COLLABORATION IN SCIENCE AND TECHNOLOGY

The basic results of the international cooperation in science and technology of the Joint Institute for Nuclear Research in 2003 reflect the following data:

- joint research has been conducted with scientific centres in the Member States as well as international and national organizations in other countries on 44 topics of first priority and 10 topics of second priority;
- to solve cooperation issues and questions of participation in scientific meetings and conferences, the Joint Institute sent 2932 specialists;
- for joint work and consultations as well as for participation in meetings, conferences and schools held at JINR, 1637 specialists were received;
- 31 international scientific conferences, 14 workshops and 11 meetings were organized and held;
- 21 scholarship holders worked at the Institute's 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 22 January Plenipotentiary Minister for Science and Economy of Germany O. Hönning and Science Advisor of the Embassy of Germany in Russia H. Bungarten visited JINR. The aim of the the visit was to sign an agreement on scientific and technical cooperation between BMBF and JINR for the following three years. In the discussion of the cooperation results, the efficiency, expediency and mutual benefit of these contacts were marked. After the current agreement had been signed the guests visited the Veksler and Baldin Laboratory of High Energies, the Flerov Laboratory of Nuclear Reactions and the Bogoliubov Laboratory of Theoretical Physics. In conclusion, a meeting with JINR staff members from Germany was organized.

The development of a yoke is a regular step in the construction of the DC-72 cyclotron at JINR for the Cyclotron Centre of the Slovak Republic.

In the end of January, parts of the yoke were delivered to Dubna. They were produced at the engineering plant in Novokramatorsk (Ukraine) and installed in building 205 of the Veksler and Baldin Laboratory of High Energies, where a construction is assembled, which imitates the scheme of the cyclotron display at the Cyclotron Centre in Bratislava. Further work is planned to be conducted here — electromagnetic measurements, adjusting of the accelerating system, pumping-out of vacuum volumes. Thus, at present, a full-scale testing site is under construction at building 205 (VBLHE) for the electric magnet of the DC-72 cyclotron.

The 13th meeting of the Joint Steering Committee on BMBF–JINR cooperation took place in Munich on 27–28 February. Experts from German scientific centres and a delegation from JINR, headed by JINR Director Academician V. Kadyshevsky, took part in the meeting.

JINR Vice-Director Professor A. Sissakian made a report on the scientific cooperation of JINR with research centres in Germany. JINR Assistant Director for Economic and Financial Issues V. Katrasev spoke in his report about the fulfillment of financial duties according to the agreement. Cooperation coordinators presented the results of the joint 2002 activities and plans for 2003.

During the meeting co-chairmen Professor A. Wagner (BMBF) and Professor A. Sissakian (JINR) signed a Protocol on Cooperation for 2003, according to which more than 1 million euros will be contributed to the JINR budget for joint projects.

Professor H. Rollnick was awarded a JINR Honorary Doctor Diploma for the outstanding contribution to the development of cooperation. Handing the Diploma, Academician V. Kadyshevsky specially noted Professor

H. Rollnick's role in the realization of the Heisenberg–Landau programme.

From the JINR side, JINR Chief Scientific Secretary V. Zhabitsky and FLNR Scientific Secretary A. Popeko took part in the work of the meeting, together with the leader of the German group at JINR, W. Kleinig. The JINR delegation visited Munich Technical University and Max Planck Institute.

On 14–16 April, plenary sessions of the Resource Review Board (RRB) were held at CERN. The RRB considered the ongoing work and plans for realization of experiments at LHC — the Large Hadron Collider (ATLAS, CMS, ALICE, LHC-b), as well as the problems of computerization of these experiments (GRID project). Addressing the session, CERN Director-General L. Maiani announced the intention of the CERN Directorate to have the collider commissioned in April, 2007.

The plenary sessions were chaired by CERN Research Director Professor R. Cashmore, chairman of the RRB. Participating in the sessions from JINR were JINR Vice-Director Professor A. Sissakian, as an RRB member from JINR; Professors I. Golutvin, N. Russakovich, A. Vodopianov, as experts.

In the reports delivered by the heads of the experiments it was noted that JINR had successfully fulfilled its scientific and technical obligations.

On 21 April, Professor of Liverpool University J. Dainton, chairman of the CERN SPS Committee, a leader of the H1 collaboration (DESY) over many years, was on a visit to Dubna.

The guest was received at the JINR Directorate and visited the Laboratory of Particle Physics, where he held an all-Institute seminar. Vice-Director Professor A. Sissakian, LPP Director Professor V. Kekelidze, LPP Deputy Director Yu. Potrebenikov and other scientists discussed with J. Dainton a number of cooperation issues.

On 16–18 June, a delegation from the Joint Institute for Nuclear Research headed by Vice-Director Professor A. Sissakian was on a working visit to the Republic of Belarus. The delegation included FLNP Director A. Belushkin, Advisor to the Directorate N. Russakovich, JINR Assistant Director for Economic Issues V. Katrasev, Head of DRRR E. Krasavin.

The JINR representatives took part in the plenary sessions of the Coordination Committee on Collaboration, which considered about 30 proposals from scientific centres of Belarus and JINR Laboratories on financing joint programmes. The delegation visited the State Committee on Science and Technology (SCST), National Academy of Sciences, Belarussian State University and other scientific centres.

In the course of meetings with Chairman of the SCST of Belarus A. Rusetsky, Vice-Presidents of the Belarussian NAS A. Lesnikovich, Director of the Institute of Mechanics of Metal-Polymer Systems, Corresponding Member of the Belarussian NAS Yu. Pleskachevsky, Rector of the BSU A. Kozulin, Prorector S. Rakhmanov, Dean of the Physics Department V. Anischik, Directors of scientific research institutes N. Kazak, N. Shumeiko, O. Ivashkevich, S. Chigrinov and others, a wide range of issues of participation of Belarussian scientific and educational centres in JINR's activities were discussed.

A meeting took place with Chairman of the Committee of the Plenipotentiaries of the JINR Member States, Deputy Chairman of the SCST V. Nedilko.

On 23 June, Professor A. Sissakian, vice-director of the Institute, had a meeting at the JINR Directorate with Vice-President of the Academy of Sciences of the Republic of Korea, Professor of Seoul National University Dong-Pil Min. Participating in the meeting was N. Kochelev, a researcher from the Bogoliubov Laboratory of Theoretical Physics.

Plans of continued collaboration between JINR and scientific centres of the Republic of Korea were discussed, according to which cooperation on a number of issues is envisaged: scientific and students' exchange, joint investigations, creation of joint scientific groups.

A meeting of the European Committee on Future Accelerators (ECFA) was held on 4 July in Geneva, which discussed issues of modern status and prospects of the programme on high-energy physics. CERN Director General Professor L. Maiani made a report on the status of the LHC project. DESY Director Professor A. Wagner informed the ECFA members about the plans of the development of particle physics in Germany. Other reports were also presented.

Professor A. Sissakian represented JINR at the meeting as an observing member of ECFA. During his stay in Geneva A. Sissakian met with CERN leaders L. Maiani, R. Cashmore, C. Détraz and leaders of the projects where JINR takes an active part: P. Jenni (ATLAS), Ju. Schucraft (ALICE) and other scientists. A wide range of cooperation issues was discussed.

A. Sissakian also took part in the reception and meeting of CERN leaders with the official government delegation of the Republic of Armenia represented by Minister for Trade and Economic Development K. Chershmaritian, Ambassador of Armenia in Switzerland and the Geneva UN Department Z. Mnatsakanyan. The guests were shown the assembling sites for the ATLAS set-up parts, in whose development specialists from JINR and scientific centres of Armenia took a direct part.

Presentation of a Russian variant of the book «Romania: the Revival of Hope» by President of Romania I. Iliescu was held in early July in the Moscow State Institute of International Relations, at the time of an official visit of the Romanian President to the Russian Fed-

eration. JINR Director Academician V. Kadyshevsky and Leader of the Romanian group of scientists at JINR A. Oprea took part in it.

After the presentation the President of Romania had a personal talk with the JINR Director. Both sides expressed their hope for further development and strengthening of international cooperation in the framework of the Joint Institute for Nuclear Research. V. Kadyshevsky presented the President with the book «Cooperation between JINR and Romanian Scientific Centres and Universities» issued on the proceedings of the round-table meeting «Romania at JINR», which was held during the June session of the JINR Scientific Council in 2003.

JINR Vice-Director Professor A. Sissakian and DLNP Director A. Olchevski visited Turin on 13–14 July. They visited Turin University, where they met with Director of INFN in Turin Professor A. Magiora, Director of Physics Department at Turin University Professor L. Ferrero, member of the Academic Senate of Italy and JINR Scientific Council Professor G. Piragino, leader of the Italian group in the PANDA collaboration Professor M.-R. Bussa and other scientists.

The sides considered the items of the status and prospects of cooperation on the following projects of mutual interest: DUBTO, COMPASS (CERN), PANDA (GSI), etc. It was arranged to start work to make agreements on the COMPASS project in the framework of the general agreement between JINR and INFN.

On 10–11 August Plenipotentiary of the Government of the Republic of Kazakhstan to JINR K. Kadyrzhanov visited the Joint Institute for Nuclear Research. A wide range of cooperation issues was discussed during the meeting at the JINR Directorate. JINR Director V. Kadyshevsky, JINR Vice-Director A. Sissakian, JINR Chief Engineer G. Shirkov and other members of the Directorate took part in the meeting.

President of the Academy of Sciences of Georgia Academician A. Tavkhelidze visited JINR on 11–12 August. He met V. Kadyshevsky and A. Sissakian at the JINR Directorate and discussed the aspects of the development of the GRID project in the Transcaucasian countries.

On 14 August JINR Vice-Director A. Sissakian received representatives of China (Taiwan) Director of the Department of Science and Technology of the Moscow representative office of the Taiwan–Russian Board on economic and cultural cooperation H. Huan and his assistant N. Chen. At the meeting JINR Assistant Director on International Cooperation P. Bogolyubov and staff members Eh. Airian and S. Kamalov were present.

In the course of the discussion the sides expressed mutual satisfaction with the results of the joint activities and interest in the development of further cooperation. The guests invited JINR leaders to visit China (Taiwan), and the invitation was accepted with gratitude.

A meeting on the cooperation among JINR, CERN and the Transcaucasian countries — Azerbaijan, Armenia and Georgia — was held on 28–30 August in Tbilisi. The central issue of the discussion was the organization of the Transcaucasian segment of the GRID project. JINR was represented by Vice-Director A. Sissakian, and CERN by Research Director R. Cashmore.

Opening the meeting, President of the Academy of Sciences of Georgia Academician A. Tavkhelidze emphasized that preservation and development of cooperation with international scientific centres is very important for scientific institutions of the Transcaucasus region.

A. Sissakian and R. Cashmore made review reports about the programmes of JINR and CERN and issues of their cooperation with centres in the Transcaucasus. Representatives from Azerbaijan (G. Akopian) and Georgia (G. Kvatadze) also spoke at the meeting. Among other participants of the meeting were Rector of Tbilisi University Academician R. Metreveli, Director of the Physics Institute G. Kharadze and other scientists.

JINR Director V. Kadyshevsky and JINR Vice-Director A. Sissakian visited Yerevan State University during their stay in Armenia at the end of August. They met with Prorector Academician Eh. Chubarian, Academician Yu. Chelinarian and other leading scientists and heads of the largest educational centre of Armenia.

The guests had meetings at the Yerevan Physics Institute with its Director Professor G. Asatrian, Plenipotentiary of the Government of Armenia to JINR Academician G. Vartapetian, Chairman of the Armenian Physics Society Academician R. Avakian and other scientists.

In the Presidium of the Armenian National Academy of Sciences the JINR leaders were received by NAS President Academician F. Sarkisian, Vice-President Academician Eh. Kazarian and other leading scientists of the Republic.

The JINR leaders discussed aspects of cooperation of JINR with scientific, educational and industrial institutions of Armenia with Minister for Trade and Economic Development K. Cheshmaritian. R. Cashmore, G. Asatrian and other members of the JINR delegation took part in the meeting.

On 31 August – 1 September leaders of the ATLAS (CERN) project visited Dubna. The delegation was headed by Professor P. Jenni. Issues of the construction of the set-up parts with active participation of JINR specialists were thoroughly discussed.

A talk was organized at the JINR Directorate, and A. Sissakian, A. Olchevski, N. Russakovich and other

JINR leaders took part in it. P. Jenni highlighted the great contribution of JINR scientists, and specialists from the JINR Experimental Workshop especially, to the development of the programme of research at the ATLAS facility.

On 11 October President of Armenia R. Kocherian received a group of participants of the jubilee session of the Academy of Sciences of Armenia. Open discussion and exchange of views touched on the aspects of preservation of the unified scientific space in CIS countries, broadening of contacts between scientists of Armenia and Russia, and support of scientific centres of the Republic. F. Sarkisian, Academicians L. Faddeev, L. Piruzian, S. Grigorian, A. Gonchar and others took part in the discussion.

JINR Vice-Director A. Sissakian informed President R. Kocherian about the cooperation among JINR, the Yerevan Institute of Physics, Yerevan State University and NAS centres of Armenia, and spoke about the initiative to hold a meeting of CIS leaders at JINR, which will be dedicated to the aspects of scientific and technical cooperation. The President of Armenia stressed the priority interest of Armenia in such discussions.

On 13 October a meeting was organized at the JINR Directorate with Research Director of the Russian Scientific Centre «Kurchatov Institute» N. Znamensky. The meeting was initiated by the Centre President E. Velikhov. JINR was represented by V. Kadyshevsky, A. Sissakian, Ts. Vylov, G. Shirkov, A. Belushkin, V. Kekelidze, V. Shvetsov. Prospects were discussed for cooperation between the two centres in research at the resonance neutron pulsed source IREN, which is being developed at JINR.

N. Znamensky spoke about the scientific programme of the Centre at the linear accelerator of electrons (LAE) «Fakel». Common interests were noted between the researchers of JINR's FLNP and RSC KI in the application of resonance neutrons obtained with LAE for the purposes of nuclear physics and condensed matter physics. V. Shvetsov spoke on the status of activities in the IREN project and gave the main theses of the JINR scientific programme oriented at the application of the new resonance neutron source.

A protocol was compiled on the results of the meeting, where joint efforts of JINR and RSC KI are worked out to attract resources from the Ministry of Atomic Energy of RF and the Ministry of Industry, Science and Technology of RF to finish the development of the IREN neutron source and implement the scientific programme issues.

On 17 October a traditional annual meeting of the Joint Cooperation Committee (JINR and National Institute for Nuclear Physics and Particle Physics (IN2P3), France) was held in the Headquarters of the National Centre for Scientific Research in France (Paris).

JINR was represented by JINR Director V. Kadyshevsky, JINR Vice-Directors A. Sissakian and Ts. Vylov, and JINR Assistant Director P. Bogolyubov. On the IN2P3 side were Deputy Directors D. Guerreau, S. Kastanevas, and Head of the International Contacts Department E. Perret.

Both sides informed each other about the main events at the centres since their last meeting in Dubna. They regarded results of the cooperation in 2003 and plans for 2004. It was also marked that a considerable amount of joint activities both in theoretical and experimental fields was implemented in the framework of the cooperation, where all JINR Laboratories and practically all nuclear physics laboratories of France took part. It was decided to hold a wider-scale meeting in 2004 dedicated to 30 years of the mutual cooperation.

A presentation of the poster exhibition «Science Bringing Nations Together» dedicated to JINR–CERN scientific-technical cooperation took place on 30 October in the Diplomatic Academy of the Ministry of Foreign Affairs (MFA) of the Russian Federation. Opening the exhibition, JINR Director Academician V. Kadyshevsky and CERN Assistant Director N. Koulberg spoke about the history and activities of the international scientific centres, and gave examples of cooperation of scientists in largest projects of modern physics for the benefit of progress for the mankind.

Representatives of the Diplomatic Academy of MFA RF, the Diplomatic Club of the Academy, the Ministry for Foreign Affairs, the Ministry of Atomic Energy, members of the representative office of the RF President in the central federal district, Member-State embassies took part in the event. JINR and CERN were admitted as honorary members of the Diplomatic Club of MFA RF for their service in bringing nations together. President of the Diplomatic Club N. Egorov presented N. Koulberg and V. Kadyshevsky the Diplomas.

The joint JINR–CERN Steering Committee on cooperation had a meeting on 15 November in Dubna in the International Conference Hall. The Committee Co-Chairmen JINR Vice-Director Professor A. Sissakian and CERN Research Director Professor R. Cashmore highlighted the outstanding results obtained in cooperation of JINR and CERN scientists in 2002–2003. They also stressed the importance of the series of exhibitions under the title «Science Bringing Nations Together» held in Bucharest, Yerevan and Moscow, joint European schools on high energy physics in Greece and Armenia and other prominent events.

Results of the current year's cooperation were analyzed (reports were made by N. Russakovich, I. Golutvin, A. Vodopianov, A. Filippov, V. Zhabitsky, A. Olchevski, V. Kekelidze, I. Savin, A. Malakhov, V. Ivanov, V. Korenkov, N. Koulberg and others) and prospects for 2004 were pointed out. Professor A. Sissakian presented an Honorary Diploma of JINR

to Professor R. Cashmore and Doctor N. Koulberg for their major contribution to JINR–CERN cooperation.

Minister for Science and Technology of India Professor V. Ramamurti visited Russia in November. The aim of his visit was the signing of the regular agreements with the Russian Academy of Sciences in the framework of the Russian–Indian scientific and technical cooperation (ILTP), which overlaps all fields of joint research, including physics, mathematics, chemistry, biology, hydrometeorology and other sciences. V. Ramamurti had a meeting with JINR Director Academician V. Kadyshevsky to discuss the prospects of the development of relations between India and JINR. Main attention was paid to the issue of India's admittance to JINR as an Associate Member. Professor V. Ramamurti said that the question of their membership to JINR had been discussed at all levels. The signing of the corresponding protocol is projected for March next year.

On 19 November Chief Scientific Advisor of the Government of India Professor R. Chidambaram and Advisor of the Embassy of India in RF Doctor P. Shukla visited JINR. They were received at the JINR Directorate, where JINR Director V. Kadyshevsky, JINR Vice-Directors A. Sissakian and Ts. Vylov, FLNP Director A. Belushkin, JINR Chief Scientific Secretary V. Zhabitsky and JINR Assistant Director on International Cooperation P. Bogolyubov were present. Concrete items of the development of cooperation between JINR and Indian scientific centres were touched upon. Professor R. Chidambaram spoke about the plans in the Indian Government to develop a proton accelerator with 10-mA current and 70-MeV energy in Bombay, stressing in this context that Indian scientists expect assistance of their colleagues from Russia and JINR.

On 24–28 November JINR Director Academician V. Kadyshevsky and Vice-Director Professor A. Sissakian were on a working visit to Brussels.

A number of important meetings and negotiations took place at the European Parliament and European Commission, including those with L. Fuster, a member of the Europarliament, chairman of the Commission on Industry, External Trade, Research and Energy, and Ch. Folias, a member of the Europarliament. In the EC Directorate General for Research, a meeting was held with Director for Energy P. Fernandez Ruiz, Head of the Department for Nuclear Energy Research and Radiation Safety H. Forsström, Head of the International Scientific Cooperation Department T. Arnold, as well as with M. Wright and M. H. Fernandez, heads of divisions. Issues of broadening cooperation and preparing a frame agreement between JINR and the European Commission were discussed.

During their stay in Brussels, V. Kadyshevsky and A. Sissakian also met with Vice-President of the European Academy of Sciences F. Carrion, Deputy Director of the Solvay Institutes for Physics and Chemistry I. Antoniou, as well as with other scientists. Participating in some of the discussions was R. Vardapetian, a JINR representative to the organizations of the European Commission. The meetings were devoted to discussing a wide range of collaboration issues in the sphere of research and educational programmes.

Concrete steps toward developing cooperation in the field of nuclear physics and condensed matter physics were discussed during the meeting with Professor R. Schenkel, deputy director-general of the EC Joint Research Centre.

From 1–4 December JINR Director Academician V. Kadyshevsky, Assistant Directors P. Bogoliubov and V. Katrasev were on a visit to Kiev.

The JINR delegation met with Minister for Science and Education of Ukraine V. Kremen and Deputy Minister V. Stognij, a new Plenipotentiary of Ukraine to JINR. The two sides discussed issues of scientific and technical collaboration between Ukraine and JINR.

The visit to Kiev coincided with celebrating the 85th birthday of B. Paton, president of the National Academy of Sciences of the Ukraine. At the general meeting of the Ukrainian NAS, which was held on the eve of the JINR delegation's visit, B. Paton was elected president of the Academy for the tenth time. Later on at the session of the International Association of Academies of Sciences, V. Kadyshevsky warmly congratulated B. Paton on behalf of the JINR staff and handed presents to him.

A collegium of the Ministry of Energy and Natural Resources of Kazakhstan was held on 4 December in Astana under the chairmanship of Minister V. Shkolnik. It considered the issue of the joint JINR–INP (Kazakhstan) project to establish an international scientific research and educational centre on the basis of the heavy ion accelerator at the L. Gumilev Euroasian National University.

The project was intensively prepared in 2003 at JINR's FLNR and INP of the Republic of Kazakhstan. The Scientific-Technical Council of the Ministry, which was held on the eve of the collegium, listened to the report on the project made by the leader of the accelerating facilities of FLNR, B. Gikal. At the collegium this item was discussed by Plenipotentiary of the Republic of Kazakhstan to JINR, Director of the Institute for Nuclear Physics K. Kadyrzhanov and JINR Vice-Director A. Sissakian. It was decided to start the development of a new accelerator in January, 2004.

A. Sissakian discussed a wide range of issues in cooperation in scientific and educational programmes with Minister V. Shkolnik, Kazakhstan Plenipotentiary K. Kadyrzhanov, Minister Advisor T. Akhmetov and other leaders and scientists of Kazakhstan.

A Workshop of the participants of the Slovak Cyclotron Centre (CC) project was held on 11 December in

the International Conference Hall under the chairmanship of Extraordinary and Plenipotentiary of the Slovak Republic to RF I. Furdik.

The workshop was attended by JINR Director Academician V. Kadyshevsky, JINR Vice-Director Professor A. Sissakian, Head of the Department on the Standardization, Metrology and Testing (SR) Professor D. Podgorsky, FLNR Director Professor M. Itkis, FLNR Deputy Directors Professor S. Dmitriev, Doctor J. Kliman, CC Director Doctor P. Kovač, Deputy Director of the administration of Atomenergoeksport S. Kebadze, Director of the CC Finance Department (SR) S. Sadlonova, Head of the FLNR Accelerator Department G. Gulbekian, CC project coordinator (SR) A. Chumbalov, Commercial Director of the Sibamak firm P. Andraško, General Director of the Blok firm O. Matula, Technical Director of the Rabit firm P. Kolenič.

Doctor G. Gulbekian made a report on the activities in the development of the DC-72 basic cyclotron at JINR. He said that 80% of the work had been accomplished according to the agreed schedule. At present, tests are being conducted in axial injection, the vacuum system and main channels of the beam transport. A magnetic field is being formed on a special test bench, where the 320-ton electromagnet has been assembled.

The workshop participants were informed about the delay in the start of the building work that led to a shift in the starting point of the operation of the «I» pavilion in the cyclotron centre to August, 2004. Altogether, it was stressed that JINR had accomplished its part of work in the agreed time.

On 12 December, by the submission of the President of the Republic of Moldova, the Parliament of the Republic ratified the Agreement on prolongation of Moldova's participation in the activities of the Joint Institute for Nuclear Research.

CONFERENCES AND MEETINGS HELD BY JINR

Nine conferences were the largest among scientific conferences and workshops held at JINR in 2003.

The regular annual ***International Seminar on Interaction of Neutrons with Nuclei (ISINN-11)*** was held in Dubna on 28–31 May. It was the 11th meeting of scientists engaged in research work in various fields of neutron physics: those who study the fundamental interactions and the neutron properties, who investigate the structure of highly excited states of nuclei formed after neutron capture, who study in the field of ultracold neutron physics.

Remaining true to the main subject matter, the seminar, however, is developing; the range of scientific research represented in the programme has been enlarging. Thus, several years ago the investigations in the field of neutron activation analysis, which are carried out actively in numerous world centres for ecological monitoring and for materials technology, were included in the programme. At JINR such investigations are carried out at the world-class REGATA facility.

Full representation of nuclear centres of Belarus, Bulgaria, Poland, Russia, Romania, Slovakia, Ukraine, the Czech Republic, as well as England, Germany, Switzerland, France and the USA were given. The highlight of the programme of the present ISINN became the section «Basic Facilities». The reports devoted to the projects of the sources of ultracold neutrons of superhigh density, which are being created in the Paul Scherrer Institute (PSI, Villigen, Switzerland) and in the Technical University of Munich, were presented. The representatives of the n-TOF collaboration from CERN reported on the current state of the resonance neutron source on the basis of proton synchrotron for an energy of 24 GeV and the experiments performed at this source.

Many interesting reports were presented concerning the study of the structure of excited nuclei with the help of radiative capture and inelastic neutron scattering. It took three sessions to discuss new results on the physics of fission. A series of reports concerning the investigation of the environmental pollution by nuclear methods generated great interest of the seminar participants.

ISINN-11 was dedicated to the 95th anniversary of Academician I. Frank, the founder of the Laboratory of Neutron Physics and laureate of the Nobel Prize. At the seminar an exhibition of his works was shown; a commemoration meeting of the people who knew I. Frank well and worked together with him for many years took place. The young participants of the seminar and foreign guests learned many new and instructive facts not only about I. Frank but also about the time when he lived and worked.

On 8–11 June the ***XII International Conference on Selected Problems of Modern Physics*** dedicated to the 95th anniversary of the birth of D. Blokhintsev (1908–1979), the outstanding Russian scientist, first JINR director, who contributed a lot to the development of a

great variety of research fields in modern physics, and the initiator of creation of pulsed research reactors, was held in Dubna.

The conference was opened by the memorial session at which V. Kadyshevsky, A. Zrodnikov, A. Logunov, A. Sissakian, and E. Shabalin shared their reminiscences of D. Blokhintsev. Further work of the conference proceeded in two parallel sections: «Problems of Quantum Field Theory» and «Physical Investigations at Pulsed Reactors».

The section «Problems of Quantum Field Theory» was a continuation of a series of conferences on nonlocal, nonlinear and nonrenormalizable field theories which were organized on the initiative of D. Blokhintsev. The first conference of this series was held in Dubna in 1967. In this section, ninety talks were given on the following themes: quantum mechanics, quantum field theory, quantum chromodynamics, hadron physics, gravitation, and cosmology; 117 scientists from Russia, Germany, Georgia, Italy, Mongolia, Poland, Romania, Slovakia, the USA, Uzbekistan, Ukraine, and Czechia participated in it. The section reviewed studies on present-day problems of quantum field theory and elementary particle theory and discussed the most promising trends of further research. Priority of Russian scientists working in this field of research was confirmed during this meeting, and tighter scientific contacts with scientists from the former USSR Republics and western countries were established. The talks given at the section obviously testify to the fact that ideas of D. Blokhintsev are timely, active scientific search is in progress, and new interesting results have been obtained.

The section «Physical Investigations at Pulsed Reactors» was a continuation of workshops on studies at the IBR-2 pulsed reactor at the Frank Laboratory of Neutron Physics, held in Dubna in 2001 and 2002. The reactor IBR-2, created on the basis of the ideas of D. Blokhintsev, is at the present time one of the world best neutron sources. It is a unique facility fitted with a broad assortment of spectrometers allowing investigations in different fields of research in modern science. During the section 150 scientists from 37 research centres of Russia, Argentina, Belgium, Germany, Latvia, the Netherlands, Slovakia, the USA, France, Czechia, Japan and other countries presented 127 oral and poster talks. Much attention in the programme of the section was given to the fields of research that are important for performance of current modernization of the IBR-2 reactor, the existing complex of spectrometers, and the realization of the programme of research at the IBR-2 in condensed matter physics.

The talks presented and the discussions showed that most of the investigations carried out at IBR-2 were accomplished at high scientific level comparable or excelling the level of research in other neutron centres of the world. The financial support of the conference was received from the Ministry of Industry, Science and Technology of the Russian Federation, the Russian Ministry of Atomic Energy, the Russian Academy of Sciences, the Russian Foundation for Basic Research, as well as from the Heisenberg–Landau, Blokhintsev–Votruba and Bogoliubov–Infeld programmes.

The VIII international conference on nuclear physics «***Nucleus–Nucleus Collisions – 2003***» (NN-2003) took place on 17–21 June in the World Trade Centre (Moscow) at Krasnaya Presnia.

«NN-2003» is one the biggest scientific forums of the physics science held once every three years in the world capitals. More than 250 leading scientists and scientific organizers usually participate in it. Russia hosted this conference for the first time. The decision to hold the conference in Moscow (such cities as Tokyo, São Paolo and Prague were among the candidates) was taken by the Council of International Experts in Strasbourg in 2000 and was motivated by the rapid development of nuclear physics in Russia, heavy ion physics, in particular. The Joint Institute for Nuclear Research, which closely cooperates with all known world centres working in the field of nuclear physics, was assigned to hold the conference.

Leading scientists from 33 countries representing all big scientific nuclear centres in this field of nuclear physics and heads of the Russian Academy of Sciences and ministries and institutions which organize and develop scientific research in nuclear physics and technology took part in the conference.

JINR Director Academician V. Kadyshevsky and Scientific Leader of the Flerov Laboratory of Nuclear Reactions Academician Yu. Oganessian spoke at the opening of the conference. Results obtained within the past few years at the biggest accelerator complexes of the USA, Japan, France, Germany, Italy, Russia and other countries were presented at the conference sessions. They covered a wide range of modern physics problems, i.e., a new matter state — the so-called quark–gluon plasma, unusual structures of «exotic» nuclei near the limits of their existence, synthesis of superheavy nuclei and their properties in the new «islands of stability», problems of nuclear astrophysics, etc. Projects on the newly created accelerator complexes in the USA, Europe and Japan were discussed at separate sessions. A meeting with leading scientists and the conference participants was organized for journalists from central mass media and scientific press.

On 23–28 June IV International Conference «***New Physics in Nonaccelerator Experiments***» (NANP'03) took place in Dubna. It was dedicated to the 90th anniversary of Academician Bruno Pontecorvo, an outstanding scientist of our time who laid the foundation of modern neutrino physics.

The main purpose of the conference was the joint discussion by both theorists and experimenters of the status of modern nonaccelerator physics and future

projects aimed at search for new physical processes outside the scope of the Standard Model of electroweak interactions.

The agenda of the conference overlapped practically all the spectrum of research in nonaccelerator physics, both in the energy range (from hundredths eV when defining the neutrino mass difference up to 10^{19} eV in the study of space rays of superhigh energies) and in methods of research (reports presented ground, underground, underwater, underice, probe and satellite experiments). Among the main topics of the reports the following can be named: mass problem, mixing and oscillations of different neutrino types; neutrinoless double beta decay; origin, composition and registration chances of Dark Matter in the Universe; research of other rare processes; possible sources and methods of registration of space rays with superhigh energies, etc.

JINR and INR RAS were the organizers of the conference. Partially it was funded by RFBR. More than 150 people from 20 countries took part in it. The results of the conference showed that the situation in neutrino physics is developing rapidly. The organizers and participants of the conference regard this meeting as very actual and well-timed.

On 28 July – 8 August the ***VII International School-Seminar on Modern Problems in Microworld Physics*** was held in Gomel (Belarus) at the holiday house «Zolotye peski». More than 130 scientists from 10 countries of the world took part in it and more than 50 reports were heard.

The Co-Chairmen of the Organizing Committee — JINR CP Chairman Deputy, Chairman of the State Committee on Science and Technology of Belarus V. Nedilko and JINR Vice-Director Professor A. Sissakian — opened the school and the exhibition «JINR's Cooperation with Institutions, Universities and Enterprises of Belarus». The greeting words of address by the Head of the Government of Belarus, Doctor S. Sidorsky, were read at the opening ceremony.

Also, at the opening of the school-seminar and the round-table discussion on the cooperation of Belarussian scientists and specialists with their colleagues from JINR, spoke Vice-President of NAS RB Yu. Pleskachevsky, Minister for Education of Belarus Professor V. Strazhev, heads of Gomel universities and organizations D. Lin, S. Timoshin, A. Rogachev, I. Solovtsov, N. Myshkin, leaders of NAS centres in Minsk and BSU G. Baryshevsky, N. Shumeiko, L. Tomilchik, A. Bogush, leading scientists from JINR I. Golutvin, N. Russakovich, S. Ivanova and others. The scientific programme of the school-seminar opened with a lecture by A. Sissakian «On the Research Programme and Seven-Year Plan of JINR Development».

On 25 August – 6 September the ***XI European School on High Energy Physics*** was held in Tsakhkadzor near Yerevan, Armenia. It was organized by JINR and CERN with the support of the International Centre of Perspective Research of Yerevan State University. European CERN–JINR schools occupy a special place in the development of the relations between the two largest international research centres and have a rich history. It is gratifying that for the first time one of the JINR Member States, Armenia, came out as the organizer of such a representative forum.

The main aim of the school was to acquaint young experimental physicists from CERN and JINR with various aspects of high energy physics, and theoretical physics in particular. Such schools are held not only for educational purposes, but also to show the latest achievements in the respective fields. The scientific programme of the school was compiled on six series of lectures: «Field Theory and the Standard Model» (I. Atchison, UK), «Colour Physics and CP-Invariance Violation» (R. Fleisher, CERN), «Astrophysics» (I. Tkachev, Moscow), «Beyond the Standard Model» (G. Gabadadze, Georgia), «Neutrino Physics» (S. Petkov, Bulgaria), «Quantum Chromodynamics» (A. Khodzhamirian, Armenia). In addition, it was decided to deliver a lecture on cosmic-ray physics (A. Chilingarian, Armenia) and multiparticle processes dynamics (J. Manjavidze, Georgia).

The daily agenda was divided into parts. In the first part, lectures were delivered. The texts of the lectures were distributed among the students beforehand. After lunch the students had free time for two hours for relaxation. Then the students attended seminars in groups, where for an hour and a half the discussion leaders answered their questions on the texts they had already read. The day finished with one more lecture right after the discussion.

On the first day of the school one of its organizers JINR Vice-Director Professor A. Sissakian acquainted the students in his talk with many scientific programmes at the Joint Institute for Nuclear Research. In the evening of the second day CERN Research Director Professor R. Cashmore spoke to the students about the current research at CERN facilities.

One of the interesting events of the school was the opening of the exhibition «Science Bringing Nations Together» in the main hall of Yerevan University. This exhibition, which is organized for the eighth time on the initiative of CERN and JINR, is dedicated to the international cooperation of scientists and their role in bringing nations together. A number of posters were especially devoted to the cooperation of the Caucasus republics with world research centres, including CERN and JINR. JINR Director Academician V. Kadyshevsky, CERN Research Director R. Cashmore, Prorector of Yerevan State University Academician Eh. Chubarian and CERN Permanent Director of CERN–JINR schools Professor E. Lillestol opened the exhibition.

Despite the rather overloaded agenda, the students could acquaint themselves with many historical places of Armenia, such as the pagan temple «Garni» (the 1st

century B.C.) and Christian churches «Gegard» (14th century). One of the most impressive sightseeing visits was the excursion to «Matenadaran», the storing place for old manuscripts in Yerevan. The only day off at the school was spent in a trip to the cosmic ray station. In a certain place Nor Amberd the students listened to a lecture by Professor A. Chilingarian on the experiments with cosmic rays in Armenia. At a height of almost 3200 meters above the sea level the students were acquainted with many modern experimental equipment for the detection of cosmic rays.

On 8–13 September the ***X International Conference on Ion Sources*** was held at the Joint Institute for Nuclear Research. The first conference of this series was held in 1969 in France, and since 1989 this scientific forum has been organized every two years in different countries of the world. This time, it was decided to hold the conference in Dubna in Russia. This decision showed the world-wide acknowledgement of the great contribution of Russian scientists, engineers and specialists from JINR to the development of this field of science and progress in physics and technology of ion sources.

The conference regarded a wide range of tasks and their solutions in fundamental science (atomic physics and plasma physics) which are connected with physics processes of ion production and formation and ion beam transport, as well as technical and technological aspects of construction and performance of different types of ion sources. More and more attention is paid to the application of ion sources in industry, as ion techniques have become at present its integral part.

For the first time the conference announced the names of the laureates of the international prize of the world community on ion sources «Brightness Award», conferred by the international jury organized during the conference preparation, for the recent outstanding achievements in physics and technology of ion sources. Donated by Bergoz Instrumentation of Saint Genis Pouilly, France, the award consists of $6000, to be shared by the two winners, and a certificate for each.

Over 200 delegates from more than 20 countries took part in the conference. The largest delegations were from Russia, Japan, the USA, France and JINR. A cultural programme with concerts of the Dubna groups and excursions to the Moscow Kremlin, Dmitrov and Seguiev Possad was arranged for the participants of the conference and the accompanying people.

The conference was supported by the Joint Institute for Nuclear Research and the Ministry of Industry, Science and Technology of the Russian Federation.

On 2–4 October the ***International Seminar Dedicated to the 50th Anniversary of the Veksler and Baldin Laboratory of High Energies*** of the Joint Institute for Nuclear Research (VBLHE JINR) took place in Dubna. JINR Director Academician V. Kadyshevsky headed the Organizing Committee of the seminar.

The foundation of the Laboratory of High Energies was initiated by the Lebedev Physical Institute, AS of the USSR (PIAS), where in 1944 V. Veksler, later an Academician and the first director of LHE, discovered the principle of phase stability, which is the basis for the performance of cyclic high-energy accelerators. Under the guidance of V. Veksler, physics specifications of the Synchrophasotron were worked out, and the facility was launched into operation in April, 1957. At that time it was the largest accelerator in the world. The Electrophysics Laboratory (EPL, AS), organized in 1953 to conduct research at the Synchrophasotron, became part of JINR in 1956 and was called the Laboratory of High Energies.

The research programme was worked out and realized under the guidance of V. Veksler, M. Markov and I. Chuvilo, who became later the second director of the Laboratory of High Energies. Unique experimental studies were conducted at the Synchrophasotron. The experiments were primarily aimed at the study of deep-elastic scattering processes at the maximum low and high momentum transfer, as well as multiple production of particles in hadron–nucleon interactions. A. Baldin, the third director of the Laboratory, introduced a new trend in research of the interaction processes — the relativistic nuclear physics.

The purposeful development of the Synchrophasotron made it possible to accelerate deuterons in 1971. With the introduction of a new injector — a linear accelerator at 20 MeV, unique (used for the first time at accelerators) electron-beam and laser sources of high-charge ions and a polarized deuteron source, physicists obtained beams of light nuclei up to sulphur, as well as beams of polarized nucleons and deuterons. The polarized deuteron beam of record energy and the polarized proton beam together with the unique quasimonochromatic polarized neutrons, obtained from beams due to stripping, and the polarized proton target opened way to the research in spin physics.

In 1993 the Nuclotron was put into operation. It was the first superconducting accelerator of nuclei, whose development and construction were headed by Academician A. Baldin. During the development of the Nuclotron, unusual solutions were found to problems of accelerator technology and superconducting magnet techniques. They were later acknowledged and developed in largest accelerator centres of the world.

Today the Laboratory of High Energies, headed by Professor A. Malakhov, is an accelerator centre for a wide range of research in the energy interval where the transition takes place from the effects of the nucleon structure of the nucleus to the demonstration of asymptotic behaviour of nuclear interaction characteristics. The Laboratory has wide international scientific cooperation with CERN, many physics centres in Russia, JINR Member States, centres in the USA, Germany, Japan, India, Egypt and other countries.

The agenda of the jubilee event included a scientific seminar and a ceremonial meeting in the Grand Hall of the «Mir» culture house. The guests of the international seminar were famous physicists and leading specialists from many scientific centres — half a century partners of the Laboratory, as well as leaders of the Russian Academy of Sciences, ministries and institutions involved in the organization and development of scientific research in nuclear physics and technology. An exhibition devoted to the jubilee events was arranged in the hall of the culture house, with a demonstration model of the Synchrophasotron in its centre.

JINR Vice-Director Professor A. Sissakian opened the scientific seminar. He noted that the «golden» jubilee of the Laboratory of High Energies was an outstanding event not only in the history of JINR but also in the history of science as a whole. I. Semenyushkin made a review report «The Dubna Synchrophasotron. From Protons to Relativistic Nuclei and Polarized Deuterons». A. Kuznetsov spoke about the first experiments at the Synchrophasotron and the research at IHEP (Protvino), CERN (Geneva), and FNAL (Batavia). A. Malakhov delivered a report on the development of the relativistic nuclear physics at the Laboratory. The report presented by A. Smirnov was called «The Nuclotron and the Development of New Techniques of Superconducting Magnetic Synchrotron Systems». N. Agapov spoke about the scientific school of cryogenics at LHE.

The next day a film about the Laboratory was shown at the ceremonial meeting. JINR Director Academician V. Kadyshevsky and LHE Director A. Malakhov opened the jubilee event.

Warm greetings to the Laboratory staff and appreciation of their international achievements in science and technology were expressed in addresses by Extraordinary and Plenipotentiary of the Slovak Republic to Russia I. Furdik, JINR SC member Professor N. Shumeiko (Belarus), Professor A. Vasiliev, Mayor of Dubna V. Prokh, Embassy Advisor of the Czech Republic V. Remek, Professor B. Bolotovsky (PIAS), Professor V. Lavrov (RRC «Kurchatov Institute»), General Director of the NPO Gelimash V. Udut, JINR Laboratories' and divisions' directors, JINR Directorate, representatives of the Moscow Region and many others. Dubna Mayor V. Prokh read out the greeting address of Governor of the Moscow Region B. Gromov and presented diplomas to LHE staff members. The ceremonial meeting finished with a festive concert.

The VIII Coordinating Meeting of the CMS project participants was held on 2–7 December in the International Conference Hall. The CMS project is one of the four experiments planned to be conducted at the new accelerator complex, the Large Hadron Collider, at CERN.

The preparation to the LHC experiments in the CMS programmes is entering now its final stage. The collaboration of Russian scientific centres and JINR called RDMS is responsible for the development of the most important systems for the CMS spectrometer. Two main subsystems of the device have been fully developed.

CERN's administration highly estimated the contribution of JINR and Russian scientists and specialists, which was pointed out by the experiment spokesman, Professor M. Della Negra, at opening of the meeting in Dubna. The next part of the activities will include the assembling of the giant spectrometer systems in the CERN experimental hall. Thus, the participants of the meeting were to discuss in detail and work out the schedule of assembling procedure for the next two years. The development of the inner front system of the detectors was the topic of the meeting. This part of the job is the full responsibility of the RDMS project participants — from the assembling to the preparation of data acquisition. Besides, the physics experimental programme had to be discussed as it is based on the processes beyond the Standard Model.

About 130 physicists from JINR and 40 their colleagues from JINR non-Member States and CERN attended the meeting.

PARTICIPATION OF JINR IN INTERNATIONAL CONFERENCES

In 2003, JINR scientists and specialists participated in 192 international conferences.

The largest delegations represented JINR at the workshop «Compressed Baryonic Matter» (Darmstadt, Germany), BVR Users' Meeting (Villigen, Switzerland), PANDA Collaboration Meeting (Darmstadt, Germany), XXXVII PNPI Winter School on Nuclear and Particle Physics (Repino, Russia), 13th BMBF–JINR Coordination Committee Meeting (Munich, Germany), NATO ASI on «Forces, Growth and Form in Soft Condensed Matter: At the Interface between Physics and Biology» (Geilo, Norway), Central European Training School on Neutron Scattering (Budapest, Hungary), XII international school «Particles and Cosmology» (Baksan, Russia), 11th International Workshop on Deep Inelastic Scattering «DIS'03» (St. Petersburg, Russia), 10th International Seminar on Neutron Scattering Investigation in Condensed Matter (Poznan, Poland), 1st international school and seminar «Electronic Information Resources for Russian Users» (Kemer, Turkey),

ATLAS Physics Week (Athens, Greece), international conference «New Trends in High Energy Physics» (Alushta, Ukraine), workshop «Review of ADS R&D Activities» (Minsk, Belarus), international workshop «Very High Multiplicity Physics» (Alushta, Ukraine), 17th Intrenational Conference on Few-Body Problems in Physics «FB-17» (Durham, USA), 10th Intrenational Conference on Nuclear Reaction Mechanisms (Varenna, Italy), 12th international colloquium «Quantum Groups and Integrable Systems» (Prague, Czechia), V intrenational workshop «Lie Theory and Its Applications in Physics» (Varna, Bulgaria), 4th intrenational workshop «Ultra Cold and Cold Neutrons. Physics and Sources» (St. Petersburg, Russia), VII international conference «NN Collisions – 2003» (Moscow, Russia), summer school «Nuclear Methods and Accelerators in Biology and Medicine» (Poznan, Poland), 5th international conference «Symmetry in Nonlinear Mathematical Physics» (Kiev, Ukraine), international meeting «Physics at LHC» (Prague, Czechia), CBM Collaboration Workshop (Darmstadt, Germany), international meeting «Symmetry and Spin» (Prague, Czechia), international conference «Progress in Supersymmetric Quantum Mechanics» (Valladolid, Spain), international school-seminar «Actual Problems of Microcosm Physics» (Gomel, Belarus), Cargese School of Physics on the Interface between Particle Physics and Cosmology (Cargese, France), 5th international conference «Modern Problems of Nuclear Physics» (Samarkand, Uzbekistan), X international conference «Symmetry Methods in Physics» (Yerevan, Armenia), International Conference on Computational Physics (St. Petersburg, Russia), European School on High Energy Physics (Tsakhkadzor, Armenia), VII international workshop «Relativistic Nuclear Physics from Hundreds of MeV to TeV» (Stara Lesna, Slovakia), V Symposium on Nuclear Physics (Tours, France), 3rd European Conference on Neutron Scattering (with Introductory Course at the French Neutron Centre) (Montpellier, France), XVIII International Workshop on Charged Particle Accelerators (Alushta, Ukraine), Small Triangle Meeting on Theoretical Physics 2003 (Medzev, Slovakia), 11th physical chemistry conference «Romphyschem-11» (Timisoara, Romania), XVII International Workshop on High Energy Physics and Quantum Field Theory «QFTHEP'2003» (Samara, Russia), VIII international conference «Plasma Electronics and New Accelerating Methods» (Kharkov, Ukraine), 2nd International Summer Student School on High Energy Physics in Memory of B. Pontecorvo (Alushta, Ukraine), XV International School on Nuclear Physics, Neutron Physics and Nuclear Energy (Varna, Bulgaria), XIX International Symposium on Nuclear Electronics and Computing «NEC'2003» (Varna, Bulgaria), HERA Collaboration Meeting (Ljubljana, Slovenia), 6th European Conference on Applied Superconductivity «EUCAS-2003» (Sorrento, Italy), 8th international seminar «Information Resources of Libraries and Net Technologies» (Odessa, Ukraine), 6th international workshop «Computer Algebra in Scientific Computing» (CASC-2003) (Passau, Germany), 1st Coordinating Meeting on Prospects of Development of Life Sciences in Nuclear Centres (Varna, Bulgaria), workshop «Physics at the Future Colliders» (Tbilisi, Georgia), 53rd International Workshop on Nuclear Spectroscopy and Atomic Nucleus Structure (Moscow, Russia), Workshop on Neutrons, Coherence and Confinement (Berlin, Germany), IX International Conference on Accelerators and Large Experimental Physics Control Systems (Gyeungiu, Republic of Korea), 2nd International Workshop on Future Accelerators for Beams of Ions and Antiprotons (Darmstadt, Germany), all-Russian conference «Radiochemistry» (Ozersk, Russia), International Conference on Actual Problems of Solid-State Physics (Minsk, Belarus), XV International Conference on Electrostatic Accelerators and Beam Technologies (Obninsk, Russia).

DEVELOPMENT OF THE JINR INTERNATIONAL COLLABORATION AND RELATIONS DURING THE YEARS 1965–2003

		1965	1975	1985	1990	1995	2000	2003
1.	Number of visits to JINR by specialists from Member States (excluding participants in JINR conferences)	203	1026	1469	1050	299	425	393
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	56
4.	Number of visits to international conferences and research centres of non-Member States	69	131	119	437	1451	1946	2005
5.	Number of visits of scientists from non-Member States	27	226	144	563	1036	990	964
6.	Number of JINR fellows		11	3	16	28	17	21

LIST OF CONFERENCES AND MEETINGS HELD BY JINR IN 2003*

No.	Name	Place	Date	Number of participants
1.	93rd Session of the JINR Scientific Council	Dubna	16–17 January	94
2.	Meeting of the JINR Finance Committee	Dubna	20–21 February	62
3.	COMPASS Collaboration Workshop	Dubna	3–5 March	30
4.	International seminar «Low- and Intermediate-Energy Electron Beams»	Dubna	5–6 March	70
5.	Meeting of the Committee of Plenipotentiaries of the JINR Member States	Dubna	20–21 March	90
6.	Meeting of the Programme Advisory Committee for Condensed Matter Physics	Dubna	3–4 April	32
7.	Research workshop «Nucleation Theory and Applications»	Dubna	4–28 April	62
8.	Meeting of the Programme Advisory Committee for Nuclear Physics	Dubna	7–8 April	39
9.	Meeting of the Programme Advisory Committee for Particle Physics	Dubna	10–11 April	55
10.	Conference on the Russian Satellite Communication Network Operations and Users	Dubna	15–18 April	250
11.	International workshop «Future Application of Alpha-Emitting Radionuclides in Medicine»	Dubna	24–25 April	40
12.	Workshop on the Use of the MPS&A Operations Monitoring (MOM) Systems	Dubna	21–22 May	39
13.	BECQUEREL collaboration workshop «Investigation of Relativistic Nuclei Interactions by Nuclear Photoemulsion Method»	Dubna	26–27 May	25
14.	International Seminar on Interaction of Neutrons with Nuclei	Dubna	28–31 May	128
15.	International workshop «Very High Multiplicity Physics»	Ukraine, Alushta	31 May – 4 June	39
16.	BAIKAL Collaboration Workshop	Dubna	3–5 June	48
17.	94th Session of the JINR Scientific Council	Dubna	5–6 June	122
18.	XII international conference «Selected Problems of Modern Physics»	Dubna	8–11 June	224
19.	International research workshop «Calculations for Modern and Future Colliders»	Dubna	13–21 June	51
20.	VIII international conference «Nucleus–Nucleus Collisions – 2003» (NN-2003)	Russia, Moscow	17–21 June	244
21.	Meeting of the Control Commission	Dubna	19–20 June	11
22.	2nd International Summer Student School on Nuclear Physics and Accelerators in Biology and Medicine	Poland, Poznan	19–30 June	73
23.	Scientific Summer School for Young Scientists and Specialists	Dubna	20–22 June	35
24.	International conference «Non-Accelerator New Physics»	Dubna	22–28 June	101
25.	International symposium «Selected Topics of HI Physics»	Dubna	23–24 June	61
26.	International workshop «Physics at LHC»	Czech Republic, Prague	6–12 July	120
27.	First International Advanced Summer School on Modern Mathematical Physics (in the framework of the program DIAS-TH: Dubna International Advanced School of Theoretical Physics)	Dubna	11–22 July	85
28.	International workshop «Symmetries and Spin»	Czech Republic, Prague	12–19 July	80

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

No.	Name	Place	Date	Number of participants
29.	International seminar «Supersymmetries and Quantum Symmetries»	Dubna	24–29 July	75
30.	International Workshop of the E391A Collaboration	Dubna	25–29 July	42
31.	International school and seminar «Actual Problems of Microcosm Physics»	Belarus, Gomel	28 July – 8 August	130
32.	International school «Traffic and Econophysics»	Dubna	28 July – 17 August	38
33.	Symposium «Quantum Physics and Communications»	Dubna	31 July – 2 August	25
34.	X international conference «Symmetry Methods in Physics»	Armenia, Yerevan	13–19 August	45
35.	European School of High-Energy Physics (a CERN–JINR school)	Armenia, Tsakhkadzor	24 August – 6 September	130
36.	VII international workshop «Relativistic Physics from Hundreds of MeV to TeV» (RNP-2003)	Slovak Republic, Stara Lesna	25–30 August	50
37.	Conference «Perspectives of the Multimedia Satellite Communication and Broadcasting Development in Russia and CIS»	Dubna	2–5 September	250
38.	International conference «Nuclear Structure and Related Topics»	Dubna	2–6 September	67
39.	Second International Summer Student School on Neutrino Physics in Memory of Bruno Pontecorvo	Ukraine, Alushta	7–8 September	59
40.	10th International Conference on Ion Sources (ICIS'03)	Dubna	8–13 September	210
41.	Workshop on the EXCHARM Experiment	Dubna	12–14 September	35
42.	XIX International Symposium on Nuclear Electronics and Computing (NEC'2003)	Bulgaria, Varna	13–20 September	80
43.	10th International Workshop on High Energy Spin Physics	Dubna	16–20 September	71
44.	1st Coordination Meeting on Perspectives of the Development of Life Sciences in Nuclear Centres	Bulgaria, Varna	20–27 September	55
45.	V Scientifec Seminar in the Memory of V. P. Sarantsev	Dubna	23–24 September	77
46.	II international workshop «Radiation Safety for Manned Mission to Mars»	Dubna	28 September – 2 October	91
47.	International Seminar Devoted to the 50th Anniversary of the Laboratory of High Energies	Dubna	2–4 October	451
48.	Conference «Science History and Museum Science»	Dubna	7–11 October	112
49.	International Seminar Dedicated to the 95th Anniversary of the Birth of I. M. Frank	Dubna	23–24 October	60
50.	Meeting of the Programme Advisory Committee for Nuclear Physics	Dubna	13–14 November	39
51.	Meeting of the Programme Advisory Committee for Particle Physics	Dubna	17–18 November	55
52.	STAR Collaboration Workshop	Dubna	19–21 November	35
53.	International workshop «JINR Participation in the Experimental Programme on the Future GSI Facility»	Dubna	20–21 November	73
54.	Meeting of the Programme Advisory Committee for Condensed Matter Physics	Dubna	20–21 November	33
55.	BAIKAL Collaboration Workshop	Dubna	1–4 December	44
56.	8th Annual International Conference of RDMS CMS Collaboration	Dubna	2–7 December	135