics and in the field of nanotechnology;
- implementation of the Neutrino research program in the field of neutrino physics, astrophysics and dark matter;
- development of a multifunctional information and computing complex to support scientific activities.

These costs are based on detailed cost estimates and project implementation schedules approved by the JINR Scientific Council and Program Advisory Committees.

In material expenditures, funds are also planned for the operation and maintenance of existing experimental installations in order to maintain them in proper working order, costs for administrative and economic services, as well as costs for the maintenance and development of institution-wide engineering systems.

4. Personnel costs (consolidated item “Personnel”)

Personnel costs are planned in a volume that ensures competitive level of remuneration and attractiveness of the Institute for highly qualified scientists and young specialists.

Starting from 2021, a centralized fund for stimulating highly qualified personnel is planned annually in personnel costs, which was created by the decision of the JINR CP in order to ensure a competitive level of remuneration, stimulate employees to improve their qualifications and professional competence, and solve the problems of concentrating resources in priority areas of JINR's activities.

Directorate of the Institute approved the directions for using the funds of the fund:

- support for the development of the main projects of the Institute – NICA, the SHE factory, IBR-2, the neutrino program, etc., within the framework of which we are talking about supporting representatives of all categories of personnel involved in projects, but the main task of using this part of the fund is to stimulate engineering and technical laboratory personnel;
- support for young researchers without a scientific degree through the mechanism of salary increments, and in the future – through an increase in the number and size of JINR grants for young scientists and specialists;
- special programs for the development and attraction of high-level personnel, which include a competitive program of postdocs, the recruitment of promising graduate students for the positions of research trainees, one-time payments for successful defense of dissertations, the attraction of outstanding researchers to full-time work at the Institute;
- support of highly qualified researchers in the person of candidates and doctors of science;
- rewarding teams for special achievements in the implementation of large-scale projects of the Institute.

Average personnel salary at JINR (thousands of Russian rubles)

	2017	2018	2019	2020	2021	2022	2023
Average monthly salary of JINR scientists, taking into account all payments is not less than	95.9	108.6	125.2	139.5	159.2	164.2	169.3
Average monthly salary at JINR, taking into account all payments is not less than	70.2	78.6	88.6	96.4	110.6	114.0	117.6

5. ISTC, “Energy and water”, “Repairs”, “Operating costs”

Expenditures under the consolidated item “International cooperation” are financially planned for 2021–2023 in accordance with the current level. Additional financing of these costs will be carried out at the expense of funds reserved for grants from plenipotentiaries, programs of cooperation with scientific organizations of the Member States, as well as joint projects with scientific organizations of non-JINR member states, with which agreements on scientific and technical cooperation have been concluded.

Expenditures under the consolidated item "Energy and Water" are planned based on the estimated consumption of energy resources by the experimental installations and facilities of the Institute. The calculation also takes into account the forecasted growth in tariffs for the services of companies in the fuel and energy complex in the Russian Federation.

The amount of funds for the consolidated item of expenditure "Repair" was determined taking into account the need to update and expand production areas that ensure the operation of new experimental installations, the development of engineering infrastructure, an increase in the number of modern research jobs in the laboratories of the Institute, as well as the costs of the current maintenance of buildings and structures of the Institute. Repairs in 2021–2023 are projected to be at roughly the same level of about \$ 10.0 million USD annually.

Expenditures under the consolidated item “Operating expenses” are planned for 2021–2023 at the level of 10.0 million USD annually, taking into account their optimization in order to concentrate funds to ensure the implementation of scientific projects.

6. Financial risks and a reserve for grants from the JINR Directorate as a measure to minimize their negative consequences

The main risks of the financial plan for the development of JINR are associated with the emergence of a deficit in the event of non-payment of contributions by individual Member States, as well as in the event of an unfavorable situation with exchange rates.

The emergence of a deficit in the JINR budget will lead to the need to limit budget expenditures, which may negatively affect the timing of the implementation of major scientific projects.

The financial plan provides for a reserve for grants from the JINR Directorate in the amount of 5% of the total amount of contributions, which is under the operational management of the Director of the Institute. These funds are necessary to mitigate the negative impact on the Institute's budget in the event of adverse circumstances. They can also be aimed at providing additional needs arising in the process of budget execution.

7. Forecast macroeconomic indicators

While forming expenditures of the JINR Financial Plan for 2021–2023, the forecasted macroeconomic indicators expected in the country where the JINR is located were used. The figures are based on the official forecasts of the Ministry of Economic Development of the Russian Federation.

Forecast macroeconomic indicators

	2017	2018	2019	2020	2021	2022	2023
Average annual US dollar exchange rate, rubles for 1 US dollar	58.3	62.5	64.7	71.9	70.8	73.1	73.8
Average annual euro exchange rate, US dollars for 1 euro	1.13	1.18	1.12	1.14	1.15	1.20	1.20
Average annual inflation (price increase) in the host state of the Institute	3.7%	2.9%	4.5%	3.4%	4.0%	4.0%	4.0%
Average annual increase in electricity tariffs	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Average annual growth of tariffs for heat energy and water supply	4.0%	4.0%	2.4%	4.0%	4.0%	4.0%	4.0%

8. Financing of the NICA project at the expense of earmarked funds of the Russian Federation

The implementation of the NICA project is carried out by joint efforts of JINR and the Russian Federation in accordance with the Agreement on the creation and operation of a complex of superconducting rings on colliding beams of heavy ions NICA of April 26, 2016.

In accordance with this Agreement, as well as its updating in accordance with the National Project "Science", funding is carried out at the expense of the JINR budget, contributions from other countries and at the expense of funds allocated under the Agreement by the Russian Federation.

The total amount of funds allocated by the Russian Federation for the creation of the NICA accelerator complex is 14,400.0 million rubles.

The use of funds from the Russian Federation is carried out in accordance with the Agreement and decisions of the Supervisory Board of the NICA project. The table below shows the structure of the actual use of these funds for 2017–2020, as well as the plan for their use for 2021–2023¹.

¹ 267.6 million rubles were spent on the implementation of the NICA project in 2016.

NICA project expenditures secured by earmarked contribution of the Russian Federation (millions of Russian rubles)

	2017	2018	2019	2020	2021	2022	2023	Total
Establishment of experimental installations	552.7	552.7	902.7	347.9	1 110.8	1 536.7	0.0	5 003.5
Research and engineering infrastructure	753.4	761.1	1 171.3	1 272.9	1 995.0	711.8	500.0	7 165.5
Computer information complex	34.8	400.6	113.9	0.0	91.5	11.8	300.0	952.6
Channels and installations for applied innovation research	0.0	0.0	46.8	62.9	590.1	311.0	0.0	1 010.8
Total	1 340.9	1 714.4	2 234.7	1 683.7	3 787.4	2 571.3	800.0	14 132.4