

COLLABORATION IN SCIENCE AND TECHNOLOGY

The basic results of the international cooperation in science and technology of the Joint Institute for Nuclear Research in 2005 are reflected by the following data:

- joint research has been conducted with scientific centres in Member States, as well as with international and national organizations in other countries, on 54 topics of first priority and 7 topics of second priority;
- to solve cooperation issues and questions of participation in scientific meetings and conferences, the Joint Institute sent 3077 specialists;
- for joint work and consultations, as well as for participation in meetings, conferences and schools held at JINR, 1414 specialists were received;
- 33 international scientific conferences, 20 workshops and 12 meetings were organized and held;
- 21 scholarship holders worked at the Institute laboratories.

The international cooperation of JINR is presented in agreements and treaties. It comprises joint experiments at basic facilities of physics centres, the acquisition of research data, preparation of publications of the joint research results, the supply of equipment and techniques for the interested sides, etc.

On 27–29 January a JINR delegation headed by JINR Vice-Director Professor A. Sissakian was on an official visit to Budapest. The delegation included FLNP Director Professor A. Belushkin and FLNR Director Professor M. Itkis. During the visit, meetings were held with Secretary-General of the Hungarian Academy of Sciences Academician N. Kroo, Head of the Physics Department of HAS Academician Z. Horvath, Professors D. Nagy, B. Kardon, K. Havancsak and other Hungarian scientists.

On 28 January an Agreement on cooperation between the Hungarian Academy of Sciences and JINR was signed by Secretary-General of HAS N. Kroo and JINR Vice-Director A. Sissakian. Unlike all the previous agreements signed after Hungary acquired the status of a JINR associate member in 1992, this agreement

was made for an unlimited term of validity, which confirms Hungary's stable interest in scientific collaboration with JINR. At the ceremony of signing the agreement A. Sissakian, M. Itkis and A. Belushkin told the representatives of HAS institutes about the JINR programme of scientific research and discussed plans of joint work. Academician N. Kroo, who made a speech at the ceremony, gave a high appraisal of the cooperation and expressed confidence in its further fruitful development.

On 7 February the Russian Office of the Helmholtz Association was opened in Moscow. Participating in the opening ceremony from JINR were Academician V. Kadyshevsky, Corresponding Members of RAS G. Shirkov and I. Meshkov, as well as Professors D. Blaschke and A. Filippov. In all, around 150 representatives of ministries and governmental branches, scientists from leading scientific centres of Germany and Russia were present at the ceremony, including Academicians of RAS V. Matveev, V. Fortov, I. Khalatnikov and other scientists.

This Association, named after the prominent German natural scientist Hermann von Helmholtz, unites fifteen German scientific and research centres involved in investigations in the sphere of natural sciences, biology and medicine aimed at providing for vital functions of man and establishing a technological base for competitive economics. Beginning in 2001, the Helmholtz Association has been financing five-year strategic scientific projects. For realization of these projects the so-called virtual institutes are created, which unite teams of researchers from universities and institutes involved in fundamental investigations. Grants are allocated to students and young scientists. A joint prize for foreign researchers has been established by the Helmholtz Association together with the Humboldt Foundation. In the summer of 2004, under the auspices of the Association the international school «Hot Points in Astrophysics and Cosmology» took place in Dubna in the framework of the DIAS-TH project. In 2005 other schools organized

by BLTP found support of the Association, their topics being connected with the investigations conducted in the Helmholtz centres GSI (Darmstadt) and DESY (Hamburg).

On 8 February, the Day of Russian Science, JINR Director V. Kadyshevsky and Vice-Director A. Sissakian had a working meeting with A. Fursenko, Plenipotentiary of the Government of the Russian Federation to JINR, RF Minister of Education and Science. The meeting took place in Moscow. Participating in the meeting were Head of the Federal Agency for Science and Innovations S. Mazurenko, Deputy Head of the Administration Directorate of this Agency V. Drozhenko and JINR Assistant Director V. Katrasev. The participants of the meeting discussed a wide range of issues on the results of the Institute's activity in 2004 and plans for 2005, as well as the preparations being made for JINR's 50th anniversary (March 2006).

On 20–22 February the Scientific Centre DESY (Hamburg) housed the 15th meeting of the Coordination Committee on the cooperation between the BMBF (Federal Ministry of Education and Research, Germany) and JINR. A JINR delegation headed by Director of the Institute V. Kadyshevsky arrived in Hamburg to take part in this meeting. The meeting of the Committee, co-chaired by Head of the BMBF Department of Fundamental Research H.-F. Wagner and JINR Vice-Director A. Sissakian, was opened by A. Sissakian's survey report on the results and plans of joint work on the BMBF–JINR agreement, JINR scientific activity and plans of its development. JINR Assistant Director V. Katrasev reported on the financial issues associated with the cooperation. The German colleagues expressed in their talks a high appreciation of the long-continued fruitful collaboration between German scientific centres and JINR. Apart from this, an arrangement was achieved on joint steps to prolong the agreement between BMBF and JINR for one more term of validity. Following the results of the meeting, a protocol on the tasks for 2005 was signed and Germany's funds were allocated.

JINR's representatives met with head of a BMBF department H. Schunk, DESY Director A. Wagner and with other scientists. The JINR delegation visited scientific laboratories of DESY, in which joint work with Dubna scientists is being successfully conducted.

From 25 March to 25 September the World Exposition EXPO-2005 was opened for the public in Japan. This is the first exposition of such a rank in the 21st century. The main theme of EXPO-2005 is «Nature's Wisdom». 125 countries, 8 international organizations and a number of first-rate Japanese industrial corporations took part in it. During the work of the exhibition it was visited by over 15 million people.

In the Russian pavilion, for the first time at the exhibition of such a scale, the exposition of the Joint

Institute for Nuclear Research was presented. On the threshold of the fiftieth anniversary of JINR, millions of visitors could learn about outstanding results of the Flerov Laboratory of Nuclear Reactions in the field of the synthesis of heavy elements. This part of the exposition was opened by a video film with the speech of RAS Academician Yu. Oganessian.

The second part of the JINR exposition included video films «Nuclear Physics and Medicine», which was about the investigations of the Laboratory of Radiation Biology in creation of new methods of the melanoma treatment, and «Nuclear Physics and Ecology», about the work of the Frank Laboratory of Neutron Physics in monitoring of the heavy metal contaminations in the environment by methods of the neutron activation analysis. The third film of this part of the exposition was about work at the Nuclotron in the study of biological effects of the heavy charged particles with high-energy forms in long-term space missions.

The third part of the JINR exposition was titled «Scientists for School Children». For several years JINR, in collaboration with the Brookhaven National Laboratory, has worked on the project «Online Science Classroom». In the framework of the project, the achievements of the modern computer technologies are used in creation of interactive cognitive modules which acquaint school students with modern science. This part of the exposition attracted the attention of not only young visitors but also their parents. By using special computer interactive kiosks, they solved different logical tasks, played memory games, getting a lot of pleasure.

On 7 April Assistant Minister of Economic Development and Trade A. Khalikova arrived in Dubna with a working visit to be acquainted with innovation activities of the Joint Institute for Nuclear Research and to see the town area where the technopark DUBNA is planned to be developed. JINR was represented at the meetings by Assistant Director on Innovation Development A. Ruzaev, Assistant Director on Economics and Finance V. Katrasev, DLNP Director A. Olchevski and Assistant Director on Economic Management S. Lukianov.

On 7–8 April a presentation of the joint exhibition of the Joint Institute for Nuclear Research and the European Centre for Nuclear Research (JINR–CERN) «Science Bringing Nations Together» was held in Thessaloniki (Greece). Representatives from Greece, JINR and CERN took part in its preparing. Such exhibitions dedicated to scientific cooperation between the two international centres, JINR and CERN, have already been organized in Oslo, Paris, Geneva, Brussels, Moscow, Bucharest, Dubna, and Yerevan.

The location of the event was not chosen by chance. Greece is a CERN member state; on the other hand, Greece is actively being prepared to enter JINR as an associate member.

The JINR delegation included V. Kadyshevsky, A. Sissakian, V. Ivanov, who took an active part in the discussion of organizational issues connected with scientific cooperation between JINR and scientific educational centres of Greece.

The official opening ceremony featured the reports by General Secretary on Research and Technology of the Ministry of Development of Greece Professor I. Tsoukalas, rector of the Aristotle University in Thessaloniki Professor I. Antonopoulos, Thessaloniki Mayor V. Papageorgopoulos, Assistant President of the National Committee on Research in Greece Doctor E. Gazis, JINR Director Academician V. Kadyshevsky, CERN Secretary-General Doctor M. Metzger, and deans of the Aristotle University departments of natural sciences.

A press conference with representatives of Greek mass media was held. It was attended by Professor J. Antoniou (Thessaloniki), Academician V. Kadyshevsky (JINR), Doctor E. Gazis (Athens), Professor N. Giokaris (Athens), Professor A. Sissakian (JINR), Doctor N. Koulberg (CERN), Doctor M. Zamani (Thessaloniki).

On 18–21 April JINR Vice-Director Professor A. Sissakian took part in the meetings of the Resource Review Committee on experiments at the LHC at CERN.

The meeting opened with the introductory reports by CERN Director-General R. Aymar, Chief Scientific Officer J. Engelen and LHC leader L. Evans. Later there was a detailed discussion of the activities to prepare the projects ATLAS, CMS, ALICE, LHC^b. P. Jenni, M. Della Negra, J. Schukraft, T. Nakada spoke on the status of these projects. JINR experts were represented at the meeting by N. Russakovich (ATLAS), V. Karzhavin (CMS), A. Vodopianov (ALICE).

First experiments in physics at the LHC are planned in the summer–autumn of 2007. The meeting marked the successful implementation of responsibilities on the JINR side in preparation of the joint experiments.

On 25 May the leader of the administration for research studies of the Federal Agency on Science and Innovation (Rosnauka) Professor Yu. Kozlov visited JINR. He was received at the JINR Directorate by the Institute leaders, Academician V. Kadyshevsky and Professor A. Sissakian, and had a talk on the issues of the development of JINR cooperation with Russian scientific centres and participation in international programmes. Visiting JINR laboratories, the guest was acquainted with the work in a number of promising research projects.

On 14–16 June XIX St. Petersburg international economic forum was held, which is often called in mass media the Russian Davos.

The status of the forum in 2005 was very high from the representative point of view. President of Russia

V. Putin, President of Azerbaijan I. Aliev, leaders of the Federation Council, State Duma, ministers of the Russian Federation, as well as political leaders of parliaments or governments of China, Lithuania, Hungary, Macedonia, Belarus and other countries took part in it. The Russian elite were widely represented on the level of governors and deputies of various rates. The economic block comprised leaders of largest corporations of Russia and Europe, representatives of international economic organizations and specialists from research centres and institutions.

The most important reason for JINR representatives to stay in St. Petersburg was the participation in exhibitions which usually accompany such events. The exhibitions were held in the Mikhailovsky manege. There were several expositions on the main topics of the forum. Azerbaijan, Hungary, the Ministry of Natural Resources of Russia, the Siberian Federal District demonstrated their exhibitions. JINR took part in the exposition «Russian Innovation Projects», after the suggestion about it had come from the RF Ministry of Economic Development and Trade. Besides JINR, similar projects were brought by the Siberian Department of RAS, the RF Ministry of Information and Communications and the Kaluga Region (mainly, Obninsk).

The key elements of the Institute exposition were the projects developed by specialists from FLNR (JINR), SCAR and SPC Aspekt. Once again one could see the highest level of JINR studies and their absolute commercial success.

JINR's participation in the exhibitions had another very important implication. The decision to give the SEZ status to a region will be determined by the question of whether projects that can attract private investors are available in Dubna and, primarily, at JINR. The RF Minister of Economic Development and Trade, G. Gref, and other participants of high rank asked this question. The exhibition in St. Petersburg showed that JINR had a positive answer to it. The minister thanked JINR's delegation for an interesting exposition.

On 15 June in Dubna, in the framework of the cooperation between the Republic of Belarus and the Moscow Region, a meeting was held of Dubna representatives with a delegation from Belarus. The latter included members of the government of the Republic of Belarus, representatives of the Embassy of Belarus in Russia, the National Academy of Sciences, the State Committee on Science and Technology, the State Military-Industrial Committee and other administration bodies and enterprises of Belarus.

A round-table discussion on the issues of cooperation in scientific, technical and innovation spheres was organized in the International Conference Hall. Vice-Chairman of the government of the Moscow Region V. Gromov, Deputy Minister of Industry and Science of the Moscow Region O. Ochin, JINR Director Academician V. Kadyshevsky, JINR Vice-Director Professor A. Sissakian, Dubna Mayor V. Prokh, Vice-Mayor

A. Rats, leaders of the Dubna enterprises Tensor, Alfa, Dedal, Apatek, Atoll who keep business contacts with Belarus took part in the discussion.

An excursion to the Flerov Laboratory of Nuclear Reactions and the Alfa scientific industrial complex was organized for the guests. The round-table discussion was continued at the Tensor instrumentation enterprise. The meeting finished with signing a Protocol on cooperation.

At the end of June, deputy dean of Tokyo University (Japan), ex-director of the Nuclear Research Centre of this university Professor H. Sakai visited JINR. He met with his colleagues from the Veksler and Baldin Laboratory of High Energies, visited the Nuclotron and had a talk with JINR Vice-Director Professor A. Sissakian.

The aim of his visit was planning joint research at the Nuclotron beam of polarized deuterons and preparation of a new joint experiment on the study of the nucleon–nucleon interaction at small distances and the three-nucleon forces' gain.

On 1 July a sitting of the Board on Particles and Fields (C 11) of the International Union of Pure and Applied Physics (IUPAP) was held in Uppsala (Sweden) in the framework of the international conference «Lepton–Photon — 2005» attended by a delegation from JINR. Member of the IUPAP Board from the Russian Federation Professor A. Sissakian made a talk at the meeting, among other reports, on the preparation of the XXXIII International Conference on High-Energy Physics to be held in Moscow on 26 July – 2 August 2006. JINR is one of the main organizers of this outstanding forum.

On 19 July Assistant to Chairman of the Government of the Russian Federation Yu. Zhdanov, later appointed by the Order of the RF Government Head of the Federal Agency on Special Economic Zones, was on a working visit to Dubna. The aim of his visit was to get acquainted with the environment existing both in the town and at the Institute to explore the possibilities of creating a technical innovation special economic zone (SEZ). Financing of SEZ creation from the federal budget and other sources will begin from January 2006.

In the framework of Yu. Zhdanov's visit, a meeting with the JINR Directorate and town administration took place at the town hall. At the meeting, issues of working out civil engineering objectives, as well as those connected with the infrastructural resources of Dubna, were discussed.

Yu. Zhdanov visited the Laboratory of Nuclear Reactions, where newly elected Director of JINR A. Sissakian told the guest about the Institute, its scientific and technological potential, innovative activity and the JINR Directorate's plans for creation of a technical innovation zone. The territory adjacent to the DLNP site, which is planned as one of the possible sectors

of SEZ in document submission for the contest, was inspected. JINR was represented at the meeting by Assistant Director for Innovative Development A. Ruzaev and FLNR Deputy Director S. Dmitriev.

On 27 July a US delegation was on an official visit to the Joint Institute for Nuclear Research. The delegation included representatives of the Congress, Department of Energy (DOE), Department of Homeland Security and the USA Embassy in Russia.

2005 marked 10 years of cooperation between the US Department of Energy, JINR and, in particular, SCAR as an organization responsible for fulfillment and modernization of physical protection and nuclear material accounting in the framework of the nuclear nonproliferation project. The American delegation had an opportunity of estimating the current status of implementing this program, as well as outlining a scheme of work which ought to be continued and improved in the context of counterterrorism.

JINR Director V. Kadyshevsky acquainted the members of the delegation with the activities of JINR as an international scientific centre. V. Samoilov spoke about JINR's cooperation with the US DOE and US national laboratories in the area of physical protection and nuclear material accounting. At the meeting the SPC ASPECT gave a presentation during which Yu. Nedachin told the guests about its work. After that the US delegation visited the central depository for nuclear materials of JINR, SCAR and the SPC ASPECT.

Summing up the results of the visit, representative of the US Congress B. White said, «Our task was to evaluate the Russian–American bilateral cooperation. We have been much impressed by the professionalism and deep knowledge of our partners. And that is a pleasant moment for us to be able to say that our states can cooperate so closely in such an area as nuclear safety». Cooperation is planned to continue up to and including the year 2008.

On 29 July the Joint Institute for Nuclear Research was visited by a South African government delegation headed by Director-General of the Department of Science and Technology R. Adam. The guests met with the JINR Directorate and got acquainted with the activities of the Laboratory of Nuclear Reactions and Laboratory of Neutron Physics. According to R. Adam's words, cooperation between JINR and the Republic of South Africa in the field of nuclear research began to actively develop from 1993, and over these years a series of joint scientific works have been published. R. Adam took notice of the great interest in scientific and student exchanges, organization of lectures of JINR scientists in their country and vice versa, as well as in joint research. He expressed confidence that scientific and technical cooperation between our two states in the field of nuclear research would serve to strengthening stability worldwide.

On 15 August, by order of RF President V. Putin a meeting was organized in Moscow on the topical problems of development of nanotechnologies in Russia. The meeting was held under the chairmanship of First Deputy Chairman of the Government of the Russian Federation A. Zhukov. Participating in it were RF Minister for Education and Science A. Fursenko, Head of the Federal Agency on Science and Innovations S. Mazurenko, as well as heads of a number of leading scientific, manufacturing and commercial enterprises of the Russian Federation, including JINR Director Academician V. Kadyshevsky, FLNR Director Professor M. Itkis and Professor V. Reutov.

At the meeting, priorities in long-term, middle-term and short-term development of nanotechnologies in Russia were considered. Possibilities of private co-financing of investigations in the sphere of nanotechnologies, as well as regulatory, recruiting and financial problems were also considered.

In their speeches Academician V. Kadyshevsky and Professor M. Itkis informed the meeting attendees of the progress and possibilities in the development of fundamental and applied investigations in radiation and ion nanotechnology, and examples of international cooperation in this direction. They also stressed that further development of the technology of manufacturing track membranes and development on their basis of the so-called template technology of synthesizing metallic and semiconductor nanostructures, as well as development of radiation and ion technology of forming two-dimensional crystal nanoplates and synthesizing monodisperse nanoclusters in solid substances could prove to be a perspective nanotechnological basis for production of specific nanomaterials for nanoelectronics, medicine, microbiology.

At the end of September Director of the Latin-American Physics Centre (CLAF) Professor F. Sanchez-Sinencio was on a two-day visit at JINR. He visited some of the Institute's laboratories, met with newly elected JINR Director Professor A. Sissakian, heads and leading researchers of the laboratories. Following the results of the visit, a new agreement on further scientific cooperation between JINR and the Latin-American Physics Centre was signed. According to A. Sissakian's words, cooperation with the Latin-American Physics Centre will develop dynamically in the interests of both sides, virtually the regions of JINR Member States and Latin-American countries, and is aimed first and foremost at involving young scientists in the cooperation.

On 5 October, an Agreement on Associate Membership of the Republic of South Africa in the Joint Institute for Nuclear Research was signed at the President Hotel in Moscow by RSA Minister for Foreign Affairs Co-Chairman of the Committee on Cooperation with Russia N. Dlamini-Zuma and JINR Director V. Kadyshevsky.

Present at the signing ceremony were RF Minister for Natural Resources Co-Chairman of the Committee on Cooperation with the Republic of South Africa Yu. Trutnev, RF Ambassador to RSA A. Kushakov, newly elected JINR Director A. Sissakian, JINR Chief Scientific Secretary V. Zhabitsky. Representing RSA in the signing ceremony were Minister for Education and Science R. Adam and other members of the government delegation.

On 6 October, a meeting of JINR Director V. Kadyshevsky and newly elected Director A. Sissakian with T. Kostrova, Deputy Director-General of OAO Komstar – Obyedinennye TeleSistemy, was held at the JINR International Conference Hall. Participating in the meeting were also Director of the Sales Department of the OAO Komstar I. Palchikov, DLNP Director A. Olchevski, LIT Director V. Ivanov, LIT Deputy Directors P. Zrellov and V. Korenkov, JINR Scientific Secretary for STI B. Starchenko.

At the meeting, mutually beneficial agreements were signed on the participation of the OAO Komstar in the work conducted by JINR together with the FGUP Kosmicheskaya svyaz (SESC), on creation of a Gigabit communication channel to Moscow, on leasing part of this channel of 10 Mbit/s capacity to the OAO Komstar, on the supply of the required communication equipment to JINR and building a Wi-Fi hot-spot network in Dubna.

The Gigabit communication channel is needed to ensure JINR's full participation in the experiments at the LHC. This channel will enable integrating the JINR Grid infrastructure into the world Grid infrastructure, which will make possible receiving, processing and storing tremendous volumes of data. Building a Wi-Fi hot-spot network in the territory of Dubna will provide JINR with immediate access to the Internet at the hotels, meeting and conference venues. The next stage will be preparation and signing of agreements on creating at JINR a telephone communication system of a new generation, as well as creating a multiservice network integrating the computer and telephone networks of the Institute. Both sides expressed deep satisfaction with the results of the meeting, as well as their determination to continue the initiated cooperation in the interests of both organizations.

On 20 October a regular meeting of the CERN–JINR Joint Steering Committee on cooperation was held at CERN. The Co-Chairmen of the Joint Committee — CERN Chief Scientific Officer Professor J. Engelen and elected JINR Director Professor A. Sissakian — greeted the participants of the meeting. Results of cooperation in 2005 were reviewed and prospects for 2006 were discussed at the event.

Reports were made on the joint experimental, theoretical and methodic elaborations by A. Sissakian (cooperation review), LHC project leaders P. Jenni, M. Della-Negra, J. Schukraft, JINR Laboratories leaders

A. Olchevski and V. Kekedilze, as well as I. Golutvin, N. Russakovich, A. Vodopianov, J. Knoblock, W. Hoff, A. Cecucci, L. Nemenov, M. Gazdzicki, A. Magnon and others. The speakers marked the high level and good prospects for the JINR–CERN cooperation.

The final part of the meeting was attended by a group of students from the elementary particle physics chamber of MSU (Chamber Head is Academician V. Kadyshesky). The students arrived in CERN for practice courses which were organized by the directorates of JINR and CERN and assisted by SCAR, JINR.

On 27 October, JINR Director-elect Professor A. Sissakian made a report «Dubna: Yesterday, Today, Tomorrow» on the scientific programme and the coming jubilee of the Institute at the traditional seminar of the Polish Physics Society held at the Jagellon University in Cracow.

The representative delegation from JINR took part in the meetings of Polish and Dubna physicists held on 23–29 October in Poznan and Cracow. Polish scientists from nine cities of Poland attended the meetings. Professor A. Sissakian met with Plenipotentiary of the Government of the Republic of Poland to JINR Academician A. Hryniewicz, Director of the H. Niewodniczanski Institute of Nuclear Physics Professor M. Eszabek, JINR Scientific Council members Academician A. Budzanowski, E. Janik and other Polish scientists. A wide range of questions on cooperation in science, education and innovation activities were discussed during the talks.

On 3–4 November JINR Director Professor A. Sissakian and JINR Assistant Director on Economic and Financial Issues V. Katrasev went to Kiev on a working visit. At the Verkhovna Rada of Ukraine A. Sissakian had a talk with Head of the Committee on Education and Science Academician I. Yukhnovsky. Chief Committee Consultant N. Shevchenko took part in the talks. Later in the day, JINR Director met with First Deputy Minister of Education and Science of Ukraine A. Gurzhij.

A long discussion was held at the National Academy of Sciences of Ukraine, where the guests from Dubna were heartily greeted by NAS President Academician B. Paton. NAS Vice-Presidents Academicians A. Shpak and A. Naumovets, Director of the Bogoliubov Institute of Theoretical Physics Corresponding Member of NAS of Ukraine A. Zagorodnij took part in the meeting. A wide range of topics related to the stabilization of the participation of Ukrainian scientific centres in JINR activities, the development of fruitful cooperation in scientific, educational and innovation programmes were considered. The Ukrainian part agreed to the suggestion made by the JINR Directorate to name a street in the Ukrainian capital after N. Bogoliubov.

During the visit to Kiev, A. Sissakian and V. Katrasev were accompanied by Plenipotentiary of the

Government of Ukraine to JINR, Head of a department in the Ministry of Education and Science V. Stognij, JINR Scientific Council member Professor G. Zinoviev, Director of the Institute of Scintillation Materials of NAS of Ukraine Corresponding Member B. Grinev.

On 17 November a delegation of the Parliament of the Czech Republic headed by Chairman of the Committee for science, education, culture, youth and sport W. Bartos visited JINR. JINR was represented by Ts. Vylov, V. Zhabitsky, V. Katrasev, P. Bogolyubov, M. Itkis, R. Lednický, I. Zvara.

The members of the Czech delegation were interested in the system of financing the research at JINR, the legal basis for financing and the amount of the education component in the scientific programme of the Institute. Having been acquainted with the history of establishment, structure, the scientific programme and instrumental resources of JINR, W. Bartos noted that the Joint Institute for Nuclear Research constitutes, scientifically and organizationally, a very modern model. He regarded the involvement of students in serious scientific work particularly important, which is a common practice at JINR.

Concluding the visit, W. Bartos said, «We must continue our cooperation as the Joint Institute is connected with scientific centres not only in Europe but in the whole world. We would like to have joint programmes for students, discuss the possibilities to finance grants for students and postgraduates.» After the meeting at the JINR Directorate, the Czech delegation visited the Flerov Laboratory of Nuclear Reactions.

On 28 November the RF Minister of Economic Development and Trade, G. Gref, announced the results of the competition on conferring the status of special economic zones which was held according to the decision of the Government of the Russian Federation. The status of a special economic zone of the technical-innovation type was given to Moscow (Zelenograd), Dubna, St. Petersburg and Tomsk.

Dubna possesses its own scientific-technical features of a technopark, as G. Gref said, i.e., nuclear physics technologies and information technologies, their application in power engineering, nano- and microelectronics, medicine, instrument-making industry and material sciences.

This event can be regarded as an important step towards the development and strengthening of the innovation zone around JINR, as well as around the whole scientific-technical complex of Dubna, i.e., the University, the aviation-space research complex, enterprises of the instrument engineering, etc. JINR is an international intergovernmental organization; that is why the special economic zone «Dubna» will become international too. The package of projects contains new proposals which will allow the realization of scientific-technical achievements and opening up additional workplaces. The technical-innovation zone «Dubna» will develop in

cooperation with scientific centres of RAS and the RF Ministry of Atomic Energy, together with JINR partners in industry.

On 30 November the opening ceremony of the 2.5 Gbit/s fiber-optic data transmission channel between Moscow and Dubna was held in Dubna. The project was implemented by the Federal State Unitary Enterprise «The Russian Satellite Communications Company» (RSCC) together with the Joint Institute for Nuclear Research, with the support of the Dubna administration. Deputy Chairman of the Moscow Region government P. Katsyv, Head of the department at the Federal Agency on special economic zone administration G. Sarychev, heads of federal departments, JINR, the Dubna administration, RSCC, «Dubna» University and township-forming enterprises, representatives of IT companies took part in the meeting dedicated to the channel launching.

Opening the meeting, JINR Director-elect Professor A. Sissakian specially marked the fact that new technological opportunities open impressive prospects for the development of the special technical-innovation economic zone in Dubna. The new channel made it possible to organize a teleconference bridge during the meeting, and RF Minister of Communication and Information L. Rejman greeted the participants from Moscow, while member of the CERN administration J. Ellis addressed the meeting attendees from Geneva and pointed out that the new channel would allow Dubna physicists to participate actively in analyzing the data from the LHC.

The launching of the new fiber-optic channel speeds up the data transmission rate by dozens of times for scientific-industrial organizations of Dubna and allows the implementation of a number of projects connected with the development of high technologies in the region of Dubna as a science city. The project on the inclusion of the Dubna Grid segment into the global system of data distribution and the project of the establishment of a state centre for data acquisition and processing for accounting for the oil and gas production in Russia on the basis of the programme complex «Trast» were presented at the meeting. The operation of the world Grid system was demonstrated in real time to the participants of the presentation.

The meeting attendees and the journalists from central and particularised editorial boards, information agencies and television companies, together with their colleagues from Dubna, visited the Dubna Centre of Space Communication and the Flerov Laboratory of Nuclear Reactions of JINR.

On 3–4 December a delegation from the Slovak Republic visited the Joint Institute for Nuclear Research. It was headed by Vice Prime Minister, Minister of Economy of the Slovak Republic J. Malchárek. The delegation also included Director-General of the trade

department of the Ministry of Economy J. Horvath, head of the administration of the Minister of Economy M. Polocíková, the Minister Adviser D. Mihok, head of the department of RF and CIS states T. Magyarics, Director-General of the Transpetrol company Š. Czucz. Extraordinary and Plenipotentiary of SR in Moscow A. Čisár, SR Embassy trade representative J. Nemčík and his deputy T. Bok accompanied the delegation. In Dubna they were joined by EP deputy from Slovakia Á. Duka-Zólyomi, Chairman of the SR State Committee on metrology, normalization and standards A. Gonda, Plenipotentiary of the SR Government to JINR S. Dubnička, and J. Ružička.

The agenda of the event included a visit of the Slovak delegation to the Flerov Laboratory of Nuclear Reactions. Laboratory Director M. Itkis and his deputies S. Dmitriev and J. Kliman acquainted the guests with basic facilities at FLNR, the U400M and IC100 accelerators, and told the guests about the main trends of research in heavy-ion physics and applied studies which are successfully tackled at the laboratory. The guests also visited the bench-test area at the Veksler and Baldin Laboratory of High Energies where the accelerator DC72 is bench-tested. The setup has been developed at JINR for the Cyclotron Centre in the Slovak Republic. Dr G. Gulbekyan and young Slovak staff members of FLNR spoke to the guests about the main parameters and merits of the new accelerator in the solution of vital scientific and applied tasks.

After their visits to the laboratories, members of the delegation had a meeting with JINR leaders at the International Conference Hall. JINR Director V. Kadyshesky spoke to the guests about the historical profile of the Institute, main trends of fundamental and applied research, wide international cooperation with Member States, marking meanwhile the great contribution of Slovakia to JINR formation and development. In their concluding speeches, Vice Prime Minister J. Malchárek and Ambassador A. Čisár expressed their confidence in further fruitful cooperation in fundamental and applied research and successful implementation of the Slovak Cyclotron Centre project.

On 5–9 December a meeting of the TESLA collaboration and the ILC GDE group was held in Frascati (Italy). Representatives of the world's largest accelerator laboratories were among the participants, including JINR Director A. Sissakian, JINR Chief Engineer G. Shirkov and LPP Director V. Kekelidze.

JINR leaders informed ILC GDE group director B. Barish, the group members V. Kuchler, J.-L. Baldy, A. Skrinsky, M. Danilov, B. Foster, J. Dorfan and other scientists about JINR plans concerning ILC.

Meetings were held with INFN (Italy) President, Chairman of the ILC Finance Committee R. Petroncio, INFN Vice-President R. Bertolucci, INFN-Frascati Director M. Calvetti. A large number of cooperation issues were discussed.

CONFERENCES AND MEETINGS HELD BY JINR

Ten conferences were the largest among scientific conferences and workshops held at JINR in 2005.

On 18–19 February the world forum «*Intellectual Russia*» was held in Dubna. The forum was organized on the initiative of the National Committee «Intellectual Resources of Russia», headed by Chairman of the Federation Council S. Mironov and President of RANS O. Kuznetsov, and with the support of JINR, the University «Dubna» and the town administration. The forum was attended by representatives of 26 regions of Russia and 15 near-abroad and far-abroad countries, including eminent scientists and organizers of science, heads of leading universities and institutes, renowned workers of culture and art, representatives of the authorities.

The forum was opened by greeting speeches of the organizers who addressed the forum participants. Each speaker shared his own outlook on the modern society and on the role and place of the Russian intellect and Russian culture abroad, as well as concrete steps towards creating knowledge-based society and economics in the country. Apart from that, an agreement on creation of a UNESCO chair at the University «Dubna» was signed.

On the second day of the forum's work there were held round-table discussions on the programmes realized by the National Committee «Intellectual Resources of Russia»: distant education, scientific electronic information resources, telemedicine, resources and development of technology in the knowledge society, problems and perspectives of IT-production development in Russia, innovative development of Russia's regions, intellectual Renaissance, youth in the knowledge society.

At the closing plenary session the results of the round-table discussions were announced and President of the forum S. Mironov presented his report. JINR Director Academician V. Kadyshevsky was handed an honorary diploma «For the Support of the Initiatives on the Development of Intellectual Resources», which the Joint Institute for Nuclear Research was honored to receive. The participants of the forum signed the Charter of the Intellectual Russia.

XIII International Seminar on Interactions of Neutrons with Nuclei (ISINN-13) was held in Dubna on 25–28 May. More than 100 specialists from Russian centres (ITEP, MEPI, the Kurchatov Institute, SRINP MSU in Moscow, the Khlopin Radium Institute in St. Petersburg, INP in Gatchina, PEI in Obninsk, Voronezh and Obninsk Universities), JINR staff members, scientists from Belarus, Belgium, Bulgaria, Germany, China, Korea, Mongolia, Slovakia, the USA, France and Switzerland attended the seminar.

The subjects of the seminar were traditional. These were fundamental properties of neutron and funda-

mental symmetries, structure of the nucleus, neutron-induced reactions, ultracold neutron physics, nuclear-analytical methods in life sciences, methodical aspects, neutron sources. A special session was devoted to the 90th anniversary of the birth of the neutron physics scientific school's founder F. Shapiro.

The 8th international conference «*Path Integrals. From Quantum Information to Cosmology*», organized by the Department of Mathematics of the Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University and by the Bogoliubov Laboratory of Theoretical Physics of the Joint Institute for Nuclear Research, was held in Prague (Czech Republic) from 6 to 10 June. It belongs to the series of famous conferences devoted both to physical calculations and to rigorous foundations of the path integral method. A total of about 75 scientists from all over the world participated in the conference.

IV Meeting on Research at the IBR-2 Pulsed Reactor was held at JINR on 5–17 June. The event has been organized annually since 2001 by the Frank Laboratory of Neutron Physics, together with the Lomonosov Moscow State University. In 2005, more than 100 participants from Germany, Latvia, Poland, Russia, Romania, Slovakia and Czechia attended the meeting.

Above 150 experiments are conducted at the reactor by researchers every year. The fact that among the participating institutions are the RSC «Kurchatov Institute», ITEP, PEI (Obninsk), the Institute of Solid Matter Physics (Chernogolovka), the Institute of Metals Physics (Ekaterinburg), the RAS Institute of Earth Physics, the Institute of Molecular and Crystal Physics (Ufa), SRI of Reprography, state universities of Moscow, St. Petersburg, Nizhni Novgorod, Sterlitomak, Tula, Obninsk assures the attractiveness of the reactor for specialists of various fields of science.

V international conference «*New Physics in Non-Accelerator Projects*» (NANP'05) was held in Dubna on 20–25 June. Its main aim was to discuss new phenomena in electroweak interactions beyond the Standard Model. Among the main and traditional topics were the neutrino mass, mixing and oscillation problem, neutrinoless double beta decay of nuclei, other rare processes, dark matter in the Universe, possibilities to detect it, etc. More than 150 attendees took part in the Conference. All the five NANP conferences were supported by RFBR and received wide recognition in the world.

Eighteen plenary meetings presented about 100 reports. The main topic of them were new data on neutrino oscillations (experiments with solar, atmospheric, reactor and accelerator neutrinos of various types) and their theoretical interpretations from the point of view

of neutrino mass hierarchy; neutrinoless double beta decay; dark matter in the Universe; search for other rare events like magnetic monopole and neutrino magnetic moment; registration and origin of space rays of super-high energies; supernova, dark holes and other research in astronomy.

On 30 June – 11 July, the *Third International Summer Student School on Nuclear Physics Methods and Accelerators in Biology and Medicine* was held in Dubna. Academician V. Kadyshesky noted in his opening speech that in recent years medicine had attached increasingly great importance to the use of achievements of physics, especially nuclear physics. The wide medical use of ionizing and nonionizing radiation, radionuclides, gamma sources, electron and proton accelerators, and computer tomographs has turned medical physics into a strategic weapon of medicine.

The school's traditional organizers are the JINR University Centre, Adam Mickiewicz University (Poznan, Poland), the Czech Technical University in Prague, and Moscow State University (MSU). The school's students came from Belarus, Bulgaria, the Czech Republic, Poland, Romania, Russia (MSU, MEPI, and the Novosibirsk Institute of Nuclear Physics), Slovakia, and the JINR University Centre. The most numerous delegations came from Poland, the Czech Republic, and Russia. New to the school were its participants from Bulgaria and Slovakia.

The experience of the previous schools and active work of the Organizing Committee members resulted in the notably well-balanced programme of the third school. And, of course, the lecture cycle of the school was successful to the most extent thanks to highly skilled specialists from different countries.

Following the school tradition, students presented their research at the student sessions. This school had the greatest number of student reports. At the first school (2001), 12 reports were made; at the second (2003), 31; this time, the school audience members made 42 reports within the school subjects. By tradition, the best reports were selected by the audience themselves. The student reports will be published in the Proceedings of the School.

The traditional school-seminar «*Actual Problems of Microworld Physics*» was held on 25 July – 5 August in Gomel (Belarus). The history of this school dates back to 1971. Its initiators were physicists from JINR (N. Bogoliubov, V. Kadyshesky, A. Sissakian, I. Savin, N. Skachkov) and Belarus (F. Fedorov, A. Bogush, L. Tomilchik, N. Shumeiko). It has played an important role in establishing and strengthening the theoretical and, later, experimental physics school in Belarus.

The school attendees, who were largely young scientists, were offered a comprehensive programme. It included research in high- and low-energy physics, non-accelerator physics, modern trends in quantum field theory. Quite unusual for such schools, there were also

lectures on nanotechnologies, new materials and quantum technologies. Over a period of eight working days, the students of the school had an opportunity of getting acquainted with the recent experimental results obtained at the accelerators RHIC, HERA, Tevatron, DESY, as well as with the prospects of conducting future research at the LHC.

Many students of the previous schools noticed the considerably increased scientific level of lectures, larger number of participants, and especially high activity of young scientists. It was a real festival of physics, which one could be acquainted with due to the perfectly elaborated programme and well-coordinated work of the Organizing Committee.

An international workshop «*Supersymmetries and Quantum Symmetries – 2005*» (SQS'05) was held at the Bogoliubov Laboratory of Theoretical Physics from 27 to 31 July. This series of biennial international workshops was initiated by Professor V. Ogievetsky (1928–1996) in the late 1980s.

The attendance of SQS'05 was about 100 participants from different countries and different continents. Its programme, like in the previous years, covered several «hot» directions of modern theoretical physics. This time the basic subjects were string theory, quantum and geometric aspects of supersymmetric theories, the theory of higher spins, supersymmetric integrable models, quantum groups and noncommutative geometry, as well as the Standard Model and its supersymmetric extensions.

Like the SQS'03 workshop, SQS'05 featured the extraordinary activity of the talented young researchers, both from the West and the East. The workshop was a natural continuation of the traditional Dubna Advanced Summer School on Modern Mathematical Physics, which this time was mainly devoted to supersymmetry and string theory, so many senior speakers and young researchers of SQS'05 participated in this event too. A curious peculiarity of SQS'05 was the «landing mission» of a large group of theorists from Japan most of whom work on non-anticommutative deformations of supersymmetric theories. The active research work in the same direction is performed in Dubna, so it was very useful for the involved Dubna theorists to make personal acquaintance with their Japanese colleagues-competitors...

The workshop SQS'05 gathered a very representative audience and proved to be very successful and useful for all participating theorists. It once more confirmed a high reputation of the Dubna SQS events among the experts in the field.

The *European School of High-Energy Physics (CERN–JINR school)* was held on 21 August – 3 September in Kitzbühel (Austria).

The tradition of joint schools organized by the two international centres dates back to 1970, when the first school on this topic was held in Finland. School 2005

was devoted to lectures on modern problems of particle physics. CERN Chief Scientific Officer Professor J. Engelen presented a lecture on the CERN scientific programme and JINR Director-Designate Professor A. Sissakian spoke on the scientific programme of JINR. Among discussion leaders were A. Gladyshev (BLTP, JINR), S. Troitzky (INP, RAS); D. Metral (CERN) and T. Donskova (JINR) were school secretaries.

The school was attended by 100 participants from 34 countries. About 30 of them represented JINR and its Member States.

XX (jubilee) annual *International Conference of the RDMS CMS Collaboration* on the Compact Muon Solenoid experiment for the Large Hadron Collider at CERN was held on 12–17 September in Gatchina, near St. Petersburg. It was organized by the Institute of Nuclear Physics in St. Petersburg and JINR, with the support of CERN and institutions of RDMS (Russian in Dubna Member States). The esteem of the conference attracted about 140 scientists from different countries of the world, including 30 participants from JINR and 32 from CERN. A particular feature of the conference was a large number of young attendees — scientists and specialists. The agenda of the event included a three-day session on physics research at CMS and one-day sessions on projects in calorimetry and muon systems.

Leader of the RDMS CMS collaboration Professor I. Golutvin reviewed in his opening speech the status of the RDMS project, marking fruitful and efficient ideas of cooperation which was started by JINR in 1994, supported by CERN and CMS leaders.

The elaboration of the research programme at the facility was discussed in detail in the reports made by coordinators. Much interest and attention was rendered to the reports by the JINR physics group on physics with big mass di-muons in the TeV range, new physics studies beyond the Standard Model and analysis of the CMS project potential in the discovery of gravitons and extra-dimension space manifestation.

The hadron calorimetry session covered in detail the issues of CMS calorimeters development and their application for registration of energy jets and fluxes, as well as calibration of end-cap calorimeters with a movable radioactive source. The assembling of the end-cap calorimeters had just been finished in the ground experimental hall.

Aspects of the development of numerous systems of muon stations were discussed in the reports by groups from the USA, Italy, Spain and RDMS. It is worth mentioning here that the technique of proportional chambers with cathode readout was suggested by JINR scientists for the CMS facility in 1993, during the work out of the experiment concept.

Leading Russian physicists made invited reports at the physics session of the conference. These were V. Rubakov (INP) who gave a review of physics beyond the Standard Model, M. Vysotsky (ITEP) with a report on electron theory, L. Lipatov and M. Ryskin (PINP) who spoke on quantum chromodynamics and diffraction processes at the LHC, and G. Kozlov (JINR) with a report on the theory and phenomenology of multiparticle correlations.

PARTICIPATION OF JINR IN INTERNATIONAL CONFERENCES

In 2005, JINR scientists and specialists participated in 228 international conferences.

The largest delegations representing JINR attended the following events: the Collaboration Meeting for the Proposed Daya Bay Neutrino Oscillation Experiment (Hon Kong, China), the International Workshop on Fluorescence Measurements (Habere-Poche, France), PINP Winter School on Nuclear Physics and Cosmology (Repino, Russia), the JINR–BMBF Coordination Committee Meeting (Hamburg, Germany), the 5th Collaboration Meeting of the CBM Experiment at FAIR (Darmstadt, Germany), the World Exhibition «EXPO-2005» (Nagoya, Japan), the CERN–JINR exhibition «Science Bringing Nations Together» (Thessaloniki, Greece), the International Conference on Theoretical Physics (Moscow, Russia), the NATO ASI school «Dynamics of Complex Interconnected Systems: Networks and Bioprocesses» (Geilo, Norway), the 3rd Central European Training School (Budapest, Hungary), the international conference «Particles and Cosmology» (Bak-

san, Russia), the 3rd Enabling Grids for E-Science (EGEE) Conference (Athens, Greece), the All-Russian conference «Radiobiological Basics of Radiotherapy» (Moscow, Russia), the 12th International Seminar on Neutron Scattering Investigation in Condensed Matter (Poznan, Poland), the 11th International Conference on Elastic and Diffractive Scattering (Paris, France), the International Conference on Low Energy Antiproton Physics (LEAP-05) (Bonn, Germany), the workshop «New Trends in Particle Detection in Experiments at the Future European Facilities» (Yalta, Ukraine), X International Workshop on Advanced Computing and Analysis Techniques in Physics Research (Zeuthen, Germany), the 6th International Conference on Nuclear Physics at Storage Rings (Bonn, Germany), the 2005 ATLAS Physics Workshop (Rome, Italy), the PANDA Collaboration and Physics Meeting (Uppsala, Sweden), the summer school «Exotic Nuclei and Nuclear/Particle Astrophysics» (Mamaia, Romania), XIV International Colloquium on Integrable Systems (Prague, Czech Repub-

lic), the 9th Petersburg International Economic Forum (St. Petersburg, Russia), the International Symposium on Exotic Nuclear Systems (ENS'05) (Debrecen, Hungary), the CBM Tracking Workshop (Darmstadt, Germany), VI international conference «Symmetry in Non-linear Mathematical Physics» (Kiev, Ukraine), the International Conference on High Pressure Science and Technologies (Karlsruhe, Germany), the 55th Conference on Nuclear Physics («Frontiers in Physics of Nucleus») (Peterhof, Russia), XXII International Symposium on Lepton-Photon Interactions at High Energy (LP-2005) (Uppsala, Sweden), the Baikal School on Elementary Particle Physics and Astrophysics (Irkutsk, Russia), the 5th international workshop «Ultra Cold and Cold Neutron Physics» (St. Petersburg, Russia), the 6th international conference «Strong Microwaves in Plasmas» (Nizhni Novgorod, Russia), the workshop (Advanced Studies Institute) «Symmetries and Spin» (Prague, Czech Republic), the COMPASS Collaboration Meeting (Prague, Czech Republic), the International Summer School on Particle Physics beyond the Standard Model (Les Houches, France), the 35th International Symposium on Multiparticle Dynamics (ISMD-2005) (Kroměříž, Czech Republic), the 12th Lomonosov International Conference on Elementary Particle Physics (Moscow, Russia), the International Conference on Accelerator Applications – 2005 (Venice, Italy), the International CBM Collaboration Meeting (Piaski, Poland), the international conference «Modern Problems of Genetics, Radiobiology, Radioecology and Evolution» (Yerevan, Armenia), the International Workshop on Charged Particle Accelerators (Alushta, Ukraine), the 7th International Position-Sensitive Detector Conference (Liverpool, UK), the 8th International Workshop on Computer Algebra in Sci-

entific Computing (Kalamata, Greece), the 11th International Conference on Ion Sources (ICIS'05) (Caen, France), the 19th International Conference on Magnet Technology (Genoa, Italy), XVI International School on Nuclear Physics (Varna, Bulgaria), the Small Triangle Meeting – 2005 on Theoretical Physics (Snina, Slovak Republic), the 2nd international conference «Hadron Structures and QCD» (St. Petersburg, Russia), the International Meeting on Nuclear Matrix Elements for Double Beta Decay (Corfu, Greece), XXXIV European Cyclotron Progress Meeting (ECPM-2005) (Belgrade, Serbia & Montenegro), the ATLAS Workshop (Paris, France), XI International Workshop on the Utilization of Charged Particle Accelerators in Industry and Medicine (St. Petersburg, Russia), the 10th International Conference on Accelerators and Large Experimental Physics Control Systems (Geneva, Switzerland), the international conference «Physics at the Future Colliders» (Tbilisi, Georgia), the Workshop on the ATLAS Project (Geneva, Switzerland), V National Conference on Application of X-Ray, Synchrotron Radiation, Neutrons and Electrons to Nanomaterials and Nanostructures Research (Moscow, Russia), the LC Beam Energy Measurements Meeting (Zeuthen, Germany), the 5th Conference on Nuclear and Particle Physics (Cairo, Egypt), the International Conference on Neutron Scattering (Sydney, Australia), the conference «Physics of Fundamental Interactions» dedicated to the 60th anniversary of ITEP (Session of RAS Nuclear Physics Department – 2005) (Moscow, Russia), the Heidelberg–Landau Programme Steering Committee Meeting (Bonn, Germany), the 43rd Meeting of the Particle Therapy Cooperative Group (Munich, Germany).

DEVELOPMENT OF THE JINR INTERNATIONAL COLLABORATION AND RELATIONS DURING THE YEARS 1965–2005

	1965	1975	1985	1990	1995	2000	2005
1. Number of visits to JINR by specialists from Member States (excluding participants in JINR conferences)	203	1026	1469	1050	299	425	339
2. Number of visits by JINR specialists to Member States	171	474	600	778	682	682	927
3. Number of conferences and meetings organized by JINR	19	42	49	44	52	54	65
4. Number of visits to international conferences and research centres of non-Member States	69	131	119	437	1451	1946	2150
5. Number of visits of scientists from non-Member States	27	226	144	563	1036	990	733
6. Number of JINR fellows	—	11	3	16	28	17	21

LIST OF CONFERENCES AND MEETINGS HELD BY JINR IN 2005*

No.	Name	Place	Date	Number of participants
1.	5th Workshop on the Scientific Cooperation between German Reserach Centres and JINR	Dubna	17–19 January	54
2.	97th session of the JINR Scientific Council	Dubna	20–21 January	110
3.	International conference «Classical and Quantum Intergable Systems»	Dubna	24–28 January	66
4.	Workshop on Distant Monitoring of Nuclear Material Accounting and Control Systems	Dubna	24–28 January	24
5.	Workshop on Neutrino Physics at Accelerators	Dubna	26–28 January	30
6.	3rd Winter School on Theoretical Physics	Dubna	29 January – 6 February	56
7.	9th Conference of Young Scientists and Specialists	Dubna	31 January – 6 February	98
8.	Meeting of the Working Group for Financial Issues under the CP Chairman	Dubna	15 February	25
9.	Meeting of the JINR Finance Committee	Dubna	16–17 February	27
10.	World forum «Intellectual Russia» (the first assembly)	Dubna	18–19 February	185
11.	GSI–INTAS Collaboration Workshop	Dubna	24–25 February	21
12.	Meeting of the Committee of Plenipotentiaries of the JINR Member States	Dubna	17–18 March	110
13.	International Seminar Devoted to the 90th Birthday of F. Shapiro	Dubna	6 April	80
14.	Session of the Programme Advisory Committee for Particle Physics	Dubna	14–15 April	100
15.	VI International Workshop on Very High Multiplicity Physics	Dubna	16–17 April	45
16.	Conference of the Operators and Users of the Satellite Communication and Broadcasting Network of the Russian Federation	Dubna	19–20 April	250
17.	Session of the Programme Advisory Committee for Nuclear Physics	Dubna	21–22 April	49
18.	Session of the Programme Advisory Committee for Condensed Matter Physics	Dubna	25–26 April	56
19.	Workshop «Experiments in Giant Pulses of Thermal Neutrons from Burst Reactors and Beam-Stops of Large Accelerators»	Dubna	27–29 April	40
20.	Workshop «Transition Radiation Detector — Tracker ATLAS LHC»	Dubna	22–29 May	44
21.	Workshop «Relativistic Nuclear Physics: From Hundreds of MeV to TeV»	Dubna	23–28 May	76
22.	13th International Seminar on Interaction of Neutrons with Nuclei	Dubna	25–28 May	115
23.	98th session of the JINR Scientific Council	Dubna	2–3 June	104
24.	Workshop of BAIKAL Collaboration	Dubna	6–10 June	46
25.	8th international conference «Path Integrals: From Quantum Information to Cosmology»	Prague, Czech Republic	6–10 June	100
26.	International summer school «Heavy Quark Physics»	Dubna	6–16 June	55
27.	HADES Collaboration Meeting	Dubna	7–12 June	79
28.	VI Workshop on Investigations at the IBR-2 Pulsed Reactor	Dubna	15–18 June	109
29.	5th International Conference on Non-Accelerator New Physics	Dubna	20–26 June	139
30.	Research workshop «Nucleation Theory and Applications»	Dubna	20 June – 20 July	55
31.	Workshop on DVIN Project	Dubna	23–24 June	50
32.	Scientific Summer School of Young Scientists and Specialists	Dubna	24–26 June	53
33.	7th AFOSR Workshop on Isomers and Quantum Nucleonics	Dubna	26–30 June	57
34.	International Workshop on SAD Project	Dubna	27–28 June	30
35.	GERDA Meeting	Dubna	27–29 June	50
36.	International workshop «Superintegrable Systems in Classical and Quantum Mechanics»	Dubna	27 June – 1 July	41

*A number of conferences were held in association with other organizations.

No.	Name	Place	Date	Number of participants
37.	17th Interregional Computer School («Summer University – 2005»)	Dubna	29 June – 17 July	90
38.	3rd international workshop «Quantum Physics and Information»	Dubna	30 June – 3 July	60
39.	Third International Summer Student School on Nuclear Physics Methods and Accelerators in Biology and Medicine	Dubna	30 June – 11 July	100
40.	Rostekhnadzor Course on Nuclear Material Accounting and Control	Dubna	4–8 July	26
41.	Round-Table Meeting on Searching for the Mixed Phase at the JINR Nuclotron	Dubna	7–9 July	30
42.	NEMO Collaboration Workshop	Dubna	11–13 July	36
43.	Summer Student Practice in JINR Fields of Research	Dubna	12 July – 4 August	47
44.	International summer school «Modern Mathematical Physics»	Dubna	14–26 July	71
45.	8th international Gomel school-seminar «Actual Problems of Microworld Physics»	Gomel, Belarus	25 July – 5 August	130
46.	International school «Nuclear Theory and Astrophysical Applications»	Dubna	26 July – 4 August	65
47.	International workshop «Supersymmetries and Quantum Symmetries»	Dubna	28–31 July	103
48.	III International School on Contemporary Physics	Ulaanbaatar, Mongolia	8–15 August	45
49.	XIII European School on High-Energy Physics	Kitzbühel, Austria	21 August – 3 September	130
50.	International conference «Renormalization Group – 2005»	Helsinki, Finland	30 August – 3 September	50
51.	VI International Seminar on Accelerating Techniques Problems (In memory of Professor V. Sarantsev)	Alushta, Ukraine	8–11 September	87
52.	X Annual Conference of the RDMS CMS Collaboration	Gatchina, Russia	9–16 September	130
53.	International conference «New Trends in High-Energy Physics»	Yalta, Ukraine	10–17 September	50
54.	Final EXCHARM Workshop	Tsarevo, Bulgaria	12–19 September	35
55.	XX International Symposium on Nuclear Electronics and Computing (NEC'2005)	Varna, Bulgaria	12–18 September	63
56.	Seminar Devoted to the 10th Anniversary of JINR–U.S. DOE Cooperation	Dubna	21–23 September	50
57.	Third Sandanski Coordination Meeting on Nuclear Science	Albena, Bulgaria	26–30 September	93
58.	XI International Workshop on High-Energy Spin Physics	Dubna	27 September – 1 October	56
59.	Workshop «Genetic Consequences of Emergency Radiation Situations» and workshop «Advanced Problems of Space Radiobiology in Application to Long-Term Orbital and Interplanetary Flights»	Dubna	4–7 October	84
60.	NIS International Workshop	Dubna	1–2 November	39
61.	Session of the Programme Advisory Committee for Nuclear Physics	Dubna	7–8 November	44
62.	Session of the Programme Advisory Committee for Particle Physics	Dubna	10–11 November	100
63.	JINR–IAEA workshop «Study of Children's Health Impacts of Toxic Elements Consumed through Foodstuffs Contaminated by Industrial Activities»	Dubna	13–17 November	41
64.	Session of the Programme Advisory Committee for Condensed Matter Physics	Dubna	14–15 November	54
65.	BAIKAL Collaboration Workshop	Dubna	5–9 December	51