

In the feature presentations and in many of the workshops, there was a good deal of worrying over low enrollments in physics, the relatively advanced median ages of tenured physics professors, and the problems facing small departments and departments in four-year colleges. In reporting the results of workshop discussions, groups gave high priority to restoring programs of Federal support for participation by undergraduates in physics research. They also recommended tak-

ing steps to attract college students to careers in high-school physics teaching, preparing sample guidelines for evaluation or accreditation of undergraduate physics programs, and assisting graduate students find jobs by providing better information and counseling.

In the final wrap-up talk, Harvard's Norman Ramsey, who is chairman of the AIP Governing Board, suggested that universities consider temporarily expanding the number of tenured positions in physics departments, so as to

provide slots for younger physicists now, on the understanding that departments would revert to their current size when older members retire.

At a dinner midway through the conference, Anthony P. French, president of AAPT, gave a talk entitled "Discovering Niels Bohr." French is the editor of a forthcoming centenary volume about Bohr's life and work, which is sponsored by the Education Commission of the International Union of Pure and Applied Physics.

APS human rights committee works on Soviet cases, Poland

The American Physical Society's Committee on the International Freedom of Scientists was represented last March at a reception held by AAAS at the American Museum of Natural History in New York for Argentina's president Raúl Alfonsín. For President Alfonsín, the AAAS reception was an opportunity, among other things, to urge Argentine expatriates to support the reconstruction of scientific research and science education in Argentina, which suffered badly under Peronist and military rule. It also was an opportunity for him to thank US scientists for speaking out on behalf of individuals who had been jailed, tortured or "disappeared" during his country's dark years.

The APS Committee on the International Freedom of Scientists is of course just one of many groups that have dedicated themselves to the difficult task of trying to protect victims of political abuse. Organizations such as Amnesty International, Helsinki Watch and the Committee of Concerned Scientists are much better known to the general public; even among most physicists, CIFS probably is not a household acronym.

Earlier this year, Thomas H. Stix, professor of astrophysical sciences at Princeton and associate director for academic affairs at the Princeton Plasma Physics Laboratory, took over as chairman of the committee. The views of Stix are described in the box page 73, and the work of the Committee on the International Freedom of Scientists is the subject of this story.

Small Committees. Like most human rights groups, CIFS concentrates almost exclusively on individual persons and does not generally address cases of discrimination against classes or groups of people. CIFS works mainly through "Small Committees"—teams of three or four people who take it upon themselves to correspond with victims of political abuse, their friends, associates and families, local authorities, and people who are in a position to intervene.

In recent years, CIFS has intervened on behalf of physicists in Argentina and Chile, it has worked with Amnesty International to protect the rights of Palestinian physicists in Israel, lodged protests with the Indian government against discriminatory treatment of Israeli physicists (see *PHYSICS TODAY*, September 1981, page 54), and taken up an investigation of Turkish physicists who were dismissed from teaching posts under the military regime. Currently, however, nearly all the individual cases handled by CIFS are in the Soviet Union, with a few in Poland. While the preponderance of Soviet cases is somewhat embarrassing to the committee, CIFS takes pains to say that this is simply the way the chips happen to have fallen.

"Because the Soviet Union imposes its repressive regime on so large a scientific community," CIFS said in its 1984 annual report, "the committee's efforts on behalf of human rights have been occupied very largely with the problems of Soviet scientists. CIFS does not wish its pro-human rights efforts to be mistakenly labeled as anti-Soviet; CIFS seriously entertains any reports of physicist human rights violations anywhere..." (For full text, see *APS Bulletin*, June, page 1068.)

CIFS small committees currently are working on nearly 70 Soviet cases, and according to committee chairman Stix, all the cases are either refuseniks (Jews who have applied to emigrate) or dissidents (persons who publicly take issue with Soviet policy). Except for those who fall into one of these two categories, physicists generally are treated quite well by comparison with some other groups in the Soviet Union, and human rights activists have little or no evidence that physicists have been victims of the kind of pervasive discrimination that Jewish mathematicians are reported to have suffered from during the past 15 years.

The comparison with mathematics is instructive. According to *samizdat* (underground) documents that are generally considered well-founded in fact,

it became virtually impossible during the 1970s for Jewish mathematicians in Russia (of whom there are a large number) to publish in some of the leading journals and get promoted at the top universities. Prominent Jewish mathematicians also found it increasingly difficult to go abroad to attend professional conferences and accept awards. Furthermore, it recently has become difficult for Jewish students in mathematics—and Jews in physics and other fields as well—to attend Moscow University.

Soviet focus. Reports indicate that the situation of Jewish mathematicians in the Soviet Union may be improving, and by comparison with Soviet physicists, the mathematicians always have found it somewhat easier to emigrate. According to Joel Lebowitz, a mathematical physicist at Rutgers and co-chairman of the Committee of Concerned Scientists, there are two reasons for this contrast. In the first place, mathematicians have suffered discrimination at the hands of anti-Semites within the mathematical establishment—persons in positions of administrative power—who have been only too happy to let Jews go when they apply for permission to emigrate. Second, the political authorities have not considered mathematics nearly as vital to national security as physics. If a physicist wants to leave the Soviet Union, the answer is almost sure to be that the person cannot be dispensed with because of national security, and if a physicist expresses dissent, the official attitude is that a sacred national trust has been betrayed.

Members of CIFS naturally are concerned, at a time when scientific exchanges and arms-control negotiations are being resumed with the Soviet Union, that so little progress has been made on human rights. For a time it seemed that Yuri Orlov's condition was improving, and CIFS members felt they may have played some role in gaining his release from prison. But the most recent reports indicate that he is being forced to live in quarters for transient

workers in a remote Siberian village, that for a long time he was unable to get treatment for his teeth, and that his mail has been cut off since last November (see letter, page 9). The treatment of Orlov, a founder of the Russian Helsinki watchdog committee, has been particularly galling to those who recall the major concessions made by the West to achieve the Helsinki agreement.

Polish Nuclear Institute. The situation in Poland, another country covered by the Helsinki Accords, also has been of mounting concern to APS and CIFS during the past year. Mildred S. Dresselhaus, acting in her capacity as president of APS, sent a cable to the Polish government last summer protesting plans to put two Polish physicists on trial for political reasons. That trial was cancelled. Then, last December, Dresselhaus sent a second cable, protesting the dissolution of the Institute for Nuclear Research.

CIFS has received extensive reports on the Institute for Nuclear Research, and similar reports have appeared in the science press. The main allegations are that the Institute was dissolved for political reasons, that three new institutes were created without guaranteeing former INR staff re-employment, and that work was being made impossible for many individual physicists. It has been hard to determine, working at a distance, just how much these individuals have suffered and the extent to which important centers of learning have been destroyed. Few people in this country are in close daily contact with developments in Poland, and a large number of special factors complicate the story.

From interviews with a handful of Polish physicists at several leading US institutions, a very crude picture—something like a second-rate satellite photograph—emerges. The Institute for Nuclear Research seems to have been highly politicized since the mid-1950s, when it was treated to a large infusion of secret-service agents who had been staffing a nearby radio jamming station. Following the upheavals in 1968, there began a policy of harrasing Jews at the Institute. According to one source, when the authorities ran out of Jews to hound, they tried to brand other individuals in disfavor as Jews and to harrase them too.

On top of political grievances, staff at the Institute were perennially unhappy with a succession of Polish governments because of their preference for coal over nuclear power. Most staff members at the institute worked on applications of nuclear energy.

When Solidarity emerged in 1980, the Institute was a hotbed of political activity from the start. In 1982, a year

after the authorities declared a "state of war" and imposed martial law, the government announced the dissolution of the Institute and the reassignment or retirement of its personnel.

The most recent reports indicate that most of the staff members have found new jobs, but many individuals apparently consider their new jobs inferior, and many are resentful at having to do work outside their original fields of inquiry. The most significant physics at the Institute, in the estimation of Polish sources in this country, was done by a small theoretical team and a small experimental team, and some persons on the theory team have managed to fare relatively well, partly because of their ties with Warsaw University. At least one of them is reported to have emerged with a better job than he had at the Institute.

Warsaw University was until recently a haven of relative autonomy. There was some concern last year, when the government rejected an eminent philosopher the university senate had elected rector. But the government went on to accept the senate's second choice, Grzegorz Bialkowski, a theoretical physicist. Bialkowski was active in organizing an independent union of scientists five years ago and is reported to be a man of integrity.

In May the situation at Warsaw University and other institutions of higher learning took a sharp turn for the worse when the government proposed new academic regulations that would eliminate the democratic election of rectors and make all university personnel liable to suspension on political grounds. Faculty, students and employees at Warsaw University held a demonstration to protest the plan, and some 150 academics and Nobel Prize winners in the United States and Europe have signed an appeal asking the Polish government not to proceed with the changes.

Cooperman's death in dispute. The Committee on the International Freedom of Scientists has taken on a few Polish cases, but it has not always been easy to see what qualifies as a rights violation in the normal sense of the term. Even when the action is much closer to home, the facts can seem confusing and complicated, and it can be hard to decide what the relevant standards are that should be brought to bear.

One of the most troubling cases to have come to the attention of the committee concerns Edward Lee Cooperman, a physicist at California State University, Fullerton, who was head of the US Committee for Scientific Cooperation with Vietnam. Cooperman was involved in many efforts to provide scientific assistance to Vietnam following the end of the war, sometimes in

defiance of US policy and possibly in violation of US export regulations. He also befriended and sought to help Vietnamese students in the US, regardless of their backgrounds or politics.

Last year, Cooperman told his wife, friends and associates that he was receiving threats and that he feared for his life. In October he was found shot dead in his campus office. A Vietnamese refugee whom Cooperman had befriended initially denied involvement but then made a confession under questioning. He claimed that he and Cooperman had been wrestling playfully with a loaded gun, that the gun had gone off accidentally, that he left and saw a movie with a girlfriend, returned later to Cooperman's office, found that the professor had bled to death in the meantime, and placed the gun in Cooperman's hand, apparently to make the death look like suicide. The first trial of the Vietnamese immigrant ended with an acquittal on first-degree murder and a hung jury on second-degree. The second time the case went to court, the defendant forfeited his right to a jury trial in agreement with the district attorney's office, which had concluded that the jury probably would deadlock again on the second-degree charge. The judge convicted the defendant of involuntary manslaughter, but said at the time that parts of the defendant's story were implausible. The district attorney told *PHYSICS TODAY* that he did not believe important aspects of the defendant's confession.

Among Cooperman's friends and close associates, it is widely believed that he must have been the victim of an assassination ordered by some right-wing Vietnamese group or gang in the US. In recent years, right-wing Vietnamese groups have "taken credit" for the murders of several Vietnamese-Americans who were considered political enemies. Vietnamese expatriates physically broke up a meeting Cooperman held on one occasion to show a film about Vietnam.

James G. Enright, the chief assistant district attorney who prosecuted the case the second time, says he has been unable to find any link between the Vietnamese refugee who killed Cooperman and a Vietnamese organization. He says he contacted Vietnamese informants, but it is known to be extremely difficult to get information in the Vietnamese community because so many Vietnamese are terrified of the gangs run by expatriate leaders. Friends of Cooperman are disappointed that even the Vietnamese students who were helped and befriended by Cooperman have not come forward with evidence that might shed light on his death.

Asked whether the FBI had been of any assistance on the case, Enright said

Stix urges physicists to express concerns to Soviet counterparts

Thomas Stix, the new chairman of the Committee on the International Freedom of Scientists, appears almost uniquely well placed to act on his leading concern, the Soviet Union's poor record on human rights. Except for the three years he spent doing military service in World War II, Stix has worked his entire adult life as a plasma physicist, and since the late 1950s he has been acquainted with leading Soviet physicists in the field, including Evgeny P. Velikhov, Vice-President for Physics and Mathematics of the Soviet Academy of Sciences, and Roald Z. Sagdeev, director of the Institute for Space Research of the Soviet Academy. Taking note of Velikhov's apparent access to the Soviet Union's top political leadership, Stix observes that it is "rather mind-boggling to be able to send a personal message to somebody who can touch the Soviet leader."

Stix feels it is imperative for American physicists to do everything in their power to convey to Russians how strongly US citizens feel about human rights. He says Velikhov once told Melvin Gottlieb of the Princeton Plasma Physics Laboratory that there is no public pressure in the USSR on human rights. Stix believes that people such as Velikhov need to be told at every opportunity that without substantial Soviet progress on human rights issues, the prospects for meaningful arms control will remain bleak.

As Stix sees it, Soviet violations of human rights provide the United States with "a moral basis for the arms race." His message to Soviet counterparts, accordingly, is that it would be a good idea for the Soviet government to do something dramatic to improve its human rights record, not as "a favor to us but as a necessity for them."

When Stix talks about human rights, he uses the term in a broad sense. He refers, among other things, to the Soviet Union's "oppression of Czechoslovakia, Afghani-



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stan, their invasion of Hungary, what they did to Solidarity. . . ." He does not, however, favor cutting contacts and exchanges as a means of exerting pressure on human rights. "Because of the nuclear danger," Stix says, "we have to use every means at our disposal to communicate with the Soviets."

Stix is aware that many Russians, including the dissident brothers Roy and Zhores Medvedev, argue that an inadequately controlled military-industrial complex in the United States is a prime cause of the arms race. What would Stix say if the Soviets were to complain that the profitability of American defense contracting gives them, the Russians, a moral basis for the arms race? They are "very sensitive to external threats, going back to the Mongols," Stix replies, "and then there's Hitler. They're paranoid about our weapons. But we're strongly concerned about their weapons, and we're paranoid about their totalitarian

regime and their suppression of individual freedom."

Stix has little patience with those who argue that intervention in the cause of human rights only makes adversaries angry and situations worse. But he appreciates that it is necessary to treat testimony about human rights abuses with some skepticism. In the case of Turkish physicists who have complained of their treatment at the hands of the current military regime, Stix was warned by a prominent Middle East expert at Princeton to proceed with care. The expert reminded Stix that Turkey's universities were a "literal battleground" before the military took over, that "automatic weapons fire was heard in the hall."

On the Cooperman case, Stix is inclined to agree with the general position adopted by his predecessor, Gerjuoy, but with one reservation. Stix considers the security of foreigners teaching or studying at US universities to be a legitimate concern for his committee. Individual Taiwanese, Vietnamese, Iranians and Libyans, among others, are believed to have been threatened or pressured by government security forces or terrorist groups in the United States.

Stix hedges on the question of whether CIFS would take action if asked to do so on Cooperman. He cites the committee's reluctance to get involved in situations "where we don't have solid evidence that human rights violations have occurred." In this case, he says, "the perpetrator is being punished, the physicist is dead, and allegations about a human rights violation concern the possibility of an assassination. We see this as substantially different from a situation in which a physicist clearly is being oppressed and and it is his own government that is oppressing him." While we "may think that the process of justice did not go far enough in this case," Stix says, "we have to ask what increment of influence CIFS can bring to bear." —WS

that the FBI knew a lot about Cooperman and his activities but was not of help in developing leads on the assassination theory. Apparently the FBI regarded the case as local, despite allegations that Vietnamese gangs in other states such as Hawaii might have been involved.

Immediately after Cooperman's death, Dresselhaus wrote to the president of California State University expressing distress over the death of Cooperman, whom she described as a "distinguished physicist and a highly regarded member of the American Physical Society." She offered the Society's "support and encouragement to you and your colleagues in your efforts to clarify the important aspects of this tragedy" and asked the president of California State to "let me know if we can assist you in any way."

Two days before Dresselhaus offered this help, a request from two APS

members for intervention in the Cooperman case was forwarded to Edward Gerjuoy, a University of Pittsburgh physicist who at that time was chairman of CIFS. The request was for CIFS to write a letter to the district attorney of Orange County, expressing the committee's strong interest in seeing that the case was thoroughly investigated. Gerjuoy turned it down on the ground that a letter could be interpreted as an attempt to interfere with an ongoing investigation, but he left open the possibility of intervening after the trial, if there were evidence that the investigation had been inadequate.

After the second trial ended, Cooperman's widow, Klaaske Cooperman, filed a civil suit against the Vietnamese refugee who killed her husband. Overseas, there are people who regard the Cooperman killing as comparable to other cases handled by CIFS. M. Laurent Schwartz, an eminent mathemati-

cian at France's Ecole Polytechnique, wrote a lengthy newspaper article about the "assassination" of Cooperman, which appeared in *Le Monde* on 22 February. Henri Van Regemorter, director of research at France's CNRS, wrote to Dresselhaus last November urging her to "ask all concerned authorities, in particular the House Subcommittee on Civil and Constitutional Rights, to conduct a complete and thorough investigation."

Before Cooperman's death, the Senate Permanent Subcommittee on Investigations launched an inquiry on Cooperman, and the Subcommittee currently has many of the documents from the physicist's office in its possession. The Subcommittee is interested primarily in whether Cooperman somehow managed to circumvent export regulations, and only secondarily in the suspicious circumstances of his death. —WS□