

Is Stanford's false economy on collider costing dear?

Berkeley

AFTER more than a month of operation, the new linear collider at the Stanford Linear Accelerator Center (SLAC) is still not producing Z^0 particles, and SLAC has assembled a task force to tackle the problem.

Early trials demonstrated the feasibility of the new collider, which accelerates bunches of positrons and electrons in a linear accelerator, then diverts them through opposing arcs which focus them on a collision course. But problems associated with the collider's cost-saving construction have hampered full-scale operation.

When focusing the beam earlier this year, SLAC ran into trouble because of the irregular shape of the arcs, the result of construction that saved money by following the contours of the hillside (see *Nature* 333, 8; 1988).

The current problem is the inability to maintain stable, reliable delivery of elect-

ron and positron bunches to the arcs. SLAC spokesman Michael Riordan says the problems are due to a high failure rate of components in the 20-year-old linear accelerator.

Only 3 per cent of the operating time in July was suitable for data collection. The task force will attempt to identify changes necessary to raise that to 50 per cent or better.

Marcia Barinaga

Some experts have already expressed doubts about the wisdom of "cutting corners" at SLAC in order to compete with European rival CERN. Writing in *Nature* last September, a correspondent concluded that "even if [SLAC] is the first Z^0 factory to operate it could be that if LEP runs to specification, its superior luminosity will allow physicists at CERN to mop up all the exciting results" (*Nature* 329, 107; 1987). CERN's Large Electron-Positron Collider (LEP) is now in the final stages of construction, with the first collisions due next year. □

Another chance to reorganize India's science planning

New Delhi

MR Rajiv Gandhi, the Indian prime minister, has been asked to establish a National Science and Technology Commission (NSTC) to integrate science and technology into economic planning. This is one of the chief recommendations in the *Perspective plan for 2001 AD* drawn up by Gandhi's 11-member Science Advisory Council (SAC), created two years ago specifically to evolve a strategy for using science as a tool for economic development.

In the past, atomic energy, space, electronics and other agencies have pursued projects in isolation, and knowledge generated by them "is not adequately being utilized in the growth of the national economy", says the SAC report released last week. The document, to be discussed in larger scientific forums before its formal adoption by the government, is said to provide a new prescription for integrating science with economic planning.

NSTC is expected to identify technology missions and to integrate science into planning by coordinating the work of government and of private and public sector agencies concerned with technology development. The planning commission and NSTC will forge a relationship under which the former will set goals and the latter will supply scientific input to achieve them.

SAC's proposal for a separate commis-

sion is seen as a reflection on the science cell within the Planning Commission. At present headed by Professor M.G.K. Menon, who is also the prime minister's science adviser, the cell is supposed to provide the appropriate science inputs for planning. But in SAC's view, the cell merely allocates funds to projects already identified by scientific agencies without taking account of overall planning and relevance to national needs. "We are convinced", says Professor C. N. R. Rao, chairman of SAC, "that there is need for considerable change in the manner in which we use science and technology in the total planning process and the way we execute the plans."

Rao said the perspective plan, if implemented faithfully, will help to double food production and gross national product (GNP), arrest population growth, bring health and literacy to a vast majority, reverse erosion of ecology and make a major dent in housing and unemployment, besides making India a leader in a few selected areas of science and technology by the turn of the century. To achieve all these objectives, SAC estimates that India must invest 2-3 per cent of GNP in science and technology, compared with 1 per cent at present. Specific proposals include a new system of links between universities and national laboratories along the lines of the Centre National de la Recherche Scientifique in France, and a centre for

Call for scientific bric-à-brac

London

A UNIQUE and diverse international collection of scientific apparatus is being assembled by the British Science and Technology Trust for auction next year. And with the money raised, the trust will set up an international science centre for the blind and handicapped.

Professor Paul Cook of Brunel University, president and founder of the trust, has contacted more than 500 academics for donations, and is overwhelmed by the response. Items collected so far include the compass used by Sir Alec Rose when he navigated the world; the chair of Nobel prize winner Sir Peter Medawar; a piece of the purest platinum; a linear accelerator; early X-ray crystallography pictures that led to discoveries in genetics at the Lab-



What am I bid? Paul Cook offers a slide-wire potentiometer used by the MRC in 1920 to calibrate a linear accelerator.

oratory for Molecular Biology in Cambridge; and equipment used in early experiments in radiation physics. The trust is also hoping for an old Superfortress plane.

A synthetic diamond given to Sir Alan Cotterell, and some pure platinum, have also been donated and are to be made into a ring by Aspreys, the royal jeweller. One company, which has asked to remain anonymous, has suggested that industry collaborate to buy the ring for the prime minister, Margaret Thatcher. And the company, which estimates the ring's value at £250,000, has put forward £10,000. The trust hopes to raise the public profile of science and to interest young people. Any money raised over the £250,000 needed to set up the centre will pay for scholarships and visits to science institutions.

Christine McGourty

advanced study in basic science similar to that at Princeton, New Jersey.

Whether or not Gandhi will act on SAC's recommendations remains to be seen. Fourteen years ago, the late prime minister Mrs Indira Gandhi asked scientists to prepare a science and technology plan, but the two volumes produced by a committee after five years of labour is now gathering dust. K.S. Jayaraman