

More money for science to come in Japanese budget

- "Priority areas of research" budget doubles
- Surprise handouts for space and astronauts

Tokyo

JAPAN'S Ministry of Education, Science and Culture has made ambitious requests for its science-related budget in 1988 — the budget is about 20 per cent up over this year — but the Ministry of Finance will almost certainly prune the proposals before submission to the Diet in January.

Requests for grants-in-aid for scientific research are increased by ¥4,000 million (\$27 million). Half of the increase is in the new grant category "priority areas of research" (see *Nature* 323, 284; 1986) which supports projects involving large groups of scientists. Individual grants run for 3–6 years with annual funds of between ¥50 and ¥600 million. From next year, for example, Professor Muto of Tohoku

University will lead a 3-year investigation into the new high-temperature superconductors with a team of 50–60 researchers drawn from institutes throughout Japan.

More than ¥2,200 million (in the category "maintenance of the scientific research system") is requested to reorganize the Astronomical Observatory of Tokyo University into an independent national research institute for joint university use (see *Nature* 323, 574; 1986) — funds for reorganization were requested this fiscal year but were turned down by the Ministry of Finance.

Joint university–industry research now amounts to several thousand million yen per year. A further increase of more than ¥1,000 million is called for in 1988. Part of the increased funds will be used to establish five new "joint research centres", in, for example, the universities of Nagoya and Gumma, to carry out research "directed towards the practical needs of society". Three such centres have been established this year in Kobe, Toyama and Kumamoto universities.

In line with government calls for the internationalization of Japan, the education ministry has allotted ¥373 million (\$2.6 million) under "international academic exchange" for a new postdoctoral fellowship scheme that will be run by the Japan Society for Promotion of Science. In the first year, 50 researchers will be invited from the United States and another 50 from European countries. The ministry also hopes to add 100 new fellowships to its domestic postdoctoral fellowship scheme for Japanese researchers,

1988 Science Budget request for Ministry of Education, Science and Culture

	Yen (thousand million)	Percentage increase or decrease
Grants-in-aid of research	49.1	+ 8.8
Maintenance of scientific research system	2.3	—
Promotion of government/industry research	8.9	+13.0
Research fellowships	1.5	+33.6
Nuclear fusion	7.7	+ 0.4
Accelerator physics (TRISTAN)	17.5	+35.7
Space science	20.6	+74.6
Marine science	5.5	+84.9
Earth science	2.1	+ 1.6
Antarctic research	2.9	0.0
Cancer research	2.2	+19.9
International academic exchange	6.8	+23.3
International student exchange	18.2	+25.5
Japanese language education	0.3	+ 7.5

Superphénix leak located but causing concern

Paris

THE site of a leak of liquid sodium from the fuel rod storage tank of the 1,242 MW Superphénix fast-breeder nuclear reactor near Lyons, France, has been identified. Using an auditory technique first tried at Dounreay in Scotland, technicians draining off the sodium located a hole near the base of the tank on 5 September. Specialists will now be able to determine the cause of the fault. The design of the tank makes repair difficult. It is more likely that the whole tank will have to be replaced, an operation could take three years at a cost of over FF400 million (£40 million; see *Nature* 328, 100; 1987).

At present, Superphénix is not essential

for France's domestic electricity needs. Nevertheless, the French nuclear safety advisory board (SCSIN) will meet on 1 October to decide whether Superphénix may safely be started up again without the defective tank.

Pierre Schmitt, director of Superphénix, hopes that the reactor will come on-stream again while repairs to the tank are carried out. As this is France's prototype, and the world's largest fast-breeder reactor, it is the suspension of on-site training of technicians and the loss of operating experience that are of immediate concern to Electricité de France (EDF), the nationalized utility which runs Superphénix.

Peter Coles

French research budget hints no reassurance

Paris

JACQUES Valade, French research and higher education minister, gave scant assurance to scientists last week when he confirmed that 150 new posts will be created in 1988 in the state research institutions (100 at the Centre National de la Recherche Scientifique, 25 at the Institut National de la Santé et de la Recherche Médicale, 16 at the Institut National de la Recherche Agronomique and 9 at ORSTOM, the scientific research, development and cooperation institute). A minimum of 750 new posts had been recommended by the government-appointed consultative body, the Conseil Supérieur de la Recherche et de la Technologie. Valade also announced that the overall research budget will increase by 8 per cent, compared with 1987. This includes both military and civil spending, however, and the exact allocation of resources within the public sector has still to be published.

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bringing the total number of new 2-year awards to 424 next year. And the number of foreign students under the ministry's scholarship scheme will be increased by 528 to 4,873 with a target of 10,000 by the end of this century.

But the biggest proposed increases are for high-energy physics and marine and space science. The research budget for TRISTAN, the world's largest electron-positron collider at the National Laboratory for High Energy Physics, leaps by more than a third to ¥17,500 million. Full-scale collision experiments began at the end of May and most of the extra funds will be used to increase operating hours from 1,800 hours this year to 2,500 hours in fiscal year 1988.

Funds for marine science are almost doubled, but nearly all the budget is consumed in construction costs for a new research vessel for the Ocean Research Institute of Tokyo University.

The most startling feature of the ministry's budget, however, is the proposal to allocate more than ¥20,000 million to the Institute of Space and Astronautical Science. Funds for the Institute hit a peak of nearly ¥16,000 million in 1983 but have since fallen.

The only new proposal in the space institute's budget is a request for about ¥300 million for another X-ray satellite (ASTRO-D) which will be a follow-up to the recently launched Ginga (ASTRO-C). But it will be surprising if the Ministry of Finance accepts in full this huge increase.

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