

mental research at the Department of Energy, says that Marchuk is a "very broad fellow and a first-rate mathematician." George Bell, head of the theory division at Los Alamos National Laboratory, describes him as "a very impressive person"—articulate, able to grasp technical detail readily, aware of everything going on around him and very gregarious. Ronald Mohler of the University of Oregon, who has collaborated with Marchuk for about 12 years, describes him as "a very outstanding and sincere person" and as "more liberal" than many of his colleagues.

Since 1980 Marchuk has been a deputy prime minister and head of the State Committee for Science and Technology, which coordinates applied research and development in the Soviet Union. He remains head of the state committee, and it is Mohler's impression that the committee may be folded into the academy and abolished as a separate entity. Mohler is inclined to view the Marchuk appointment as evidence of the Soviet leadership's efforts to streamline the economy and emphasize openness.

Career. Before 1980 Marchuk was director of the Siberian division of the Academy of Sciences at Novosibirsk. Loren Graham, a science historian and expert on the Soviet Union at MIT and Harvard University, notes that Novosibirsk was known in the 1950s and 1960s as a relatively free-wheeling intellectual center. Because of its distance from Moscow and because of Mikhail Lavrentiev's dynamic leadership, it was a place where, for example, modern biology was fostered. Andrei Budker's Nuclear Physics Center in Novosibirsk pioneered colliders and was a center for fusion research (see *PHYSICS TODAY*, August 1969, page 62).

To attract top talent to Novosibirsk, some scientists were offered special privileges such as individual houses, and so entrepreneurial types tended to take up residence.

That said, Graham thinks that Novosibirsk may have lost some of its élan in recent years and that Marchuk's tenure was associated with some tightening of political control. Graham is certain that Marchuk was the Communist Party's candidate for the top academy post. A majority of the academy's members and all members of its presidium are now party members, enabling the party to strongly influence or even dominate the choice of president, Graham says.

Setback to Velikhov. Evgeny P. Velikhov, vice president for physical and mathematical sciences in the Soviet Academy, had been widely expected to be elected the academy's president, and because he has frequent contacts with



MARCHUK

scientists outside the Soviet bloc and is well known to be an advocate of science exchanges and arms control, his defeat tended to be interpreted as a victory for party hard-liners and a setback to détente.

Marchuk has been primarily involved in Soviet exchanges with Eastern Europe and is reported to have publicly condemned Andrei Sakharov. But DeLisi, Bell and Mohler all would be skeptical about any attempt to portray him as a hard-liner or an enemy of exchanges with the West. All three of them have been invited by Marchuk to the Soviet Union on numerous occasions.

Graham would be inclined to interpret the party's choice of Marchuk as "an attempt to find a person who is good at getting fundamental science connected to industrial production and closing that gap, which is the historic weakness of the Soviet Union in science and technology, and a person who is very familiar with working with the government bureaucracy toward tying science to economic planning goals."

—WILLIAM SWEET

Cornell unit surveys some US Academy members on SDI

The Science and Engineering Committee for a Secure World, an organization established last spring to muster support for President Reagan's Strategic Defense Initiative (*PHYSICS TODAY*, June, page 81), has been quick to denounce the latest poll of eminent scientists on SDI as irrelevant and insignificant.

In the poll of members of the National Academy of Sciences in the physical sciences, mathematics and engineering, 78% of the respondents said that the prospects were "poor" or "extremely poor" that a survivable and effective missile defense system could be built in

the next 25 years, while just 4% considered the odds of success as better than even. The results of the survey, which was conducted by a social science research unit at Cornell University, were released in late October.

On 10 November, the pro-SDI committee issued a press release assailing the poll on the grounds that the respondents lacked the "understanding and experience" to make such judgments. Frederick Seitz of Rockefeller University, the head of the committee, was quoted in the release as saying, "One wonders to what extent most of these scientists who disapprove of SDI have actually participated in the research program, or appreciate the degree of seriousness which the Soviet Union devotes to its own continuing efforts in this field."

Peter Stein, an experimental particle physicist at Cornell University who conceived of the academy poll with two other Cornell physicists (astronomer Steven Soter and George Lewis, a postdoc in applied physics), concedes that the survey did not inquire specifically into knowledge or opinions about Soviet missile defense programs. But he says the survey did ask about the relative US and Soviet positions in technologies pertinent to the Strategic Defense Initiative and found that the consensus overwhelmingly favored the United States. As to Seitz's second point, Stein says that "it is very common to ask distinguished scientists their general opinion of an effort that they themselves are not directly involved with."

Poll method. Earlier last year, when Stein, Soter and Lewis conceived of the academy poll, they were unaware that Harvard physicist William A. Shurcliff already had conducted a private survey of the entire academy on Star Wars (*PHYSICS TODAY*, June, page 81). When they learned of Shurcliff's poll, which found members skeptical about the SDI program by a margin of 20:1, they wondered whether they should proceed. They decided a more rigorous poll still would be useful and managed to raise \$8000 to have the Cornell Institute for Social and Economic Research do the job.

The Cornell pollsters went for as high a response rate as possible, using what is called an "all-out" sequence of mailings. Robert McGinnis, director of the Cornell research unit that did the poll, says that they sent out an initial mailing of the polling instrument with neutral cover letters, sent a follow-up card a week later, tracked the returns, sent a second copy of the instrument to non-respondents three weeks later, again tracked the returns and, finally, sent a third copy by certified mail to

stubborn non-respondents.

Even then, the pollsters had obtained a response rate of only 62%, even though they were shooting for 75% and considered two-thirds the minimum acceptable. And so at that point they tracked down non-respondents by telephone, and by persuading some hold-outs to fill out the questionnaires and send them in, they boosted the response rate to 74%.

Many of those who did not respond turned out to be deceased or out of the country and inaccessible, and some disqualified themselves on the ground that they no longer were intimately in touch with science research and no longer considered themselves true members of the scientific community. But 59 refused to participate, expressing disdain for social science research in general or disdain for the survey instrument in particular. McGinnis takes satisfaction from the fact that those expressing disdain for the survey instrument were evenly divided between those who considered it blatantly pro-SDI and those who considered it blatantly anti-SDI.

—WILLIAM SWEET

Nominations urgently sought for Gemant Award

Nominations are sought for the first annual Andrew Gemant Award, which will be made by the AIP Governing Board at its March 1987 meeting. The award will recognize the accomplishments of a person who has made significant contributions to understanding the relationship of physics to the surrounding culture and to the communication of that understanding.

Nominations for the 1987 Gemant Award may be made to any member of the award committee: Donald Holcomb of Cornell University (chairman), Bernard F. Burke of MIT and David Lazarus of the University of Illinois.

The career of the awardee must be judged "very strong" in at least one of the following areas:

- Creative work in the arts and humanities that derived from a deep knowledge of and love for physics
- The interpretation of physics to the public through such means as mass media presentations or public lectures
- The enlightenment of physicists and the public regarding the history of physics or other cultural aspects of physics
- The clear communication of physics to students who are learning physics as part of their general education.

The awardee will receive a certificate and a cash award. In addition, the recipient will be invited to deliver a

lecture to a meeting that focuses on the interdisciplinary aspects of physics and will select an academic department for receipt of a special AIP grant, which can be used to fund either a graduate fellowship or a public lecture series.

Policy for the Gemant Award was adopted by the AIP Governing Board at its October meeting. The board also adopted a policy for the newly established Meggers Award. Both awards honor noted physicists and are endowed by bequests they left to the American Institute of Physics.

Gemant, a native of Hungary, was an industrial physicist and author of numerous scientific papers who also played classical piano proficiently, read widely in the literature of several languages and wrote novels and short stories.

Gemant's interest in AIP arose from a solicitation the institute's history division sent him in the 1960s, when members of the division decided to assemble biographical information on physicists working in industry. A lengthy correspondence ensued between Gemant and Joan Warnow of the history division. After Gemant's wife died, he made AIP the beneficiary of his will, and when he died in 1983, the net value of his estate turned out to be about \$150 000. Gemant had specified that he wanted the estate to endow some kind of award in his name.

William F. Meggers, a spectroscopist who spent his entire career at the National Bureau of Standards, was an avid collector of stamps and coins and decided in the 1960s to donate his collections to AIP to further physics education. In a letter he wrote on 30 November 1965, Meggers said: "When I attended high school in 1902, everyone was required to study physics; our only elective was a foreign language. Since then, physics became an elective and enrollments for its study have steadily declined. . . . In my opinion, it is not enough to 'help check the continuing drop'; it is absolutely necessary to reverse the trend."

When Meggers gave the collections to AIP, the value of the coins was estimated at around \$40 000. AIP kept the collection in safe deposit boxes for 20 years, and in May 1985 it was auctioned by Robert A. Siegel Auction Galleries in New York, yielding a net return to AIP of more than a half million dollars.

Meggers Award. The Governing Board's policy statement on the Meggers bequest provides for the establishment of two awards:

- The Meggers Project Award, given to the winner of a biennial competition open to the physics community for projects whose goals are consistent

with the Meggers gift

- The Meggers/AIP Educational Programs Branch Research and Development Award, for the purpose of providing the basis for special projects, consistent with the Meggers gift, to be carried out by AIP alone or in conjunction with one or more of the member societies or other organizations.

A committee is to be established to make nominations for the biennial project award. The AIP Committee on Educational Policy will recommend selection criteria and make awards for the education research and development award.

Annual income from the Meggers endowment is expected to be about \$55 000, while income from the Gemant bequest should be around \$15 000. The amounts to be awarded will be determined by the Governing Board after considering what it will cost to administer the awards and to protect their value against inflation.

Kogelnik is elected 1987 vice president of OSA

Herwig Kogelnik, director of AT&T Bell Laboratories in Holmdel, New Jersey, has been selected as 1987 vice president of the Optical Society of America. Kogelnik will become president-elect of OSA in 1988 and president in 1989. The 1986 president is Robert G. Greenler of the University of Wisconsin, Milwaukee, and the president-elect is William B. Bridges of Caltech.

In other election results, OSA members elected three directors-at-large to serve two-year terms: Robert L. Byer of the applied physics department at Stanford University; H. Angus Macleod of the Optical Sciences Center, University of Arizona; and Duncan T. Moore of the Institute of Optics, University of Rochester.

A native of Austria, Kogelnik earned

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