Student Director Becomes Full-Time Visiting Scientist

The first director of the Society of Physics Students has become a one-man visiting-scientist program in his first year on the job. Cecil G. Shugart traveled to 21 states during the first semester of 1968–69, concentrating on smaller colleges that operate in relative isolation.

During a campus visit Shugart, 38, rarely will find time to sit down. He will meet with students, perhaps to help them form a chapter of SPS or Sigma Pi Sigma, the honor society, to offer advice and encouragement, or just to exchange ideas. He will meet with faculty members, again to exchange ideas and experiences. He may give several formal talks, either on the society or the sponsoring American Institute of Physics or on a topic in nuclear physics, his speciality. He may speak to groups of nonphysics majors.

Beyond the programs of individual chapters, Shugart has concentrated on regional student meetings. Student sessions at AIP member-society meetings have worked well. Now SPS is sponsoring additional meetings around the country at which both students and working physicists present papers. The first five took place in New York, Georgia, Texas, Arkansas and Pennsylvania, the last the site of an all-day "physics happening."

Shugart has made it his goal that every physics student in the US should be able to attend at least one nearby student session while he is a junior or a senior.

Now the society is considering expansion into the multiplying junior colleges around the country. The present constitution does not provide for junior-college chapters; the only exceptions are two-year schools in Maryland and Arkansas affiliated through their parent universities.

Shugart and his staff formally presented the necessary amendment to the SPS Council in Washington last 1 May. They then submitted it to the member chapters for approval. Under the plan junior colleges would offer associate membership. These chapters in turn could nominate outstanding students for associate membership in Sigma Pi Sigma.

Asked about finances in this period of general belt tightening, Shugart said the society is on its way to being self-supporting. Each regular member pays $3 a year; new members of Sigma Pi Sigma pay a one-time fee of $12. In 1968–69 income from these two sources totaled $46 500. Sigma Pi Sigma alumni contributed another $28 000. This left AIP with a difference to make up of about $20 000. Shugart hopes rising income from the first three sources will soon make the fourth unnecessary.

Experience as student and teacher in large and small colleges, as well as in industry, helped qualify Shugart for the job. After high school in Houston, he studied at Navarro Junior College and North Texas State, working at Bell Telephone Laboratories to support himself. Graduate work took him to the University of Texas, where he also worked in the Defense Research Laboratory.

He moved to California, working in magnetics for IBM and teaching at Foothill College near Stanford. He returned to Texas in 1962 to become department chairman at Hardin–Simmons University. In 1963 he became a zone counselor for Sigma Pi Sigma, responsible for the eastern half of Texas. During his tenure the number of chapters grew from 6 to 14. He returned to the University of Texas in 1965, at first teaching also at South-

ARGONNE NATIONAL LABORATORY PHOTO

DAMP DEDICATION. Oliver C. Simpson, left, solid-state division director, holds umbrella for Glenn T. Seaborg, Atomic Energy Commission chairman, during dedication of solid-state building at Argonne National Laboratory.

western University and then joining the Center for Nuclear Studies at the University of Texas.

Shugart has two sons, each born on a return to Austin. The older is now 10 and may be a future physicist: He enjoyed accompanying his father to the nuclear laboratory. The younger, just 3, has not yet indicated any career preferences.

What are Shugart's impressions after almost a year of travel? Despite widespread concern over declining student interest in physics, he has found quite the opposite. Smaller schools have more and better physics programs, he told PHYSICS TODAY. In many cases better physicists are staffing the colleges than was the case a decade ago.

Where are the problem areas? Shugart is concerned about college curricula designed only for students going on to graduate school. He wants more flexibility for terminal-degree students going into industry or high-school teaching. Another problem is providing students with better information on employment prospects.

"The kids in college don't know the real job situation," he said. "This is something the physics community will have to face." —JPW

AIP Information Division Asks $4.2 Million over Three Years

After several years spent studying the criteria for a national physics information system, the American Institute of Physics is asking the National Science Foundation for $4.2 million, spread over a period of three years, to begin implementation of its recommendations for such a system. The AIP Information Division submitted its proposal to NSF on 27 June; a decision is expected at the 22 Nov. meeting of the National Science Board. If approved the grant will be effective 1 March 1970.

The grant will provide funds for the start of new services to be offered to the physics community. Scheduled for early 1970 are pilot versions of a new current-awareness journal and physics information on magnetic tape. The switch to a production operation will mean a major increase in the activities of the division.

New products developed are expected to become a permanent part of AIP efforts to improve communication among physicists.

RESONANCES

Physicists consolidated their White House influence when President Nixon announced his intention to nominate Hubert B. Heffner, professor of applied physics and electrical engineering at Stanford, to be deputy director of the Office of Science and Technology. Heffner, 44, would serve under Lee A. DuBridge, who is also presidential science advisor.

Named to head the National Bureau of Standards is Lewis M. Branscomb, now director of the Joint Institute for Laboratory Astrophysics at Boulder, Colo. On 1 Sept. Branscomb will replace Allen V. Astin, who is retiring after 17 years as director and 37 years with NBS.

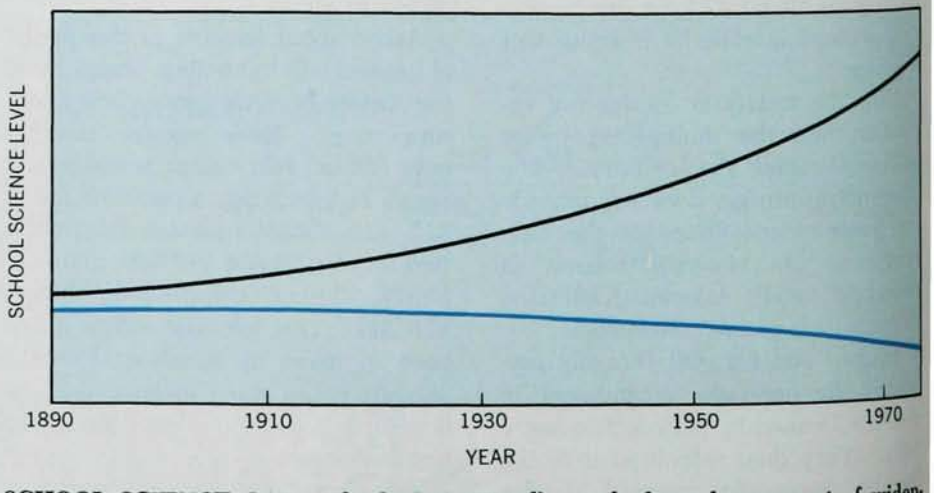
Political upheaval has caused cancellation of the 11th Latin American School of Physics. José Leite Lopes, professor at the Centro Brasileiro de Pesquisas Físicas and director of the 1969 school, reports he has been excluded from his university and forced into retirement. In a letter to Peter G. Bergmann at Syracuse, Leite Lopes wrote, "I am sorry to tell you that under the circumstances I do not believe there is any atmosphere for holding the school in this country as planned." He added that he and others plan to leave Brazil.

AIP Study Offers Solutions to School Science Problems

After a year of talking to teachers, students and administrators in interviews lasting up to two hours, a researcher for the American Institute of Physics has come up with 27 recommendations for improving US precollege science teaching.

She found the science teachers "overworked and tired, eager and enthusiastic, frustrated and angry, in anguish for the students they want to help and can't, and . . . surprised and pleased that someone will listen."

The interviewer was no stranger to the subject. Elizabeth A. Wood, a PhD crystallographer at Bell Telephone Laboratories until her retirement in 1967, has been associate director of the Physical Science for Non-science Students program (PSNS). The AIP study grew out of meetings 18 months ago of representatives of the American Association of Physics Teachers, the Commission on College Physics and the AIP Division of Education and Manpower. Arnold A.



SCHOOL SCIENCE GAP. Elizabeth A. Wood's graph shows her concept of widening gap between level (background, vocabulary, sophistication) of school texts and courses (black) and that of the average student and teacher (color).