

UK council seeks £60 million 'pulse' to ease LHC burden

London. Britain's Particle Physics and Astronomy Research Council (PPARC) is seeking an extra 'pulse' of funding of about £10 million a year over 6 years to help to offset the costs of its contribution to the Large Hadron Collider (LHC) being built by the European Laboratory for Particle Physics (CERN) in Geneva, Switzerland.

The plan represents a novel approach to the financing of major research facilities, as PPARC officials say that they would, if necessary, consider accepting this 'pulse' as a loan from government, to be paid off over the lifetime of the new accelerator, expected to be about 20 years.

But it also coincides with widespread criticism in the particle physics community of the first step in PPARC's declared strategy for remedying the budgetary crisis facing their discipline, namely that it intends to seek a reduction in its contribution to CERN — a move whose likely failure, say physicists, could leave them even worse off than they are at present.

The difficulties facing PPARC stem from two factors. One is the general squeeze on the science budget, coinciding with demands from researchers for increasingly expensive equipment. The second is a relative increase in the size of the UK contribution to CERN, due to a combination of the strength of the British economy, and the fall in value of the pound against the Swiss franc (in which the subscription is paid).

The result is that, at current funding levels, the £70 million (US\$105 million) a year that Britain's contributes to CERN — and which will be used to help build the LHC — will leave the domestic particle physics budget, needed to pay for the preparation of experiments on the machine, starved of funds.

Concerned at the extent to which the CERN contribution now dominates its whole budget — and in particular its impact on astronomy projects — PPARC's council agreed last month to 'cap' total spending for particle physics, including the CERN subscription, at a level of about £95.5 million a year.

This proposal, combined with a statement of its intention to seek a reduction in the CERN contribution in order to be able to increase domestic spending on particle physics, was included in the council's 'business plan', which has since been submitted to the government.

The problem, as PPARC officials admit, is that other CERN members are unlikely to listen sympathetically to the request for a reduction, particularly as the UK government can no longer justify such a request on the grounds of economic difficulties (as

Germany, for example, was able to do in the period immediately after reunification).

It was with this in mind that Ken Pounds, the chief executive of PPARC, told the House of Commons Select Committee on Science and Technology last week of the new funding proposal, pointing to what he described as the "lumpy" nature of investment in major research facilities.

Pounds said that the total amount of money needed both to help build the LHC and to participate adequately in experiments "considerably exceeds any expectation from our current plan". One way around this, he said, "would be to secure an extra injection of money over a finite period of time; but we need help from government to do that."

He suggested a figure of about £10 million year over the six years 1998 (the first year of construction of LHC) to 2003 to get over this problem. Peter Williams, chairman of PPARC — and of the company Oxford Instruments — justified this as being similar to a request for capital investment by an industrial company, to be written off over the lifetime of a project. "We want an exceptional capital fund during the lifetime of LHC that will relieve the pressure on the current revenue account."

Williams also promised that the controversial decision at the last meeting to cap the total funding for particle physics — a decision that could lead to serious difficulties if the CERN subscription is not reduced and no extra money is forthcoming from government — would be "revisited" at the council's next meeting in June.

This announcement has dampened some of the criticism of the research council's strategy from the physics community, which last month led those attending a 'town meeting' of particle physicists to the verge of passing a motion of no confidence in Pounds and his staff (see *Nature* 380, 576; 1996).

Asked whether the cap would be retained if there is no reduction in the CERN subscription, Williams said that it would be "unrealistic to imagine that we would fix a cap now and stay with it forever".

Peter Kalmus, professor of physics at Queen Mary College, London, said that he was relieved that "there seems to be a bit of backtracking", even though there had been no commitment yet to a change of policy. But Roger Cashmore, professor of experimental physics at the University of Oxford, and one of three authors of a letter to *The Times* last week criticizing PPARC, says: "We are still going to keep the pressure on".

David Dickson

'Voucher' scheme will give costed access to facilities

London. The main research council sponsoring the physical sciences in British universities is introducing a system of 'virtual vouchers' to provide support for the use made by academic researchers of major research facilities.

In the past, such facilities — for example, large lasers or synchrotron X-ray facilities, located primarily at the Rutherford Laboratory outside Oxford and at the Daresbury Laboratory in Cheshire — were financed directly by the research councils. Researchers then put in bids for time on the machines, without having to take account of the costs involved.

In future, all those applying for grants from the Engineering and Physical Sciences Research Council (EPSRC), which supports £210 million (US\$317 million) of research a year, will include in their application a request for a certain amount of time on large equipment.

The value of this time will have been calculated on the basis of running costs obtained from the laboratory operating the facility, and will be included explicitly as a cost in the grant application. If the grant is awarded, this money will not go to the researchers but directly to the laboratory concerned.

"There has been a strong feeling [at the EPSRC] that we need to get our use of facilities in order," says Richard Brook, chief executive of the research council. "When we looked at how our 'cake' is divided up, it became clear that a substantial proportion of our funding goes towards these major facilities, but that this money was somewhat out of control, as it was not being evaluated against other demands [on the research budget]."

According to Brook, this new way of operating is consistent with the decision, taken in the government's white paper of May 1993, to 'spin off' the Rutherford and Daresbury laboratories to a separate organization. Both are now the responsibility of a body known as the Council for the Central Laboratory of the Research Councils (CLRC).

As far as the laboratories are concerned, contributions towards their planned operating budget for any one year from the EPSRC will be at the level of the use made of the facility by EPSRC grant recipients in the previous year. "The laboratories are happy with this new arrangement, and we are happy with it," says Brook, who claims that the new system will make the whole process of paying for the use of major research facilities more 'transparent'.

D.D.