## OPTICAL BARGAINS

Fine, American-Made Instrument at Over 50% Saving

### STEREO MICROSCOPE



Up to 3" Working Distance-Erect Image—Wide 3 Dimen-sional Field

Now, ready after years in development — this instrument answers the long standing need for a sturdy, efficient STEREO MICROSCOPE at low cost. Used in production—in research—in the lab.

now cost. Used in production
—in research—in the lab,
shop, factory, or at home;
for inspections, examinations,
counting, checking, assembling, dissecting—speeding up
and improving quality control.
2 sets of objectives on roiating turret. Standard pair of wide field 8X Kellner Eyepieces give you 21 power and 34 power. Additional eyepieces available for greater or lesser magnification. A low
reflection coated prism erecting system gives you an erect
image—correct as to right and left—clear and sharp. Helical rack and pinion focusing, 10-DAY TRIAL . . . complete
satisfaction or your money back.

Order Stock No. 85,039-W (Shipping wt. approx. 11 the.)

Send Check or M.O.

#### See the Stars, Moon, Planets Close Up! 3" "PALOMAR, JR." TELESCOPE 100 or 120 Power - An Unusual Buy!



You'll see the Rings of Saturn, the fas-You'll see the kings of Saturn, the ras-cinating planet Mars, huge craters on the Moon, Star Clusters, Moons of Jupi-ter in detail, Galaxies! Aluminized and overcoated 3" diameter high-speed f/10 ventilated mirror. Equatorial mount with ventilated mirror. Equatorial mount with lock on both axes. An Optical Finder Telescope, always so essential, is also included. Sturdy, hardwood, portable tripod. Order by Stock No. — Send check or M.O. — Money-back guaranteel

Stock No. 85,050-W (Shipping wt. 10 lbs.)

\$29.50 f.o.b. Barrington, N. J.

#### SPITZ MONOSCOPE

A precision-made 32 power reflecting telescope—by the makers of Spitz Planetarium. Clearly reveals the craters of the moon, shows Saturn, Jupiter, other wonders of the heavens. Based on ders of the heavens. Based on same principles as world's giant telescopes. Stands 36" high on removable legs. Adjustable 3" polished and corrected mirror. Fork type Alt-Azimuth rotates on full 360° circle—swings to any location in the sky. Fascinating 18-page instruction book is included. Instrument packed in sturdy carrying case.



Stock No. 70,068-W ...... \$14.95 Postpaid

# New! 2 in 1 Combination! Pocket-Size 50 Power MICROSCOPE 10 Power TELESCOPE



ONLY





Useful Telescope and Microscope combined in one amazing, precision instrument. Imported! No larger than a fountain pen. Telescope is 10 Power. Microscope magnifies 50 Times. Sharp focus at any range. Handy for sports, looking at small objects, just plain snooping.

Send Chek or M.O.

Order Stock No. 30,059-W .. \$4.50

## WRITE FOR FREE CATALOG-W

WRITE FOR FREE CATABOON WAS SUPPLY OF THE WAS SUPPLY OF THE PROPERTY OF THE PR

Order by Stock No. — Send Check or M.O. Satisfaction Guaranteed

EDMUND SCIENTIFIC CO. BARRINGTON, NEW JERSEY

Spectroscopy, Pittsburgh, Pa. (L. M. Melnick, U.S. Steel Corp., Applied Research Lab., Monroeville, Pa.)

7-9. American Orthopsychiatric Assoc., 34th annual, Chicago, Ill. (M. F. Langer, AOA, 1790 Broadway, New York 19.)

7-9. Biometric Soc., Eastern North American Region, Washington, D.C. (A. M. Dutton, Box 287, Sta. 3, Rochester, N.Y.)

7-9. Fundamental Cancer Research, 11th annual symp., Houston, Tex. (L. Dmochowski, M. D. Anderson Hospital, Texas Medical Center, Houston 25.)

7-9. Optical Soc. of America, semiannual, New York, N.Y. (S. S. Ballard, Scripps Inst. of Oceanography, San Diego 52, Calif.)

10-16. Nuclear Engineering and Science Cong., 2nd, Philadelphia, Pa. (Engineers Joint Council, 29 W. 39 St., New York 18.)

11-15. National Assoc. of Corrosion Engineers, 13th annual, St. Louis, Mo. (R. T. Effinger, Shell Oil Co., Deer Park Refinery, Houston, Tex.)

11-18. Pakistan Assoc. for the Advancement of Science, 9th annual conf., Peshawar, West Pakistan. (B. Ahmad, PAAS, University Institute of Chemistry, The Mall, Lahore, Pakistan.)

12-13. Cellular and Humoral Aspects of the Hypersensitive States, symp., New York, N.Y. (A. M. Pappenheimer, Jr., Dept. of Microbiology, New York Univ., College of Medicine, 550 First Ave., New York 16.)

13-15. Society of Exploration Geophysicists, 10th annual midwestern, Fort Worth, Tex. (G. A. Grimm, Tide Water Associated Oil Co., Box 2131, Midland, Tex.)

14. Effect of Radiation on Foods, Assoc. of Vitamin Chemists, Chicago, Ill. (M. Freed, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32.)

15. Fats in Human Nutrition, AMA symp., New Orleans, La. (Council on Foods and Nutrition, American Medical Assoc., 535 North Dearborn, Chicago 10,

18-21. Institute of Radio Engineers, natl. convention, New York, N.Y. (B. Warriner, IRE, 1 E. 79 St., New York 21.)

19-21. American Meteorological Soc., 151st national, Chicago, Ill. (K. C. Spengler, AMS, 3 Joy St., Boston 8, Mass.)

20-22. National Health Forum, Cincinnati, Ohio. (National Health Council, 1790 Broadway, New York 19.)

20-23. National Science Teachers Assoc., annual, Cleveland, Ohio. (R. H. Carleton, NSTA, 1201 16 St., NW, Washington 6.)

21-23. American Physical Soc., Philadelphia, Pa. (K. K. Darrow, APS, Columbia Univ., New York 27, N.Y.)

21-23. International Assoc. for Dental Research, annual, Atlantic City, N.J. (D. Y. Burrill, 129 E. Broadway, Louisville 2, Ky.)

21-23. Michigan Acad. of Science, Arts and Letters, annual, Detroit, Mich. (R. F. Haugh, Dept. of English, Univ. of Michigan, Ann Arbor.)

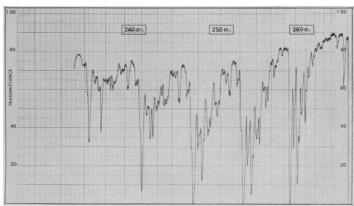
(See issue of 18 January for comprehensive list)

# **EQUIPMENT NEWS**

All inquiries concerning items listed here should be addressed to Science, Room 604, 11 W. 42 St., New York 36, N.Y. Include the name(s) of the manufacturer(s) and the department num-

- VISCOSIMETER has a temperature range from 0° to -65°F. The unit utilizes mechanical refrigeration, and temperature is controlled by an adjustable hydraulic thermostat. The stainless-steel working chamber, which has 6 in. of insulation, is large enough to accommodate several Kinematic tubes. The stirrer is airdriven. (Labline, Inc., Dept. S138)
- LABORATORY REACTOR operates at a 5-watt power level and produces a flux of 108 neutrons/cm2 sec. The core is a 1-ft stainless-steel sphere that holds about 4 gal of enriched uranyl sulfate in water solution. The unit is 8 ft high and 8 ft in diameter; about 6 mo are required for installation. (Atomics International, Dept. S139)
- RECORDING SPECTROPHOTOMETERS are described in a new catalog. The specifications of two models of Cary instruments designed for use in the visible, infrared, and ultraviolet regions are given. (Applied Physics Corp., Dept. S141)
- SCALER with five decade units is designed as a general-purpose nuclearcounting instrument. Five plug-in decade units, plus a 100,000th-unit indicator, permit a direct count up to 199,-999 without the use of external registers. Over-all resolution time is 1.0 µsec per pulse pair. A pulse-height control allows the sensitivity to be varied, and a single control lever starts, stops, and resets the count and time. (Technical Associates, Dept. S142)
- ■INDUCTION FURNACE is designed for analyzing hydrogen in titanium and zirconium metals as well as in metal hydrides. The furnace burns the sample in a stream of oxygen, converting the hydrogen and oxygen into water, which is then weighed in a gravimetric bulb. The unit utilizes standard tank oxygen, which is run through a heated sample in a bath of molten iron. (Laboratory Equipment Corp., Dept. S143)
- GRATING MONOCHROMATERS covering the range between 220 and 2800 mu are described in a new bulletin. Three units, for use in the ultraviolet, visible, and infrared regions, are listed. The units can be used as light sources in microscopic studies whenever monochromatic light is desirable. (Farrand Optical Co., Dept. S144)

# SPECTRACORD\* 4000 Spectrophotometer

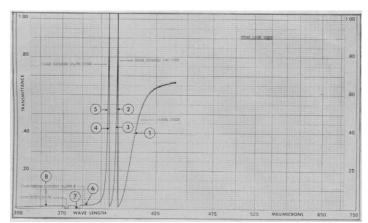


High resolution is illustrated by the benzene vapor spectrum above. Instrument resolving power: 1 Å at 2500 Å; 2 Å at 4000 Å; 20 Å in the near infrared.



Fast, Simple Operation:

Twice as fast as any other instrument at comparable resolutions.



Low scattered light of the instrument is illustrated by the above sodium nitrite run. (1) actual transmission of sodium nitrite at 0-100 T scale. (2) Scale expanded to read 1% T full scale. (3) Run continued with expanded scale. (4) Scale expanded to read 0.01% T full scale. (5) Same as (3). (6) Transmission of sample 0.0002% T. Sample beam closed to show true zero. (8) Transmission stray light now 0.0001%.

Perkin-Elmer Corporation

# for the ultraviolet, visible and near infrared

The runs shown at left illustrate the unusual precision of the SPECTRACORD 4000 spectrophotometer. This laboratory instrument provides performance equivalent to considerably more expensive instruments, and at a price comparable to the least expensive spectrophotometers of limited operations. Design features of the SPECTRACORD 4000 instrument include:

- double monochromator for high resolution with virtually no scattered light. Superior to single monochromators for qualitative and quantitative analysis.
- drum-type recorder for greatest accuracy.
   Constant, even contact between pen and paper insures high reproducibility.
- linear absorbance and transmittance recording for increased analytical flexibility.
- plug-in electronic units for fast, easy servicing.
- time-drive and repetitive scanning accessories for your special analytical problems.
- a variety of recorder papers for the different wave-length ranges.
- speedy change-over from one recording range to another.
- single and double beam operation for spectral energy or transmittance recording.

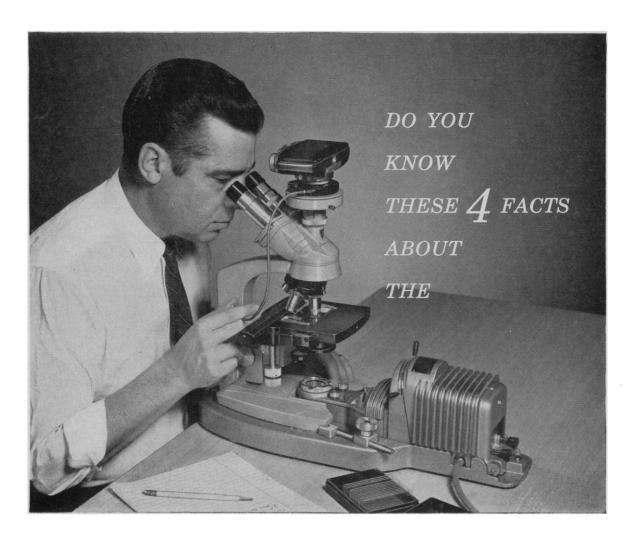
The SPECTRACORD 4000 instrument, because of its versatility, simplicity and low cost has broad application in petroleum, food, drug, medical, agricultural, paint, plastics, glass, packaging, sewage, and paper industries.

Send for more complete information covering your particular application.

\*Trade mark

#### **IMPORTANT**

A dramatically new development in infrared instrumentation will be announced in these pages next month—a development which gives new scope to organic chemist and spectroscopist alike. Look for complete details from P-E in March.



# Ortho-Illuminator?

- 1 ASSURES MAXIMUM OPTICAL PERFORMANCE OF YOUR MICROSCOPE—Koehler type illumination—ideal for bright field ... phase... interference... polarizing... and dark field microscopy and photomicrography. Numerical aperture... and field diaphragm settings regulated accurately and effectively—permit full resolving power of your microscope.
- 2 OFFERS WIDE SELECTION OF FILTERS Eight levels of intensity . . . plus daylight, green and red filters . . . quickly selectable by simple finger-tip rotation of turret mounted filters. Optimum intensity and correct contrasting color selection are very important factors to reveal the specimen detail you're investigating.
- 3 PROVIDES PERMANENT ALIGNMENT WITH MICRO-SCOPE — Three point positioning device precisely locates and rigidly retains any make microscope equipped with horseshoe base. Microscope may be removed and easily repositioned against locating device without disturbing absolute alignment. Near parallel beam of light evenly illuminates entire field of view.
- 4 COSTS LESS THAN YOU THINK Model 600 AO-Spencer Ortho-Illuminator complete...\$165.00. Optically and mechanically designed to give you years of trouble-free service... maximum efficiency... and reduced fatigue.

formerly available from Silge & Kuhne, San Francisco

Write Dept. N1 for ORTHO-ILLUMINATOR Brochure SB-600

American Optical Company