SCIENCE

16 December 1960

Vol. 132, No. 3442

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

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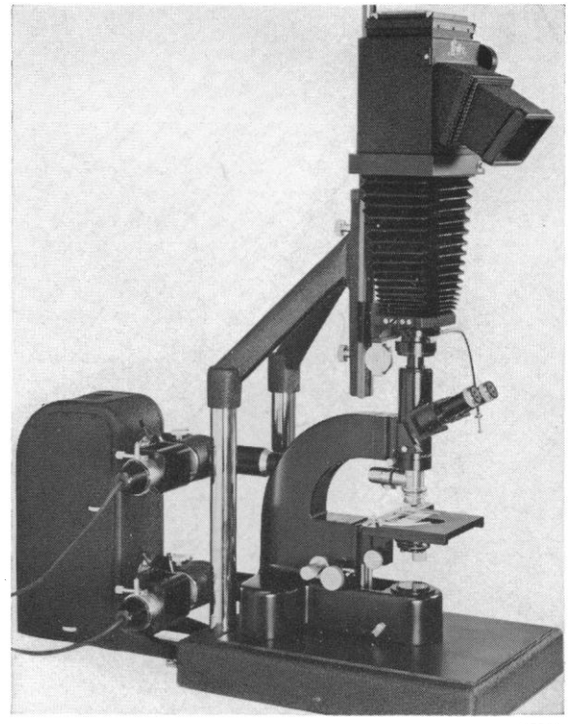

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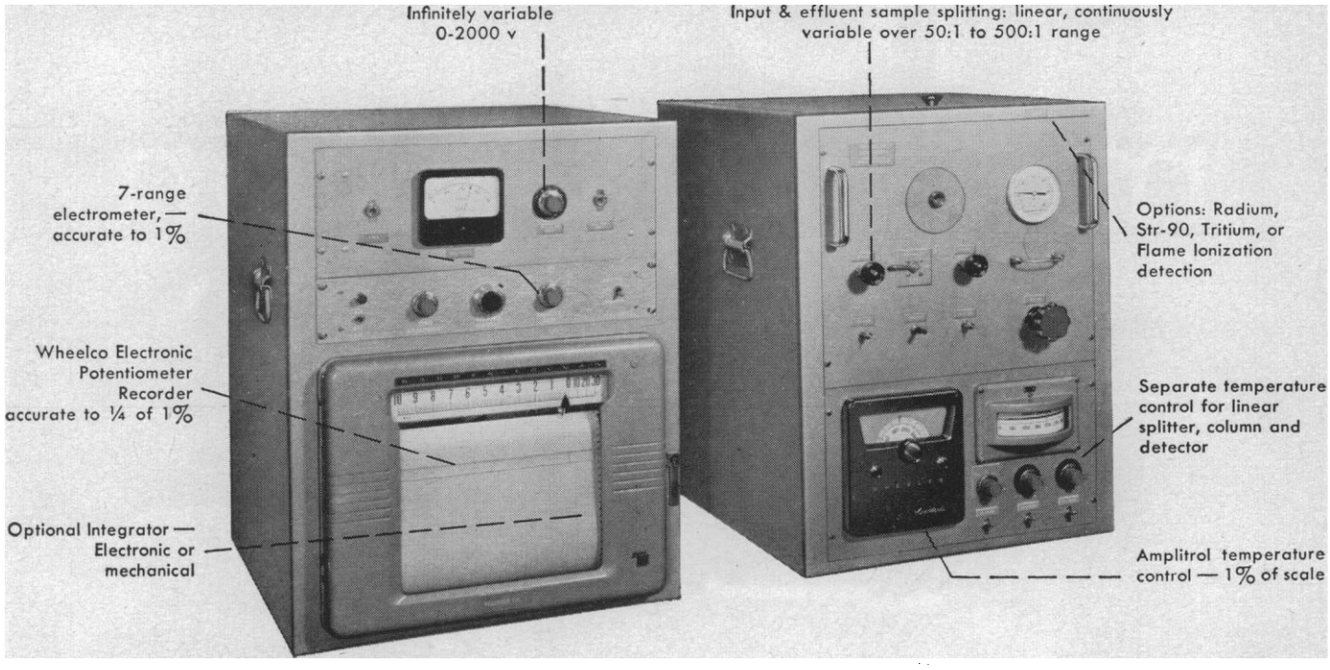

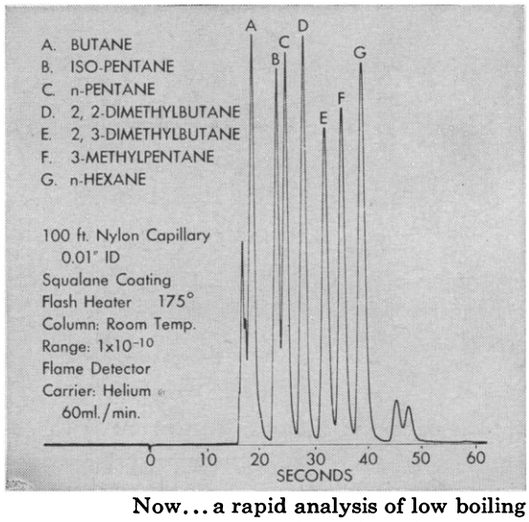

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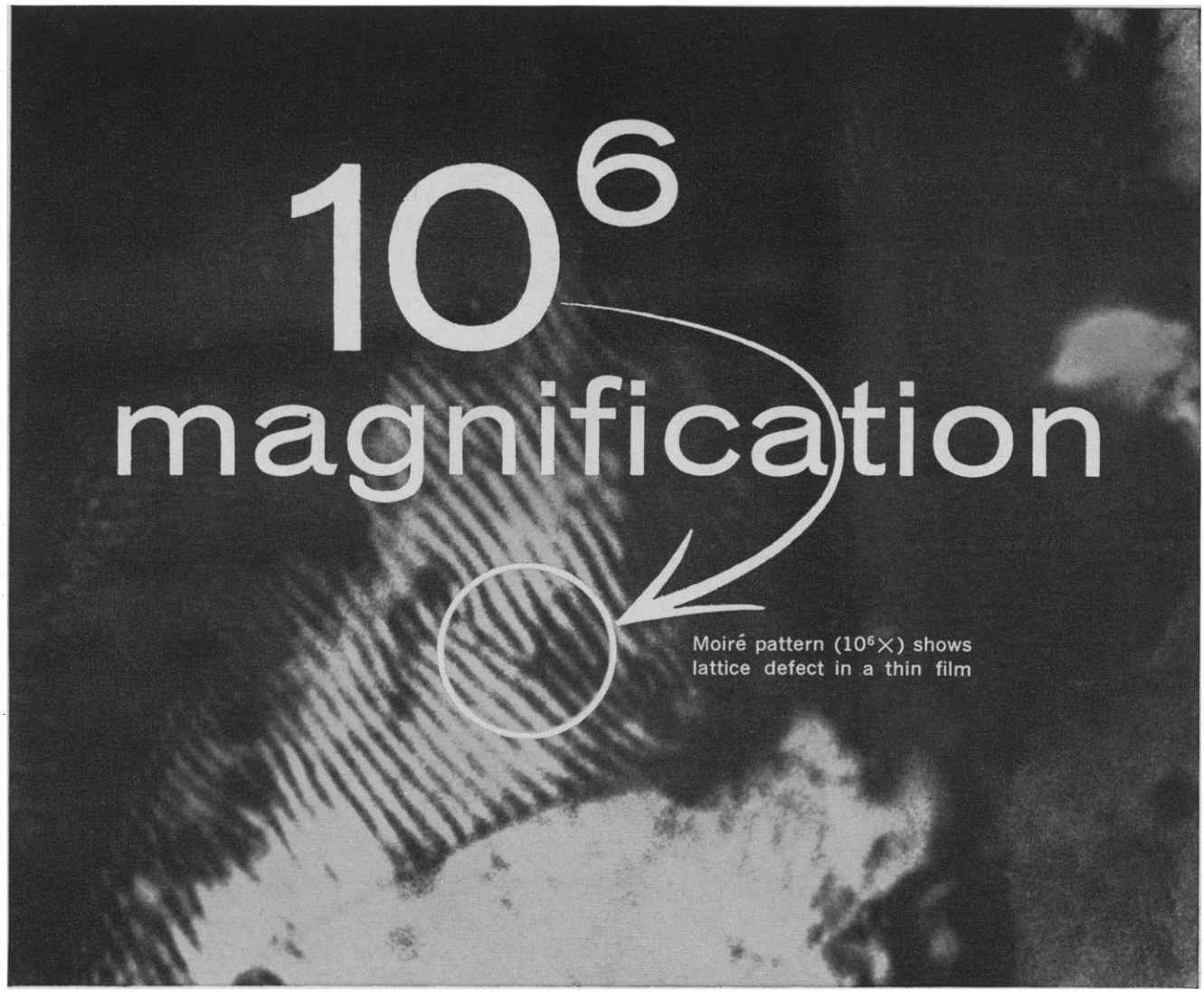

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16 December 1960, Volume 132, Number 3442

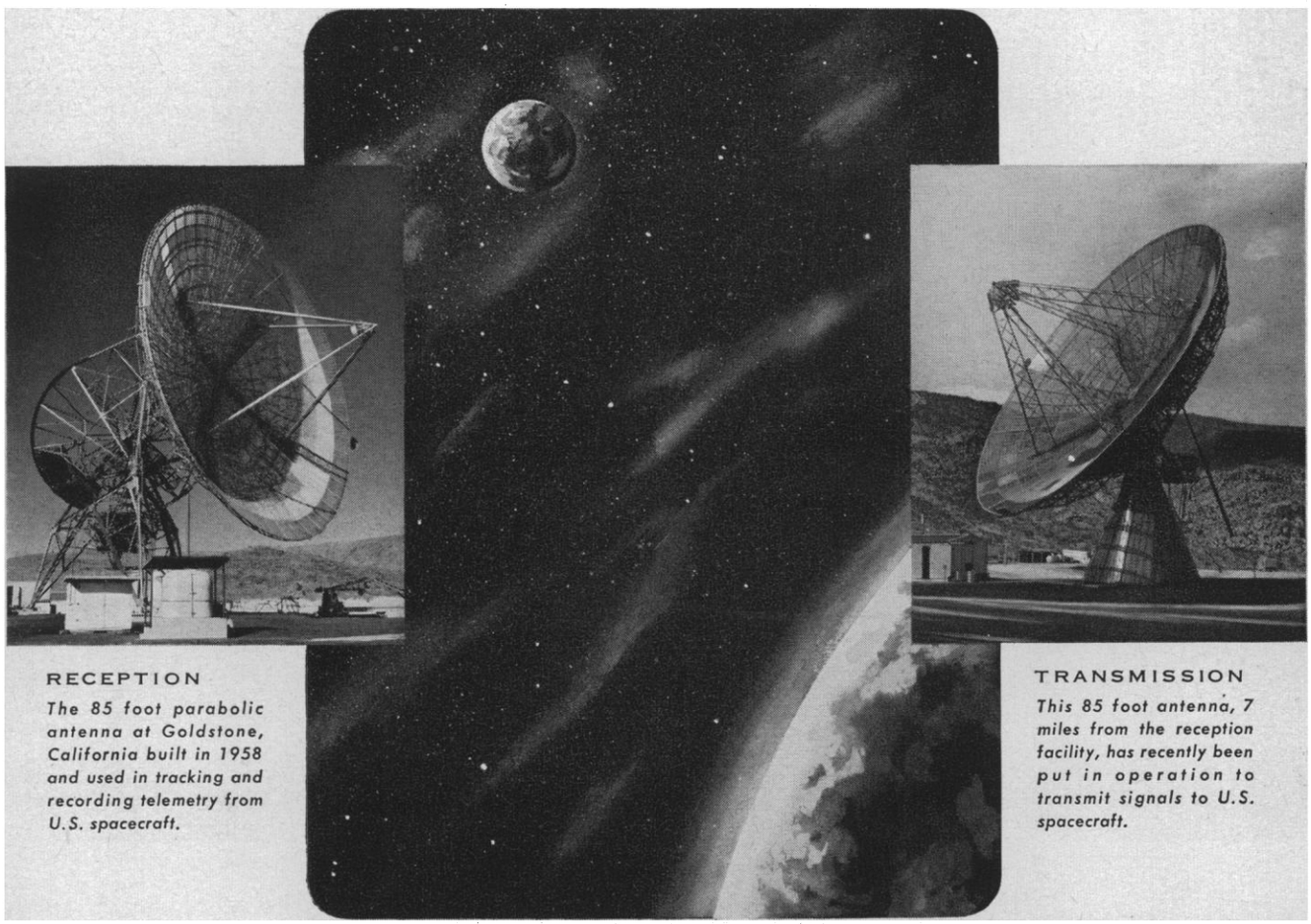
SCIENCE

Cover

Underwater sedimentary formations in Moriches Inlet off the south shore of Long Island, photographed from an airplane. From *The Intelligent Man's Guide to Science* by Isaac Asimov; see page 1830. [American Geographical Society and Basic Books]

Pioneering Achievements at JPL

Following an impressive period, beginning in 1938, in the pioneering and development of all forms of rocketry—JPL's jump into outer space began with the successful flight of America's first satellite, Explorer I. When the moon probes Pioneer III and IV proved equally successful, the Jet Propulsion Laboratory's position as an outstanding center of research and development was again confirmed.



RECEPTION

The 85 foot parabolic antenna at Goldstone, California built in 1958 and used in tracking and recording telemetry from U.S. spacecraft.

TRANSMISSION

This 85 foot antenna, 7 miles from the reception facility, has recently been put in operation to transmit signals to U.S. spacecraft.

PIONEERING IN SPACECRAFT COMMUNICATIONS

With the completion of the new transmitting antenna installation at the Goldstone Deep Space Instrumentation Facility in California, a unique space communications research and operations laboratory now exists which makes possible still further communications achievements in space research. The facility is being used in various ways. Two-way communications with space probes permits precision tracking, precision radio guidance, and wideband data reception. Working as a bistatic, CW Doppler radar, the facility permits accurate tracking of dark satellites whose orbits are only imperfectly known, as well as accurate tracking of the moon and, later, the planets.

The purely scientific data produced by such a facility ranges from propagation data and lunar reflectivity characteristics to the wideband data communicated to the station from the scientific instruments aboard the space probes. This is but one of the many space exploration activities pioneered by the Jet Propulsion Laboratory.

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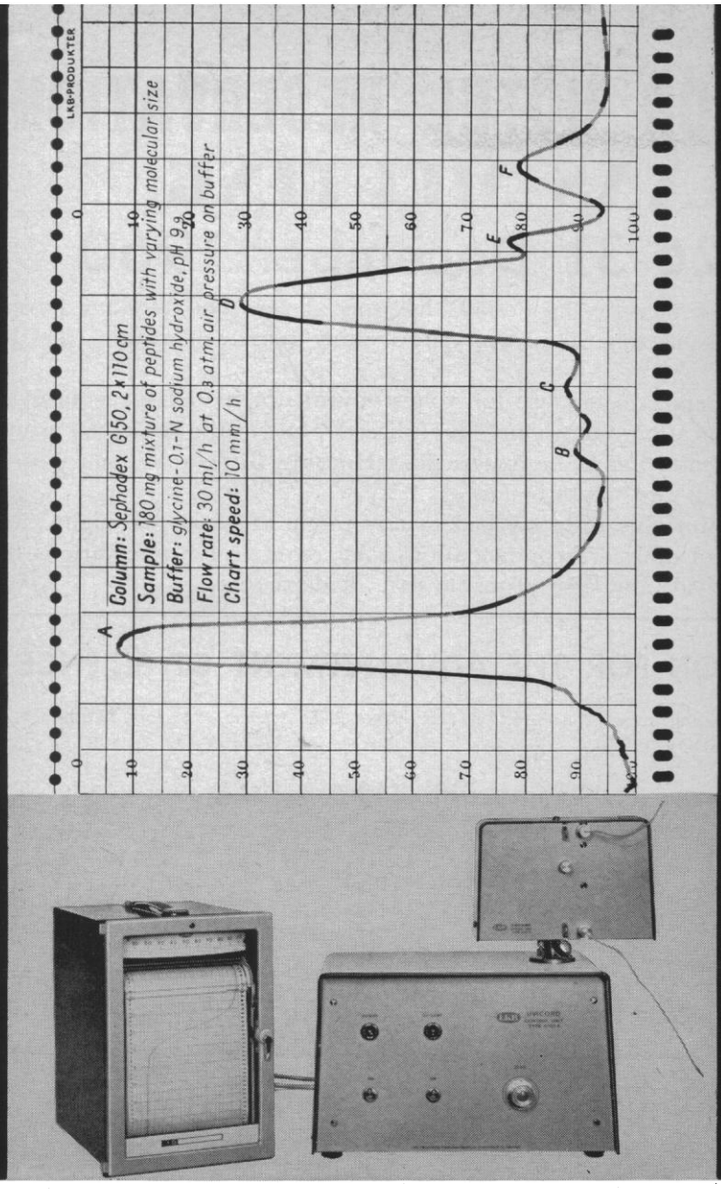

THIS UVICORD DIAGRAM SHOWS:

Peptides released from α-casein through enzymatic degradation by action of Lactobacillus lactis. Six peaks are separated by molecular sieving through a column of SEPHADEX*) G50. Change of test tube in the associated fraction collector appears as a colour change of trace from blue to red or vice versa (grey and black in this reproduction).

Peak	Approx. amount of substance (mg)	Molecular weight
A	50	1.4×10^6
B	3	—
C	4	—
D	39	2.7×10^4
E	12	—
F	11	—

Note:
Molecular weights are calculated from the coefficients of diffusion. Peaks B, C, E and F are too small to permit accurate determination of diffusion coefficients.

**) SEPHADEX is manufactured by AB Pharmacia, Uppsala, Sweden.*

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Volume of Cell	0.05 ml	0.1 ml	0.1 ml	0.2 ml	0.3 ml

* **HIGH SENSITIVITY AND WIDE MEASURING RANGE**
Example I. 0.00036 % thyrosine in 0.1-N NaOH, 5 mm cell ≃ 10 mm pen deflection (E = 0.05)
0.036 % thyrosine in 0.1-N NaOH, 1 mm cell ≃ 100 mm pen deflection (E = 1)
Example II. 0.02 % serum albumin in 1-% NaCl, 5 mm cell ≃ 10 mm pen deflection (E = 0.05).

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The list of hotels and the reservation coupons below are for your convenience in making your hotel reservation in New York. Please send your application, *not* to any hotel directly, but to the AAAS Housing Bureau in New York and thereby avoid delay and confusion. The experienced Housing Bureau will make assignments promptly; a confirmation will be sent you in two weeks or less.

If requested, the hotels will add a comfortable rollaway bed to any room, at $3.00 per night. Mail your application now to secure your first choice of desired accommodations. All requests for reservations must give a definite date and estimated hour of arrival, and also probable date of departure.

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For a list of the headquarters of each participating society and section, see page 230, *Science*, 22 July. Both the Commodore and the Biltmore are AAAS headquarters hotels.

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Hotel	Single	Double Bed	Twin Beds	Suites
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* All rates are subject to a 5% New York City tax on hotel room occupancy.

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(Individual requesting reservation) (Please print or type)

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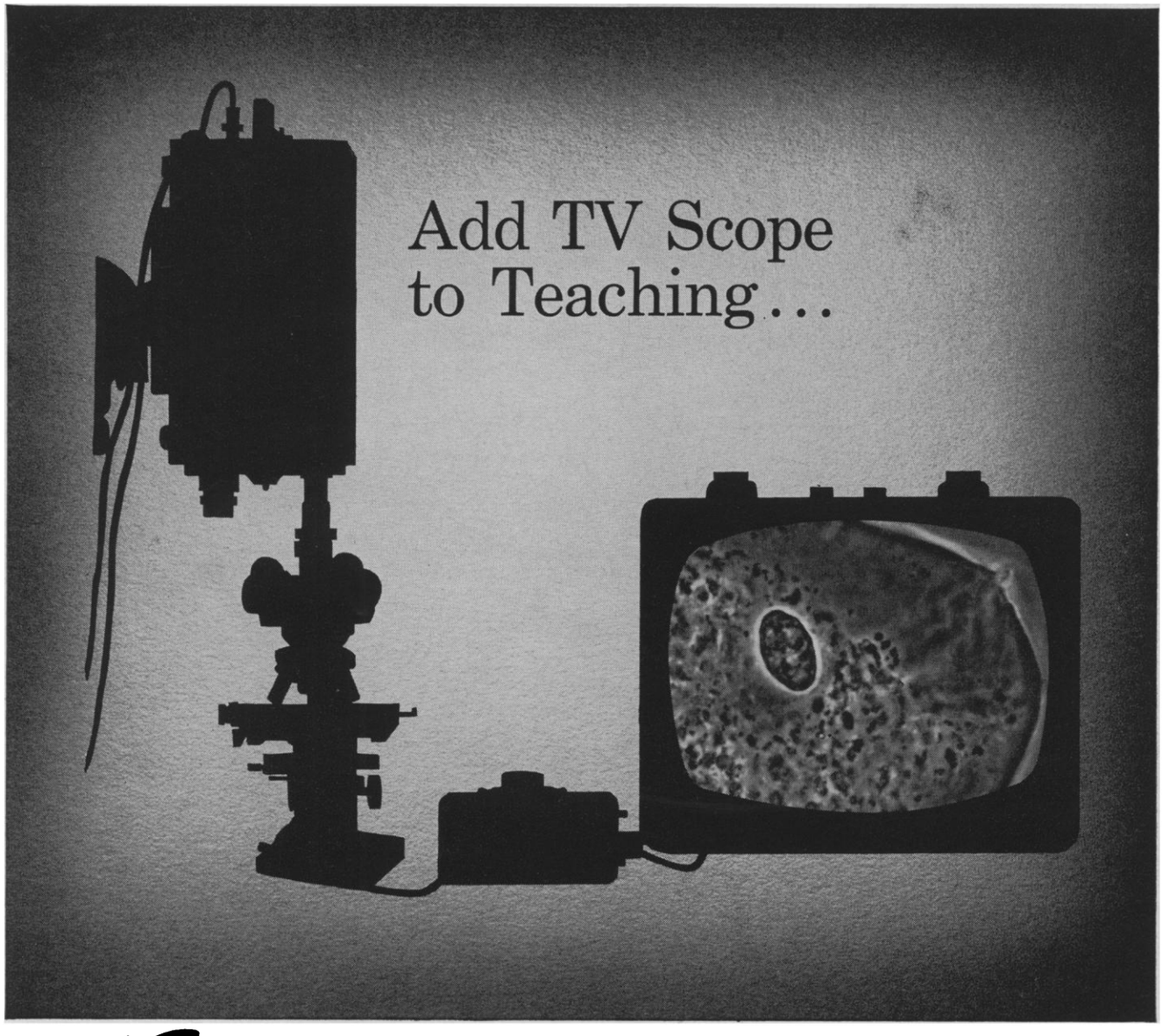
Mail this now to the Housing Bureau. **Rooms will be assigned and confirmed in order of receipt of reservation.**



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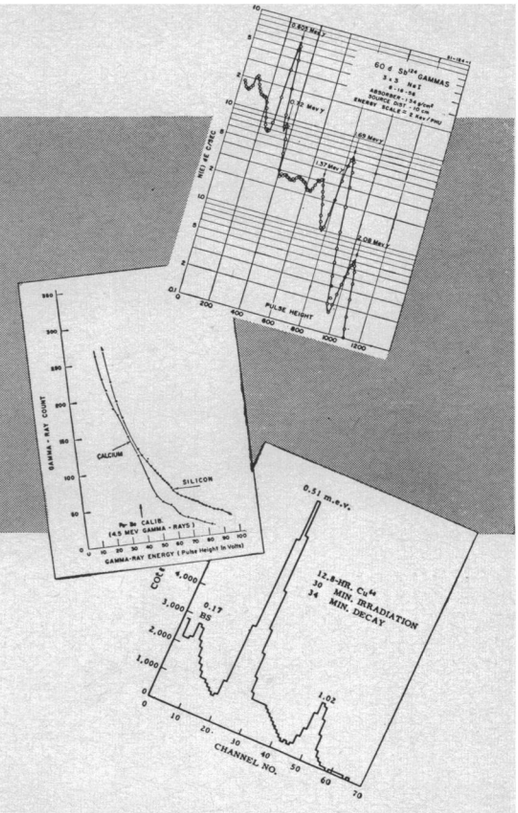

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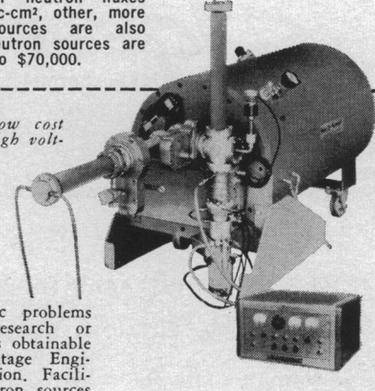

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Editorial and personnel-placement correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts or for the opinions expressed by contributors. For detailed suggestions on the preparation of manuscripts and illustrations, see *Science* **125**, 16 (4 Jan. 1957).

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Social Science

The National Science Foundation has established a Division of Social Sciences, correlative with the divisions responsible for supporting work in the physical and biological sciences. Establishment of the new division concludes a debate that began in 1946 when Congress first discussed the creation of a National Science Foundation. Some of the Congressional bills included a Division of Social Sciences; others excluded it. The final compromise was to omit specific mention of the social sciences but to give the foundation an open-ended structure by attaching the words ". . . and other sciences" to each listing of fields in which research grants, fellowships, or other support might be given. What Congress said, in essence, to the new Foundation was: "We do not instruct you to support work in the social sciences and neither do we prohibit such work; we leave the decision in your hands."

This action was satisfactory to most scientists; indeed a number of social scientists recommended that their fields not be specifically mentioned so that the controversy might be settled and the Foundation brought into being. A poll conducted by the Inter-Society Committee for a National Science Foundation, which the AAAS established in 1947 to determine and make known the consensus of scientists with respect to the several organizational problems at issue, showed 49 percent of the scientists queried as favoring inclusion of the social sciences, 2 percent opposed, and 48 percent preferring to leave the decision to the Foundation itself. Ninety-eight percent were willing either to have a Division of Social Sciences written into the bill or to have the question decided by the Foundation itself; and 63 percent said they would prefer no foundation to one from which the social sciences were excluded by statute.

In the light of its legislative history, the NSF approached the social sciences gradually. From the very beginning, fellowships in the more biological aspects of anthropology and psychology were awarded. This was not support for the social sciences, but the action gave substance to the ". . . and other sciences" portion of the mandate. Later, research was supported in those areas of the social sciences that converge with the physical or biological sciences. Still later, these programs were expanded and brought together in an Office of Social Sciences. Now the Office has become a Division. What the Foundation has done, in essence, is to reply to Congress: "We have explored carefully the means of social science support we consider proper and have now decided that full recognition, through divisional status, is desirable."

Social scientists will be pleased, and so, unless majority opinion has changed since 1947, will most other scientists; pleased both with the symbolic value of the new status and with the promise of increased support that accompanied the NSF action. Support, the NSF has pointed out, will be for basic research that meets high standards of conceptual and methodological rigor, not for "applied craftsmanship in social affairs." This is as it should be, to be consistent with other programs of the NSF, to allay any remaining fears that the term *social science* is merely a cloak for action on important but sometimes controversial social issues, and to help competent research scholars interested in human and social behavior to develop their field to the point where there will no longer be any doubts concerning the appropriateness of the word *science* in *social science*.—D.W.

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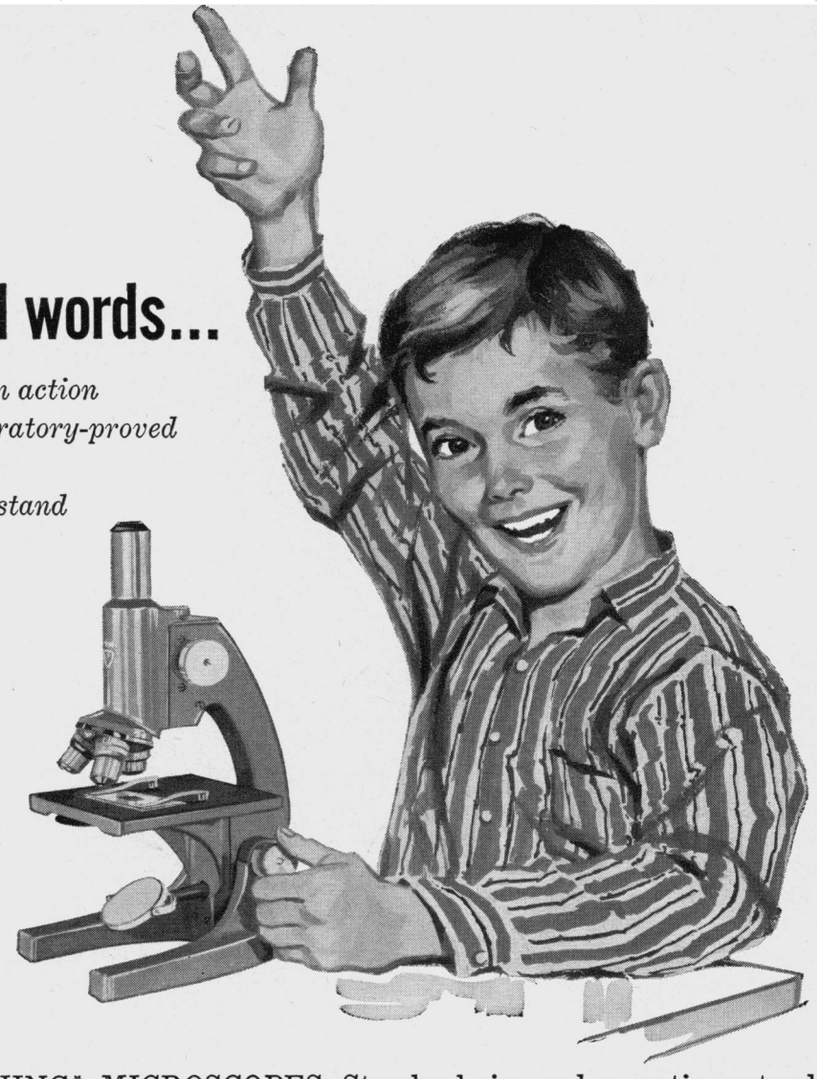

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Meetings

Forthcoming Events

January

3–9. Indian Science Cong., 48th session, Roorkee (Uttar Pradesh), India. (General Secretary, ISC Assoc., 64 Dilkhusa St., Calcutta 17, India)

8–12. Thermoelectric Energy Conversion, symp., Dallas, Tex. (P. H. Klein, General Electric Co., Electronics Lab., Bldg. 3, Room 221, Syracuse, N.Y.)

8–13. American Acad. of Orthopedic Surgeons, Miami Beach, Fla. (J. K. Hart, 116 South Michigan Ave., Chicago 3, Ill.)

8–14. Bahamas Conf. on Hypertension, Nassau. (I. M. Wechsler, P.O. Box 1454, Nassau)

8–14. International Conf. of Social Work, 10th, Rome. (Miss R. M. William, ICSW, 345 E. 46 St., Room 1012, New York 17)

8–15. Latin American Convention of Astronomy, 2nd, Lima, Peru. [A. C. Parro, Enrique Palacios 187 (359), Chorrillos (Lima), Peru]

9–11. Reliability and Quality Control, 7th natl. symp., Philadelphia, Pa. (R. L. Schwerin, ACF Electronics Div., ACF Industries, Inc., 11 Park Place, Paramus, N.J.)

9–12. White House Conf. on Aging, Washington, D.C. (Special Staff on Aging, Office of the Undersecretary, Dept. of Health, Education and Welfare, Washington 25)

9–13. Society of Automotive Engineers, annual, Detroit, Mich. (SAE, 485 Lexington Ave., New York 17)

10–11. Conference on Physics of Polymers, Bristol, England. (Organizing Secretary, Physical Soc., 1 Lowther Gardens, London, S.W.7)

16–18. American Astronautical Soc., annual, Dallas, Tex. (F. F. Martin, AAS, 304 S. Woodstock Dr., Haddonfield, N.J.)

16–19. Instrument Soc. of America, winter instrument-automation conf., St. Louis, Mo. (W. H. Kushnick, 313 Sixth Ave., Pittsburgh 22, Pa.)

22–28. Bahamas Serendipity Conf., 3rd, Nassau. (I. M. Wechsler, P.O. Box 1454, Nassau)

23–25. Institute of the Aeronautical Sciences, 29th annual, New York, N.Y. (Meetings Dept., IAS, 2 E. 64 St., New York 21)

23–26. American Meteorological Soc., 41st annual, New York, N.Y. (K. C. Spengler, AMS, 45 Beacon St., Boston 8, Mass.)

24–27. American Mathematical Soc., 67th annual, Washington, D.C. (J. W. Green, Univ. of California, Los Angeles)

24–27. Society for Industrial and Applied Mathematics, Washington, D.C. (G. Kaskey, Remington Rand Univac, 1900 W. Allegheny Ave., Philadelphia, Pa.)

24–27. Society of Plastics Engineers, 17th annual conf., Washington, D.C. (T. A. Bissell, SPE, 65 Prospect St., Stamford, Conn.)

25–27. Mathematical Assoc. of America, annual, Washington, D.C. (H. L. Alder, Dept. of Mathematics, Univ. of California, Davis)

26–27. Western Spectroscopy Conf., 8th annual, Pacific Grove, Calif. (R. C. Hawes, Applied Physics Corp., 2724 S. Peck Rd., Monrovia, Calif.)

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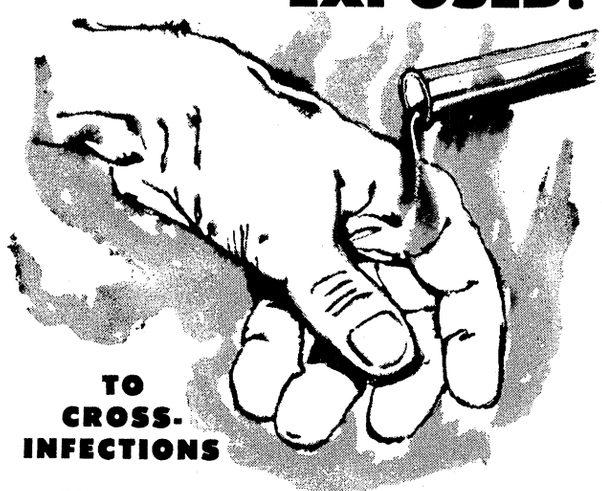

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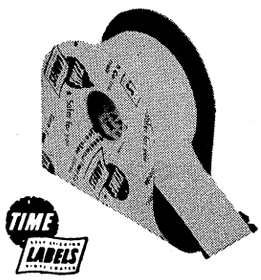

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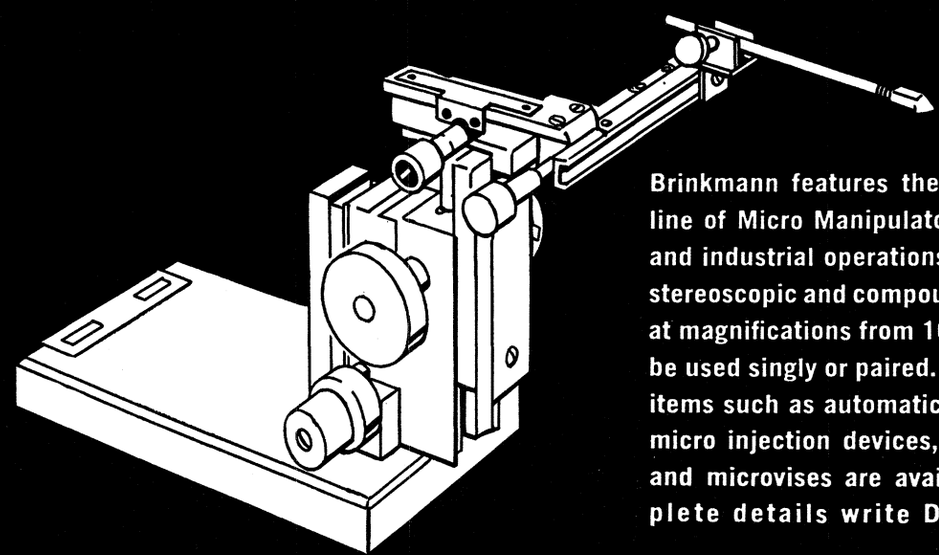

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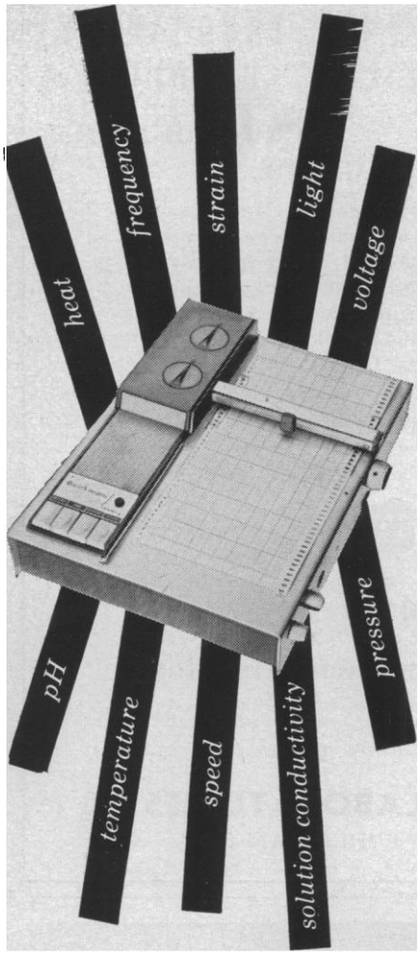

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27–28. Royal College of Physicians and Surgeons, annual, Ottawa, Ontario, Canada. (T. J. Giles, 150 Metcalfe St., Ottawa)

28–30. Control of the Mind, symp., San Francisco, Calif. (Dept. of Continuing Education in Medicine, Univ. of California Medical Center, San Francisco 22)

28–31. Infertility, sectional meeting, Intern. Fertility Assoc., Acapulco, Mexico. (M. L. Brodny, 4646 Marine Dr., Chicago 40, Ill.)

29–3. American Inst. of Electrical Engineers, winter meeting, New York, N.Y. (E. C. Day, AIEE, Technical Operations Dept., 33 W. 39 St., New York 18)

30–3. Clinical Cong. of Abdominal Surgeons, Miami Beach, Fla. (B. F. Alfano, 663 Main St., Melrose 76, Mass.)

30–4. American Library Assoc., mid-winter meeting. (Mrs. F. L. Spain, New York Public Library, 20 W. 53 St., New York, N.Y.)

31–4. American Assoc. of Physic Teachers, New York, N.Y. (F. Verbrugge, 135 Main Engineering, Univ. of Minnesota, Minneapolis)

31–4. American Physical Soc., annual, New York, N.Y. (K. Darrow, APS, Columbia Univ., 116th St. and Broadway, New York)

February

1–3. Solid Propellant Rocket Conf., American Rocket Soc., Salt Lake City, Utah. (R. D. Geckler, Aerojet-General Corp., P.O. Box 1947, Sacramento, Calif.)

1–3. Winter Military Electronics Conv., 2nd, Inst. of Radio Engineers, Los Angeles, Calif. (A. N. Curtiss, IRE Business Office, 1435 S. La Cienega Blvd., Los Angeles 35)

1–4. American Physical Soc., annual, New York, N.Y. (K. K. Darrow, APS, 538 W. 120 St., New York 27)

2–4. Congress on Administration, 4th annual, Chicago, Ill. (R. E. Brown, American College of Hospital Administrators, 840 N. Lake Shore Dr., Chicago 11)

6–8. American Acad. of Allergy, 17th annual, Washington, D.C. (J. O. Kelly, 756 North Milwaukee St., Milwaukee 2, Wis.)

6–8. Geodesy in the Space Age, symp., Ohio State Univ., Columbus. (W. A. Heiskanen, Ohio State Univ., 1314 Kinnear Road, Columbus 12)

9–15. Second Allergy Conf., Nassau, Bahamas. (I. M. Wechsler, P.O. Box 1454, Nassau)

13–16. American Soc. of Heating, Refrigerating and Air-Conditioning Engineers, Chicago, Ill. (R. C. Cross, 234 Fifth Ave., New York 1)

15–17. International Solid-State Circuits Conf., Philadelphia, Pa. (J. J. Suran, Bldg. 3, Room 115, General Electric Co., Electronics Park, Syracuse, N.Y.)

22–25. American Educational Research Assoc., annual, Chicago, Ill. (G. T. Buswell, 1201 16th St., NW, Washington 6)

23-25. American Orthopsychiatric Assoc., annual, New York, N.Y. (Miss M. F. Langer, 1790 Broadway, New York 19)

23-25. Fifteenth Annual Symp. on Fundamental Cancer Research, Houston, Tex. (Publications Dept., Univ. of Texas M.D. Anderson Hospital and Tumor Inst., Texas Medical Center, Houston 25)

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