

WHAT'S WRONG WITH THESE CONFERENCES?

Henry H. Barschall and Willy Haeberli

Previously in *PHYSICS TODAY*, David Mermin has looked at various problems, both scientific and sociological, through his "What's Wrong With..." series of Reference Frame columns. Following his lead, we would like to discuss our concerns about the proliferation of physics conferences.

Our immediate incentive is the Opinion column by Wlodek Zawadzki (*PHYSICS TODAY*, December 1991, page 65), in which he writes: "There are, clearly, more and more conferences, whose organizers need invited speakers and want to publish proceedings... There most probably will be more and more conferences and publications in the future. Facing the inevitable..."

We hope that the inevitable can be avoided and that potential organizers of conferences will carefully examine the need for another conference. In our field, nuclear physics, there has been a long tradition of holding international conferences at approximately three-year intervals, and various specialties in nuclear physics have also had regular conferences—for example, there has been a Polarization Conference every five years since 1960. In recent years the number of conferences, workshops and symposia has increased so that there is now on average a meeting in some area of nuclear physics about once a week, and in all of physics there are on average about a dozen meetings every week. This increase has many causes: Physics research is carried out in more places and may be advancing faster; there are more specialties;

there are more large collaborations, where sometimes just bringing the collaborators together may constitute a conference.

Nevertheless, these many conferences and the resultant proceedings have some undesirable effects. Rustum Roy wrote in a letter to *PHYSICS TODAY* (December 1989, page 97): "I have plotted the person-days spent at meetings by the faculty of our lab, and it has an ominous exponential shape. When are we supposed to work?" In an article in *Physics World* (July 1991, page 12), Michael Berry addressed the effort and time spent on preparing contributions to conference proceedings: "When the proceedings finally appear, they are rarely consulted, and can be hard to obtain. The quality of the contributions is often poor, perhaps because they are written in haste and not refereed." Although we do not agree entirely with Berry's statement, we do see a real problem with the proliferation of conference proceedings.

What can be done to reduce the number of conferences and conference proceedings? Persuading physicists not to attend conferences is difficult, because researchers feel considerable pressure to attend conferences in their area of activity to make sure that their contributions are recognized. Many may fear that research published only after it is completed will have little impact on competing efforts or will be overlooked entirely. Physicists who contemplate organizing a conference should first consider carefully whether the conference will really advance physics or will merely serve as a vehicle for attracting attention to their own research. Likewise, those asked to serve on a conference advisory or organizing committee should not automatically agree to be

listed, but should weigh the need for the conference.

One of the important functions of the International Union of Pure and Applied Physics is to sponsor conferences. IUPAP examines proposals for international conferences, especially to make sure that there are no conflicts or duplications. Funding agencies should pay more attention to IUPAP sponsorship before agreeing to support conferences.

Organizers and sponsors of conferences should consider particularly carefully the plans for publishing proceedings. The success of a conference does not depend on the publication of proceedings, as is clearly demonstrated by the Gordon conferences, which never publish proceedings. All science libraries are facing a budgetary crisis, which is aggravated by the large number of conference proceedings. In a typical physics library, somewhere between a third and a half of the books purchased are conference proceedings. In addition, conference proceedings greatly increase the cost of some journals, especially those that are billed by the volume. Proceedings of one conference may fill several volumes of a journal and may cost a library \$1000 or more. When the proceedings are published in a journal, a library has no choice but to buy them, as long as users of the library need other parts of the journal.

In his article, Berry favors publishing proceedings in journals, because, he says, such proceedings are peer-reviewed. But in our experience, a referee report on a conference contribution is a rare occurrence. Usually, organizers treat proceedings published in journals the same as those published as separate books. Conference proceedings are intended to be a record of what was actually present-

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OPINION

ed at the conference. Hence altering a paper in response to a referee report, while desirable for an ordinary journal article, is not really appropriate for a paper in conference proceedings.

Another problem with conference proceedings is that they often duplicate papers appearing in journals or other conference proceedings. This occurs because some researchers present the same work at many different meetings, perhaps with some additional results at later meetings. A search of the literature often leads to half a dozen references to the same work by the same authors; in some cases the number of references reaches a dozen or more. An investigator may decide to present the same work at several meetings for good reasons: The results may be important for workers in quite different specialties who attend different conferences, or the meetings may attract attendance from distinct geographical areas.

In our opinion the most valuable parts of conference proceedings are the review talks, which are often given by the most knowledgeable researchers. The potential users of such reviews would, however, be much better served if the reviews were published in a more accessible review journal or book, such as *Annual Reviews*, *Physics Reports* or *Reviews of Modern Physics*. In fact, some review publications experience problems in attracting submissions because of the competition from proceedings.

Conferences are an important forum for the exchange of ideas and the development of new initiatives in research. Conference proceedings are an essential resource for every research physicist and provide a convenient source of references to the current literature. However, if there were fewer conferences, the attendance at each conference would increase. If there were fewer conference proceedings, each would give a more complete coverage of the field and copies would be more readily available. At present, physicists cannot attend all the conferences in their area of interest, and libraries can no longer afford to acquire all available physics conference proceedings, even in areas where researchers at their institutions are active.

We hope that potential organizers of conferences will examine the need for publishing proceedings and that, if they do wish to publish proceedings, they won't publish them in a journal unless libraries have the option not to purchase the proceedings. ■

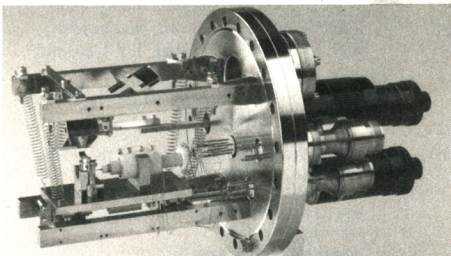
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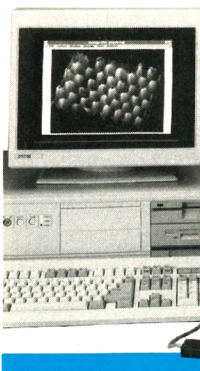
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