

must have been unavoidable, some revelations seem to have been made purely as an exercise in détente. Five days before the flight, for example, Professor Igor Konstantinovich Bazhinov, the deputy chief of flight ballistics, admitted on Moscow radio that Salyut-7 had undergone unexpected orbital drift, and that a special correction had been necessary to ensure the successful docking of the "international" crew — a degree of intimacy with his audience that is unusual by Soviet standards.

The French experimental programme for the flight was, in fact, outlined in the CNES annual reports for 1980, and includes sensory physiology (including the vestibular, visual and kinaesthetic systems) and the effects of soft radiation on the developmental capacities of unicellular and multicellular organisms. The biological experiments are a continuation of previous Franco-Soviet work using unmanned probes.

Little has been said, however, about the type of space station to be visited by the "spacinaute". Although all CNES releases spoke cautiously of a "Salyut" station, without giving it a number, they were illustrated by a schematic diagram of Salyut-6. Only after the launch this spring of Salyut-7 was it stated that Chrétien would pass his historic week in space aboard what the Soviets say is a more advanced and more comfortable space station.

Vera Rich

French science loi

Who will lose?

Paris

The long-awaited French law for science and technology, which guarantees a 17.8 per cent annual real growth in government civil research spending until 1985, is now almost on the statute books. At present, it lies under the harsh light of an inter-house committee of the French Parliament, which is attempting to reconcile the differences between the views of the Senate (which all but overturned the law) and the Assembly (which supported it). Second readings are to take place next week but it appears that the law will sail through much as planned by M. Jean-Pierre Chevènement and his team, even if those most affected will be reading its provisions with a magnifying glass to see exactly what has, and what has not, been left in.

One thing that was left out is causing the more cautious of French scientists to pause for thought. The law is divided into three sections: an introduction, the law proper (which is quite short) and an annexe. The full force of law attaches only to the law proper, so one question has been what is to go into the law, and what into the annexe? In the research ministry version, fundamental science is mentioned only in the annexe — where there is talk of 13 per cent growth (less than the 17.8 per cent

total growth, reflecting the fact that the Chevènement plan mostly concerns technology). Some deputies at the Assembly, briefed by university researchers, pushed for the 13 per cent to be inscribed into the law proper, but the government refused.

Does this mean that basic research is going to be less well protected against the current French financial crisis than technology? Some French scientists fear so. The question is how far should Chevènement's technological imperatives, outlined in seven major investment programmes from space to biotechnology, encroach on and influence the whole of science. It is beginning to look as if they will be very pervasive.

For example, new accounting methods are to be applied to the big government research organizations, such as the Centre National de la Recherche Scientifique (CNRS), which means that they will be controlled from the ministry, programme by programme, rather than by total budget. The organizations will also be given explicit new tasks, such as the application of their research to profitable ends.

Even the small protection given to basic science by the ministry of national education may be being eroded, as the ministry appears to be adopting the same priorities as the ministry of research. (In distributing its research money, which amounts to perhaps a fifth of the total obtained by universities, the ministry of national education recently asked universities to favour groups already supported through the ministry of research and technology.)

Nevertheless, the fears may be misplaced if French research is compared with the situation of research in other countries. If the 13 per cent figure is respected — and ministry of research officials insist that although only in the annexe, the figure has force — French scientists will be doing far better than their foreign colleagues. For the sum includes a 4.5 per cent annual increase in the number of salaries, and salaries amount to more than two-thirds of basic research costs. The result is that next year's true research budget — what a laboratory director will have in his pocket to spend — would be up by more than 25 per cent in real terms, an increase so large that one senior researcher said last week that it would be "frankly a problem" working out how to spend the money.

For the ministry, the next problem will be how to raise the money promised, against a sombre French economic background (although the promised figures are only averages to 1985) and then how to put into effect certain structural changes outlined in the law. Not least of these is the reform of CNRS and related organizations which will be given new statutes allowing them to make profitable links with industry. CNRS will also get new rules for electing its internal review body, the Comité National. These new rules are

themselves contentious. It appears that the Comité will exclude university lecturers not at present or previously associated with the organization, thus, according to some, deepening the rift between the universities and CNRS.

Robert Walgate

Laboratory animal welfare

Congress in sight of compromise

Washington

After months of negotiation between animal welfare groups and representatives of the biomedical research community, a bill that would tighten up standards for the treatment of laboratory animals has reached the House of Representatives Science and Technology Committee.

This compromise proposal (HR 6245) is now the only serious contender among the several animal welfare bills filed with the House. It will be taken up by the committee later this month when the House returns from its Independence Day recess. The bill avoids some of the extreme measures that some animal groups had pressed for, such as setting aside up to 50 per cent of the National Institutes of Health (NIH) funds now going to work involving animals used for research into non-animal substitutes. But it would impose strict requirements on the care of animals used in federally-supported research. Researchers would have to justify any distress caused to a research animal and ensure that pain was minimized (through the use of tranquilizers and anaesthetics, for example). No animal could be used in more than one major operative procedure, except in special circumstances.

The legislation grew out of hearings held last autumn by a House subcommittee in response to considerable public pressure. At that time legislation for the protection of laboratory animals was not serving the interests of anyone very well. Under the present law, the Animal Welfare Act of 1966, the responsibility for enforcement falls on the Department of Agriculture (USDA), which critics say is understaffed and cannot do a proper job.

Last autumn, for instance, USDA inspectors found only minor violations in Dr Edward Taub's laboratory just weeks before he was indicted under Maryland's animal cruelty law for causing pain and suffering to monkeys. Although Dr Taub protested that he was the victim of a public relations stunt by a group called People for Ethical Treatment of Animals, which had infiltrated one of its members into Dr Taub's Institute for Behavioral Research in Silver Spring, Maryland, he was convicted of the charges and also had a \$200,000 NIH grant taken away from him. Dr Taub appealed against the conviction, and his case is now being heard.

In an effort to obtain the widest possible support for new legislation, the subcom-

mittee staff consulted groups such as the American Physiological Society and the Association of American Medical Colleges when drafting the bill, as well as animal welfare groups such as the Humane Society of America. The bill was reported out of the subcommittee on 9 June by a 14-1 vote.

Universities still have two strong objections, however, that may be raised in the full committee and may prevent any action being taken. One is that the standards set by the bill are quite high. For one thing, the new legislation would apply to rats and mice, which were exempted from the Animal Welfare Act. (Farm animals would continue to be exempt under the new bill.) Research facilities would also have to be accredited by an organization such as the American Association for the Accreditation of Laboratory Animal Care (AAALAC), which since 1965 has certified about 400

"HE'S THE TOKEN RAT."



facilities under a voluntary programme. Universities claim that it would cost \$500 million to bring the remaining NIH-supported universities up to the very high AAALAC standards.

This objection may be answered in part by a 10-year phase-in provision, which the subcommittee staff says should allow much of the upgrading (installation of new ventilation equipment, for example) to be done in the course of routine laboratory modernization and repair.

The second objection is that research facilities will have to set up animal studies committees and in particular will have to appoint one member from outside the university who is "primarily responsible for representing community concerns regarding the welfare of animal subjects". The committees would act much as human experimentation review committees do.

Balancing these possible objections, however, is an apparently growing recognition by the research community of the benefits that mandatory regulations will bring in terms of public reassurance — much as the recombinant DNA guidelines provided what one scientist calls an "umbrella of trust". This may be especially important now that the effectiveness of the Animal Welfare Act and the essentially voluntary system have been called into question.

Stephen Budiansky

US science societies

Women's rights boycott shadow

St Louis

Although the Equal Rights Amendment (ERA) to the US Constitution has now failed, many states will continue to be deprived of important scientific conferences for years to come. And it is possible that some societies will continue to boycott the fifteen states that dragged their heels on the amendment.

The amendment would have added to the constitution an interdiction of discrimination on the grounds of sex. By the extended deadline of 30 June, however, only 35 of the required 38 states had ratified the amendment, which thus becomes a dead letter.

The boycott was first organized in 1977 by the National Organization for Women (NOW), the most prominent feminist organization in the United States. Convention promoters in non-ratifying states have admitted they lost millions of dollars' worth of business during the ERA boycott. Convention sites in ratified states and Canada benefited.

How societies will respond to the lapsing of ERA is not yet clear. Some have abandoned the boycott, but others with large numbers of women members or which are otherwise committed to equal rights for women and minorities are ambivalent about giving their convention business to non-ratifying states.

The scientific societies that adopted the NOW boycott, and avoided Missouri, Illinois and some southern states none of which ratified ERA (see box), include the American Association for the Advancement of Science (AAAS), the American Society for Cell Biology, the Society for Neuroscience, the Society for Developmental Biology, the Endocrine Society, the American Astronomical Society and the Biophysical Society. But AAAS stresses that its policy on meetings is independent of NOW's boycott.

No complete list of boycotting societies exists, but if the experience of Professional Associates of St Louis is typical, fewer than half of all scientific organizations supported the boycott. Professional Associates handles convention planning for nine science groups, of which three supported the boycott. Of those three, two decided to drop the boycott in booking meeting sites after 30 June.

NOW itself has not decided whether to keep the boycott going past the deadline, but the question is likely to come up at its board meeting in July. Even if NOW formally ends the boycott, it will affect where organizations hold meetings for several years if only because many societies make their meeting plans years in advance.

AAAS, the Society for Neuroscience

and the American Psychiatric Association are booked only in ratified states until the end of 1986, the Biophysical Society until 1985 and the American Society for Cell Biology until 1984. The boycott excluded some of the most popular convention sites in the United States such as Atlanta, Chicago, New Orleans, St Louis, Kansas City and Las Vegas.

Some other societies did not honour the boycott only because it was logistically too difficult. The Federation of American Societies for Experimental Biology (FASEB), for example, says it would have liked to have supported the boycott but "The federation's meetings are so large — 15,000 to 20,000 people — we require 50-60 simultaneous meeting rooms. Only one or two cities in ratified states can provide that." The FASEB meeting was held this year in New Orleans in Louisiana, which like most other southern states has not ratified ERA. But two of the six member societies of FASEB, the American Society of Biological Chemists and the American Association of Immunologists, do honour the boycott when they meet as separate groups.

AAAS acknowledges that it has been inconvenienced by its stand, especially when it switched its 1979 meeting from Chicago to Houston in order to hold the meeting in a ratified state. "It's always inconvenient to move a meeting in less than a year's time. We had to be in several

Non-ratifying states

The 15 states that did not ratify ERA are: **Alabama, Arizona, Arkansas, Florida, Georgia, Illinois, Louisiana, Mississippi, Missouri, Nevada, North Carolina, Oklahoma, South Carolina, Utah, Virginia.**

different places in Houston." AAAS meetings can draw 4,000 to 8,000 people.

Germal Sanderson, vice-president for sales of the Chicago Convention and Tourism Bureau, acknowledged that cancellation of business meetings had caused "significant losses". He estimated that 23 groups cancelled previously scheduled meetings, costing the city more than \$11 million. The effect of the ERA boycott could last until 1989, he said.

Nobody knows if the boycott helped or hurt the movement to ratify ERA. People representing boycotted convention areas agree that it did not help the ratification effort and may have hurt it.

Jim Hutchinson, director of convention sales for the New Orleans Convention Bureau, says "It was ridiculous to begin with. It inconvenienced a lot of people and not another state has ratified since it started". NOW itself does not know if the boycott swung any legislators' votes its way. "It certainly was effective in terms of dollars lost" says Judy Murphy, NOW press secretary. "But if it helped, it was just one or many things we did." **Karen Freeman**