



CERN's 300 GeV accelerator may fall out of the high energy spectrum, leaving Weston as the only next step.

## 300 GeV on the rocks

The British decision to withdraw from CERN's giant accelerator costs the plan \$19.2 million a year and much of its grip on life.

High energy physicists' plans for the next generation of accelerators has been a three-legged stool: the 200-400 billion electron volt (GeV) machine at Weston, Ill., the 300 GeV planned by the European consortium, CERN, and Russian design studies of a 1,000-up GeV accelerator.

One of the legs was looking mighty wobbly last week, as Britain's announced withdrawal from support of the CERN machine had shock effect on the other 12 member-nations of the organization.

The British are neither deliberately scuttling the 300 GeV nor do they seem to be trying to play international prima donna; rather they are worried about the shaky state of their own economy and the stability of the pound. As NATURE puts it: "... the inspectors

from the International Monetary Fund are forever paying inquisitive visits."

Prime Minister Harold Wilson has declared that his policy would be to support only such European cooperatives as would yield the kind of technological results that would build European industrial capacity to the point of meeting American competition.

The CERN 300 does not meet that criterion.

A possible further influence on the British decision may have been the complicated negotiations over a site for the 300. The installation would have the impact of a sizable new industry on any place where it was located, and many places wanted it. Nine sites were still in the running.

A committee of three, the so-called three wise men, Professor J. K. Boggild

of the University of Copenhagen, André Chavanne of Switzerland and J. H. Bannier of the Netherlands, had just reported with a rating of the sites. The British site, at Mundford, got a low rating. Best rated was the French site at Le Luc in the Provencal uplands near the Riviera; second was the Italian at Doberdò.

Some observers have suggested that the British might have stayed in if their site had got a better rating.

Infighting in the British scientific community has also been suggested as a factor. The annual British contribution to the new accelerator—8 million pounds—equals the whole budget of the nation's Medical Research Board, and the pressure from the have-not disciplines has been mounting, and telling.

British reaction to the decision was



*CERN member nations. Which ones will buy the big accelerator?*

mixed. *NATURE* called it shabby, but the *NEW SCIENTIST* editorially agreed with the Government.

Prof. J. M. Cassels of Liverpool University regards the decision as "wholly deplorable. The whole physics world, solidly lined up with this sentiment, will persistently campaign for reversal of this foolish decision."

Prof. E. H. S. Burhop of University College, London, calls the decision shocking. "It has led," he declared, "to a sense of frustration and disillusionment among young British nuclear physicists. . . . The Government made a great play about British technology helping Europe, but now at the price of one nuclear submarine over 10 years has contradicted itself."

And Prof. Brian Flowers, leader of the British CERN delegation, called the news he had to give the CERN Council "the unhappiest, most deplorable statement I have ever made." He urged fellow European countries to go right on.

First reaction in the rest of Europe was a kind of rallying round the flag. The British decision removes a quarter of the proposed 1,776 million Swiss franc budget for the 300, but CERN

people are talking of going on with a cheaper project. Among the suggestions is making a start with a 150 GeV or 200 GeV machine and expanding later.

But observers outside the organization feel the CERN people are whistling among the tombstones. They fear the British decision will start a falling-domino effect.

Prof. Böggild believes that collapse of the 300 is hardly a catastrophe since storage rings are being built for CERN's present synchrotron.

But Dr. Lars Perrson, research assistant secretary of the Swedish Atomic Research Council, points out Europe's high energy lead because of present equipment and cooperative agreements with Serpukhov. "It would be a pity to lose this lead. The other nations should be able to accept the extra costs."

Governmental reactions from the Scandinavian and Benelux countries are not expected momentarily. Their expected financial contributions are small, and their policy all along has been to await decisions of the larger powers.

Dr. Bannier, who is director of the Netherlands Foundation for Fundamental Research, is optimistic in the

long run. Britain did not join CERN when it originally started in 1952, but came in later, and many in the Benelux countries feel they will come into the 300 project once it gets going.

Some days after the British decision was announced, the West German Atomic Energy Commission recommended German participation. A formal Government decision is expected by the end of July or beginning of August.

Dr. Wolfgang Paul of Bonn University, for three years a member of CERN, shares the general European dismay. "But," he says, "I think the project will come. It may be smaller than the 300 GeV we hoped for, and it may come later than we would have liked. . . . The big danger is that a chain reaction will set in, and other countries will follow the British lead."

**The official outward** French reaction is go on. "Whatever national sacrifices are necessary France will not withdraw . . .," says Prof. Francis Perrin, French representative to the CERN Council. But the British withdrawal was said to be causing relief in French fiscal circles, hard hit by the May revolution. The French are said to be privately desirous of reconsidering their decision to go but unwilling to accept public opprobrium for torpedoing the project. This the British may have done for them.

American observers tend to agree with Atomic Energy Commissioner Gerald F. Tape that collapse of the European project would make the U.S. Weston project even more urgent than it now is. Congress seems to be about to impose a slowdown on Weston, but, says Dr. Tape, comments of influential members indicate the reason is general budget problems and not disenchantment with the idea of the Weston accelerator.

Dr. Wolfgang K. H. Panofsky of Stanford, who has dealt successfully with government budgeteers in the past, also sees no long run trouble for Weston. In his view, too, Congressional opinion remains favorable to the project.

**But American accelerator** people are generally unhappy over the British decision, says Dr. Panofsky. What happens now, he feels, depends on the French and the Germans. A commitment to go ahead on the part of both—and the Germans have just about said so—could be enough to build the 300 without Britain, he feels.

Dr. John P. Blewett of Brookhaven National Laboratory shares the unhappiness over the British decision, but feels it means only a postponement of the project. The rest of Europe will go on, he feels, and the British may reassess their action.