SCIENCE

15 January 1960

Vol. 131, No. 3394

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

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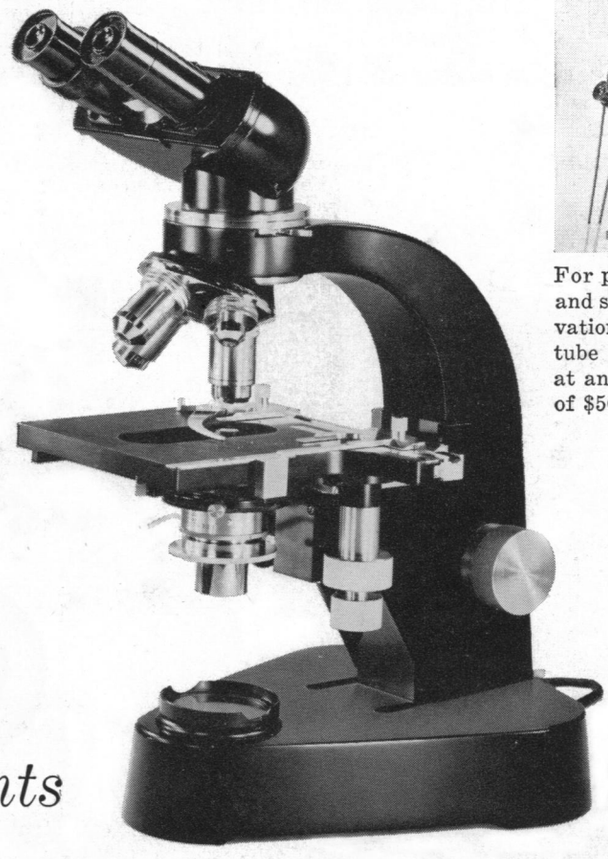

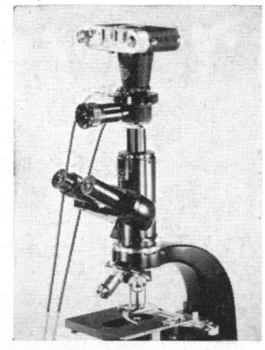

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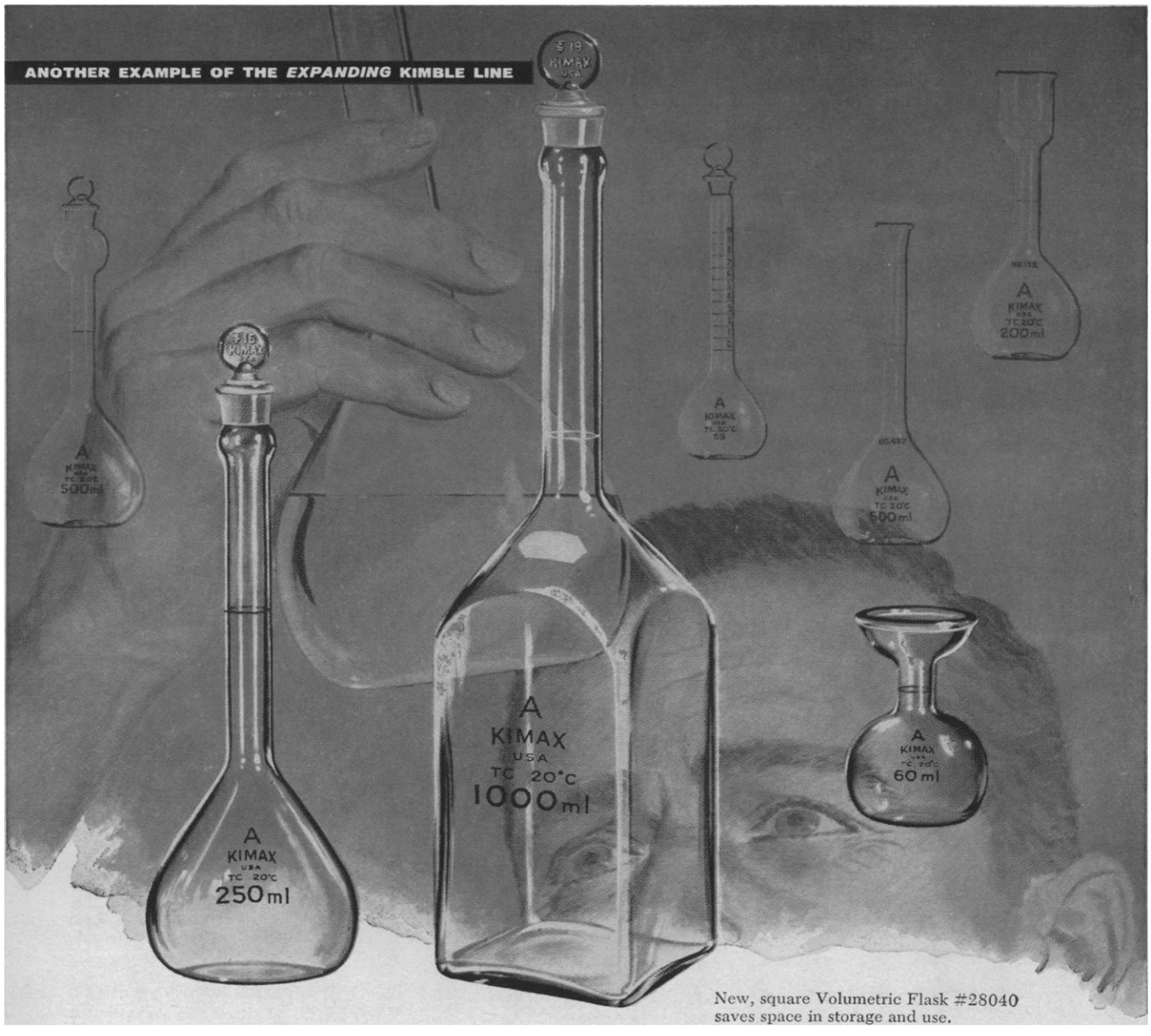

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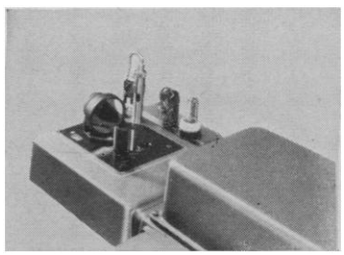
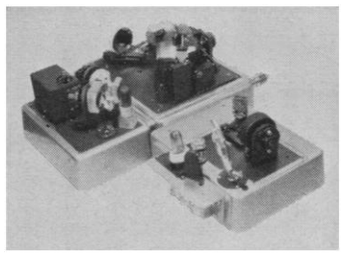
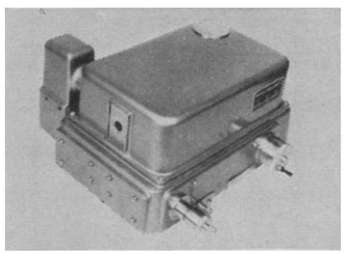
BUILDING BLOCK AND SPECIAL ENGINEERING UNITS



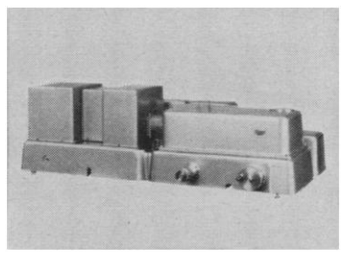
SOURCES: A variety of assemblies to provide globar, hydrogen, tungsten, or xenon sources, or any combination. Source focussing optics included; special choppers are also available.



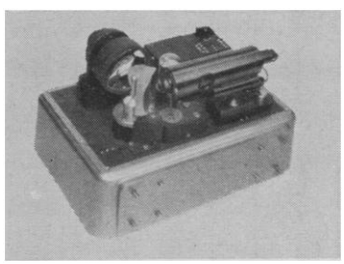
RAPID-SCAN SPECTROMETERS: Utilizing oscillographic or galvanometric read-out. These P-E building-block instruments analyze fast-moving reactions by scanning infrared wavelengths at very high rates. A variety of sources and detectors may be used. Scanning frequencies range from 2.5 to 180 spectra/second.



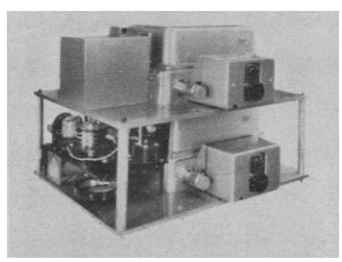
MONOCHROMATORS: Single-beam prism and grating monochromators in both single and double-pass modes. Double-pass instrument has chopper as standard equipment. Single-pass monochromators are used in single and double-beam systems; they are also used where DC radiation is required, or where chopping before the sample is essential.



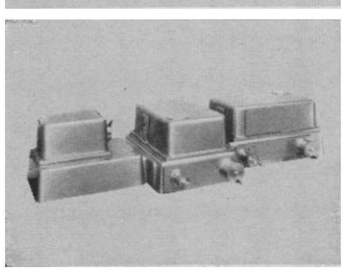
FAR INFRARED GRATING SPECTROMETER: Operating in the region from 25 to 150 microns, the P-E far infrared instrument utilizes three gratings and associated filters to cover this range. The monochromator provides the ability to scan in linear wavenumbers, affords maximum slit opening of 10 mm. A Golay detector with a diamond window is used in this region.



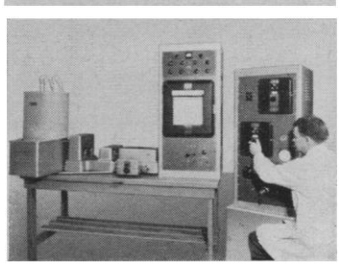
DETECTORS: Individually or in assemblies, lead sulfide, photomultiplier, Golay, thermocouple and photoconductive detectors, with associated focussing and exit optics Switching systems to change multi ple detectors are also provided.



SPECTROPHOTOFLUORIMETER: Fluorescent materials, excited by energy at one wavelength, emit light at another (usually longer) wavelength. Perkin-Elmer's Spectrophotofluorimeter is a device for measuring this phenomenon. Constant linear energy levels of excitation are assured as the excitation wavelength is scanned.



GRATING UNITS: Fore-prism grating units for separating orders when used with grating monochromators, thus affording the highest resolution possible. Combinations are available to cover wavelength range from UV to the far infrared.



DIFFUSE REFLECTANCE ATTACHMENT: A building-block utilization of the heated hohlraum technique, this attachment for the Perkin-Elmer Model 13 measures absolute spectral reflectance and emissivity in the range from 2 to 15 microns. KBr optics increase range to 20 microns.

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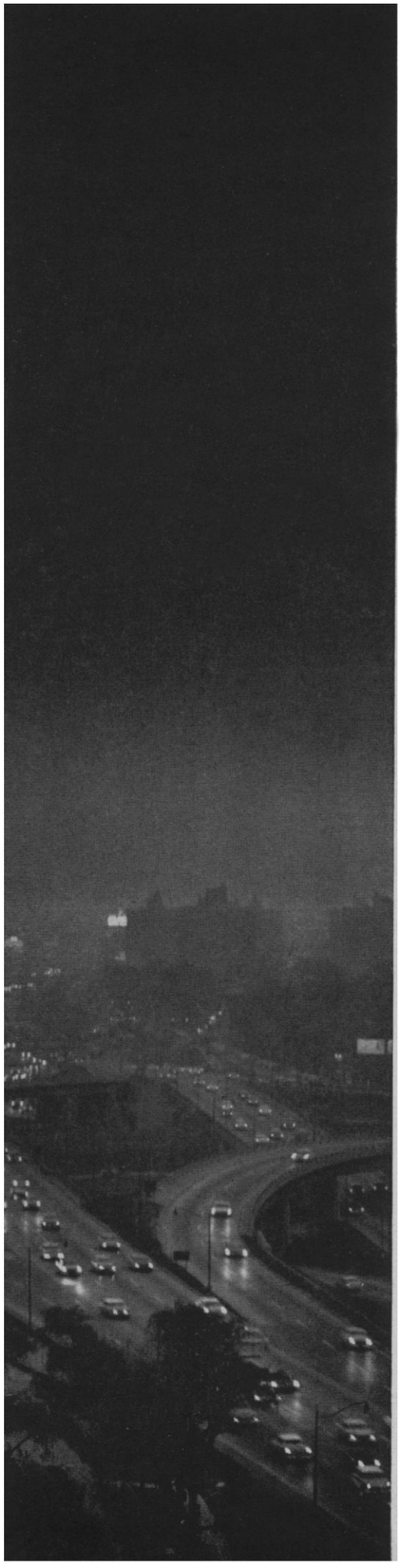
15 January 1960, Volume 131, Number 3394

SCIENCE

Cover This Mach Zehnder interferometer pattern shows a refractive index homogeneity of approximately three parts per million in barium flint optical glass. The pattern is in a disk 12 inches in diameter and 2¼ inches thick. It was made for use by the Perkin-Elmer Corp. in aerial camera lenses. [Corning Glass Works]



One of a series

Resolving the driver-car-road complex

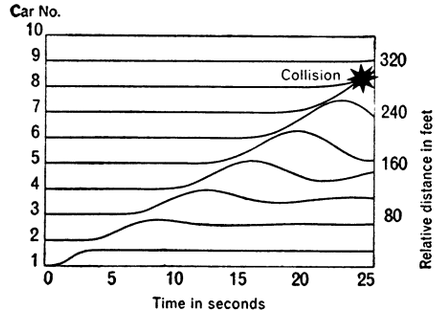
The manner in which vehicles follow each other on a highway is a current subject of theoretical investigation at the General Motors Research Laboratories. These studies in traffic dynamics, coupled with controlled experiments, are leading to new "follow-the-leader" models of vehicle interaction.

For example, conditions have been derived for the stability of a chain of moving vehicles when the velocity of the lead car suddenly changes – a type of perturbation that has caused multiple collisions on modern superhighways. Theoretical analysis shows that the motion of a chain of cars *can be stable* when a driver accelerates in proportion to the relative velocity between his car and the car ahead. The motion is always unstable when the acceleration is proportional only to the relative distance between cars. Experimentally, GM Research scientists found that a driver does react mainly to relative velocity rather than to relative distance, with a sensitivity of reaction that increases with decreasing distance.

Traffic dynamics research such as this is adding to our understanding of intricate traffic problems – what causes them, how they can best be resolved. The study is an example of the ways GM Research works to make transportation of the future more efficient and safe.

General Motors Research Laboratories

Warren, Michigan



Relative positions of 10 hypothetical cars after lead car goes through maneuver. Amplitude of instability increases, resulting in a collision between 7th and 8th cars.

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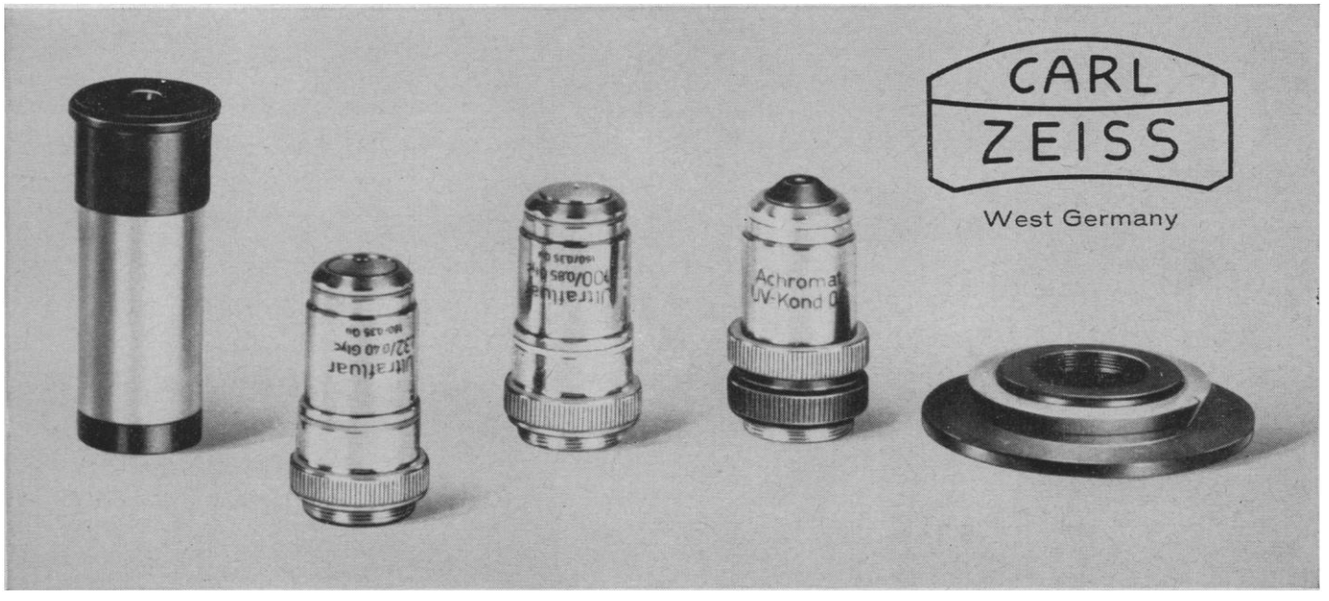

Shown in picture above:

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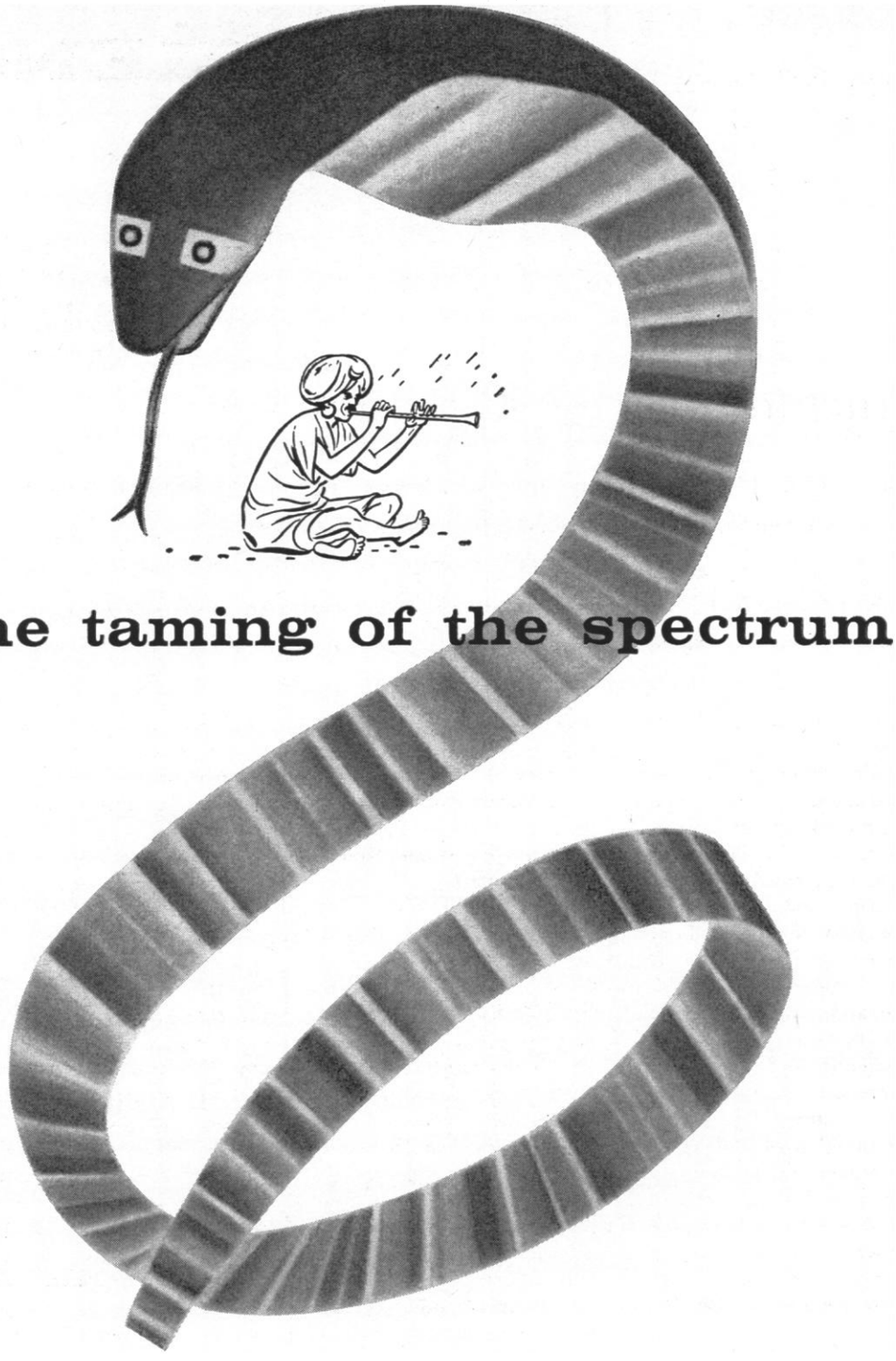
The Doctors Disagree

One source of happy expectation behind the American-British-Soviet negotiations on the cessation of nuclear tests was that it would be easier for technical experts to agree on scientific truth than for diplomats to agree on political measures. The hope was that once the experts established what was technically feasible in the way of discouraging any country from conducting secret tests, the diplomats could set about the task of turning a scientific possibility into a political reality. In the summer of 1958 a conference of experts did succeed in agreeing on an inspection system, which, on the basis of evidence then available, was thought to provide adequate safeguards. Unfortunately, a conference of experts in 1959 proved less successful. Running from 25 November through 18 December, the conference produced agreement on possible improvements in instrumentation, but left other important questions unresolved.

The American and Soviet delegations each have their own ideas about who is wrong in these disputes, and any expert in one of the appropriate fields who will take the trouble to read the verbatim records of the conference, or the separate briefs filed at the end of the conference, can make his own attempt at scientific objectivity. A test of objectivity, however, is also open to the non-expert reader. He can consider which of the two sides displayed the greater tendency to stray from the scientific issues at hand. For scientists not only may find it difficult to reach agreement, but they are just as prone as other men to bring in irrelevant arguments to discredit their opponents.

A typical example of straying from the issues at hand occurred in what was probably the most important area of dispute, the interpretation to be put upon the new seismic data from the American Hardtack experiments. The Americans claimed that the Hardtack experiments show that the 1958 conference of experts was too optimistic about the effectiveness of the control system it recommended. Specifically, the Americans claimed that the direction of first motion of a seismic needle is less effective in identifying seismic disturbances as earthquakes than had previously been thought. Since the instrumental set-up used in the Hardtack experiments was not precisely the same as that recommended by the 1958 conference, the Americans also offered a demonstration that the set-up was fully adequate for the purposes of testing the method of first motion. The Soviets were free to question this demonstration, and they did, but somehow time and time again they came back to the point that the Hardtack instrumental set-up after all *was* different. This matter of difference is irrelevant—the question is whether the American demonstration of the full adequacy of the set-up is valid—but the fact that there is a difference could be made to leave the impression that the Americans were trying to palm off unreliable data.

Following the failure of the 1959 conference to reach agreement, President Eisenhower declared on 29 December that the United States would not extend its 14-month moratorium on testing beyond the expiration date of 31 December, but that any future tests would be announced in advance. No immediate American tests are expected. On 3 January the Moscow radio broadcast a pledge by Premier Khrushchev that the Soviet Union would not explode nuclear weapons unless the West did. Britain's policy is not to resume testing so long as "useful" negotiations continue. Political talks were resumed again on 12 January, and it may be that the conference of experts did serve a useful purpose. Prior to the conference it seems that the Soviet scientists not only disagreed with the American scientists, but did not really understand the new material that troubled them. Now the Soviets understand, and if what bothers American scientists is valid, it may come to bother Soviet scientists too.—J.T.



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Meetings

Calorimetry

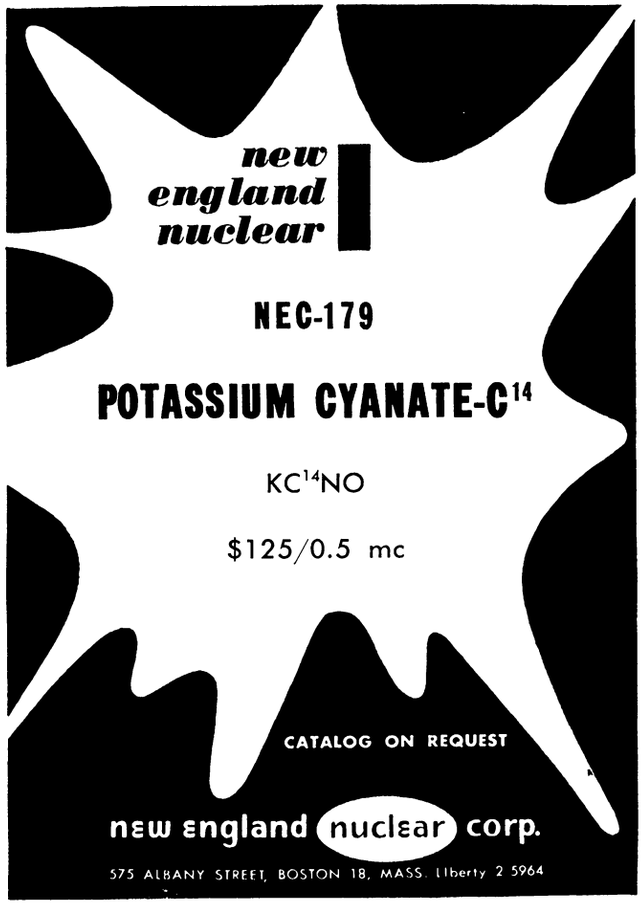
Over 100 calorimetrists from the United States, Canada, and Europe gathered in Yale University's Sterling Chemistry Laboratory from 10 to 12 September for the 14th annual Calorimetry Conference. Under the chairmanship of David White (Ohio State University) they heard and discussed 30 technical papers covering nearly all phases of calorimetry—heat capacity measurements at temperatures as low as 0.1°K and as high as 1400°K, precision reaction and bomb calorimetry, solution calorimetry, and determinations of stored energy in solids.

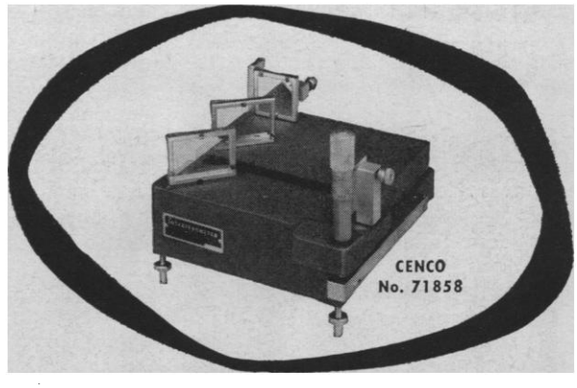
Most of the papers were concerned with topics not even mentioned at early calorimetry conferences, and many reported on developments of the past few months. Nevertheless, as calorimetric techniques are extended to more extreme conditions, the problems that led to the founding of the conference remain, under new guises. The need for better temperature-measuring devices—the first item on the agenda of the 1st Calorimetry Conference—was emphasized again in seven papers that reported on research at temperatures below 11°K. No device comparable to the platinum resistance thermometer now in general use for measurements above 11°K is yet available for the very low temperatures at which some of the most important calorimetric research is now being done. However, the conference heard enthusiastic reports on a device that may extend precision thermometry to at least 1°K—the germanium resistance thermometer developed at Bell Telephone Laboratories. Bell furnished 12 of these thermometers for a Calorimetry Conference test program involving 11 different laboratories. Three papers at the Yale conference described the first results of this program, which are so promising that the conference plans to seek a manufacturer of additional units for a more extensive testing program.

Feature addresses were given by George S. Parks (Stanford University) and Lars Onsager (Yale University). At the annual banquet, Parks delivered the Hugh M. Huffman Memorial Lecture, "Some Remarks on the Thermodynamic Properties of Organic Compounds." Parks and one of his first graduate students, the late Dr. Huffman, started the first systematic calorimetric studies of organic compounds at Stanford over 30 years ago. Parks traced the history of thermodynamic research on organic substances and the role that improvement of calorimetric methods has played in the remarkable progress made in the last three decades.

Onsager gave the principal lecture of the technical sessions, on "Cooperative Phenomena," a field in which he has developed much of the basic theory. Many papers at each calorimetry conference describe experimental studies of cooperative phenomena, and Onsager outlined the approaches one may take in seeking a theoretical understanding of such effects. Admitting that three-dimensional treatments of critical phenomena by statistical mechanics seem hopelessly complex, he dwelt mostly on more simplified treatments that give results.

In addition to the objective of promoting better calorimetric research, the conference also is concerned with publication policies relating to calorimetric and thermodynamic articles. A "resolution regarding published calorimetric data" adopted by the 8th conference, in 1953, has proved to be valuable to editors and authors alike in establishing consistent policies based on the opinions of experts in the field. Because calorimetric research has expanded into many areas not covered by the 1953 resolution, the 14th conference established a committee headed





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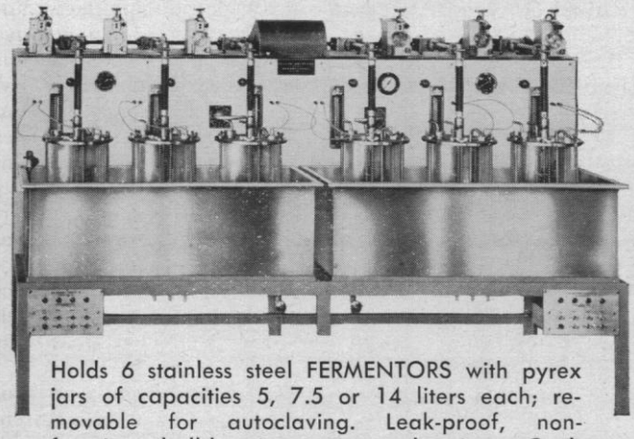

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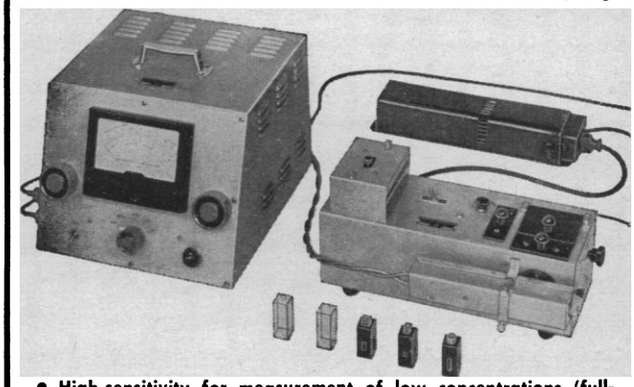

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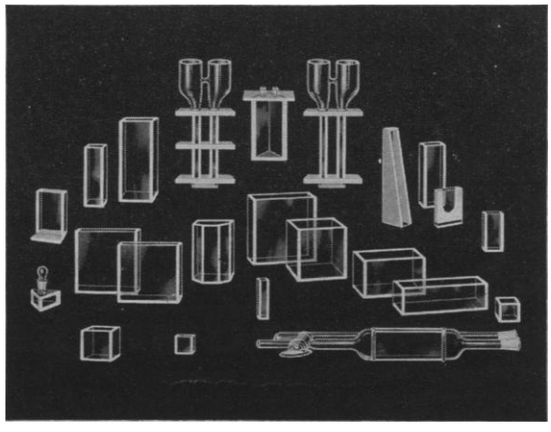

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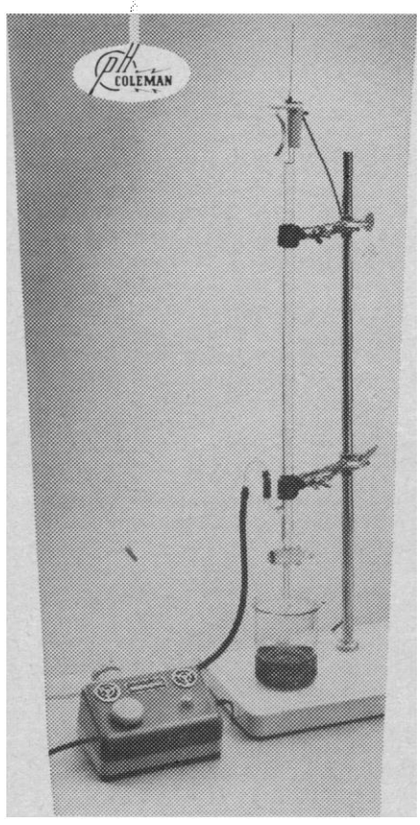

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by J. P. McCullough to consider revising and extending the earlier recommendations.

Edgar F. Westrum, Jr. (University of Michigan) and Stig Sunner (University of Lund, Sweden) presented a proposal of the IUPAC Commission on Thermodynamics for a joint meeting in 1961 of the Calorimetry Conference and the subcommissions on Experimental Thermochemistry and Experimental Thermodynamics. The conference unanimously approved the proposal for a joint meeting to be held either before or after the biennial IUPAC meeting that year in Montreal, Canada. Plans will begin immediately for what should be one of the most important international conferences ever held in the field of calorimetry.

At the annual election, the following members were named to conference offices: chairman, J. P. McCullough (Petroleum Thermodynamics Laboratory, Bureau of Mines); chairman-elect, D. W. Osborne (Argonne National Laboratory); directors, 1959 to 1962, N. E. Phillips (University of California, Berkeley) and J. M. Sturtevant (Yale University). Other officers are C. E. Messer (Tufts University), secretary-treasurer, and David White, D. H. Andrews (Johns Hopkins University), J. E. Kunzler (Bell Telephone Laboratories), and J. A. Morrison (National Research Council, Ottawa), directors.

JOHN P. MCCULLOUGH
Bartlesville, Oklahoma

Forthcoming Events

February

10–11. Gas Cooled Reactor, symp., Philadelphia, Pa. (F. L. Jackson, Franklin Inst., Philadelphia, Pa.)

10–12. American Acad. of Occupational Medicine, Williamsburg, Va. (L. B. Shone, Bureau of Medicine and Surgery, Navy Dept., Washington 25.)

10–12. Solid States Circuit Conf., Philadelphia, Pa. (T. R. Finch, Bell Telephone Laboratories, Murray Hill, N.J.)

10–13. National Assoc. for Research in Science Teaching, 33rd annual, Chicago, Ill. (C. M. Pruitt, Univ. of Tampa, Tampa, Fla.)

10–13. National Soc. of College Teachers of Education, Chicago, Ill. (E. J. Clark, Indiana State Teachers College, Terre Haute.)

11. Protein and Amino Acid Requirements of Swine, Chicago, Ill. (J. T. Sime, Assoc. of Vitamin Chemists, Evaporated Milk Assoc., 228 N. La Salle St., Chicago 1.)

11–13. Society of Univ. Surgeons, Minneapolis, Minn. (B. Eiseman, 4200 E. Ninth Ave., Denver 20, Colo.)

14–18. American Inst. of Mining, Metallurgical and Petroleum Engineers, annual, New York, N.Y. (E. O. Kirkendall, AIME, 29 W. 39th St., New York 18.)

16. Astronomical Soc. of the Pacific annual, San Francisco, Calif. (S. Einarsson, Leuschner Observatory, Univ. of California, Berkeley 4.)

18–19. Chemical Inst. of Canada (Protective Coatings Div.), Toronto, Ont., and Montreal, Que., Canada. (Scientific Liaison Office, National Research Council, Sussex Drive, Ottawa, Canada.)

18–20. National Soc. of Professional Engineers, winter, Wichita, Kan. (P. H. Robbins, NSPE, 309 Bancroft Bldg., Univ. of Nebraska, Lincoln.)

21–24. American Inst. of Chemical Engineers, Atlanta, Ga. (F. J. Van Antwerpen, AICE, 25 W. 45 St., New York 36.)

22–25. Technical Assoc. of the Pulp and Paper Industry, annual, New York, N.Y. (J. Winchester, TAPPI, 155 E. 44 St., New York 17.)

22–4. Scientific Management, 12th intern. cong., Sydney and Melbourne, Australia. (C. M. Gray, Federal Council of the Australian Inst. of Management, Western House, 83 William St., Melbourne, C.1, Victoria, Australia.)

24–26. Biophysical Soc., 4th annual, Philadelphia, Pa. (O. H. Schmitt, Biophysical Soc., Chairman, Program Committee, Univ. of Minnesota, Minneapolis.)

25–27. American Orthopsychiatric Assoc., Chicago, Ill. (Miss M. F. Langer, 1790 Broadway, New York 19.)

25–27. Cell Physiology of Neoplasia (14th annual symp. on fundamental cancer research), Houston, Tex. (Editorial Office, Univ. of Texas M. D. Anderson Hospital, Texas Medical Center, Houston 25.)

26. Highway Geology, 11th annual symp., Tallahassee, Fla. (W. F. Tanner, Geology Dept., Florida State Univ., Tallahassee.)

28–5. American College of Allergists, Miami Beach, Fla. (E. Bauers, 2160 Rand Tower, Minneapolis 2, Minn.)

29–3. American College of Surgeons, Boston, Mass. (H. P. Saunders, 40 E. Erie St., Chicago, Ill.)

29–4. Pittsburgh Conf. on Analytical Chemistry and Applied Spectroscopy, Pittsburgh, Pa. (L. P. Melnich, U.S. Steel Corp., Monroeville, Pa.)

March

3–5. American Acad. of Forensic Sciences, Chicago, Ill. (W. J. R. Camp, AAFS, 1853 W. Polk St., Chicago 12.)

4–6. National Wildlife Federation, Dallas, Tex. (C. H. Callison, 232 Carroll St., NW, Washington 12.)

6–13. American Otorhinologic Soc. for Plastic Surgery, Miami Beach, Fla. (J. G. Gilbert, 75 Barberry Lane, Roslyn Heights, N.Y.)

7–9. Wildlife Management Inst., Dallas, Tex. (C. R. Gutermuth, 709 Wire Bldg., Washington 5.)

7–11. American Soc. of Civil Engineers, New Orleans, La. (E. S. Kirkpatrick, ASCE, 33 W. 39 St., New York 18.)

10. Recent Developments in Poultry Nutrition (Assoc. of Vitamin Chemists), Chicago, Ill. (J. T. Sime, Director of Research, Evaporated Milk Assoc., 228 N. La Salle St., Chicago 1.)

13–14. American Otological Soc., Miami Beach, Fla. (L. R. Boies, University Hospital, Minneapolis 14.)

14–16. American Railway Engineering Assoc., annual conv., Chicago, Ill. (N. D. Howard, AREA, 59 E. Van Buren St., Chicago 5.)

14–17. Positive Health of Older People, forum, Miami Beach, Fla. (A. Mallach, National Health Council, 1790 Broadway, New York 19.)

15–16. American Broncho-Esophangological Assoc., Miami Beach, Fla. (F. J. Putney, 1712 Locust St., Philadelphia 3.)

15–21. Nondestructive Testing, 3rd intern. conf., Tokyo and Osaka, Japan. (S. Ishizaka, Scientific Attaché, Embassy of Japan, 2514 Massachusetts Ave., NW, Washington 8.)

17. Congress for Pharmacists, 2nd annual, Jamaica, N.Y. (Congress for Pharmacists, Public Relations Office, St. John's Univ., Jamaica 32.)

17–19. American Radium Soc., conf., San Juan, Puerto Rico. (ARS, 635 East Union, Pasadena, Calif.)

17–19. Blood Platelets, intern. symp. (by invitation only), Detroit, Mich. (Miss S. A. Johnson, Henry Ford Hospital, Detroit 2.)

17–20. International Assoc. for Dental Research, Chicago, Ill. (D. Y. Burrill, Northwestern Univ. Dental School, 311 E. Chicago Ave., Chicago 11.)

18–19. American Laryngological Assoc., Miami Beach, Fla. (L. Richards, Massachusetts Inst. of Technology, Cambridge 39.)

20–23. American Assoc. of Dental Schools, Chicago, Ill. (R. Sullen, 840 N. Lake Shore Drive, Chicago 11.)

20–26. American Cong. on Surveying and Mapping, Washington, D.C. (C. E. Palmer, American Soc. of Photogrammetry, 1515 Massachusetts Ave., NW, Washington 5.)

20–26. American Soc. of Photogrammetry, Washington, D.C. (C. E. Palmer, ASP, 1515 Massachusetts Ave., NW, Washington 5.)

21–24. American Acad. of General Practice, 12th annual, Philadelphia, Pa. (AAGP, Volker Blvd. at Brookside, Kansas City 12, Mo.)

21–24. Institute of Radio Engineers, natl. conv., New York, N.Y. (L. G. Cumming, IRE, 1 E. 79 St., New York 21.)

23–25. Optical Spectrometric Measurements of High Temperatures, symp., Chicago, Ill. (F. Brech, Laboratories for Applied Science, Univ. of Chicago, 6220 S. Drexel Ave., Chicago 37.)

24–25. Human Factors in Electronics, 1st annual symp. (IRE), New York, N.Y. (J. E. Karlin, Bell Telephone Laboratories, Murray Hill, N.J.)

24–26. American Assoc. for the History of Medicine, Charleston, S.C. (J. B. Blake, c/o Smithsonian Institution, Washington 25.)

24–26. Aviation Education, 4th natl. conf., Denver, Colo. (W. Kinkley, Superintendent of Schools, Aurora, Colo.)

26–27. American Psychosomatic Soc., 17th annual, Montreal, Canada. (E. D. Wittkower, APS, 265 Nassau Rd., Roosevelt, N.Y.)

28–31. Exploitation of Natural Animal Populations, symp., Durham, England. (E. D. Le Cren, British Ecological Soc., The Ferry House, Ambleside, Westmorland, England.)

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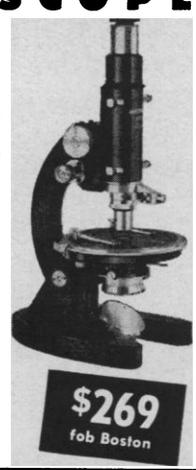

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29–31. American Power Conf., 22nd annual, Chicago, Ill. (R. A. Budenholzer, Mechanical Engineering Dept., Illinois Inst. of Technology, 3300 Federal St., Chicago 16.)

29–2. National Science Teachers Assoc., 8th annual conv., Kansas City, Mo. (Miss M. R. Broom, NSTA, National Education Assoc., 1201 16 St., NW, Washington 4.)

30–31. Adrenergic Mechanisms, Ciba Foundation symp. (by invitation only), London, England. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Pl., London, W.1, England.)

31–1. Continuous Culture of Microorganisms, symp., London, England. (R. Elsworth, c/o Ministry of Supply, Microbiological Research Establishment, Porton, Salisbury, Wilts., England.)

31–2. American Gastroenterological Assoc., New Orleans, La. (W. Volwiler, Dept. of Medicine, Univ. of Washington, Seattle.)

April

1–3. American Soc. of Internal Medicine, San Francisco, Calif. (R. L. Richards, 350 Post St., San Francisco 8.)

1–3. American Soc. for the Study of Sterility, Cincinnati, Ohio. (H. H. Thomas, 920 S. 19 St., Birmingham 5, Ala.)

1–4. Bahamas Medical Conf., Nassau. (B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.)

2. Paleontological Research Institution, Ithaca, N.Y. (Miss R. S. Harris, 126 Kelvin Pl., Ithaca.)

2–6. American College of Obstetrics and Gynecologists, Cincinnati, Ohio. (D. F. Richardson, 79 W. Monroe St., Chicago 3.)

3–6. American Surgical Assoc., White Sulphur Springs, W. Va. (W. A. Altemeier, Cincinnati General Hospital, Cincinnati, Ohio.)

3–7. International Anesthesia Research Soc., Washington, D.C. (A. W. Friend, E. 107 St. and Park Lane, Cleveland 6, Ohio.)

3–8. Nuclear Cong., New York, N.Y. (P. Lange, Engineers Joint Council, 29 W. 39 St., New York.)

4–6. American Inst. of Electrical Engineers, Houston, Tex. (N. S. Hibsham, AIEE, 145 N. High St., Columbus 15, Ohio.)

4–6. American Inst. of Mining, Metallurgical and Petroleum Engineers (43rd Natl. Open Hearth Steel Conf. and Blast Furnace, Coke Oven and Raw Materials Conf.), Chicago, Ill. (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18.)

4–6. American Oil Chemists' Soc., Dallas, Tex. (Mrs. L. R. Hawkins, AOCS, 35 E. Wacker Drive, Chicago 1, Ill.)

4–7. Atomic Exposition, New York, N.Y. (Atomic Exposition, 117 S. 17 St., Philadelphia, Pa.)

4–8. American Soc. of Mechanical Engineers, New York, N.Y. (D. B. MacDougall, ASME, 29 W. 39 St., New York.)

4–9. American College of Physicians, San Francisco, Calif. (E. R. Loveland, 4200 Pine St., Philadelphia 4.)

5–7. Instrument Soc. of America (Natl. Chemical and Petroleum Symp.), Rochester, N.Y. (H. S. Kindler, ISA, 313 Sixth Ave., Pittsburgh 22, Pa.)

5–7. Naval Structural Mechanics, 2nd symp., Providence, R.I. (E. H. Lee, Brown Univ., Providence.)

5–14. American Chemical Soc., natl., Cleveland, Ohio. (A. T. Winstead, ACS, 1155 16 St., NW, Washington 6.)

6–8. Biochemistry and Pharmacology of Compounds Derived from Marine Organisms, symp., New York, N.Y. (R. F. Nigrelli, Dept. of Marine Biochemistry and Ecology, New York Aquarium, Seaside Park, Eighth St. and Surf Ave., Brooklyn 24, N.Y.)

6–8. Hyper-Environments—Space Frontier (Inst. of Environmental Scientists), Los Angeles, Calif. (M. S. Christensen, IES, 6251 Marita St., Long Beach 15, Calif.)

6–8. Radiofrequency Spectroscopy Group, Nottingham, England. (J. E. Ingram, RSG, c/o Dept. of Electronics, Telecommunications and Radio Engineering, Univ. of Southampton, England.)

6–9. Mineral Processing, intern. cong., London, England. (B. W. Kerrigan, Institution of Mining and Metallurgy, 44 Portland Pl., London, W.1, England.)

7–8. Cathode Protection, European symp., Frankfurt am Main, Germany. (Secrétariat du Symposium, Deutsche Gesellschaft fur Metallkunde, Alteburgerstrasse 402, Koln-Marienburg, Germany.)

7–9. American Assoc. of Railway Surgeons, Chicago, Ill. (C. C. Guy, 5800 Stoney Island Ave., Chicago 37.)

7–9. Association of Surgeons of Great Britain and Ireland, Birmingham, England. (F. A. R. Stammers, 47 Lincolns Inn Fields, London, W.C.2, England.)

7–9. Optical Soc. of America, Washington, D.C. (K. S. Gibson, OSA, Natl. Bureau of Standards, Washington 25.)

8–9. American Assoc. of University Professors, Detroit, Mich. (P. R. David, Univ. of Oklahoma, Norman.)

8–9. Southern Soc. for Philosophy and Psychology, Biloxi, Miss. (E. Henderson, Dept. of Philosophy, Florida State Univ., Tallahassee.)

8–11. American Dermatological Assoc., Boca Raton, Fla. (W. M. Sams, 308 Ingraham Bldg., Miami 32, Fla.)

9–10. Histochemical Soc., 11th annual, New York, N.Y. (H. W. Deane, Albert Einstein College of Medicine, Bronx 61, N.Y.)

11–13. American College of Surgeons, Minneapolis, Minn. (H. P. Saunders, 40 E. Erie St., Chicago 11, Ill.)

11–14. American College Personnel Assoc., Philadelphia, Pa. (M. D. Hardee, Florida State Univ., Tallahassee.)

11–15. American Assoc. of Immunologists, Chicago, Ill. (C. Howe, Columbia Univ., College of Physicians and Surgeons, New York 22.)

11–15. American Inst. of Nutrition, Chicago, Ill. (G. M. Briggs, Div. of General Medical Sciences, National Institutes of Health, Bethesda, Md.)

11–15. American Physiological Soc., Chicago, Ill. (R. G. Daggs, 9650 Wisconsin Ave., NW, Washington 14.)

11–15. American Soc. for Experimental Pathology, Chicago, Ill. (F. J. A. McManus, Univ. of Alabama Medical Center, Birmingham.)

11–15. American Soc. for Pharmacology and Experimental Therapeutics, Chicago,