Association Affairs

Preview of Programs at AAAS Washington Meeting

Some of the programs to be presented at the 1958 AAAS meeting in Washington are given here. Others will be announced in subsequent issues.

Mathematics

Section A. Vice-presidential address of Section A: "Pathology of Infinite Systems of Differential Equations," by Einar Hille, Yale University. Invited papers, cosponsored by the Operations Research Society of America: "Mathematics in the Social Sciences"; 27 Dec. Papers will be presented on mathematical organization theory (Merrill M. Flood, University of Michigan) and on psychological measurement and a theory of data (Clyde Coombs, University of Michigan).

Panel: "The Problem of Formulating a Problem," arranged by Richard S. Burington, Bureau of Ordnance, Navy Department, who will preside; 28 Dec. Papers: general considerations (Richard S. Burington); formulation of the problem of ballistic missile flight dynamics (J. D. Nicolaides, Bureau of Ordnance, Navy Department); the mathematician's point of view on formulating problems (Philip M. Whitman, Applied Physics Laboratory, Johns Hopkins University); the formulation of evaluation problems in systems-engineering analyses (D. C. May, Bureau of Ordnance, Navy Department); the formulation of nonlinear theories in fields and continua (Horace M. Trent, Naval Research Laboratory); determination of upper atmospheric properties from satellite observations (Robert Jastrow, Naval Research Laboratory); formulation of problems in geodesy (John O'Keefe, Army Map Service). Open discussion by members of the panel.

Association for Computing Machinery. Invited papers: "Adventures with Electronic Digital Computers"; arranged by a committee, J. H. Wegstein, National Bureau of Standards, chairman; 30 Dec.; William F. Cahill, National Bureau of Standards, presiding. Papers: French to English by computing machine (A. F. R. Brown, Georgetown University); musical compositions by a digital computer (Lejaran Hiller, University of Illinois); computers and the Dead Sea scrolls (Paul Tasman, IBM World Trade Corporation); Capital Airlines electronic reservation system (R. C. Douglas, Capital Airlines).

Physics

Section B. Three-session symposium, cosponsored by Sigma Pi Sigma and the Chesapeake Section of the American Association of Physics Teachers: "Reviews of Special Topics in Physics"; arranged by J. Howard McMillen, National Science Foundation; 28 and 29 Dec. Part I, Bernard B. Watson, Johns Hopkins University, presiding. Papers on lightning effects on trees and buildings (Francis M. Defandorf, National Bureau of Standards) and trends in cosmic ray research (Maurice M. Shapiro, Naval Research Laboratory). Part II, L. L. Marton, National Bureau of Standards, presiding. Paper on the properties of positronium (Richard A. Ferrell, University of Maryland). Part III, Edward J. Schremp, Naval Research Laboratory, presiding. Paper on the present status of relativity theory (Joseph Weber, University of Maryland).

Physicists' luncheon and vice-presidential address of Section B: "Science, Pseudoscience, and Parapsychology," by Raymond T. Birge, University of California; 29 Dec.; Robert Bruce Lindsay, Brown University, presiding.

American Astronautical Society. Guest lecture: "The Exploration of Space," by Hugh L. Dryden, National Aeronautics and Space Administration; 27 Dec. Technical session I: "Space Explorations"; 27 Dec. Paper on orbit decay and prediction of motion of artificial satellites (Herman F. Michielsen, Lockheed Missile Systems Division). American Astronautical Society Honors Night dinner; 27 Dec.; Ross Fleisig, Sperry Gyroscope Company, presiding. Technical session II: "Reentry Mechanics"; 28 Dec. Paper on heat transfer in high-speed slip flow (Richard A. Oman and Richard A. Scheuing, Grumman Aircraft Engineering Corporation). Technical session III: "Space Vehicle Design"; 29 Dec. Paper on the high-temperature research challenge in space vehicle design (Peter E. Glaser, Arthur D. Little, Inc.). Technical session IV: "Guidance, Control and Communications"; 30 Dec. Paper on simplified space guidance systems analysis (Curtis A. Brown and Ross Fleisig, Sperry Gyroscope Company).

American Meteorological Society. Invited papers: "Review of Recent Developments in Radar Meteorology"; arranged by Vaughn D. Rockney, U.S. Weather Bureau; 30 Dec. Papers on cloud physics and propagation (Walter (Hitschfeld, McGill University); synoptic meteorology (Edwin Kessler, III, U.S. Air Force Geophysics Research Directorate); severe storms and hurricanes (Myron G. H. Ligda, Stanford Research Institute); instrumentation and hydrology (Richard D. Tarble, U.S. Weather Bureau). Invited papers, cosponsored by the Association for Computing Machinery: "Numerical Weather Prediction"; arranged by George P. Cressman, National Meteorological Center, who will preside; 31 Dec.

Chemistry

Section C. Symposium: "Kinetics of Gas Phase Reactions"; 26 Dec.; Ralph Klein, National Bureau of Standards, presiding. Papers will be presented on the decomposition of vibrationally excited species (Basil de B. Darwent, Catholic University of America); chemically induced molecular excitation—the initial products of exothermic elementary reactions (David Garvin, Princeton University; kinetics of some reactions of atomic oxygen (Frederick Kaufman, Aberdeen Proving Ground); photo-oxidation mechanisms (Kenneth O. Kutschke, Canadian National Research Council); exploration of the elementary steps of diborane reactions (Rudolph A. Marcus, Polytechnic Institute of Brooklyn).

Two-session symposium: "Frozen Free Radicals"; 27 Dec.; F. O. Rice, Catholic University of America, presiding. Introduction (Julius Jackson, National Bureau of Standards); papers on electron spin resonance of certain free radicals (G. K. Fraenkel, Columbia University); electron spin resonance of polymers (R. E. Florin and D. W. Brown, National Bureau of Standards); the imine radical (W. B. Gager, National Bureau of Standards, and F. O. Rice); cold surface deposition of atoms from a molecular beam source (M. Scheer, National Bureau of Standards); small molecules (C. K. Jen and S. N. Foner, Johns Hopkins University); H atom reactions with solid olefins at low temperatures (R. Klein and M. Scheer, National Bureau of Standards); low-temperature x-ray diffraction investigations (L. H. Bolts, F. A. Mauer, and H. S. Peiser, National Bureau of Standards).

Three-session symposium: "Chemical

Effects of High Energy Radiation"; 28 and 29 Dec.

Part I: "Small Molecules"; Leo A. Wall, National Bureau of Standards, presiding. Introductory remarks (Leo A. Wall); papers on characteristic features of radiation chemistry (Milton Burton, University of Notre Dame); the radiation chemistry of low molecular weight hydrocarbons (Leon Dorfman, Argonne National Laboratory); the effect of linear energy transfer on radiation chemical reactions (Robert Schuler, Mellon Institute); indirect and direct action of radiation on organic compounds containing the N-C bond (Warren M. Garrison, University of California).

Part II: "Polymers"; Milton Burton, University of Notre Dame, presiding. Papers on irradiation of polyethylene, IV: oxidation effects (H. Matsuo and Malcolm Dole, Northwestern University); the radiation-induced cis-trans isomerization of polybutadiene (Morton A. Golub, B. F. Goodrich Company); gamma irradiation of poly-α-methylatyrene (A. M. Kotliar, Naval Research Laboratory); radiation chemistry of polydimethylsiloxane (A. A. Miller, General Electric Company); gamma irradiation of fluorocarbon polymers (Roland E. Florin and Leo A. Wall, National Bureau of Standards); gamma irradiation of collagen (James Cassel, National Bureau of Standards).

Part III: "Irradiation Techniques"; S. David Bailey, Quartermaster Research and Development Command, presiding. Papers on irradiation-induced polymerization (Ed F. Degering, G. J. Caldarella, and M. A. Mancini, Quartermaster Research and Development Command); monitoring irradiation effects on monomers and polymers by mass spectrometry (Charles Merritt, Jr., Ed F. Degering, and Maurice L. Bazinet, Quartermaster Research and Development Command); irradiation of organic polymers in nuclear reactors (Oscar Sisman, Oak Ridge National Laboratory); competitive reagents and the radiolysis of glycine (Charles Maxwell, National Institutes of Health); low-temperature radiation studies (Daniel W. Brown and Leo A. Wall, National Bureau of Standards).

Contributed papers; 30 Dec. Part I, Gilbert W. Castellan, Catholic University of America, presiding. Papers on factors governing the deposition of suspensions by nonuniform electric fields (Herbert A. Pohl and James P. Schwar, Princeton University); the photolysis of acetone in perfluorocarbon solvents (Gilbert J. Mains, Carnegie Institute of Technology); strontium-90 balance in man (E. Lenhoff, H. Spencer, J. Samachson, and Arthur R. Schulert, Lamont Geological Observatory); ultraviolet absorption measurements of some aromatic compounds in solutions in the

solid state (M. Ellen Dolores Lynch, Dunbarton College, Washington, D.C., and Columba Curren, Notre Dame University); ionization constants of derivatives of fluorene and other polycyclic compounds (Preston H. Grantham, Elizabeth K. Weisburger, and John H. Weisburger, National Institutes of Health); improved synthesis of amides (David W. Young and Eileen M. Paré, Sinclair Research Laboratories). Part II, George N. Kowkabany, Catholic University of America, presiding. Papers on a possible mechanism for respiratory chain phosphorylation (the pyridine nucleotide cycle) (Theodore I. Bieber, University of Mississippi); quantitative determination of adrenocortical steroids in the urine of pregnant women (David F. Johnson, Daniel François, and Erich Heftmann, National Institutes of Health); isolation of steroids from human feces (Erich Heftmann, Ekkehard Weiss, and Erich Mosettig, National Institutes of Health); activities of division of chemistry and chemical technology of the National Research Council (Clem O. Miller, National Research Council).

American Association of Clinical Chemists. Symposium: "Biochemical Studies in Schizophrenia"; moderated by Seymour S. Kety, National Institute of Mental Health; 29 Dec.; Elizabeth G. Frame, National Institutes of Health, presiding. Papers will be read on sources of error in biochemical research in schizophrenia (Seymour S. Kety); studies on ceruloplasmin and ascorbic acid in schizophrenia (Roger K. McDonald, National Institute of Mental Health); metabolism of epinephrine and norepinephrine (Julius Axelrod, National Institute of Mental Health); observations on catechol amines in blood and urine in mental illness (Hans Weil-Malherbe, National Institute of Mental Health); the significance of aromatic compounds in the urine of schizophrenics (Elwood H. LaBrosse, National Institute of Mental Health); some aspects of tryptophan metabolism in schizophrenia (Irwin J. Kopin, National Institute of Mental Health).

American Association of Clinical Chemists dinner; 29 Dec.; Oliver H. Gaebler, Edsel B. Ford Institute for Medical Research, presiding. Medical research observed in the Soviet Union (Thelma B. Dunn, National Cancer Institute).

Contributed papers; 30 Dec. Part I, Albert E. Sobel, Jewish Hospital of Brooklyn, presiding. Papers on chelated iron (Martin Rubin and J. V. Princiotto, Georgetown University Medical Center); effects of growth hormone and corticotropin on total output and partition of N^{15} from glycine, alanine, and ammonium citrate (O. H. Gaebler, Dorothy Kurrie, and Thomas Maska-

leris, Edsel B. Ford Institute for Medical Research); the binding of amido black and bromphenol blue dyes by serum protein fractions separated by continuous-flow electrophoresis (F. William Sunderman, Jr., U.S. Naval Medical School, and F. W. Sunderman, Jefferson Medical College); determination of fibrinogen in plasma (Miriam Reiner and Helen L. Cheung, D.C. General Hospital); a simple method for determination of uropepsin or pepsin (Ernest C. Adams, Jr., Ray Mast, and Alfred H. Free, Miles-Ames Research Laboratory); stable starch substrate solution for the spectrophotometric determination of amylase (Eugene W. Rice, Presbyterian Hospital, Pittsburgh); the determination of organic acids in serum (Samuel Meites, Children's Hospital, Columbus, Ohio); photometric determination of the sialic (N-acetylneuraminic) acid distribution in cerebrospinal fluid (Abraham Saifer and Harold A. Siegel, Jewish Chronic Disease Hospital, Brooklyn). Part II, Joseph V. Princiotto, Georgetown University Medical Center, presiding. Papers on urinary excretion of aromatic metabolites in mental disease (Harry Goldenberg and Vivian Goldenberg, Hillside Hospital, Glen Oaks, New York); alterations in blood chemistry during iproniazid (Marsilid) hepatitis (Seymour Winsten and Lawrence Weiss, Albert Einstein Medical Center); detection of small amounts of phenothiazine-derived drugs by rapid urinary color tests (Irene S. Forrest and Fred M. Forrest, Veterans Administration Hospital, Brockton, Mass); choline reversal of anticholinesterase activity of psychotomimetic compounds in human serum (Herbert Sprince, Veterans Administration Hospital, Coatesville, Pa., and Irwin Lichtenstein, University of Pennsylvania); influence of lysergic acid diethylamide and vasotonic drugs on urinary excretion patterns (Harry Goldenberg, Vivian Goldenberg, and Arnold Blumberg, Hillside Hospital, Glen Oaks, New York); detection of the heterozygous carrier in galactosemia (David Yi-Yung Hsia, Irene Huang, and Grace Lawrence, Children's Memorial Hospital, Chicago, and Shirley G. Driscoll, Northwestern University Medical School); the adsorption of sulfonamides to blood protein precipitates (Harold L. Rosenthal, Washington University School of Dentistry, and Lois Jud, Rochester General Hospital); corticosterone and 17-hydroxycorticosterone levels in human plasma (Joseph McLaughlin, Jr., Edward C. Knoblock, and E. G. Herndon, Jr., Walter Reed Army Medical Center); the photometric determination of phenylpyruvic acid in urine (Abram Saifer and Alfred F. Harris, Jewish Chronic Disease Hospital, Brooklyn).

Astronomy

Section D. Vice-presidential address of Section D: "Surveying the Moon," Chester B. Watts, U.S. Naval Observatory; 26 Dec.; Dirk Brouwer, Yale University Observatory, presiding.

Astronomical League. Invited papers, cosponsored by Section D (Astronomy); arranged by Grace Scholz Spitz, Alexandria, Virginia, who will preside; 26 Dec. Papers will be read on achievements of amateurs in astronomy (James Q. Gant, George Washington University School of Medicine), nonastronomical achievements of amateur astronomers (Robert H. McCracken, Diamond Ordnance Fuse Laboratories), and opportunities and obligations of the amateur in science (Armand N. Spitz, Spitz Laboratories).

Insect Pathology and Biological Control

The first International Conference for Insect Pathology and Biological Control was held at the Hotel International in Prague, Czechoslovakia, 13–23 August. Approximately 150 delegates from 20 different countries attended. There were two delegates from the United States: John D. Briggs of the Illinois Natural History Survey and Edward A. Steinhaus of the University of California. The latter was assigned the role of spokesman for the Western nations, while I. A. Rubtzov of the U.S.S.R. lead the delegation of the Eastern countries. The conference was held under the auspices of the Czechoslovak and Slovak Academies of Sciences, with J. Weiser, head of the academy's Laboratory of Insect Pathology in Prague, and A. Huba, in charge of the Laboratory of Plant Protection in Ivanka, serving as host-chairmen of the meeting.

The conference opened with speeches of welcome by Ivan Málek, chief of the academy's Institute of Biology, and by Weiser and Huba. The scientific sessions and the presentation of scientific papers lasted through 16 August. The following ten sections (and their moderators) were convened: (i) Insect Bacteriology (E. A. Steinhaus), (ii) Insect Mycology (N. A. Telenga), (iii) Insect Helminthology (J. Weiser), (iv) Taxonomy of Entomophagous Insects (Z. Bouček), (v) Evaluation of the Results of Introductions of Entomophagous Insects (I. A. Rubtzov), (vi) Insect Virology (G. Bergold), (vii) Insect Protozoology (J. Weiser), (viii) Rise and Effect of Parasitic Insects (P. Mesnil), (ix) Use of Monophagous and Polyphagous Insects in Biological Control (Liu Chung Lo), (x) International Cooperation (J. Weiser and J. Huba).

A total of 65 papers were presented. Of this number, 36 were concerned with insect pathology and microbial control, 23 with entomophagous insects and biological control generally, and six dealt with the matter of international cooperation in the fields of insect pathology and biological control.

In addition to the strictly scientific parts of the conference, a sumptuous banquet was held the night of 14 August complete with appropriate toasts and gustatorial pleasures. Following the paper-reading sessions, there were several very enjoyable and greatly appreciated excursions. These included a trip through historical and modern Prague, a trip to Carlsbad and Marienbad to see some of the famous Czech spas, and an extended excursion to Slovakia, climaxed by a farewell dinner in the High-Tatras.

It is impossible to describe and to evaluate the conference in the space available here. Those interested in the subject matter of the conference are urged to write to the Czechoslovak Academy of Sciences in Prague. Complete proceedings of the conference will be published in early 1959. Notable advances were reported by representatives of almost every country present.

On the last day of scientific sessions conferences were held between the delegates of western and eastern European countries in an effort to establish better cooperation and liaison between these two areas and the individual countries concerned. Representatives (J. Franz and P. Bovey) of the Western European Commission Internationale de Lutte Biologique (CILB) explained their program and objectives. Delegates from eastern European and Asian nations formulated resolutions and statements of intent to form a somewhat similar organization among their countries. The hope was expressed that eventually closer liaison and cooperation could be established between the Eastern organization, the CILB, the Commonwealth Institute of Biological Control, and perhaps other groups.

Although regional meetings and conferences dealing with insect pathology and biological control have been held in several parts of the world, this is the first gathering of so large a group of scientists in these disciplines from so many countries. For this reason, this first international conference is of historic as well as of current scientific importance. The exceptionally fine and expertly managed facilities—including a radio-earphone interpreting system that provided simultaneous translations into Czech, German, English, and Russian—and the generous hospitality and solicitude of the Czech hosts, made the conference one that could be enjoyed from a human-relations as well as a scientific stand-

point. Opportunity was provided for numerous small conferences and meetings, permitting valuable discussions and interchange of ideas and viewpoints. It was a conference that no one who was present is likely ever to forget, and it is to be hoped that the place and time of the second such conference may be decided soon.

Forthcoming Events

December

7–10. American Inst. of Chemical Engineers, annual, Cincinnati, Ohio. (F. J. Van Antwerpen, 25 W. 45 St., New York, N.Y.)

8–10. American Nuclear Soc., winter, Detroit, Mich. (ANS, P.O. Box 963, Oak Ridge, Tenn.)

9–10. Conference on Learning Effectiveness, Univ. of Pennsylvania, Philadelphia, Pa. (Air Force Office of Scientific Research, Air Research and Development Command, U.S. Air Force, Washington 25.)

10–16. American Acad. of Optometry, annual, Boston, Mass. (C. C. Koch, 1502 Foshay Tower, Minneapolis, Minn.)

12–13. Association for Research in Nervous and Mental Disease, annual, New York, N.Y. (R. J. Masselink, 700 W. 168 St., New York 32.)

15–17. American Soc. of Agricultural Engineers, winter, Chicago, Ill. (J. L. Butt, American Soc. of Agricultural Engineers, St. Joseph, Mich.)

15–19. Radiation Biology, 2nd Australian conf., Melbourne, Australia. (J. H. Martin, Physics Dept., Cancer Inst. Board, 483 St. Lonsdale St., Melbourne, Victoria.)

17. Institute of Aeronautical Sciences, Washington, D.C. (R. R. Dexter, IAS, 2 E. 64 St., New York 21.)

18–20. American Physical Soc., Los Angeles, Calif. (K. K. Darrow, APS, Columbia Univ., New York 27.)

26–31. American Assoc. for the Advancement of Science, annual, Washington, D.C. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., NW, Washington 5.)

27–29. American Economic Assoc., Chicago, Ill. (J. W. Bell, AEA, Northwestern Univ., Evanston, Ill.)

27–29. Econometric Soc., Chicago, Ill. (R. Ruggles, Box 1264 Yale Station, Yale Univ., New Haven, Conn.)

27–30. American Folklore Soc., New York, N.Y. (MacE. Leach, AFS, Univ. of Pennsylvania, Philadelphia, Pa.)

28–30. Archaeological Inst. of America, Cincinnati, Ohio. (L. A. Campbell, AIA, Dept. of Classics, Brooklyn College, Brooklyn, N.Y.)

29–30. National Council of Teachers of Mathematics, New York, N.Y. (M. H. Ahrendt, NCTM, 1201 16 St., NW, Washington 6.)

28–30. Western Soc. of Naturalists, Seattle, Wash. (J. P. Harville, San Jose State College, San Jose 14.)

(See issue of 17 October for comprehensive list)

Erratum: The American Rocket Society will meet in New York 17–21 Nov. 1958, and not 1–5 Dec. 1958.

Letters

Science Teaching

Many people will be interested in "1958 Parliament of Science," published in *Science* of 18 April [**127**, 852 (1958)], reporting the Washington, D.C., convention of the parliament on 15–17 Mar. 1958, conducted by the American Association for the Advancement of Science. However, the problems and recommendations must be supplemented by a practical program for the achievement of the aims and must reach those who have power to put the recommendations into effective practice, or the parliament has substantially failed.

Recommendations 51 through 55 stress the need to increase the subject-matter knowledge of people who are now teaching science and who propose to teach science. This can be accomplished in two ways: (i) Existing teachers must be given the credit which leads to higher salary if they take subject-matter courses in the liberal arts departments; (ii) prospective teachers must be permitted to substitute liberal arts courses for the education department courses presently required for certification. These reforms involve changes in university management and changes in the various state regulations, and both changes must be accomplished through political rather than scientific channels.

Recommendation No. 55 is the masterpiece of understatement in the whole report: "We believe that in many cases it is possible to reduce the number of hours in professional education courses required for certification or graduation, and that the corresponding increase in opportunity for other courses would improve teaching effectiveness." Every educated person knows that the world's great teachers, from Buddha, Aristotle, and Jesus Christ down to include most of our finest contemporary teachers, never had *any* courses in an education department.

We need a drastic reduction in the number of hours in professional education courses required for teacher certification or graduation. Science departments, not education departments, should select science teachers! A science-department teaching recommendation should be accepted legally as a substitute for, and in lieu of, education department courses. It is certainly not in the public interest that capable scientists, including even the President's science adviser, should be barred from teaching in the public schools by legal requirements imposed through the political influence of those less competent to judge qualifications of a science teacher.

A first step in improving science education and teaching is to get rid of the