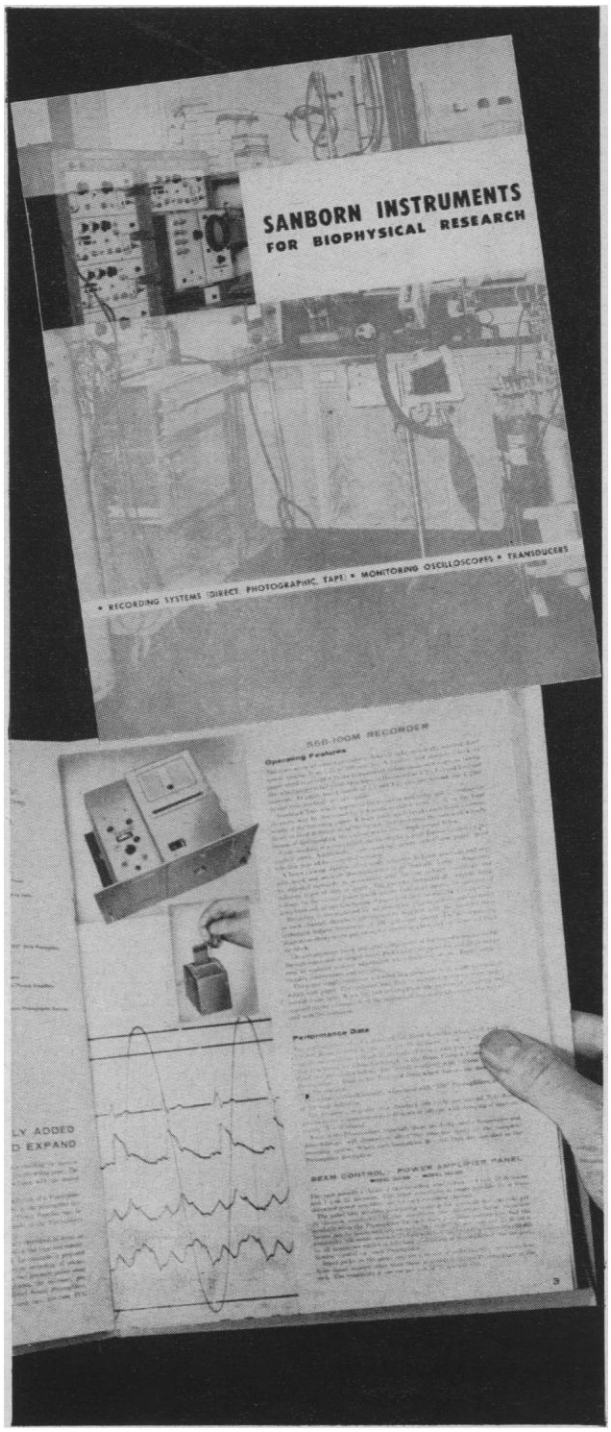

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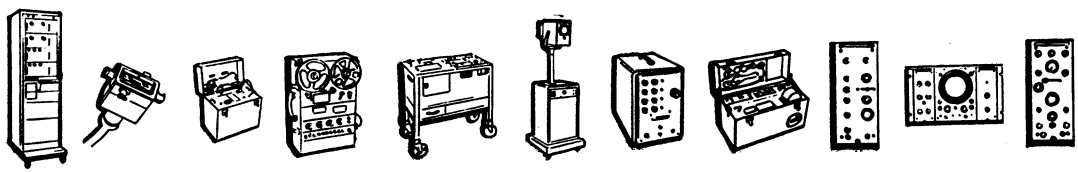

Meetings

Forthcoming Events

November

10–12. Electrical Techniques in Medicine and Biology, 12th annual conf., Philadelphia, Pa. (L. E. Flory, RCA Laboratories, Princeton, N. J.)

10–15. Laboratory Measurement and Automation Techniques in Chemistry, intern. cong., Basel, Switzerland. (ILMAC, 61 Clarastrasse, Basel, Switzerland.)

11–12. Clinical Anticancer Drug Research, Washington, D.C. (B. H. Morrison, III, Cancer Chemotherapy National Service Center, National Cancer Inst., Bethesda 14, Md.)

11–13. Operations Research Soc., 16th natl., Pasadena, Calif. (J. L. Taylor, NORAIR Div., Northrop Corp., Hawthorne, Calif.)

11–14. Society of Naval Architects and Marine Engineers, annual, New York, N.Y. (W. N. Landers, SNAME, 74 Trinity Pl., New York 6.)

12–13. Cardiology in Aviation, intern. symp., Brooks Air Force Base, Tex. (L. E. Lamb, Dept. of Internal Medicine, School of Aviation Medicine, Brooks Air Force Base.)

12–13. Utilization of Atomic Energy, 2nd annual conf., College Station, Tex. (G. M. Krise, Radiation Biology Laboratory, Texas Engineering Experiment Station, College Station.)

12–18. International Odontological Session (with 64th Paris Dental Congress), Paris, France. (J. Charon, Secretary-General, 31, rue Tronchet, Paris 8°, France.)

15–18. Society of American Foresters, 59th, San Francisco, Calif. (Soc. of American Foresters, Mills Bldg., 17th and Pennsylvania Ave., NW, Washington 6.)

15–19. American Soc. of Agronomy, Cincinnati, Ohio. (L. G. Monthey, 2702 Monroe St., Madison 5, Wisc.)

15–20. Radiological Soc. of North America, conf., Chicago, Ill. (Radiological Soc. of North America, 815 Medical Arts Bldg., Fort Worth, Tex.)

16–18. Molecular Structure, 3rd conf., Houston, Tex. (Robert A. Welch Foundation, 2010 Bank of the Southwest Bldg., Houston 2.)

16–19. Magnetism and Magnetic Materials, 5th conf., Detroit, Mich. (D. M. Grimes, Dept. of Electrical Engineering, Univ. of Michigan, Ann Arbor.)

16–20. American Rocket Soc., annual meeting, Washington, D.C. (J. J. Harford, ARS, 500 Fifth Ave., New York 36.)

16–20. Automation Cong., 5th intern., New York, N.Y. (R. Rimbach, 845 Ridge Ave., Pittsburgh 12, Pa.)

16–21. Antarctic Symp., Buenos Aires, Argentina. (R. N. Panzarini, Instituto Antarctico, Argentino, Cerrito 148, Buenos Aires.)

16–21. Disposal of Radioactive Waste, conf., Monaco. (Intern. Atomic Energy Agency, 11–13 Kärntner Ring., Vienna 1, Austria.)

17-18. Air Transportation, natl., San Francisco, Calif. (Inst. of Aeronautical Sciences, 2 E. 64 St., New York 21.)

17–19. Building Research Inst. (NAS–NRC), fall conf., Washington, D.C. (J. H. Houtchens, Information Services, BRI, NAS–NRC, 1145 19 St., NW, Washington 25.)

17–19. Northeast Electronics Research and Engineering Meeting, Boston, Mass. (Miss S. Whiteker, Inst. of Radio Engineers, 73 Tremont St., Boston, Mass.)

17–20. National Assoc. for Mental Health, annual, Philadelphia, Pa. (American Psychiatric Assoc., 1700 18 St., NW, Washington 9.)

18. Association for Psychiatric Treatment of Offenders, New York, N.Y. (M. Schmideberg, New York Acad. of Sciences, 2 E. 63 St., New York 21.)

19–21. Inter-Society Cytology Council, annual, Detroit, Mich. (P. A. Younge, ISCC, 1101 Beacon St., Brookline 46, Mass.)

20–21. American Mathematical Soc., Winston-Salem, N.C. (J. W. Green, Univ. of California, Los Angeles 24.)

20–21. Nuclear Fusion, symp., Austin, Tex. (Texas Symp. on Nuclear Fusion, P.O. Box 8005, University Station, Austin.

22–24. American Soc. of Hematology, 2nd annual, St. Louis, Mo. (J. W. Rebuck, Henry Ford Hospital, Detroit, Mich.)

22–29. Pan American Child Cong., 11th, Bogotá, Colombia. (Office of Intern. Conferences, Department of State, Washington 25.)

23–24. Solid-State Techniques in Modern Instrumentation, symp., Philadelphia, Pa. (G. L. Eberly, 12 S. 12 St., Philadelphia 7.)

23–25. Fluid Dynamics (APS), Ann Arbor, Mich. (R. J. Emrich, Dept. of Physics, Lehigh Univ., Bethlehem, Pa.)

23–26. Technical European Conf. on Standards Applicable to Water (by invitation only), Copenhagen, Denmark. (World Health Organization, Regional Committee for Europe, 8 Scherfigsvej, Copenhagen.)

23–3. Inter-African Soils Conf., 3rd, Daloba, Guinea. (Committee for Technical Cooperation in Africa South of the Sahara, Abbey House, 2–8 Victoria St., London, S.W.1, England.)

25. Association for the Advancement of Psychoanalysis, New York, N.Y. (New York Acad. of Medicine, 2 E. 103 St., New York, N.Y.)

26–27. Association for the Utilization of Atomic Energy in Ship-Building and Navigation, Hamburg, Germany, Gesellschaft für Kernenergieverwertung in Schiffbau m.b.H., Hamburg.)

26–28. Central Assoc. of Science and Mathematics Teachers, Chicago, Ill. (G. G. Mallinson, Western Michigan Univ., Kalamazoo.)

26–28. Ceylon Assoc. for the Advancement of Science, Colombo. (K. Arumugam and S. Wijesundera, General Secretaries, Univ. of Ceylon, Colombo 3.)

26–29. Legal and Administrative Problems of Peaceful Use of Nuclear Energy, intern. conf., Rio Piedras, Puerto Rico. (J. Mayda, Faculty of Law, Univ. of Puerto Rico, Rio Piedras.)

27–28. American Mathematical Soc., Detroit, Mich. (J. W. Green, Univ. of California, Los Angeles 24.)

27–28. American Physical Soc., Cleveland, Ohio. (K. K. Darrow, Columbia Univ., New York 27.)

27–28. American Soc. of Animal Production, Chicago. Ill. (H. H. Stonaker, Colorado State University, Fort Collins.)

27–28. National Council for Geographic Education, Detroit, Mich. (L. Kenndmer, Univ. of Texas, Austin.)

27–17. Bahamas Medical Conf. Nassau. (B. L. Frank, Box 4037, Fort Lauderdale, Fla.)

29–30. American College of Chest Physicians, Dallas, Tex. (M. Kornfield, 112 E. Chestnut St., Chicago 11, Ill.)

29–4. American Soc. of Mechanical Engineers, annual, Atlantic City, N.J. (ASME, 29 W. 39 St., New York 18.)

30–2. American Acad. for Cerebral Palsy, 13th annual, Los Angeles, Calif. (G. L. Brooks, AACP, Brown Univ., Providence 12, R.I.)

30–2. French-Speaking Neurosurgeons Society, annual, Paris, France. (M. David, 4, rue Galliera, Paris.)

30–3. Eastern Joint Computer Conf., Boston, Mass. (Miss M. Fox, EJCC, Box 4999, Washington 8.)

30–3. Entomological Soc. of America (joint with the societies of Canada and Ontario), annual, Detroit, Mich. (L. L. Reed, Entomological Soc. of Canada, Science Service Building, Ottawa, Canada.)

30–16. Tropical Meteorology, symp., Nairobi, Kenya, East Africa. (Secretariat, World Meteorological Organization, Campagne Rigot, Avenue de la Paix, Geneva, Switzerland.)

30–17. Problems of Tropical Meteorology in Africa and the Neighboring Islands, symp., Nairobi, Kenya, Africa. (World Meteorological Organization, Campagne Rigot, 1, Avenue de la Paix, Geneva, Switzerland.)

December

1–3. Eastern Joint Computer Conf., Boston, Mass. (D. T. Ross, Dept. of Electrical Engineering, Massachusetts Inst. of Technology, Cambridge.)

1–4. American Medical Assoc. (clinical), Dallas, Tex. (R. M. McKeown, 510 Hall Bldg, Coos Bay, Oreg.)

2–4. Electrical Furnace Conf., Cleveland, Ohio. (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18.)

3–4. Semiconductor Surfaces, 2nd conf., Silver Spring, Md. (R. F. Greene, U.S. Naval Ordnance Lab., White Oak, Silver Spring, Md.)

3–4. Vehicular Communications, St. Petersburg, Fla. (L. G. Cumming, IRE, 1 E. 79 St., New York 21.)

3–5. Corrosion, symp., Dresden, Germany. (Chemische Gesellschaft in der Deutschen Demokratischen Republik, Unter den Linden 68/70, Berlin W.8, Germany.)

3–5. Visual Communications, 3rd annual intern. conf., New York, N.Y. (E. Kaestner, Soc. of Reproductive Engineers, Bell Telephone Labs., New York, N.Y.)

3–11. Training and Education in Nutrition, European symp., Frankfurt am Main, Germany. (Food and Agricultural Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.)

3–12. International Confederation of Free Trade Unions, 7th world cong., Brussels, Belgium. (ICFTU, 24, rue du Lombard, Brussels.)

4–6. American Psychoanalytic Assoc., New York, N.Y. (D. Beres, 151 Central Park West, New York 23.)

5–10. American Acad. of Dermatology and Syphilology, Chicago, Ill. (R. R. Kierland, First National Bank Bldg., Rochester, Minn.)

6. American Acad. of Dental Medicine, mid-annual, New York, N.Y. (A. J. Cannistraci, 2152 Muliner Ave., New York 62.)

6–10. American Inst. of Chemical Engineers, annual, San Francisco, Calif. (F. J. Van Antwerpen, AICE, 25 W. 45 St., New York 36.)

7–12. Algology, UNESCO symp., New Delhi, India. (J. P. Correa, South Asia Cooperation Office, 21, Curzon Rd., New Delhi, India.)

8–10. Application of Electrical Insulation, 2nd natl. conf., Washington, D.C.) (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

9–15. American Acad. of Optometry, Chicago, Ill. (C. C. Koch, 1506–1508 Foshay Tower, Minneapolis 2, Minn.)

11–12. American Rheumatism Assoc., Detroit, Mich. (F. E. Demartini, Presbyterian Hospital, 622 W. 168 St., New York 32.)

11–12. Association for Research in Nervous and Mental Disease, annual, New York, N.Y. (R. J. Masselink, 700 W. 168 St., New York 32.)

11–12. Oklahoma Acad. of Science, Weatherford. (R. Kelting, Life Sciences Department, Univ. of Tulsa, Tulsa, Okla.)

11–12. Salt and Water Metabolism, symp., New York, N.Y. (A. P. Fishman, New York Heart Assoc., 10 Columbus Circle, New York 19.)

11–12. Texas Acad. of Science, Austin. (L. Kennamer, Dept. of Geography, Univ. of Texas, Austin 12.)

16–18. American Soc. of Agricultural Engineers, Chicago, Ill. (J. L. Butt, P.O. Box 229, St. Joseph, Mich.)

25–27. Indian Mathematical Soc., 25th conf., Allahabad, India. (B. N. Prasad, Allahabad Univ., Lakshmi Niwas, George Town, Allahabad 2.)

26–30. American Assoc. for the Advancement of Science, annual, Chicago, Ill. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., N.W, Washington 5.)

The following 46 meetings are being held in conjunction with the AAAS annual meeting.

AAAS Committee on Science and the Promotion of Human Welfare (B. Commoner, School of Botany, Washington Univ., St. Louis 5, Mo.). 27 Dec.

AAAS Cooperative Committee on the Teaching of Science and Mathematics (Brother G. Nicholas, Dept. of Biology, Univ. of Notre Dame, Notre Dame, Ind.). 27 Dec.

Academy Conference (A. M. Winchester, Stetson Univ., De Land, Fla.), 27–28 Dec.

Alpha Epsilon Delta (M. L. Moore, 7 Brookside Circle, Bronxville, N.Y.). 29 Dec.

American Assoc. of Clinical Chemists (A. Dubin, Director of Biochemistry, Cook County Hospital, Chicago 12, Ill.). 26–27 Dec.

American Geophysical Union (W. C. Krumbein, Dept. of Geology, Northwestern Univ., Evanston, Ill.). 28 Dec.

American Meteorological Soc. (K. Spengler, 3 Joy St., Boston, Mass.).

American Nature Study Soc. (E. L. Will, State Univ. Teachers College, Oneonta, N.Y.). 26–30 Dec.

American Physiological Assoc. (F. A. Hitchcock, Ohio State Univ., Columbus). 28 Dec.

American Political Science Assoc. (J. Robinson, Dept. of Political Science, Northwestern Univ., Evanston, Ill.). 28 Dec.

American Psychiatric Assoc. (E. L. Bliss, General Hospital, Salt Lake City, Utah). 28–29 Dec.

American Soc. of Criminology (D. E. J. MacNamara, New York Inst. of Criminology, Inc., New York 36). 28–29 Dec.

American Soc. of Naturalists (A. D. Hasler, Dept. of Zoology, Univ. of Wisconsin, Madison). 27–28 Dec.

American Soc. of Plant Taxonomists (L. R. Heckard, Dept. of Botany, Univ. of Illinois, Urbana). 28–30 Dec.

American Sociological Soc. (J. S. Coleman, Dept. of Sociology, Univ. of Chicago, Chicago 37, Ill.). 28–29 Dec.

American Statistical Assoc. (R. F. Winch, Dept. of Sociology, Northwestern Univ., Evanston, Ill.). 29–30 Dec.

Association of American Geographers (A. Cutshall, Univ. of Illinois, Navy Pier, Chicago 11). 29 Dec.

Association for Computing Machinery (W. F. Cahill, Goddard Space Flight Center, Silver Spring, Md.). 29 Dec.

Astronomical League (E. Halbach, 2971 S. 52 St., Milwaukee 19, Wisc.). 26 Dec.

Beta Beta Beta (Mrs. F. G. Brooks, P.O. Box 515, Ansonia Station, New York 23). 27–28 Dec.

Chicago Acad. of Sciences (R. A. Edgren, Chicago Acad. of Sciences, 2001 N. Clark St., Chicago 14, Ill.). 29–30 Dec.

Conference on Scientific Communications (G. L. Seielstad, Applied Physics Lab., Johns Hopkins Univ., Silver Spring, Md.). 28–29 Dec.

Conference on Scientific Manpower (T. J. Mills, National Science Foundation, Washington 25). 28 Dec.

Ecological Soc. of America (W. C. Ashby, Dept. of Botany, Univ. of Chicago, Chicago 37, Ill.). 28–30 Dec.

Honor Soc. of Phi Kappa Phi (L. R. Guild, 634 S. Western Ave., Los Angeles 5, Calif.). 30–31 Dec.

Illinois Geographical Soc. (Miss M. Grant, Morton Junior College, Cicero, Ill.). 28 Dec.

Institute of Management Sciences (M. M. Flood, College of Engineering, Univ. of Michigan, Ann Arbor). 29 Dec.

Metric Assoc. (J. T. Johnson, Ravenswood YMCA, 1725 Wilson Ave., Chicago 40, Ill.).

Mycological Soc. of America (D. P. Rogers, Dept. of Botany, Univ. of Illinois, Urbana).

National Acad. of Economics and Political Science (J. Rothrock, Pan American Union, Washington 6). 29 Dec.

National Assoc. of Biology Teachers (H. E. Weaver, 202 Men's Old Gym, Univ. of Illinois, Urbana). 26–30 Dec.

National Assoc. for Research in Science Teaching (J. C. Mayfield, Univ. of Chicago, Chicago 37, Ill.). 26–30 Dec.

National Assoc. of Science Writers (P. Fraley, Evening Bulletin, Philadelphia, Pa.). 27 Dec.

National Geographic Soc. (W. R. Gray, NGS, 16 and M Sts., NW, Washington 6). 30 Dec.

National Science Teachers Assoc. (R. H. Carleton, NSTA, 1201 16 St., NW, Washington, D.C.). 26–30 Dec.

National Soc. for Medical Research (R. A. Rohweder, NSMR, 920 S. Michigan Blvd., Chicago 5, Ill.). 29 Dec.

National Speleological Soc. (T. C. Barr, Jr., Tennessee Polytechnic Inst., Cookeville, Tenn.). 28 Dec.

Philosophy of Science Assoc. (W. A. R. Ley, Roosevelt College, Chicago, Ill.). 28 Dec.

Scientific Research Soc. of America (D. B. Prentice, 56 Hillhouse Ave., New Haven 11, Conn.). 29 Dec.

Sigma Delta Epsilon (Miss E. S. Anderson, Stratford Hotel, 25 E St., NW, Washington, D.C.). 26–30 Dec.

Society for General Systems Research (R. L. Meier, Mental Health Research Institute, Univ. of Michigan, Ann Arbor).

Society for the History of Technology (M. Kronzberg, Dept. of History, Case Inst. of Technology, Cleveland, Ohio).

Society of the Sigma Xi (T. T. Holme, 56 Hillhouse Ave., New Haven 11, Conn.). 29 Dec.

Society of Systematic Zoology (R. E. Blackwelder, Southern Illinois Univ., Carbondale). 26–30 Dec.

Tau Beta Pi Assoc. (R. H. Nagel, Univ. of Tennessee, Knoxville). 27 Dec.

United Chapters of Phi Beta Kappa (C. Billman, 1811 Q St., NW, Washington, D.C.). 29 Dec.

27–30. American Anthropological Assoc., Mexico City. (W. S. Godfrey, Jr., Logan Museum, Beloit College, Beloit, Wisc.)

27–30. American Astronomical Soc., Cleveland, Ohio. (J. A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)

27–30. American Folklore Soc., Mexico City. (MacE. Leach, 110 Bennett Hall, Univ. of Pennsylvania, Philadelphia 4.)

27–30. American Statistical Assoc., Washington, D.C. (D. C. Riley, 1757 K St., NW, Washington 6.)

27–30. Institute of Mathematical Statistics (weather control), Washington, D.C. (J. Neyman, Statistical Lab., Univ. of California, Berkeley 4.)

28–29. American Chemical Soc. (Div. of Industrial and Engineering Chemistry), symp., Baltimore, Md. (M. A. H. Emery, ACS, 18 and K Sts., NW, Washington D.C.)

28–29. Industrial Relations Research Assoc., Washington, D.C. (E. Young, Sterling Hall, Univ. of Wisconsin, Madison.)

28–29. Mechanisms of Interfacial Reaction, American Chemical Soc., annual symp, Baltimore, Md. (H. E. Hoelscher, Chemical Engineering Dept., Johns Hopkins Univ., Baltimore, Md.)

28–29. Northwest Scientific Assoc., Spokane, Wash. (W. B. Merriam, Dept. of Geography, State College of Washington, Pullman.)

28–30. American Economic Assoc., Washington, D.C. (J. W. Bell, Northwestern Univ., 629 Noyes St., Evanston, Ill.)

28–30. American Philosophical Assoc. (eastern div.), New York, N.Y. (L. Garvin, Dept. of Philosophy, Univ of Maryland, College Park.)

28–30. American Physical Soc., Pasadena, Calif. (K. Darrow, APS, Columbia Univ., 116 St. and Broadway, New York, N.Y.)

28–30. Econometric Soc., Washington, D.C. (R. Ruggles, Dept. of Economics, Yale Univ., New Haven, Conn.)

28–30. Western Soc. of Naturalists, Los Angeles, Calif. (Y. U. Amrein, Dept. of Zoology, Pomona College, Claremont, Calif.)

28–31. Phi Delta Kappa, Columbia, Mo. (A. G. Clark, 316 Dalzell Ave., Ben Avon, Pittsburgh 2, Pa.)

28–16. Bahamas Surgical Conf., Nassau. (B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.)

GET YOUR ADVANCE COPY

of the General Program of the AAAS Chicago Meeting

by first class mail – early in December

The General Program of the 126th Meeting of the AAAS in Chicago, 26-31 Dec., 1959, will be available to you within the first week in December—whether you can attend the Meeting or not.

Effective this year, the former General Program-Directory, which had become an unwieldy book of more than 400 pages, has been separated into *two* publications, namely:

a) The Directory of AAAS Officers and Activities, 96 pp., already published; and
b) The General Program of the Annual Meeting, c. 200 pp., which will appear early in December

Both of these, sold at cost, may be purchased separately—in advance (see coupon below), or at the meeting. Some of their *respective* contents are:

The General Program

1. The two-session general symposium "Moving Frontiers of Science IV," arranged by the Committee on AAAS Meetings.
2. Programs of the 18 AAAS sections (symposia and contributed papers).
3. Programs of the more than 80 participating societies.
4. Sessions of the Conference on Scientific Communication, Conference on Scientific Manpower, and the Academy Conference.
5. The Special Sessions: AAAS Address and Reception, National Geographic Society, Phi Beta Kappa, Sigma Xi, RESA, Tau Beta Pi Association.
6. Details of the Morrison Hotel—center of the Meeting—and of the other session sites.
7. Titles of the latest foreign and domestic scientific films to be shown in the AAAS Science Theatre.
8. Exhibitors in the 1959 Annual Exposition of Science and Industry and descriptions of their exhibits.

The Directory

1. AAAS officers, staff, committees, for 1959.
2. Section committees and other AAAS Council members.
3. The 285 affiliated organizations.
4. Historical sketch and organization of the Association.
5. Complete roll of AAAS presidents and their fields.
6. Publications of the Association, including all symposium volumes.
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8. Future Meetings of the AAAS through 1963.
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10. Constitution and Bylaws.

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1b. ☐ Enclosed is $2.00 for only the General Program. (It is understood that, if I should attend the Meeting later, the Badge—necessary for the privileges of the Meeting—will be secured for $1.00 more.)

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1c. ☐ Enclosed is $1.00 for the Directory of AAAS Officers and Activities to be sent now.

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New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science *nor the writer assumes responsibility for the accuracy of the information. All inquiries concerning items listed should be addressed to* Science, *Room 740, 11 West 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department number(s).*

■ PIPETTER permits normal finger-action control with suction provided by bulb. The operator's finger is accommodated by a tube sealed with a finger cot. The device accommodates the range of standard pipettes made for ordinary hand use. (Scientific Glass Apparatus Co., Dept. 115)

■ VOLTMETER for high-voltage measures directly positive and negative peaks to 150 kv and root-mean-square potentials to 115 kv. The instruments are portable and are equipped with built-in high-voltage multipliers for full-scale ranges of 75 kv. For higher voltage, the multiplier bushing is separately mounted. Single- and multiple-range models are available. (Associated Research, Dept. 134)

■ ANALYTICAL EVAPORATOR accommodates six samples in 50-ml erlenmeyer flasks, or 12 in test tubes. The apparatus consists of a stand, sample holder, gas manifold, and 12 gas injectors with individual needle-valve control. A thermostatted water bath permits evaporation at constant temperature, which may be set between 35° and 70°C. Dry air or nitrogen at flow rates up to 0.25 ft^3/min is required. (Organomation Associates, Dept. 123)

■ MICROSCOPES in a new line of 15 models include a home-laboratory series with two models; a medical series of five models, including a binocular microscope with full staging equipment and magnification up to 2000; a stereoscopic series of three models, available also as focusing head assembly only; a portable series of three models with self-contained battery-powered illumination; and two all-purpose models. (D. P. Bushnell and Co., Dept. 126)

■ AIR MONITOR features four interchangeable detectors for sensing four combinations of radioactivity: alpha, beta, and gamma; beta and gamma; alpha; or beta. The nondiscriminating detector is a 2-in. hemisphere gas-flow Geiger detector with Mylar window 1 mg/cm^2 thickness. A moving filter offers a choice of immediate detection of first-surface deposits or delayed detection. Motion may be continuous or stepwise. The monitor is mounted on a mobile cart. (Nuclear Measurements Corp., Dept. 130)

■ TENSILE TESTER is a portable device for tensile tests on round or flat specimens. The load is applied to the specimen by manual rotation of a knurled knob. The applied load is measured by a trapped-oil system and indicated on a 4½-in. gage. The testers are available in capacities from 100 to 1000 lb. Interchangeable jaws cover flat specimens of thickness up to ⅜ in. and round specimens of diameter from ⅛ to ⅝ in. Maximum specimen length is 7 in. Tester dimensions are 5 by 23 by 11 in.; weight is 36 lb. (Steel City Testing Machines, Inc., Dept. 137)

■ SPECTROMETER may be used for alpha, beta, gamma, or neutron detection by direct interchange of detecting crystals. Included are a 1.5 by 2 in. NaI (Tl) crystal, photomultiplier tube, amplifier, pulse-height analyzer, count-rate meter, and pulse generators. The instrument is battery-operated and portable. (Radiation Instrument Development Laboratory, Dept. 116)

■ FREQUENCY METER of heterodyne type reads frequency directly from 100 to more than 10,000 Mcy/sec. Accuracy of ±0.03 percent is claimed. Accuracy at 5 Mcy/sec crystal check points is ±0.002 percent. Input sensitivity at 500 Mcy/sec and above is −30 dbm and at 100 Mcy/sec −5 dbm. The bandwidth of the video amplifier is 0.8 Mcy/sec. (Polytechnic Research and Development Co., Dept. 128)

■ TEMPERATURE-CONTROL SYSTEM provides continuous automatic control of liquid and air baths to a tolerance said to be ±0.1°C. The system is based on a transistorized crystal-controlled oscillator circuit that senses the position of the column in a mercury thermometer by means of an external electrode. The oscillator actuates a pulse-duration modulated system to control power up to 1500 watts. (Milltown Instrument Co., Dept. 129)

■ VIBRATION INTERFEROMETER for calibration of accelerometer vibration transducers consists of the interferometer proper, a multibeam stroboscopic slit assembly with white-light source, and a vibration generator. Frequency range is approximately 450 to 10,000 cy/sec. Double amplitudes over a range of 1 to 1000 μin. can be determined with accuracy said to be ±1 μin. or ±1 percent, whichever is greater. (Gaertner Scientific Corp., Dept. 133)

■ MICROWAVE STEP ATTENUATORS are remotely operated for use in unaccessible areas. Attenuation values from 0.1 to 60 db can be obtained with power-handling capability of 1 or 4 watts of

radio-frequency power. Frequency range is from dc to 4 kMcy/sec. Standard units operate from 28v dc source; other operating voltages can be supplied. (Empire Devices Products, Dept. 143)

■ PORTABLE TAPE RECORDER is battery operated with spring-motor drive. The recorder operates 30 min on a single motor winding. Warning is given 15 sec before rewind, which may be performed during operation, is required. Single and multi-speed models are available. (Amplifier Corp. of America, Dept. 154)

■ DROPPING-MERCURY ELECTRODE contains a stable half cell which enables the test vessel to be rotated for quick change of sample solution. A ceramic frit liquid bridge provides low electrolytic resistance. The electrode combines in a compact unit the dropping-mercury system, constant-head mercury column, test vessel, reference electrode, reference salt bridge, water bath, and gas flowmeter. Fifty grams of mercury are required for operation. Mercury mass-flow rate can be determined while analysis is being made. (Leeds & Northrup Co., Dept. 142)

■ PIPETTE CONTROLLER can be operated with equal ease by right or left hand. Precision is said to permit fractional drop delivery to 0.01 ml. Construction material is chrome-plated metal and acid resistant gum rubber. (Tenso-Lab., Dept. 162)

■ THERMOELECTRIC JUNCTIONS are designed to maintain a temperature above or below ambient. The thermojunctions are made of cast semiconductors. In normal room ambient temperatures it is said to be possible to obtain a temperature difference in excess of 40°C with an input power of 2 watts. As a generator the junction can produce approximately 0.25 watt electrical output with a difference of temperature of 150°C between cold and hot junctions. Maximum hot junction temperature is 150°C; minimum cold junction temperature is −75°C. Resistance is 0.0025 ohm. Maximum current is 40.0 amp. (Ohio Semiconductors, Inc., Dept. 138)

■ STERILE SYSTEM consists of three interconnecting systems: a surgical unit, measuring 38 by 26 by 17½ in., with accommodations for four gloves; an autoclave unit, for animal and food transfer, water jacketed with heating capability from room temperature to autoclave temperature in 15 min; a rearing unit measuring 38 by 26 by 26 in., capable of maintaining a sterile environment for extended periods of time. The surgical and rearing units are mounted on mobile bases, each containing controls for electrical heating, ventilating, and recording systems and a battery-operated emergency power supply. Emergency switchover to battery operation is automatic. (Fisher Scientific Co., Dept. 144)

■ HIGH-VOLTAGE POWER SUPPLY produces 16 kv d-c at 200 μa from input of 26.5 volts d-c, 650 ma. Conversion is through a mechanical vibrator, transformer, and voltage doubler. The unit can operate at ambient temperatures from −65° to +125°F. Dimensions are 4⅞ by 6⅜ by 6⅞ in. (Southwestern Industrial Electronics Co., Dept. 148)

■ MICROMICROAMMETER is a battery-powered transistorized instrument that measures current from 1 μμa through 300 ma full-scale in 24 ranges. Accuracies of ±1.0 percent from 1 mμa through 300 ma and ±2 percent from 1 μμa through 300 μμa are claimed. Dimensions are 13 by 7½ by 8¾ in.; weight is 17 lb. (Belleville-Hexem Corp., Dept. 145)

JOSHUA STERN

National Bureau of Standards, Washington, D.C.

RADAR ENGINEERS and SCIENTISTS

THE MITRE CORPORATION

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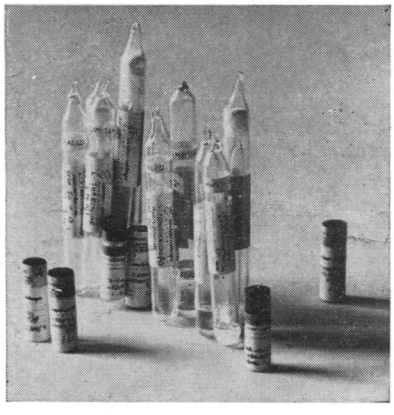
NUCLEAR REVIEWS

from

NUCLEAR-CHICAGO

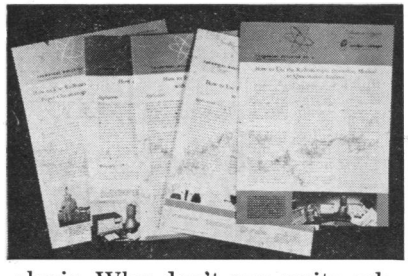


This handsome little still life illustrates the high quality and variety of radioactive carbon reagents now available from us for your research work. Today we offer over 250 different carbon-14 compounds, and dozens of phosphorus-32, sulfur-35, and tritium compounds. All are listed with prices and package sizes in our chemical catalog "Schedule E." In this new 20 page schedule you'll also find high intensity beta and gamma sources, reference sources, radioactive standards, and source kits. If you're interested in radioactivity you'll want a copy. It's absolutely free and there's no obligation. If you don't have a copy of our General Catalog R to go along with the "Schedule E," ask for that, too. This illustrates and describes all of the radioactivity measuring instruments made by us.

RADIOISOTOPES SAVE INDUSTRY $$

Companies investing in radioisotopes, either for process control or research, averaged more than an eight-fold return on their money according to a recent NICB report. Biggest savings were reported by the chemical and petroleum industries where $500,000 invested brought a 12-month savings of more than $8,000,000. The report pointed out that although returns were juicy, only a small number of companies use radioisotopes.

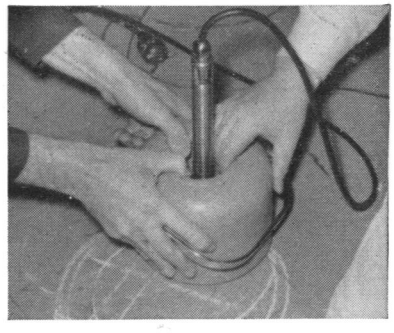
We think it will pay you to investigate the uses of radioisotopes in *your* research laboratories. To help familiarize you with the ways isotopes are being used profitably today, we have prepared a series of Technical Bulletins. Six have been completed. They describe common process applications of radioactivity such as mixing evaluation studies, and review laboratory applications including isotope dilution analysis, paper radiochromatography techniques, and radiometric analysis. Why don't you write asking us to send you the first six Technical Bulletins? Read them, and if you think they are helpful we'll gladly put your name on our mailing list to receive them regularly. They're meaty, short, and (we think) stimulating. The cost? Only a postcard.



LEAKY PIPES?

Radiant heating systems are nice, but when they start to leak, it can be mighty hard to find the trouble. We were called in recently to help locate a leak somewhere in 2640 feet of pipe in an elementary school. The pipes, embedded 6″ in concrete, ran up and down the halls, under walls and furniture. Several previous attempts to find the leak were unsuccessful and had left ugly torn-up floor areas.

In cooperation with a plumbing contractor, we drained the 160 gallon system, then pumped into the empty system another 160 gallons of water made slightly radioactive with radiosodium-24. The entire floor area was then monitored with Geiger and scintillation detectors. The general area of the leak was located within 30 minutes. Standard Nuclear-Chicago instruments were then used to pinpoint the leak within



½ inch. A couple of tiles were removed, the pipe exposed and repaired. Probably to the disappointment of the small fry, the whole job was completed on a Saturday afternoon.

Although we're not in the plumbing business, we'll be glad to forward any inquiries you may have on this application to our plumbing friends who now have authorization from the AEC to conduct these tests. Other process or research applications of radioisotopes we'll be happy to handle ourselves.

nuclear-chicago
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