Protests and promises grow in Russia as science spending falls

[MOSCOW] Russia's finance minister, Alexander Lifshits, promised scientists last week that he would speed up payment of the science budget, and expressed optimism that — unlike last year — it will be paid in full.

The promise followed growing discontent over the late payment of salaries, as well as the poor state of the science budget. President Boris Yeltsin has signed into law Russia's budget for 1997, already approved by both chambers of the Russian parliament, allocating 15,258 billion rubles (US\$2.6 billion) to research and development (R&D). Of this figure, 5,731 billion rubles will be spent on fundamental research and 9,526 billion rubles on the development of new technologies.

But the planned spending on R&D represents only 2.7 per cent of all budget expenditure — considerably less than the 4 per cent mandated in a law passed last August. Furthermore, there is growing concern among scientists that more than half this sum will make its way back to the government through taxation.

Proposed changes to the tax laws drawn up by the finance ministry would, if adopted, deprive scientists of privileges which are currently worth 8,000 billion rubles. Scientific organizations would be required to pay both value added tax and local land taxes, while all recipients of research grants would have to pay income tax on the money they receive.

"Under these conditions, foreign

organizations which support Russian science are likely to decide not to finance the bureaucracy, and thus to stop giving grants to Russian scientists," says Alexander Spirin, a member of the Russian Academy of Sciences.

Vladimir Kudryavtsev, a vice president of the academy and former director of its Institute of the State and Law, complains that the "new tax code had been prepared without consulting the scientific community, in strict secrecy, and in spite of the fact that the academy itself possesses hundreds of highly qualified specialist in its economics department."

The difficulties facing scientists are compounded by the fact that not all the money allocated to them actually arrives, while the distribution of funds between different fields of science is very uneven. Last year, for example, the Russian Space Agency received 97.3 per cent of what had been planned, a reflection of US pressure on Russia over its planned participation in the international space station; in contrast, the Russian Foundation for Fundamental Research received only 37 per cent.

With many scientists receiving their salaries at least a month late, a series of protest meetings has been held. These began in the academy's biological scientific centre at Pushchino near Moscow, where 3,000 of the 20,000 staff have demanded the resignation of the government and retirement of the president.

Such demands have been supported by

scientists in St Petersburg, Vladivostok and Moscow, where about 300 people picketed the White House, the main parliament building. Their representatives were met by Lifshits and Vladimir Fortov, chairman of the State Committee on Science and Technologies.

On behalf of the cabinet, Lifshits signed a promise that scientists will in future receive the same priority on salaries as teachers and service personnel. A schedule of monthly payments of the science budget was also approved: this month, scientists are to receive 950 billion rubles, and a further 750 billion rubles will be paid in each of the following three months — equivalent to a quarter of the annual budget.

A further meeting between members of the cabinet and representatives of the scientific community will be held in June to discuss plans for the second half of the year. Lifshits promised to find additional finance for science, in particular using foreign loans. He also expressed optimism that the remaining three-quarters of the science budget would be paid by the end of the year.

Meanwhile, Yeltsin has appointed Yuri Osipov, the president of the academy who was recently appointed to the cabinet, as a member of the Security Council. Another academy member, Boris Berezovsky, was recently made deputy chairman of the council. The 1,200 academy members are waiting to see whether the appointments will have any impact on their plight. **Carl Levitin**

Lab director exits bloody but unbowed

[WASHINGTON] Few modern research administrators have managed to personify their institution in quite the way that Nick Samios has come to represent the Brookhaven National Laboratory in New York state since his appointment as director there in 1982.

Then, Brookhaven had just been forced to abandon work on a giant particle accelerator called Isabelle, which had been intended to ensure the laboratory's future as a centre for particle physics research. Now, the Long Island laboratory is home to the National Synchrotron Light Source, a vastly popular source of X-ray, ultraviolet and infrared radiation.

Many smaller projects and centres have broadened the laboratory's scientific base. And the completion in 1999 of a brand new nuclear physics facility, the Relativistic Heavy Ion Collider, should assure Brookhaven a sparkling future.

Or so it appeared until the discovery in January of an underground plume of radioactive tritium emanating from Brookhaven's other large user facility, the

High-Flux Beam Reactor (see *Nature* **386**, 3; 1997). The furore over the leak — which, as Samios ruefully observes, amounts to around 30 cubic millimetres of the hydrogen isotope — overshadowed the announcement on 7 March that he will quit as Brookhaven's director.

Tears were shed at the laboratory that morning, according to Brookhaven staff. They were probably provoked not by concern for Samios, who is well able to look after himself, but by exasperation inside the besieged laboratory as activists and local politicians — notably Senator Alfonse D'Amato (New York, Republican) — sought to blame Samios for the leak and take credit for his departure. "D'Amato will say anything he thinks will get him re-elected," observes one prominent physicist unconnected with Brookhaven.

Samios denies that he was forced out, saying that he had notified Associated Universities Inc., the contractor that runs Brookhaven, a year ago that he was intending to leave after 15 years in the job. Sources outside the laboratory confirm this. But they

Samios: departure was agreed prior to recent controversy over leakage of tritium.

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also point out that, without the furore over the leak, Samios would probably have offered to stay in place until a successor was found. Instead, he will step down at the end of next month.

Samios, who turned 65 last Friday, but looks and acts ten years younger, says that he did consider a resignation accepting blame for failing to find the leak earlier. But he rejected the idea, saying "It's not my style to quit, it's not true, and it wouldn't have solved very much."

The crisis that has engulfed Brookhaven since the leak was found has led Samios to reflect more widely on the public's understanding of science. "There's an anti-science mood in the world today," he says. "You see it all over; there is a distrust of science. Look at how worried people are about cloning." This mood, he says, "is stronger than it was five years ago. Science in general has to make more cogent arguments than it has in the past. We haven't communicated the importance and value of our work."

Samios shares the blunt, engaging and energetic manner that characterizes so many successful sons of New York city. A brilliant physicist whose discovery of the Omega Minus particle in the 1960s is considered by some colleagues to be worthy of a Nobel prize, he spurns intellectual aloofness and prides himself on being a man of action.

As chair of the American Physical Society's planning committee, for example Samios was a major behind-the-scenes force in the recent unified call by US scientific societies for more research funding (see *Nature* **384**, 393; 1996).

Despite his deep involvement in science policy, Samios says he does not plan to work in Washington DC in the foreseeable future if he can help it. Having had little time for research in recent years, he says he is flattered to have already been invited to participate in scientific projects, but adds that it is "too early to comment" on what he might take up. Samios is supposed to complete a plan to clear up the tritium plume before he leaves. Running the laboratory has been "a wonderful responsibility", he says. "But not having that responsibility on my shoulders will be a great thing."

Brookhaven retains an interest in particle physics, and will be involved in the design of the Atlas detector for the Large Hadron Collider at CERN, the European Laboratory for Particle Physics in Switzerland. But its largest scientific interests now lie elsewhere. It needs a new director who can lead the laboratory beyond the Relativistic Heavy Ion Collider and into the next century.

In practice, this means a nuclear or condensed-matter physicist of exceptional political agility, ready and able to convince the people of Long Island that physics research can and must continue safely in their midst.

Colin Macilwain

A window of opportunity is opened for Italian reforms

[ROME] Italy is giving its research agencies a unique opportunity to reform their notoriously bureaucratic management structures — the bane of scientists for decades — and to develop more effective ways of allocating research funds.

The Italian parliament agreed last week that the government should have the power to modify existing laws, without further parliamentary approval, where this is needed to promote efficiency in public institutions. As a result, Luigi Berlinguer, the research minister, now has the right to "reorder and rationalize all efforts related to the promotion and support of scientific and technological research".

The new law states that, in making changes to the activities of research agencies, consideration should be given to the need to increase the institutional flexibility of researchers and their ability to move between research institutes, universities and industry.

The so-called Bassanini law, named after its parliamentary sponsor, will take effect for just one year. Committees set up by major research organizations — including the national research council (CNR), the National Agency for New Technology, Energy and the Environment (ENEA), the Italian Space Agency (ASI) and the National Institute for Nuclear Physics (INFN) — as well as many smaller organizations and institutes, have four months in which to draw up proposed changes.

The ministry of research will then revise the proposals and present them to parliament for debate.

Any changes will have to be in line with the government's strategic goals for research. Last December, the government set up a top-level committee of six ministers to develop a long-term research strategy based on clear priorities. These are being identified with the use of forecasting techniques and an analysis of Italy's research capacity and the needs of potential users of the research results.

A task force, headed by Giuseppe Tognon, under-secretary of state for research, is working with this committee to coordinate research and technology policies of the different ministries. "Previously, Italy's long-term plans have been no more than shopping lists, with little indication of priorities," says Alberto Silvani, a senior policy adviser to Berlinguer and a former researcher at the CNR Institute for Science Policy in Rome. Silvani says that the ministry wants to "concentrate, rather than scatter" its money, and plans to set up an assessment system to monitor the way in which research money is spent.

Berlinguer: powers to 'reorder' agencies

Few are prepared to speculate at this stage on likely changes to the research environment. But it is clear that the CNR will probably undergo major reform. The government is keen to see a clearer distinction between the roles of Italy's major research institutions. In particular it wants investigator-initiated research to be carried out exclusively in universities, which employ 60,000 professors, with the 3,000 researchers in CNR institutes carrying out strategic research.

There is also pressure from political and university quarters to remove the CNR's role in funding university research projects (see *Nature* **367**, 398; 1994). Some have suggested that a new independent grant agency should be given this task, and that the CNR's central technology transfer support unit — which acts as a go-between for academics and industry — should be taken over by ENEA, which is Italy's principal applied research organization.

The Bassanini law will also permit reform of other research-related bodies such as the government's science and technology advisory committee (CNST). This was created by a 1989 law, but there have been no elections of representatives from the research community as no one has been able to define the electorate. Berlinguer would like the CNST to be restructured and to become fully active.

Luciano Maiani, the president of INFN — which is unlikely to face major changes — says that the most helpful thing the Bassanini law could do would be to increase the mobility of researchers between institutes and universities. "We need to change the way people work, rather than hold large strategic discussions," he says.

This could involve further efforts to abandon the centralized competitions for university positions (concorsi). Many would welcome such a move (see *Nature* **378**, 228; 1995), but it has had little support in parliament, which traditionally has a high number of professors.

With only 12 months to overhaul their entire management structure, tensions are already beginning to run high among research administrators. Maiani admits that they face a difficult task ahead. But, echoing a widely held sentiment, he says that the Bassanini law is a great chance for Italy, "and it would be a disaster if the opportunity were to be lost".

Alison Abbott