

further and personally participate in the actual formulation and conduct of public policy. I, therefore, support Schwartz's proposal, not only as a desirable end in itself, but because it constitutes a step in the broader and to my mind even more pressing area of direct participation in public affairs.

GEORGE C. SPONSER
Bethesda, Maryland

Understanding implications

That the membership of the American Physical Society should concern themselves as individuals with the many troubling public issues of the day (such as our policy in Vietnam, civil rights, etc.) is mandatory. The only question that arises is whether APS is the proper vehicle through which they as a group should express this concern.

The new prestige that science has acquired since 1945 has made it an inevitable factor in decision-making at many levels of government. The level of public support for research derives from this new prestige and will determine the rapidity of the advances that can be made in many basic fields. This makes it both inevitable and desirable that physicists speaking through APS express their concern as to the social and political implications of their work.

In addition to the proposed amendment to the APS constitution, whose adoption I most heartily urge, it may be proper to redefine the object and purpose of the society as given in the Articles of Incorporation to read: "the advancement and diffusion of the knowledge of physics, and the understanding of its social and political implications."

MILTON DANK
Space Sciences Laboratory
General Electric Company

Safeguarded voices

Broadening the aims of the American Physical Society to include discussions of public issues will, to use a mixed metaphor, force the society to walk a tightrope between the horns of a dilemma. That is, while the attempt to gain a consensus of the membership is most commendable, there are serious

difficulties that must be overcome if the society can continue to function efficiently.

The most extreme argument against the proposal is that the organization may be reduced to a debating society, overwhelmed by verbiage on complex, emotion-laden issues. Cliques to support this-or-that stand on an issue may form and disrupt the orderly workings of the society.

Clearly, safeguards are needed to prevent such eventualities. Strict enforcement of rules of procedure at meetings will help to maintain order. Adequate airing of diverse viewpoints in the *Bulletin* or *PHYSICS TODAY* prior to meetings may reduce excessive discussion at the meetings. In fact, requiring a proponent to write his views on paper for all members to read and judge may be a powerful way of preventing interminable oral debates at meetings. Also, it would appear that more than a simple majority (perhaps two thirds) of those voting should be required before a given viewpoint is reputed to be that of the society as a whole.

I, for one, believe that, if such safeguards can be effectively implemented, the society and the entire scientific community can profit from discussions of public issues. With such discussions greater interest in the workings of the society might be generated among members. But of greatest import is the fact that in many areas of concern to scientists, there has been no effective voice, as decried in the pages of *Science* during the past several months, to represent the viewpoints of American scientists in a forceful, cohesive manner. At least some of the problems affecting American science, especially with respect to its relations with the federal government, could be ameliorated if scientific organizations were accurately aware of the opinions of their members. Given such information, the American Physical Society could truly represent its members and advance the interests as well as the knowledge of physics.

RICHARD L. HAHN
Oak Ridge National Laboratory

Journals in other hands

I am interested that a vote or poll is in the process of being taken to deter-

This is not an advertisement!

This is an
important announcement
for readers of
PHYSICS TODAY
who are interested in
the latest developments with
**GERMANIUM for
INFRA-RED and
GAMMA-RAY
DETECTORS.**

Report from Geoscience

Geoscience is pleased to report the successful development of GELIDE, the hyper pure detector grade Germanium mono-crystals, uniquely suitable for Infra-Red and Gamma Ray Detectors.

GELIDE Germanium Crystals are grown to customer's specifications and tested for purity and perfection by the lithium drift technique and Hall measurements. Gelide from Geoscience, successfully used by the nation's leading nuclear laboratories, is now available to the Optical Industry.

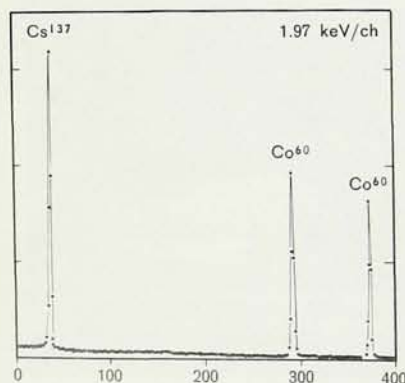
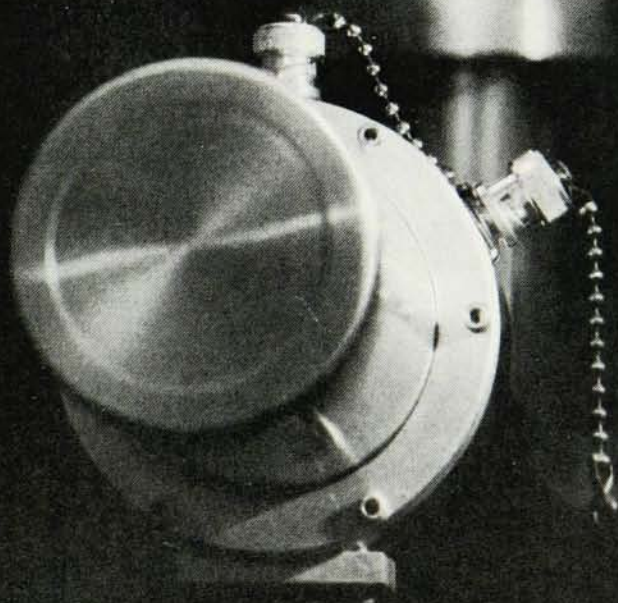
We invite you to write for the complete report on GELIDE for Infra-Red and Gamma-Ray Detectors.

GEOSCIENCE
INSTRUMENTS

Geoscience Instruments Corp.,
435 East 3rd Street, Mt. Vernon, N.Y. 10553
(914) 664-5100

Princeton Gamma-Tech
has found a way to eliminate
Compton edges. Totally.

In this cryostat are two
Ge(Li) detectors in coincidence.
We call it the DUODETM spectrometer.



Now you may achieve peak-to-Compton ratios of 30:1, 40:1, even better than 50:1. The new DUODETM spectrometer records the total deposited energy of gamma-rays which interact by multiple processes only. Energy from a single Compton event is not accepted by the coincidence circuitry. Result: total elimination of Compton edges and a greatly reduced Compton continuum. Weak-intensity peaks stand out against a low, featureless background.

When not performing in its anti-Compton mode, the DUODETM functions as a standard high-resolution Ge(Li) detector.

PRINCETON GAMMA-TECH

Box 641, Princeton, New Jersey, U.S.A.
(609) 924-7310. Cable PRINGAMTEC.

See our Ge(Li) detectors demonstrated at the APS meeting, booth 461.

mine whether some of the AIP journals, most particularly *PHYSICS TODAY*, should be opened up to debate on issues such as Vietnam and the like. It seems to me that it would be a great mistake for the American Institute of Physics, or the member societies, to be involved in such controversial matters unless they are tied very immediately to the profession of physics itself. To use our journals for very general discussion and debate means that they will lose their essentially professional character. Still further, the journals will fall into the hands of politically or socially oriented editors who will inevitably use them to support their own special viewpoints on matters far outside of the field of physics.

Every physicist is a citizen and has countless avenues outside his professional journals for expressing social and political views not immediately related to his profession. If his views have special merit, he will reach a far wider audience and hence be much more effective by using the broader media for presenting and supporting his opinions.

I wish to emphasize that I see no reason why *PHYSICS TODAY* could not be used for comments on social or economic issues immediately related to our profession. On the other hand, such activities should be exceedingly well conceived if they are to have special meaning. By and large, one should strive toward something like the level approached in *Nature*. It is not easy to find editors who are capable of initiating and sustaining good analysis of this type. It is better to shun such areas than to enter into them badly.

FREDRICK SEITZ
National Academy of Sciences

Against a free ride

I oppose what for brevity I will call the "Schwartz amendment" to the constitution of the American Physical Society. The society has lived, thrived and done immeasurable service to physics under constitutions that limit its object to the advancement and diffusion of the knowledge of physics. Even more germane to the situation is the text of the articles of incorporation,

which reads: "The object and purpose of the Society is, and shall be, to promote the advancement and diffusion of the knowledge of physics, to publish a periodical and other publications for that purpose, and to do such other things as may be conducive to the said purpose." Adoption of the Schwartz amendment could result in plebiscites or referenda on issues that could not be construed as conducive to that purpose. Such a plebiscite could endanger the tax-free status of the society. Each plebiscite would cost the society an amount that has been conservatively estimated at \$2000 under present conditions, an estimate sure to rise with postage costs and printing costs. This brings me to my final point. George Pegram used to say that the printed membership list of the society is a public document. Apparently anybody, be he a member or even a nonmember of the society, can carry out a plebiscite of the society on any issue, provided that he use the latest printed membership list, and himself do all the work and pay all the cost of his plebiscite. Presumably the society could not prevent such a private enterprise if it would, and I doubt whether the council would prevent such an enterprise if it could. The responsibility of the society would in no wise be engaged. Seen in this light, the Schwartz amendment appears not as a scheme for making possible something that is now impossible but as a device for making APS, at its own risks and perils, pay for enterprises that their proponents could and should pay for. Not for such an aim should the traditional purpose of the society be altered.

KARL K. DARROW
Secretary Emeritus
American Physical Society

Ignorance and pressure groups

I would like to congratulate *PHYSICS TODAY* for limiting itself to its proper function to discuss physics, physicists, and nothing else. I also want to congratulate you for a thoughtful and even-handed editorial on the subject.

This is a subject to which I have been forced to give much thought. It may be justified, therefore, if I express in a brief manner my thoughts to you.

One may justify the discussion of

Teltronics 300 Series coherent amplifiers

simplify
ultra-low
signal
measurements



MODEL 300-A Coherent (lock-in) Amplifier reduces complexity and cost of measuring ultra-low level signals.

Radio astronomers, medical researchers and those scientists working with paramagnetic resonance or making subtle photometric studies can now simplify those measurements that require instrumentation capable of phase-locking with, identifying and measuring signals buried in the noise up to 50 dB or more.

Teltronics, Inc., has produced fundamentally simple solid state coherent amplifiers with genuinely needed features and lower overall prices.

Modulation Tuning Range: 1.5 Hz to 200 kHz, continuously or with plug-in field-adjustable tuners.

Adjustable-Q Filtering: From broadband to high selectivity.

Plug-In Preamplifiers: High or low impedance; single or differential inputs with 100 nV fs sensitivity.

Internal or External Reference: Reference channel can drive coaxial switch or chopper directly.

Price: \$1,400 to \$1,920 depending on preamplifier and tuning system.

Write for Technical Data



Teltronics, Inc.

Box 466, Nashua, New Hampshire 03060
(603) 889-6694 / Subsidiary of Roanwell Corporation

Visit Us, Physics Show, Booth 414