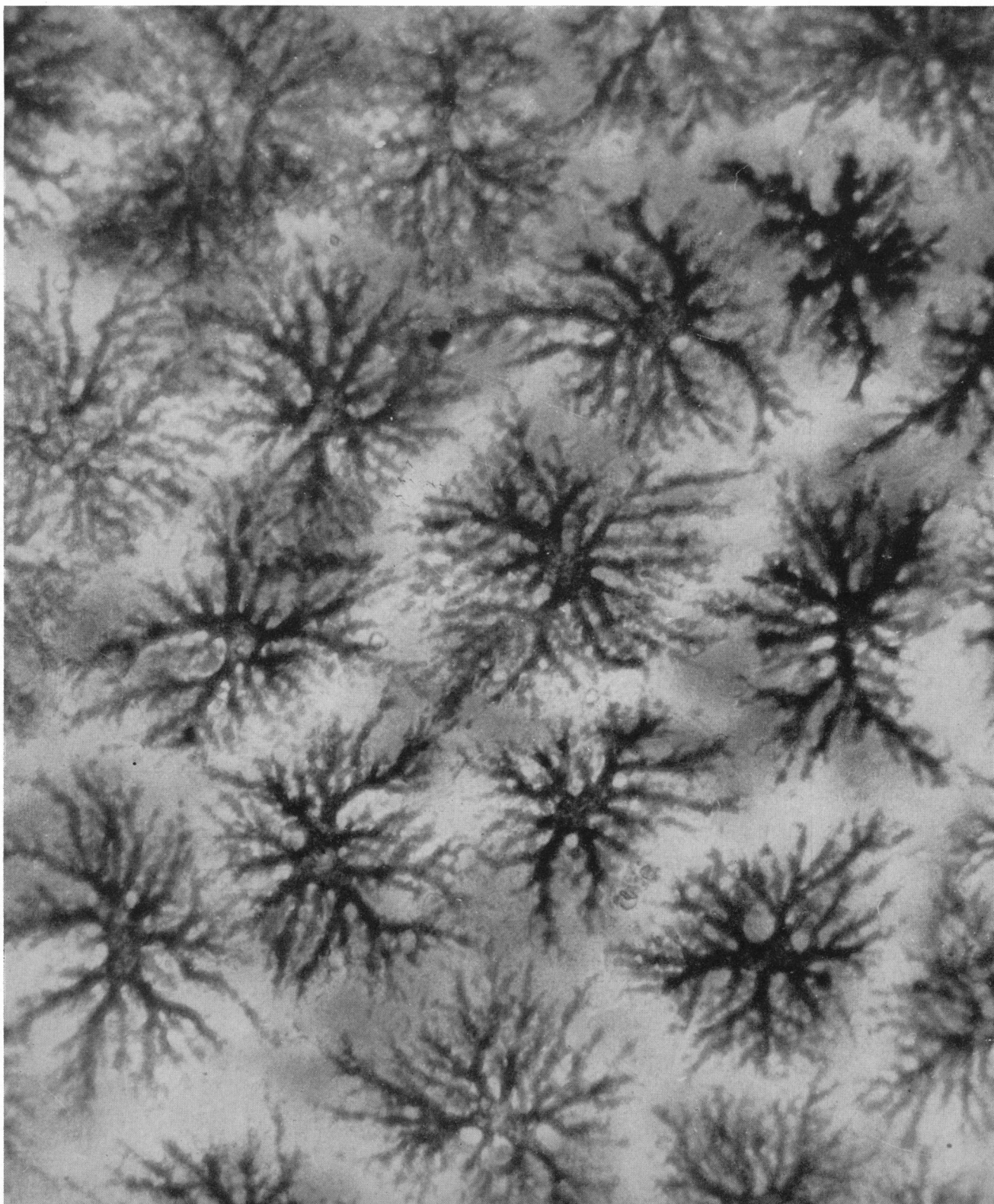


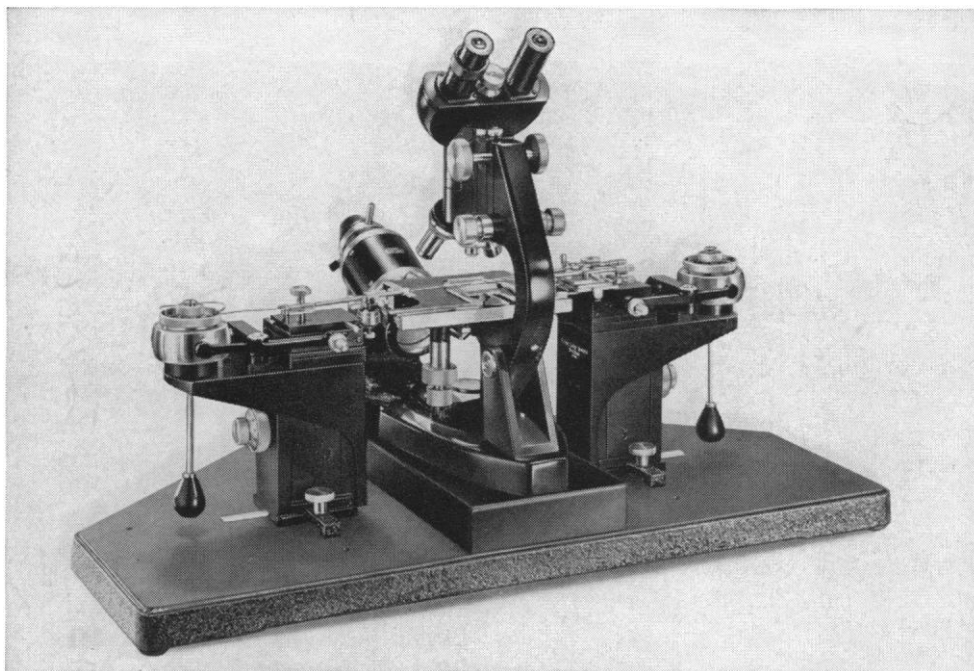
SCIENCE

18 November 1960

Vol. 132, No. 3438

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



Leitz***first in precision optics******THE NEW LEITZ MICRO MANIPULATOR***

Horizontal and vertical movements of this mechanically operated instrument are independent, but can be adjusted simultaneously. Adjustable ratio of movement enables micro knives, needles, pipettes, etc., to be kept within a field of 0.1 mm. Single and double needle holders are available. Positive control of micro-instruments, without backlash, drift, or thermal expansion assured.

A reputation for integrity and a tradition of service have led thousands of scientific workers to bring their optical problems to Leitz. If you have problems in this field, why not let us help you with them?

See your Leitz dealer and examine these Leitz instruments soon. Write for information.

E. LEITZ, INC.
468 Park Avenue South, New York 16, N. Y.

Please send me the Leitz _____ brochure.

NAME _____

STREET _____

CITY _____ ZONE _____ STATE _____

E. LEITZ, INC., 468 PARK AVENUE SOUTH, NEW YORK 16, N. Y.
Distributors of the world-famous products of
Ernst Leitz G. m. b. H., Wetzlar, Germany—Ernst Leitz Canada Ltd.
LEICA CAMERAS · LENSES · PROJECTORS · MICROSCOPES · BINOCULARS

PICKER NUCLEAR
announces a new line of
transistorized **NUCLEAR**
TRAINING INSTRUMENTS



PICKER QUALITY AT "BUDGET" OUTLAY

Picker Nuclear announces a comprehensive line of basic instrumentation for training students in radioisotope technics. Uniquely versatile, these instruments permit the scheduling of full laboratory courses in radioisotope technics (including such important fields as pulse height analysis and rate function studies).

The cost of this new equipment falls well within the reach of modest equipment budgets. Instruments can be delivered before the start of the 1960-61 academic year. For details, please call any local Picker office (see 'phone book) or write Picker X-Ray Corporation, 25 South Broadway, White Plains, New York.

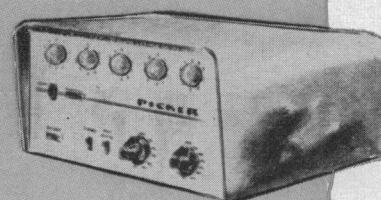
Hallmark of quality nuclear instrumentation



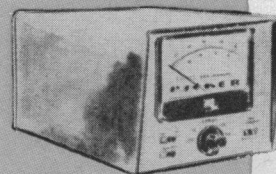
Standing behind every Picker instrument is a local member of the Picker X-Ray national sales and service network.

He's there to protect your investment.

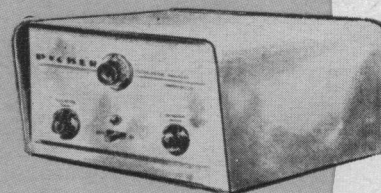
Because of him the user of a Picker instrument is never left stranded.



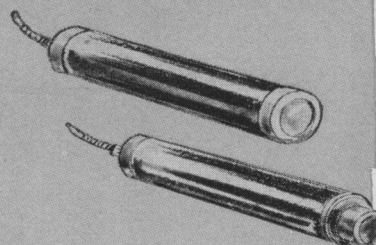
TRAINING SCALER



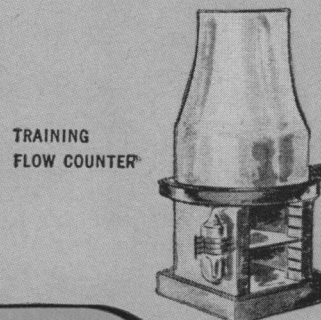
TRAINING RATEMETER



TRAINING ANALYZER



TRAINING SCINTILLATION DETECTORS

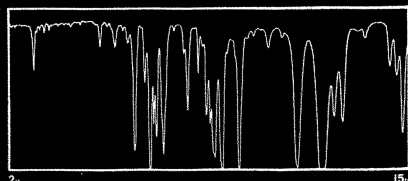


TRAINING
FLOW COUNTER

KEEP YOUR LAB AHEAD IN INFRARED WITH LOW-COST INFRACORD® SPECTROPHOTOMETERS



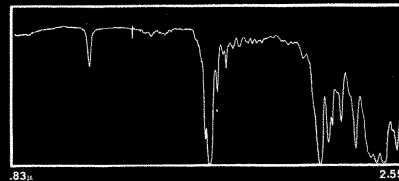
One of Perkin-Elmer's line of Model 137 Infracord® Spectrophotometers. Alike in appearance and operation, instruments differ in spectral regions covered as shown by chart paper. Sample is 1,2,4-Trichlorobenzene.



NaCl Model 137. Scans fundamental infrared range 2.5μ to 15μ —in 12 minutes; suitable for 70% of all analytical problems involving organic chemicals.



KBr Model 137. Scans from 12.5μ to 25μ in 6.5 minutes; provides data impossible or difficult to obtain at shorter wavelengths.



Model 137-G. Newest Infracord, this grating instrument covers the highly significant $.83\mu$ to 7.5μ region with high resolution. Two-speed wavelength drive permits either 24-minute scan for quantitative analysis or 8-minute scan for survey work.

INSTRUMENTS COVER THREE IR RANGES. Three Infracord Spectrophotometers are available. All are double-beam instruments, similar in appearance, accuracy, reliability, simplicity, low cost and availability of accessories for sampling and special analyses. They differ only in the IR spectral region covered and in their optics.

Any laboratory can improve its analytical efficiency with one or more low-cost Perkin-Elmer Model 137 Infracord® Spectrophotometers.

The cost—\$4500 for the NaCl Model 137—is one-half to one-third that of infrared instruments designed for more complex and demanding work. Despite this difference in price, P-E Infracords can handle most analytical problems a chemist in research and development, process or quality control, must perform. This means you don't pay for performance you don't need... nor for a high-salaried specialist, since a technician can operate the Infracord after a few minutes' instruction.

For laboratories with no IR instrument, an Infracord means cutting analytical time from hours to minutes... achieving accuracy and reliability unmatched by other techniques. Re-

sults are presented as standard spectra on notebook-size paper for easy reference and filing as a permanent record.

For large laboratories, the use of a number of Infracords provides rapid, accurate analysis of the more routine samples... prevents delays at the spectroscopy lab... keeps more sophisticated IR equipment and skilled spectroscopists busy at problems only they can handle.

For multi-laboratory organizations, an Infracord at each of a company's decentralized labs stems the flow of samples to the central research lab for IR analysis. It provides better analytical service in the field... leaves the central lab free for more basic work.

For complete information on all Infracords, write to the Perkin-Elmer Corporation, 910 Main Avenue, Norwalk, Conn.

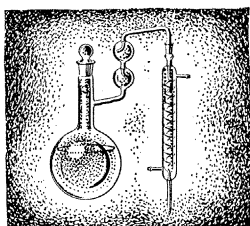
Ask about our instrument leasing programs.

INSTRUMENT DIVISION
Perkin-Elmer Corporation
NORWALK, CONNECTICUT

Editorial	Science Proves	1449
Articles	Genetic Systems in <i>Chlamydomonas</i> : <i>R. Sager</i>	1459
	Both chromosomal and nonchromosomal systems of genetic determinants are being analyzed in this alga.	
	Radiation Environment in Space: <i>H. E. Newell</i> and <i>J. E. Naugle</i>	1465
	Satellites and space probes are revealing the kinds and amounts of radiation men will encounter in space.	
Science in the News	John Kennedy's New Frontier; Lysenko's Influence on Soviet Biological Sciences Waning	1472
Reports	<i>n</i> -Tridecane and trans-2-Heptenal in Scent Gland of the Rice Stink Bug <i>Oebalus pugnax</i> (F.): <i>M. S. Blum</i> et al.	1480
	Use of Cytoplasmic Male Sterility in Making Interspecific Crosses in <i>Allium</i> : <i>E. W. Davis</i>	1481
	Pineal Regulation of the Body Lightening Reaction in Amphibian Larvae: <i>J. T. Bagnara</i>	1481
	Experimental Study of Teratogenic Effect of Emotional Stress in Rats: <i>A. Härtel</i> and <i>G. Härtel</i>	1483
	Perturbations of the Orbit of the Echo Balloon: <i>I. I. Shapiro</i> and <i>H. M. Jones</i>	1484
	Observed Solar Pressure Perturbations of Echo I: <i>D. O. Muhleman</i> et al.	1487
	National Academy of Sciences: Abstracts of papers presented at the autumn meeting	1488
Association Affairs	Programs Planned for the AAAS New York Meeting	1501
Departments	Biochemical Anthropology; Forthcoming Events	1506
Cover	Pigment cells with dispersed melanin in the tail fin of the tadpole of the South African clawed toad, <i>Xenopus laevis</i> (about $\times 295$). Tails of these tadpoles become dark in color when they are subjected to darkness because the melanin in their pigment cells is dispersed. The reaction seems to be mediated by the action of light on the pigment cells of the fin. Other pigment cells of such tadpoles react differently because they are influenced by the pineal gland (see page 1481).	

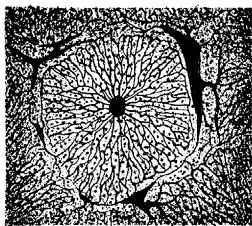
IT HAPPENED THIS MONTH...

a glance at yesterday in relation to today



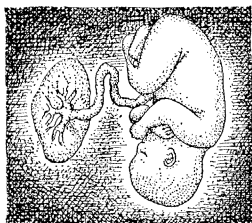
IN NOVEMBER — (1910) — there is reported¹ a study of the influence of alcohol upon nitrogen metabolism in dogs and man. Moderate doses of alcohol are found to exert a protein-sparing action; with larger quantities there is some nitrogen loss. Perhaps the most significant impression is the absence of any *profound* disturbance in protein metabolism, even when comparatively large doses are continued for days and weeks.

Today, we know that alcohol reduces the entry of amino acids into the Krebs cycle. If you wish to study objectively the nutritional relationship between alcohol and amino acids, Schwarz BioResearch can supply you with the amino acids at low cost. (Since repeal of prohibition, there is no problem in obtaining alcohol for pleasurable and nutritional purposes.) We are also ready to fill your research, instructional, and analytical needs with these optically standardized, highly purified amino acids — plain or labeled with N^{15} , S^{35} , C^{14} and O^{18} .



IN NOVEMBER — (1939) — a letter from the Coris² discusses certain apparent differences between liver, brain, and muscle phosphorylase. The liver enzyme converts glucose-1-phosphate to glycogen more rapidly than do preparations from other tissues. This is attributable to contamination of liver phosphorylase by glycogen, rather than to an intrinsic difference in the enzyme itself. This established the role of glycogen as a primer in glycogenesis.

While the glycolytic enzymes are still difficult to obtain in a pure crystalline state, many of their substrates are readily available from Schwarz BioResearch. We supply a large number of sugars and sugar phosphates, plain or labeled with C^{14} .



IN NOVEMBER — (1952) — a report from Scandinavia discusses the determination of the nucleic acid content of human placenta. There is good agreement between results obtained by Hammarsten's method and by application of cysteine reactions to the hot T.C.A. extract. Schmidt and Thannhauser values showed considerable divergencies. P.N.A. content decreases sharply with the aging of the placenta, while D.N.A. increases slightly. Thus, there is marked decrease in the P.N.A./D.N.A. ratio during pregnancy.³

Placentation is only one type of tissue development where nucleic acids play a major role. Schwarz BioResearch is the leading supplier of all types of nucleic acid compounds: DNA, RNA, nucleate salts, nucleotides, nucleosides, purines and pyrimidines, 2 deoxy-D-ribose, D-ribose, and ribose 5-phosphate. Many of these have been radiolabeled. Write for our most recent catalog and price list.

You are invited to visit us at Booth 96 at next month's AAAS meeting.

1. Mendel, L. B., and Hilditch, W. W.: The influence of alcohol upon nitrogenous metabolism in men and animals. *Am. J. Physiol.* 27:1 (Nov.) 1910. 2. Cori, G. T., and Cori, C. F.: Letters to the Editor: The activating effect of glycogen on the enzymatic synthesis of glycogen from glucose-1-phosphate. *J. Biol. Chem.* 131:397 (Nov.) 1939. 3. Brody, S.: Quantitative studies on the nucleic acids in human placenta. *Acta Chem. Scandinav.* 7:507, 1953.



SCHWARZ BIORESEARCH, INC. Dept. 11-B • Mount Vernon, New York
BIOCHEMICALS • RADIOCHEMICALS • PHARMACEUTICALS *for research, for medicine, for industry*



PHOTO BY WILL CONNELL

Push button ease in titrations, redox measurements and pH determinations is yours with a Beckman Zeromatic* pH meter. ☞ The Zeromatic is shown with one of Beckman's new Combination Electrodes easily performing a neutralization titration. Thousands of titrations can be done by this modern pH-endpoint method. The Zeromatic's millivolt scale adds even more versatility, making possible complete millivolt titrations without range changes over any 1400 mv span between ± 1400 mv. ☞ Recorder or automatic temperature compensator hook-up can be made in seconds. The line-operated Zeromatic automatically eliminates zerodrift and standardizing between readings, making measurements more reliable. Accuracy of 0.1 pH and reproducibility of 0.02 pH are guaranteed. The Zeromatic is available for immediate delivery from 99 laboratory apparatus dealer locations in the U.S. and Canada. Ask for a demonstration, or write us today for Zeromatic Data File 38-47-01.

*Trademark

Beckman
Scientific and Process Instruments Division
Beckman Instruments, Inc.
2500 Fullerton Road, Fullerton, California

INSTRUMENTAL IN YOUR FUTURE
25
YEARS
1935-1960

ULTRAVIOLET AND INFRARED SPECTROPHOTOMETERS • GAS CHROMATOGRAPHS • pH METERS • ELECTROCHEMICAL INSTRUMENTS
SALES AND SERVICE FACILITIES ARE MAINTAINED BY BECKMAN/INTERNATIONAL DIVISION IN FIFTY COUNTRIES

the first ten volumes

ANN ARBOR SCIENCE PAPERBACKS

for the scientist seeking
a specialist's knowledge
of a field outside his own.

THE STARS

By *W. Kruse and W. Dieckvoss*

Natural History: "An excellent little book . . . Along with such stellar matters as direction, brightness and color, there are discussions of variable stars, novae, stellar temperatures and composition, giants and dwarfs."

106 illus. AAS 501 \$1.95

THE ANTS

By *Wilhelm Goetsch*

The New Yorker: "... says, with perfect clarity, pretty nearly everything there is to say about ants and their ways . . . full of fascinating information."

85 illus. AAS 502 \$1.95

THE SENSES

By *Wolfgang von Buddenbrock*

Science Magazine: "The presentation is simple, informal, and lively . . ."

55 illus. AAS 503 \$1.95

LIGHT: Visible and Invisible

By *Eduard Ruechardt*

Science Progress: "... presented with . . . just the right amount of precision and scientific rigour."

137 illus. AAS 504 \$1.95

THE BIRDS

By *Oskar and Katharina Heinroth*

American Scientist: "... ranging from how birds communicate with each other, to eating habits, growth, orientation during migration, and to the mental powers of birds . . . The book is . . . a trustworthy and accurate account of the material it represents."

91 illus. AAS 505 \$1.95



EBB AND FLOW:

The Tides of Earth, Air, and Water

By *Albert Defant*

Natural History: "Will certainly answer any questions a non-hydrographer is ever apt to ask about the tides."

64 illus. AAS 506 \$1.95

ANIMAL CAMOUFLAGE

By *Adolf Portmann*

Jerold Lanes, Associate Editor Natural History Magazine: "... could hardly be bettered."

101 illus. AAS 507 \$1.95

PLANET EARTH

By *Karl Stumpff*

Astronautics: "Designed to provide us with a broader understanding of the planet on which we live . . . is deserving of a place in anyone's library."

57 illus. AAS 508 \$1.95

VIRUS

By *Wolfhard Weidel*

Emilio Weiss, Naval Medical Research Institute: "It is refreshing to find a little book, such as this one, which depicts the science as one which investigates and can decipher some of the innermost secrets of life. This book is well written, fluent, and witty."

27 illus. AAS 509 \$1.95

THE SUN

By *Karl Kiepenheuer*

Science News Letter: "Concise account for the serious reader of what is known about the sun, 'the only star whose shape and surface can be observed.'"

76 illus. AAS 510 \$1.95

Use this
coupon
to order

To The University of Michigan Press Science Department,
Ann Arbor, Michigan.

Please send me _____ sets of the ten titles in clothbound
reference editions at the special price of \$42.50 per set.

Please send me _____ sets of the ten titles in quality paper-
back editions. \$18.95.

Please send me the Ann Arbor Science Paperbacks whose numbers
I have circled.

AAS 501	AAS 502	AAS 503	AAS 504	AAS 505
AAS 506	AAS 507	AAS 508	AAS 509	AAS 510

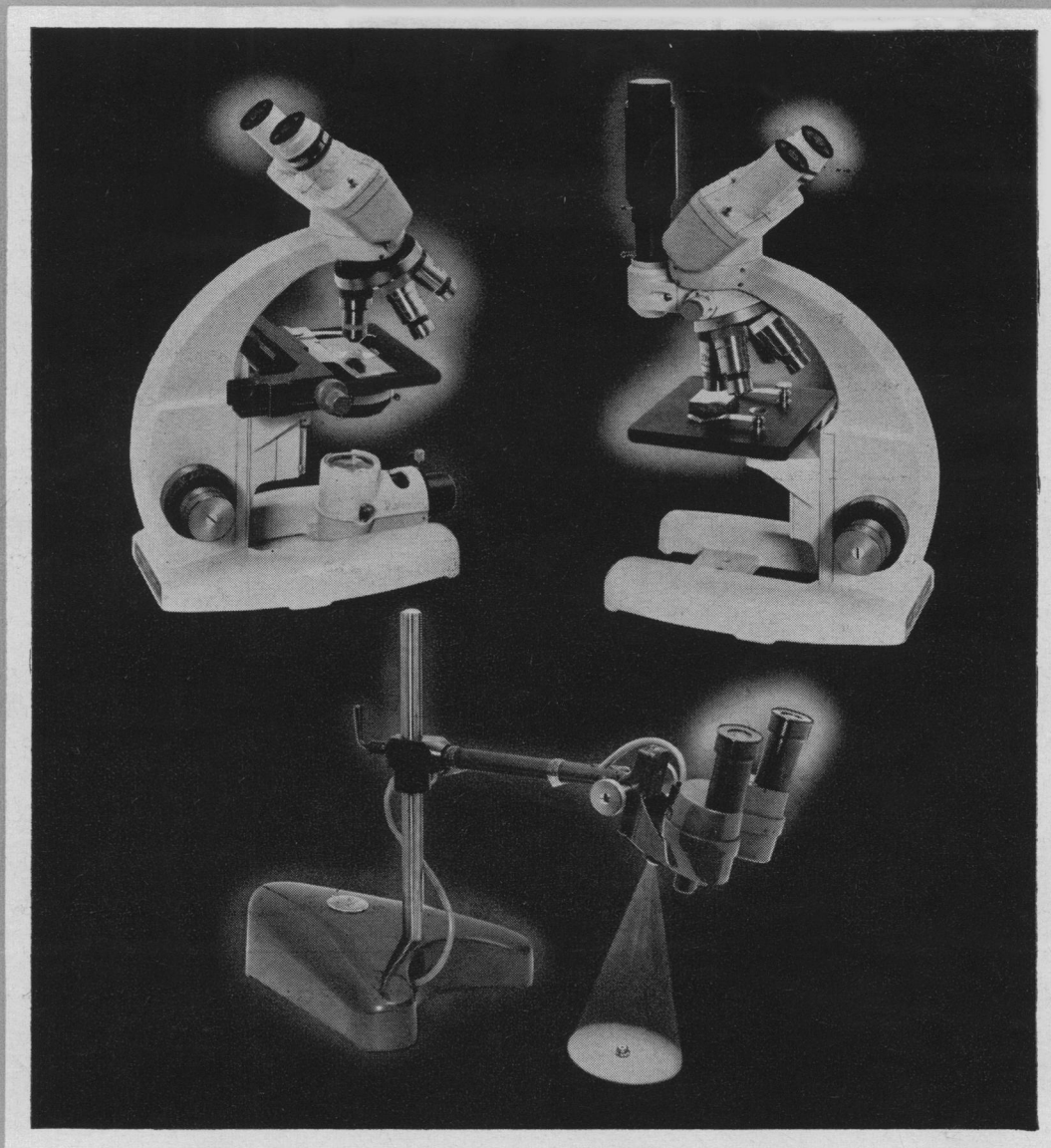
Bill me _____ Payment of \$ _____ enclosed

name _____

address _____



THE UNIVERSITY
OF MICHIGAN
PRESS
ANN ARBOR



Cooke laboratory microscopes . . . superior optical
performance . . . clean design . . . precision construction . . .

for maximum operator convenience and efficiency . . . for long-term, trouble-free service.

Manufactured at York in England . . . specifications on all models available on request.

BIOLOGICAL BY2L (illustrated upper left), 30X to 1000X, \$435.

METALLURGICAL BT2 (illustrated upper right), 100X to 1000X, \$489.

STEREOSCOPIC B1683, 20X fixed magnification, built-in focusable illuminator, \$165.

COOKE, TROUGHTON & SIMMS, INCORPORATED

91 WAITE STREET, MALDEN 48, MASSACHUSETTS • IN CANADA: 77 GRENVILLE STREET, TORONTO

APPLICATION FOR HOTEL RESERVATIONS

127th AAAS MEETING

New York, 26-31 December 1960

The five hotels for the AAAS New York meeting have established special, low, flat rates and have reserved appropriately large blocks of rooms for this meeting. Thus everyone making room reservations for the AAAS meeting is assured substantial savings.

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.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

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.

Flat Rates for Rooms with Bath*

Hotel	Single	Double Bed	Twin Beds	Suites
Commodore	\$ 8.50	\$14.00	\$15.50	\$21.00 to \$52.50
Biltmore	8.50	14.00	15.50	45.00 and up
Roosevelt	8.50	14.00	15.50	39.00 to 43.00
Belmont Plaza	8.50	14.00	15.50	30.00 and up
Waldorf-Astoria	10.00	16.00	18.00	45.00 and up

* All rates are subject to a 5% New York City tax on hotel room occupancy.

----- THIS IS YOUR HOUSING RESERVATION COUPON -----

AAAS Housing Bureau
90 East 42nd Street
New York 17, N.Y.

Date of Application

Please reserve the following accommodations for the 127th Meeting of the AAAS in New York, 26-31 December 1960:

TYPE OF ACCOMMODATION DESIRED

Single Room Double-Bedded Room Twin-Bedded Room

Suite Desired Rate Maximum Rate
(Desired rate and maximum rate apply only to suites)

Number in party Sharing this room will be:
(Attach list if this space is insufficient. The name and address of each person, including yourself, must be listed.)

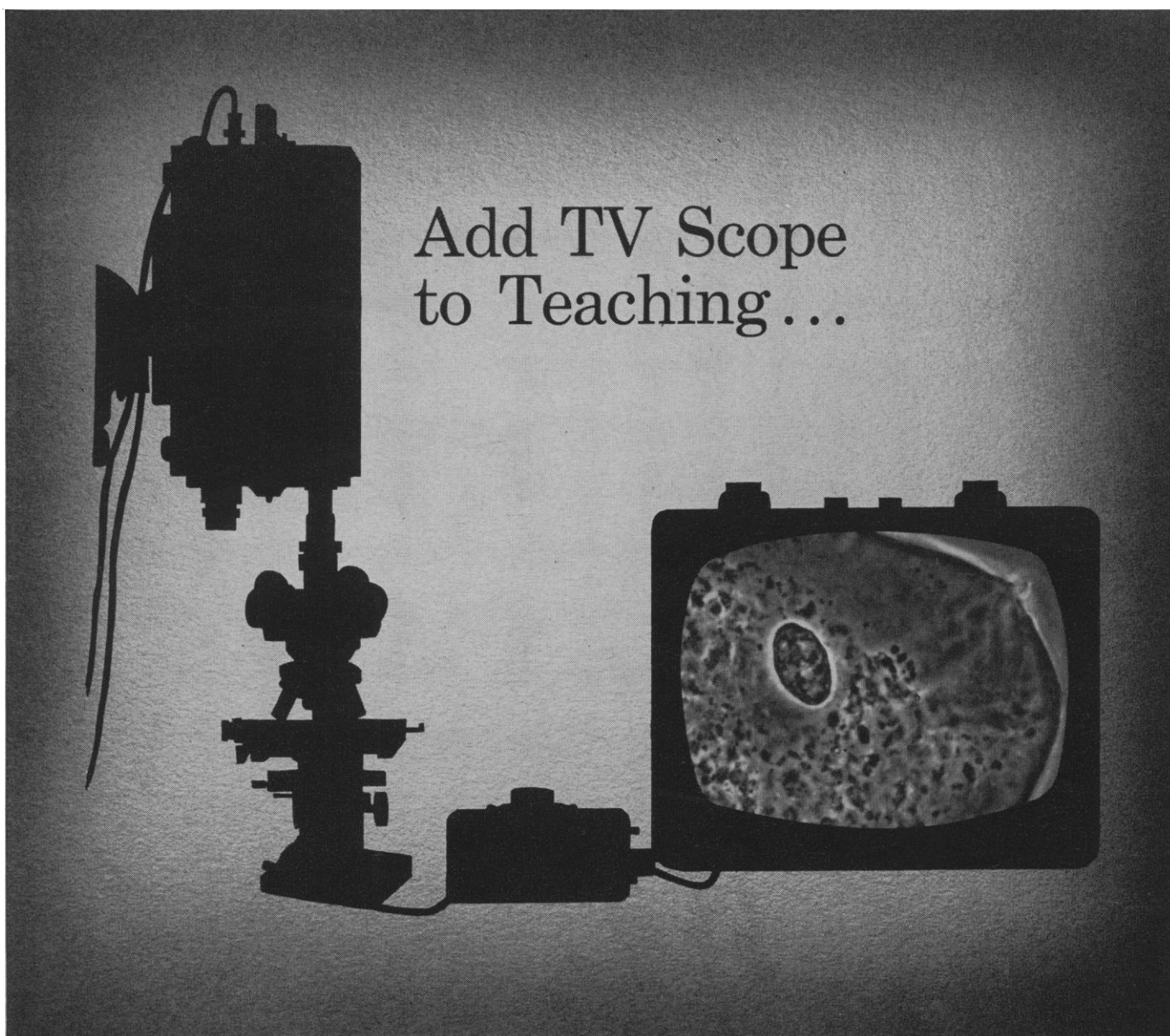
First Choice Hotel Second Choice Hotel Third Choice Hotel

DATE OF ARRIVAL DEPARTURE DATE
(These must be indicated—add approximate hour, A.M. or P.M.)

NAME
(Individual requesting reservation) (Please print or type)

ADDRESS
(Street) (City and Zone) (State)

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



Add TV Scope
to Teaching...

Elgeet
of Rochester

Now Closes The Cost "Gap" On Closed Circuit TV

A COMPLETE system, including a research microscope, TV camera, and 17" monitor with 300 line horizontal resolution is now available from Elgeet of Rochester for **UNDER \$1500**. A COMPLETE system with 600 line resolution is available for **UNDER \$2200**.

SEE US AT THE AAAS SHOW
BOOTH 99, BILTMORE HOTEL
New York City, December 26-31

Elgeet Closed Circuit Television Microscope-Integrated Systems, at these AMAZINGLY LOW prices, are the finest quality teaching tools that educators can buy for student-training programs.

For full details, write TODAY for Elgeet Booklet TV58-1.

Elgeet OPTICAL CO., INC. . . . SCIENTIFIC INSTRUMENT AND APPARATUS DIVISION
838 SMITH STREET • ROCHESTER 6, NEW YORK
"Quality is our watchword . . . Precision Engineering our constant goal"

nuclear physics

FOR PULSED NEUTRON & TIME-OF-FLIGHT STUDIES • GAMMA AND COINCIDENCE PAIR SPECTROSCOPY

health physics

FOR WHOLE BODY COUNTERS • BIOLOGICAL ASSAYS • FALLOUT ANALYSES

radiochemistry

FOR QUALITATIVE AND QUANTITATIVE ANALYSES

reactor engineering

FOR REACTOR CONTROL DESIGN • FUEL ROD ANALYSIS

mass spectroscopy



*and for other areas
of research involving
pulse or time measurements . . .*

THE TMC MULTICHANNEL ANALYZER MODEL CN-110

First and finest of all transistorized multichannel analyzers, the CN-110 is now widely used throughout the U.S., Canada and Europe. Its interchangeable plug-in logic, 256-channel basic computer and associated data handling units are unconditionally guaranteed for one full year and backed by an unequalled service policy. Call or write for complete specifications.



TECHNICAL MEASUREMENT CORPORATION
441 WASHINGTON AVE., NORTH HAVEN, CONN. • CE 9-2501

AMERICAN ASSOCIATION
FOR THE
ADVANCEMENT OF SCIENCE

Board of Directors

CHAUNCEY D. LEAKE, *President*
THOMAS PARK, *President Elect*
PAUL E. KLOPSTEG, *Retiring President*
HARRISON BROWN
H. BENTLEY GLASS
MARGARET MEAD
DON K. PRICE
MINA REES
ALFRED S. ROMER
WILLIAM W. RUBEN
ALAN T. WATERMAN
PAUL A. SCHERER, *Treasurer*
DAEL WOLFLE, *Executive Officer*

Editorial Board

KONRAD B. KRAUSKOPF H. BURR STEINBACH
EDWIN M. LERNER WILLIAM L. STRAUS, JR.
PHILIP M. MORSE EDWARD L. TATUM

Editorial Staff

DAEL WOLFLE, *Executive Officer*
GRAHAM DUSHANE, *Editor*
JOSEPH TURNER, *Assistant Editor*
ROBERT V. ORMES, *Assistant Editor*

BETHSABE ASENJO, CHARLOTTE F. CHAMBERS, SARAH
S. DEES, NANCY S. HAMILTON, OLIVER W. HEAT-
WOLE, HOWARD MARGOLIS, ELLEN E. MURPHY,
PATRICIA D. PADDOCK, EDGAR C. RICH, BARBARA
SUTHERLAND, NANCY TEIMOURIAN, LOIS W.
WOODWORTH, CONRAD YUNG-KWAI

EARL J. SCHERAGO, *Advertising Representative*



SCIENCE, which is now combined with THE SCIENTIFIC MONTHLY, is published each Friday by the American Association for the Advancement of Science at National Publishing Company, Washington, D.C. The joint journal is published in the SCIENCE format. SCIENCE is indexed in the *Reader's Guide to Periodical Literature*.

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).

Display-advertising correspondence should be addressed to SCIENCE, Room 740, 11 West 42 St., New York 36, N.Y.

Change of address notification should be sent to 1515 Massachusetts Ave., NW, Washington 5, D.C., 4 weeks in advance. If possible, furnish an address label from a recent issue. Give both old and new addresses, including zone numbers, if any.

Annual subscriptions: \$8.50; foreign postage, \$1.50; Canadian postage, 75¢. Single copies, 35¢. Cable address: Advancesci, Washington.

Copyright 1960 by the American Association for the Advancement of Science.

Science Proves . . .

One need watch television only briefly to learn that scientific instruments, phrases, and symbols are being used—and misused—to promote a wide variety of products. If the listener reacts as the advertiser wishes, he smokes the cigarette chosen by “more scientists and educators” than any other brand, dresses his hair with the preparation that does not evaporate in a solar heater, shaves with the blade that “engineers” call a “scientific breakthrough,” and then, for he probably needs it, takes the pill recommended by “three out of four doctors” and follows it with the one shown in blown-up cross section and improved by its “enteric coating.”

This din of pseudoscientific chatter has nothing to do with the brilliant generalization or the careful collection of data by which science advances. But for scientists it has two meanings: (i) “science” is a useful sales gimmick, now apparently on a par with endorsement by a pretty girl; and (ii) the public, including children, is given a false and misleading impression of the methods, character, and integrity of scientific work. Against this result there is growing revolt.

What can be done? First, protest. Specific ads that are false or misleading can be protested to the Federal Trade Commission, which invites such reports, and to the advertisers and TV chains, which should receive them whether invited or not.

FTC chairman Earl W. Kintner recently told the Association of Consulting Chemists and Chemical Engineers that scientists and consulting laboratories should extend the scope of their professional responsibility to insist that their findings be properly reported in any commercial usage made of them. Advertisers and advertising agencies, he continued, also have a professional responsibility, and warned them that if they abdicate self-discipline, they invite the imposed discipline of tighter government controls.

Ridicule is also useful. A *New Yorker* cartoon shows an executive blasting as “absolutely unscrupulous” an ad in which SCIENCE, in large caps, is paired with a bottle of unknown content, and adding, “Why didn’t we think of it first?”

But attacking misleading ads alone is like treating symptoms; TV ads reflect the state of television as a whole. The widely syndicated critic John Crosby, in a roundhouse swing at the whole industry, recently announced that television has become so bad that it no longer merits a daily column; he will write about it only once in a while. The 1 January 2000 issue of the *Seattle Daily Galaxy* (a publicity paper for the Century 21 International Exposition to be held in Seattle in 1962) discusses tariffs on Mars imports, regrets surplus production of sea farms, and reports low morale at the moon colony. In contrast with these indications of how the world is sweeping on, and in a transparent jibe at the state of television, the day’s TV program ends with a movie that was grade B 57 years earlier. Perhaps television executives should be included among the groups that need to develop professional attitudes and self-discipline; TV advertising is not likely to exhibit high standards until TV producers gain respect for the taste and intelligence of their audience.

In the meantime, we can protest and we can ridicule. TV commercials too frequently deserve both.—D.W.



See it anywhere between **3.5×** and **120×**

With Bausch & Lomb StereoZoom® Microscopes, just turning a knob gives you an infinite number of repeatable magnifications within the range selected. Powers available from 3.5× to 120×.

And, a new "Power Pod" optical design completely encloses the optical system in a single unit—keeps out dust and dirt, eliminates annoying image jump and blackout.

Why not see today's most versatile microscope soon in a free laboratory demonstration.

*Made in America,
to the world's highest standard*

BAUSCH & LOMB INCORPORATED
85611 Bausch St., Rochester 2, N. Y.

- ☐ Please arrange a free laboratory demonstration at my convenience.
- ☐ Please send Catalog D-15 with complete information on B&L StereoZoom Microscopes.

Name

Address

City Zone State

BAUSCH & LOMB



Dentistry

Section Nd. Two-session symposium, cosponsored by Section N—Medical Sciences, the American College of Dentists, the American Dental Association, and the International Association for Dental Research, North American Division: "Fundamentals of Keratinization," arranged by Earl O. Butcher, College of Dentistry, New York University; 30 Dec.

Butcher will preside over Session I, in which papers will be presented on the mechanism of keratinization (A. Gedeon Matoltsy, University of Miami); the histochemical distribution of sulfhydryls and disulfides in vertebrate keratins (R. J. Barnett, Yale University School of Medicine, and Reidar F. Sognaes, School of Dentistry, University of California, Los Angeles); keratinization of whole skin and isolated epidermis in vitro (George Szabo, Harvard Medical School); keratinization as seen with the electron microscope (J. A. Rhodin and E. J. Reith, New York University School of Medicine); the effects of vitamin A on keratinizing epithelia (Howard A. Bern and Donald J. Lawrence, Cancer Research Genetics Laboratory, University of California, Berkeley); effects of vitamin A on keratinization in the vitamin-A-deficient rat (J. P. Parnell and B. Sherman, Downstate Medical Center, State University of New York).

Sognaes will preside over Session II. Papers will be presented on the effect of environment on the physical characteristics of the cornified epithelium (Irvin H. Blank, Harvard Medical School); keratinization of the oral mucosa (Julia Meyer, College of Dentistry, University of Illinois); keratinization in dental cysts (Jens J. Pindborg, Royal Dental College, Copenhagen); the extracellular position of enamel (M. L. Watson, University of Rochester); the chemistry of the protein matrix of enamel (K. A. Piez, National Institutes of Health).

Pharmacy

Section Np. There will be opening remarks by John E. Christian, secretary of Section Np, and this will be followed by greetings from the American Society of Hospital Pharmacists, the American Pharmaceutical Association, the New York State Council of Hospital Pharmacists, and the American Hospital Association.

There will be two sessions for contributed papers in hospital pharmacy, arranged by George F. Archambault, Division of Hospitals, U.S. Public Health Service, and Joseph A. Oddis, American Society of Hospital Pharmacists and American Pharmaceutical Association; 27 Dec. Oddis will preside

over Session I; Archambault, over Session II.

On the same day there will be a luncheon, arranged by E. R. Squibb and Sons, New York (coordinated by P. A. Freeman), and the vice-presidential address of Section Np, "Dedication to Pharmacy," given by Joseph V. Swintosky.

On 27 Dec. there will also be programs arranged by Wyeth Laboratories, Philadelphia (coordinated by H. L. Ferrier), and by McKesson and Robbins, Inc., New York (coordinated by Milton N. Stamatos).

There will be two sessions for contributed papers, arranged by John E. Christian. John Autian (University of Texas) will preside over one of these, on 29 Dec.; Lee H. MacDonald (Upjohn Company, Kalamazoo, Mich.) will preside over the other, on 30 Dec.

The entire program of Section Np is cosponsored by the American Association of Colleges of Pharmacy, the American College of Apothecaries, the American Pharmaceutical Association, the American Society of Hospital Pharmacists, and the National Association of Boards of Pharmacy.

HARSHAW SCIENTIFIC

Spotlights Analytical Balances



H-2424—Balance, Analytical, Sartorius "Selecta Rapid" model. Capacity—200 grams. Sensitivity—1/10 mg. Single Pan. No weight handling. Weights are an integral part of balance and are added by flick of external knobs.

Price \$890.00



H-1823—Balance, Analytical, Becker Model "AB-2". Two Pan. Dial reading, chainomatic, with notched beam. Capacity—200 grams. Sensitivity—1/20 mg.

Price \$449.00

A Balance for every weighing . . . and a Balance that will perform the weighing to the accuracy required in the shortest possible time. Most of our extensive line of domestic and imported balances is illustrated and described in the 32-page Harshaw Scientific Balance Bulletin. Do you have your copy? In addition we will gladly furnish detailed information on particular balances.

H-1642—Balance, Analytical, Ainsworth "Right-A-Weigh," Type SC. Capacity—200 grams. Sensitivity—1/10 mg. Single Pan. No weight handling. Features substitution weighing.

Price \$895.00



H-2400—Balance, Analytical, Sartorius "Projecta Rapid" Model. Capacity—200 grams. Sensitivity—1/20 mg. Two pan. No weight handling up to 10 grams (weights up to 10 grams are built-in).

Price \$645.00



H-1905—Electrobalance, Cahn, Range Selector Model. For micro weighings quickly and accurately. Maximum range—0-100 mg. with 25 micrograms sensitivity. Four other ranges down to 0-1 mg. with increased sensitivity.

Price \$695.00



H-2440—Balance, Analytical, Voland Model 100N. Capacity—200 grams. Sensitivity—1/10 mg.

Price \$125.00



These balances are just a few of the many balances making up our complete line including Micro, Semi-Micro, Specific Gravity, etc. Write us regarding your specific need.



HARSHAW SCIENTIFIC

Division of The Harshaw Chemical Co. • Cleveland 6, Ohio

SUPPLYING THE NATION'S LABORATORIES FROM COAST TO COAST

SALES BRANCHES AND WAREHOUSES CLEVELAND 6, OHIO 1943 East 97th Street	CINCINNATI 12, OHIO 6265 Wingo Road DETROIT 26, MICH. 9240 Hubbard Ave.	HOUSTON 11, TEXAS 6622 Supply Row LOS ANGELES 22, CAL. 3237 So. Garfield Ave.	OAKLAND 1, CAL. 5321 East 8th Street PHILADELPHIA 48, PA. Jackson & Swanson Sts.
--	--	--	---

SALES OFFICES • Atlanta 5, Ga. • Baton Rouge 6, La. • Buffalo 2, N. Y. • Hastings-On-Hudson 6, N. Y. • Pittsburgh 22, Pa.

INSTANT THOROUGH MIXING!

NEW!
VERSATILE
VORTEX JR. MIXER



Convenient Efficient Mixing

Just hold the tube or other vessel in your hand... press it against the revolving neoprene cup. A vortex forms at once for immediate mixing action!

**No Stoppers... No Rods
No Finger Capping**

Saves time and energy. For use whenever a quick mix is called for... works well with any shape vessel.

- Test tubes... micro to 40 mm.
- Centrifuge tubes... all sizes
- Florence or Erlenmeyer flasks... small size
- Square or specially-shaped tubes

Ask your laboratory supply dealer for details, or write directly to:



SCIENTIFIC INDUSTRIES, INC.
DEPT. S1118, 15 PARK STREET
SPRINGFIELD 3, MASSACHUSETTS

SPRAGUE-DAWLEY, INC.
Pioneers in the development
of the
STANDARD LABORATORY RAT.

We are completing another new modern colony which will double our present production.

The new colony building contains every device to insure continuous production and shipment of guaranteed Sprague-Dawley strain albino rats.

Increased orders from our present customers and orders from new customers will be accepted as production builds up.

OUR PLEDGE: Our insistence on the highest possible quality will never be sacrificed to quantity.

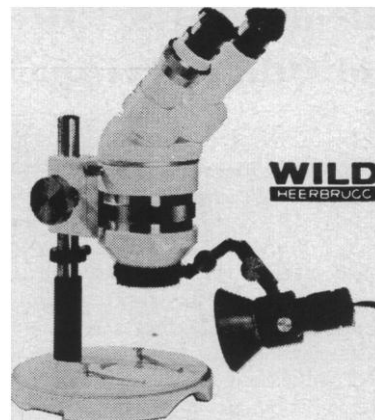
Price list will be mailed upon request.

SPRAGUE-DAWLEY, INC.

P.O. Box 2071

Madison, Wisconsin

STEREO-MICROSCOPE



PROMPT DELIVERY

Long Working Distance

Superb Optics

Magnifications 6X-200X

Large Variety of Accessories

Old World Craftsmanship

ERIC SOBOTKA CO.

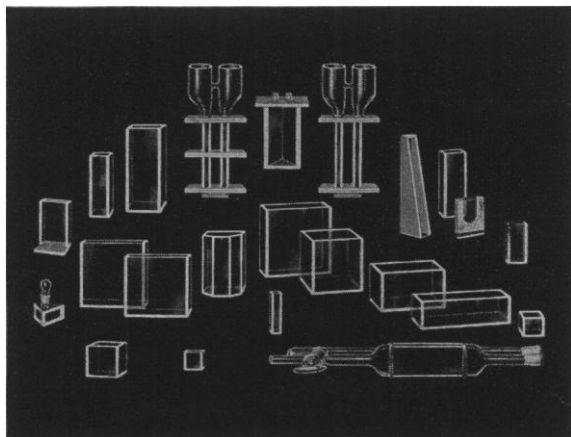
108 West 40th St.

New York, 18, N. Y.

Specialists in Imported Equipment

GLASS ABSORPTION CELLS

made by **KLETT**



— SCIENTIFIC APPARATUS —
Klett-Summerson Photoelectric Colorimeters—
Colorimeters—Nephelometers—Fluorimeters—
Bio-Colorimeters—Comparators—Glass Standards—Klett Reagents.

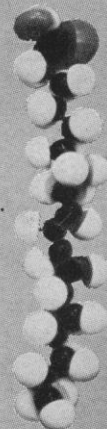
Klett Manufacturing Co.

179 East 87 Street, New York, New York

Godfrey MOLECULAR MODEL KIT



Indole and 9,11
Linoleic acid clusters.



Plus

NEW SUPPLEMENTARY MODELS
for Researchers, Teachers, Students

Godfrey molecular models give best representation of van der Waals' and covalent radii—a true picture of steric hindrance. Models of small ring compounds and bicyclic compounds easily made. Show flexibility and resilience of actual molecules.

NEW Supplementary Atoms: 15 new atoms just designed—35 elements may be represented in 65 valence states, using only 26 different atoms.

Write for Full Details



BRONWILL SCIENTIFIC

A Division of Will Corporation

3900 Russell Street • Box 952, Rochester 3, N. Y.

The Ethical Dilemma of Science and Other Writings

by A. V. HILL,
Honorary Research Associate,
University College, London

A DELIGHTFULLY informal collection of writings and speeches covering the long and distinguished career of the celebrated British physiologist and Nobel laureate, A. V. Hill. Many of the articles are personal and most are nontechnical. Included are selections about the author's government service during two world wars, his years as a Member of Parliament from Cambridge, and his associations with scores of distinguished persons on both sides of the Atlantic and in India and Pakistan.

1960 416 pp. \$7.50

The Rockefeller Institute Press
IN ASSOCIATION WITH
Oxford University Press • N. Y.

**Get UNITRON's FREE
Observer's Guide and Catalog on
ASTRONOMICAL TELESCOPES**

**This valuable 38-page book
is yours for the asking!**

With artificial satellites already launched and space travel almost a reality, astronomy has become today's fastest growing hobby. Exploring the skies with a telescope is a relaxing diversion for father and son alike. UNITRON's handbook contains full-page illustrated articles on astronomy, observing, telescopes and accessories. It is of interest to both beginners and advanced amateurs.

Contents include—

- Observing the sun, moon, planets and wonders of the sky
- Constellation map
- Hints for observers
- Glossary of telescope terms
- How to choose a telescope
- Amateur clubs and research programs



UNITRON

INSTRUMENT COMPANY • TELESCOPE SALES DIV.
66 NEEDHAM ST., NEWTON HIGHLANDS 61, MASS.

Please rush to me, free of charge, UNITRON's new Observer's
Guide and Telescope Catalog. 4-1-4

Name _____

Street _____

City _____

State _____

Meetings

Biochemical Anthropology

On 6-8 July a group of 24 scientists from three continents gathered at the Fels Research Institute in Yellow Springs, Ohio, for a conference on biochemical anthropology. Under discussion were biochemical differences that have, or may have, adaptive value under particular circumstances. Inevitably the conference, concerned with biochemical polymorphisms in man, overlapped the growing new field of geographical medicine.

Considerable attention was paid to the abnormal hemoglobins, especially where the heterozygote is at an adaptive advantage in malarial areas. Of particular interest were those parts of the world where more than one of the abnormal hemoglobins are present, or where both abnormal hemoglobins and glucose-6-phosphate dehydrogenase deficiency states are coexistent. Of interest, too, were iron requirements in hemolytic disorders having a genetic basis.

Interestingly, discussions on the various serological factors and on the globulin fractions both took a developmental tack. Since maternal-fetal incompatibilities will not arise where the relevant antigen does not develop during prenatal life, "late developing" blood types are obviously at a selective advantage. The ontogenetic timing of other serum fractions may prove useful in phylogenetic comparisons as well, as several participants suggested.

To the anatomists and physical anthropologists present at the conference, the implications currently read into human biochemical polymorphisms proved exceptionally stimulating. Traditionally, morphological variability has been viewed as having no particular significance. Clearly, variability in form and function now suggests either competing directions of selection or a selective advantage associated with heterozygosity.

Mentioned, too, were various "genetic" diseases whose frequency in contemporary populations demands explanation. Here nutritional variables were introduced, as in the interaction between diet and genetic disease. Other immunochemical reactions, chief among them allergies, suggested a fertile field for investigation. Are the disadvantages of being allergic balanced by enhanced resistance to infectious disease?

The meaning of human polymorphisms has emerged only recently as a major area of investigation. Most authors followed Darwin in assuming that polymorphisms exist because they are neutral with respect to natural selection. The conference on biochemical anthropology, aided by the Wenner-Gren Foundation for Anthropological

Research, casts new light on this old question. People differ at the molecular level, and in enzyme content and concentration. We are beginning to know why, and we are increasingly able to define the situations that are responsible.

STANLEY M. GARN
*Physical Growth Department,
Fels Research Institute,
Yellow Springs, Ohio*

Forthcoming Events

December

1-16. Commission for Climatology, 3rd session, London, England. (World Meteorological Organization, Campagne Rigot, 1, avenue de la Paix, Geneva, Switzerland)

2-5. Central American Medical Conf., 8th, Panama City. (A. Bissot, Departamento de Salud Publica, Ministerio de Trabajo, Prevision Social y Salud Publica, Panama)

3-6. Visual Communications, 4th annual intern. cong., Chicago, Ill. (Visual Communications Cong., 10600 Puritan Ave., Detroit 38, Mich.)

3-8. American Acad. of Dermatology and Syphilology, Chicago, Ill. (R. R. Kierland, First National Bank Building, Rochester, Minn.)

4-6. Spectroscopy, annual southern seminar, Gainesville, Va. (Annual Seminar on Spectroscopy, Univ. of Florida, Gainesville)

4-7. American Inst. of Chemical Engineers, annual, Washington, D.C. (F. J. Van Antwerpen, AICE, 25 W. 45 St., New York 36)

4-9. Radiological Soc. of North America, Cincinnati, Ohio. (D. S. Childs, 713 E. Genesee St., Syracuse 2, N.Y.)

5-7. American Soc. of Agricultural Engineers, winter, Memphis, Tenn. (J. L. Butt, 420 Main St., St. Joseph, Mich.)

5-7. Electronic Industries Assoc., 3rd conf. on maintainability of electronic equipment, San Antonio, Tex. (E. B. Harwood, Office of the Secretary of Defense, Room 3D1018, Pentagon, Washington 25)

5-8. American Rocket Soc., 15th annual, Washington, D.C. (R. L. Hohl, ARS, 500 Fifth Ave., New York 36)

5-8. American Soc. of Agronomy, annual, Chicago, Ill. (L. G. Monthey, ASA, 2702 Monroe St., Madison 5, Wis.)

7-13. American Acad. of Optometry, San Francisco, Calif. (C. C. Koch, 1506-08 Foshay Tower, Minneapolis 2, Minn.)

9-10. The Myocardium—Its Biochemistry and Biophysics, New York, N.Y. (A. P. Fishman, New York Heart Assoc., 10 Columbus Circle, New York 19)

9-11. American Psychoanalytic Assoc., New York, N.Y. (D. Beres, 151 Central Park West, New York 23)

10-11. Academy of Psychoanalysis, New York, N.Y. (J. H. Merin, 125 E. 65 St., New York 21)

11-14. Hot Laboratory and Equipment Conf., 8th, San Francisco, Calif. (J. R. Lilienthal, Los Alamos Scientific Laboratory, P.O. Box 1663, Los Alamos, N.M.)

12-14. American Nuclear Soc. (Isotopes and Radiation Div.), San Francisco, Calif. (O. J. Du Temple, ANS, 86 E. Randolph St., Chicago 1, Ill.)

Made for each other
... another Bellco innovation



**MORTON
STAINLESS STEEL
CULTURE TUBE CLOSURE**
.....
**and DeLONG
CULTURE FLASK***


This convenient combination provides greater ease and safety in handling. Prevents contamination from the air and reduces evaporation to approximately $\frac{1}{2}$ that of conventional Erlenmeyer flasks and cotton plugs. Immediate shipment on 7 sizes (ml.): 25, 50, 125, 250, 300, 500, 1000.

*research
deserves
the best*

*PATENTS PENDING

Write or wire for full specifications and prices.
BELLCO GLASS INC. VINELAND
NEW JERSEY

PHOTOVOLT
LINE-OPERATED MULTIPLIER
FLUORESCENCE METER
model
540



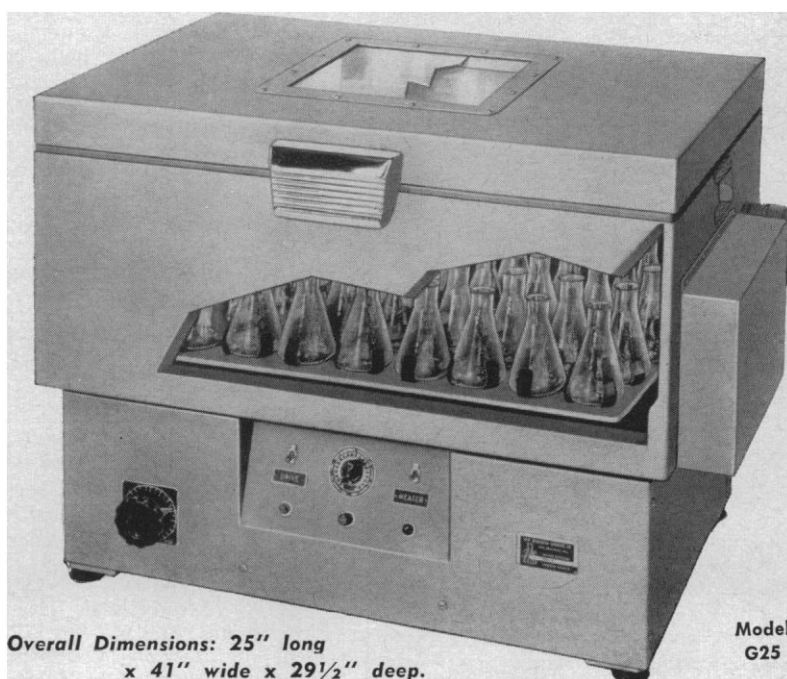
- High sensitivity . . . full scale for 0.001 microgram quinine sulphate
- Micro-fluorimetry . . . liquid volumes down to 1 ml
- Low blank readings . . . linear instrument response
- High sensitivity nephelometry . . . minute turbidities
- Fluorescence evaluation of powders, pastes, and solids; also for spot-tests on filter paper without elution
- Selection of filters, interference filters, and sample holders

Write for Bulletin No. 392 to:
PHOTOVOLT CORP.
95 Madison Avenue • New York 16, N. Y.
Also: pH Meters, Colorimeters, Densitometers

Grow Aerobic and Anaerobic Cultures in the

GYROTORY[®] INCUBATOR SHAKER

Model G25 is a controlled temperature incubator with continuous shaking action. Agitation speed is continuously variable from 140 to 400 rpm. A heavy-duty motor drives the triple-eccentric-shaft stabilizer assembly which distributes positive, rotary motion to every flask on the 18"x30" platform. This rugged apparatus provides cool, quiet, and smooth-running operation with heavy workloads. Circulating heated air, the fully insulated unit maintains constant temperature; from ambient to 60°C., $\pm \frac{1}{2}$ °C. It is adaptable for tubes, bottles, and other glassware, and is thoroughly reliable under continuous, day and night operation. Alternate speed ranges, and connections for gassing are also available.



UNCONDITIONAL 1 YEAR WARRANTY

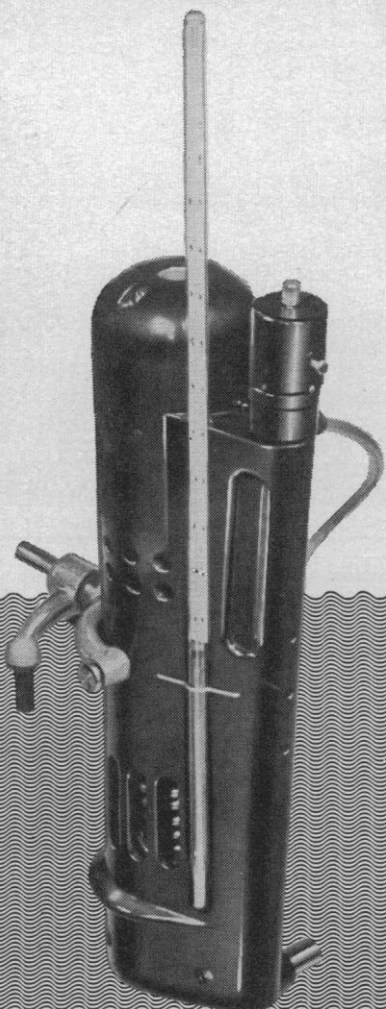
WRITE FOR
CATALOG
G-25-N 185



NEW BRUNSWICK SCIENTIFIC CO., INC.
PRECISION LABORATORY APPARATUS
P.O. BOX 606, NEW BRUNSWICK, NEW JERSEY

UNITHERM

HAAKE CONSTANT TEMPERATURE CIRCULATOR



FEATURING:

- Accuracy to $\pm 0.01^{\circ}\text{C}$
- Range $0-150^{\circ}\text{C}$
- Pumps to 5 GPM
- Magnetic Temperature Setting
- Automatic "water level" shut off device
- Separate control unit protected from fumes
- Additional heater may be connected
- Cooling coil
- Suitable for open tank or closed circuit pumping.

SEND FOR COMPLETE DESCRIPTIVE CATALOG

BRINKMANN

Brinkmann Instruments, Inc.,
Cutter Mill Road, Great Neck, L. I., N. Y.

12-14. Water Pollution, natl. conf., Washington, D.C. (F. A. Butrico, Office of Engineering Resources, Div. of Engineering Services, U.S. Public Health Service, Washington 25)

12-16. Atomic Industrial Forum, conf., San Francisco, Calif. (D. J. Scherer, 3 E. 54 St., New York 22)

13-15. Eastern Joint Computer Conf., New York, N.Y. (E. C. Kubie, EJCC, Computer Usage Co., Inc., 18 E. 41 St., New York 17)

19-20. Statistical Mechanics, conf., London, England. (Organizing Secretary, Physical Soc., 1, Lowther Gardens, London)

22-2. Panamerican Diabetic Congress, 1st, British Honduras. (B. R. Hearst, Director, Diabetic Inst. of America, 55 E. Washington St., Suite 1646, Chicago 2, Ill.)

26-30. Inter-American Cong. of Psychology, 7th, Havana, Cuba. (G. M. Gilbert, Psychology Dept., Long Island Univ., Brooklyn 1, N.Y.)

26-31. American Assoc. for the Advancement of Science, annual, New York, N.Y. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., NW, Washington 5)

27-14. Bahamas Surgical Conf., Nassau. (B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.)

27-29. Conference on Strong Interactions, Berkeley, Calif. (A. C. Helmholz, Dept. of Physics, Univ. of California, Berkeley.)

27-29. Northwest Scientific Assoc. and Idaho Acad. of Science, joint meeting, Moscow. (E. J. Larrison, Dept. of Biological Sciences, Univ. of Idaho, Moscow.)

28. Association for Education in International Business, St. Louis, Mo. (J. N. Behrman, Univ. of Delaware, Newark, Delaware)

28-30. American Economic Assoc., St. Louis, Mo. (J. W. Bell, Northwestern Univ., Evanston, Ill.)

28-30. Econometric Soc., St. Louis, Mo. (R. Ruggles, Dept. of Economics, Yale Univ., New Haven, Conn.)

28-29. Linguistic Soc. of America, annual, Hartford, Conn. (A. A. Hill, Box 7790, University Station, Austin 12, Tex.)

28-30. National Council of Teachers of Mathematics, Tempe, Arizona. (M. H. Ahrendt, 1201 16 St., NW, Washington 6, D.C.)

29-31. American Physical Soc., Berkeley, Calif. (K. Darrow, APS, Columbia Univ., 116 St. and Broadway, New York, N.Y.)

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, Electronics Park, Syracuse, N.Y.)

8-13. American Acad. of Orthopedic Surgeons, Miami Beach, Fla. (J. K. Hart, 116 S. 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)

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)

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

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.)

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)

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)