News and Comment

High-Energy Physics: Budget Cuts by House Committees Contrast with Easing of Funds for Other Fields

As the current session of Congress shows signs of a more generous attitude toward research expenditures, one exception—high-energy physics—stands out and offers some instruction on what's troubling the legislators as they weigh requests for money for science.

It must be recognized at the outset that high-energy physics and its congressional setting add up to a unique situation, and perhaps too much can be read into the decision to withhold a few million dollars from the high-energy budget. Legislatively, the field comes under the jurisdiction of the Joint Committee on Atomic Energy, whose first affection has always been the promotion of atomic energy. And, as many administration science advisers have come to realize, high-energy physics is the area of basic research that is simultaneously the costliest and the most removed from lay understanding and visible applications. Thus, if basic research is to encounter political difficulties, it is not surprising that this $210-million-a-year field should be singled out for attention.

That it is receiving such attention is now apparent. The House, which tends to be the more niggardly of the two chambers, seems to have gotten over its reluctance to promote resumption of the annual growth of the basic research activities supported by the National Institutes of Health and the National Science Foundation. But, in recent weeks, both the Joint Committee on Atomic Energy and the House Appropriations Committee let it be known that they feel particularly uneasy about the rapid growth of the high-energy physics program, and each underlined its concern by conspicuously snipping at the AEC's high-energy budget request for the 1965 fiscal year, which starts 1 July. When all is said and done, high-energy activities will end up with something more than they had in the current fiscal year, since the cuts still permit the high-energy budget to rise above the current level. But the reductions are significant, not only because they will have to be translated into a reduction of activities but because they symbolize a disenchantment with a field of research that heretofore was able to write its own ticket in Congress.

The Joint Committee, which has previously expressed concern that high-energy physics was booming financially while nuclear applications were encountering money troubles, cut $4 million from the AEC's physical research budget, including a $1.8 million reduction specifically designated for high-energy physics. It then went on to warn that it wanted a long-range high-energy program laid out for its approval before it would consider any increases beyond what it was approving for the forthcoming fiscal year—a not-at-all subtle threat to plans for building new and extremely large and costly accelerators.

National Policy

"The committee," it declared, "does not believe that it should approve or participate in setting the stage for such massive increases in funds without a clearly defined national policy on high energy physics. A position must be taken by the executive branch as to the longrange technical goals and plans for this program. . . . Pending the receipt and evaluation of [a longrange plan] it will be difficult to justify levels of funding for high energy physics any higher than that authorized by this committee for fiscal 1965."

As a legislative committee, the Joint Committee simply sets a ceiling on what can be spent. The decision on how much is to be appropriated rests with the appropriations committee, which, in this case, fell in step with the concerns of its Joint Committee colleagues. It endorsed the $4 million physical-research cut by the Joint Committee and cut an additional $8 million. The appropriations report left it to the AEC to determine how these reductions would be allocated among various physical research activities, but it did note, in connection with high-energy physics, that "this program has grown from $121 million in 1960 to $210 million allowed for 1965. . . . For the third consecutive year, the committee would like to reiterate the admonition that there be a tightening up in the process of selecting areas and subjects of research undertakings *with greater emphasis on overall usefulness* [italics added] of the potential results. It aligns itself completely with the position of the Joint Committee. . . ."

An examination into the "why" of these congressional actions initially encounters a number of obvious answers. By virtue of its expense and rapid growth, high-energy physics would inevitably attract congressional attention. Furthermore, the Joint Committee, although it has a long tradition of generous support for high-energy physics, quite understandably finds more joy in atomic power and other nuclear applications than it does in new-found particles. And it has not been pleased to note that spending on applications has been leveling off while high-energy physics continues to grow. Finally, the appropriations committee rarely ever turns down an excuse to cut back on spending, and if the nuclear-loving Joint Committee is willing to slice money from the AEC's budget, it's too much to expect the appropriations committee to look for error in that decision.

Thus, one doesn't have to probe too deeply to find causes for the cuts. But, underlying the affection for applications as compared to basic research, and underlying the demand for what amounts to a plan of the unplannable, is another problem, a very fundamental one for the future of high-energy physics—namely, that the nation's high-energy physicists have performed abysmally in telling the public and the Congress why the nation's taxpayers should spend $200 million a year or more on this particular activity. Several years ago, when a panel under Norman Ramsey, of Harvard, made recommendations for high-energy physics activities over the next 18 years, it observed that better

public understanding would be necessary to obtain support for the projected growth. However, if anything is being done to obtain such understanding, it has managed to remain remarkably well concealed. And, when the average citizen drives past Brookhaven or Argonne, it is a safe bet that the only thing he knows about the activities inside is that he's paying for them.

To correct this situation is a task calling for the cooperative efforts of scientists and public relations men—a combination, it should be acknowledged, that does not often work well in tandem. But the basic facts are that the high-energy physicists have a good story to tell; that the excitement and importance of their work can easily be communicated, even if the details are beyond the comprehension of the layman; and that the tools of their trade—the giant accelerators—could readily compete with NASA's rockets in stirring the general public's imagination.

Quiet Please

Undoubtedly, the prospects of getting involved in a publicity carnival would be repugnant to scientists who want to do their work and be left in peace. But there is a happy middle ground between virtually ignoring the public and grasping at every trick for attention. And since the high-energy physicists want the public to pay for their machines and pay their salaries, it is not unreasonable that they be asked to tell the public why. Not all problems would melt away if the general public had some understanding of the potential return on this huge investment, but public and congressional attitudes might be considerably different. When one considers the scientific importance of high-energy physics, it seems curious that no one in Congress has raised the question of whether we are spending too little in this field. Considering the level of support, it's improbable that we are. But, whatever the financial realities, high-energy physics, alone of all the activities supported by the U.S. government, has no congressional champion arguing for more money. The reason could be that it has enough, but a more probable explanation is that Congress has been voting billions for high-energy physics without any of the recipients of this money making it their business to educate the membership as to what it's all about.

—D. S. GREENBERG

"Science Year": 1965 Designated by Johnson for Stressing Efforts Directed toward Human Welfare

Last week, in a commencement address at Holy Cross, President Johnson laid considerable stress on the social utility of science. The U.N., he noted, has designated 1965 as International Cooperation Year. "I propose," he said, "to dedicate this year to finding new techniques for making man's knowledge serve man's welfare. Let this be the year of science."

If the President has any new programs or plans in mind, they remain to be revealed. As has been the case since World War II, the United States is currently involved in a large variety of international programs concerned with science and technology, and since many of these are fairly complex undertakings, they are stretched out over long periods of time. Presumably, the President was referring to a number of these as part of the "year of science," but whether anything new will happen now that this label has been offered was not stated.

The President said he will be able to report to the Third International Conference on the Peaceful Uses of Atomic Energy that the United States has achieved an "economic breakthrough" in the use of large-scale power reactors. This development, he explained, "offers a dramatic prospect" for economic desalination.

In addition, the President said, "I intend to expand our efforts to provide protection against disease." The success of a pilot program to provide immunization against measles in West Africa has "enabled us to proceed, this year, with a program to immunize one-fourth of the susceptible population in seven countries of West Africa." The U.S. will also expand "efforts to prevent and control disease in every continent. . . ."

And, he said, this country will "move ahead with plans to devise a worldwide weather system—using the satellites and facilities of all industralized countries."—D.S.G.

Announcements

A committee to examine the needs and potentials of U.S. **chemistry research** has been established within the National Academy of Sciences–National Research Council's division of chemistry and chemical technology. The 15-member committee, headed by Frank H. Westheimer, Loeb professor of chemistry at Harvard, is inquiring into the "present status of chemical research and the levels of support required to assure its continuing vigorous development." The American Chemical Society has provided a $50,000 grant to help support the survey, and will assist the committee's ten panels in obtaining information needed for the study. The panels' reports are expected by late summer, and the final report of the committee by the end of this year. The members of the committee are William O. Baker, Bell Telephone Laboratories; Theodore L. Cairns, DuPont; Melvin Calvin, University of California, Berkeley; Bryce L. Crawford, Jr., University of Minnesota; H. S. Gutowsky, University of Illinois; Franklin A. Long, Cornell; Robert W. Parry, University of Michigan; Kenneth S. Pitzer, Rice; Charles C. Price, University of Pennsylvania; John D. Roberts, Caltech; Harrison Shull, Indiana University; Walter H. Stockmayer, Dartmouth; Gilbert Stork, Columbia; and Henry Taube, Stanford.

Scientists in the News

Eric A. Walker, president of Pennsylvania State University, has been elected chairman of the National Science Board, governing body of the National Science Foundation. He succeeds **Detlev W. Bronk.**

The National Park Service has appointed **George Sprugel, Jr.**, chief scientist of the new division of natural science studies. He was previously director of the environmental biology program at the National Science Foundation.

George Cooper, Jr., professor of radiology at the University of Virginia Hospital, Charlottesville, has been named chairman of the radiology department at the University of Tennessee's medical college and chief of radiological services at the City of Memphis Hospitals, effective 15 September.

Samuel B. Gould, president of educational television station WNDT-TV channel 13 in New York, has been appointed president of the State University of New York, effective 1 September.