

NEWSLETTER

of the FORUM on PHYSICS and SOCIETY

Volume 2

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December 1973

New Forum Programs

The Forum is embarking on a number of new programs and Forum members are needed to implement them. A new committee on Arms Control has been established with Anne Cahn of MIT as chairperson. It will promote discussion within the APS of current weapons technology, weapons policy, the role of physicists in developing weapons and weapons policy, and the prospects for arms control. It will try to broaden the base of interest and expertise among physicists in the arms control field by developing programs to involve APS members in arms control research.

At present the APS has a number of prizes to reward outstanding contributions to research. There has been no such reward for public policy work. Consequently, the Executive Committee of the Forum has proposed the Leo Szilard Award, to be presented each year at the Washington meeting to a physicist for an outstanding contribution to public interest science. Another annual award, the Forum Award, would recognize the author of articles or books which contribute significantly to public understanding of a science and society issue. A Forum Award Committee, chaired by Martin Perl of SLAC, is drawing up a proposal to be submitted for APS Council approval at its February meeting so that the initial prizes can be awarded in April, 1974. In the meantime, suggestions for recipients of the awards would be welcomed.

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Scientists in the Public Interest: The Role of Professional Societies

A conference on the topic "Scientists in the Public Interest: The Role of Professional Societies," held at Alta, Utah September 7-9, 1973, brought together officers of eleven scientific and engineering professional societies, scientists and engineers involved in public policy work, scientist-activists, and representatives of the scientific press. The conference was organized by four physicists: Peter Gibbs of the University of Utah, Barry M. Casper of Carleton College, Frank von Hippel of Argonne National Laboratory, and Joel Primack of the University of California at Santa Cruz. It was sponsored by the American Academy of Arts and Sciences, Western Center, in cooperation with the Engineering Experiment Station, the College of Engineering and the Department of Physics of the University of Utah.

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Special Forum
Contributed Paper Session
on
THE ENERGY CRISIS
at
APS Washington Meeting
April 22-25, 1974

Topics of interest are: energy conservation techniques and options, political and economic origins of the problem... Remember the deadline for abstracts is February 8!

Scientists in the Public Interest: The Role of Professional Societies

(continued from page 1)

The conference was inspired by Primack's article "Planning for Technology: What Professional Societies Can Do" in the December, 1972 Newsletter of the Forum on Physics and Society. A diverse group of 65 participants (the contingent from the physics community included APS Executive Secretary W.W. Havens, Jr., Forum Chairman Martin Perl, Congressional aide Thomas Ratchford, SESPA activist Charles Schwartz, and Physics Today editor Harold Davis) explored ways in which the professional societies can promote the effective involvement of their members in the public policy process. The three-day conference was divided into seven sessions: (1) The Federal Government: Unmet Needs for Technical Advice; (2) The Need for Technical Advice by State Governments and the Courts; (3) Progress Reports from the Societies; (4) Public Interest Science Research; (5) Educating the Public; (6) Interacting with the Congress; and (7) Programs to Promote Public Interest Science.

In the past few years, an increasing number of scientists and engineers have begun to work full-time to influence public policy. Many of those active in public interest science organizations and those who have staff positions in the federal and state legislatures participated in the conference. They described many ways in which technically trained individuals have contributed to the development of public policy, including: advising federal, state and local government officials; analyzing the impact of new technologies; working with local planning and regulatory agencies; educating the public about technical issues; and assisting public interest organizations by serving as courtroom witnesses, lobbying for legislation, and providing technical advice.

At the same time, the scientific and engineering professional societies

have been reevaluating their responsibilities to their members and to society. In the past, these organizations had concerned themselves with the traditional activities of learned societies: sponsoring meetings and publishing scholarly journals. However, representatives of the societies reported recent changes in this outlook. They described many new programs aimed at involving the societies and their members in dealing with social issues, including: the formation of public policy offices or divisions within the society, explicitly concerned with the social consequences of science and technology; the institution of Congressional Fellowship programs; the development of a roster of members interested in becoming involved in public interest science; the publishing of books and monographs of use to laymen on the technical aspects of public policy questions; and the formulation of mechanisms to support society members whose conditions of employment are threatened because they have spoken out on public interest issues.

A number of concrete proposals for cooperative programs among the societies were introduced and five task forces were formed: (1) Clearinghouse for Public Interest Science; (2) Defending Professional Responsibility; (3) Congressional Fellowships; (4) Public Interest Science Studies; and (5) Improving Science Advising. These task forces were charged by the conference to circulate specific proposals to the professional societies and gain their support in implementing the programs.

A great deal of information and many ideas came out of this conference. Those who are interested in more of the details can obtain a copy of the conference proceedings by writing to Prof. Peter Gibbs, Chairman, Physics Department, University of Utah, Salt Lake City, Utah, 84112.

New Forum Programs (continued from page 1)

At its October meeting the APS Council gave the go-ahead to three studies of technical issues related to energy policy (see page 5). The Forum has established a Committee on Energy Conservation, chaired by Mike Casper at SLAC, to assist in organizing the energy conservation study. It will also consider commissioning mini-studies of various aspects of energy conservation to groups of physicists interested in doing pro bono public interest work. In addition, the Forum will sponsor a session of contributed papers on The Energy Crisis at the Washington APS meeting in April. Papers on topics ranging from technical means of reducing energy consumption to analyses of what went amiss in the energy planning process would be welcomed.

Another new Forum Committee, on Physicists in the Public Interest, chaired by Joel Primack of the University of California at Santa Cruz, is concerned with involving physicists in public interest science. One project of this committee is a proposed APS Public Interest Science Roster. Many physicists would like to use their expertise for the public benefit, but are not aware of the projects that can use them. At the same time, public interest organizations, state and local government officials, Congressmen, the media, and others are suffering from a lack of technically competent assistance. The APS could solicit and compile a roster of physicists interested in such activity and see to it that this information is made available to those individuals and organizations who might use their help. This committee will also consider an APS role in providing technical advice to the Executive Branch and the Congress. In particular, it will explore possible APS inputs into the naming of advisory committee members and a liason between the

APS and the newly established Office of Technology Assessment.

The Forum Committee on Placement, under Eugen Merzbacher of the University of North Carolina, is looking into possible improvements in the AIP Placement Service for physicists seeking employment. A Committee on Courses on Physics and Society is being organized by Dietrich Schroeer of University of North Carolina.

Other proposals for new Forum projects include a Strategy for Dealing with the Employment Crisis, Forecasting Problems of Technology, Technology Funding Priorities and Opening up the APS. Any Forum members who would like to become associated with any of these projects, or who has any other suggestions for Forum activities is urged to contact the committee chairperson or Mike Casper, Bin 61, SLAC, Stanford, California, 94305.

FORUM ACTIVITIES AT BERKELEY

APS MEETING; DEC. 27-29, 1973

ENERGY IN CALIFORNIA: OPTIONS, POLICIES AND ALTERNATIVES: Thursday, 10:00 A.M., Physical Sciences Lecture Hall.

TIME FOR A CHANGE??, A MINI-CONFERENCE ON PHYSICS GRADUATE EDUCATION: Thursday, 2:00 P.M., Physical Sciences Lecture Hall.

SCIENCE AND SOCIETY: CONTRIBUTED PAPERS: Friday, 9:00 A.M., Le Conte 308.

A Forum Social Evening is planned for Thursday; time and place will be posted.

APS Congressional Fellows

APS Congressional Fellows Benjamin Cooper of Iowa State University and Richard Werthamer of Bell Laboratories began their Washington activities with a three week orientation program in September. Cooper is now on the staff of Senator Jackson's Committee on Interior and Insular Affairs working on energy policy, including the emergency legislation recently passed by the Congress to meet the "energy crisis."

Werthamer is on the staff of Congressman Charles Mosher, ranking Republican member of the House Science and Astronautics Committee and a member of the Office of Technology Assessment Board. In this capacity, Werthamer has been involved in organizing the operation of the new OTA. Both Cooper and Werthamer will report on their work in a Forum session on "New APS Programs" at the annual meeting in Chicago.

It now appears almost certain that the program will be continued, with at least two more APS Fellows selected for 1974-75. For further information, contact the program director, Sidney Millman, APS, 335 E. 45th St., New York, New York, 10017.

FIRST 1974 FORUM BUSINESS MEETING

The first 1974 Forum Business meeting will be held at the APS Chicago meeting on Tuesday morning, February 5, after the morning Forum session (about 11:30 A.M.).

The 1974 Forum chairman, Mike Casper (address until August, 1974: SLAC, Stanford, California, 94305), would appreciate suggestions for topics, such as new Forum programs, to be discussed at the meeting. Please plan to attend the meeting.

The Forum and Newsletter

The Forum on Physics and Society is an official organization within the American Physical Society. All members of the Forum are members of the American Physical Society. For membership and other information, write the Secretary-Treasurer, Ralph Llewellyn, Physics Dept., Indiana State University, Terre Haute, Indiana, 47809.

This Newsletter is distributed, through the APS, to the Forum membership. Others who would like a copy should write M. Perl, SLAC, Stanford, California, 94305.

Letters, comments, editorials, and articles for this Newsletter should be sent to the Senior Editor, Jay Orear, Cornell University. The Newsletter is arranged by M. Perl; and Forum news items which do not require Newsletter Committee approval should be sent directly to him.

Don't

Forget

the

CONFERENCE ON TRADITION AND
CHANGE IN PHYSICS GRADUATE EDUCATION

Pennsylvania State University
August 19-23, 1974

Sponsored by the Forum, the Committee on Education of the APS and the American Association of Physics Teachers. For the details see: July 1973 issue of the Forum Newsletter, October or November 1973 issues of APS Bulletin or write the Forum Newsletter for an announcement.

Council Approves Three APS-Sponsored Energy Studies

The APS Council took a significant step in the direction of promoting public interest work by physicists at its October 26 meeting when it approved in principle three APS-sponsored studies of technical aspects of energy policy: (1) An Investigation of Some Technical Aspects of Nuclear Reactor Safety; (2) Technical Aspects of Energy Conservation; and (3) Physics Problems Relating to Energy Technologies.

The Forum on Physics and Society Executive Board, polled prior to the meeting, had urged Council approval. If funding can be obtained, the studies are expected to be carried out during the summer of 1974.

The Council's approval came after an APS Energy Study Planning Committee, chaired by Jack Sandweiss of Yale, had recommended the studies. Sandweiss' committee met for a week at Los Alamos in mid-August and received intensive briefings on a wide variety of energy-related issues. Frank von Hippel, a Resident Fellow at the National Academy of Sciences, organized the briefings and has been instrumental in preparing the groundwork for the studies.

The reactor safety study is urgently needed. Public hearings held by the AEC this past year have revealed serious disagreement concerning the reliability of the emergency core cooling systems in nuclear reactors currently in operation and under con-

struction. On the basis of this information, Ralph Nader's organization is calling for a nationwide moratorium on construction of reactors. At the same time President Nixon and AEC Chairperson Dixy Lee Ray are calling for speeding up the reactor-licensing process so that more reactors can be in operation sooner. This is likely to become a significant political issue in the near future. It would be very useful for decision-makers and the public to have an independent (i.e., non-AEC, non-reactor industry, non-Nader) study of the technical issues involved.

The energy conservation study is obviously timely. There appear to be a number of technical problems associated with energy conservation where a study by physicists and engineers might prove useful. For example, the study might consider means of using the heat from electric power generation now being wasted, which accounts for 17% of the nation's energy use (while at the same time an additional 17% goes into producing industrial process steam.) The newly-created Forum Committee on Energy Conservation will assist in organizing this study.

The third study on energy technology would consider selected topics such as superconductivity technology as it applies to the generation, transmission, and storage of electrical energy, and photovoltaic and photochemical processes as they apply to the utilization of solar energy.

FORUM AWARDS PROPOSED

1974 LEO SZILARD AWARD FOR PHYSICS IN THE PUBLIC INTEREST: To recognize outstanding accomplishment by a physicist in promoting the use of science for the benefit of society in such areas as the environment, arms control, and science policy. Any physicist is eligible.

1974 FORUM AWARD FOR PROMOTING PUBLIC UNDERSTANDING OF THE RELATION OF SCIENCE TO SOCIETY: To recognize outstanding accomplishment in promoting public understanding of issues involving the interface between science and society. The recipient must have made significant contributions to the public understanding of science and society issues through such means as newspaper or journal articles, books, films, etc. within the past two years.

These awards have been proposed by the Forum Executive Board. If approved by the APS Council, they will be awarded at the April, 1974 APS Meeting in Washington. Comments on the selection criteria, nominations, and supporting information should be submitted by February 1 to the Chairman of the Selection Committee, Martin Perl, SLAC, Stanford, California, 94305.

JOIN THE FORUM ON PHYSICS AND SOCIETY

I wish to join the APS Forum on Physics and Society and receive the newsletter. Enclosed is a check for \$2.00 to cover my annual dues.

Name (please print) _____

Address _____

Return to Dr. Ralph Llewellyn
 Forum Secretary-Treasurer
 Physics Department
 Indiana State University
 Terre Haute, Indiana 47809