LETTERS

A place to be heard

The Schwartz amendment and the debate thereon were unfortunate because member attention was diverted from the important issue, member alienation. We should not debate or vote on political or public issues that possess little or no scientific implication.

But there are public questions, I submit, that could be the proper province of American Physical Society discussion because they heavily involve science and the scientific community. The real issue is that there is not only no mechanism within the APS to discuss these questions, there is even no mechanism to decide whether to discuss them. There is the Committee on Physics and Society (COMPAS) within the American Institute of Physics, but my impression so far is that it has had little interaction with most of the APS membership and indeed has so far remained invisible. I don't want to "vote" on the Weston location, for example, but I certainly want some place to express my opinion within APS, where I know that I will be heard and can judge the results.

As Robert Cairns noted in his letter here in the March issue of PHYSICS TODAY, the American Chemical Society has formed a continuing committee especially to examine questions that embrace science and public policy. It actively receives, by way of open meetings, member opinion on suitable topics. I urge that APS adopt a similar mechanism. Such a group would be free to examine any question and make any recommendation. If APS councilors will trust this group not to make irresponsible pronouncements concerning the war, I will trust it to take my suggestions seriously. I must say that such mutual feelings of trust do not appear currently to obtain between the APS Council and the membership.

DAVID M. WETSTONE
Hartford, Connecticut

Declining interest, 1699

It will not be long before we have figures for the new academic year on the enrollment of students majoring in physics. The release of these figures will no doubt lead to a continuation of the debate on whether young people are losing interest in the physical sciences. I would like to point out that in 1699 Gottfried Wilhelm von Leibnitz wrote a letter to the mathematician John Wallis in which he says that interest in the physical sciences seems to be declining, commenting that ". . . very few of our juniors are ambitious to attain the glory of their predecessors." Wallis replied to Leibnitz as follows:

Oxon, April 20, 1699.

"Sir, What you complain of, that the sublimer studies are not now pursued so eagerly as formerly, and nature has fewer diligent observers, may be in some measure true; but it is not to be wondered at that the studies of men should have their vicissitudes like all other things. Doubtless in the present age, which is now drawing to a period, knowledge of all kinds has experienced very great and even unhoped for improvements, as physics, medicine, chemistry, anatomy, botany, mathematics, geometry, analytics, astronomy, geography, navigation, mechanics, and even, what I least rejoice at, the art of war; and indeed far greater than for many ages before. For formerly men seemed to aim at nothing more than to understand what had been delivered by Euclid, Aristotle, and the rest of the ancients; having little concern about making any further progress, as if they had established the limits of the sciences, which it might be presumptuous to extend. But after some few had ventured to look further, others were thence encouraged to enter the wide field of the sciences. Thus a new ardour, a new effort, urged them to attempt new things, and indeed not without success. But when the novelty ceased, this new ardour gradually declined. Many of the diligent scrutinizers of nature are dead, and others must soon follow them; and the novelty of the subject will no longer, as before, excite the young men to tread in the steps of their predecessors.

"The matter also itself was great, but is now partly exhausted; so that a harvest is not to be expected, but

Meanwhile, back at the accelerator...

The neutron, having been released during the collision of a deuteron and a target nucleus of tritium, flew over to the heavy water, where it generated two more neutrons. One of these travelled back to a detector, which had actually been waiting since an alpha particle from the d,T collision started the time-of-flight clock.

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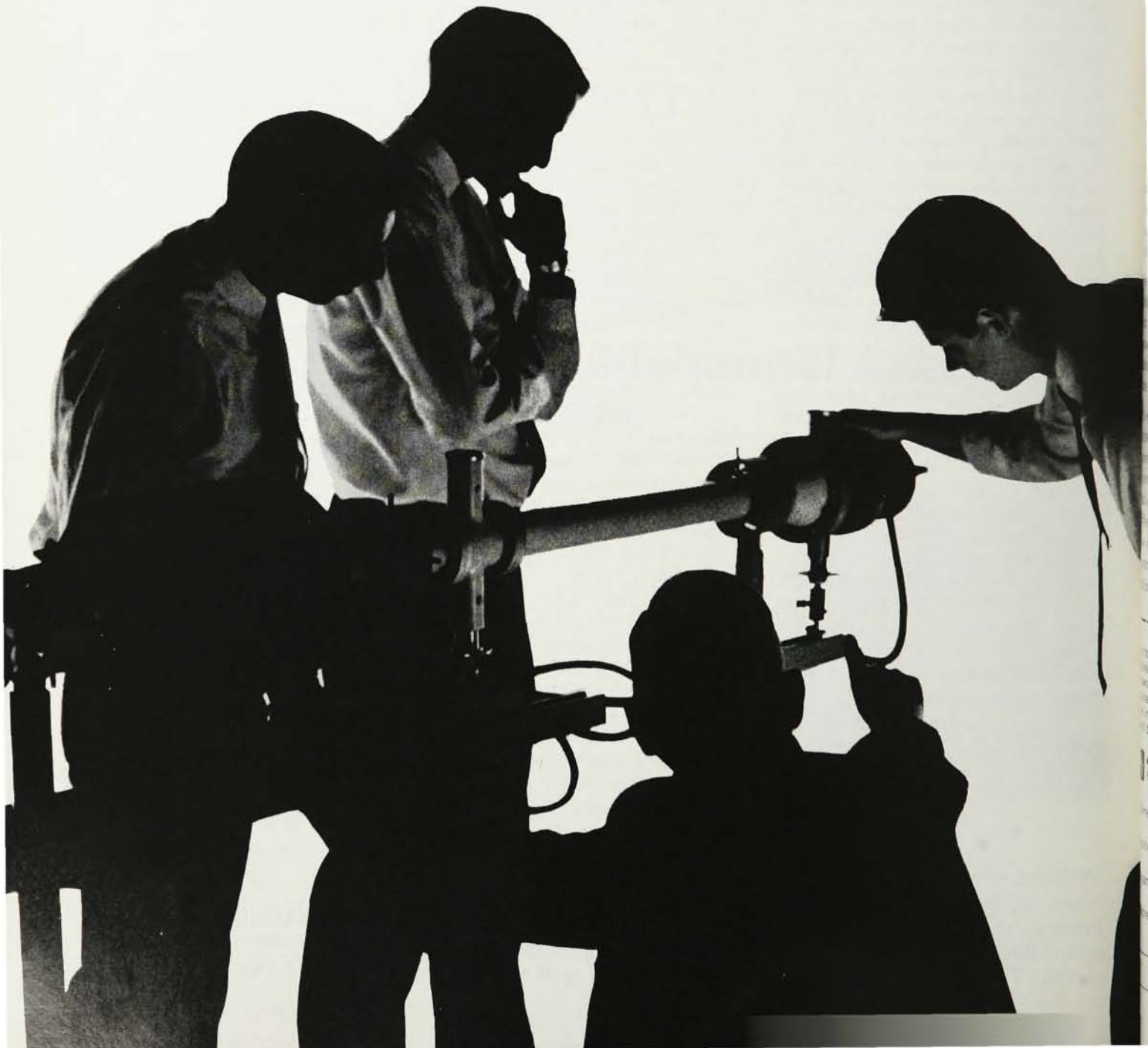

only a gleaning; and it seems reasonable to allow that those that are tired and wearied should have some rest. Nay it may happen, though I wish it may be otherwise, that the sloth of the next age may exceed the industry of the present."

RAYMOND BOWERS
Cornell University

Smithsonian is international

In your October article, "The Deutsches Museum and How it Succeeds," the statement is made (page 50) that the Smithsonian Institution is "concerned only with accomplishments in the United States." One would not expect such a statement from anyone who had actually seen the exhibits of science and technology in this museum; for the visitor to the exhibits of the physical sciences, for example, would see, as he entered, exhibits relating to Jesse Ramsden (English), Ptolemy (Greek), Willebrod van Roijen Snell (Dutch), Johannes Kepler (German) and a number of other "foreigners" before he encountered anything American. Indeed the editorial in the same issue of PHYSICS TODAY quotes the label from one of our exhibits dealing with Galileo Galilei! It is true that we have few original objects from such eminent Europeans, but this is also true of the Deutsches Museum—and indeed of all others.

Inasmuch as your magazine may have given its readers the impression that the Smithsonian is not interested in science and technology except as they relate to the United States, I am sure that you will want to enter a correction. The Museum of History and Technology of the Smithsonian is a comprehensive historical museum. This means that we cover more than science and technology. In a survey made in 1965 we estimated that 184 000 square feet is devoted to science and technology (against 420 000 in the Deutsches Museum and 171 000 in the Chicago Museum of Science and Industry, neither of which is a comprehensive historical museum). Our exhibits of science and technology deal with the history of those fields per se. In one respect our museum undoubtedly gives the impression of national bias. Historic objects of American origin naturally tend to come here, and objects of foreign origin are difficult for us to obtain. An exhibit here will consequently have a disproportionate number of objects of American origin. Precisely the same observation can be made of the Deutsches Museum and, indeed, of all "science" museums.

ROBERT P. MULTHAUF
Director, Museum of History and Technology
Smithsonian Institution

Few and inadequate telescopes

In his July column your man Phimsy unwittingly touches a tender nerve when he writes, ". . . but astronomers' telescopes come in sizes unthought of when I was a boy," and later states, "I looked in vain for a picture of an extraordinary 200-inch telescope." Although radio telescopes are often measured in feet, meters and even acres and the Russians are well along toward completion of a 236-inch (6-meter) reflector, in 1921 the Mt Wilson astronomer Francis Pease thought of and designed optical telescopes larger than anything now under construction. I suggest that an extraordinary 200-inch telescope might be defined as a second American 200-inch and that the absence of such a telescope—or a third or fourth such or even a couple substantially larger—is not only extraordinary but also not a matter of indifference to either astronomers or physicists.

The Palomar 200-inch was financed *40 years ago* on the basis of outstanding successes with ever-larger reflectors that revolutionized astronomy. Since then—nothing larger or even as large. No other science can "boast" of such a miserable record. Consider what physics would have been like if accelerators had been limited to their 1928 dimensions.

The American Astronomical Society is doubling in membership about every six years. The appallingly few and inadequate observing facilities have resulted in an ever-growing number of theorists over-discussing an inadequate number of observations. Nevertheless astrophysics has never been so exciting or promised greater research rewards—so much so that a group of astrophysicists trained as physicists has recently applied to the Council of the American Physical Society for the formation of a division of high-energy astrophysics. Quasi-stellar objects of one kind or another and the incredible pulsars are asking questions in fundamental physics that can only be an-