

# High-energy accelerator panic

Stringency or policy could  
close one after another

Fundamental science is not a profit-making activity. To pursue it requires economic patronage, and in modern times that patronage comes from governments. For a long time it has been thought that the United States had, implicitly if not explicitly, a policy of supporting basic science, and particularly of following the most basic of physical sciences, high-energy particle physics.

Over the years this putative national commitment to high-energy physics has led to the construction of ever more energetic particle accelerators as physicists have proceeded further and further toward the most fundamental constituents of matter. The seven operating high-energy accelerators range in energy from the 3-billion-electron-volt (GeV) Princeton-Pennsylvania Accelerator to the 30-GeV Alternating Gradient Synchrotron at Brookhaven National Laboratory. A 200-400-GeV accelerator is being built at the National Accelerator Laboratory in Batavia, Ill.

**Physicists** inside the Government and out now believe that the Bureau of the Budget has put a ceiling on the high-energy physics budget, which will lead to closing an accelerator a year, and that the Atomic Energy Commission has a priority list. The list is not being officially admitted, but Rep. Chet Holifield (D-Calif.), chairman of the Joint Committee on Atomic Energy, refers to the first losers as the Princeton-Pennsylvania Accelerator, the Cambridge Electron Accelerator and the Bevatron at Berkeley, Calif.

In a hearing this week on the AEC high-energy physics budget request for fiscal year 1971, Holifield compared five-year budget projections supplied to him by the AEC last year with those supplied this year. The two projections overlap for fiscal years 1971 through 1974, and Holifield compared the cumulative amounts projected for each accelerator for this period.

The 1970 projection gives 67 percent less to the Cambridge Electron Accelerator

than the 1969 one would have done, 39 percent less for the Stanford Linear Accelerator Center, 16 percent less for the Zero Gradient Synchrotron at Argonne National Laboratory, 9 percent less for the Alternating Gradient Synchrotron and 4 percent less for the Bevatron.

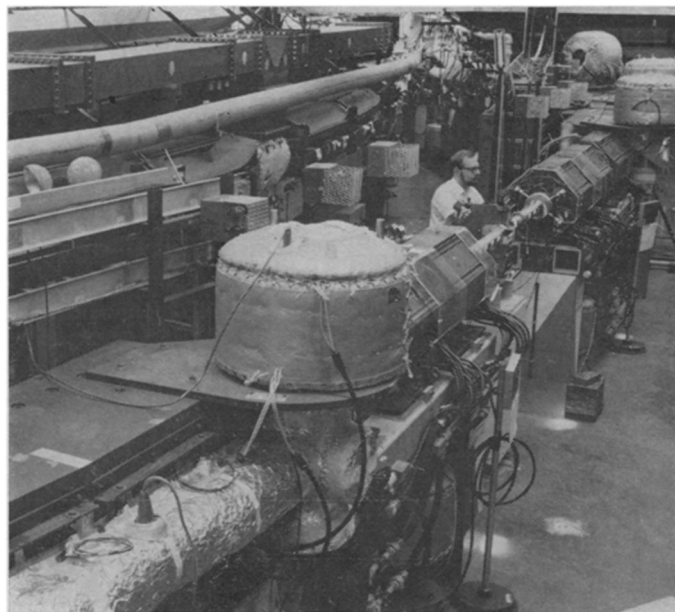
The Budget Bureau denies a long-term ceiling. "The President did certain things in the context of the 1971 budget," says a spokesman. "What 1972 will bring, I don't know."

**The only place** the 1970 projection showed an increase over the 1969 one is 2 percent for the National Accelerator Laboratory. The Princeton-Pennsylvania Accelerator is not on the list because the AEC has decided to close it by 1972 (SN: 2/7, p. 148).

Holifield points out that this gloomy projection came at a time when the commission's High-Energy Physics Advisory Panel had recommended modest increases in most of the programs and had wished there could be substantial ones. "No one at the Budget Bureau seems to have read it (the panel's report) or believed it if they did read it," says Holifield.

Dr. Paul McDaniel, director of AEC's Division of Research, denies that a deliberate policy or a change of philosophy is involved. The drops in the five-year spending estimates represent the "realities of fiscal stringency," he says.

But if the stringency continues, says Dr. Carl York of the White House Office of Science and Technology, "I can foresee the time of only two machines: the Stanford Linear Accelerator and Batavia." He says that the White House and Budget Bureau have told the AEC it may not expect increases in its high-energy budget, and therefore in



CEA/R. J. Levy

*CEA: Half a program this year, then maybe none.*



AEC

*McDaniel: No change of philosophy.*

face of rising costs it seems likely that the AEC will have to close accelerators.

"They aim to cut the budget in general during inflation," says Dr. Glenn T. Seaborg, Chairman of the AEC. "High-energy physics is very visible and has been vulnerable. I haven't heard anyone enunciate that (attrition of accelerators) as a policy."

The AEC says there are no official plans to close any accelerators beyond the Princeton-Pennsylvania Accelerator. But it has cut the Cambridge Electron Accelerator's program in half. "I doubt there are any evil plans," says Dr. McDaniel, but he goes on to say: "We are closing the PPA and putting pressure on the CEA. Maybe some people think the CEA is next."

"We're going to fight to keep it going," Dr. McDaniel told Holifield. He concedes however, an inability to refute the reasoning of those who believe that if there is a next closing, it will be CEA. □