for expansion than the new cables. The new cables handle 720 channels, and while the satellites are expected to start off with around 270, within 5 years they would have about 1400, and they could also transmit television, which cables cannot. The unstated reason for the A.T.&T. move, however, was the company's wish to demonstrate the solidarity of U.S. business in facing the threat of recalcitrance from abroad. The A.T.&T. decision is expected to take a good deal of the steam from British resistance to satellites, since the British argument was predicated, in part, on the availability of the new A.T&T. cables. In any event, the move was a real break for COMSAT and seems to resolve the competition-versus-cooperation question in the direction of cooperation—which is pretty much what everyone expected all along, despite the entertainment value of a bit of suspense.

Though fresh from victory with A.T.&T., COMSAT was set back a bit this week with the Pentagon's announcement, after a year of delay, that it planned to construct its own system of communications satellites—another cut into the government business COMSAT had hoped to be able to count on. Discussions are going on, however, in the hope that COMSAT can persuade the Pentagon that its secret messages will be safe on channels leased from the corporation. It is probable that the Pentagon will build its own system, however, and that because it has its own form of diplomatic immunity from the laws of economics, it will still turn its routine communications over to the commercial corporation.

In sum, though optimism is plentiful, a hard road lies ahead and the future of the Communications Satellite Corporation is far from settled.

This is the conclusion of a two-part series on COMSAT.—ELINOR LANGER

Announcements

Walter Sullivan, science news editor of the New York *Times*, and **Dean E. Wooldridge**, former president of Thompson Ramo Wooldridge, now a research associate at California Institute of Technology, will receive the 1963 AAAS-Westinghouse Science Writing Awards, and $1000 honorariums.

Sullivan, who received honorable mention in the 1962 competition, won this year's newspaper writing award for three stories: on a Soviet project for boring into the earth's crust; on an echo device which has disclosed what may be the original crust of the earth; and on the possibility that island chains may have been formed from single volcanoes.

Wooldridge won the magazine writing prize for his article, "Man's Mysterious Memory Machine," a description of research on memory processes, which appeared in the June 1963 issue of *Harper's* magazine. This is the second successive year that an article appearing in *Harper's* has won the award.

Honorable mention for newspaper stories will go to Ian Menzies, science editor of the *Boston Globe*, and Jerry Lochbaum, science writer on the *San Antonio News and Express*. For magazine articles, George Boehm, an associate editor at *Fortune*, and Albert Rosenfeld, science editor of *Life*, received honorable mention.

The awards were established in 1946, in cooperation with the Westinghouse Educational Foundation, in a move to help improve the quality of science writing for laymen and to stimulate public interest and understanding of scientific topics.

Grants, Fellowships, and Awards

The Boris A. Bakhmeteff fellowship in **fluid mechanics** is available for the 1964–65 academic year. Applicants must be full-time graduate students, working toward the master's or doctor's degree. The recipient will carry out an original research project, at the institution of his choice; the stipend is $3600. Deadline for applications: *15 February*. (W. Allen, School of Engineering and Architecture, City College of New York, New York 31)

The Atomic Energy Commission is offering fellowships for work leading to a doctoral degree in **health physics**. The fellowships last for 1 year, but are renewable for 2 more years. Applicants must be U.S. citizens, preferably under 32 years of age; they must be working in the health physics field, and have had at least 2 years' experience, aside from training. The stipends are $4000 a year, plus $500 for each dependent, and travel allowance to the university, tuition, and fees. Recipients must have security clearance from the AEC before starting fellowship work. Application deadline: *1 February*. (Fellowship Office, Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn.)

Meeting Notes

The **Health Physics** Society is accepting abstracts of papers to be presented at its ninth annual meeting, scheduled 14–18 June in Cincinnati, Ohio. Topics to be discussed include environmental monitoring, radiation physics and biology, instrumentation and dosimetry, radium and thorium, man-made radionuclides, radioanalyses, and environmental cycling of radionuclides, and bioassay. Deadline for receipt of abstracts: *1 February*. (C. P. Straub, Taft Sanitary Engineering Center, Cincinnati 26, Ohio)

The 15th annual mid-America symposium on **spectroscopy** is scheduled for 2–5 June in Chicago. The call for papers has been issued for the following areas: emission, flame, magnetic absorption; nuclear magnetic resonance; ultraviolet, visible, and x-ray spectroscopy; gas chromatography; infrared and raman. Deadline for titles and abstracts: *14 February*. (E. N. Davis, Sinclair Research, Inc., 400 E. Sibley Blvd., Harvey, Ill.)

The call for papers has been issued for the 16th conference of the Southwestern Institute of **Electrical and Electronics Engineers**, 22–24 April, in Dallas, Texas. Emphasis of the meeting will be on technical areas of interest to both power and communications engineers. Abstracts of approximately 200 words are required. Deadline: *1 February*. (F. E. Brooks, Jr., LTV Military Electronics Division, P.O. Box 6118, Dallas, Texas 75222)

Papers are invited for presentation at the sixth international symposium on **global communications**, 2–4 June in Philadelphia, Pa. The meeting will emphasize the relationships between computers and communication networks. Abstracts of 35 words and summaries of 300 to 500 words are required in triplicate. Deadline: *28 February*. (R. Guenther, RCA Communications Systems Div., Bldg. 1-3-1, Camden, N.J. 08102)

Courses

Applications are being accepted for a summer institute in **anthropology**, scheduled 22 June to 14 August at the University of Oregon, Eugene. Participation is limited to 30 junior college and college teachers; preference will be

given those whose principal education has been in other disciplines but who must teach at least one course in anthropology. Two courses, totaling nine credit hours, will be presented: Man and culture, and New theoretical developments. The program will be conducted under a $40,800 National Science Foundation grant. No tuition will be charged, and participants will receive stipends, dependency allowances, and partial travel reimbursement; some dormitory housing will be provided. Application deadline: *10 February*. (A. C. Spaulding, Department of Anthropology, University of Oregon, Eugene)

Temple University and the University of Pennsylvania plan to offer a course in **allergy** 16–27 March at Temple's medical center. The program is designed for practicing physicians; it will emphasize diagnosis and management of allergic patients, and will include sessions on pediatric and dermatologic aspects of allergy. The tuition fee is $200. (G. Blumstein, Temple Medical Center, Philadelphia 40, Pa.)

A course on fundamentals of **engineering statistics** is scheduled 16–20 March, at Georgia Institute of Technology, Atlanta. It is designed as a refresher course for graduate engineers; emphasis will be placed on application and on random variation in the solution of problems. A $150 fee will include tuition, textbook, and all necessary supplies. Deadline for applications: *9 March*. (Director, Dept. of Short Courses and Conferences, Georgia Inst. of Technology, Atlanta, Ga. 30332.)

Analytical Engineering Laboratories, (Analabs), Hamden, Conn., will sponsor a course in **gas chromatography** 19–21 March, in Houston, Tex. The course will include fundamental theory and applications, the chromatographic column, inert support and stationary phases, temperature programming, bulk property sensing devices, and ionization detectors. Advance registration is required. (P. D. Hercz, Analabs, Inc., P.O. Box 5215, Hamden, Conn.)

Purdue University will offer a summer institute in **geometrics**, 15 June to 7 August, for college teachers of surveying, geodesy, and photogrammetry. Applicants should possess a B.S. degree in engineering or related physical sciences and have at least 2 years' teaching experience. Some financial support is available through an NSF grant. Deadline for applications: *15 February*. (K. S. Curtis, Geometrics Summer Institute, School of Civil Engineering, Purdue University, Lafayette, Ind.)

Scientists in the News

Charles C. Shepard, medical director of the PHS Communicable Disease Center in Atlanta, Ga., has won the 1963 Kimble methodology award for "contributions to developing new or better procedures in public health." He was cited for developing the first successful method of growing human leprosy bacilli outside the human body. The $1000 award is sponsored by Kimble Products, a division of Owens-Illinois, and presented by the Conference of State and Provincial Public Health Laboratory Directors.

George B. Duvall, director of Poulter Laboratories, Stanford Research Institute, has been appointed professor of physics at Washington State University, Pullman, effective 1 January.

Robert B. Banks, formerly director of research at the SEATO Graduate School of Engineering, Bangkok, Thailand, has been appointed dean of the college of engineering at the University of Illinois, Chicago.

Raymond A. Katzell, psychology professor at New York University, has been appointed head of the school's all-university department of psychology.

Nyle C. Brady, head of Cornell University's department of agronomy, has been named director of science and education for the U.S. Department of Agriculture.

Recent Deaths

Ruth Florence Allen, 84; retired plant pathologist and cytologist, U.S. Department of Agriculture and University of California, Berkeley; 30 November.

Walter Bauer, 65; Jackson professor of clinical medicine, Harvard University; 2 December.

Eliot R. Clark, 81; retired chairman of the anatomy department, University of Pennsylvania medical school; 1 November.

Maurice B. Eichelberger, 70; retired associate professor of engineering graphics, University of Michigan; 12 October.

Marek Fisz, 53; professor of mathematics, New York University; 4 November.

Milton L. McCall, 52; professor and chairman of the department of obstetrics and gynecology, University of Pittsburgh medical school and medical director of Magee-Womens Hospital, Pittsburgh, Pa.; 8 October.

Joe Vincent Meigs, 72; clinical professor emeritus of gynecology, Harvard University; 24 October.

Allan C. G. Mitchell, 61; head of the physics department, Indiana University; 7 November.

I. I. Schmalhausen, 80; Russian biologist, member of the Academy of Sciences of the U.S.S.R.; 7 October.

Abraham M. Shanes, 45; professor of pharmacology at the University of Pennsylvania; 12 October.

Joseph T. Singewald, Jr., 79; director of the Maryland State Department of Geology, Mines and Water Resources; 20 October.

Robert E. Woodson, Jr., 59; professor of botany at Washington University; 6 November.

William Embry Wrather, 80; retired director of the U.S. Geological Survey; 28 November.

Erratum: In the report "Actinomycin D: its effect on antibody formation in vitro, by J. W. Uhr [*Science* **142**, 1476 (13 Dec. 1963)], there are four serious errors. The amount of $3 \times 10^{-7}M$ actinomycin D given in line 10 of paragraph 3 was 0.37 μg/ml, not 0.3 μg/ml. The missing label on the ordinate of Fig. 1 is *K* (antibody concentration). The compounds named in the next-to-last line of the next-to-last paragraph are uridylate and guanilate (not uridylak and guanilak). The second sentence of the last paragraph should have read: "The prompt and complete inhibition . . . suggests that this messenger can have [*not* has] a half-life of less than several days."

Erratum: In the article "Specific inhibition of replication of animal viruses" by I. Tamm and H. J. Eggers [*Science* **142**, 24 (4 Oct. 1963)], reference (*64*) in line 43, column 2, page 28, should be to H. J. Eggers and I. Tamm, in preparation, not to *Nature* **199**, 513 (1963); reference (*64*) in line 2, column 2, page 29, is correct as it stands. There is an error in Fig. 8. The nucleosides should have been depicted in their β-D configuration and not in their β-L configuration.

Erratum: On the Table of Contents page, the title of the report by R. W. Holton and J. Myers [*Science*, **142**, 234 (1963)] should read: "Cytochromes of a Blue-Green Alga: Extraction of a c-Type, with a Strongly Negative Redox Potential." In the report itself, on p. 235, column, 1, line 23, Table 2 should read Table 3; column 2, line 12, Table 1 should read Table 2; column 2, line 41, Table 2 should be Table 3.

Erratum: In the program for the AAAS Cleveland meeting (6 December), the date of the symposiums, "The development of perception during the first six months of life" and "Engineering psychology: contributions of an infant science," is 30 December, not 29 December. Both symposia are programs of the Psychology Section (I). A symposium on "Models in biology," 29 December, should have been included as part of the program of the Statistics Section (U) at the meeting. Consult the *General Program* for complete details.