

JPRS-UST-93-002
8 April 1993



JPRS Report

Science & Technology

***Central Eurasia:
Science & Technology Policy***

DTIC QUALITY INSPECTED 2

DISTRIBUTION STATEMENT A

**Approved for public release;
Distribution Unlimited**

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA 22161

19971229 063

Science & Technology

Central Eurasia: Science & Technology Policy

JPRS-UST-93-002

CONTENTS

8 April 1993

ORGANIZATION, PLANNING, COORDINATION

Zagaynov on Fate of 'Science' Cities [G. Zagaynov; <i>RABOCHAYA GAZETA</i> , 19 Feb 93]	1
Saltykov Makes S&T Policy Recommendations [M. Lapina; <i>NAUKA I BIZNES</i> , 5 Feb 93]	2
Commentary on 'Reorientation' of FSU Research Potential [Yu. Filippov; <i>RABOCHAYA TRIBUNA</i> , 23 Jan 93]	3
Organizational Problems With Basic Research Foundation Discussed [M. Lapina; <i>NAUKA I BIZNES</i> , No 2, 22 Jan 92]	6
Minscience Official Discusses Programs, Financing for 1993 [B. D. Yurlov Interview; <i>DELOVOY MIR</i> , 16 Jan 93]	7
Russian Academy of Sciences Ends Year With Major Issues Unresolved [V. Pokrovskiy; <i>NAUKA I BIZNES</i> , No 1, 15 Jan 93]	11
Controversy Arises Over Kazakh Nuclear Center [V. L. Okolovich Interview; <i>KAZAKHSTANSKAYA PRAVDA</i> , 29 Dec 92]	13

BUDGET, FINANCE

S&T Foreign Aid Programs Described [S. Simanovskiy, M. Strepetova; <i>NAUKA I BIZNES</i> , 5 Feb 93] ...	17
RAS, Moscow City Government Meet Over S&T Budget Issues [M. Lapina; <i>NAUKA I BIZNES</i> , No 3, 29 Jan 93]	18
Chernomyrdin Meets With Academicians Over Funding [M. Lapina; <i>NAUKA I BIZNES</i> , No 3, 29 Jan 93]	19
Fund Supporting Sectorial R&D Described [B. D. Yurlov Interview; <i>NAUKA I BIZNES</i> , No 1, 15 Jan 93]	19
Soros Foundation Grants \$1 Million to Russian Biologists [A. P. Rasnitsyn; <i>NAUKA I BIZNES</i> , No 1, 15 Jan 93]	21

FACILITIES, MANPOWER

Young Scientists Abandoning Belarusian Academy of Sciences [L. M. Sushchenya Interview; <i>KOMSOMOLSKAYA PRAVDA</i> , 29 Jan 93]	23
Latvia Forms Group To Research Automated Control Systems [O. Martinsons; <i>PANORAMA LATVII</i> , 9 Jan 93]	24
New Medical Institute To Research Optical Radiation Effects [L. V. Abramov; <i>SVETOTEKHNIKA</i> , No 9, Sep 92]	24

TRAINING, EDUCATION

State Program for University Science Drafted [V. Styazhkin; <i>IZVESTIYA</i> , 14 Jan 93]	26
---	----

AUTOMATION, INFORMATION POLICY

Edict, Decree on Russian Federation Patent, Trademark Committee [<i>ROSSIYSKIYE VESTI</i> , 23 Feb 93]	27
Procedure for Registering Computer Programs Explained [L. I. Podshibikhin Interview; <i>NAUKA I BIZNES</i> , No 3, 29 Jan 93]	30
Latest Developments in Russian Intellectual Property Rights Noted [E. P. Gavrilov Interview; <i>RADIKAL</i> , No 47, Dec 92]	31
Latvian Patent Board Resumes Operations [<i>THE BALTIC OBSERVER</i> , Nov 92]	32

PATENTS, INVENTIONS

CIS in Need of Central Patent Authority [V. P. Rassokhin, M. L. Gorodisskiy; <i>ROSSIYSKIYE VESTI</i> , 23 Feb 93]	33
---	----

TECHNOLOGY TRANSFER

'Secret' Negotiations Over Laser Technology Sales Reported [KOMMERSANT-DAILY, 4 Dec 92]	35
---	----

MISCELLANEOUS

Russian Security Forces Block Departure of Missile Experts [M. Popov; RABOCHAYA TRIBUNA, 11 Feb 93]	36
New U.S. Presidential Science Advisor Described [P. Deynichenko; NAUKA I BIZNES, No 3, 29 Jan 93]	37
Policies of Ukrainian Academy of Sciences President Criticized [V. Kuzmenko; NEZAVISIMOST, 27 Jan 93]	37
Russian Scientists Protest Low Wages Paid by Western Firms [SOVETSKAYA ROSSIYA, 21 Jan 93] ..	38
Russian Government Decisions Affecting S&T Summarized [RADIKAL, No 47, Dec 92]	39
'POISK' Science News Briefs 11-17 December 1992 [POISK, No 50 (188), 11-17 Dec 92]	40
'POISK' Science News Briefs 4-10 December 1992 [POISK, No 49 (187), 4-10 Dec 92]	42
'POISK' Science News Briefs 27 November-3 December 1992 [POISK, No 48 (186), 27 Nov-3 Dec 92] .	43
'POISK' Science News Briefs 20-26 November 1992 [POISK, No 47 (185), 20-26 Nov 92]	45
'POISK' Science News Briefs 13-19 November 1992 [POISK, No 46 (184), 13-19 Nov 92]	47

AWARDS, PRIZES

Nominations for State Prize for Science and Technology Announced [ROSSIYSKIYE VESTI, 30 Jan 93]	49
--	----

PUBLICATIONS

'RADIKAL' Changes Name to 'NAUKA I BIZNES' ('SCIENCE AND BUSINESS') [RADIKAL, No 49, Dec 92]	52
---	----

Zagaynov on Fate of 'Science' Cities

937A0102A Moscow *RABOCHAYA GAZETA*
in Russian 19 Feb 93 p 5

[Article by German Zagaynov, director of the Central Aerohydrodynamics Institute imeni Prof. N.Ye. Zhukovskiy and professor of the Moscow Physical Technical Institute, under the rubric "A State Problem": "Woe From Wit—Both for Man and for the City"—first paragraph is *RABOCHAYA GAZETA* introduction]

[Text] During the prewar, war, and first postwar years for the solution of problems of a state scale, which were connected first of all with defense and the development of science and industry, our country organized a number of specific cities, settlements, and zones. The names of some of them have been known a long time, the public learned about others only in recent years.

In the Moscow region there are Zhukovskiy, Kalinigrad, Dubna, Pushchino, Obninsk, Troitsk, and Krasnoarmeysk, in other regions there are Arzamas-16, Chelyabinsk-70, the zone near Krasnoyarsk, Severodvinsk.... Many major problems arose for all these artificial formations, I will call them science cities. In trying to solve them, scientists of the Moscow region established the Council for the Development of "Cities of Science"—V. Lapin, chairman of the Zhukovskiy Soviet, headed it. Under the direction of N. Nikitina the draft of "The Fundamentals of State Policy of the Preservation and Development of Science Cities" was drawn up, versions of their structural reorganization into technology parks and technopolises are being proposed. But these are just the first steps.

The sharp reduction of the spending on defense and science and the overall deterioration of the economic situation have placed these cities in an extremely difficult position. The next group of problems is connected with the transition to a market economy, the selling of shares, and privatization. The necessity of structural reorganization and conversion is a painful subject for these "government" plants and scientific zones, which are 100-percent budget-carried.

It is necessary not just to understand the immediate troubles of these artificial formations, but to look once more at the history of their establishment and to single out the specific features. In order, by changing the structure, to save them as exponents of dual-purpose—civilian and military—science-intensive high technologies, basic and sectorial science, and production, including in the interests of defense.

I will try to specify these specific historical traits.

As a rule, these are one-product cities, with one or two urban development enterprises. An example close to the author is the city of Zhukovskiy in the Moscow region, which arose on the basis of the Central Aerohydrodynamics Institute imeni Prof. N.Ye. Zhukovskiy during the prewar years. Now this is a city of aviation and space

science and technology with a number of large scientific research institutes and design and testing organizations; the majority of these cities have powerful construction organizations.

The product of the labor of the citizens of this residential formation is oriented toward the meeting of a state need—scientific results, designs, and means of defense. In many cases the product is not of a market nature, but in some sense is a raw material, a semimanufacture, which a specific sector of industry needs.

These cities, as a rule, did not produce anything for themselves—with the exception of the minimum social services—and for the region. They lived in isolation and most often were closed, drawing manpower from the region mainly for auxiliary jobs and arousing by no means good feelings by the privileged nature of their status—supply from Moscow and a higher wage.

Vast funds were invested here in the establishment of enterprises, and now they have a unique experimental and production base, the maintenance of which requires considerable capital. Under present conditions this national wealth is beginning to go to ruin, as theaters, museums, and libraries are going to ruin.

For a number of generations "brains" were brought together here. Talented graduates of the most prestigious higher educational institutions of the country—Moscow State University, the Moscow Physical Technical Institute, the Moscow Higher Technical School, the Moscow Aviation Institute, the Moscow Engineering Physical Institute, and many others from Moscow, Leningrad, Kiev, and a number of other very large cities.

In a number of these settlements during their organization they forgot to establish a system of higher education, at best they opened evening affiliates of higher educational institutions of the capital. As a result the natives of these cities in the second and subsequent generations, as well as the inhabitants of the neighboring region could not receive an adequate education, although they did not have any choice: It was necessary to go to a scientific research institute or design bureau of this city.

The combination of highly elite personnel and the inhabitants of the region and the settlement itself, who were enlisted by force in work and to whom they did not give a proper education, is the social tragedy of these enterprises and cities.

Another peculiarity is the chronic shortage of available housing—up to 40 percent of the inhabitants need housing. At current prices it is now difficult to build houses and, what is the main thing, there is nowhere to build them: These cities and settlements, as a rule, are not a part of the surrounding regions, they are of oblast or kray subordination, while the land around them belongs to the rayon.

In some sense these are watch cities, only the watch at them is an entire lifetime and many people feel their entire life like favorites.

The results: The country in a short time created unique formations, "pearls" dispersed throughout the country with national property—a scientific production base and such a concentration of an elite scientific and technical potential, of which there are practically no analogs in the world. And if the country expects (and rightfully!) to remain among the developed countries of the world, it cannot do without these "pearls."

The community of purpose of these science-intensive, high-tech enterprises, to all appearances, can be transformed into a regional technopolis. An exclusively voluntary formation, without the administrative reshaping of the region, which is based on purely business and economic mutual interests with integration with the entire economic infrastructure of the region.

The establishment of a regional and, if possible, elite and prestigious system of the training of highly professional specialists is necessary. It is necessary to change over gradually to a system of polytechnical universities, at which, in addition to specialized education, say, in the area of aeronautics and astronautics, there should be practically all the specialties that are necessary for the normal robust functioning of the region. This system will make it possible to avoid the mass importing of "brains."

A basis for the establishment of such universities exists locally—prominent scientists, designers, and engineers. But one cannot manage without the help of elite higher educational institutions of the capital. A successful example of such work exists at the Moscow Physical Technical Institute.

The transformation of head, science-intensive, and high-tech enterprises of the region into a system of technology parks with the organization (after the pattern of a holding company or a joint-stock company) of a group of subsidiaries, which adapt dual-purpose high technologies to products for the national economy and the retooling of other sectors, is necessary.

The structural reorganization of cities and settlements and the departure from a one-product system to general production with a final (market) product and the outflow of surplus manpower from urban development enterprises should be a consequence of this.

Business integration with the region and with its production and other infrastructure is important. One must not limit oneself to one's own city, settlement, or zone. One will not solve problems on the scale of Chernogolovka, Troitsk, Dubna, and the academy campus.

Of course, state support and legislative acts are needed, but initiative from below is also needed.

Saltykov Makes S&T Policy Recommendations

937A0105A Moscow *NAUKA I BIZNES* in Russian
5 Feb 93 p 10

[Article by *NAUKA I BIZNES* correspondent Marina Lapina: "The Government All the Same Had Time for Science"—first paragraph is *NAUKA I BIZNES* introduction]

[Text] A point concerning the scientific and technical policy of the Russian Federation and the report of Vice Premier and Minister of Science B. Saltykov were on the agenda of the meeting of the collegium of the government back on 28 November. The question was shelved from meeting to meeting, moreover, since January it has been shelved for an indefinite period. But suddenly literally two days before the regular meeting of the collegium on 20 January the final decision to heard the report of the minister was made (immediately after the visit of V. Chernomyrdin to the Russian Academy of Sciences).

At the meeting of the collegium B. Saltykov delivered the report "The Essence and the Mechanism of the Implementation of State Scientific and Technical Policy in 1993." The minister began the speech with what had been done during the past year: He spoke about the formation of a new system of financing—budgetary sources (the Basic Research Foundation, the Fund for the Support of Young Scientists) and extrabudgetary sources (the Technological Development Fund and sectorial funds), about the tax credits granted to scientific institutions and higher educational institutions, about the lifting of customs duties from equipment, instruments, and materials, which are imported by means of centralized currency allocations, and so on. True, several of the mentioned steps were purely declarative—for example, the elimination of "the taxation of grants and customs duties on scientific equipment which is received from the assets of international foundations." The decree and explanation signed by ministers on this theme were never accepted for execution by the local services of the tax department and the customs department. The law on the exemption from taxes and customs duties of all assets, which are transferred free of charge by international foundations and organizations for the support of Russian science, thus far has also not been passed. Therefore, after the visit to Russia of G. Soros and his meeting with B. Yeltsin the question of the exemption from taxes of his gift of \$100 million arose.

The overall trends dictate the program of actions for this year. It does not differ greatly from the program announced last year, although, undoubtedly, it will still be adjusted.

Saltykov spoke about the state scientific and technical programs, of which there are now about 40, in nine priority directions, about the necessity of the combination of base and special-purpose (grants) financing, about the attraction of international investments, about

the establishment of federal science centers, extrabudgetary funds, and so on, that is, in fact about the development of ideas that have been discussed for a long time. Including the legal support of scientific and technical policy, namely the completion and adoption of such documents as the decree of the government on extrabudgetary technological funds, "the code of behavior in the transfer of know-how and other intellectual property," the program of privatization in the sphere of research and development, and, finally, the Law on State Scientific and Technical Policy.

The discussion of the report was not too intense and most active, inasmuch as by its start the government had sat for several hours and was exhausted by discussions on economic themes. Nevertheless, several serious decisions, about which I asked Deputy Minister of Science A. Fonotov, who attended the meeting of the government, to tell, were made.

"We and the other interested ministries and departments, specifically their executives V. Barchuk (the Ministry of Finance), A. Nechayev (the Ministry of the Economy), I. Lazarev (the State Tax Service), N. Fedorov (the Ministry of Justice), and I. Shurchkov (the State Committee for Industry), were charged to elaborate specific measures on the preservation of the potential of Russia and the corresponding legislative acts, which ensure the implementation of these measures, for their consideration in the government.

"One of the decisions concerns privatization. Although they should not have begun it without the adoption of the corresponding program, nevertheless a number of institutes due to incomplete development and the independence of the State Committee for the Management of State Property have already been privatized. The department of A. Chubays will have to make refinements in the state program of privatization.

"About financing. The preliminary budget for science for 1993 is 251 billion rubles in the prices of last year. But, apparently, during the visit to the Russian Academy of Sciences V. Chernomyrdin heard convincing arguments that this is inadequate. The Ministry of Finance has been charged to find additional assets for the financing of science, particularly basic science, as well as to change the ratio between the items of expenditures.

"Three million will be specially allocated for the payment of the debts for the repair and maintenance in ports of foreign states of ships of the fleet of the Russian Academy of Sciences.

"The question of the Technological Development Fund and other extrabudgetary funds led to a discussion. The minister wanted to know whether the principles of their formation would change—now they are formed on a voluntary basis—and what are the guarantees of their survival in the established form. And although now, unfortunately, it is impossible to give optimistic answers to these questions, it was decided for the time being to

leave the same procedure of the formation of extrabudgetary funds as was in effect during the past year.

"Up to now there were as many scientific and technical policies as there were ministries. No one considered it necessary, as a rule, to submit for the approval of the Ministry of Science, the Higher School, and Technical Policy intradepartmental decisions in the scientific and technical sphere, including in matters of the export sale of equipment and technology abroad. But as a result people called our ministry and wanted to know how a development got to the West, if only the same Topaz device. Therefore, at the meeting of the collegium a very timely decision, it seems to me, was made—on the establishment of an interdepartmental commission for scientific and technical policy attached to the government of the Russian Federation."

Commentary on 'Reorientation' of FSU Research Potential

937A0085A Moscow *RABOCHAYA TRIBUNA*
in Russian 23 Jan 93 p 6

[Article by Doctor of Philosophical Sciences Yuriy Filippov under the rubric "Science": "The Reorientation of the Research Potential of the former USSR Conforms to the Interests of the United States"—first three paragraphs are *RABOCHAYA TRIBUNA* introduction]

[Text] A Necessary Foreword

The document, with which you will now become familiar, was not intended for the public at large. It is exclusively official material, which was addressed to the assistant to the U.S. President (G. Bush is meant—editor) for science and technology. The results of a conference, which was held on 3 March 1992 in Washington and was devoted to you and me, are summarized in it. The conference theme was: "The Reorientation of the Research Potential of the Former USSR." F. Press, G. Stever, and E. Carter directed it. Dr. Frank Press heads the National Research Council, which was established back during the years of World War I for the formulation of recommendations for the federal government.

During the preparation for the conference four working groups were set up: scientific and engineering personnel in the sphere of weapons; basic research; the commercialization of technology; studies of interbranch problems—health care, ecology, power engineering, the Arctic, and the Antarctic. About 120 "leading representatives of science and engineering of the United States," as is stressed in the report, examined the problem of preserving the basic scientific potential of their former rival. Of course, proceeding here, as is customary in the world, from their own interests.

However, I do not want to predetermine the conclusions. The reader himself, I hope, will draw them.

"The Reorientation of the Research Potential of the Former USSR"

The scientific and engineering personnel of the former USSR will play a key role in the matter of economic recovery, which is necessary for the successful transition to an open and stable democratic society, in which the laws of the market will dominate. The establishment of such a society conforms to the interests of the United States. The new scientific and technical problems, which are arising for specialists of the former USSR in peacetime spheres, will help to redirect the technical talent of scientific personnel to spheres which do not involve military application. The affording of new opportunities for work to former Soviet scientists, who previously dealt with not only military, but also civilian problems, will be required for the accomplishment of the goals set by the United States on the reduction and redirection of the resources of the former USSR, which have been channeled into research in the military sphere, as well as for the development of a scientific and technical component of the world economy. It is particularly important to organize their collaboration with American colleagues. The possibilities of joint work will help former Soviet specialists to broaden the bounds of their knowledge in spheres which directly interest American scientific and business circles.

The Time Factor Is of Great Importance

Under the conditions of the lack of opportunities for the accomplishment of these difficult tasks, without having financial support, the scientific and technical personnel of the former USSR will quickly disappear as a result of the foreign and domestic "brain drain." The growing temptation of scientists of the military complex of the former USSR to go abroad and to find there a use for their knowledge is a significant problem. Many first-rate enterprises of the scientific and technical complex, which soon may simply become useless, are idle. The chances of the United States for the satisfaction of its commercial interests by the use of advanced scientific and technical achievements of the USSR may disappear after other countries have selected the best commercial facilities. The new leadership on the space of the former USSR will soon begin to make the most important decisions, which concern the priority of research activity, intellectual property rights, and the recognition of educational diplomas, while the opportunity to influence these decisions in some way will soon disappear.

Conclusions From the Basic Recommendations

The scientific and economic interests, as well as the national security interests of the United States can gain significantly, if within a few years by means of participation in major joint programs the best scientists of both the military and the nonmilitary spheres of the former USSR obtain new opportunities for conducting research.

The criteria of the appropriation of funds through the new International Center of Science and Technology, which were proposed by U.S. Secretary of State J. Baker

and FRG Minister of Foreign Affairs H.-D. Genscher, should include the specification "scientists and engineers, who work in the sphere of weapons," which would encompass the corresponding specialists of academic and research institutes, who participated in the development of Soviet military scientific and technical programs. Particular attention should be directed to specialists who have extensive knowledge and skills in the sphere of weapons. The proposals endorsed by the center, which concern the collaboration of military and nonmilitary scientists of the former USSR with American researchers, will be the most effective means of achieving the goal facing the United States of limiting and redirecting weapons development programs in the former USSR, as well as of making its military laboratories more "transparent"....

The U.S. Government should immediately moderate the restrictive policy that regulates the acquisition from countries of the former USSR of advanced technologies and the results of technical examinations by American firms, including those which have major Pentagon contracts. The relaxation of the restrictions, which were imposed by the government on the activity of private firms in the area of collaboration with the former USSR, can as a result help to expand contacts of scientists of both countries, to weaken the military-industrial complex of the former USSR by the diversion of its scientists and engineers to civilian projects, and to promote the development of the economy of the former republics of the USSR.

American experts and specialists of the former USSR should conduct studies of the possibilities of the former USSR in the selected spheres of science and technology, which are of interest to the United States, in order to conduct joint activity more purposefully, as well as to use more efficiently the unique enterprises and data banks of the former USSR.

The Steps Taken by the United States Should Be Aimed at the Development of Large-Scale Programs

As a result of the unpredictability in the behavior of partners from the former USSR the fulfillment of a large number of interstate agreements in the sphere of science and technology seems difficult. The unreliability of partners has become an ordinary thing in business. No one at all deals with individual important scientific and technical aspects. Nevertheless, a number of the mentioned agreements along with several intersectorial programs of individual agencies suggest a mechanism of the identification and funding of programs of particular importance. By means of them it is possible to classify quickly partners within the former USSR. For example, the programs, which were proposed by the National Science Foundation, the National Institutes of Health, the Department of Energy, and the marine research center, are very easy and satisfy the requirements of American scientists in the sphere of research that is of interest to the United States. At the same time the programs of special U.S. agencies (the Environmental Protection

Agency, the Department of Energy, the U.S. Geological Survey, the National Aeronautics and Space Administration) offer America a mechanism of access, moreover, very effective access, to leading specialists of the former USSR and to its most important enterprises.

American business circles are prepared to take advantage of the extensive technical possibilities in the former USSR, but many entrepreneurs are hesitating owing to dissatisfaction with...the policy being pursued by the United States in the sphere of technology transfer, as well as owing to the imperfection of the legislation that regulates questions of economic activity in the former USSR. At the same time rivals in the person of Germany and other countries are being encouraged by their governments and are gradually establishing business alliances with a large number of promising organizations of the former USSR.

The new Center for the Support of Scientists Who Are Specialists in the Nuclear Sphere of the Former USSR is giving former Soviet specialists good chances to redirect their activity for the achievement of peaceful goals, and, thus, the scale of scientific and design development, which is being conducted in the former USSR in military interests, will decrease significantly.

And What Does the Russian Scientist Think About This?

The policy of the present Russian leadership is a most serious test for the people. The higher school has one foot in the grave, scientific research institutes are going to pieces, the system of the advanced training of personnel has been destroyed, scientific collectives are disintegrating. Intellectual labor—the bedrock of modern production and in part of the way of life—is turning now into a not very respectable, and at times an openly contemptible occupation.

The state is dragging out a miserable existence, and it is impossible, alas, to count on its help. The moaning in this connection is idle and inappropriate moralizing. The cosmopolitan ideology of ultraradical liberalism does not tolerate anything that pertains to the state. The state for it is an evil, moreover, an incomparably worse evil than runaway inflation and structural unemployment. Its role, by definition, is trivial: always to be merely a "night watchman."

That is why, reader, it is not worth judging by "stagnation" standards experts and consultants of the American president. For they are advising the head of their state to take in Russia what is not being managed by anyone and is somehow being preserved or, to put it bluntly, is doing poorly. In such a situation it is not disgraceful to take.

Incidentally, the Russian government itself is not hindering this, and in some way is even promoting this. Apparently, out of the ingrained habit of rigorously fulfilling commands it is doing everything in its power not to offend its partners and not to deceive them in the hopes for the complete liberalization of Russia. And, it

must be said, it is winning their sympathies with truly Russian generosity and scope. It is not acting in a petty manner, as did, for example, Mr. Bakatin, who divulged the secrets of his department.

It is far more effective and impressive jointly with the Americans to erase from the face of earth our military-industrial potential, without sparing billions of rubles and dollars for this. The more, say, missiles, airplanes, and tanks, moreover, the most advanced ones, we destroy and the sooner, having carried out conversion, we change over to the production of pans, the stronger the authority of Russia on the world arena will become and the wider and more powerful the stream of credits of the International Monetary Fund will become. Here, of course, it does not matter that the pragmatically minded Americans are looking first of all after the interests of the great America.

How is it possible to suspect American politicians of something unseemly, if they are so sincere and in a purely humane manner, on the basis of considerations of humanism, propose to make military laboratories "transparent," so that henceforth nothing would threaten all nations, including Russia?

The readiness for a policy without thoughts of revenge, which is displayed by a respectable partner, of course, is capable of rousing reciprocal actions in response. Thus, just recently the Ministry of Foreign Affairs of Russia considered it possible and expedient to the highest degree to relieve simultaneously several diplomats of the held positions at the Russian embassy in Washington. It let them go to work in the field of cooperation in spheres that are far from diplomacy. This step, which was unexpected even for our times, resulted in various false rumors, which somehow gloss over the magnanimous act of the Russian foreign policy department. One of the versions of the resignation of five diplomats is their mercenary interests.

It is hardly worth believing it. It is secondary. This is not at all the main thing. The Russian Ministry of Foreign Affairs demonstrated to the entire world that the freedom of the individual comes before its interest in skilled personnel. One should seek in this and only in this the ultimate reason for the displayed altruism, the importance of which is especially great as in the history of international relations the stubborn hoarding of individual countries has also occurred. Suffice it to recall that in the early 1970s there arose for the same United States several rough spots in relations with Great Britain, which was forced to resist resolutely the "brain drain" to America. For the sake of accuracy let us also note that international conflict did not occur as a result of this prohibited action of the British government.

Is a similar demarche on the part of Russia possible if necessary? On the initiative of, say, A. Kozyrev? It is, it seems, hardly possible. Such a practice is repugnant to Russian interests, it is at variance with the notions of

modern diplomacy about freedom and does not blend with its understanding of the interests of Russia.

Most likely, as one can assume, other high-class specialists: physicians, engineers, inventors, general designers, scientists, and, what is not ruled out, professional politicians from among the liberals, will also follow the diplomats to seasonal work. And, perhaps, also intelligence agents, who, incidentally, have already beaten a road to the West.

Which version should be considered optimal for the national interests of Russia (they still exist!)? Who should be let go, and who should be kept if only for a while?

It is obvious that in free Russia this ticklish question will be settled in the most democratic way. Everyone can leave, can "drain." But in the interests of stabilization and the reforms being implemented we will also give our own advice: The departure at first of just liberal politicians is preferable. For in this case a "drain" will occur, but brains will remain.

Organizational Problems With Basic Research Foundation Discussed

937A0095A Moscow *NAUKA I BIZNES* in Russian
No 2, 22 Jan 93 p 10

[Article by *NAUKA I BIZNES* correspondent Marina Lapina under the rubric "Foundations": "The First Holders of Grants of the Basic Research Foundation Will Be Known at the End of March"]

[Text] Academician A. Gonchar, chairman of the Basic Research Foundation of Russia, regards the decree of the government of 3 November 1992 on the establishment of the foundation as the reference point of its practical activity. But for scientists events, which almost merged in time: the publication of the announcement on the conditions of the competition of scientific works and projects and the first meeting of the officially approved council of the foundation, became it. Against the background of the flow of enthusiastic comments on Soros' \$100 million, which had fallen like snow, these events remained unnoticed, although the largest alternative source in Russia of the financing of basic science is appearing.

A discussion of the basic principles of its activity also took place at the first meeting of the council. Academician A. Gonchar, who was entrusted with its formation, would not conceal the fact: Both the ministry of science and the presidium of the RAS [Russian Academy of Sciences] had overcome him with convincing entreaties with respect to their favorite candidates. Letters came not only from the generals of science—they came from the marshals. From the "cohort of marshals" two were included on the council: V. Shorin, chairman of the committee for science and the higher school of the Supreme Soviet of the Russian Federation, and deputy minister of science I. Bortnik, who is in charge of basic

science, and they became members of the council not contrary to, but, to all appearances, owing to the wish of the chairman. The remaining members of the council are almost entirely academicians and corresponding members of the RAS without portfolios.

As a result of the stormy debates at the meeting of the council it was finally possible to come to an understanding in fact on two points that are very fundamental. First, the average amount of a one-year grant of the Basic Research Foundation, which a scientist or a research group on the order of 10 people can seek, was specified. "As a rule" (the wording takes precisely that form), the amount of a grant will come to 3-4 million, "not more than" 5 million rubles [R]. Second, the optimum ratio in the distribution of assets of the foundation (I will recall: It is the matter of an amount that comes to three percent of all the budget deductions for Russian science) among types of activity is specified. Sixty percent of the assets will be used for grants, 20 percent will be used for the material and technical development of institutes, 7-8 percent will be used for the participation of Russian scientists in international conferences and meetings, approximately the same amount will be used for publishing activity, the remaining few percent will be used for the pay of the staff of the foundation, which will begin to be formed in the immediate future and, according to the estimates of the chairman, at first will number 30-40 people.

The settlement of other, no less fundamental practical questions remained for the time being at the level of estimates. In particular, the ratio of financing among the six indicated scientific directions. For the present physics and astronomy have priority—20 percent of the assets—the other scientific directions can count on somewhere around 16 percent. These figures will be made more specific. The council members took as a basis the experience of the RAS, which is quite natural, inasmuch as the majority of them are all the same members of the RAS. This fact serves as one of the arguments of the opponents of A. Gonchar, who are inclined to believe that with the establishment of the Basic Research Foundation an additional source of financing is being obtained mainly by the academy, which will pull the financial blanket over itself.

The supporters of this version may get another trump in their hands. During the period of the preparation of the charter of the foundation, which lasted more than a month, the question of whether the chairman of the foundation can remain a vice president of the RAS remained one of the controversial questions. The opinion of the ministry of science, in the bowels of which the charter was prepared, was always unequivocal: These functions are incompatible. As a result there appeared Point 24 of the charter, which states: "The foundation is the main place of work of the chairman of the foundation, his deputies, the responsible secretary of the foundation, and the other members of the executive committee of the foundation. The indicated staff members of

the foundation do not have the right to hold the positions of administrative executives (and their deputies) of organizations and institutions, which conduct basic scientific research."

As you see, the wording precludes an ambiguous interpretation. The answer to my direction question—When does Academician A. Gonchar intend to leave the post of vice president of the RAS?—was very unexpected: Andrey Aleksandrovich does not intend to leave the vice presidency, inasmuch as "it is not recorded anywhere that he cannot combine both posts." Moreover, if he were actually faced with the problem of choosing, Andrey Aleksandrovich would prefer the academic post, inasmuch as he was elected vice president before they persuaded him to become the organizing chairman of the Basic Research Foundation. It is hard to believe that the chairman of the foundation does not suspect the existence of the corresponding point of the charter of the organization he heads.

At the first meeting of the council the formation of expert councils—as the prerogative of the members of the council of the foundation, who represent specific scientific directions—was also discussed. All the responsibility for the choice of qualified experts will fall on them, stressed A. Gonchar, who himself, in his own words, held aloof of the formation of the expert councils. Perhaps, members of the large council will head the expert councils.

The experts will also be able in conformity with common practice to submit applications for the support of their own research, or else, as the members of the council of the foundation correctly reasoned, how will they otherwise succeed in enlisting the most qualified scientists in expert work? As to the members of the council of the Basic Research Foundation, the question of the possibility of their submission of applications was not considered specially, but A. Gonchar communicated his own personal point of view: It is better not to.

In addition to other functions the council of the foundation, apparently, with time will also have some control functions. For example, to track from what sources the candidates for a grant have already received support and in what amounts. Such a practice has been adopted throughout the world. One will probably also have to regulate in some way the interrelations with the management of scientific institutions, which will be disposed without fail to the withdrawal of a certain portion of the assets received by associates from the Basic Research Foundation. There is nothing reprehensible in this, but it is important to act in moderation. For example, at some scientific institutions of America the management takes from the recipients of a grant up to 50-60 percent of the assets, in some countries the percentage does not exceed 20. As a result of the stormy discussions the council of the Basic Research Foundation named the figure of 30 percent as a tentative figure. Apparently, the management of the foundation will recommend to institutional authorities not to exceed this bound.

A final decision on this and other fundamental elements of the activity of the foundation will most likely be made at the second meeting of the council of the Basic Research Foundation, which is planned for March.

Minscience Official Discusses Programs, Financing for 1993

937A0093A Moscow *DELOVOY MIR* in Russian
16 Jan 93 p 13

[Interview with Boris Dmitriyevich Yurlov, chief of the Administration of the Economic and Legal Regulation of Scientific and Technical Progress of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation, by a *DELOVOY MIR* correspondent, under the rubric "The Concept"; place and date not given: "The Goal of Scientific and Technical Policy Is the Survival of Russian Science"—first paragraph is *DELOVOY MIR* introduction]

[Text] Without the sharp increase of the regulating role of the state in the area of innovations and national economic structural changes the country is doomed to the complete destruction of its scientific and technical potential with all the ensuing catastrophic consequences—such is the opinion of Boris Yurlov, chief of the Administration of the Economic and Legal Regulation of Scientific and Technical Progress of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation. Our correspondent talks with him.

[*DELOVOY MIR*] Boris Dmitriyevich, could you to start with give a general assessment of the state of the scientific and technical potential of Russia and the corresponding preliminary forecasting plans for the coming year?

[Yurlov] This potential, naturally, was created over decades, while by way of describing its present state I will cite first of all the following figures and data. In 1991 in the sphere "Science and Scientific Service" there were about 2.9 million people; the number of specialists, who performed scientific research and development, at the beginning of this year came to about 1.1 million, including 16,000 doctors of sciences and 118,000 candidates of sciences. The successes of domestic science are well known. But now the scientific and technical potential of Russia is endangered. In the immediate future its state will for the most part be determined by the following series of factors:

- a) the continuing investment slump;
- b) inflationary processes and inflationary expectations;
- c) the rigid budget policy;
- d) the low demand of commercial structures for the results of research and development with their ever increasing demand for the resources that are in the

sphere of science and scientific service (buildings, personnel, materials, equipment, and so on);

e) the extremely selective interest of foreign capital in the use of the Russian scientific potential.

In this situation it is a matter of the survival of science. In this connection I can report that during the consideration on 27 August 1992 of the concept of the structural reorganization of the Russian economy for 1993 the government recognized the preservation of the scientific and technical potential as one of the few priorities. And even earlier this was reflected in the Edict of the President of Russia "On Urgent Measures on the Preservation of the Scientific and Technical Potential of the Russian Federation."

[DELOVOY MIR] Thus, we are coming to the group of main tasks of state scientific and technical policy. You will agree that the thesis of "the leading role of scientific and technical progress at the stages of the recovery from the crisis and the 'restoration' of the national economy" will remain a good wish, mere words, if at last purposeful and accurately calculated, precisely economically verified steps of the state do not follow declarations. And it is necessary to act precisely today, under the conditions of the most severe investment crisis. How in this situation, if we speak about the main thing, is the financing of "the preservation of the the innovation potential," first of all the financial support of the sphere of science, which is languishing before our very eyes, conceived of?

[Yurlov] Given the continuation of the rigid budget policy in 1992-1993 one of two fundamental versions of its support can be implemented.

The first is the continuation of the support of all the existing organizational structures of science. Then the financial resources will be spent practically completely on the wage of scientific workers (with a relative decline to the average wage for the national economy) and on the increasing operating expenses. In this case the total stagnation of scientific and technical activity is inevitable.

The second version involves the singling out of the "nucleus" of the scientific potential, with respect to which the amount and structure of the formed financial support are retained with allowance for inflationary factors. This, of course, presumes the putting into effect of the principle of priority financing. Given the fifteen-fold increase of prices and only a three- to fourfold increase in 1992 (as compared with 1991) of the financing of science the size of such a "nucleus" can come to no more than 20-25 percent of the existing scientific potential. If one reduces the size of the "nucleus" to 10 percent (earmarking by means of budget assets for the remainder of the scientific potential allocations in the amount of the minimum "social security"), in this case for its normal activity the "nucleus" should absorb not less than half of the budget allocations.

Based on this, given the retention of strict financial limitations state policy in the area of science can be of only a discriminative, selective nature.

[DELOVOY MIR] What priority objects of state scientific and technical policy are appearing today?

It is a matter first of all of fundamentally new areas of science and technology, which are capable of changing the technological order of things and of ensuring on this basis the changeover to a new type of consumption and way of life of the people, the abrupt increase of labor productivity, and a qualitatively higher level of resource conservation, and of also ensuring the development of science itself.

[Yurlov] In 1993 a strictly limited number of scientific and technical programs of the federal rank, which are connected with the accomplishment of urgent tasks and the creation of a reserve for the future, will be implemented. In early 1992, 49 programs of the state level, which are financed by our ministry, were specified. And this list should be reduced further. Each of the programs is carefully considered and undergoes examination; the composition of the correspond projects is specified.

Taking into account the present situation, the basic group of scientific and technical programs envisages the implementation of projects in the immediate future. Priority when selecting the projects of state scientific and technical programs is being given to measures, which are connected with the solution of social problems, the improvement of the ecological situation, and resource conservation. These are the programs on the development of highly efficient processes of food production and technologies for the processing sectors of the agroindustrial complex; on the control of the most prevalent diseases; on the development of ecologically clean and resource-saving processes in power engineering, the mining and metallurgical industry, and chemistry; on the waste-free processing of secondary resources; on new materials; on technologies and equipment for construction; on the solution of problems of environmental protection and the thorough processing of raw materials, and others. A number of programs are aimed at the settlement of questions of the social and cultural revival of Russia and the development of education and the higher school.

The second group of programs is oriented toward the future. There are envisaged here, in particular, the development of advanced information technologies, the latest methods of bioengineering, and models of high-speed transport; the development of research in the area of high-energy physics, high-temperature superconductivity, controlled thermonuclear fusion, space, the world ocean, and the human genome.

The completion or continuation of research and technical development, which was begun earlier by Russian organizations and enterprises with partners of foreign countries under more than 200 international projects, is envisaged next year. Work will be performed first of all

on those of them, in which according to the results of preceding years a high effectiveness is anticipated.

There are specific grounds to hope for the most active participation in the implementation of international projects of various universities, scientific organizations, and firms of Germany and the United States (particularly in the area of new promising materials, chemistry and metallurgy, the development of biotechnology, ecology and the earth sciences, instrument making and information technologies). The number of international projects, which are being formulated with South Korea, will increase. A significant amount of cooperation will be carried out in 1993 with Bulgarian organizations, first of all in the agroindustrial sphere and biotechnology. Participation in international projects of Italian, English, French, Japanese, Finnish, Chinese, Hungarian, and Polish firms is anticipated. I also cannot but talk about the prospect of the joint formulation of a number of projects on the basis of multilateral cooperation along the lines of the World Health Organization, the West European EUREKA program, and other international programs.

A few words about intersectorial projects. In 1993 it is planned to continue the giving of state support of scientific research and development, which are of an intersectorial and sectorwide nature and are aimed at the development of new generations of equipment and materials for resource-saving and ecologically clean base technologies, as well as at the implementation of highly effective inventions. Within the framework of these jobs (which are selected on a competitive basis with the participation of experts) a significant place is held by the problems of new technologies, machines, and compounds for the agroindustrial complex and the food industry; new types of machines, instruments, and equipment for light industry and technically complex consumer goods; new types of effective drugs and medical equipment, diagnostic aids, equipment for the disabled, means of the ecological monitoring and protection of the natural environment, waste-free ecologically clean technologies. The development of new technologies of the production of construction materials and components (including from production waste) is also envisaged. Advanced types of means of transportation (including ecologically clean ones), communications, data processing, and computer equipment, and the complete automation of technological processes will be developed.

In this connection I will touch upon the research and development, which are being conducted by defense sectors for civilian purposes. In 1993 the further expansion of the use of achievements of the defense complex for national economic purposes is envisaged, specific steps on overcoming the technical isolation between the civilian sphere and defense spheres are planned. The demilitarization and conversion of the sphere of research and development should be oriented toward the retooling of civilian sectors and the fundamental social reorientation of the economy. Next year in conformity with a number of programs work in priority directions

will be launched here. In particular, in the area of civilian aircraft, civilian shipbuilding, optical instrument making and movie and photographic equipment, medical equipment with the use of high technologies (laser, proton, computer, and others), means of the ecological monitoring and protection of the environment, data processing and computer systems and equipment, technological equipment for the agroindustrial complex and light industry, technically complex consumer goods.

The development of an effective mechanism of technology transfer from defense to civilian sectors, including the establishment of data banks of the technologies being converted and an extensive network of intermediary firms for the promotion of the dissemination of these technologies, is necessary.

[DELOVOY MIR] Is basic scientific research included in the research, which is being specially singled out and supported by programs?

[Yurlov] Yes, for it, as is known, acts as the source of new knowledge and constitutes the base for the development of applied scientific development.

At the Russian Academy of Sciences next year it will be concentrated on directions of the natural, technical, and social sciences and the humanities, which are envisaged in the assignments of 21 basic research programs. Its development with respect to the problems of theoretical, applied, and numerical mathematics and with respect to nuclear and particle physics, solid-state physics, optics, and laser physics is envisaged. Work will be performed in the area of the chemical sciences, physical chemical biology, and ecology. The conducting of research on themes of the earth sciences, water resources, the world ocean, the atmosphere, and deep and near-earth space is planned. The intensification of research in the area of the humanities and the social sciences lies ahead.

It is also proposed to focus the efforts of sectorial academies on priority directions.

The Russian Basic Research Fund, from which the financing of research work on a competitive basis has been started, was established in conformity with an edict of the president.

[DELOVOY MIR] The preservation of the scientific and technical potential as a program guideline of state policy, which was indicated by you, entails, evidently, specific plans of changes of an institutional organizational nature. What is the essence of the coming reorganization of the scientific and technical sphere?

[Yurlov] On the basis of an inventory of the network of scientific institutions it is proposed first of all to identify the organizations that are capable of working efficiently under the new conditions. In 1993 the commenced formation of a new organizational model of the network of scientific institutions of Russia will be continued. It is planned, in particular, to form a limited network of state

science centers and nonprofit scientific research organizations, which are oriented toward the solution of the most important basic and applied problems.

The partial privatization of institutions of science is also envisaged. This means that a significant portion of today's state organizations (in particular, the numerous and, as a rule, large sectorial scientific research institutes, as well as several academic institutes with a large share of applied research) will be faced with a choice:

a) to merge with industrial or commercial structures and to receive the status of intrafirm (intraplant) science (at state or private enterprises);

b) to reorganize into private (privatized) organizations which work on orders on the basis of the conclusion of contracts;

c) under the conditions of the lack of sources of financing to "disappear" or to turn into consulting, engineering, and venture firms and so forth. The financing of intrafirm science rests entirely with the enterprises and other structures, which took on the scientific subdivisions.

A somewhat different version, incidentally, is also possible: the transfer of state scientific organizations to the ownership not of individual enterprises or firms, but of operating corporations or concerns—for the servicing of all the structural units that belong to them. However, in principle this does not change the matter.

I want to explain at once: The privatization of scientific institutions does not eliminate state financing, but converts it to a competitive (contract) basis. It is carried out either in the form of one-time grants, which are intended for scientific collectives that won the competition (the latter become the performers of a state order for a specific result), or in the form of the financing of the participation of private scientific organizations in the formulation of state scientific and technical programs or projects (also on a competitive basis).

All this will require steps on the social protection of scientists. The following steps are envisaged. First, the increase of the level of payment for scientific research work and the introduction of its regular indexing. Second, the setting up of the organizational and information infrastructure of the job placement and retraining of scientific personnel who are released. Third, for the purpose of the protection of scientific personnel as people with a below-average competitive ability on the labor market, as well as young specialists, who have been registered as unemployed, a procedure of the establishment by the enterprise of quotas, benefits, and stimuli for their hiring will be formulated and approved. Fourth, the establishment of special nonbudgetary funds for the social protection of personnel of science and higher education is envisaged. Finally, fifth, assistance in the formation of professional organizations and unions for the protection of the interests of various

categories of creative personnel and help in the development of scientific contacts between Soviet and foreign specialists and in the exchange of specialists and students will be given.

[DELOVOY MIR] The "brain drain" from Russia. Does the government intend to counteract this process?

[Yurlov] Under present conditions state regulation of intellectual migration cannot set the goal of the complete halt of the "brain drain" or its substantial reduction—this is simply unrealistic. Administrative attempts to make the departure of scientists difficult would be at variance with passed legislation and the international commitments of our country in the area of human rights. It is necessary to solve this problem not by the method of bans, but comprehensively. In this connection the following, in particular, has been planned:

1) the simplification of the procedure of the return of specialists and scientists to work at domestic scientific organizations, higher educational institutions, and enterprises;

2) the introduction (on the basis of the principle of reciprocity with individual countries) of the right to dual citizenship;

3) the assignment of apartments to scientists and specialists, who went to work abroad, and the guaranteeing to them of significant social rights (seniority, pension service, insurance, and so forth);

4) the development of the nonstate pension security of personnel of science and the insurance of scientific innovative activity;

5) the development of an effective mechanism of the use of the aid, which is being granted to Russian science by organizations of the United Nations, UNESCO, the EC, NATO, and others;

6) the further development of democratic principles in the organization of the labor of highly skilled specialists and scientists;

7) the systematic increase of the business skills of personnel, including their sending for extended foreign practical studies and participation in joint scientific and technical activity;

8) the improvement of the work of all the units of the education system, with particular emphasis on the settlement of the questions of the early identification and subsequent development of talented young people.

[DELOVOY MIR] Could you, having returned to the problem of the financing of science, which was already partially touched upon, list the specific sources of financial support of research and development, which it is proposed to mobilize in the immediate future?

[Yurlov] In addition to the mentioned principle of priority goal financing the principle of putting a large

number of sources to use was also made the basis for the new approach in these matters. It is a matter of expanding markedly the sources of the financial support and stimulation of scientific and innovative activity, by attracting the assets of not only budgets of various levels, but also nonbudgetary funds, as well as bank credits and the resources of interested enterprises, organizations, and foreign investors.

The analysis, incidentally, shows that under the conditions of the decline of production and the decrease of the demand for scientific and technical products the budget remains the only stable source of the financing of science. In the last three years its share in the total expenditures on science increased from 55.4 percent to 72.1 percent.

The amount of financing of civilian research and development for 1993 from assets of the republic budget is predicted at 286 billion rubles [R] (in 1992 prices) as against R103 billion in 1992. The calculation is based on the decrease of the number of people employed in the budget-carried sphere of science by 66,000 with the increase of their wage to the average level of the remuneration of labor of people employed in the national economy, as well as on the maintenance of the conditions of the economic security of scientific organizations at least at the 1992 level.

Of the total amount of budget allocations it is planned to channel about 70 percent into the financing of priority directions of the development of science and technology and into basic research; for the solution of both immediate and long-range problems. As to basic scientific research, the share of its financial support at the Russian Academy of Sciences, its regional departments, and sectorial academies is being increased. In conformity with the Edict of the President of Russia "On Urgent Steps on the Preservation of the Scientific and Technical Potential of the Russian Federation" 3 percent of the allocations for science through the budget are being channeled into the Russian Basic Research Fund for the financing of enterprising projects that are selected on a competition basis.

The share of the funds, which are being allocated for the conducting of priority applied research and development, which are being performed in accordance with the above-examined state scientific and technical programs, will also increase. It is envisaged to allocate funds from the budget for the indicated purposes mainly on a matching basis with interested organizations, including on a repayable basis and on credit terms.

For the financing of sectorwide and intersectorial research and development in conformity with the Edict of the President of Russia sectorial nonbudgetary funds have been established by means of deductions in the amount of 1.5 percent of the production cost of the commodity production (operations, services). Drafts of a decree of the Supreme Soviet and the government, which envisage the mandatoriness of the inclusion in the

product cost of the deductions for nonbudgetary funds for the financing of research and development, on the procedure of the formation and use of the assets of these funds have been prepared.

The Russian Technological Development Fund attached to the Ministry of Science, the Higher School, and Technical Policy of Russia has also been formed. In 1993 the accumulation of assets for the financing of the highest priority scientific and technological programs and development should be its basic task. In 1993 the receipts will come to about R1 billion. This amount of receipts has been calculated on the basis of the realities of this year, while in case of the improvement of the economic situation of enterprises it may increase to R2.5-3 billion.

In addition to direct financial support indirect methods—tax and other credits—should, in our opinion, be used for the stimulation of scientific and technical activity.

In conclusion it seems necessary to stress the following. The most developed countries of the world are confidently switching to a fundamentally new type of development—the innovation type. This means that the process of innovations becomes deliberate, goal-oriented, and reproducible on a systematic basis, while innovations themselves are regarded as the main tool of the solution of the problems that face society. Consequently, there are required of society itself such a reorientation, such a restructuring of all its institutions, values, and norms, and the education of such a creative individual, which would be equal to this global challenge of the times. And the earlier we fully realize this imperative and subordinate our state policy to it, the sooner we will create the prerequisites for the technological revival of Russia.

Russian Academy of Sciences Ends Year With Major Issues Unresolved

937A0095B Moscow *NAUKA I BIZNES* in Russian
No 1, 15 Jan 93 p 2

[Article by *NAUKA I BIZNES* correspondent Vladimir Pokrovskiy under the rubric "At the Academies": "The Immortals Are Alive. Notes from the General Meeting of the Russian Academy of Sciences. The Main Result of the Year—They Survived!"—first paragraph is *NAUKA I BIZNES* introduction]

[Text] Thus, the General Meeting of the RAS [Russian Academy of Sciences] was held at the end of December. To begin with the president of the RAS treated those who had gathered to an hour and a half long accountability report, the essence of which is simple: "The academy did not collapse, and this is the main result." Moreover, in spite of the more than tragic lack of finances, "the academy owing to the devotion of scientists to their work is maintaining a high potential and

prestige in the world scientific community. Its contribution to world science remains very significant and in a number of directions...decisive."

Self-Diagnosis

President Osipov asserted that the notion of a deep scientific crisis and the collapse of domestic science, which has been created in social consciousness, to a significant degree is incorrect, inasmuch as numerous discussions on this theme were conducted "abstractly and superficially, in isolation of an understanding of how the entire country is living at this time." He cited as confirmation of his thesis about 30 examples of the successful completion of various scientific research programs—from the field of physics, mathematics, chemistry, biology, the humanities, and others. He cited them on the basis of the reports that had been specially prepared by the departments of the RAS for this occasion. Healthy (plus, perhaps, a drop of unhealthy) skepticism forces us to ponder the conformity of such a self-diagnosis to the real state of affairs.

And still one would like to believe that Academician Osipov is correct—in the end the institutes are operating, there is light in the windows, and many of the people, for whom Monday begins on Saturday, still remain.

But financially the academy actually scraped by, although during the fourth quarter it was on the verge of bankruptcy—Vice President of the RAS Academician Andrey Gonchar told about this in detail, with figures. By the end of the year a truly rotten situation had formed—mainly because the annual budget of the academy had not been indexed and was almost entirely used up during the preceding three quarters; in addition difficulties arose with the mandatory introduction of wage rate classification, which required additional and nonexistent billions for the wage of scientists. The leadership of the academy succeeded in making ends meet literally at the last moment, so that troubles-92 were left behind and it is time to think about troubles-93.

Problems With the Charter

The so-called Temporary Charter of the RAS, all the shortcomings of which should have been corrected in 1992, had been in effect since the moment of the formation of the RAS. Strictly speaking, the last General Meeting was itself also convened in order to make from the Temporary Charter a permanent one.

Reconciliation proceeded by points and at a very good pace. By the evening meeting everything had been completed, they voted practically unanimously for approval (only the perpetual disturber of academic peace, Aleksey Zakharov, deputy chairman of the trade union of workers of the RAS, raised a hand in opposition to approval).

Such unanimity is incomprehensible to him—it was still a long time until supper. The charter remained practically the same, the basic problems of the temporary document were transferred without substantial changes to the permanent document, which it will be legally much more difficult to change, therefore, the author categorically refuses to understand why the proponents, that is, the leadership of the RAS, need such a charter.

As far as I can gather, the main problem of the RAS consists in the fact that it, strictly speaking, to date is not a legal person: The Temporary Charter was not registered anywhere and could not have been, because the main question—the status of the academy—was not settled in it. It did not postulate the status of a state enterprise, the status of a public organization, or the mixed status of an association of public and state organizations. The permanent charter in exactly the same way does not postulate any status and for this reason cannot be registered.

Formally it will not be registered for the reason that in it there is no final mandatory point on the procedure of eliminating the academy—President of the RAS Yuriy Osipov explains that they simply could not bring themselves to insert such a point. Academician Gonchar at a press conference, which followed soon after, explained the situation in the following way. The question of the status is a sore point for the academy, none of the ones existing in Russian legislation suits it. It is also bad without a status, and they are waiting for when the Law on the RAS, in which this status will be specially introduced for the academy, will be passed by the Supreme Soviet. Because of such ambivalence the question of the registration of the permanent charter of the RAS also remains unclear. The point is that, in the opinion of Andrey Gonchar, only the charters of public enterprises are registered, the charters of state enterprises are not. Therefore, the charter of the RAS in principle might not be registered. Such a statement of the question is unexpected for us, since, according to our information, only bodies of state administration and trade unions are not registered—here, apparently, the expert advice of an experienced lawyer is required.

The academy, having been faced with the need to have a status, was actually faced with a problem that is difficult to solve. In the end in the charter they recorded the compromise and, it appears, meaningless phrase that the academy "was established by the state as the highest scientific institution of Russia." In what sense is it the "highest"? What does "was established by the state" mean from a legal standpoint?

"If on the Cage of an Elephant..."

The same confusion is found in the question of property. As President of the RAS Yuriy Osipov announced in his accountability report, the question of the possessions of the RAS has finally been settled. There is a letter of Khasbulatov, in which it is explained in popular terms that there are no contradictions between the edict of

Yeltsin on the establishment of the RAS, in which these possessions were transferred to the ownership of the academy, and the decree of the Supreme Soviet of the Russian Federation, which made these possessions federal property and transferred them to the jurisdiction of the State Committee for the Management of State Property—the property both belonged and belongs to the academy.

Honestly speaking, the interpretation of the lawyers of Ruslan Imranovich raises some doubts. In trying to prove that the Decree of the RSFSR Supreme Soviet of 1 November 1991 does not at all make academic property federal property, the highest legislator of the country writes: "This follows from Point 15, in which it is stated that the Decree cancels only the powers on the disposal of state property, which were delegated prior to 10 November 1991, while the Edict (of the president) was signed on 21 November 1991. Moreover, Point 16 emphasizes that the restriction of ownership, which is introduced by this Decree, does not apply to objects, which earlier were state-owned and were alienated in accordance with the law to the ownership of...legal persons."

But transfer to the ownership of someone else is not included in the powers on the disposal of state property, about which Point 15 of the Decree speaks. As for Point 16, it concerns the transfer of state property to the ownership of legal persons, which kind of person, in the opinion of our experts, the academy was not and, alas, is not to date—its charter for the present has not been registered anywhere.

The State Committee for the Management of State Property is also of approximately the same opinion, but in principle legal purity interests us half-heartedly. Another thing is more important: What kind of property is more advantageous for the academy—its own or federal? At the last General Meeting of the RAS it was asserted that federal property is better, while there are more troubles with one's own property and it is possible to lose it in a jiffy.

The question is very complicated, Vice President of the RAS Andrey Gonchar believes. There are both "pros" and "cons" here. On the one hand, the possessions, which are state-owned, can in principle come under the effect of state acts on privatization and so forth. On the other, the supporters of the federal form of ownership say, the transfer of the possessions of the academy is a step in the direction of its collapse, inasmuch as the state form of ownership it protection far more strongly than other forms.

"If on the cage of an elephant the word 'buffalo' is written, do not believe your eyes," Kozma Prutkov says. Now the process has begun according to the formula: "If on the cage of an elephant the word 'buffalo' is written, believe what is more advantageous to you. If only we knew what is more advantageous.

Controversy Arises Over Kazakh Nuclear Center

937A0105B Alma-Ata KAZAKHSTANSKAYA PRAVDA
in Russian 29 Dec 92 p 2

[Interview with Vice President of the Academy of Sciences of the Republic of Kazakhstan Academician Vladimir Nikolayevich Okolovich, by Svetlana Krymova, under the rubric "Opinions"; place and date not given: "Is the Nucleus of Science Fissionable?"—first five paragraphs are KAZAKHSTANSKAYA PRAVDA introduction]

[Text] A dramatic situation has taken shape over the Edict of the President of the Republic "On the National Nuclear Center of the Republic of Kazakhstan."

Signed on 15 May of this year, it resulted first of all from the necessity of preserving the scientific and technical potential of the Semipalatinsk Nuclear Test Range. In the edict it is stated that in addition to facilities of the Kurchatov institute "the corresponding scientific organizations and facilities, which are located on the territory of the Republic of Kazakhstan," should also be included in the nuclear center. This also became a stumbling block when preparing the decree of the Cabinet of Ministers to execute the edict.

The point is that three leading institutes of the Academy of Sciences: the Institute of Nuclear Physics, the Institute of High Energy Physics, and the Physical Technical Institute, were grouped with "the corresponding scientific organizations." In response to this decree President of the Academy of Sciences Academician Umirzak Sultangazin at the end of October sent the Prime Minister a letter, in which he reported: "I bring it to your notice that the draft of this decree was not endorsed by me and the institutes were transferred to the center without the consent of the Academy of Sciences.... The adoption by the Cabinet of Ministers of the decree in such a form is a gross violation of the rights of the Academy of Sciences and the legislation of the Republic of Kazakhstan."

Indeed, in accordance with the Law on Science and Scientific and Technical Progress the Academy of Sciences is a self-administered organization. The fixed capital, possessions, and grounds, which are attached to it and its institutions, are its property and cannot be taken from it without the consent of the academy. Moreover, neither the president nor the presidium of the academy can dispose of this property. Only the general meeting of the Academy of Sciences has the right to give consent to the withdrawal from it of scientific collectives, along with the property attached to them.

All this may become grounds for an appeal of the academy to the Constitutional Court. But the decree on the nuclear center thus far has not taken effect, so that there is an opportunity to weigh the arguments "for" and "against." In connection with this I asked Vice President of the Academy of Sciences Academician V. Okolovich to elucidate the situation.

[Okolovich] First, I want to say at once that the members of the scientific community do not reject in principle the idea of establishing science centers, including the nuclear center. Indeed, many urgent tasks have accumulated: the problems of nuclear power engineering, nuclear waste disposal, the use of nuclear technologies, radiation ecology, and others. So that the question is urgent.

We have discussed it more than once both at meetings of the presidium and at the institutes themselves. We believe that, first, centers should be established as the conditions, under which such structures could operate efficiently and accomplish practical tasks, become ripe. Second, it is necessary to establish them without destroying active operating structures.

For example, two versions of the organization of the nuclear center are being proposed. The first: The subdivisions, which bear a direct relation to the problems of the center, are included in the nuclear center. At the Institute of Nuclear Physics, for example, such subdivisions will amount to about 40 percent. The others have nothing to do with the tasks that face the center, since the problems of the institute are broader, and it is inadvisable to transfer them to the center. It would also be incorrect to transfer the entire experimental base to the nuclear center. And it is rather substantial: a nuclear reactor and two accelerators. Whereas it would be possible to transfer the reactor, it is impossible to do this with the accelerator complex, since other institutes of the academy also use it.

In the event of the use of this version a serious problem, about which the ministerial drafters of the decree are keeping silent, will also arise. It is assumed that at the nuclear center the wage of associates will be approximately twofold higher than at the academy. But if two structures—an academic structure and the nuclear center—begin to operate on the grounds of the town of physicists, Alatau, this will lead to serious social tension, and sooner or later the departure of personnel from academic institutes will also begin. The scientific schools, directions, and institutes, which were established over the years, will cease their existence.

In accordance with the second version the three institutes are transferred in their entirety to the nuclear center. There is a big advantage in this—it is not necessary to divide the experimental base. But in this case the nuclear center, according to our proposal, should be included in the system of the academy. In this we also disagree with the Ministry of Science and New Technologies, which believes that the nuclear center should be subordinate to the Cabinet of Ministers, but in fact, if we speaking candidly, to the Ministry of Science. We want to warn: The collapse of the Academy of Sciences is approaching.

[Krymova] Vladimir Nikolayevich, in the West there are hardly any academies in such a form. If we also will not, what of it?

[Okolovich] First, it is high time to stop using revolutionary methods. If you accept such a point of view, the republic will lose, after all, not the Academy of Sciences, but basic science—it is necessary to call a spade a spade.

Second, for some reason it is now customary to allude to the West: If they do not have academies of our type, we should give up our academy for lost. In the future, I think, it is necessary to switch to the view that the academy will become an association of scientists on a voluntary basis—we are working on such a concept. But the switch should be made gradually, with allowance for realities, and not like a cavalry attack.

They want to take away from us precisely the institutes, owing to which basic science gives the national economy a return and has begun to be of practical benefit—first of all this concerns the institutes of geological sciences, mining, metallurgy and ore dressing, and chemical sciences.

[Krymova] But the academy probably should convince by deed the government and the same taxpayer of the necessity of its existence. For example, what is being done to increase the level of demand for scientific achievements?

[Okolovich] This is a basic element of the criticism of the academy: It is not giving the national economy enough. But the cause of such a situation lies not in the academy itself. The main thing is that a mechanism of the mutual interest, of the interdependence of science and production is lacking. At the time when the state regulated all and everything, we ought to have seen to the development of such a mechanism, but here they only spoke over and over again about "introduction." Now, when the changeover to market relations is beginning, when the power of the state has weakened considerably, the sphere of its influence has narrowed, while as before the lack of receptivity of production to science remains. But we are not sitting idle—we are establishing our own applied science centers. For example, for ultrapure materials under the Physical Technical Institute. There are already contracts with the Shymkent [Chimkent] Phosphorus Plant and the Karaganda Metallurgical Combine. The chemical technology department is preparing for the opening of the Pharmaceuticals Center for the production of drugs. The Institute of Organic Catalysis has real achievements in the organization of the production of catalysts. Joint ventures are taking the first steps.

[Krymova] In such a situation the Ministry of Science and New Technologies could help to throw these bridges between science and production, in order to adjust finances and to create reserves for the future. Do you feel such support?

[Okolovich] Thus far I do not. Moreover, the ministry dragged out the financing of republic programs. Only toward the end of the year did we receive something. The associates, who are participating in these programs, for half a year were unpaid. Some institutes were able somehow to "give supplementary food" to them, but

others were not. Now money has been received, but people have left. The question of the matching participation of our republic in the Joint Institute for Nuclear Research in Dubna is not being decided—we are only registered there nominally. In the Ministry of Science they say that the contribution will be made after the questions with the organization of the nuclear center have been decided. But why not do this now?

[Krymova] But did you offer the ministry your own plans? Of the same nuclear center?

[Okolovich] More than once! We wrote our own proposals and prepared a draft of the decree, but the Ministry of Science and New Technologies ignored them.

[Krymova] But for the majority of people the difference between basic and applied science is cunning. How is one to convince them that without basic science we are going, well, nowhere? You deal with the physics of fission—could you cite an example from your own experience?

[Okolovich] I can. At the first stage of our research we studied the characteristics of the fission of "light," so-called subactinide nuclei. At first glance the research did not have any practical outcome, since these nuclei are not of interest to nuclear power engineering. When working on basic problems, we unexpectedly discovered that our methods make it possible to determine trace contaminants (a very negligible amount of them) in components which are used in electronics. Moreover, we detected significant contaminants in the separated isotopes, with which we were working. We immediately sent our recommendations to the isotope fund, which was located in Moscow, as well as to enterprises, which deal with the component base, with the suggestion to use our methods in their practical work. As a result there are two authorship certificates for inventions.

But there are more impressive examples. In the scientific press the following fact, for example, was cited. In the early 1980s in Great Britain they asked themselves a question similar to the one now being asked in our country: Is it worth spending on elementary particle physics such vast amounts of capital, might it be better to channel them into the solution of more practical problems? Great Britain even froze its annual contributions to the European Center for Nuclear Research [CERN]. But CERN responded with statistical calculations, which astonished even scientists themselves. It turned out that the center, while producing nothing, except for elementary particle beams, yields a colossal profit by the introduction in industry of instruments and technologies, which were developed for the solution of physics problems. Thus, the money, which was invested in the development of cryogenic units for CERN, is being returned multiplied by a factor of 1.7. For vacuum technology it is equal to 3.2, for precision mechanics—3.6, and for electronics—4.8. While for such an area,

which, it would seem, has little connection with physics problems, as the development of new steels, it comes to a value of 7.3!

[Krymova] I believe that you will have a large number of examples to spare. But what all the same is one to say now to a person, who is standing in line and is barely making ends meet? How is one to convince him that the taxes, which he pays, are being put to practical use?

[Okolovich] I will simply say: One must not live for one day. For even under our awful conditions we all the same are thinking about our children and grandchildren living a little better, and are looking for ways to leave them some inheritance—in the broad sense of the word.

[Krymova] Pardon the sarcasm, but Saudi Arabia is not particularly concerned about science, but there they live in clover.

[Okolovich] Due to petrodollars. But, first, this is not a bottomless barrel and, second, well-known physicist Abdus Salam said that a nation, which does not value its intelligentsia, is doomed. People, particularly we, should clearly understand this, inasmuch as we are entering the world arena. Are we joining the world community as an intellectual state or only as a state which consumes the intellectual achievements of others? If it is the former, let us treat science seriously, not in a bureaucratic and philistine manner, but as one of the forms of social consciousness. For the time will come—and we will all the same be feeding, providing with shoes, and clothing people. But will everyone be content with this? Will we establish a civilized society? Incidentally, in the same Saudi Arabia the attitude toward science is also changing—this problem worries them.

[Krymova] But, you will agree, it is impossible to be successful in everything, in all sciences.

[Okolovich] It is to say the least tactless to see the Academy of Sciences now as being slow in carrying out reforms. We have to make a difficult choice: to define our priorities under the conditions of, so to speak, an endurance cruise, in the absence of a helmsman, as the USSR Academy of Sciences was for us.

Two criteria can be taken as the basis. First, we should preserve the directions of research, in which we are at the world level.

[Krymova] Are there such directions at the Academy?

[Okolovich] Of course. Not every state, even a developed capitalist state, can boast, say, of an established school of mathematicians, physicists, and chemists, but we have them. Our geologists, hydrogeologists, and biologists have achieved significant gains in several areas of research. At many international forums the papers of social scientists have produced ovations of the audience. I will say that it is not worthwhile for us to show false modesty—the rating of Kazakhstan science is quite substantial in the world scientific community.

The second basic criterion is the urgency of research from the standpoint of the quickest formation of our state. That is, it is necessary to determine the directions, in which scientists can help the republic "achieve a position in life" more quickly. These are the efficient use of natural resources, ecology, demography, and other urgent problems. Incidentally, I will cite here the well-known work of

the President of the republic *Strategiya stanovleniya i razvitiya Kazakhstana kak suverennogo gosudarstva* (*The Strategy of the Formation and Development of Kazakhstan as a Sovereign State*)—these directions are clearly spoken about there.

On this level we are now working purposefully.

S&T Foreign Aid Programs Described

937A0106A Moscow *NAUKA I BIZNES* in Russian
5 Feb 93 p 10

[Article by Stanislav Simanovskiy and Margarita Strepetova, the Institute of International Economic and Political Research of the Russian Academy of Sciences: "Are They Distributing Free Cheese in Science?"—first paragraph is *NAUKA I BIZNES* introduction]

[Text] This year the International All-European Fund for Aid to Russian Science with headquarters in Brussels should begin to operate. The plan of its establishment was advanced at a meeting of the Group of 7 in May 1992. The size of the fund is 50-100 million ECU [European Currency Units], or 350-700 million francs. More than 90 percent of its assets, as is proposed, should be spent in Russia.

If we talk about foreign companies which are prepared to give a hand to scientists from Russia and the countries of the CIS and have already done this, first of all it is necessary to single out companies of the United States. For example, SUN Microsystems became one of the first western firms, which gave support of Russian scientists, having thus averted the next drain of domestic brains. This company came to an agreement with a group of 50 scientists, who are engaged in development in the area of programming, on cooperation in Russia on a commercial basis. The firm is equipping in Moscow a special laboratory and is supplying integrated equipment for the development and production of computer systems of a new generation.

Two other American companies have concluded individual contracts with Russian scientists who are conducting research in the area of optical fibers. American Telephone and Telegraph Bell Laboratories as of 1 June 1992 had signed a one-year contract with the Institute of General Physics of the Russian Academy of Sciences, in which about 100 scientists of the 1,200 scientific associates of the institute are participating. Corning concluded contracts with more than 100 scientists and engineers of the State Optical Institute imeni Vavilov in St. Petersburg (the largest research center in the field of optics in the world) and the Institute of Silicate Chemistry, which specializes in the study of these forms of glass.

Of the West European countries Germany is cooperating most extensively with Russian scientists. More than 4,000 scientists and engineers, who are emigrants from the countries of the CIS, are working today at scientific research laboratories of this country. The federal government of Germany also intends to support our scientists in Russia itself. In particular, it will financing the work of a group of scientific associates of the Institute of General Physics of the Russian Academy of Sciences (IOFAN). An agreement between Germany and Russia envisages direct contacts between scientists of the IOFAN and their German colleagues without the participation of the Russian Academy of Sciences. Joint work in the area of laser physics and technology both within

the framework of purely basic research and in industry, including in the private sector of the German and Russian economy, is outlined by the agreement.

In France they are also adhering to the combined approach to the use of "brains" from the CIS. There are 600 scientists, who are emigrants from Russia, working in the country. France is also interested in inviting specialists from the former Union for work there under contracts. Specialized firms have even been established for this, and they are working rather successfully. Thus, 30 percent of the mathematics instructors, who were hired at French universities in 1992, are invited Russians.

Several French firms prefer to finance the activity of scientists of the CIS directly locally. The aircraft firm Societe Europeene de Propulsion, which produces motors for the Ariane rocket, has already signed 33 contracts with scientific research laboratories of Russia, Ukraine, and Kazakhstan. The signing of another five new contracts is anticipated.

While the French Centre National de Recherche Scientifique (CNRS) has opened its own permanent representation in Moscow for the coordination of bilateral cooperation locally for the purpose of the job placement of Russian scientists and the prevention of their undesirable emigration from the country.

Following the example of the West the countries of the East—Japan, South Korea, and Taiwan—are expanding their activity on the development of scientific and technical cooperation and on the support of Russian scientists. Joint laboratories have already been established and are operating, scientists and specialists are being hired under contracts for work in Korea. Both government research centers (the Korean Institute of Science and Technology—KAIST) and private corporations (Deu, Samsung, and others) are engaging in this.

The Korean Institute of Science and Technology has concluded an agreement with a term of five years on scientific cooperation and the exchange of scientists with the Russian Academy of Sciences. Along the lines of KAIST, under which the special Korean-Russian Center has been organized, 74 joint development projects have been agreed on and approved. Russian basic research, the problems of conversion, new technologies, computer software, and the development of optical and electronic instruments are attracting the Korean side.

The countries of Latin America are also prepared to accept emigrant scientists from the former USSR. True, many of them are linking such emigration with the condition of its financing by the United States and the countries of Western Europe. It is hard to say whether the West will agree to this. For the time being it is concentrating its financial efforts on the epicenter of the potential emigrant boom.

As a whole western aid (which has already been given and has been promised) to science of the countries of the

former Union, and first of all Russia, at the beginning of 1993 is estimated at about \$400 million. This is a life preserver, which will make it possible to ensure the employment of our scientists and specialists within the country and to keep them from emigrating.

At the same time it is necessary to understand: In giving aid to science of Russia, even out of the most noble motives, foreign partners are pursuing an obvious economic advantage. They save substantially on the training of the corresponding staffs of specialists, on the conducting of scientific research and development, on the establishment of the necessary material and technical base, and, what is the main thing, on the wage of scientific workers, creating in practice in Russia, that is, outside their economy, a scientific and technical complex which serves the needs of the West.

Sooner or later this will give rise to a number of socioeconomic problems of both a domestic and a foreign nature. The question of the financial (and, thus, quality) control of our research and development and of their subordination to the interests of foreign partners may arise. We will be faced with the problem that a substantial part of the domestic scientific potential will be diverted from its use in our national economy. The question of discrimination in the wage of our scientists as compared with foreign scientists, of their being restricted in copyrights with respect to the use of the obtained results, and so forth is being raised urgently. But these are themes of a separate discussion.

RAS, Moscow City Government Meet Over S&T Budget Issues

*937A0098A Moscow NAUKA I BIZNES in Russian
No 3, 29 Jan 93 p 10*

[Article by Marina Lapina under the rubric "At the Academies": "The Authorities of Moscow and the Russian Academy of Sciences Have Begun To Cooperate on New Principles"]

[Text] In contrast to the official visit of V. Chernomyrdin the visit to the RAS [Russian Academy of Sciences] by the mayor of Moscow and the joint meeting of the government of the capital and the presidium of the academy, which was held on 21 January, were emphatically open: For the successful cooperation of the academy and city authorities it is important to create a common background, an atmosphere of most favored treatment.

In the opening speech Yu. Luzhkov noted that subsequent cooperation should be based on new principles—economic principles. Earlier the attempts at mutually beneficial cooperation were not always successful due to elements of arrogance in the position of city administrators with respect to the academy, who believed that it, at any rate its Moscow sector, should work free of charge for the good of its city. Those present at the joint meeting on the part of the academy completely shared this point of view.

Neither the members of the academy nor the representatives of the Moscow government, I think, picked up at the meeting much that was new for themselves, inasmuch as at the working level they have been cooperating for a long time and closely and know each other's problems. Some problems have already been solved, an even larger number await solution. Evidence of this is the draft of the decree of the government of Moscow and the presidium of the RAS and the five appendices to it: on the "Science for Moscow" program of joint work, on the composition of the working group of the Science Council of Moscow, which will supervise the implementation of the program, the appendices on the socioeconomic support of scientists and the development of the material and technical base of scientific institutions of the RAS, as well as "the proposals on the transfer to institutions, organizations, and enterprises of the RAS of buildings and premises in conformity with the list of separate municipal buildings that are leased by the RAS."

The draft also envisages the institution of annual prizes for scientists for the best developments and innovation projects, which have been completed in the interests of the city, as well as the allocation of grants.

Thus, in the prepared documents the interests of the parties are reflected almost completely, although the texts of the decree and the appendices will still be corrected.

Thus far both parties have not always succeeded in finding common ground when cooperating at the working level. For example, the question of payment for water supply in practice has been agreed on: The academy will now pay as a budget-carried organization, not as a production organization. But so far it has not been possible to solve amicably a similar problem with regard to electric power. Reverberations of the discussion on this theme were also heard at the joint meeting. One of the representatives of the city authorities acknowledged that it is necessary to give aid to academic institutions, but not in the form of preferential payment, inasmuch as in such a case this payment will be made in part at the expense of the profit of Moscow enterprises and, thus, at the expense of the city budget. At the academy they believe that it is a matter not of preferential payment, but of the natural right of the academy to pay for electric power at the rates that are in effect for budget-carried organizations.

There is also no complete mutual understanding on the housing question. For the present the Moscow authorities are not satisfying the request on the right to purchase 50,000 square meters of living space at cost. At auction prices buy as much as you want. The problem of changing the rates of rent is also among the unsolved problems.

And there is another stumbling block: the allotment of municipal increments to medical personnel who work at

academic polyclinics and hospitals. In contrast to their colleagues from city medical institutions they have been deprived of increments.

Apparently, the academy all the same is hoping in the immediate future for the successful solution of these and other problems, especially as it can now use economic levers in the form of the payment for scientific and technical developments that the city needs. If there were no hope, there also would not have been a joint meeting.

In conclusion Yu. Luzhkov proposed to meet again in half a year and to summarize the first results of the work.

Chernomyrdin Meets With Academicians Over Funding

937A0098B Moscow *NAUKA I BIZNES* in Russian
No 3, 29 Jan 93 p 10

[Article by Marina Lapina under the rubric "At the Academies": "The Official Visit of V. Chernomyrdin Will Not Pass Without Leaving a Trace for the Academy"]

[Text] At the closed meeting of the Presidium the prime minister touched in his statement upon questions which go far beyond the interests of the academy proper: He spoke about the collapse of the agricultural complex, about privatization (of course, not of the sphere of science), and so on. The means of solving economic problems, in the opinion of the prime minister, in many respects depend on the understanding of the ultimate goal—what kind of society in the sense of the economic system we want to build. Here all the cards are in the hands of academy economists, who should, they say, suggest an answer to this question.

The members of the Presidium of the RAS [Russian Academy of Sciences] tried to relate their troubles as completely as possible to the head of government—down to such "trifles" as the forced observance of one of the draconian rules of unforgettable Aeroflot—payment in currency for tickets for domestic air travel for foreigners (the international agreements signed by the academy stipulate that the receiving party bears the expenses for travel within the country). The academy, of course, does not have currency for the payment for trips of foreign scientists about the country. International exchanges due to this at one time practically ceased. The appeals of the academy to the management of Aeroflot and the corresponding sector got nowhere.

The head of government, by his own admission, will need time in order to look into everything, and at the meeting he, of course, did not give any specific promises. But all the same it was possible to reach an understanding on something.

At the suggestion of President of the RAS Academician Yu. Osipov a short meeting in a close group, at which first persons: in addition to the president First Vice President Academician A. Gonchar and Chief Scientific

Secretary Academician I. Makarov, were present from the academy, was the epilog of the closed meeting of the Presidium. As we have learned, they came to the understanding that a list of priority problems consisting of five or six points, the solution of which V. Chernomyrdin can actually further in the immediate future, will be drawn up for the head of government. Moreover, the academicians turned over to the prime minister the materials on the Bashkir (and Tatar—?) affiliate(s) of the RAS with the request to dot finally the "i's." Serious passions have been seething a long time over these scientific centers (see *RADIKAL*, No 43, 1992).

The list of questions, which the RAS will try to settle with the help of V. Chernomyrdin, has not yet been specified precisely. According to trustworthy data, these will most likely be requests of a local nature, but of great importance. For example, on the change of the system of payment for the guarding of academic institutions, the expenditures on which came last year to the order of 700 million rubles [R], on the form of payment for airline tickets for domestic travel for foreigners, who come to Russia along the lines of the academy, and on other similar financial privileges. For everyone, including the leadership of the academy, it is obvious that one must not count on additional budget allocations which are sufficient to cover these expenses. Nevertheless the discussion all the same will turn to some increase of them—by somewhere around 10 percent. On all but the day after the meeting instead of R70 billion the figure of R78 billion appeared on the budget line of the RAS. Moreover, whereas until recently the assets were divided according to the principle "for basic research" and "for the preservation of the scientific and technical potential," now the two columns have been combined. At any rate while the budget message of the government has not been approved by the Supreme Soviet, the RAS still can count on some, of course negligible, increase of budget allocations.

And a final thing. It remains only to wonder why it was necessary to conduct the discussion of the problems of the academy behind doors that were closed to journalists.

Fund Supporting Sectorial R&D Described

937A0096A Moscow *NAUKA I BIZNES* in Russian
No 1, 15 Jan 93 p 3

[Interview with Boris Dmitriyevich Yurlov, vice president of the Russian Technological Development Fund and chief of the administration of the economic and legal regulation of scientific and technical progress of the Ministry of Science, the Higher School, and Technical Policy of Russia, by *NAUKA I BIZNES* special correspondent Marina Lapina, under the rubric "Foundations"; place and date not given: "The Fund for the Support of Sectorial Science Is Functioning"—first paragraph is *NAUKA I BIZNES* introduction]

[Text] Boris Yurlov, vice president of the Russian Technological Development Fund and chief of the administration of the economic and legal regulation of scientific and technical progress of the Ministry of Science, the Higher School, and Technical Policy of Russia, tells our special correspondent Marina Lapina about it.

[Lapina] Boris Dmitriyevich, what is the Russian Technological Development Fund, how did the idea of its establishment come up?

[Yurlov] In 1991 the unified science and technology development funds in ministries and departments were abolished. Big problems with the financing of sectorial science arose. Therefore, at the end of that year a decision of the government on the establishment of extrabudgetary funds by means of deductions of 1.5 percent of the production cost of the products manufactured by enterprises was made. All ministries, associations, departments, and corporations could establish funds for the support of science in their own sectors.

But here the question of the financing of intersectorial scientific research and experimental design work arose. The question was partially eliminated owing to the Edict of the President "On Urgent Steps..." of 27 April 1992. In accordance with one of the points of the edict the Russian Technological Development Fund was established under the Ministry of Science, the Higher School, and Technical Policy. Minister of Science B. Saltykov approved the temporary regulations of its operation and the procedure of the conducting of an examination and the selection of works. By an order of the minister his first deputy, V. Mikhaylov, was appointed chairman of the board of the fund. Starting in the spring of last year the formation of the fund was begun in accordance with the following principle: A fourth of the assets from the 1.5 percent, which were received by ministries and departments, was transferred in a centralized manner to our fund.

[Lapina] Was it transferred voluntarily, or were ministries obliged to do this? What is the mechanism of interaction with organizations that have extrabudgetary funds for the needs of science?

[Yurlov] This is a central issue. The principle of obligation is not declared anywhere. If they obliged enterprises to transfer a portion of the profit to such funds, our fund included, this would actually signify the introduction of a tax on science. They make the transfers on a voluntary basis. Enterprises and organizations perceive this correctly and are agreeing to such deductions. The situation from a legal standpoint is as follows: If the 1.5-percent deductions for science are included in the product cost, the enterprise is obliged to transfer them, if they are not envisaged, deductions are optional.

According to our optimistic estimates, during the past year on the order of 20 billion rubles [R] should have been concentrated in extrabudgetary funds. The results proved to be significantly more modest. Many enterprises due to the overall situation were simply unable to

transfer money. The results proved to be significantly more modest. There are no final figures yet, but according to preliminary estimates the total comes to more than R3 billion. As to the centralized technological development fund, on the order of R958 million were received here, which comes to approximately a fourth of the total amount of all the extrabudgetary funds.

[Lapina] What is the mechanism of the distribution of assets in the RFTR [Russian Technological Development Fund]?

[Yurlov] The fund finances jobs which involve the development of technologies and prototypes. It is possible to divide conditionally the materials, which are received by us, into two parts: what are called "millioners," which require comparatively modest financing, and jobs on the development of powerful technologies and pilot works, the expenditures on which come to tens and at times hundreds of millions of rubles.

Applications are submitted to the Ministry of Science, the Higher School, and Technical Policy, usually in address of the chairman of the fund. The staff members of our administration perform the functions of the working staff of the fund. We send the analyzed applications to the Russian Examination Center. The results are returned to the fund within a month, and we send them to the sectorial administrations of the Ministry of Science, the Higher School, and Technical Policy for a conclusion. The board examines both evaluations. It also makes the final decision on financing.

[Lapina] But why is a second ministerial level needed, if an evaluation of independent experts has already been obtained? For the officials of the sectorial administrations have already formed their own interrelations with the representatives of some scientific institutions and collectives or others and they might introduce an undesirable subjective factor in the evaluation of one job or another.

[Yurlov] I do not understand and do not accept such an approach. I considered and consider that first of all high-class specialists work in the sectorial administrations of the ministry.

[Lapina] If I have understood you correctly, can the fate of a job be decided already at the second level—in the administration?

[Yurlov] No, a specialist can give a negative conclusion, but according to the charter the board makes the final decision.

[Lapina] And who besides Mikhaylov and you belong to it?

[Yurlov] The deputy ministers, who are in charge of the sectorial administrations, the chief of the planning and budget administration.... In all on the order of 10 people.

[Lapina] And what is forcing you to remain "in" and "under" the ministry?

[Yurlov] You have probably noted that in the names of the documents of the fund the word "temporary" is absent. We foresee a department, but a little later. The operation of such a fund is an absolutely new matter, it is important to develop a mechanism of actions. The mistake of many funds or organizations, which seeks such a status, consists in the fact that the main efforts are being expended on the establishment of the structure itself and the staff, on the fight for a building, and so forth. We purposely did not take this route, but preferred to simplify these procedures, in order to begin more rapidly the main thing—the financing of scientific operations.

The scientific and technical council of the fund, the members of which will specify the ideology, the basic approaches, and the priorities in selecting a direction for financing and will give a supplementary conclusion, particularly on major projects, will soon begin to work.

[Lapina] What is the real picture now, how many applications have been received, what jobs are being financed?

[Yurlov] I do not have at hand the entire register of applications, I have only the overall figures. On 19 December 84 applications for a total amount of financing of R1.3 billion had been received. The board accepted 24 applications for R452 million, of them R108 million are for 1992. Another 37 jobs are now undergoing examination. In literally the last days at least another 30 jobs have come through the mail of our administration.

[Lapina] Are the applications main from sectorial institutes?

[Yurlov] Yes, although there are also applications from academic institutes. Today, for example, at the planning meeting of the board we supported the work of the Institute of Lasers of the Siberian Department of the Russian Academy of Sciences. We sent out information about the fund and about the procedure of submitting applications to all ministries and departments with the request to pass it on to all institutes, but it obviously did not get to all of them.

[Lapina] As far as I know, the idea of establishing regional branches exists, does it not?

[Yurlov] So far we have implemented it only in St. Petersburg. The joint decision of the mayor's office of the city, the Ministry of Science, the Higher School, and Technical Policy of Russia, and the RFTR on the establishment of the St. Petersburg Regional Innovation Center has been made. It operates as an independent structure, but we gave it the rights of our representative in the region. Following the example of the St. Petersburg center, we hope, funds will be organized in Novosibirsk, Samara, Tomsk, Vladivostok.... Such a proposal has been submitted to the government.

Soros Foundation Grants \$1 Million to Russian Biologists

937A0096B Moscow *NAUKA I BIZNES* in Russian
No 1, 15 Jan 93 p 3

[Article by Prof. Aleksandr P. Rasnitsyn, the Paleontology Institute of the Russian Academy of Sciences, under the rubric "Foundations": "George Soros Is Trying To Save Our Classical Biology. According to the Results of the Competition"—first paragraph is *NAUKA I BIZNES* introduction]

[Text] The competition for the receipt of stipends for scientists, who are studying biological diversity, was established jointly by the International Cultural Initiative Foundation (the foundation of George Soros) and the Academy of Natural Sciences of the Russian Federation. Nikolay Nikolayevich Vorontsov, vice president of the academy and people's deputy of Russia, was the initiator of the action.

The organizers of the competition saw in stipends a means of supporting the personnel of classical biology, whose situation was particularly alarming.

For the more effective support of the personnel of classical biology, as well as for the purpose of avoiding undesirable administrative distortions the form of individual applications for participation in the competition was chosen. Collective applications were not considered, while the petitions of management were taken into account only in case of the examination of the files of scientific and technical personnel (the keepers of the most important collections, as well as editorial and library personnel and illustrators of scientific literature on biological diversity).

G. Soros allotted for the competition a little less than \$1 million, proposing to distribute it among nearly 4,000 stipend recipients in the republics of the former USSR (except for the Baltic region, Moldova, and Ukraine, where their own branches of the Cultural Initiative Foundation are settling similar questions).

Unfortunately, due to the fact that the time of the collection of applications coincided with the field season, as well as due to the slowness and unobliging nature of the mail, fewer applications were received than anticipated—only 2,252. However, it is not ruled out that it will be possible to hold a second round of the competition, in which those who missed the first round could contend for the stipends that remained unused.

Two expert commissions made up of the most authoritative scientists—the Moscow commission and the St. Petersburg commission under the chairmanship of Prof. N.N. Vorontsov and Academician Yu.I. Polyanskiy respectively—were established for the holding of the competition. The St. Petersburg commission examined the Moscow applications, the Moscow commission examined the rest. Not less than three experts evaluated each application, and in case of differences a decision

was made at a meeting of the commission. The work of the commissions was completed at the end of September. In early October in connection with the protracted foreign business trip of N.N. Vorontsov by his decision the duties of chairman of the commission were assigned to Prof. A.P. Rasnitsyn (the Paleontology Institute of the RAS [Russian Academy of Sciences]).

Of the 2,252 received applications 2,110 were recognized as having gotten through the competition, 142 applications were rejected. The overwhelming majority of accepted applications (2,014) were received from Russia, 76 were received from Armenia, 36 were received from Kazakhstan, 29 were received from Belarus, 26 were received from Georgia, 19 were received from Kyrgyzia, 13 each were received from Tajikistan and Turkmenia, and 11 each were received from Uzbekistan and Azerbaijan. The rejected applications are similarly distributed: 129 from Russia, four each from Armenia and Tajikistan, two each from Belarus and Kazakhstan, and one from Kyrgyzia. In Russia not less than 10 stipends each will go to the following regions and institutions: St. Petersburg—703 (the Zoology Institute of the RAS—219, the Botany Institute of the RAS—186, St. Petersburg State University—96, the All-Union Institute of Plant Growing—38, the Institute of Cytology of the RAS—21, the All-Union Geology Institute—12, the All-Union Scientific Research Institute of Plant Protection—10), Moscow—564 (Moscow State University—178, the Institute of Evolutionary Morphology and Ecology of Animals of the RAS—69, the Paleontology Institute of the RAS—53, the Institute of Oceanology of the RAS—43, the All-Union Scientific Research Institute of Nature Conservation—32, the Institute of Developmental Biology of the RAS—28, the Geology Institute of the RAS—28, the

Main Botanical Garden of the RAS—26, the Institute of General Genetics of the RAS—14), Vladivostok and Maritime Kray—108 (the Biology and Soil Science Institute of the Far Eastern Department of the RAS—50, the Institute of Marine Biology of the Far Eastern Department of the RAS—40), Moscow Oblast—53 (the Pushchino Scientific Center of the RAS—10), Novosibirsk and the oblast—48, Leningrad Oblast—45, Yaroslavl and the oblast—33 (the Institute of Biology of Inland Waters of the RAS—31), Irkutsk and the oblast—23, Yekaterinburg and the oblast—also 23 (the Institute of Plant and Animal Ecology of the RAS—14), Tomsk—16 (Tomsk State University—12), Magadan and the oblast—15 (the Institute of Biological Problems of the North—12), Voronezh and the oblast—13, Astrakhan and Dagestan—11 each.

It is planned to carry out the implementation of the results of the competition in the following manner. It is proposed to convert the currency allotted for this (at the rate of \$250 per stipend) into rubles in January 1993.

The slowness, unreliability, and expensiveness of mail do not dispose one to use it for the distribution of stipends, especially under the conditions of our inflation. The same thing goes for banking services. Therefore, distribution will be organized through the regional structures of the Academy of Natural Sciences so that the maximum number of winners of the competition would be able to receive the stipend themselves (personally or by proxy). The necessary details are now being clarified, and as soon as the questions have been eliminated, we will begin to give information on the procedure of receiving a stipend. We hope that the majority of stipends will be able to find their masters during January-February 1993.

Young Scientists Abandoning Belarusian Academy of Sciences

937A0091A Moscow KOMSOMOLSKAYA PRAVDA
in Russian 29 Jan 93 p 2

[Interview with President of the Academy of Sciences of Belarus Leonid Mikhaylovich Sushchenya, by KOMSOMOLSKAYA PRAVDA correspondent O. Yegorova; date not given: "Will Science Live by Begging? President of the Academy of Sciences of Belarus Leonid Sushchenya Reflects on This"—first paragraph is KOMSOMOLSKAYA PRAVDA introduction]

[Text] Minsk—As it turned out, the disintegration of the country was contraindicated to science, in contrast to politics. The loss of contacts, information, and general programs, which at one time constituted real progress, is threatening to become irreversible. Science should not be a hostage of politics, the president believes.

[Yegorova] Is it true, Leonid Mikhaylovich, that at the academy there are now almost no people under the age of 30? And that young people do not want to enter graduate studies?

[Sushchenya] This is a sore subject. During the past year to year and a half the share of young scientists at the Academy of Sciences has decreased by a factor of two. If everything remains as before, by 2000 there will be no people younger than 40. While the lack of a succession of generations is the personnel undermining of science.

State support of science, not only basic, but also applied science, which, it would seem, is aimed at the solution of the immediate problems of the national economy, has also changed. It remains only to be amazed at the government. The degree of support of basic science is so small that it is possible to talk about the degradation, the destruction of what there is. The "reforms" have carried us to the point of absurdity. Of course, if it is impossible to feed and clothe people, about what other functions of the state it is possible to speak?

"Stagnation" at the present moment seems considerably more attractive. There was stability, although of an inadequately high level, but it gave the scientist confidence that he could at least plan his work.

[Yegorova] In what situation today is the young person, who, let us assume, has graduated from a university and who would like to devote himself to science? He is faced again with a purely worldly choice. Not a scientific choice. For the most commonplace problem of human life is being solved: How is one to survive? Ninety-nine out of 100 percent are rejecting graduate studies.

[Sushchenya] Of course. Foreign centers are beginning to take an interest in talented people. At first they receive a short contract for two to three years, but later it is suggested that they extend it.... And they do not return. And these, as a rule, are specialists in the area of advanced technologies, optics, physics, organic chemistry, and electronics and in areas at the meeting point of

biology and medicine. They are giving them guarantees and stipends. I believe that we are losing not only people. Intellect, knowledge, as well as commercial secrets and state secrets are departing.

[Yegorova] But a scientist still should have the freedom of choice....

[Sushchenya] Yes, in the sense that he should move about freely. But if it were possible to return from abroad, as happens throughout the world, and to continue work at home! But to return from a splendidly equipped institute to the primitive conditions of one's own republic, where moral and professional decline await, is too painful an ordeal.

This year for us was very difficult. A year of shock. Leaves without pay, changeovers to shortened days—there was nothing with which to pay wages. Every worker of the Academy of Sciences on the average did not work half a month. As a result we lost 1,750 people. At the Academy of Sciences there are 5,500 purely scientific personnel. Moreover, it is interesting that only one academician is under the age of 50. It goes without saying, now candidates of sciences are over the age of 45. The average age of academicians is 67. Corresponding members—68.

[Yegorova] Was it easier before the union academy collapsed?

[Sushchenya] This is a very interesting question. There was an enormous country with its own infrastructure in all areas. Of course, the center usurped power. A peripheral place in science was assigned to outlying regions. But Belarusian science still in the last 20 years developed intensively. Now, after the establishment of the Russian Academy of Sciences, everything has gone to rack and ruin.

Incidentally, contrary to expectations, the West was not in too much of a rush to get even to Chernobyl in order to use the unique materials of the testing ground. There is no great influx of scientists. There is curiosity, but not scientific interest. The underestimation of what it is possible to do today at the Chernobyl testing ground is obvious.

[Yegorova] But how can one hope for something better, if the generation of 20-year-olds has already been passed over?

[Sushchenya] It is necessary to think about how not to pass over children. To establish already now alternative schools, colleges, higher educational institutions, private secondary schools. But it will be very hard to restore the system of lost common sense.

Latvia Forms Group To Research Automated Control Systems*937A0097A Riga PANORAMA LATVII in Russian
9 Jan 93 p 1*

[Article by Oskars Martinsons under the rubric "Our Presentation": "The National Organization of Latvia for Automation"]

[Text] Specialists in automation have established the Latvian National Organization for Automation—the ANO. This is a public scientific nonprofit organization, which unites research on automatic control systems and systems engineering, as well as scientific associates who work in applied fields.

Its goal is to promote the development of control theory and technologies over a wide range, including physical, technical, biological, social, economic, and other systems.

The International Federation of Automatic Control has been operating since 1965. At one time the USSR was a member of this federation, but individual republics were not permitted to join it.

The ANO officially appealed for admission and received consent and even an invitation. At present the official registration of membership is under way.

The council of the ANO was elected. The president of the organization is Prof. Janis Osis, head of a chair of the faculty of automation and computer technology of Riga Technical University, the vice presidents are Janis Grundspenkis, docent of Riga Technical University, and Doctor of Engineering Sciences Aldis Baums (the Academy of Sciences of Latvia). The council members are: Ivars Andersons, Ernests Petersons, Janis Graivulis, Antanas Sauhatas, Konstantin Didenko, Arkadiy Borisov, and Yuriy Merkuriev.

Specialists of the Latvian University, LATVENERGO, "Mobile Telephone," and other organizations also became ANO members. We invite and await new participants. Any natural or legal person, whose scientific or practical activity is connected with automatic control and systems engineering, can become an ANO member.

The materials of the ANO will be published in the journal of the Academy of Sciences AVTOMATIKA I VYCHISLITELNAYA TEKHNIKA (it is also published in English). In connection with this the form of the journal, in which until now primarily reports on computer networks were published, is being changed. The automation section is becoming the basic structure for the ANO, and specialists of the corresponding direction are gathering around it.

The ANO encourages the development of international contacts and stimulates information exchange, as well as the cooperation of scientists, instructors, and students.

The official address of the ANO in Latvia is: Riga, LV-1658, Ultisa Kalkyu, 1, Riga Technical University.

For the settlement of day-to-day questions it is possible to use the contact telephone numbers: 32-00-92 or 32-00-19. Yu. Merkuriev, who is responsible for membership questions—32-12-42.

New Medical Institute To Research Optical Radiation Effects*937A0097B Moscow SVETOTEKHNIKA in Russian
No 9, Sep 92 p 2*

[Article by Candidate of Technical Sciences L. V. Abramov, the Mordvinian State University imeni N. P. Ogarev, Saransk: "The 'Man and Light' Scientific Research Institute"]

[Text] For the purposes of the further development of basic and applied research by the Decree of the RSFSR State Committee for Science and the Higher School of 12 July 1991 a new scientific organization—the Scientific Research Institute for the Study of the Effect of Optical Radiation on the Human Body (the "Man and Light" Scientific Research Institute)—was established under the Mordvinian State University imeni N.P. Ogarev.

At present the basic directions of work are being established, the photobiological, medical, and physical technical departments and scientific laboratories, of which scientists of the university, Doctors of Technical Sciences N.I. Atyasov, I.N. Piksin, R.Ye. Kiseleva, and V.V. Revin, Candidates of Technical Sciences Ye.V. Okhonskaya and V.S. Mordyuk, and others have taken charge, have been formed. The Council of the institute has been organized. Illumination engineers, physicists, medical personnel, and biologists have become members of it.

The thematic plan of basic and applied work for 1992-1995 has been drafted, practical activity on all the themes has begun. Here, of course, the financial, personnel, scientific, and technical possibilities are being taken into account. Cooperation of the institute with academic and VUZ science, design organizations, scientific and practical medicine, and enterprises of the illumination engineering subsector of industry and participation in the Russian InterVUZ Programs are envisaged for the implementation of the plan. It is also counting on the aid, assistance, and support of the illumination engineering complex of Mordvinia.

The work of the institute in the immediate future will be focused on two directions: the increase of the effectiveness of light-radiating systems by the use of promising means of the generation of optical radiation and new materials and technologies; the optimization of the overall effect of optical radiation on the human body. For all their breadth they have an overall orientation toward man.

The scientifically substantiated demands on artificial light should be based on the results of comprehensive biomedical and psychophysiological research on the assurance of the optimum parameters of the light environment for various

aspects of the vital activity of man. The performance of a set of operations—from basic research to introduction in production and the health care system—is envisaged in the indicated directions.

State Program for University Science Drafted

937A0087A Moscow IZVESTIYA in Russian 14 Jan 93
p 6

[Article by Vadim Styazhkin, senior scientific associate of Moscow State University: "The Government Is Financing the Scientific Program 'Universities of Russia'"—first paragraph is IZVESTIYA introduction]

[Text] The formation of the scientific program "Universities of Russia," which should aid the preservation and increase of the intellectual potential of VUZ science, has been completed. No less important a goal of it is the training of specialists who are capable of quickly adapting themselves to the conditions of the market economy.

Russian universities from olden days were famous for their scientific schools and high quality of instruction. Under the present critical conditions it is important not to lose this wealth. For the program "Universities of Russia," which was formulated in accordance with a decision of the Committee for the Higher School, the Russian government was able to find additional assets in the meager budget. Already this year within the framework of this program applied science conferences have been held, monographs have been prepared for publication, and the concepts of the classical and technical university have been developed.

Not only venerable scientists, but also promising young university people were able to include their themes in the program. Graduate students and the most gifted undergraduates are being enlisted in active participation in the projects.

Exploratory and basic research is being financed through a competitive system of grants. Both the oldest universities and the educational institutions, which recently acquired the lofty status, have received equal opportunities. Small creative groups also have their chance.

Every university should become a kind of center of science, education, and culture in its region. The program envisages the formation of market-oriented mechanisms and the transfer of advanced technologies from higher educational institutions to industry. For this the establishment of a network of science and technology parks is planned.

The priority directions of basic and applied research on a wide range of problems in the area of natural science and humanities disciplines have been specified. This section was formed from major interVUZ programs. The practical implementation of the projects will enrich us first of all with new knowledge and discoveries.

The program "Universities of Russia" is intended for five years. Forty three classical universities, five technical universities, three specialized universities: a pedagogical, a medical, and an economic and financial university, four educational academies, and 41 institutes are participating in its implementation. Moreover, scientists of the Russian Academy of Sciences and a number of scientific research institutions and scientific-industrial associations have been enlisted in the elaboration of many combined projects.

"This program," Moscow State University Rector Prof. V. Sadovnichiy, one of the cochairmen of its council, believes, "is an act of the government support that VUZ science now so urgently needs."

**Edict, Decree on Russian Federation Patent,
Trademark Committee**

937A0103A Moscow ROSSIYSKIYE VESTI in Russian
23 Feb 93 p 3

[Edict No. 223 of President of the Russian Federation B. Yeltsin of 12 February 1993 "On the Committee of the Russian Federation for Patents and Trademarks" and the Statute on the Committee of the Russian Federation for Patents and Trademarks, approved by Edict No. 223 of the President of the Russian Federation of 12 February 1993]

**[Text] "On the Committee of the Russian Federation for
Patents and Trademarks"**

For the purposes of ensuring the protection of intellectual property in the sphere of science and technologies I resolve:

1. To approve the attached Statute on the Committee of the Russian Federation for Patents and Trademarks.

2. To establish that a state organization—the Russian Agency for the Legal Protection of Computer Programs, Databases, and Topologies of Integrated Microcircuits, which performs the functions, which were assigned to it by the Law of the Russian Federation "On the Legal Protection of Computer Programs and Databases" and the Law of the Russian Federation "On the Legal Protection of Topologies of Integrated Microcircuits," and is financed by means of assets of the republic budget of the Russian Federation, registration fees, and other extrabudgetary sources—operates under the Committee of the Russian Federation for Patents and Trademarks.

3. The Ministry of Finance of the Russian Federation, the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation, and the Committee of the Russian Federation for Patents and Trademarks are to envisage starting in 1993 the allocations which are necessary for the financing of the activity of the Russian Agency for the Legal Protection of Computer Programs, Databases, and Topologies of Integrated Microcircuits.

4. The State Committee of the Russian Federation for the Management of State Property in accordance with established procedure is to ensure the assignment of 300 square meters of office space to the Russian Agency for the Legal Protection of Computer Programs, Database, and Topologies of Integrated Microcircuits.

5. The Committee of the Russian Federation for Patents and Trademarks:

jointly with the Ministry of Justice of the Russian Federation, the Ministry of Finance of the Russian Federation, and the State Committee of the Russian Federation for the Management of State Property within a month is to submit to the Government of the Russian

Federation proposals on the composition, legal status, and functions of the organizations that are a part of the unified state patent service;

jointly with the Ministry of Finance of the Russian Federation is to specify the procedure of the receipt of patent fees by the Committee of the Russian Federation for Patents and Trademarks and their use for the financing of the unified state patent service, as well as the procedure of the deduction of registration fees for the Russian Agency for the Legal Protection of Computer Programs, Databases, and Topologies of Integrated Microcircuits and their use for the financing of the activity of the agency;

is to approve in accordance with established procedure the Charter of the Russian Agency for the Legal Protection of Computer Programs, Databases, and Topologies of Integrated Microcircuits, bearing in mind that its activity does not pursue the goal of deriving a profit.

6. The Edict takes effect as of the moment of its signing.

[Signed] President of the Russian Federation B. Yeltsin
Moscow, the Kremlin

12 February 1993

No. 223

**The Statute on the Committee of the Russian Federation
for Patents and Trademarks**

1. The Committee of the Russian Federation for Patents and Trademarks (Rospatent) is a central body of federal executive authority, performs the functions of the state patent office, and implements a unified state policy in the area of the protection of industrial property, including the protection of the rights to inventions, useful models, industrial designs, trademarks, service marks, names of the places of origin of goods (hereinafter called objects of industrial property), as well as in the area of the legal protection of computer programs, databases, and topologies of integrated microcircuits.

2. Rospatent and the organizations, to which the direct performance of individual functions, which are attached by legislation of the Russian Federation to the state patent office, is assigned, form the unified state patent service.

3. Rospatent in its activity is guided by the Constitution of the Russian Federation, the laws of the Russian Federation, the decisions of the Congress of People's Deputies of the Russian Federation and the Supreme Soviet of the Russian Federation, the edicts and directives of the President of the Russian Federation, the decrees and directives of the Government of the Russian Federation, as well as this Statute.

4. The basic tasks of Rospatent are:

the drafting of proposals on the formulation of a unified state policy in the area of the protection of industrial

property and in the area of the legal protection of computer programs, databases, and topologies of integrated microcircuits and its implementation;

the legal protection of industrial property on the territory of the Russian Federation;

the assurance of the efficient functioning of the unified state patent service;

the organization of information and publishing activity in the area of the protection of industrial property;

the organization of the training of specialists in the area of the protection of industrial property;

the promotion of the creation of the legal conditions for the development of scientific and technical and industrial design creativity in the Russian Federation;

the carrying out of international cooperation in the area of the protection of industrial property.

5. Rospatent in accordance with the tasks assigned to it performs the following functions:

in cooperation with the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation, other interested central bodies of federal executive authority, and bodies of state power of the republics within the Russian Federation drafts proposals on the formulation of a unified state policy in the area of the protection of industrial property and in the area of the legal protection of computer programs, databases, and topologies of integrated microcircuits, as well as state programs, which are aimed at the improvement of the protection of industrial property, and participates in their implementation;

drafts proposals on the improvement of legislation of the Russian Federation in the area of the protection of industrial property and in the area of the legal protection of computer programs, databases, and topologies of integrated microcircuits, as well as proposals on the conclusion of international agreements of the Russian Federation in these areas;

drafts, adopts, and promulgates within the limits of its competence rules and explanations on the application of legislation of the Russian Federation in the area of the protection of industrial property;

establishes common forms of protective and other necessary documents;

in accordance with legislation of the Russian Federation accepts applications for objects of industrial property, conducts an examination of the applications, on behalf of the state issues for these objects the appropriate protective documents, in accordance with established procedure recognizes protective documents as invalid, as well as carries out the registration of objects of industrial property and maintains state registers;

registers license agreements on the granting of the right to the use of objects of industrial property, agreements on the cession of patents and trademarks and on the pledging of the rights to objects of industrial property;

makes a systematic analysis of the state of affairs in the area of the protection of industrial property, generalizes the practice of applying the legislation of the Russian Federation, which is in effect in this area, carries out for these purposes cooperation with the All-Russian Society of Inventors and Efficiency Experts and other public organizations;

conducts scientific research work on questions of the protection of industrial property, implements measures on the improvement of the organization and the increase of the efficiency of the operation of the unified state patent service;

publishes bulletins with official data concerning the protection of industrial property, as well as issues other specialized periodicals and literature on questions that belong to the competence of Rospatent;

ensures the acquisition of the state patent fund, organizes its storage and carries out the library information service of experts, other specialists of the unified state patent service, and readers, carries out in accordance with established procedure the international exchange of patent documentation;

participates jointly with executive bodies of state power in the performance of work on the supply of the patent funds of territorial and other organs of scientific and technical information with complete sets of patent documentation and other necessary materials on objects of industrial property, carries out the procedural supervision of libraries and organs of scientific and technical information, which are acquiring patent funds;

in accordance with established procedure organizes the training and the improvement of the skills of specialists in the area of the protection of industrial property, develops for these purposes curricula, syllabuses, teaching and educational methods aids;

carries out the certification and registration of patent attorneys, as well as the monitoring of the observance by patent attorneys of the demands made on them;

carries out in accordance with established procedure international cooperation in the area of the protection of industrial property, in the area of the legal protection of computer programs, databases, and topologies of integrated microcircuits, represents the Russian Federation in the corresponding international organizations, takes steps that are aimed at the fulfillment of the obligations of the Russian Federation, which follow from international treaties and agreements, implements measures on international cooperation, organizes the study and use of foreign know-how in these areas;

implements measures on the promotion of the role and importance of industrial property and its legal protection;

organizes the rendering by specialists of the unified state patent service of legal and information services to natural and legal persons on questions of the protection of industrial property.

6. Rospatent is granted the right:

to submit to the Government of the Russian Federation, central bodies of federal executive authority, and other state bodies proposals on questions of the legal regulation of relations in the area of the protection of industrial property, in the area of the legal protection of computer programs, databases, and topologies of integrated microcircuits;

to submit in accordance with established procedure proposals on the conclusion of international agreements on questions of the protection of industrial property and the legal protection of computer programs, databases, and topologies of integrated microcircuits, within the limits of its competence to conduct talks with the appropriate international organizations, and on the instructions of the Government of the Russian Federation to sign the indicated agreements;

to conclude in accordance with established procedure agreements on cooperation with patent offices and other organizations of foreign countries, as well as with international organizations, which deal with questions of the protection of industrial property and the protection of computer programs, databases, and topologies of integrated microcircuits;

to enlist domestic and foreign specialists for the settlement of questions which are connected with the protection of industrial property and the protection of computer programs, databases, and topologies of integrated microcircuits;

to specify in accordance with established procedure the prices and rates for patent information products, as well as for jobs and services in the area of the protection of industrial property, including in foreign currency, to prepare proposals on the introduction of state prices and rates for the indicated products, jobs, and services;

to dispose of patent fees in accordance with the procedure established by Rospatent jointly with the Ministry of Finance of the Russian Federation;

to open accounts, including accounts of extrabudgetary assets, for the entry of patent fees and their subsequent use in consultation with the Ministry of Finance of the Russian Federation.

7. A chairman, who is appointed to the post and is relieved of the post by the President of the Russian Federation, heads Rospatent.

The chairman of Rospatent has deputies, including one first deputy, who are appointed by the Government of the Russian Federation on the representation of the chairman of Rospatent.

8. The chairman of Rospatent carries out the direction of Rospatent and bears personal responsibility for the accomplishment of the tasks and the performance of the functions, which have been assigned to Rospatent.

The chairman of Rospatent approves within the limits of the established number of personnel of the central staff and the fund for the remuneration of their labor the structure, manning table, and statutes on the subdivisions of the central staff, as well as the estimate of the expenditures on its maintenance within the limits of the budget allocations, which have been approved for the corresponding period, determines the competence and sphere of activity of his deputies, appoints to a post and relieves of a post the personnel of the central staff, is the manager of the credits which are allotted for the financing of Rospatent.

The chairman of Rospatent also approves the structure and staffs of subordinate budget-carried organizations, in accordance with established procedure appoints to a post and relieves of a post the managers of the organizations that are subordinate to him, approves their charters.

9. The expenditures on the maintenance of the central staff of Rospatent are financed by means of allocations which are envisaged in accordance with the Republic Budget of the Russian Federation for the maintenance of bodies of state administration.

The financing of the organizations, which are subordinate to Rospatent, is carried out by means of patent fees, assets of the republic budget of the Russian Federation, and other extrabudgetary sources.

10. A collegium, of which by virtue of their position the chairman of Rospatent (the chairman of the collegium) and his deputies are members, is formed in Rospatent. The members of the collegium of Rospatent, except for the persons who belong to it by virtue of their position, are approved by the Government of the Russian Federation on the representation of the chairman of Rospatent.

11. For the consideration and elaboration of recommendations on the most important questions of the protection of industrial property a scientific and technical council made up of its personnel, leading scientists and specialists, as well as representatives of interested bodies of state administration and public organizations is formed in Rospatent. The organizational and technical support of the activity of the council is carried out by the central staff of Rospatent.

The statute on the scientific and technical council and its personnel are approved by the chairman of Rospatent.

12. Rospatent is a legal person, has a seal with a picture of the State Emblem of the Russian Federation and with its name, other necessary seals and stamps, a settlement account and other, including currency, accounts at institutions of banks.

13. The seat of Rospatent is the city of Moscow.

Procedure for Registering Computer Programs Explained

937A0099A Moscow *NAUKA I BIZNES* in Russian
No 3, 29 Jan 93 p 14

[Interview with Leonid Ivanovich Podshibikhin, deputy general director of the Russian Agency for the Legal Protection of Computer Programs, Databases, and Topologies of Integrated Microcircuits, under the rubric "The Computer and the Law"; place and date not given: "How To Register a Program"—first paragraph is *NAUKA I BIZNES* introduction; last three paragraphs are *NAUKA I BIZNES* conclusion]

[Text] On 20 October 1992 the Law of the Russian Federation "On the Legal Protection of Computer Programs and Databases" took effect. Questions about how the registration of computer programs and databases is carried out and what the legal consequences of this registration are, are arising for many of our readers. For explanations we turned to Leonid Podshibikhin, deputy general director of the Russian Agency for the Legal Protection of Computer Programs, Databases, and Topologies of Integrated Microcircuits (RosAPO).

[*NAUKA I BIZNES*] Leonid Ivanovich, what is it necessary to do in order to register a program? Is registration mandatory?

[Podshibikhin] In conformity with Article 13 of the law the holder of all the property rights to a computer program or a database directly or through his representative during the term of validity of the copyright at his own desire can register it with the RosAPO, having submitted in accordance with established procedure an application for deposit. In case of the presence in the application of all the necessary documents and their conformity to the established rules of execution the computer program or database is entered in the appropriate register. After this a certificate of official registration is issued to the applicant, while information on the registered object is published in the official bulletin of the agency.

It should be particularly emphasized that the official registration of computer programs and databases, which is envisaged by the law, is of an exclusively optional nature.

[*NAUKA I BIZNES*] For what, then, is such registration needed?

[Podshibikhin] Registration ensures the official notification of the public of the exclusive right of the applicant

to the use of the registered object. The corresponding data are published in the official bulletin of the agency. The same publication performs the role of effective advertisement, inasmuch as it contains the information that was presented by the holder of the rights in the abstract.

Registration aids the protection of rights in case of the occurrence of conflicts. The deposited materials can be regarded by the court as primary evidence, since they confirm that the person, who submitted the application for registration, has the corresponding rights and knowledge. It is obvious that the amount of evidence is determined by the amount of information contained in the application. All the materials can be presented by the agency at the request of the court.

Moreover, the possibility of using the corresponding register of the agency as an independent depository of the source codes of computer programs is ensured. Access to the register is granted to the licensee (for example, the user of a program or database) in strictly limited cases of an extraordinary nature—the bankruptcy of the holder of the rights, the death of the author, and so forth. The establishment and maintenance of centralized registers of computer programs and databases make it possible to develop on their basis the corresponding information systems. On the basis of such systems it will be possible to conduct forecasting research that is similar to the research being conducted at present on the basis of the analysis of patent collections.

[*NAUKA I BIZNES*] In what cases is the registration of contracts on the transfer of the property rights to a computer program or a database necessary?

[Podshibikhin] Contracts on the complete cession of all property rights to a computer program or a database are liable to mandatory registration—for the unambiguous identification of the holder of the rights of the registered object. All other contracts are registered at the desire of the parties, which is reflected either in the contract itself or in a separate protocol of agreement.

As Leonid Podshibikhin reported to us, lawful acts, which establish the amounts of the registration fees and the procedure of their payment, as well as the rules of the execution and submission of applications for official registration, will be adopted in the immediate future.

In our next publications: the basis provisions of the mentioned documents and information on where and when it is possible to acquire them. We also plan to notify the readers about other instructional methods documents that are being drafted by the RosAPO.

The contact telephone numbers of the RosAPO are: 928-58-67, 206-63-16, 928-63-26, 206-10-82 (concerning registration).

Latest Developments in Russian Intellectual Property Rights Noted

937A0080A Moscow *RADIKAL* in Russian No 47,
Dec 92 p 9

[Interview with Doctor of Juridical Sciences Eduard Petrovich Gavrilov, deputy general director of the Russian Intellectual Property Agency, by Igor Krylov: "Does the World Standard Shine a Light for Us?"—first paragraph is *RADIKAL* introduction]

[Text] Doctor of Juridical Sciences Eduard Gavrilov, deputy general director of the Russian Intellectual Property Agency (RAIS), shares his views.

[Krylov] Eduard Petrovich, what is happening with the new copyright law?

[Gavrilov] Its fate is causing, of course, much agitation. Two draft laws, which clashed in various committees and commissions of the Supreme Soviet of the Russian Federation, were prepared.

The arrogance of the authors and the deputies simply did not make it possible to put these drafts together. The intervention of the newly established Russian Intellectual Property Agency and the legislative participation of its general director, Doctor of Juridical Sciences Mikhail Fedetov, were needed.

Then a small working group made up of representatives of all the "opposing" sides in approximately four to five days—I was also busy with this—put the finishing touches on and made more specific what had been outlined in the draft of Mikhail Aleksandrovich. As a result the unified draft law combined the best qualities of the two preceding ones.

On 24 November of this year this version was submitted to a joint meeting of the Commission for the Cultural and Natural Heritage of the Peoples of the Russian Federation, the Committee for Science and Public Education, the Committee for Legislation, and the Commission for Culture. They all made a unanimous decision: It is necessary to submit the draft as soon as possible to the Presidium of the Supreme Soviet. The speakers from these commissions will also present it in both chambers of the parliament. There are no longer any fundamental differences.

[Krylov] And still what disputes are possible when considering the draft?

[Gavrilov] Here is just one point of possible differences. The draft of the new copyright law includes the protection of computer programs. But a special law on the legal protection of computer programs, which has already taken effect and is in force, was passed on 23 September 1992. The commissions at present are proceeding from the fact that computer programs will be protected by the new copyright law. But what is to be done with the former one? It is here that different approaches

appeared. The first approach, and the most resolute one, is: to repeal completely the old law and to include all the norms in the new one.

But legal practice will come after the passage of the law, and if it heads "in different directions," if the copyright will decide things one way, while in accordance with the law on the protection of computer programs things will be decided otherwise, this, in addition to everything else, will also lead to the violation of our international obligations. In particular, in accordance with the Russian-American agreement a unified copyright law should protect computer programs.

[Krylov] Does this law contain such a concept as intellectual property?

[Gavrilov] No, because the concept of intellectual property, being a combined concept, is subdivided into the copyright and related rights, as well as industrial property. Inventions, useful models, industrial designs, trademarks, and the topology of integrated microcircuits are assigned to the area of intellectual property. Rospatent [the Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy of Russia] is now in charge of these problems. While the RAIS, although intellectual property is actually mentioned in its name, is still dealing with the defense of the rights of authors.

[Krylov] The combating of intellectual piracy is becoming a priority area in the activity of the RAIS. Recently a representative Russian-American meeting on this problem was held in Moscow. What are the prospects here?

[Gavrilov] From 8 to 15 November a strong "American landing party"—20 very good specialists in the area of the copyright and related rights—was in our country. Moreover, all of them—except for one—represented private organizations. Here, incidentally, is evidence that not only the government is interested in copyright legislation. I think that very soon in our country private publishing houses and organizations, which produces videos and movies, will also sense the necessity of a copyright and the importance of the reliable protection of the rights of the makers of these works.

The Americans urged us to pass as soon as possible a good copyright law. We discussed this problem both in the Russian Intellectual Property Agency and in the Supreme Soviet. This was very useful.

As to specific questions of the combating of piracy, here Russia has enormous difficulties. The Americans devoted an entire day to meetings with our executive power and visited the Arbitral Tribunal and the Supreme Soviet, which should combat this evil. Quick and decisive actions are always necessary here, and it is necessary to treat pirates only that way, otherwise it is a simple matter, on receiving notices, to change both one's bank

account and one's residence. An understanding, so it seems to me, has been reached with the Ministry of Justice.

The infringement of copyrights entails the compensation of losses. But the victim should prove their amount and submit written proof and documents. This is stipulated in the draft of the law. But there is also a different approach: The court can obtain on demand from the infringer documents, which confirm his profit, and regard it as the losses of the author. It is also possible to establish for any infringement, for example, for the illegal performance of a song on the radio, a small fine—for example, the minimum monthly wage. Moreover, not on behalf of the state, but on behalf of the author!

[Krylov] Did complete mutual understanding really reign at these talks?

[Gavrilov] Our interest in the solution of the problems, which have accumulated for at least seven decades, is mutual. But we perfectly understand that the American side is standing up first of all for its own interests. In some instances they did not coincide in everything with ours or were directly opposite. In particular, this concerns the protection of so-called old works. We gave the promise in 1993 to become a party to the Bern Convention. America did this three years ago, but does not protect works that were published prior to this moment. If our partners have taken such a stand, how will Russia act after signing the Bern Convention? This is a serious legal problem, and we would not want to act unilaterally. But, as the representative of one of the American firms, which owns 5,000 movies of the 1930s through the 1960s, said, they would like that for the purposes of combating piracy in Russia these movies would be protected on our territory. I think that in such a case there should be bilateral obligations, but for the present nothing of the sort is included in their plans.

And all the same there are no antagonistic contradictions at all here—the principle of the retrospective action of the Bern Convention is causing differences in literature and in theory, while in practice—we hope—it is always possible to come to agreement.

[Krylov] When will all Russian authors finally be certain of their rights?

[Gavrilov] Immediately after the conclusion of the Seventh Congress of People's Deputies we expect the consideration of the draft law in the Supreme Soviet. After the first reading the readers of your newspaper can also familiarize themselves with its text. We are doing everything so that by the end of 1992 Russia would have a strong copyright law at the level of world standards. This will enable it in 1993, as was planned, to become a party to the Bern Convention.

Latvian Patent Board Resumes Operations

937A0051A Riga *THE BALTIC OBSERVER*
in English 5-11 Nov 92 p 3

[Text] The Latvian Patents Board (LPV) has resumed operations and is already accepting applications for the legal protection of inventions, trademarks and logos. However, there is still no law on the protection of intellectual property.

According to LPV director Zigfrids Aumeistars, the legislation required for the patenting of so-called intellectual property has been worked out in cooperation with the World Intellectual Property Organization (WIPO) and the European Patents Board. The preparation of the documents should be finalized by the beginning of next year.

Once the bill on intellectual property is passed, Latvia will become eligible to join international organisations such as the Paris Convention on the Protection of Industrial Property, the Convention of Patents' Cooperation and the Madrid Agreement on Trademarks. The LPV has already submitted a request to the WIPO for full membership.

Currently, foreign firms are more active in protecting their trademarks in Latvia than are local ones. To date, as many as 1500 applications by foreign firms and entrepreneurs have been presented at the LPV.

The LPV director fears that the implementation of a law on the protection of intellectual property will bring forth an onslaught of lawsuits—a practice which is quite common in the West. (BNS)

CIS in Need of Central Patent Authority

937A0104A Moscow ROSSIYSKIYE VESTI in Russian
23 Feb 93 p 7

[Article by Doctor of Juridical Sciences Vitaliy Petrovich Rassokhin, chairman of the Committee of the Russian Federation for Patents and Trademarks, and Mikhail Lvovich Gorodisskiy, general director of the Soyuzpatent Association of Patent Attorneys, under the rubric "Discussion": "How To Obtain a Patent"]

[Text] Do Not Destroy the Working Structure (Vitaliy Rassokhin)

If we cast aside political ambitions, even the critics of the Russian Patent Office should admit that Rospatent [the Committee of the Russian Federation for Patents and Trademarks] now is the only one of similar structures on the territory of the CIS, which is capable of working at the level of world standards. And there is nothing surprising in this—only it has an infrastructure, a patent fund, and the largest patent library, which satisfy world requirements. In expert potential it is comparable to the German patent office, the oldest and best one in Europe.

In my opinion, it would be perfectly logical for this institution to work for the good of the entire CIS. It could if not issue patents, which are valid on its entire territory, then at least perform the functions of an international search organ. In this case the office would remain a Russian structure. While an interstate patent bureau, the establishment of which will not require large expenditures, could grant a common protective document. This, without a doubt, is advantageous not only for the republics, but also for both Russia (inasmuch as approximately 70 percent of the inventors are Russians) and foreign applicants. Both wish to guarantee with the minimum costs the protection of their rights on the entire territory of the CIS.

Rospatent is prepared to conduct its work in accordance with this arrangement. But several offices of the other republics, first of all the Ukrainian office, are opposed. They see in this the danger of national Russian protectionism. Rospatent, they say, will be favorably disposed toward applicants from Russia, but will find fault with applicants from Ukraine or Kazakhstan.

Or a different solution is proposed—to divide Rospatent together with its expert base, library, patent fund, and specialists into two parts. To turn the larger part into an interstate office. And to leave the smaller part to Russia. But I am convinced that this is a dead-end path. To divide, in my opinion, means, in this case, to destroy. In place of one working structure we will get two non-working ones.

Another proposal, in my opinion, is also unacceptable: to place at the disposal of the interstate office the entire expert structure of Rospatent, first of all the institute of patent examination. This is explained in the first place by the fact that after the termination of the validity of

USSR laws each state is writing its own patent legislation. But owing to political differences for the present there is no talk of any standardization of it (as was done in the system of states of Europatent). Will the patent expert be able to work under such circumstances? On what legal basis should he rely?

Another obstacle is the lack of reliable financing. For all the states will have to pay for the operation of the interstate office. If only the experience of financing the Joint Armed Forces of the countries of the CIS shows how many problems await us in this case.

The idea of establishing an interstate office in a void also seems at present to be completely utopian. First, under the conditions of the budget deficit in all the states of the CIS there is no money for this. They also do not have the experts and specialists in patent affairs, who are necessary for the performance of these functions.

In order to establish an interstate office resembling the European office, it is necessary to solve all these problems. In my opinion, the drawing up by an international working group of the draft of a patent convention should become the first step in this direction. The countries of the CIS could establish an interstate patent bureau, which would accept a common application, it would be possible in accordance with it to obtain a patent for the entire territory of the CIS. Let the applicant himself decide who will conduct an examination on it (provided, of course, the chosen national office will undertake this work). For example, Georgia—what concerns tea production, Uzbekistan—cotton production, Russia, Ukraine, or Kazakhstan—those questions, in which, in the opinion of the applicant, this country has a sufficiently representative expert potential.

...And Protect the Rights of the Manufacturer (Mikhail Gorodisskiy)

A year has passed since the start of the movement of Russia toward market relations. But contrary to expectations western businessmen are in no hurry to assist the formation of the Russian economy. When analyzing the causes of this phenomenon, specialists are most often inclined to seek them in the acuteness of the political situation in the country, in the lack of stable legislation, and even in ecological problems. And such, in my opinion, an important cause as, to put it mildly, the unfavorable situation, which has developed around the protection of industrial property in Russia and the countries of the CIS, is hardly mentioned.

Throughout the civilized world, which exists under the conditions of competition and the market, an immutable rule is in effect: Any businessman, before beginning the production abroad of one commodity or another, should see to the protection of the manufacturer's exclusive rights, that is, should obtain protective documents—a patent for an invention, a registration certificate for the trademark that is placed on the product being manufactured. Thereby he will secure himself against a crude, but inexpensive article, which was manufactured by some

local cooperative, supplanting the original from the shelves a week after the appearance of his commodity on the market and forcing production to be curtailed. Taking into account the skill of our "business people," who have demonstrated in practice their ability to organize in the shortest time the production of imitation proprietary items, patenting and the registration of trademarks are becoming for the western businessman not a whim, but a conscious necessity, a kind of insurance policy. It is here that difficulties and hidden obstacles await him.

Earlier, when we lived in a unified country, we and our guests did not have a problem with patenting. It was sufficient for western manufacturers to address an application to the Patent Office of the Union, to pay a specific amount for the conducting of an examination, and to receive a protective document, the validity of which extended to the entire country. But since the end of the year before last 15 independent states have been formed on the territory of the former USSR. Several of them have already established their own patent offices. Consequently, is it necessary in the future instead of one patent to obtain 15? Accordingly it is necessary to submit 15 applications and...to pay 15 times. You will agree, the prospect is not one of the best.

Of course, people may reply to me that it is also possible to do without this, that it is sufficient to obtain a patent only where production will be launched. For example, in Russia or Belarus. Yes, it is possible. But is it wise?

The whole paradox is that the division by decree of the territory, of the customs or patent space does not at all mean the immediate destruction of the traditional scientific and technical, production, and economic ties of the enterprises that are located in the different countries of the CIS. At present it is impossible to check the leaking of production secrets and technologies through them. Therefore, no one can guarantee western businessmen the protection of the exclusive right of the manufacturer, if a commodity, which has been patented in Russia, were to be produced, for example, in Kazakhstan.

The establishment of an interstate patent office for the states of the CIS would be, in my opinion, a worthy

solution to this legal impasse. It will not be unique in its own way. The European countries, which for three decades have been moving persistently toward the establishment of a common European home, understood long ago the advantage of a common patent space.

It is characteristic that the majority of republics of the former USSR understand the necessity of establishing such an interstate body. Especially as in contrast to the Europeans this would not require large expenditures—the necessary infrastructure, which conforms to international standards, existed earlier in Moscow. It belonged to the USSR State Patent Office. After its abolition it was transferred to the jurisdiction of the Committee for Patents and Trademarks of the Russian Federation (the Patent Office of Russia).

Apparently, agreements between authorized bodies of the member countries of the CIS on the procedure and forms of legal cooperation within the common patent space should be concluded. A uniform form of the protection of objects of intellectual property would be in force on it.

From the Editorial Office:

Thus, it seems, everyone has learned the hard way the advantage and even the necessity of establishing an interstate patent office of the CIS. But during the past year on two occasions, in Tashkent and Bishkek, the attempts to find a compromise failed. The interim agreement on the legal protection of industrial property on the territory of the CIS was never signed.

The dispute is continuing, and, apparently, considerable time will pass before it is resolved. While the protection of the rights of inventors and businessmen in Russia and the CIS as before remains their personal business. Is it surprising that western manufacturers and potential investors, having been placed under such primitive conditions, are not hurrying to our market?

We hope that these publications will not be ignored by those executives of Russia and the republics, under whose competence the settlement of this question comes. We, on our part, promise to familiarize the readers on the pages of the newspaper with their responses.

'Secret' Negotiations Over Laser Technology Sales Reported

937A0088A Moscow KOMMERSANT-DAILY
in Russian 4 Dec 92 p 3

[Article by a group of industrial companies under the rubric "Russian Laser Technologies in the United States": "Secret Negotiations on the Sale of Laser Developments"—first two paragraphs are KOMMERSANT-DAILY introduction]

[Text] Yesterday a delegation, which represents the interests of several scientific production associations that were engaged in the development of powerful military lasers, left Moscow by air for the United States. The official visit is taking place under the conditions of strict confidentiality. Its duration has thus far not been specified exactly; according to the conjecture of experts of KOMMERSANT-DAILY, it will last until 15 December. Talks on technological cooperation in the area of the civilian application of lasers are included in the plans of the delegation.

According to the data of KOMMERSANT-DAILY, with respect to a number of laser technologies Russia has an advantage over American developments. Specialists believe that this visit can create the conditions for the start of practical cooperation on a commercial basis.

In the USSR about 10 organizations, including the Luch, Astrofizika, and Elektrofizika scientific production associations, the Scientific Production Association imeni V.Ya. Klimov, the All-Union Design and Technological Institute of Power Machine Building, and, according to some data, the All-Union Scientific Research Institute of Experimental Physics (Arzamas-16), dealt with the development of powerful lasers.

According to the data of KOMMERSANT-DAILY, the sale of the rights to the technology, the sale of technologies proper, proposals on joint projects and, perhaps, the discussion of orders for lasers may become the goal of the official visit of the Russian specialists to the United States. It is a matter of gas-dynamic lasers (lasers which use the effect of the rapid expansion of gases) with a continuous radiation power of up to several tens of kilowatts—for the cutting and welding of massive metal structures. The estimated cost of such a unit is \$50 million. The Lawrence Livermore Laboratories, which thus far have not had commercial contacts with Russian organizations, have also displayed interest in Russian laser technologies. According to the data of KOMMERSANT-DAILY, the idea of establishing an international laser corporation with the participation of the United States is now being advanced by the League of Defense Enterprises of Russia. By 15 December, in the opinion of experts of KOMMERSANT-DAILY, the official visit should conclude. KOMMERSANT-DAILY will report the details of its progress and results on 16 December or earlier, if it concludes before then.

Russian Security Forces Block Departure of Missile Experts

937A0108A Moscow *RABOCHAYA TRIBUNA*
in Russian 11 Feb 93 p 3

[Article by *RABOCHAYA TRIBUNA* correspondent Mikhail Popov under the rubric "Sensations From the Provinces": "'Secret Bearers' on Suitcases. How One Clever Man Recruited a Group of Missile Experts for Work in North Korea and Why Their 'Quiet Departure' Abroad Did Not Take Place"—first paragraph is *RABOCHAYA TRIBUNA* introduction]

[Text] Chelyabinsk—They call them "secret bearers." For long years they worked at closed enterprises, developing the nuclear missile shield of the homeland. Now the concept of the security of the country has changed fundamentally, military orders have declined. And the most exceptional intellectuals, who in addition have hands of gold, suddenly felt unnecessary to the homeland, which had never happened to them before. And what an insignificant amount of money they pay now for "the bearing of secrets." But what if someone were to offer for knowledge a manifold greater price? Would the "brains" of defense workers not start to flow abroad, to where the best specialists of other sectors beat a track long ago?

Recently federal security bodies of Russia prevented the attempt at the self-departure of "secret bearers" directly at the Sheremetyevo International Airport, before the very boarding of the airplane. A large group of specialists, of which workers of the Miass Design Bureau of Machine Building constituted the core, was attempting to leave for wages in North Korea. How were things going?

Exactly a year ago, in February 1992, one Anatoliy Rubtsov showed up in Miass and entered into talks with the management of the design bureau, which is one of the leading centers of domestic missile building. It was easy to do this, inasmuch as, according to the data of security bodies, Rubtsov had earlier studied at a higher educational institution with several of its workers. The discussion concerned the possibility of the participation of staff members of the design bureau in work abroad, particularly in Southeast Asia. Specific countries—China, the DPRK—were also named. Here Rubtsov introduced himself as a man, who had been given powers in this matter, which he had received simultaneously from several governments, including the Russian government.

The design bureau at that time was experiencing a sharp decrease of the volume of orders, and the proposal of Rubtsov fell on fertile soil. A few more meetings in Miass and Moscow, and a group of engineering and technical personnel, who had dealt with the problems of strategic missile weapons, "grew ripe" for the flight abroad.

But to start with they decided to conduct reconnaissance. Ten specialists took off for North Korea, moreover, no

one even asked the question of their possession of state secrets. They took advantage of the open confusion in the official registration of foreign departures and resorted to the services of private commercial structures, which had been given a license for the right to draw up foreign passports, and—how do you do, Pyongyang.

There was an objective discussion there: What interests the Korean side, on what problems of missile building the Russian scientists are to work. The Korean side assumed all the moving expenses, inviting people to work at a state enterprise, staff members of the embassy of the DPRK in Moscow were put to work. Everything testified that the situation was under the control of the two states. But the main misconception of the scientists also lay in this. Whereas the Korean side actually was interested in carrying out this action—by means of the Russian potential to carry out in a short time the modernization of its missile weapons—the government of Russia simply could not give its consent to this project. The Treaty on the Nonproliferation of Strategic Weapons imposes rather specific obligations on our country.

Thus, they promised our specialists from \$1,500 to almost \$4,000 a month. After this the missile builders returned to Miass and began the actual preparation for departure abroad. In passing they enlisted on their side other specialists who were involved with the production of strategic weapons. In the end the composition of the group exceeded 60 people. Moreover, not all of them worked at the Miass design bureau. There were also staff members of other closed enterprises, from other regions, and even from neighboring foreign countries. Valeriy Mikhaylovich Tretyakov, chief of the security administration of the Russian Federation for Chelyabinsk Oblast, is reserved:

"I do not presume to comment. But you yourself understand that strategic missile weapons are not intended to carry some 50-kilogram warheads. Of course, they prepared it for specific types of weapons, once against strategic ones."

But they were not allowed to take off.... As a result two high-ranking diplomats from the embassy of the DPRK were forced in 24 hours to pack their "attache cases."

Now the missile builders are again in the Urals.

Alas, the moral harm, which they suffered, is very great. But their sad experience is a lesson for others. Those who at one time also gave a written undertaking not to divulge secrets. The state, which entrusted a secret to a person, cannot allow him to dispose of it as his own discretion. While an entire system exists so that secrets would not "float away." The federal security bodies this time proved that they are eating bread not without reason.

New U.S. Presidential Science Advisor Described
937A0100A Moscow NAUKA I BIZNES in Russian
No 3, 29 Jan 93 p 9

[Article by Petr Deynichenko: "John Gibbons. We Present the Advisor to the U.S. President for Science"]

[Text] Forty years ago John Gibbons was a physicist at the Oak Ridge National Laboratory and was studying the nuclear reactions that occur in stars. Since then he has been in Washington's corridors of power, dealing with energy conservation problems, has taught at the University of Tennessee, and in 1979 returned again to Washington and until now was in charge of the Office of Technology Assessment of the U.S. Congress.

Now John Gibbons is 63 years old, and he has a new job. On 23 December Bill Clinton unexpectedly offered him the post of advisor to the administration for science and technology. His task is to direct the \$79 billion a year research and development program of the federal government. This is not so easy under the conditions of radical changes and the tighter and tighter budget. The results of the activity of Gibbons in this post will affect not only the state of American science and technology, but also the competitive ability of American industry.

It must be said that the supporters of Clinton sincerely believe in industrial and technological policy. Officials are talking about the forthcoming injection of hundreds of millions of dollars of additional funds into industrial research and development and commercially important research that is being conducted at universities and national laboratories. The support of government centers, which help small companies to master new industrial technologies, is planned. Like many people, Gibbons supports the idea of allotting the money, which was used for defense, for civilian needs, inasmuch as "the cold war" is over. "The present war is competition in the civilian sector," he says.

This accentuated attention to commercial technologies worries some scientists. In their opinion, the new administration will ignore basic science. Gibbons rejects these fears. "It is absurd to say that we are a country which can no longer afford to make discoveries. But basic science deals precisely with this," he says.

In Gibbons' words, the technological plans of the Clinton Administration do not differ that much from past policy as might seem. Some fields always received priority: electronics, biotechnology, aviation, agriculture. Mistakes were made when government officials tried to predict the market, pumping money into such fields as the production of synthetic fuel and so forth, which were of no interest to industry. That is why Gibbons hopes that the contribution of industry to White House policy will be greater, which, in turn, would increase the likelihood that companies will invest money in projects that are supported by the government.

Competitive ability is just one of the many items on Gibbons' agenda. An important question is: Should the United States speed up the \$8 billion project on the building of the superconducting supercollider and continue the work on the \$40 billion space station? The suspension of either one could provide additional funds for other research projects. Gibbons has to help the unusually productive research capacities of universities to survive the era of decreasing financing.

But still the main problem facing the new advisor for science, like all his predecessors, is whether the Clinton Administration, and first of all Vice President Gore, will heed his advice.

The vice president is one of the authors of the idea of an active technology policy, and he has many of his own proposals. Among them is computer communications, which links universities, laboratories, hospitals, schools, and enterprises. Another priority of Gore is intensive research in the area of environmental protection and the development of new safe technologies. The idea of state technological support of small and medium-size firms belongs to him.

It must be assumed that no problems will arise while the advisor and the administration work as a team.... Especially as many authoritative figures of congress, such as John Brown, chairman of the Senate Committee on Science, Space, and Technology, believe that a better candidate will not be found for this post. The experience and ideological impartiality of Gibbons and his ability to work behind the scene as well are, perhaps, the best means of bringing science and technology to the front line of any Washington debates on the economic future of the country.

Policies of Ukrainian Academy of Sciences President Criticized

937A0100B Kiev NEZAVISIMOST in Russian
27 Jan 93 p 2

[Article by Doctor of Technical Sciences Prof. Vasilii Kuzmenko: "Where Does Paton's Bridge Lead?"]

[Text] Yes, there were previously times which do not compare with the present times. Everything was extremely clear and simple. There was one party, there was one goal, and society was united. There were, it is true, two classes, but in the future they should have united as a consequence of the merging of mental labor with physical labor. And there was also the single highly prestigious Academy of Sciences (the pedagogical and medical academies do not count), the scientific potential of which to a significant extent promoted again the scientific substantiation of the existence of the above-named "sole and unique ones."

Today in Ukraine there are many academies, far more than there are programs for recovering from the crisis—actually 12. Moreover, 11 of them have been registered completely officially by the Ministry of Justice of

Ukraine, that is, have been recognized as ones that do not undermine, do not contradict, and do not harm. Among them are three state academies, the rest are public academies.

The rumors that President of the Academy of Sciences of Ukraine B.Ye. Paton is seeking the adoption of an edict of the President of Ukraine on the banning of all academies except "his own," proved to be not a New Year's joke, as it was initially interpreted, but another recurrence of the Stalinist way of thinking. The "honorary citizen" of Kiev, obviously, believes that during the 30 years of his permanent residence on the academic Mount Olympus he has created a model academic "preserve"—a standard for all others. Reality, however, testifies to the opposite.

The decline of the social sciences, the loss of the priority position of the basic sciences, which is characteristic of academies, and the almost complete subordination of the applied sciences to the interests of the military-industrial complex, the contamination of the stratum of academicians and corresponding members of the Academy of Sciences of Ukraine with both current and former administrative staff members (including secretaries of the Central Committee of the Communist Party of Ukraine and their aides), plagiarists, as well as people promoted through patronage—it is possible to continue this sorrowful list. Such "achievements" plus the reluctance to condescend to the actual coordination of Ukrainian science (VUZ and sector) do not give its authorized executives of the Academy the right to dictation with respect to other public organizations of scientific associates, even if they in some way (by copying the Academy of Sciences of Ukraine) seem imitation.

Yes, a great number of academicians have been raised here. But was it not following their example that Ukrainian science found itself not going in the same direction as world science in the most developed countries? There the scientific environment is based on powerful, open, authoritative narrowly specialized scientific societies, while academies operate as clubs for individuals who pay dues, without receiving, as in our country, money for titles. Our academies are groups, which are closed without fail for the overwhelming majority of specialists, nearly always with vaguely expressed broad themes. And scientific or scientific and technical associations are barely vegetating (with respect to finances and authority), for everyone knows that they are not yet "the highest authority." Now the "academies" are a different matter.... Here the low scientific level of a significant portion of the academic corps and their moral unscrupulousness, which is clearly demonstrated, for example, during the election of new members of the academies, are not taken into account.

The president of the Academy of Sciences of Ukraine is deliberately (and not in a disinterested way) lumping together the consequences with the causes. Public academies appeared exclusively to counterbalance Paton's autocratic system of the persecution of intellect, the

insulting ranking of scientific personnel, and the inefficiency of scientific research. Suppose these academies are imperfect and for their most part are adopting, unfortunately, principles of the organization of labor, which have discredited themselves. But they are eroding the ossified structure of the Academy of Sciences of Ukraine and are approaching the day, when its radical reorganization will be inevitable. Given a reasonable democratic approach to reorganization it would be possible to achieve more rapidly the worldwide level of the organization of science. However, Paton systematically rejected and rejects such suggestions of individual scientific personnel, scientific collectives, and trade union organizations. Now he, having sensed danger for the oligarchy of the Academy of Sciences of Ukraine, which he established, has decided to attack openly.

The formation of the Academy of Sciences of the Higher School of Ukraine, in the charter of which truly democratic principles of organization were incorporated, was the last "straw" for him. If it succeeds with everything contemplated, this will be such a weighty argument in favor of self-administration that the stagnant atmosphere of the Academy of Sciences of Ukraine will, at last, be dispersed. Then both the pressing unification of academic and VUZ science and the other urgent problems of science will finally get beyond the state of talk.

Russian Scientists Protest Low Wages Paid by Western Firms

937A0089A Moscow SOVETSKAYA ROSSIYA
in Russian 21 Jan 93 p 1

[Article from THE FINANCIAL TIMES of 15 January 1993 under the rubric "The Obvious Is the Incredible": "Russian Scientists at Home...and on the Western Market"]

[Text] Leading scientists of Russia are uniting their efforts for the sale of their services to world industry and for the combating of what they call western exploitation of researchers of the former Soviet Union, to whom work is being offered at humiliatingly low pay rates.

Many well-known professors of Russia, who work in diverse spheres of science—from ecology to nuclear research—have joined the new organization named Tezaurus.

Tezaurus will sell the services of researchers and consultants through the British-Russian enterprise "Trade and Shipping"—a joint venture of Robson Rods, who heads a London firm of accountants and management consultants, and Petr Dragadze, the head of the Moscow group.

Prof. Sergey Kapitsa, president of Tezaurus, stated that scientists are inclined to work through the British organization, inasmuch as "the English treat better the proper remuneration of labor."

Mr. Petr Dragadze says that the attempts of American companies to hire scientists of Russia for only \$25 a

month "are regarded not only as humiliating, but also as impracticable." The price of the manpower of a consultant of Tezaurus, apparently, will be somewhat less than the pay for the labor of a senior scientific associate in the West.

Many scientists of Russia were demoralized by the loss of status and continuity after the collapse of communism and the Soviet Union, Professor Kapitsa acknowledges: "Under socialism they treated us better than under capitalism."

Russian Government Decisions Affecting S&T Summarized

937A0078A Moscow RADIKAL in Russian No 47,
Dec 92 p 10

[Article under the rubric "Documents": "Basic Decisions on the Scientific and Technical Sphere, Which Were Made by the President, the Supreme Soviet, and the Government of the Russian Federation"—first paragraph is RADIKAL introduction]

[Text] Edict No. 426 of the President of the Russian Federation of 27 April 1992 concerns urgent steps on the preservation of the scientific and technical potential of the Russian Federation.

The Russian Basic Research Foundation was established as a self-administered state organization, the basic activity of which is the support of enterprising scientific projects (Edict No. 426 of the President of the Russian Federation of 27 April 1992).

Three percent of the appropriations, which are envisaged for the financing of science through the republic budget of the Russian Federation, which comes to about 3 billion rubles [R] for the 1992 budget, is being channeled into the foundation.

It is envisaged that the assets of the foundation will be used for:

subsidies (grants), which are intended for the financing of enterprising basic scientific projects, which are being carried out by small scientific collectives and individual scientists;

grants to scientific research organizations institutions for the development of their material and technical base;

stipends and allowances, which are paid to persons for instruction in graduate and doctoral studies, the obtaining of practical training at scientific centers, and participation in scientific measures in Russia and abroad, including for the payment for travel.

The State Committee for the Management of State Property of Russia and the GKAP [State Committee for Antimonopoly Policy] of Russia were charged to ensure the monitoring of the processes of the reorganization of state scientific research organizations and higher educational institutions, having in mind the intolerability of

the separation from them of pilot and pilot experimental works, which destroys the technological unity of the scientific and technological base (Edict No. 426 of the President of the Russian Federation of 27 April 1992).

The nonbudgetary Russian Technological Development Fund, which is formed by means of deductions by enterprises of assets in the amount of 1.5 percent of the product cost, was organized. The fund is intended for the financing of applied research and development, which are of a sectorwide nature (Edict No. 426 of the President of the Russian Federation of 27 April 1992).

Higher educational institutions, scientific research institutions, enterprises, and organizations of the Russian Academy of Sciences, the Russian Academy of Medical Sciences, the Russian Academy of Agricultural Sciences, and the Russian Academy of Education, as well as higher educational institutions and scientific research institutions of ministries and departments of the Russian Federation in accordance with a list, which is approved by the Government, were exempted from the fee for land (Law No. 3317-1 of the Russian Federation of 16 July 1992).

The scientific research and experimental design work, which is performed at the expense of the budget, as well as the assets of the Russian Basic Research Foundation and the Russian Technological Development Fund and the nonbudgetary funds of ministries, departments, and associations, which are formed for these purpose in accordance with legislation, as well the scientific research and experimental design work, which is performed by institutions of education on the basis of economic contracts, were exempted from the payment of the value-added tax (Law No. 3317-1 of the Russian Federation of 16 July 1992).

Scientific research institutions, enterprises, and organizations of the Russian Academy of Sciences, the Russian Academy of Medical Sciences, the Russian Academy of Agricultural Sciences, the Russian Academy of Education, and state science centers, as well as of scientific research institutions of ministries and departments of the Russian Federation in accordance with a list, which is approved annually by the Government of the Russian Federation, were exempted from the payment of the enterprise property tax (Law No. 3317-1 of the Russian Federation of 16 July 1992).

Laws of the Russian Federation, which regulate relations in the sphere of intellectual property, were passed (the Patent Law No. 3517-1 of the Russian Federation of 23 September 1992, Law No. 3524-1 of the Russian Federation "On the Legal Protection of Computer Programs and Databases" of 23 September 1992, Law No. 3522-1 of the Russian Federation "On Trademarks, Service Marks, and the Names of the Places of Origin of Goods" of 23 September 1992, Law No. 3528-1 of the Russian Federation "On the Legal Protection of the Topologies of Integrated Microcircuits" of 23 September 1992).

The question of the transfer to the Russian Academy of Sciences and its regional departments of the buildings, structures, and other property, which is leased by its institutions, organizations, and enterprises, was settled (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

Executive bodies of state power of Russia were charged to issue to the Russian Academy of Sciences, its institutions, organizations, and enterprises documents for the right to the indefinite (permanent) use of the parcels of land, which were previously made available to them (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

The Ministry of Science, the Higher School, and Technical Policy was charged to review systematically the amount of financing of the Russian Academy of Sciences with allowance made for the volume and nature of the tasks being performed, the change of prices, and the steps being taken by the Government of Russia on the social protection of the population (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

It was established that the budget allocations not used during the year, which were received by institutions, organizations, and enterprises of the Russian Academy of Sciences for the conducting of scientific research work, are carried over and are not liable to confiscation (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

The Ministry of the Economy of Russia was charged to envisage when determining the total amounts of state purchases the material and technical resources, which are necessary for the construction of facilities of the RAS [Russian Academy of Sciences] and the fulfillment of scientific research and the most important scientific and technical programs, which are financed from the republic budget of the Russian Federation (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

The Ministry of the Economy of Russia was changed to allocate annually limits of centralized capital investments for the construction of facilities of science and the social sphere of the RAS (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

The Ministry of the Economy of Russia and the Ministry of the Press and Information of Russia for the purposes of giving state support in the publication of scientific literature and periodicals were charged to allocate annually to the RAS in accordance with its orders paper, cardboard, binding materials, printing foil, and ink (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

The RAS was permitted to establish funds for the solution of problems of the social development of its institutions and organizations by means of assets which are

received from various nonbudgetary sources (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

The Government of Moscow and the administration of Moscow Oblast were charged:

to ensure in 1993-1994 the construction of three apartment buildings with 100 apartments each for foreign scientists and their families;

a dormitory of the hotel type with an area of 20,000 square meters for the housing of graduate students;

to allot a parcel of land for the construction of a 1,000-room hotel complex;

beginning in 1993 to construct for workers and specialists of the RAS apartment houses in Moscow with an area of not less than 50,000 square meters a year;

to allot the RAS within the 50-km zone a parcel of land with an area of 150 hectares for the construction of an urban-type settlement;

to set aside parcels of land for the construction of dacha settlements and the setting up of horticultural associations (Decree No. 538 of the Government of the Russian Federation of 3 August 1992).

All organizations, enterprises, and associations, which import in 1992 by means of centralized currency assets equipment, instruments, and materials for scientific research and production purposes, were exempted from the payment of import customs duties (Decree No. 782 of the Government of the Russian Federation of 13 October 1992).

'POISK' Science News Briefs 11-17 December 1992

937A0092A Moscow POISK in Russian No 50 (188), 11-17 Dec 92 p 2

[Article]

[Text] The Geography of Dirty Hands

There has already been much talk about the fact that the nature of Uzbekistan is perishing from the hands of man. But thus far no one has answered the question, To what extent has the environment in each specific place suffered? A unique publication—an ecological map of Uzbekistan—is called upon to put all the dots on the "i's." Scientists of the department of geography of the Academy of Sciences of the republic developed it. The run is 10,000 copies, of which 7,000 are in Uzbek and 3,000 are in Russian.

[POISK correspondent Stanislav Fioletov, Tashkent]

A Usual Thing Is Reform

The alphabet of Turkmen will change over to the Roman alphabet by 1995. The matter has been settled, but no

end to the debates is visible. They also flared up at an applied science conference that was recently held in Ashgabat.

"Azerbaijan has already changed over to the Roman alphabet," says Myratgeldy Soyegov, director of the Institute of Linguistics of the Academy of Sciences of Turkmenistan. "Kyrgyzstan, Tatarstan, and Bashkortostan intend to do the same thing. This is natural—the representatives of the Turkic-speaking peoples want to communicate freely with each other."

"But I am categorically opposed to language reform today," says Candidate of Historical Sciences Marat Durdyyev, "three changeovers to a new script are too much for one century."

[POISK correspondent Stanislav Fioletov, Tashkent]

Figure

1783 is the year of birth of the oldest department of the Russian Academy of Sciences—the Literature and Language Department. At that time the Academy of Philology—the forefather of the department—was organized.

Quotation

"The relative significance of science in the country is determined not just by the assets, which are released through the state budget, and by the number of research institutes, but first of all by the range of vision of scientific figures and by the altitude of their scientific flight."

S. Vavilov

Fact

The Institute of Russian History of the RAS [Russian Academy of Sciences] has come forth with a proposal on the holding in February of next year of a conference of scientific institutions of the history type for the purpose of discussing the conceptual bases of history textbooks for secondary schools.

The Ministry of Science, the Higher School, and Technical Policy, the presidium of the RAS, and the academy trade union have concluded a sectorial (wage rate) agreement on the provision of socioeconomic and legal guarantees of personnel of the institutions of the RAS. The agreement was prepared "for the purpose of preserving the intellectual potential and the material base of the RAS during the period of economic reforms."

Among the joint obligations of the parties are the establishment and maintenance of a data bank on the supply and demand of manpower in scientific and engineering specialties, the promotion of the establishment of centers of the retraining of associates of the RAS in the most scarce specialties, and the organization of a system that regulates the increase of the remuneration of labor of personnel of the RAS. It was also decided to draft a statute on the fund for the social protection of personnel

of the RAS. The parties intend to promote the conclusion of agreements of the RAS with the state bank of Russia on preferential lending to organizations of the RAS.

The Ministry of Science, the Higher School, and Technical Policy bound itself not less often than once a quarter to make an adjustment of the amounts of financing being allocated with allowance for the increase of prices and inflation. It was also promised to find the necessary currency resources for the subscription by institutions of the RAS to scientific literature and the acquisition of drugs by medical institutions of the academy.

The council of the trade union of workers of the RAS decided not to limit itself to the above-mentioned agreement and to continue contacts with the government and the Supreme Soviet. In preparing for the talks, the council formulated its position with respect to the steps on the preservation of domestic basic science. At its basis is the conviction that "profound changes in the organization of basic research are necessary, but they cannot have the nature of a one-time action." The reorganization of science should be purposeful and long-term and should be based on the strategic interests of Russia.

In the opinion of the council, the reorganization of academic structures requires the adoption of "a program of the transition period and the creation of the base conditions of the reforms being implemented," among which is the establishment of a system of the professional and social protection of scientists. Here the trade union leaders believe that "reorganization, which has not been completely thought out, will not be able to compensate for the shortfall of allocations for science."

The council favors "the increase of the wage at the level of the average indicators for the country, the maintenance of the basic number of workplaces, and the financing of science from the protected part of the budget."

The presidium of the RAS adopted a decree on the introduction of the Unified Wage Scale for the Remuneration of the Labor of Personnel of the Budget Sphere in the System of the Academy. The categories of the remuneration of the labor of managers and scientific associates were approved. Alas, thus far the Ministry of Science, the Higher School, and Technical Policy has not "ratified" the decree of the presidium—in the opinion of ministerial economists, several categories are too high.

The decree of the presidium of the RAS "On the State and Prospects of Research in the Area of the Historical Sciences" was signed.

The presidium is suggesting that scientists of the History Department concentrate creative efforts on the elaboration of the most diverse problems: from the typology and comparative historical analysis of civilizations to the study of entrepreneurship and the role of mentality in sociohistorical development.

The department has been commissioned to ensure the reorganization of institutes, having linked it with the updating of scientific themes and the formulation of new progressive ideas. Here preference will be given to flexible and mobile forms of the organization of collectives. Steps should be taken on the strengthening and development of ties with VUZ science. The presidium called upon professional historians to step up the opposition to the flow of antiscientific publications, which give a distorted interpretation of events of history.

The History Department should take an active part in the formulation of the concept of history education in Russia.

At the regular meeting of the presidium of the RAS the Literature and Language Department gave a report on its activity.

This year the reorganization of the structures of institutes of the department was begun—14 subdivisions have already been eliminated. The number of associates has been reduced by 7 percent. Research themes are being updated, the theoretical concepts in the area of literary criticism and sociolinguistics, of which, by the admission of scientists, dogmatism and excessive ideologization were characteristic, are being revised.

Now the activity of institutes is concentrated around the program "Domestic and World Spiritual Culture (Languages, Literature, Folklore, and Art)."

The directives of President B. Yeltsin on the appointment of V. Rassokhin as chairman of the Committee for Patents and Trademarks and of M. Fedotov as director of the All-Russian Intellectual Property Agency were signed.

'POISK' Science News Briefs 4-10 December 1992

937A0092B Moscow POISK in Russian No 49 (187), 4-10 Dec 92 p 2

[Article]

[Text] **Back to ITER**

A group of scientists of the Institute of Nuclear Research of the Academy of Sciences of Ukraine prepared a document, in which the possibility of conducting in the republic independent research on controlled thermonuclear fusion is substantiated. One of the sections of the document is devoted to the question of the participation of Ukraine in the ITER [International Tokamak-Reactor] international project. The goal of the project is the use of the source of energy of the hydrogen bomb for the development of an ecologically clean and safe thermonuclear electric power plant.

In 1989 four parties—the United States, the USSR, Japan, and United Europe—represented ITER. Now Russia has replaced the USSR. Ukrainian nuclear physicists, who had performed work within the framework of the project, found themselves without official duties.

Ukraine should return to ITER as an independent participant, the scientists of the Institute of Nuclear Research believe. Recently they appealed in this regard to the government of the country.

[Olga Anisimova, Kiev]

Figure

Instruction is now being conducted in 78 languages at secondary schools of Russia.

Quotation

"Ignorance is closer to salvation than half-knowledge."

Ibn Sina, philosopher and encyclopedist scientist of the eastern middle ages

Fact

The presidium of the RAS [Russian Academy of Sciences] ordered the Problems of World Economics and International Relations Department to establish its own fund for the support of young scientists.

A working meeting of Minister B. Saltykov with V. Shorin, chairman of the Committee for Science and Public Education of the Supreme Soviet of the Russian Federation, took place in the Ministry of Science, the Higher School, and Technical Policy of Russia.

It was a matter of the budget of science for the coming year, legislative measures of the support and development of the scientific and technical potential and innovation policy were discussed.

The fathers of domestic science expressed the resolve to ensure the financing of state scientific and technical programs and the social sphere from the "current" part of the budget, that is, by guaranteed assets, and not from the remainder "budget of development." The minister and the chairman agreed in the opinion that it is also necessary to support the scientific potential in those regions of the country, where strong collectives and schools have formed and there are promising young people.

V. Shorin reported that the law "On the Copyright and Related Rights," which also encompasses scientific and technical creativity, had been prepared in the committees of the Supreme Soviet. The preparation of a law on the higher school has begun. The preparation of the draft of a law on scientific and technical policy that conforms to the changed conditions is being completed in the Ministry of Science, the Higher School, and Technical Policy jointly with scientific organizations.

A general meeting of the committees and commissions of the Supreme Soviet, which participated in the preparation of the draft of the law "On the Copyright and Related Rights," was held. It was decided already this year to submit the draft for discussion by the Supreme Soviet. It is planned to hold the first reading of the law soon after the completion of the congress of people's deputies.

A decree of the presidium of the RAS on the state and prospects of basic research in the area of the economic sciences was signed. The presidium recommended that the Economics Department hold a discussion of the strategy of scientific research during the fourth quarter of this year with the enlistment of the public. It was also proposed during 1992-1993 to submit regularly for discussion by the presidium scientific reports on key questions of the structural reorganization of the Russian economy, the changeover to a market, and the social protection of the population.

The holding of field scientific sessions on economic problems in various regions and scientific centers will be practiced.

The department will have to stimulate contacts with universities and leading economic higher educational institutes of the country and to begin the establishment of scientific educational complexes on the basis of leading institutes.

A decree similar to the above-mentioned one was also adopted in accordance with the results of the report of the Problems of World Economics and International Relations Department.

Scientists of the department were ordered by 10 December to submit a report, "which reflects their position on the international problems of the Russian Federation and on the concept of its foreign policy."

It is noted that the development of the scientific schools, which formed as a result of many years of activity of academic institutes and do not have analogs in Russian sectorial and VUZ science, is the most important task of the department.

It is recommended by the end of the year to conduct at institutes competitions and the certification of scientific associates for the purpose of "the rational reduction of the staff."

The Institute of Oriental Studies of the RAS will be transferred from the Problems of World Economics and International Relations Department to the History Department, the presidium of the RAS decided. The reason is the specific nature of the research, which, for the most part, pertains to the area of classical oriental studies. The former manager will carry out the scientific methods supervision of the research that is being conducted in the area of modern economic, political, and sociocultural processes, as well as international relations in Asia, North Africa, and Oceania.

The Russian Academy of Sciences is holding an exhibition of completed works, which can be used in various sectors of municipal services. Eighty academic institutes presented about 300 exhibits. These are new materials and technologies, systems of the monitoring and forecasting of the economic situation, devices for the reduction of fuel consumption and the decrease of the toxicity of exhaust in motor transport, fire extinguishing agents,

new drugs and medical instruments, information systems for the evaluation of the socioecological situation....

The displayed works can find application in the fuel and power complex, communications systems, machine building and metal working, transportation, the garden and park system, and health care.

The exhibition is open until 10 December from 1000 to 1800 in the new building of the presidium of the RAS at the address: Leninskiy Prospekt, 32a, zone A, the Leninskiy Prospekt metro station. Telephone inquiries: 938-52-43, 135-53-96.

'POISK' Science News Briefs 27 November-3 December 1992

937A0081C Moscow POISK in Russian No 48 (186),
27 Nov-3 Dec 92 p 2

[Article]

[Text] We Await the Verdict From the "Three"

Five percent and immediately—the basic demand of scientists of the Siberian Department of the Russian Academy of Sciences, which was expressed as an "Appeal" and was addressed to the well-known "three"—Yeltsin-Khasbulatov-Gaydar—consists in this.

The scientists are urging the state men to establish the share of the produced national product, which Russia can spend on science. In the opinion of the authors of the "Appeal," this share should be not less than the mentioned 5 percent. Here the expenditures on basic research should be singled out by a separate line within "the budget of current expenses," and not be approved, as now, with respect to "the development budget," which implies financing according to the remainder principle. "Scientists," it is justly noted in the "Appeal," "cannot plan basic research, inasmuch as they do not know what awaits them not just next year, but even this month."

Another half a year of uncertainty and the scientific centers in the eastern part of the country will be lost, which will entail the degradation of leading universities of the Urals, Siberia, and the Far East, the workers of the Siberian Department of the RAS warn, having in passing rubbed the nose of the powers that be in the experience of "economically developed countries."

In conclusion the scientists by tradition relied on the understanding of the government, which it, apparently, is carefully concealing.

[Olga Kolesova, Novosibirsk]

Is the Truth for Export?

The book of Ukrainian scientist Vladimir Chernousenko, in which, in the words of the author, the most genuine truth about Chernobyl is told, was recently published...in Germany.

But Chernousenko himself, although officially registered as an associate of the Institute of Theoretical Physics of the Academy of Sciences of Ukraine, in the immediate future does not intend to return from his extended foreign tour. Incidentally, the Academy of Sciences of Ukraine asked the publishers to wait a little before publishing the book, but there they ignored the request. Now several associates of the academy not only do not agree with the author's interpretation of the consequences of the Chernobyl catastrophe, but also intend to bring action against Chernousenko.

[POISK correspondent Raisa Chirva, Kiev]

Figure

Russian science needs thirtyfold more money as compared with what it now has in order to conform to world standards. They are naming such a figure in the Committee for Science and Public Education of the Supreme Soviet of the Russian Federation.

Quotation

"Wherever the spirit of science dominates, great things are done with little funds."

N. Pirogov, Russian surgeon

Fact

The presidium of the Supreme Soviet of the Academy of Sciences adopted a decree, in which it directs the attention of President Yeltsin to the failure of the government and other bodies of power to fulfill the Law on Education.

At the meeting of the collegium of the Ministry of Science, the Higher School, and Technical Policy a report on the proposed budget of science for 1993 was heard.

In all 253 billion rubles [R] will probably be allocated from the budget for the programs for the preservation of the scientific potential, for state scientific and technical programs, for the Russian Academy of Sciences, for the needs of the higher school, and for the Foundation for the Support of Basic Research, which has begun to operate, while, according to the most conservative estimates, R268 billion are necessary for all this. With allowance for inflation next year there will be less money than this year.

Moreover, the spending on science, as in former times, holds a place not in the main "current budget," but in what is called "the development budget," which is formed according to the remainder principle.

At the meeting of the collegium of the Ministry of Science, the Higher School, and Technical Policy the draft of the statute on state scientific and technical programs was also discussed. This document will specify the main principles and mechanisms of the formulation, implementation, and financing of the basic types of federal goal

programs. It will also be indicated in it how the monitoring of their fulfillment should be carried out.

As of 1 January 1993 academicians of the RAS will receive R10,000 for the title of full member of the academy. Such a salary has been established for them by the government of the Russian Federation. The salary for the title of corresponding member will be half as much—R5,000. The amounts of the present salaries for these titles come respectively to R2,565 and R1,300.

The government of the Russian Federation approved the draft of the agreement between the governments of Russia and China on scientific and technical cooperation, which was prepared by the Ministry of Science, the Higher School, and Technical Policy and the RAS. It is planned to sign the agreement during the official visit of President B. Yeltsin to the PRC.

President of the RAS Yu. Osipov and President of the U.S. National Academy of Sciences Prof. F. Press signed an agreement on scientific cooperation between the two academies. The conducting of joint research, thematic seminars, and consultations on problems of the activity of scientific organizations is envisaged by the agreement. The American academy will take part in the financing of seminars on microeconomics and the problems of conversion, dual-purpose technologies, scientific and technical policy, nuclear safety, the reorientation of the social sciences in Russia.... Two-year schools of young scientists will also be organized. The themes of instruction have been specified: ecology of the Arctic, the consequences of nuclear accidents, and biological diversity.

During the official visit the American delegation visited leading institutes of the RAS, where conversations with scientists and associates took place. The Americans were often asked the question about the possibility of obtaining stipends and grants. Everywhere F. Press responded in the same way: For this it is necessary to find a specific partner abroad, who could obtain money in the National Science Foundation or other foundations. Moreover, only for a specific Russian scientist.

Vice President of the RAS Academician Ye. Velikhov reported on the proposals on the further operation of the new building of the presidium of the academy (Leninskiy Prospekt, 32A) and presented a preliminary business plan of the activity of the International Center of Science and New Technologies, which it is planned to organize in this building.

The support of the development of scientific directions of current interest and scientific and technical development in the area of new technologies at institutes and subdivisions of the RAS will be the basic goal of the activity of the NTsNNT [International Center of Science and New Technologies].

The active enlistment of foreign partners is planned. As Ye. Velikhov reported, the operation of the building in

accordance with the business plan in 1993 can yield significant revenue, a portion of which—about \$2.5 million—will be used for academic needs (the purchase of literature, the sending of scientists abroad). The rent of the companies, which will be accommodated in the center, will be the basic source of revenue.

At a meeting of the presidium of the RAS Academician Secretary of the History Department I. Kovalchenko reported on the status and prospects of basic research in the area of the historical sciences.

Radical changes are occurring in the system of research in this area. In the words of I. Kovalchenko, the main task of historians now is to abandon the one-sided, primitive approach in research, which was based on former ideological dogmas.

Touching upon the personnel problem, the academician secretary expressed doubt about the necessity of wholesale reductions: "A critical mass of specialists is needed in order to conduct basic research." While the most skilled Russian historians, in the opinion of I. Kovalchenko, are concentrated in the department.

'POISK' Science News Briefs 20-26 November 1992

937A0081B *Moscow POISK in Russian No 47 (185), 20-26 Nov 92 p 2*

[Article]

[Text] The "Suspended" Building

The question is "loaded": To whom does the building of the Committee for the Higher School of the Ministry of Science, the Higher School, and Technical Policy, which is located on Ulitsa Lyusinovskaya, belong? That is strange, you will say. Of course, to the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation! A little mistake: It just ceased to belong to...the State Committee for Antimonopoly Policy.

In conformity with Edicts Nos. 1147 and 1148 of the president of the Russian Federation of 30 September 1992 on the reform of the system and structure of central bodies of federal executive power the decision was made "to abolish the Committee for the Higher School of the Ministry of Science, the Higher School, and Technical Policy of Russia, having transferred its functions to the corresponding subdivisions in the structure of the central staff of the ministry."

It is a matter, let us explain, not of the "dissolution" of the only institution for all of Russia, which deals with the higher school, but of its transformation into an independent department. That is why the Committee for the Higher School worked calmly, expecting a deserved promotion in "rank." But, inasmuch as it ceased to exist de jure, it proved possible...to eliminate it de facto, having thrown it out into the street.

And on 10 November 1992 Directive No. 738r of the State Committee for the Management of State Property concerning the fact that the building on Lyusinovskaya was being removed from the balance sheet of the Ministry of Science and was being transferred to the State Committee for Antimonopoly Policy, was signed.

The staff members of the Committee for the Higher School are scared people. During the misunderstandings with the property of the eliminated USSR State Committee for Public Education, to which several legal successors laid claim, they were evicted. Now the situation is simply paradoxical. The Committee for the Higher School seems as if not to exist, but it was left with the building!

In the State Committee for the Management of State Property they waited a month and a half from the moment of the abolition of the Committee for the Higher School. And—they turned the "vacant" building over to the fighters against monopolism. Later, it is true, they remembered that such things are prohibited by a decree of the Supreme Soviet. And for that reason they edited their own directive. Since 15 November the building has "hung" on the balance sheet of the State Committee for the Management of State Property.

To whom will it pass in the end?

[Svetlana Kirillova]

A Number of Miraculous Changes

President of the Academy of Sciences of Kazakhstan Umirzak Sultangazin in a letter addressed to Republic Vice Premier Sergey Tereshchenko called the adoption of the decree of the Cabinet of Ministers on the establishment of a national nuclear center a gross violation of the rights of the Academy of Sciences and the legislation of the Republic of Kazakhstan.

POISK has already informed its readers (No 21, 1992) about the edict of President of the Republic of Kazakhstan Nursultan Nazarbayev on the establishment of a nuclear center. At that time at the academy they treated with understanding the idea of the preservation of the scientific potential of the Semipalatinsk Nuclear Test Range and its conversion, for the sake of which, first of all, the edict was promulgated. However, subsequently the initial idea of consolidating scientific forces underwent substantial metamorphoses. Thus, for example, at the stage of the specific implementation of the edict by a decree of the government it was ordered to turn three leading academic institutes over to the nuclear center and to subordinate it directly to the Cabinet of Ministers. This decision was made without consulting the Academy of Sciences, which by right of the owner lodged its own protest.

[Svetlana Aleksandrova, Alma-Ata]

Let Them Remember Your Name

President of Turkmenistan Saparmurad Niyazov, evidently, made an outstanding contribution to many fields of science, since the Academy of Sciences elected him its honorary academician, while the Agricultural Academy elected him a full member. The associates of the later, not wishing to stop at what has been achieved, are now petitioning the Cabinet of Ministers to confer on their academy the name of the beloved president.

[Stanislav Fioletov, POISK correspondent for Central Asia and Kazakhstan, Tashkent]

Figure

Nine million rubles—one of Moscow's largest sectorial higher educational institutions was forced to pay that amount to the personnel of a private security agency for guarding the student campus for a month.

Quotation

"Knowledge humbles the great man, astonishes the ordinary man, and inflates the little man."

L. Tolstoy

Fact

Experts of the RAS [Russian Academy of Sciences] have completed the work on the draft of the edict of the president of the Russian Federation on additional material support of the academy. The draft has been sent off to the office of the president.

The government of the Russian Federation adopted the decree "On the Russian Basic Research Foundation." The foundation was established by an edict of President Yeltsin in April of this year. The decree of the government approves the charter of the foundation, which is called upon to carry out the financial support of enterprising scientific projects, which are being carried out by small scientific collectives and individual scientists. This support will be given in the form of special-purpose subsidies—grants—on a competitive basis. The foundation will also help with money people, who are studying in graduate and doctoral studies, are going to scientific events, and are undertaking practical studies at world scientific centers.

Vice President of the RAS Academician A. Gonchar at a meeting of the presidium of the academy told how the work on the organization of the Basic Research Foundation was proceeding. The council of the foundation—its governing body—should be approved at the beginning of December. Twenty-four people—representatives of academic, VUZ, and sectorial science—will be on the council. At the end of December the foundation will begin to accept applications for financing from it. By the end of the first quarter the decision on who will receive grants will be made.

In the words of A. Gonchar, the work of the foundation will be able to become most efficient only in three years. The organizing director of the foundation sees its main mission in the establishment of a system of the support of scientific projects, which is alternative to the system of state scientific and technical programs.

The presidium of the RAS reacted to the decree of the presidium of the Supreme Soviet of Bashkortostan on the transfer of the property of the Bashkir Scientific Center of the Ural Department of the RAS to the Academy of Sciences of Bashkortostan. A decree of the presidium on the transformation of the Bashkir Scientific Center of the Ural Department of the RAS into the Ufa Scientific Center of the RAS was promulgated. The election of the director of the center is scheduled for March of next year.

On the invitation of M. Rakhimov, chairman of the Presidium of the Supreme Soviet of Bashkortostan, a delegation of the RAS headed by Academy Vice President N. Laverov visited Ufa. The Russian scientists met with M. Rakhimov himself and with the leadership of the Bashkir Scientific Center and the Academy of Sciences of the republic. As a result an agreement was signed. It is a matter in it of the need to suspend the effect of the edicts and decrees of the authorities of Bashkortostan and the leadership of the Academy of Sciences of the republic until the fate of the Bashkir Scientific Center is decided at the December general meeting of the RAS. The parties also decided henceforth not to promulgate standard acts which would aggravate the situation. The Bashkir side stated that it has nothing against the decree of the presidium of the RAS on the transformation of the Bashkir Scientific Center into the Ufa Scientific Center, which will operate in accordance with the charter of the RAS. Moreover, the Academy of Sciences of Bashkortostan invited the presidium of the Russian Academy to consider the question of its joining of the RAS as an associate member.

At the request of the Committee for Science and Public Education of the Supreme Soviet of the Russian Federation the RAS is preparing a report on the status of the academy's science cities. The vice presidents of the academy and the academician secretaries of the departments are invited to express their opinion in this regard. As stated in the letter sent from the committee, there they had come to the conclusion that it is necessary to support the science cities at the legislative level.

The decree of the government of Russia on the formation of the National Oceanographic Committee has been issued. The state-level committee will deal with questions of international scientific and technical cooperation in the study of the world ocean and will coordinate the participation of ministries, departments, and organizations in the intergovernmental oceanographic commission of UNESCO.

The presidium of the RAS approved the program of work of the forthcoming December general meeting. President

Yu. Osipov will deliver the report "The Russian Academy of Sciences: The Status and Prospects." The speech of Vice President A. Gonchar will be devoted to the new charter, while that of Vice President V. Kudryavtsev will be devoted to the new statute on the department. The approval of the charter and the statute is planned.

A regional conference of members of the Association of Russian Higher Educational Institutions was held in St. Petersburg. Representatives of the State Committee for Patent Affairs and the LOGMOS joint-stock company, which deals with the development of trademarks for products of the higher school, also took part in it. Questions of the new system of the licensing of inventions in the system of higher education, the privatization of higher educational institutions, and the securities market at the higher school were discussed. The conference participants adopted an appeal of Boris Yeltsin, demanding the establishment of such a unified state federal body of the management of the higher school of Russia, the head of which would be a member of the Cabinet of Ministers and could directly implement state policy in higher education.

'POISK' Science News Briefs 13-19 November 1992

937A0081A *Moscow POISK in Russian No 46 (184), 13-19 Nov 92 p 2*

[Article]

[Text] The Procurator Rules Over Science

The protracted conflict between the Soviet of People's Deputies of Sovetskiy Rayon (where the Novosibirsk Academy Campus is located) and the leadership of the Siberian Department of the Russian Academy has entered a new phase. The legal phase.

The rayon soviet has sent to the court a suit to hold Academician V. Koptug, chairman of the Siberian Department of the RAS [Russian Academy of Sciences], administratively responsible for the failure to fulfill its, the rayon soviet's, decisions. Not content with a suit alone, the deputies have also appealed to the procuracy. Here the accusations are a little more harsh—they "tack on" to the academician the failure to fulfill legislative acts of the Russian Federation. Whereas a year ago the participants in the conflict could not divide land (POISK, No 14, 1991), today academic housing resources have become the bone of contention. Incidentally, it is possible to call them academic only conditionally, inasmuch as it is completely unclear to whom they belong in reality. The deputies claim that the possessions of the academy, including housing resources, are state property. Consequently, the privatization of housing at the academy campus should proceed in the usual manner. The presidential edict of 29 December 1991 as if established that the privatization of institutions of the RAS can be carried out only in accordance with a decision of the government.

The rayon soviet has already overcome the first obstacle: At its request the General Procuracy of the Russian Federation repealed the directive of the State Committee for the Management of State Property of the Russian Federation of 1 November 1991, which prohibits the privatization of housing at the Siberian Department of the RAS. The leadership of the academy took steps in response—it sent to the Supreme Soviet a draft law on the transfer of state property of the RAS to the ownership of the academy. The vigilant rayon soviet addressed to the presidium and the committees of the Supreme Soviet of the Russian Federation the demand to reject such a version of "departmental privatization." The draft law was sent for modification, while the General Procuracy drew the conclusion that the Siberian Department of the RAS does not have grounds for rejecting the privatization of housing.

It is unclear whether they will "condemn" Academician Koptug. Another thing is clear—academy campuses will hardly be able to exist without their own housing resources. But until the government finally decides whether it needs science in general and science cities in particular, the procurator as before will decide their fate.

[Olga Kolesova, Novosibirsk]

Over the Seas, Over the Waves

The scientific research fleet of the Academy of Sciences of Ukraine has admitted to its ranks a new ship. The "River-Sea" class ship will operate on the Dnieper and Dunay Rivers, the Black Sea, and the Sea of Azov. The 37-meter ship with a displacement of 214 tons is fitted with the most advanced apparatus and equipment. The owner of the floating laboratory is the Institute of Hydrobiology. Its specialists will engage in radioecological and hydrobiological studies of the water basin of Ukraine.

While at the Institute of Metal Physics of the Academy of Sciences of Ukraine meanwhile the development of a new type of items made of nonmagnetic steel was completed. Using the plastic deformation method, scientists achieved particular strength of such items, which in addition have improved corrosion resistance. Whereas earlier metal bands, cables, and springs, which were intended for use in sea water, failed very quickly, now long-term use is in store for them.

[POISK corresponding Raisa Chirva, Kiev]

Landing Party Grants

In Latvia the "scientific landing party" from Denmark has completed its work.

A large group of leading scientists of this country for several months engaged in the evaluation of the scientific potential of Latvian colleagues and in the examination of the research themes announced by them. Earlier the

union Academy of Sciences and the USSR State Committee for Science and Technology performed these functions.

In accordance with the results of the present examination the most promising works will receive grants of not only the Council for Science of Latvia, but also, perhaps, several science foundations of the Nordic countries.

[POISK correspondent Vladimir Steshenko, Riga]

At the regular meeting of the collegium of the Ministry of Science, the Higher School, and Technical Policy steps on the implementation of the patent law were discussed.

The discussion participants agreed in the opinion that the development and putting into effect of lawful acts and the preparation of standard documents and procedural recommendations, which would help in practice to carry out the protection of intellectual property, are necessary.

In these documents the procedure of drawing up and submitting applications for the issuing of protective documents and of exchanging authorship certificates of the USSR for Russian patents should be clearly explained and the form of the model contract for the transfer of the right to a patent and the right to the use of an invention and much more should be specified.

The Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy was commissioned to prepare the documents.

A delegation of the RAS, which Academy President Yu. Osipov headed, visited China. The main goal of the trip was the preparation of agreements on scientific and technical cooperation between the Russian Federation and the PRC. During the official visit agreements on cooperation were signed with the State Social Sciences Foundation of China and the Shanghai Academy of Social Sciences. Moreover, it is planned to sign by the end of 1992 agreements with the PRC State Education Commission, the Academy of Sciences of China, and the Academy of Social Sciences of China. Most likely this will take place in December during the planned official visit to China of President of the Russian Federation B. Yeltsin.

At the last meeting of the presidium of the RAS, Academician B. Toporin, acting academician secretary of the department, delivered a report on the state and prospects of research in the area of the philosophical, sociological, legal, and psychological sciences. The basic review of

research themes is now under way in the Philosophy, Sociology, and Law Department. Maximum attention is being devoted to the analysis of the present state of Russian society, forecasts of the development of the emerged sociopolitical trends are being formulated.

The reorganization of the structure of institutes is being carried out. Within the traditional divisions a system of scientific groups, which makes it possible to combine the discipline and project principles of the organization of scientific research, is being formed in place of sectors. Here temporary scientific collectives are becoming the basic units. The introduction of this system expands the possibilities of interdisciplinary research and the broad expert evaluation of research results.

At a number of institutes scientific research centers and international scientific research laboratories are being established.

During the second half of 1992 work was begun on the reestablishment of multiple-skill flexible temporary collectives under the department, which include scientists of not only institutes of the department, but also higher educational institutions of Moscow and nonacademic scientific centers.

The government of the Russian Federation published the decree "On the Financing of Vocational and Technical Educational Institutions of the Ministry of Education of the Russian Federation." As of 1 January 1993 the financing of vocational and technical educational institutions will be carried out from the assets of the budgets of the republics within the Russian Federation, kray and oblast budgets, and the city budgets of Moscow and St. Petersburg. The Ministry of Education and local bodies of executive power should take additional steps on the efficient use of the material base of these educational institutions for the training, advanced training, and improvement of the skills of young people.

The Ministry of Science, the Higher School, and Technical Policy of Russia jointly with the Ministry of Ecology, the Russian Union of Industrialists and Entrepreneurs, and other organizations will conduct from 10 to 19 February 1993 the international congress "The Ecology of Russia." It will take place at the complex of the Russian Academy of Management. An exhibition and trade fair, at which various achievements of scientific and technical thought in the area of ecology will be exhibited, will open simultaneously at Manezh in Moscow. The best ones will be selected for inclusion in the Program of the Ecological Revival of Russia.

Nominations for State Prize for Science and Technology Announced

937A0094A Moscow ROSSIYSKIYE VESTI in Russian
30 Jan 93 p 5

[Article: "From the Commission Attached to the President of the Russian Federation for State Prizes of the Russian Federation in Science and Technology"]

[Text] The Commission Attached to the President of the Russian Federation for State Prizes of the Russian Federation in Science and Technology reports that the following works have been allowed to compete for the 1993 State Prizes:

1. A.I. Rusanov, F.M. Kuni, N.N. Kochurova, V.L. Kuzmin. "The Establishment of the Laws of the Spontaneous Surface Polarization of Fluids and Their Application to Global Processes."

Nominated by St. Petersburg State University.

The public discussion is being held by the Institute of Electrochemistry imeni A.N. Khrumkin at the address: 117071, Moscow, Leninskiy Prospekt, 31. Telephone number for inquiries: 952-08-98.

2. V.A. Vishnevskiy, B.I. Alperovich, A.M. Granov, A.K. Yeramishantsev, V.A. Zhuravlev, V.S. Shapkin. "The Development and Introduction in Clinical Practice of Effective Methods of the Diagnosis and Treatment of Neoplasms of the Liver" (a series of works).

Nominated by the Institute of Surgery imeni A.V. Vishnevskiy.

The public discussion is being held by the Moscow Scientific Research Institute of Oncology imeni P.A. Gertsen at the address: 125284, Moscow, 2-y Botkinskiy Proyezd, 3. Telephone number for inquiries: 945-64-97.

3. V.-A.S. Borovik-Romanov, Yu.M. Bunkov, Yu.M. Mukharskiy, I.A. Fomin. "The Detection and Study of Magnetic Superfluidity" (a series of works).

Nominated by the Institute of Physical Problems imeni P.L. Kapitsa.

The public discussion is being held by the Physics Institute imeni P.N. Lebedev at the address: 117924, GSP-1, Moscow V-333, Leninskiy Prospekt, 53. Telephone number for inquiries: 135-24-30.

4. S.A. Tikhodeyev, A.Ye. Garbuz, K.N. Kovalenko, A.F. Rakityanskaya, E.N. Bellendir. "Reconstructive Restorative Surgery of Inflammatory Diseases of the Spine in Children and Adults (1980-1991)."

Nominated by the St. Petersburg Scientific Research Institute of Phthisiopulmonology.

The public discussion is being held by the Central Scientific Research Institute of Tuberculosis at the

address: 107564, Moscow, Yauzskaya Alleya, 2. Telephone number for inquiries: 268-17-41.

5. E.D. Yershov, V.V. Baulin, L.S. Garagulya, S.Ye. Grechishchev, K.A. Kondratyeva, N.N. Romanovskiy, V.T. Trofimov, N.I. Trush. *Geokriologiya SSSR (Geocryology of the USSR)* (a monograph in five volumes).

Nominated by Moscow State University imeni M.V. Lomonosov.

The public discussion is being held by St. Petersburg State University at the address: 199034, St. Petersburg, Universitetskaya Naberezhnaya, Building 7/9. Telephone number for inquiries: 218-48-31.

6. G.P. Shveykin, V.A. Gubanov, A.L. Ivanovskiy, R.N. Pletnev, V.P. Zhukov, A.I. Likhenshteyn, S.P. Gabuda, N.K. Moroz. "Quantum Chemical and Radiospectroscopic Methods in Solid-State Chemistry."

Nominated by the Institute of Solid-State Chemistry of the Ural Department of the Russian Academy of Sciences.

The public discussion is being held by the Institute of General and Inorganic Chemistry imeni N.S. Kurnakov at the address: 117907, Moscow V-71, Leninskiy Prospekt, 31. Telephone number for inquiries: 954-24-42.

7. V.T. Vasilyev, B.M. Kats, V.P. Meshchanov, G.M. Priyetzhev, A.L. Feldshteyn, A.M. Khrapko, A.M. Shvartsman, K.V. Yuryev. "The Theory, the Development, and the Organization of the Series Production of Superwideband Functional Devices of the Microwave and Extremely High Frequency Bands for Radio Measuring Complexes of Modern Electronic Instrument Making."

Nominated by the Central Scientific Research Institute of Measuring Equipment.

The public discussion is being held by the Moscow Power Engineering Institute at the address: 105835, GSP, Moscow, Ulitsa Krasnokazarmennaya, 14. Telephone number for inquiries: 273-49-93.

8. M.S. Yakovlev, T.B. Batygina, O.P. Kamelina, G.Ya. Zhukova, G.K. Alimova, T.N. Naumova, Z.I. Nikiticheva, I.I. Shamrov. *Sravnitel'naya embriologiya tsvetkovykh rasteniy (The Comparative Embryology of Flowering Plants)* (a monograph in five volumes).

Nominated by the Botany Institute imeni V.L. Komarov.

The public discussion is being held by Saratov State University imeni N.G. Chernyshevskiy at the address: 410000, Saratov, Ulitsa Astrakhanskaya, Building 83. Telephone number for inquiries: 24-54-45.

9. P.L. Ulyanov. "A Series of Works on the Metric Theory of Functions" (1956-1990).

Nominated by Moscow State University imeni M.V. Lomonosov.

The public discussion is being held by the Mathematics Institute imeni V.A. Steklov at the address: 117966, Moscow, V-333, Ulitsa Vavilova, 42. Telephone number for inquiries: 135-22-91.

10. Ye.V. Ametistov, V.V. Blazhenkov, V.I. Bezrukov, A.K. Gorodov, A.S. Dmitriyev, A.V. Klimenko. "A Set of Scientific and Technical Works: The Power Physics Principles of the Obtaining and Use of Monodisperse Systems."

Nominated by the Moscow Power Engineering Institute.

The public discussion is being held by the State Scientific Research Power Engineering Institute imeni G.M. Krzhizhanovskiy at the address: 117927, GSP-1, Moscow, V-71, Leninskiy Prospekt, 19. Telephone number for inquiries: 954-37-32.

11. Ya.G. Sinay. "A Series of Works on the Theory of Dynamic Media."

Nominated by the Institute of Theoretical Physics imeni L.D. Landau.

The public discussion is being held by the Institute of Mathematics and Mechanics of the Ural Department of the Russian Academy of Sciences at the address: 620219, Yekaterinburg, GSP-384, Ulitsa S. Kovalevskoy, 16. Telephone number for inquiries: 44-21-32.

12. V.Ye. Zakharov, A.B. Shabat. "The Theory of Solitons and the Inverse Problem Method" (a series of works).

Nominated by the Institute of Theoretical Physics imeni L.D. Landau.

The public discussion is being held by the St. Petersburg Branch of the Mathematics Institute imeni V.A. Steklov at the address: 191011, St. Petersburg, Naberezhnaya Fontanki, 27. Telephone number for inquiries: 310-73-17.

13. Ye.N. Panov. "The Basic Study of the Communication of Animals and Biosociality: Organizational Mechanisms and Evolutionary Changes."

Nominated by the Institute of Evolutionary Morphology and Ecology of Animals imeni A.N. Severtsev.

The public discussion is being held by the Institute of Plant and Animal Ecology of the Ural Department of the Russian Academy of Sciences at the address: 620219, Yekaterinburg, GSP-511, Ulitsa 8 Marta, 202. Telephone number for inquiries: 29-41-71.

14. V.A. Boldyrev, Ye.G. Avvakumov, Yu.T. Pavlyukhin, Ye.Yu. Ivanov, P.Yu. Butyagin, A.Ye. Yermakov, Ye.P. Yelsukov, V.A. Barinov. "The Mechanical Activation of Oxide and Metallic Systems."

Nominated by the Institute of Solid-State Chemistry and the Processing of Mineral Raw Materials of the Siberian Department of the Russian Academy of Sciences.

The public discussion is being held by Moscow State University imeni M.V. Lomonosov at the address: 119899, GSP-3, Moscow, V-234, Leninskiye Gory, Moscow State University, the Chemistry Faculty. Telephone number for inquiries: 939-21-05.

15. Yu.V. Gulyayev, P.Ye. Kandyba, D.V. Karpeyev, V.V. Novikov, V.V. Praporshchikov, V.I. Pustovoyt, I.B. Yakovkin. "The Devising of the Scientific Principles, the Development and Introduction of Items on the Basis of Surface Acoustic Waves in Electronic Equipment."

Nominated by the Fonon Scientific Research Institute.

The public discussion is being held by St. Petersburg State Electrical Engineering Institute at the address: 197376, St. Petersburg, Ulitsa Profesora Popova, 5. Telephone number for inquiries: 234-98-38

16. A.M. Sladkov, V.V. Korshak, V.I. Kasatochkin, Yu.P. Kudryavtsev, S.Ye. Yevsyukov, M.B. Guseva, V.G. Babayev, V.V. Khvostov. "Carbyne Is the Third Allotropic Form of Carbon."

Nominated by the Institute of Elementoorganic Compounds imeni A.N. Nesmeyanov.

The public discussion is being held by the Institute of Organic Chemistry imeni N.D. Zelinskiy at the address: 117913, GSP-1, Moscow, V-334, Leninskiy Prospekt, 47. Telephone number for inquiries: 137-13-79.

17. S.D. Beskorovaynaya, Ye.V. Bolotov, A.A. Braginet, L.V. Nikandrova, O.N. Petrikov, Ye.M. Predko, G.I. Fedorov, O.P. Shubin. "The Development of the Optimum Competitive Range of Metal Compensators and a Domestic Standard Technical Base That Ensures the Design and Manufacture of Products for the Needs of the National Economy."

Nominated by the department of the shipbuilding industry of Russia.

The public discussion is being held by the State Naval Technical University at the address: 190008, St. Petersburg, Ulitsa Lotsmanskaya, Building 3. Telephone number for inquiries: 114-06-51.

18. A.Ya. Gurevich. "Medieval Culture: New Problems and Interpretations" (a series of monographs).

Nominated by the Institute of General History.

The public discussion is being held by Tomsk State University at the address: 634034, Tomsk, Ulitsa Lenina, 36. Telephone numbers for a inquiries: 22-32-58, 22-56-47.

19. S.I. Stenin, O.P. Pchelyakov, G.A. Potemkin, G.P. Tretyakov, G.G. Yemelin, A.G. Denisov, V.I. Kratenko,

V.M. Lyapin. "The Development and Introduction of Industrially Oriented Technological Superhigh-Vacuum Equipment for Molecular Beam Epitaxy."

Nominated by the Institute of Semiconductor Physics of the Siberian Department of the Russian Academy of Sciences.

The public discussion is being held by Scientific Research Institute of Vacuum Equipment imeni S.A. Vekhshinskiy at the address: 113105, Moscow, Nagornyy Proyezd, 7. Telephone number for inquiries: 123-10-22.

20. V.O. Geydebrekht, N.A. Aldokhin, A.Kh. Namsarayev, A.D. Sokovikov, Yu.V. Sugonyeyev, A.I. Goncharov, Ya.V. Nikitin, N.K. Grigoryeva. "The Development and Introduction of a Closed Drainage-Free Water Circulating System at the Selenginsk Pulp and Paperboard Combine."

Nominated by the Selenginsk Pulp and Paperboard Combine.

The public discussion is being held by the United Scientific Council for Chemical Sciences of the Siberian Department of the Russian Academy of Sciences at the address: 630090, Novosibirsk, 90, Prospekt akademika Lavrentyeva, 17. Telephone number for inquiries: 35-05-59.

21. V.V. Sukhotskiy, A.P. Kegler, V.Ye. Kopalev, Yu.V. Petrov, V.I. Resin, V.L. Rozhdestvenskiy, V.P. Sokolov, V.G. Filatov. "The Comprehensive Engineering Assimilation of Urban Grounds in Case of the Mass Building of the 'Krylatskoye' Residential Rayon."

Nominated by the construction department of the government of Moscow.

The public discussion is being held by the St. Petersburg Zonal Scientific Research and Experimental Design Institute at the address: 191065, St. Petersburg, Naberzhnaya reki Moyki, 45. Telephone number for inquiries: 315-33-38.

'RADIKAL' Changes Name to 'NAUKA I BIZNES' ('SCIENCE AND BUSINESS')

937A0083A Moscow RADIKAL in Russian No 49,
Dec 92 p 9

[Article by the editorial office of RADIKAL: "Dear Reader!"]

[Text] Today our newspaper is being published for the last time under the title RADIKAL. In the new year readers will receive the weekly NAUKA I BIZNES (SCIENCE AND BUSINESS).

Of course, we are changing not only and not so much the name. Having retained all the best that was in RADIKAL, we are setting the goal also to respond even more precisely and completely to the most vital practical needs of the readers.

Our SUPERTASK is: to make every READER—be he an INDUSTRIALIST, INVENTOR, BANKER, or SCIENTIST—a PARTNER, having offered him the most different forms and spheres of cooperation. For example, having offered the BANKER and INDUSTRIALIST an INTELLECTUAL PRODUCT, which has gone through the most authoritative examination, and the SCIENTIST participation in the competition for domestic and foreign GRANTS, PROGRAMS, PROJECTS....

Thus, NAUKA I BIZNES is first of all the day-to-day MONITORING of the abundant explosive area, in which two intellects—of the BUSINESSMAN AND

INNOVATOR—meet, where the keen nose of the former detects the SMELL OF A LOT OF MONEY, which it is possible to obtain only with the help of the latter.

To read NAUKA I BIZNES means to be well informed about THE LATEST ACHIEVEMENTS OF SCIENCE AND TECHNOLOGY (surveys of world-famous experts) and to have solid information about the most promising SPHERES AND PLANS OF THE INNOVATION BUSINESS (state, budget-commercial, and purely commercial programs and projects—both Russian and foreign).

The timely PUBLICATION of and highly skilled COMMENTING ON LAWS AND LAWFUL ACTS, which regulate the activity of staff members of scientific, design, and planning organizations and specify the methods of obtaining, transferring, and using the INTELLECTUAL PRODUCT, are in the field of special attention of NAUKA I BIZNES.

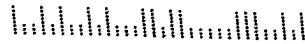
NAUKA I BIZNES is also THE INNOVATION EXCHANGE, which has gained popularity and which authoritative experts, patent experts, and specialists in scientific and technical management, advertising, and marketing conduct. An intellectual product, which is presented on our EXCHANGE, is guaranteed an information outlet to the WORLD MARKET OF INNOVATIONS—to the countries of Europe, Southeast Asia, and America and to Japan.

NTIS
ATTN PROCESS 103
5285 PORT ROYAL RD
SPRINGFIELD VA

2

22161

BULK RATE
U.S. POSTAGE
PAID
PERMIT NO. 352
MERRIFIELD, VA.



This is a U.S. Government publication. Its contents in no way represent the policies, views, or attitudes of the U.S. Government. Users of this publication may cite FBIS or JPRS provided they do so in a manner clearly identifying them as the secondary source.

Foreign Broadcast Information Service (FBIS) and Joint Publications Research Service (JPRS) publications contain political, military, economic, environmental, and sociological news, commentary, and other information, as well as scientific and technical data and reports. All information has been obtained from foreign radio and television broadcasts, news agency transmissions, newspapers, books, and periodicals. Items generally are processed from the first or best available sources. It should not be inferred that they have been disseminated only in the medium, in the language, or to the area indicated. Items from foreign language sources are translated; those from English-language sources are transcribed. Except for excluding certain diacritics, FBIS renders personal names and place-names in accordance with the romanization systems approved for U.S. Government publications by the U.S. Board of Geographic Names.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by FBIS/JPRS. Processing indicators such as [Text] or [Excerpts] in the first line of each item indicate how the information was processed from the original. Unfamiliar names rendered phonetically are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear from the original source but have been supplied as appropriate to the context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by the source. Passages in boldface or italics are as published.

SUBSCRIPTION/PROCUREMENT INFORMATION

The FBIS DAILY REPORT contains current news and information and is published Monday through Friday in eight volumes: China, East Europe, Central Eurasia, East Asia, Near East & South Asia, Sub-Saharan Africa, Latin America, and West Europe. Supplements to the DAILY REPORTs may also be available periodically and will be distributed to regular DAILY REPORT subscribers. JPRS publications, which include approximately 50 regional, worldwide, and topical reports, generally contain less time-sensitive information and are published periodically.

Current DAILY REPORTs and JPRS publications are listed in *Government Reports Announcements* issued semimonthly by the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161 and the *Monthly Catalog of U.S. Government Publications* issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The public may subscribe to either hardcover or microfiche versions of the DAILY REPORTs and JPRS publications through NTIS at the above address or by calling (703) 487-4630. Subscription rates will be

provided by NTIS upon request. Subscriptions are available outside the United States from NTIS or appointed foreign dealers. New subscribers should expect a 30-day delay in receipt of the first issue.

U.S. Government offices may obtain subscriptions to the DAILY REPORTs or JPRS publications (hardcover or microfiche) at no charge through their sponsoring organizations. For additional information or assistance, call FBIS, (202) 338-6735, or write to P.O. Box 2604, Washington, D.C. 20013. Department of Defense consumers are required to submit requests through appropriate command validation channels to DIA, RTS-2C, Washington, D.C. 20301. (Telephone: (202) 373-3771, Autovon: 243-3771.)

Back issues or single copies of the DAILY REPORTs and JPRS publications are not available. Both the DAILY REPORTs and the JPRS publications are on file for public reference at the Library of Congress and at many Federal Depository Libraries. Reference copies may also be seen at many public and university libraries throughout the United States.