

PHYSICS and SOCIETY

The NEWSLETTER of the FORUM on PHYSICS and SOCIETY

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1977 FORUM ON PHYSICS AND SOCIETY AWARD GOES TO JOEL PRIMACK AND FRANK VON HIPPEL

Joel Primack, University of Santa Cruz and Frank von Hippel, Princeton University, have won the 1977 Forum on Physics and Society Award for their book Advice and Dissent. The awards will be presented on Tuesday, April 26 at 8:00 pm at the 1977 Washington Meeting of the American Physical Society.

The award citation reads in part, "This book is a detailed examination of the recent interactions of the scientific community with federal policy making on scientific and technological issues. It is a basic study in the field and has already become a classic, having had wide influence in the scientific community."

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FROM LEE GRODZINS, THE 1976 FORUM CHAIRMAN

I leave the Chairmanship of Forum with no apprehension for its future; the year's file of Forum correspondence attests to vitality, involvement, commitment. But I worry that we become too establishment. The founders of Forum were radical, sometimes angry, concerned with the individual voice. And their accomplishments endure: the Forum session at APS meetings, the Forum Awards, the Congressional Fellowships, Tradition and Change Conferences, the Forum Newsletter. The terms of three of the Forum's prime movers, Mike Casper, Joel Primack and Brian Schwartz, ended this January. Each is still committed to what Forum is about; we need not fear losing their inputs. But this transition is a forceful reminder that while much has been done, there is much to be done.

The year has passed too swiftly. Two major projects did not get far off the ground. But a foundation was laid for Forum sponsorship of international conferences on physics and society, as well as for disseminating Forum issues throughout the physics community. Since I hope to catalyze action on the former and spearhead the implementation of the latter during the coming year, a progress report is appropriate. Considerable effort was spent to implement an international conference on the interchange of scientists between Europe and the U.S. The APS Physics Council gave us support; we had the appropriate chairman for the U.S. effort. Unfortunately, though there was considerable interest among the European physicists, there was no one willing to act as coordinator. My experience indicates that Forum should push vigorously for international conferences on physics and society but that we should act unilaterally, expecting, when we do so, to receive considerable cooperation from the international community, with each country represented separately. Many Forum members have expressed a strong desire to work on international

(continued on page 2)

FROM LEE GRODZINS (continued from page 1)

issues. I would like to bring these efforts together and suggest we meet at this coming Washington meeting. (A formal notice is contained elsewhere in this Newsletter.)

The Forum's sessions at the APS meetings are among the most interesting and well-attended. We have consistently been concerned with the vanguard issues presented by the strongest advocates of a spectrum of views. It is time for this resource to be made available on a routine basis to the physics community at large. A good start was made this past year when Forum gathered and made available an information packet for the Science Court issue aired at the 1976 Washington meeting (see Physics and Society Newsletter, October 1976). The success of this venture leads me to suggest that we formalize a network of Forum members in the local physics societies who will obtain source material through us from the speakers of Forum sessions so that local chapters of SPS are encouraged to discuss and debate the issues. The coming Washington APS session on nuclear proliferation is another prime subject for broad discussion. We have asked each of the speakers to provide us with appropriate material which will be made available to local chapters. (It is worth noting that the speakers are enthusiastic that their views will reach a broader audience than that at the session themselves and that this was an important consideration in the agreement of several to participate.) All those interested in this project -- we especially invite students -- should write to me directly. The greater the participation, the more assured will be the success.

I cannot leave without expressing a strong sense of pleasure at having been the Chairman of this very dynamic division. Throughout the year, I enjoyed the total cooperation, indeed, the active proddings of the Executive Committee -- especially the Secretary -- and the members. Much was done. Besides initiating the two long-range projects above, we can report that the Forum sessions were again successful and stimulating. The second Tradition and Change Conference is well along the path to great success, we have made a start towards increasing the stipend for the Forum Awards, and most important of all, the Physics and Society Newsletter is now bimonthly. These accomplishments results from the efforts of many members. Let's keep it that way.

PHYSICS AND SOCIETY, the Newsletter of the Forum on Physics and Society of the American Physical Society is published for, and distributed free to, the members of the Forum. It presents news of the Forum and of the American Physical Society; and provides a medium for Forum members to exchange ideas. PHYSICS AND SOCIETY also presents articles, letters and columns on the scientific and economic health of the physics community; on the relations of physics and the physics community to government and to society, and on the social responsibilities of

science. Space is preferentially given to those analyses and opinions which are less likely to be published in the established journals such as Physics Today and Science. Letters, short articles, suggestions for columns, and Forum news items should be sent to the Editor, Martin L. Perl, SLAC, Stanford, California 94305.

PHYSICS AND SOCIETY is also distributed free to Physics Libraries upon request. Such requests and requests for other information should be sent to M.L. Perl.

NEW FORUM OFFICERS ELECTED

1977 Forum vice-chairwoman and 1978 chairwoman: MARY L. SHOAF,
West Chester State College and American Physical Society

New members of the Forum Executive Committee:

ROLAND H. GOOD, JR., Pennsylvania State University

GLORIA B. LUBKIN, Physics Today

VIGDOR L. TEPLITZ, Virginia Polytechnic Institute

INTERNATIONAL CONFERENCE ON PHYSICS AND SOCIETY

During the APS Washington Meeting on Monday, April 25 at 4:00 pm in the Taft Room of the Sheraton Hotel, there will be a Forum sponsored meeting to discuss the possibility of holding an International Conference on Physics and Society. The goal of the meeting is to formulate a plan for the conference and select a steering committee. Those who expect to be there, please write Lee Grodzins at MIT prior to the meeting with suggestions and comments.

FORUM AWARDS FUND GROWS

A Forum committee chaired by Roland Good has collected donations totaling \$710 for a fund for the Leo Szilard Award and the Forum Physics and Society Award. At its meeting at the 1977 APS Chicago meeting the Forum Executive Committee voted to set aside an additional \$700 for these award funds. The Forum Awards Committee and the Forum Executive Committee thanks all those who contributed to the fund. Additional donations are welcome and should be sent to Forum Secretary-Treasurer Thomas Sheahan.

SIERRA CLUB NEEDS EXPERTS ON ENVIRONMENTAL SCIENCE

The Sierra Club (530 Bush Street, San Francisco, Calif., 94108) wants to establish a bank of volunteer consultants to assist the Club. They would like Forum members who are willing to help with environmental science issues to notify them of their interest. The degree of help you give the Sierra Club is flexible. For example: they sometimes need manuscripts reviewed to assure technical quality; sometimes they sponsor in-depth studies of environmental science issues.

FORUM SESSIONS AT THE 1977 APS WASHINGTON MEETING

MONDAY MORNING
9:00 AM, APRIL 25

CONTRIBUTED PAPER FORUM SESSION

MONDAY EVENING
8:00 PM, APRIL 25

NEW HAZARDS IN BIOLOGICAL RESEARCH -----

RECOMBINANT DNA

A panel consisting of biologists:

Kostia Bergman, Northeastern University

Roy Curtis, University of Alabama

Jane K. Satlow, Brookhaven National Laboratory

George Wald, Harvard University

will discuss this subject. Audience participation in the discussion is invited.

CHAIRMAN: I.R. Lapidus, Stevens Institute of Technology

TUESDAY EVENING
8:00 PM, APRIL 26

PRESENTATION OF THE 1977 FORUM ON
PHYSICS AND SOCIETY AWARD TO:

Joel Primack, Physics Department, University of Santa Cruz

Frank von Hippel, Center for Environmental Studies, Princeton

for their book ADVICE AND DISSENT

CHAIRMAN: Lee Grodzins, MIT

WEDNESDAY MORNING
9:00 AM, APRIL 27

NUCLEAR POWER WITHOUT NUCLEAR WEAPONS PROLIFERATION?

SPEAKERS: Michael McCormack, U.S. House of Representatives
Henry Kendall, MIT
George Stathakis, General Electric Co.
Theodore Taylor, Princeton University

CHAIRMAN: Bernard Feld, MIT

WEDNESDAY MORNING
11:30 AM, APRIL 27

FORUM BUSINESS MEETING

(will be held in same room as session on Nuclear
Power as soon as that session is over.)

WEDNESDAY EVENING
8:00 PM, APRIL 27

OUR NUCLEAR LEGACY AS PORTRAYED BY FILM

John Dowling, Jr., Mansfield State College, Mansfield

Films and excerpts of films will be shown which examine aspects of our nuclear legacy: (1) building and using the bomb, (2) living with the bomb, and (3) living with nuclear power. These films provide a concise, balanced, informative picture of our nuclear legacy in a format pertinent to our media-oriented society. The films represented are:

"Building the Bomb",	Time-Life Films
"Einstein",	Time-Life Films
"Hiroshima-Nagasaki",	Syracuse University
"Versus",	NATO
"Citizen Harold",	Learning Corporation of America
"Lovejoy's Nuclear War",	Bullfrog Films
"Plutonium Connection",	NOVA
"Nuclear Reactor Safety",	Atomic Industrial Forum

The following panel will discuss the issues raised and the manner in which they are communicated by the films:

Ann Seltz-Petrash, Editor, Science Books and Films, American Association
for the Advancement of Science

Ed Klevens, Department of Nuclear Engineering, Pennsylvania State Univ.

Adolph Baker, Physics Department, Lowell University

Dave Roper, Physics Department, Virginia Polytechnic Institute and State
University

PUBLIC SERVICE RESIDENCES AND PUBLIC SERVICE
INTERNSHIPS IN THE NSF SCIENCE FOR CITIZENS
PROGRAMS

From William Blanpied, NSF

The National Science Foundation has announced that it will award a number of Public Service Residencies, for experienced scientists and engineers, and Public Service Internships, for undergraduate and graduate students of science and engineering, as part of its new Science for Citizens Program. "These awards will be made in response to the Congressional mandate to the Foundation: To facilitate the participation of experienced scientists and engineers as well as graduate and undergraduate students in helping the public understand science, engineering and technology and their impact on public policies."

Applicants for these awards will be required to submit a record of their education and experience, and to propose a project to improve the public understanding of science or the impact of science on public policy. The prospective host institution with which the applicants plan to associate themselves is asked to confirm the importance and appropriateness of the project. These host institutions may include any of a wide range of groups, institutions, and organizations that serve important public purposes. In keeping with the spirit of the Science for Citizens program, applicants will be encouraged to associate themselves with citizens' groups that do not normally have access to scientific expertise. In keeping with the explicitly education purpose of the awards, the NSF is specifying that it will not give support to proposals that are primarily intended to "market" pre-determined ideas or particular products. Persons and organizations required to register under the Federal Regulation of Lobbying Act will not be eligible for awards.

The closing date for the first series of awards, to be announced by 15 September 1977, will be 15 May. Successful applicants must begin their Residencies or Internships within twelve months of the award date.

Additional information and applications forms can be obtained from:

Science for Citizens Program
Office of Science and Society
National Science Foundation
Washington, D.C. 20550.

GRADUATE STUDENTS, THE FORUM, AND THE PENN
STATE CONFERENCE

The Forum on Physics and Society would like to have a Physics Graduate Student Committee as a standing committee, the committee being organized and run by graduate students. Patrick Dreher, Physics Department, University of Wisconsin, is leading the effort to organize such a committee. He would like to begin the organizing effort at the Penn State Conference on "Changing Career Opportunities for Physicists". He proposes a graduate student meeting during the evening picnic on Tuesday, August 2. If you are interested in helping organize the Forum Graduate Student Committee either before, during, or after the Penn State Conference, write to:

Patrick A. Dreher
P.O. Box 475
Bantam, Conn. 06750

PRELIMINARY ANNOUNCEMENT OF A CONFERENCE ON
CHANGING CAREER
OPPORTUNITIES
FOR
PHYSICISTS
AUGUST 1-3, 1977

**Kern Graduate Building
The Pennsylvania State University
University Park, Pennsylvania**

Sponsored by
The American Association of Physics Teachers
The American Physical Society
Committee on Education
Committee on Professional Concerns
Forum on Physics and Society

PURPOSE

The purpose of this conference is to study present and future manpower problems in the physics profession. What changes in traditional employment patterns have taken place and will take place? What nontraditional employment possibilities have developed? How should the physics community act to broaden the opportunities open to its new members? Should the universities further revise their programs and attitudes?

This conference is a sequel to that on *Tradition and Change in Physics Graduate Education*, held in the summer of 1974 at Penn State. The first conference provided a valuable interchange among physicists in government, industries, and universities. There the central question was: "Does the traditional training in physics serve the best interests of society, of the physics community, and the individual physicist?" There have been changes in the physics profession, especially in attitudes, in recent years, and it is time now to take a new realistic look at the problems.

The first conference was devoted to Ph.D.-level training only. In this one, employment opportunities for all levels of education will be discussed. It is expected that the conference will generate some concrete suggestions for educational institutions, potential employers, and students seeking employment.

CONFERENCE FORMAT

There will be five half-day sessions on specific subjects. Each session will include half-hour invited talks, ten-minute contributed papers, and open exchange. In addition there will be a half-day of panel discussions and two evening social affairs.

ABSTRACTS

Abstracts of both contributed and invited papers will be published in the June issue of the *Bulletin of the American Physical Society*. The abstracts of the contributed papers should conform to the usual rules and regulations as set forth in the *Bulletin*. They should be mailed to R. Good at the address below and must be received before March 30, 1977. Contributed papers are welcome and it is hoped that some will come from students.

ACCOMMODATIONS

Dormitory, hotel, and motel rooms will be available, and there are some camping possibilities within driving distance of the campus. Advance registration forms will be sent out in March.

LOCATION

The University is in the central Pennsylvania community of State College. There is open country with ample opportunities for outdoor activities, especially golf, swimming, hiking, and within driving distance of the campus, sailing. Some people may wish to bring families and combine the conference with a few days of vacation.

TENTATIVE AGENDA

I. Facts, Myths, and Projections

Manpower studies that have been made in the last few years will be reviewed. The demographic data will be brought up to date and forecasts made where possible.

II. Why Things Are the Way They Are

The factors governing the career choices of students will be examined. These include information flow to beginning students, past experience of placement services, government funding patterns, and the coupling of physics training to perceptions of what skills are marketable.

III. Nonacademic Careers

Job content and career paths for physicists in industry and government will be covered. What can a physicist who undertakes a nonacademic career expect in the way of career satisfaction, reward system, and professional recognition?

IV. Careers in Health, Energy, Environment, and Government

Specific information on these nonacademic areas will be given. What career choices are available? How should a student choose between them? Emphasis in this session is on public sector careers.

V. Panel Discussions

Experience of the past few years and current opinions about physics education will be presented by panels with representation from university department chairmen, industrial department managers, postdocs, and students.

VI. Implementing Change

What are the pressures for change in the physics profession and what resistance has to be overcome? What is the role of the APS and AAPT? How important is government policy?

STEERING COMMITTEE CHAIRMEN

Roland H. Good, Jr.
Physics Department, 103 Davey Lab
The Pennsylvania State University
University Park, PA 16802

Martin L. Perl
S L A C
Stanford University
Stanford, CA 94305

CONFERENCE ON CHANGING CAREER OPPORTUNITIES FOR PHYSICISTS
PENN STATE, AUG. 1-3, 1977 ---- (SEE PAGE 7)

HIGH ENERGY PHYSICS MANPOWER

A subpanel of the High Energy Physics Advisory Panel (HEPAP) is currently looking at the complex issues of employment and career opportunity in high energy physics. The subpanel members are : J.D. Sullivan, Chairman (Univ. of Ill.), T.L. Neff (MIT), M. Shochet (Univ. of Chicago) and W. Wales (Univ. of Penn.). The subpanel welcomes suggestions and comments from all interested parties. Please communicate them in writing or otherwise to the Subpanel Chairman.

DEVELOPING COUNTRIES NEED BACK VOLUMES OF SCIENTIFIC JOURNALS

(From M. Moravcsik, Univ. of Oregon)

A program, active for some years now, to channel surplus back volumes and issues of scientific journals to libraries in developing countries needs your cooperation. If you have back copies or volumes of journals you do not need, write to Dr. Luciano Fonda, International Centre of Theoretical Physics, Miramare 34100, Trieste, Italy and he will furnish you with the address of a library which needs those journals. Even funds to cover some of the shipping cost might be available.

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THE APS WASHINGTON MEETING!! (SEE PAGES 4 AND 5)

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