

studying high-energy emissions in space. ROSAT's High Resolution Imager, one of three main instruments, was irreversibly damaged in September when it scanned too close to the Sun (see *Nature* 395, 826; 1998).

Mission managers used the imager's remaining supply of xenon gas to reactivate another instrument, the Position Sensitive Proportional Counter (PSPC), which had exhausted its own gas supply in 1994. During a final two days of observations, the PSPC returned data on Supernova 1987a and other selected astrophysical targets. Launched in 1990, ROSAT was designed to last only 20 months.

UK power from biomass helps meet carbon target

[LONDON] **The country that gave cricket to the world has scored another first for the use of the fast-growing willow tree, a variety of which is used to make cricket bats — it is using it to produce electricity. Last week John Battle, the energy and industry minister, laid the foundation stone for Britain's first 'significant' power station to be fuelled by biomass.**

The power station, to be built in Yorkshire, will turn 42,000 tonnes a year of specially grown willow, as well as agricultural and forestry wastes, into

8 megawatts of electricity, sufficient to heat 8,000 homes. Battle said that, in addition to contributing to sustainable development by using a renewable resource, the station would help to meet national and international carbon reduction targets.

Europe's researchers get high-speed network

[LONDON] Research organizations in countries in northern Europe last week logged into an exclusive high-speed Internet ring that can carry 155 megabits of information per second.

The network, known as TEN-155, will eventually connect research organizations in 16 European countries. Countries in southern and central Europe are expected to join next year. The project has been partly funded by the European Commission as part of the fourth Framework programme of research.

Magneto-resistance attracts German prize

[MUNICH] **During a television spectacular last week, Germany's president, Roman Herzog, awarded the new *Deutsche Zukunftspreis* (the 'German Future Prize') to Peter Grünberg, a scientist at the Institute**

of Solid State Physics in Jülich, for his discovery of 'giant magneto-resistance'. This property can be used to help develop sensors that can read very compact data on computer hard disks.

In an attempt both to show the 'fun' side of science to the public and to stress "the importance of innovative research", the prize, worth DM500,000 (US\$300,000), was awarded at the German Theatre in Berlin amid musical and acrobatic displays. Grünberg's selection from a shortlist of four was dramatically revealed when the winner's envelope was opened on stage.

Correction

A recent article on neutrino studies being carried out with the SuperKamiokande detector at the Kamioka Observatory, Institute for Cosmic Ray Research, University of Tokyo, stated that Monbusho has been asked for a budget increase from ¥5 million to ¥10.4 billion for a project to detect neutrinos (see *Nature* 395, 107; 1998). The second figure should have read ¥1.04 billion.

The article was also incorrect in stating that the Long Baselines Neutrino Oscillation Experiment will send neutrinos through a 250-kilometre underground tunnel; neutrinos can pass through the Earth without the help of a tunnel.

Rapid shake-up at German health institute

[MUNICH] The Robert Koch Institute (RKI) in Berlin, which belongs to the health ministry, has undergone one of the fastest and most extensive restructuring exercises ever performed by a German research institute.

Within six months of a highly critical evaluation by the Wissenschaftsrat, Germany's science council, the RKI has flattened its hierarchical structure, slashed the number of its research departments and groups, and radically altered its role as collector and disseminator of epidemiological data.

It used consulting companies to help its 600-odd employees adapt psychologically to the changes in their working practices.

The RKI's acting director, Reinhard Kurth, says the reform should serve as a model for other ministry-owned research institutes requiring external evaluation.

The health ministry was forced to review the structure of its institutes in 1993, when information about HIV-contaminated blood failed to reach the minister, Horst Seehofer. Seehofer dissolved the ministry's public health bureau, and merged the bureau's six institutes into three — including the RKI — which are now responsible to the ministry.

The Wissenschaftsrat was asked to evaluate the three institutes. Its report, published late last year, said the RKI was performing poorly in terms of both research and other functions, including assembling epidemiological information for the ministry. It said the institute should close if it could not be radically reformed.

Kurth, who was appointed acting direc-



tor in 1996, acted rapidly to address these criticisms. RKI research will now concentrate on three areas: antibiotic resistance, Borna virus infection, and Creutzfeldt-Jakob disease. The number of research groups has been cut from 53 to 10.

The RKI will also be responsible for collecting, interpreting and disseminating epidemiological data on both non-infectious and infectious diseases. It will also improve the notoriously poor quality of epidemiological data in federal Germany, where 440 authorities collect local data, and even data on diseases like measles and rubella are unreliable. The RKI will be helped by a law under discussion in parliament that will impose sanctions on doctors who do not report cases of infectious diseases.

As a result of these changes, nearly all the RKI's staff, who are employed on permanent

civil-service contracts, will have to change the orientation of their jobs. They must also learn to work in a non-hierarchical environment, which the Wissenschaftsrat had recommended to increase flexibility and improve efficiency.

Kurth hired external consulting companies to run workshops to help with both the psychological and the practical aspects of the changes. The exercise has been expensive, he says, but the DM500,000 (US\$290,000) so far spent on workshops was "money well spent".

The RKI practice of employing staff on life-long contracts means that most staff are relatively old. This makes accepting changes much more difficult, says Kurth, "but it also means that we desperately need new blood to make sure the institute has a strong future".

He has persuaded the finance ministry to pay for two young scientists' groups to be set up for five years. The ministry says it would consider adding more in the 2000 budget.

Bärbel-Maria Bellach, an east German mathematician who is director of the newly styled department of epidemiology at the RKI, says the changes were hard for the staff to cope with, but that the workshops "really helped a lot".

She says the worst time was the three months of waiting to hear exactly what the new structure would be.

An atmosphere of suspicion remains over the distribution of jobs, admits Bellach, but younger scientists are optimistic that the institute has a good chance of becoming internationally competitive. **Alison Abbott**

Japanese science ministry expects large funding boost

[TOKYO] Japan's Ministry of Education, Science, Sports and Culture (Monbusho) is expecting a substantial increase in its science-related budget under the government's special one-off appropriation aimed at developing infrastructure for telecommunications, science, technology and the environment for the next century.

This is on top of its modest 1999 budget request for an increase of 1.8 per cent submitted last week, and will support university infrastructure and postdoctoral programmes (see *Nature* 395, 3; 1998).

Monbusho's core budget will receive

¥28.2 billion (US\$213 million) from the appropriation. The money will top up its programme for upgrading the capacity of information networks linking universities across Japan and improving database and electronic libraries at universities.

It will also boost Monbusho's 'research for the future' programme of large grants that include support for postdoctoral research assistants. The funds would increase by nearly 23 per cent, and the number of five-year industrially related projects would increase by a fifth to around 300. Each project presently receives between

¥50 million and ¥300 million a year.

Monbusho also plans to expand next year's postdoctoral fellowship programmes in line with the government's scheme to increase the number of postdocs in Japan to 10,000 by the end the decade. Next year the number of fellowships will increase by nearly a quarter to 1,600.

The 1999 budget requests reduced funding for space science and high-energy accelerators by 13.6 and 13.9 per cent, respectively. But Monbusho has asked for a quantum leap in budget from ¥5 million to ¥10.4 billion for an ambitious project to detect neutrinos. This will be a collaborative effort between the National Laboratory for High Energy Physics (KEK) and the Institute of Cosmic Ray Research at Tokyo University.

The Long Baseline Neutrino Oscillation Experiment will send neutrinos from KEK's 12-GeV proton synchrotron accelerator through a 250-kilometre underground tunnel to detectors at the SuperKamiokande observatory in central Japan. **Asako Saegusa**

Highlights of Japan's Ministry of Education, Science, Sports and Culture budget request for fiscal year 1999 (in ¥ billion)

	Request	% increase over 1998
Grants in aid for scientific research	137	16.2
Centre of excellence programme	14.4	19
Research for the future programme	26.8	22.9
Postdoctoral fellowships	17.9	11.3
Joint research with industry	118.2	11.5
Neutrinos	10.4	207,500