

Activist Groups Seek Ways To Bring Science into Politics

Organized physicists are digesting half a dozen proposals to deepen their involvement in political and social change in the U.S. New groups, some already at work in cities around the country, are attracting members; the scientific organizations are reexamining their own structure.

Political ferment has been bubbling in the physics community for several years. Some physicists decided this year that existing action channels, such as the Federation of American Scientists and the Scientists Institute for Public Information, were not enough. When they gathered in New York in February for the annual meeting of the American Physical Society and the American Association of Physics Teachers, they brought new ideas for making their voices heard.

The four-day meeting was turbulent. At least 400 APS members turned out for the annual business meeting in an effort to have the 1970 meeting moved from Chicago. About 300 attended a caucus that night; of these more than 100 paid \$5 on the spot to join the newly formed Scientists for Social and Political Action.

Politics pervaded the four-day meeting. Buttons worn next to registration badges proclaimed "Stop ABM," "No Chicago meeting" or "March 4," the date of the research stoppage at MIT and other universities. Petitions circulated through corridors and meeting rooms. Hastily mimeographed handouts announced meetings and news conferences.

Outgoing APS president John Bardeen armed himself with a lawyer and a parliamentarian for the annual business meeting. Repeated interruptions and challenges gave them all a workout. Wallace Waterfall's parliamentary ruling that the business meeting could not act prevailed, however.

In his own report Bardeen said he thought the APS should discuss political issues but should not take stands on them. Physicists can and should provide information for the

RESONANCES

US ratification of the nonproliferation treaty on 13 March may break the logjam. Sigvard Eklund, director general of the International Atomic Energy Agency, feels the treaty may become operational by next year. Rudolf Rometsch, the agency's new inspector general, already has 53 staff members from 29 countries available as diversion safeguard inspectors.

The Chicago meeting question has produced the heaviest votes in the histories of both the American Physical Society and the American Association of Physics Teachers. By 26 March more than 14 000 (of 25 000) APS members and an estimated two thirds of the 13 000 AAPT members had voted. (See story page 85).

US groups may be able to work at the 76-GeV Serpukhov accelerator as a result of a trip there last month by five US high-energy physicists. The next step is to win approval for specific research proposals from the Soviet atomic energy agencies. Wolfgang Panofsky of SLAC led the delegation, which included Luke C. L. Yuan and Rodney L. Cool of Brookhaven, W. A. Wenzel of the Lawrence Radiation Laboratory and Thomas H. Fields of Argonne. The same exchange program would bring Soviet scientists to Batavia.

public, he said, and suggested the American Institute of Physics as the best vehicle. Bardeen noted that APS has no direct connection with AIP's Committee on Physics and Society (COMPAS) and said APS was examining its own structure to see how it could become more responsive.

Next morning the APS Council had plenty of new business. In addition to working on its own agenda, the council took these actions as a result of political activity on Monday and Tuesday:

- A petition signed by 550 people asking that a new division on physics and society be created was referred to a council committee on divisions. The proposal envisions regular sessions on science and society, including some by graduate students and young physicists. (Brian B. Schwartz and Emanuel Maxwell of the National Magnet Lab at MIT, who drew up the petition, later emphasized that the intent is to establish a forum for discussion, not to initiate political action. They called incorrect published reports that the petition envisioned an end run around the constitution to get APS into politics.)

- The council agreed to schedule a session on technical aspects of the

ABM system at Washington; APS officials had tried to set one up for the New York meeting.

- The issue of having young physicists represented on the APS Council took shape when two members appeared to nominate a candidate on the grounds that he was under 30. The council reminded Schwartz of existing constitution requirements that officers be fellows; nomination for fellowship includes listing the candidate's contributions to physics.

(I. Richard Lapidus of Stevens Institute of Technology is circulating proposed amendments that would delete the requirement that officers be fellows. The amendments will be presented to the council, with petitions signed by 1% of the membership if necessary.)

The council did move, however, to attract more students, many of whom are not APS members. Concessions on dues and subscription rates will now be granted for five years, providing the student maintains full-time status, instead of for a maximum of two years.

While the council met at the Hilton, the organizers of Scientists for Social and Political Action held a

news conference at the Abbey-Victoria to describe their plans. The group grew out of conversations among Martin Perl of SLAC, Charles Schwartz of Berkeley, Marc Ross of Michigan and Michael Goldhaber of Rockefeller University.

Local autonomy is the key to SSPA: Each chapter is to be, among other things, a little think tank, free of all restraints as it studies the issues and then takes whatever actions it decides are appropriate. The organizers carefully avoided establishing any national structure; Perl will serve as acting secretary only to get

out a newsletter describing the activities of local chapters.

As Schwartz explained it, SSPA was formed to fill a vacuum left by existing societies. He said groups like APS and AIP "are very polite organizations which avoid controversies by defining very narrow roles for themselves . . . They shun any statement of opinion or judgment . . . and they use such excuses as, 'We must protect our tax-exempt status.'"

By 1 March 20 chapters were operating. A local unit formed in New York immediately after the meeting. Its first action was to join with American Psychologists for Social Action in the 4 March research stoppage.

Feinberg, Commoner, Crane Probe Scientists' Social Role

Long before the buttons and petitions blossomed at the Hilton, the American Physical Society and the American Institute of Physics had organized a panel on science and society. On Monday evening H. William Koch, AIP director, presided over discussion of scientists' responsibility to the world around them.

Gerald Feinberg of Columbia, outlining the theme of his book *The Prometheus Project*, argued that a measurable fraction of the human race should formulate long-range goals to be used as ethical guidelines for future technological development. He rejected the idea of an intellectual elite making any such decisions, arguing that there is no reason to believe that scientists or any other small group can summarize the

ethical views of the human race.

Barry Commoner, Washington University biologist, agreed that it was a mistake for scientists to set themselves up as an elite, even in discussion of technical policy. "Everybody has a technical adviser now except the man in the street," he said, and it should be the main job of the scientist to inform the man in the street of the consequences of scientific and technological progress.

Commoner rejected the idea that physicists or any other group can stand aloof from the problems of the day. He thinks, for example, that AIP has an "involuntary responsibility" to get and publish the facts on the antiballistic-missile system.

H. Richard Crane of Michigan described the work of the first 15

West Coast chapters are organizing a drive to seek open Congressional hearings on long-range U.S. weapons policy. Petitions are being circulated; physicists will be asked at the Washington meeting to ask their own congressmen to work for such hearings.

SSPA joined fully with the Science Action Coordinating Committee and the Union of Concerned Scientists in promoting the 4 March research stoppage. The first newsletter urged members to take part and to take advantage of the opportunity to advertise the existence and aims of Scientists for Social and Political Action.

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months of the AIP's Committee on Physics and Society (COMPAS). Its first concerns, he said, had been to gather information on effects of the draft and federal budget cuts on physics. Now, he said, with AIP encouragement it is exploring "what the appropriate areas should be for the nontechnical involvement of the AIP." Its recommendations will be made to the governing board, composed almost entirely of member-society representatives.

As Crane put it, it is no longer a question of whether AIP should be involved outside of pure physics, but rather how and to what degree.

FAS Welcomes Sakharov Essay; Hollander to Edit Response

The Federation of American Scientists has officially welcomed the essay on international cooperation by Soviet nuclear physicist Andrei D. Sakharov; an FAS committee headed by Jack M. Hollander of Lawrence Radiation Laboratory is drafting a reply to be ready in four to six months.

Sakharov wrote that only ultimate "convergence" of the US and USSR could avert the dangers confronting the world. He listed these dangers as the threat of thermonuclear war, overpopulation and famine, pollution, police dictatorships and encroachment on intellectual freedom. The essay is believed to have been circulated widely in Russia, although it has never been officially printed there. It was first printed in the US last July and is now available as a book.

Cameron Satterthwaite of the Uni-

All-Girl Physics Course Makes Converts in Illinois

"Physics is for everyone, even for girls!" With this attitude, chairman F. Darrell Goar has increased the physics enrollment at Moline High School, Illinois, by 58% in two years with a probable additional 30% increase this fall. Convinced that enrollment drops are caused by teachers who have made physics no longer worthwhile for the average high-school student, Goar took 21 hesitant females and made physics meaningful by avoiding the "smoke screen of mathematical vocabulary."

Goar reported his success at the American Association of Physics Teachers annual meeting in New York.

Hoping to dispel the myth that physics is male territory, he began

the first all-girl course in May 1967. He separated the girls because he felt that in co-ed laboratories, the males do the work while the girls assume "the proper female role" of secretary, not wanting to upstage the male intellect.

In class Goar overcame their fear of physics and built their confidence with experiments from the Physical Sciences Study Curriculum. Emphasis was on discovering basic scientific principles, using math only when needed to compute experimental results. Effects were positive; most of the girls went on to take the advanced chemistry course they previously thought too difficult and two have decided to become high-school physics teachers instead of nurses.