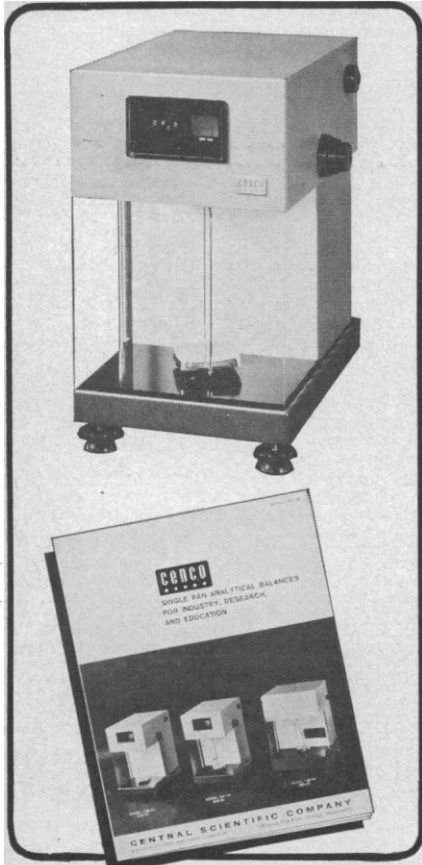


# NEW

**Cenco Analytical Balances**—For fast, accurate weighing in industrial and research laboratories. New operator conveniences. Superior mechanism and controls. Precision optics. Metal housing. SPECIAL QUANTITY DISCOUNTS



# FREE

**Eight Page Booklet**—Gives full details on 160g and 200g balances: performance data, technical data, prices. Just use the coupon. CEN-3-231

## CENTRAL SCIENTIFIC

a division of Cenco Instruments Corporation  
1700 Irving Park Road  
Chicago, Illinois 60613  
offices in principal cities



I'd like complete information on Cenco's three new analytical balances and the quantity discounts available.

- ☐ Please send eight page booklet.  
☐ Please call to arrange a demonstration.

Name \_\_\_\_\_ Title \_\_\_\_\_  
Company or Institution \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

gested, monolayers can serve as a suitable analogue for evaluating solid state concepts as applied to biological systems.

Many of these notions currently exist in biochemical and biophysical circles. It is clear that the continuing experimental and theoretical progress made on organic solids, particularly in the areas of spectroscopy, photoconduction, and reactivity, must be monitored carefully and critically by workers whose interests primarily concern fundamental life processes.

PAUL L. KRONICK

Chemistry Division,  
Franklin Institute Laboratories,  
Philadelphia, Pennsylvania 19103

## Forthcoming Events

### August

23-26. **Soil Conservation Soc. of America**, 19th annual, Jackson, Miss. (SCS, 7515 Northeast Ankeny Rd., Ankeny, Iowa)

23-28. **American Inst. of Biological Sciences**, annual, Boulder, Colo. (AIBS, 2000 P St., NW, Washington, D.C.)

23-28. **American Congr. of Physical Medicine and Rehabilitation**, Boston, Mass. (G. Gullickson, Jr., 30 N. Michigan, Chicago, Ill.)

23-28. **Conservation Education**, conf., Tacoma, Wash. (C. Boyce, Office of the Superintendent of Public Instruction, Olympia, Wash.)

24-26. **American Inst. of Aeronautics and Astronautics**, Los Angeles, Calif. (AIAA, 1290 Sixth Ave., New York, N.Y.)

24-26. **Society for Cryobiology**, annual, Washington, D.C. (V. P. Perry, Tissue Bank Dept., National Naval Medical Center, Bethesda, Md.)

24-26. **Education in the Nuclear Power Era**, conf., Gatlinburg, Tenn. (M. L. Nelson, Education Div., Oak Ridge Natl. Laboratory, P.O. Box 117, Oak Ridge, Tenn.)

24-26. **Mathematical Assoc. of America**, summer meeting, Univ. of Massachusetts, Amherst. (H. M. Gehman, Univ. of Buffalo, Buffalo 14, N.Y.)

24-27. **American Soc. for Pharmacology and Experimental Therapeutics**, Univ. of Kansas, Lawrence. (E. B. Cook, The Society, 9650 Wisconsin Ave., NW, Washington, D.C.)

24-27. **Biological Photographic Assoc.**, annual, New York, N.Y. (C. H. Weiss, 81 Bedford St., New York 14)

24-27. **American Hospital Assoc.**, Chicago, Ill. (E. L. Crosby, 840 N. Lake Shore Dr., Chicago 11)

24-27. **Toxicology and Occupational Medicine**, 4th inter-American conf., Miami Beach, Fla. (W. Machle, Univ. of Miami School of Medicine, Coral Gables, Fla.)

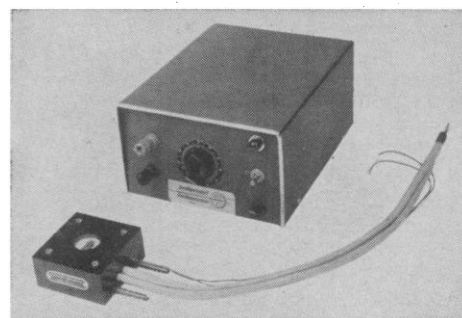
24-28. **International Council of the Aeronautical Sciences**, 4th congr., Paris,



# STOP ACTION FREEZING CONTROL

MODEL CY3

## THERMOELECTRIC MICROSCOPE COLD STAGE



- \* Range  $-80^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$
- \* Precise Temperature Control
- \* No Compressed Gas Required
- \* Integral Thermistor Sensing Element
- \* Compact — Fast Set-Up
- \* Noiseless — Single Control

Compact controller with cooler in a 3" x 3" x 1 1/2" epoxy housing. Fits standard microscope. Cooling provided by thermoelectric elements which transfer heat from sample to integral heat exchanger. Temperature sensed by bead thermistor fixed to sample holder. Null indication audible through earphones for continuous sample observation.

Instrument permits control of crystal front as it moves across field of view. Progression of front can be slowed, halted or reversed. Melting and freezing rates controlled. Applications include detection of impurities, observation of profile and extinction angles, refractive indices and birefringence estimation, etc. Write for complete details...



**Industrial  
Instruments**

89 Commerce Road, Cedar Grove, New Jersey 07009  
Tel. 201-239-6200 • TWX: 201-239-4704

France. (American Inst. of Aeronautics and Astronautics, 2 E. 64 St., New York, N.Y. 10021)

24-28. **Aerodynamics Guidance and Control**, conf., Los Angeles, Calif. (K. Watanabe, 4731 B Engineering Building III, University of California, Los Angeles 24)

24-28. **American Astronautical Soc.**, military space applications symp., Stanford, Calif. (AAS, 516 Fifth Ave., New York, N.Y.)

24-28. **Society for Industrial and Applied Mathematics**, Amherst, Mass. (W. S. Dorn, T. J. Watson Research Center, I.B.M., P.O. Box 218, Yorktown Heights, N.Y.)

24-28. **Scandinavian Mathematical Congr.**, Copenhagen, Denmark. (Secretariat, The Congress, c/o Mathematical Inst., H. C. Ørsted Inst., Universitetsparken 5, Copenhagen Ø)

24-28. **American Mathematical Soc.**, New York, N.Y. (G. L. Walker, AMS, 190 Hope St., Providence, R.I.)

24-28. **Preventive Cardiology**, first intern. conf., Burlington, Vt. (W. Raab, Preventive Heart Reconditioning Foundation, 206 Summit St., Burlington, Vt.)

24-28. **Water Pollution Research**, 2nd intern. conf., Tokyo, Japan. (Water Pollution Control Federation, 4435 Wisconsin Ave., Washington, D.C. 20016)

24-29. **Psychotherapy**, 6th intern. congr., London, England. (F. Pannell, The Congress, 11 Whitehall Ct., London, S.W.1)

24-29. **Preparation and Biomedical Application of Labeled Molecules**, Venice, Italy. (C. Colombini, Center of Nuclear Chemistry, Univ. of Padova, Via Loredan 6, Padova, Italy)

24-3. **International Assoc. of Agricultural Economists**, 12th triennial conf., Lyons, France. (French Organization Committee of the Conference, 4, rue de Lasteyrie, Paris 16°, France)

25-27. **Association for Computing Machinery**, 19th annual, Philadelphia, Pa. (H. S. Bright, Philco Computers, Willow Grove, Pa.)

25-28. **Western Electronics Show and Conv. (WESCON)**, Inst. of Electrical and Electronics Engineers, summer meeting, Los Angeles, Calif. (R. R. Bennett, Suite 1920, 3600 Wilshire Blvd., Los Angeles)

25-29. **Audiology**, 7th intern. congr., Copenhagen, Denmark. (H. W. Ewertsen, c/o State Hearing Centre, 7 D. Tvaergade, Copenhagen K)

25-3. **International Astronomical Union**, 12th general assembly, Hamburg, Germany. (D. A. Bell, c/o Royal Greenwich Observatory, Hertsmonceaux Castle, Hailsham, Sussex, England)

26-2. **British Association for the Advancement of Science**, 126th annual, Southampton, England. (BAAS, 3 Sanctuary Bldgs., London, S.W.1, England)

26-2. **Logic, Methodology, and Philosophy of Science**, intern. conf., Jerusalem, Israel. (Y. Bar-Hillel, Hebrew Univ., Jerusalem)

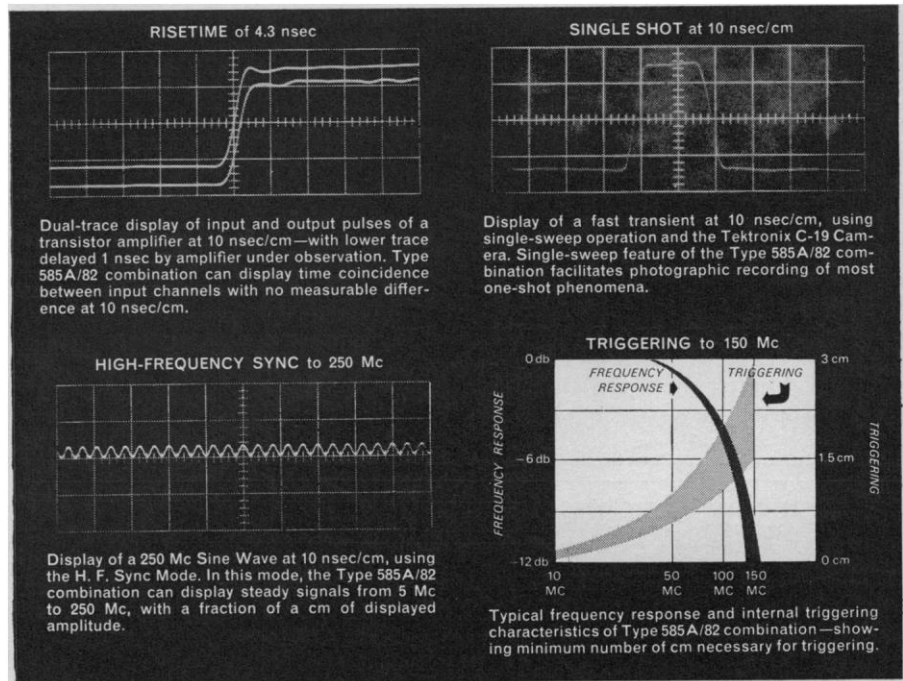
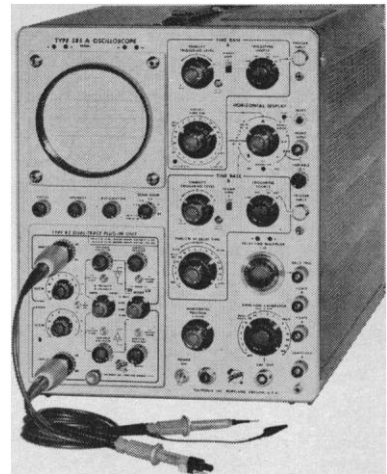
26-3. **Electron Microscopy**, 3rd European regional conf., Prague, Czechoslovakia. (Organizing Committee, Albertov 4, Prague 2)

27. **American Soc. for Horticultural Science**, Amherst, Mass. (R. E. Marshall,

# high-speed

**Tektronix Oscilloscope with general-purpose convenience**

**TYPE 580A SERIES WITH DUAL-TRACE PLUG-IN UNIT**



Used with a Type 82 dual-trace unit, a Type 580A Series Oscilloscope offers new measurement convenience for high-sensitivity, wide-band, dual-trace applications. Here are some of the features:

■ **DUAL-TRACE OPERATION** with 4 operating modes ■ **DC-to-85 MC PASS-BAND** at 100 mv/cm ■ **DC-to-80 MC PASSBAND** at 10 mv/cm ■ **CALIBRATED SENSITIVITY** in 9 steps, variable ■ **INTERNAL AND EXTERNAL TRIGGERING** to 150 Mc ■ **SWEEP RANGE** from 10 nsec/cm to 2 sec/cm ■ **SUPPLIED SMALL-SIZE PASSIVE PROBES** with risetime of probe, plug-in, oscilloscope at overall sensitivity of 100 mv/cm of approximately 4½ nsec.

**PLUS COMPATIBILITY WITH 17 LETTER-SERIES PLUG-INS**  
when used with Type 81 Adapter.

Type 581A Oscilloscope . . . . . \$1425  
Type 585A Oscilloscope . . . . . 1725  
Type RM585A Oscilloscope . . . . . 1825  
585A models have sweep-delay facility  
Oscilloscope Prices without plug-in units

Type 82 Dual-Trace Plug-in Unit . . . \$650  
Type 86 Single-Trace Plug-in Unit . . . 350  
Type 81 Plug-in Adapter . . . . . 135  
(allows insertion of letter-series plug-ins)

U.S. Sales Prices, f.o.b. Beaverton, Oregon

**FOR A DEMONSTRATION, CALL YOUR TEKTRONIX FIELD ENGINEER.**

**Tektronix, Inc.**

P.O. BOX 500 • BEAVERTON, OREGON 97005 • Phone: (Area Code 503) Mitchell 4-0161 • Telex: 036-691  
TWX: 503-291-6805 • Cable: TEKTRONIX • OVERSEAS DISTRIBUTORS IN 25 COUNTRIES  
TEKTRONIX FIELD OFFICES in principal cities in United States. Consult Telephone Directory.  
Tektronix Australia Pty., Ltd., Melbourne; Sydney • Tektronix Canada Ltd., Montreal; Toronto  
Tektronix International A.G., Zug, Switzerland • Tektronix Ltd., Guernsey, C. I.  
Tektronix U. K. Ltd., Harpenden, Herts

AMHS, Dept. of Horticulture, Michigan State Univ., East Lansing)

27-28. **Activation Analysis**, Glasgow, Scotland. (J. M. A. Lenihan, Western Regional Hospital Board, 9 W. Greham St., Glasgow, C.4)

27-29. **Pacific Slope Biochemical Conf.**, San Francisco, Calif. (M. P. Gordon, Dept. of Biochemistry, Univ. of Washington, Seattle 98105)

27-29. **Reactive Intermediates in Organic Chemistry**, symp., Quebec City, P.Q., Canada. (C. R. Engel, Faculté des Sciences, Université Laval, Quebec City)

28-3. **Neurology**, 8th intern. congr., Vienna, Austria. (H. Hoff, Medizinische Fakultät, Neurologische und Psychiatrische Abteilung, Vienna 9)

29. **Gravity Research Foundation**, annual, New Boston, N.H. (The Foundation, Gravity Village, New Boston)

29-5. **International Epidemiological Assoc.**, 4th intern. meeting, Princeton, N.J. (L. Breslow, Div. of Preventive Medical Services, California Dept. of Public Health, 2151 Berkeley Way, Berkeley 95704)

30-2. **Electronic Properties and Applications of Solid-Solid Interfaces**, Boston, Mass. (F. S. Gardner, Office of Naval Research, 495 Summer St., Boston, Mass.)

30-3. **Illuminating Engineering Soc.**, Miami Beach, Fla. (A. D. Hinckley, IES, 345 E. 47 St., New York 10017)

30-4. **American Chemical Soc.**, fall natl. meeting, Chicago, Ill. (A. H. Emery, 1155 16th St., NW, Washington, D.C.)

30-4. **Institute of Mathematical Statistics**, annual, Amherst, Mass. (D. M. Gilford, Mathematical Sciences Division, Office of Naval Research, Washington, D.C.)

30-4. **American Ornithologists' Union**, Lawrence, Kan. (L. H. Walkinshaw, 1703 Wolverine Tower, Battle Creek, Mich.)

30-5. **Applied Mechanics**, 11th intern. congr., Munich, Germany. (Organisations-Sekretariat des Mechanik-Kongresses, Inst. für Mechanik, Arcisstr. 21, Munich 2)

30-5. **Cell Biology**, 11th intern. congr., Providence, R.I. (J. W. Wilson, Dept. of Biology, Brown Univ., Providence)

30-5. **Haematology**, 10th intern. congr., Stockholm, Sweden. (L. E. Bötiger, P.O. Box 638, Stockholm 1)

30-5. **Sensitivity Analysis of Nonlinear Systems**, Dubrovnik, Yugoslavia. (J. E. Gibson, Electrical Engineering Dept., Purdue Univ., Lafayette, Ind.)

31-2. **Electric Propulsion**, 4th conf., Philadelphia, Pa. (J. M. Sellen, Jr., Physical Research Div., TRW/Space Technology Laboratories, One Space Park, Redondo Beach, Calif.)

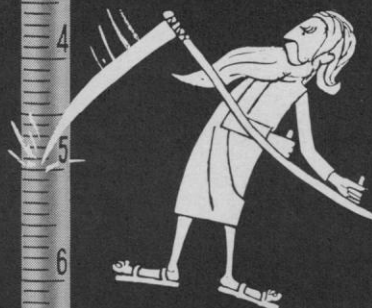
31-3. **American Psychopathological Assoc.**, Birmingham, Ala. (Secretary, APA, 503 Medical Arts Bldg., Wilmington, Del.)

31-3. **American Sociological Assoc.**, 59th annual, Montreal, Canada. (G. M. Sykes, 1755 Massachusetts Ave., NW, Washington, D.C. 20036)

31-4. **Low Temperature Physics**, 9th intern. conf., Columbus, Ohio. (The Conference, P.O. Box 3073, University Station, Columbus 43210)

31-4. **British Assoc. of Paediatric Surgeons**, 11th congr., Rotterdam, Netherlands. (Secretariat, c/o Holland Organ-

## MARKINGS: GOOD FOR LIFE!



**NALGENE® UNBREAKABLE PIPETS** are marked, in vivid color, with big, bold "Magni-Vue" graduations which are fused on permanently. These markings cannot be removed chemically or mechanically. Not even repeated autoclaving can dim their original appearance. They can't fade, rub off, scrub off or wear off—ever!

Nalgene unbreakable pipets are easy to read, and they stay that way—"for life." Rugged, chemically-resistant polypropylene is non-reflective. You'll never be bothered with light glare. You see the full liquid column clearly. No meniscus to prevent accurate reading.

Nalgene unbreakable pipets are individually calibrated for maximum precision. Limits of error do not exceed 0.06 ml for the largest sizes. Lifetime accuracy is assured.

Nalgene unbreakable pipets are available in transfer, serological and measuring styles, sizes 1 ml to 10 ml. Priced from \$2.10 to \$2.80 each. See your lab supply dealer, or write Dept. 2708, The Nalge Co., Inc., 75 Panorama Creek Drive, Rochester, New York 14625.

 **NALGENE  
LABWARE**  
Leader in quality plastic labware since 1949

Visit our Booth 248 at the National Chemical Exposition Sept. 1-4, Conrad Hilton, Chicago.



Anywhere! PORTA-STIR™ is at home in refrigerators, glove boxes, incubators, dry boxes, in the field. It's the first magnetic stirrer for cordless operation.

**Portability with power!** The high torque DC motor easily stirs liquids with the viscosity of water to 1750 rpm up to 10 hours without recharging; stirs 87% glycerine—13% water at 1,000 rpm.

#### THE LAPINE TOUCH:

- Pure white case facilitates titrations
- Corrosion proof and impact resistant polyethylene housing
- Built in recharger for the nickel-cadmium batteries
- Removable line cord
- Stays cool

**348-07 Porta-Stir with LaPine LOZENGE® magnetic stirring bar . . . only \$45 each.**

#### LAPINE SCIENTIFIC COMPANY OFFICES AND WAREHOUSES



**CHICAGO**  
6001 South  
Knox Ave.,  
Chicago 29, Ill.  
Phone 312  
Reliance 5-4700

**NEW YORK**  
So. Buckhout St.,  
Irving, N. Y.  
Phone 914  
LYric 1-8900

**CALIFORNIA**  
2229 McGee Ave.,  
Berkeley 3, Calif.  
Phone 415  
THornwall 5-3614

Gentlemen:

TYPIT® is the perfect way to type any technical, foreign or numerical symbol -- easy as  $\pi$ . Over 1,000 symbols like  $\sqrt{-1}$ ,  $\infty$ ,  $\Omega$ ,  $\square$ ,  $\Sigma$ ,  $\gg$ ,  $\$$ ,  $\approx$  to choose from. A standard typewriter + TYPIT® is

all you need. It's clean, inexpensive and fast



**TYPE ANY SYMBOL  
perfectly in 4 seconds**

write today for free catalog

**TYPIT®** manufactured by  
mechanical enterprises, inc.  
3127 SG Colvin Street, Alexandria, Va.

Gentlemen:

Send: ☐ Catalog ☐ Representative

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## Dajac LABORATORIES

*Will one of these new reagents  
answer your needs in medical  
research or biochemical testing?*

Isopropenyl Acetate Acetylating Agent  
Acrylamide  
N,N'-Methylene-bis-Acrylamide  
Hexamethylphosphoramide  
2-Amino-2-Methyl-1,3-Propanediol  
2,4-Dinitrofluorobenzene  
Flazo Orange  
HABA, 2-(4-Hydroxybenzeneazo) Benzoic Acid  
N-(4-Hydroxy-1-Naphthyl) iso-Maleimide  
Benzoyl Thiocoline Iodide  
6-Bromo-2-Naphthyl beta-D-Glucuronide  
Ruthenium Red  
Polyvinyl Phosphate, Ammonium Salt  
BT®, Blue Tetrazolium -- Steroid reagent grade  
TNBT, Tetranitro BT  
INT  
Nitro BT®  
Substrates for Esterases  
Electronmicrographic Chemicals

Write for your **FREE COPY** of new catalog to Department S-84.

THE *Borden* CHEMICAL COMPANY  
5000 LANGDON STREET • P.O. BOX 9522  
PHILADELPHIA 24, PA.

izing Centre, 16, Lange Voorhout, The Hague, Netherlands)

31-9. **Peaceful Uses of Atomic Energy**, 3rd intern. conf., Geneva, Switzerland. (J. Gaunt, United Kingdom Atomic Energy Agency, 11 Charles II St., London, S.W.1, England)

31-9. **Soil Science**, intern. congr., Bucharest, Rumania. (N. Giosan, Comite Roumain d'Organisation, The Congress, Bucharest 33)

#### September

1-4. **AAAS, Alaska Div.**, College. (G. Dahlgren, Dept. of Chemistry, Univ. of Alaska, College)

1-4. **Aerospace Power Systems**, 3rd biennial conf., Philadelphia, Pa. (American Inst. of Aeronautics and Astronautics, 2 E. 64 St., New York, N.Y. 10021)

1-4. **Gas**, 9th intern. conf., The Hague, Netherlands. (R. H. Touwaide, General Secretary, Intern. Gas Union, 4, Avenue Palmerston, Brussels, Belgium)

1-5. **Biological Standardization**, 9th intern. congr., Lisbon, Portugal. (C. de Oliveira, c/o Inst. Bacteriologico Camara Pestana, Rua do Instituto Bacteriologico, Lisbon)

1-5. **American Soc. of Ichthyologists and Herpetologists**, Morehead City, N.C. (J. R. Bailey, Dept. of Zoology, Duke Univ., Durham, N.C.)

1-5. **Nuclear Magnetic Resonance and Relaxation in Solids**, intern. conf., Louvain, Belgium. (L. Van Gerven, Naamsestraat 61, Louvain)

1-8. **Photographic and Spectroscopic Optics**, conf., Tokyo and Kyoto, Japan. (H. Kubota, Science Council of Japan, Ueno Park, Tokyo)

2-4. **Structure and Properties of Coordination Compounds**, Bratislava, Czechoslovakia. (Czechoslovak Chemical Soc., Hradcanske nam. 12, Prague 1)

3-5. **Czechoslovak Orthopedic Congr.**, Prague. (M. Jaros, Libusna 5, Prague 2)

3-8. **International Soc. of Blood Transfusion**, 10th biennial congr., Stockholm, Sweden. (C. Högman, P.O. Box 434, Stockholm 1)

4-5. **Great Basin Anthropological Conf.**, Reno, Nev. (W. L. d'Azevedo, Desert Research Inst., Univ. of Nevada, Reno)

4-6. **Gout and Uric Lithiasis**, intern. congr., Evian, France. (R. J. Réveillaud, 4 Boulevard de la Bastille, Paris 12)

4-6. **Parapsychological Assoc.**, 7th annual, Oxford, England. (K. R. Rao, 6847 College Station, Durham, N.C.)

4-6. **American Philosophical Assoc.**, Pacific Div., Seattle, Wash. (L. E. Hahn, Dept. of Philosophy, Southern Illinois Univ., Carbondale)

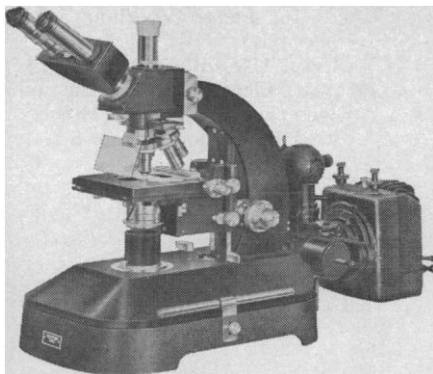
4-9. **American Psychological Assoc.**, Los Angeles, Calif. (A. H. Brayfield, 1333 16th St. NW, Washington, D.C.)

6. **Spacesuits and Human Performance**, symp., Soc. of Engineering Psychologists, Los Angeles, Calif. (N. M. Molesko, 4918 Castana Ave., Lakewood, Calif.)

6-7. **International Acad. of the History of Medicine**, Basel, Switzerland. (N. Poynter, c/o Wellcome Historical Medical Library, 183 Houston Rd., London, N.W.1, England)

6-11. **Physical Medicine**, 4th intern.





# SIMULTANEOUS CONTRAST FLUORESCENCE MICROSCOPY

exclusively with the

REICHERT  
**Zetopan**

This unique new approach may very well become instrumental in solving some of your intricate microbiological research problems. It can be accomplished with the ingeniously designed Reichert "ZETOPAN" by simultaneous application of white light and ultra-violet illumination supplemented by a newly developed fluorescence contrast condenser.

The combined advantages of Phase or Anoptral Contrast and the fluorescent techniques now appear simultaneously in the microscopic image.

Our constant, self-regulating Power Supplies for operation of the fluorescent light source prolong the lifetime of the Osram burner and insure a steady arc and increased light.

The "ZETOPAN" is a versatile instrument for all microscopic investigations of transmitted, reflected, and mixed illumination. It is a truly universal research microscope.

*Hacker*

For particulars or demonstration, write to:  
**WILLIAM J. HACKER & CO., INC.**  
Box 646, W. Caldwell, N.J., CA 6-8450 (Code 201)

congr., Paris, France. (J. P. Held, French Natl. Soc. of Physical Medicine, 15, rue de l'Ecole de Medicine, Paris 6°)

6-13. **Animal Reproduction and Artificial Insemination**, 5th intern. congr., Trento, Italy. (T. Bonadonna, Via Monte Ortigara 35, Trento)

7-9. **Psychometric Soc.**, Los Angeles, Calif. (W. G. Mollenkopf, Procter and Gamble, P.O. Box 599, Cincinnati 1, Ohio)

7-10. **High-Energy Electrons**, symp., European Assoc. of Radiology, Montreux, Switzerland. (P. L. Cova, Casa di Cura S. Ambrogio, Via Faravalli 16, Milan, Italy)

7-11. **Coordination Chemistry**, 8th intern. conf., Vienna, Austria. (V. Gutmann, Verein Österreichischer Chemiker, 1 Eschenbachgasse 9, Vienna 1)

7-11. **Magnetism**, intern. conf., Nottingham, England. (Deputy Secretary, Inst. of Physics and the Physical Soc., 47 Belgrave Sq., London, S.W.1, England)

7-11. **Microwaves, Circuit Theory, and Information Theory**, intern. conf, Tokyo, Japan. (K. Morita, Inst. of Electrical Communication Engineers of Japan, 2-8 Fujimicho, Chiyoda-ku, Tokyo, Japan)

7-12. **Astronautics**, 15th intern. congr., Warsaw, Poland. (Intern. Astronautical Federation, 250 rue St. Jacques, Paris 5°, France)

7-12. **Laurentian Hormone Conf.**, Bolton Landing, N.Y. (J. C. Foss, 222 Maple Ave., Shrewsbury, Mass. 01545)

7-12. **Odontological Federation of Central America and Panama**, 7th congr., Guatemala City, Guatemala. (E. Estrada H., Apartado Postal 513, Guatemala City)

7-12. **Pharmaceutical Sciences**, 24th intern. congr., Amsterdam, Netherlands. (Congress Secretariat, 4 Sint Agnietenstraat, Amsterdam-C)

7-12. **Surface Active Substances**, 4th intern. congr., Brussels, Belgium. (Secretary General, The Congress, 49, Square Marie-Louis, Brussels 4)

7-19. **Photogrammetry**, 10th intern. congr., Lisbon, Portugal. (A. Paes Clemente, Intern. Soc. for Photogrammetry, c/o Instituto Geografico e Cadastral, Praça da Estrela, Lisbon)

8-10. **Gas Chromatography**, 5th intern. symp., Brighton, England. (Organizing Office, 61 New Cavendish St., London, W.1, England)

8-10. **Nonsteroidal, Antiinflammatory Drugs**, intern. symp., Milan, Italy. (S. Garattini, Instituto di Ricerche Farmacologiche "Mario Negri," Via Eritrea 62, Milan)

9-11. **Applied Spectroscopy and Analytical Chemistry**, 11th symp., Ottawa, Ontario, Canada. (Chemical Inst. of Canada, 48 Rideau St., Ottawa 2)

9-11. **Kinetics of Pyrolytic Reactions**, Ottawa, Ontario, Canada. (K. J. Laidler, Dept. of Chemistry, Univ. of Ottawa, Ottawa 2)

9-11. **European Organization for Quality Control**, 8th conf., Baden-Baden, Germany. (Secretariat, Weena 700, Rotterdam 3, Netherlands)

9-11. **International College of Surgeons**, North American Federation, congr., Chicago, Ill. (Secretariat, 1516 Lake Shore Dr., Chicago 60610)

9-12. **Society of General Physiologists**,

When is a  
\$2 Glove Bag  
better than a  
Dry Box?

Both Glove Bag and dry box are made to do an equal job: provide dry, inert or clean atmospheres. I<sup>2</sup>R's Glove Bag is faster to purge because it starts out flat . . . saving time and gas. The polyethylene Glove Bag is transparent, light and portable. Folded it slips easily into your coat pocket . . . expanded you have up to 18 cu. ft. of clear workspace. And most important, you may discard it after a single experiment or use it over and over again!

**Write For Literature**

**I<sup>2</sup>R**

**Instruments For Research And Industry**  
106 Franklin Ave. Cheltenham, Pa.

**a complete low cost system  
for taking motion pictures  
of exceptional quality  
through the microscope**

## **The New Sage SERIES 300 Time Lapse Apparatus** takes pictures that are sharp, clear, in perfect register



Sage Series 300 shown with  
Leitz Ortholux Microscope: \$3250  
(Not including microscope).  
Incubator optional at extra cost.

The Sage Series 300 Time Lapse Apparatus provides all the features necessary for getting excellent motion pictures at high magnifications. The instrument includes a unique desk-mounted vibration-isolation system, camera and drive assembly with wide choice of framing rates, viewing eyepiece for the microscope, variable time exposure control for continuous light photography, and trigger for flash synchronization.

Also from Sage, the completely integrated Series 100 Time Lapse Cinematographic Apparatus includes a dual light source, steady source for viewing and xenon flash for photography, built-in controls, and other features that make it the most versatile time lapse instrument available.

For complete information,  
write or telephone.

**SAGE INSTRUMENTS, INC.**

2 SPRING ST., WHITE PLAINS, N.Y.  
914 WH 9-4121  
Represented by leading microscope dealers.

Woods Hole, Mass. (R. Milkman, Dept. of Zoology, Syracuse Univ., Syracuse, N.Y. 13210)

9-12. American Political Science Assoc., annual, Chicago, Ill. (The Association, 1726 Massachusetts Ave., NW, Washington, D.C. 20036)

10-13. General Practice, 6th intern. congr., Salzburg, Austria. (K. Engelmeier, Intern. College of Medical Practice, Lange Str. 21a, 474 Oelde, Germany)

11-12. Diseases Common to Animals and Man, annual West-Northcentral conference, Omaha, Nebr. (N. G. Miller, College of Medicine, Univ. of Nebraska, Omaha 5)

11-12. Scandinavian Neurosurgical Soc., 18th annual, Oslo, Norway. (K. Kristiansen, Neurosurgery Dept., Ulleval Sykehus, Oslo)

11-14. German Soc. of Metallurgy and Mining, general assembly, Hanover. (Gesellschaft Deutscher Metallhütten und Bergleute, Paul-Ernststr. 10, Clausthal-Zellerfeld, Germany)

13-16. Electrical Insulation, conf., New York, N.Y. (J. Lenkey, Anaconda Wire and Cable Co., 605 Third Ave., New York, N.Y. 10016)

13-16. American Fisheries Soc., Atlantic City, N.J. (E. A. Seaman, 1404 New York Ave., Washington, D.C.)

13-17. Power, World conf., Lausanne, Switzerland. (U.S. Natl. Committee, World Power Conf., c/o Engineers Joint Council, 345 E. 47 St., New York 10017)

14-15. Chromatography, 3rd intern. symp., Brussels, Belgium. (Belgian Soc. of Pharmaceutical Sciences, rue Archimede 11, Brussels 4)

14-15. Nutrition, Canadian-U.S. conf., Toronto, Ont., Canada. (J. M. R. Beveridge, Dept. of Biochemistry, Queen's Univ., Kingston, Ont.)

14-16. Military Electronics (MIL-ECOM 8), intern. conf., Inst. of Electrical and Electronics Engineers, Washington, D.C. (H. M. O'Bryan, Bendix Corp., 1730 K St., NW, Washington, D.C. 20006)

14-17. International Assoc. of Milk and Food Sanitarians, Hartford, Conn. (H. L. Thomasson, P.O. Box 437, Shelbyville, Ind.)

14-18. Aeronautical Research and Development, NATO advisory group, 14th general assembly, Lisbon, Portugal. (The Assembly, 64, rue de Varenne, Paris 7<sup>e</sup>, France)

14-18. Analogue Computation, 4th intern., Brighton, England. (E. L. Harder, Westinghouse Electric Corp., East Pittsburgh, Pa.)

14-18. Aviation and Space Medicine, intern. congr., Dublin, Ireland. (S. O'Quigley, Aer Lingus—Irish International Airlines, Dublin Airport, Dublin, Ireland)

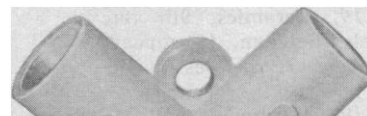
14-18. Mass Spectrometry, intern. conf., Paris, France. (Secretariat, Groupement pour l'Avancement des Méthodes Spectrographiques, 1, rue Gaston-Boissier, Paris 15<sup>e</sup>)

14-18. Microwave Tubes, 5th intern. congr., Paris, France. (Secretariat, B.P. no. 20, Bagneux, Seine, France)

14-18. Operational Research and the Social Sciences, intern. conf., Cambridge, England. (Operational Research Soc., 64 Cannon St., London E.C.4, England)

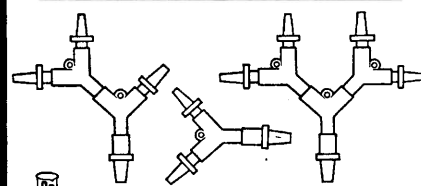
14-18. Radio Meteorology, world conf.,

## **versatile\*unbreakable MANIFOLD-Y CONNECTOR**



Pioneer's new Manifold-Y Connector greatly simplifies complicated set-ups. Used with the versatile Q-D Connector, the Manifold-Y permits multiple connections of flexible tubing—even of different sizes!

Pioneer Manifold-Y Connectors are made of polyolefin . . . freeze proof, light in weight and, of course, unbreakable.



AVAILABLE THROUGH YOUR LABORATORY SUPPLY HOUSE . . . FOR COMPLETE SPECIFICATIONS AND PRICES ON ALL PIONEER QUALITY PRODUCTS, REQUEST OUR SIXTEEN PAGE BULLETIN.

**Specify PIONEER**

Pioneer Plastics, Inc.  
DEPT. S, BOX 8066, JACKSONVILLE, FLORIDA — 32211

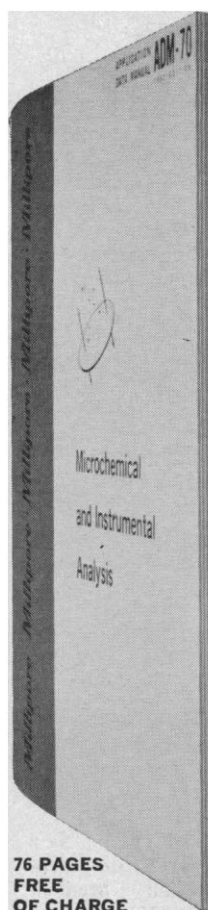
## **Worth writing for**

ADM-70, "Microchemical and Instrumental Analysis" describes techniques for identifying particulate contaminants, using Millipore filters, in optical and electron microscopy, microchemical spot tests, ring oven analysis, infrared and ultraviolet absorption spectroscopy, flame photometry, radio-activity analysis and other related methods. To get a copy of this manual, write to

**Millipore**

**FILTER CORPORATION**  
145 Ashby Rd., Bedford, Mass.

Millipore® filters are cellulose plastic porous membranes made in twelve pore-size grades from 8 microns down to 10 millimicrons. In microfiltration or analysis, all matter larger than the filter pore size is screened from fluids and retained on the filter surface.



76 PAGES  
FREE  
OF CHARGE

Boulder, Colo. (J. W. Herbstreit, Central Radio Propagation Laboratory, National Bureau of Standards, Boulder 80301)

14-18. **Weather Radar**, 11th conf., Boulder, Colo. (J. W. Herbstreit, Central Radio Propagation Laboratory, National Bureau of Standards Boulder Research Laboratories, Boulder)

14-19. **Ceramics**, 9th intern. congr., Brussels, Belgium. (European Assoc. for Ceramics, 13, rue des Poissonniers, Brussels 1)

14-19. **Instruments and Measurements**, 6th intern. conf., Stockholm, Sweden. (RESO Cong. Service, Stockholm 1)

15-17. **Armed Forces Management Assoc.**, 11th natl. conf., Detroit, Mich. (The Association, P.O. Box 7603, Washington, D.C.)

15-17. **Luminescence**, conf., Hull, Yorkshire, England. (G. F. J. Garlick, Physics Dept., Univ. of Hull, Hull)

15-17. **Chemical Reaction Engineering**, 3rd European symp., Amsterdam, Netherlands. (J. G. van de Vusse, c/o Kon. Shell Laboratorium, Badhuisweg 3, Amsterdam)

15-18. **Nuclear Photography**, intern. conf., Geneva, Switzerland. (Scientific Conf. Secretariat, European Organization for Nuclear Research, Geneva 23)

15-19. **Industrial Chemistry**, 35th intern. congr. Warsaw, Poland. (Secretariat, Rydgiera 8, Warsaw 86)

16-18. **American Assoc. of Medical Clinics**, annual, Bal Harbour, Fla. (The Association, Box 58, Charlottesville, Va.)

17-18. **Computing**, 7th annual Northwest conf., Seattle, Wash. (R. K. Smith, Northwest Computing Assoc., Box 836, Seahurst, Wash.)

17-18. **Engineering Management**, conf., Cleveland, Ohio. (Inst. of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York, N.Y. 10021)

17-19. **Cancer**, 5th natl. conf., Philadelphia, Pa. (American Cancer Soc., 219 E. 42 St., New York, N.Y. 10017)

17-19. **British Assoc. of Urological Surgeons**, annual, Sheffield, England. (Joint Secretariat, 47 Lincoln's Inn Fields, London, W.C.2, England)

17-20. **Science Education**, intern. conf., Banff, Alberta, Canada. (S. Trieger, Faculty of Education, Univ. of Alberta, Edmonton, Canada)

18. **Hungarian Chemical Soc.** Tihany. (M. T. Beck, Szabadsag ter 17, Budapest 5, Hungary)

19-26. **Gynecology and Obstetrics**, 4th world congr., Buenos Aires, Argentina. (R. Lede, Primera Catedra de Ginecología, Hospital de Clínicas, Córdoba 2149, Buenos Aires)

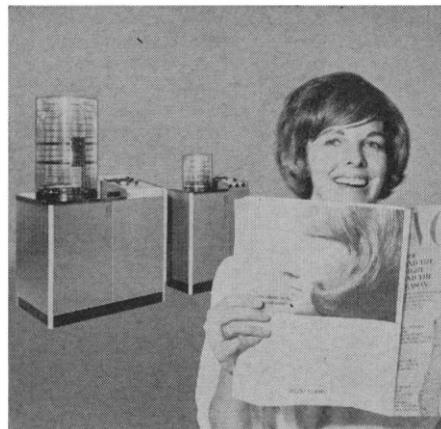
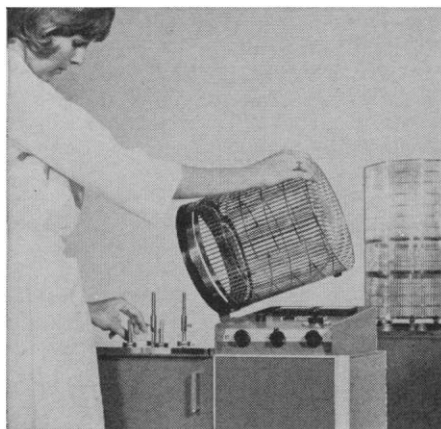
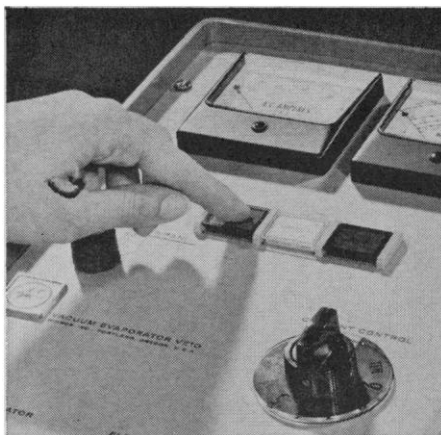
19-27. **Scientific Films Assoc.**, 18th intern. congr., Athens, Greece. (SFA, 38, Avenue des Ternes, Paris 17<sup>e</sup>, France)

20-23. **Ceramic-Metal Systems**, American Ceramic Soc., French Lick, Ind. (ACS, 4055 North High St., Columbus, Ohio)

20-23. **American Inst. of Chemical Engineers**, Las Vegas, Nev. (F. J. Van Antwerpen, 345 E. 47 St., New York, N.Y. 10017)

20-24. **American Soc. of Oral Surgeons**, Chicago, Ill. (E. W. Gilgan, 119 North Michigan Ave., Chicago 11)

20-25. **Neuroradiology**, 7th symp., New York, N.Y. (J. M. Taveras, Neurological Inst., Columbia-Presbyterian Medical Center, New York, N.Y. 10032)



# AUTOMATIC

**MIKROS VACUUM EVAPORATORS.** Push a button. Walk away. Mikros automatic control takes over completely. No valving decisions to make. No operator attention during valving-pumping sequences. No tension-producing possibility of human valving errors. Work on other jobs around the lab. Oversee control of several units simultaneously—side by side—or anywhere in the building within practical walking distance. Not semi-automatic. Completely automatic. Vacuum evaporators that literally think for themselves. MODEL VE-10, three-minute pumpdown to  $1 \times 10^{-4}$  Torr, operates in the low  $10^{-6}$  Torr range, \$2400.00\*. MODEL VE-20, high pumping speed unit for thin film research and production, operates in low  $10^{-7}$  Torr and upper  $10^{-8}$  Torr ranges, \$6500.00\*. Both units also available as pumping stations. Send for descriptive literature. See your nearest Mikros representative. Ask for a demonstration.

\*F.O.B. Portland, Oregon.

**Yours for the asking**—New C-100 Condensed Catalog, describing more than 30 advanced-design vacuum products—accessories, gauges, automatic controllers, motor-driven vacuum-valves—plus related instruments and components for industry and the research lab.



**MIKROS INC.** SUBSIDIARY of ESI-ELECTRO SCIENTIFIC INDUSTRIES  
7634 S. W. CAPITOL HIGHWAY • PORTLAND, OREGON 97219 • 503, 246-5494

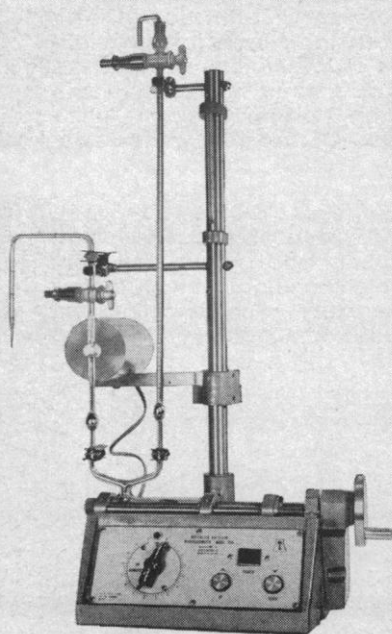
ELECTRON MICROSCOPES/HIGH VOLTAGE GENERATORS/VACUUM EVAPORATORS/VACUUM EQUIPMENT

**SALES OFFICES**—MIKROS, INC., 2414 Leimert Blvd., Oakland 2, Cal. (261-6884). EBCOR, INC. (formerly Eklund Electronic Sales), P. O. BOX 30592, Dallas 30, Texas (363-4934). TECH SALES & MARKETING, 3107 Radford Dr., Indianapolis, Ind. (547-9208). MIKROS, INC., 816 Dennis Avenue, Silver Springs, Maryland (588-6976). BERGER ASSOCIATES, 1 West Boardwalk, Long Beach, L.I., N.Y. (431-3700). ENGINEERING ASSOCIATES OF N.E. INC., 319 Lincoln St., Manchester, N.H. (623-7294). CANADA-INSTRONICS, LTD., P. O. BOX 100, Stittsville (Ottawa, Ont.) (828-5115).

the  
fastest,  
most  
accurate,  
most  
dependable  
laboratory apparatus  
you can use  
for determination  
of  $\text{CO}_2\text{-O}_2\text{-CO-N}_2$  in  
ultra-micro samples  
is the

## NATELSON MICROGASOMETER

And now... a new Gas Injector attachment can be used with any standard Gas Chromatograph for complete gas analysis (e.g. Perkin-Elmer Model 820).



Ask your laboratory supply dealer for a demonstration of this easily learned technique... or write to:

**Scientific Industries INC.**



DEPT. 5864, 220-05 97th AVENUE  
QUEENS VILLAGE 29, NEW YORK

20-26. **Anaesthesiology**, 3rd world congr., São Paulo, Brazil. (L. Rodrigues Alves, Caixa Postal 330, São Paulo)

21-24. **Agricultural Engineering**, intern. congr., Lausanne, Switzerland. (P. Regamey, Etat de Vaud, 14. Cite-Devant, Lausanne)

21-24. German Soc. for **Psychology**, 24th congr., Vienna, Austria. (J. Rohrer, Deutsche Gesellschaft für Psychologie, Am Hof 1e, 5300 Bonn, Germany)

21-25. **Animal Care Panel**, 15th annual New York, N.Y. (ACP, P.O. Box 1028, Joliet, Ill. 60434)

21-26. **Documentation**, 30th intern. conf., The Hague, Netherlands, (Intern. Federation for Documentation, 7 Hofweg, The Hague)

21-26. **Electrochemical Thermodynamics and Kinetics**, intern., London, England. (M. Fleischmann, Dept. of Physical Chemistry, Univ. of Newcastle upon Tyne, England)

### Meeting Notes

The following are scientific and technical meetings scheduled in the U.S.S.R and satellite nations. Similar lists will appear regularly in this section. In cases where no other source of information is known, the Academy of Sciences of the nation involved is listed.

#### August 1964

25-27. **Structure and Function of Red Blood Cells**, 4th intern. symp., Berlin, East Germany. (Gesellschaft für Experimentelle Medizin der DDR, Littenstr. 78, Berlin C.2)

26-28. **Neurochemical and Liquor Research**, work Group, East Germany **Psychiatric-Neurological Soc.**, Rostock, East Germany. (German Acad. of Sciences (Berlin), Mohrenstr. 39, Berlin W.8)

26-3. **Electron Microscopy**, 3rd European regional conf., Prague, Czechoslovakia. (J. Wolf, Organizing Committee, Albertov 4, Prague 2)

30-5. **Nonlinear Systems**, Sensitivity Analysis, intern. symp., Prague, Czechoslovakia. (G. Ruppel, Intern. Federation of Automatic Control, Postfach 10250, Düsseldorf 10, Germany)

31-4. **Mathematical Statistics**, applications in industry, colloquium, Budapest, Hungary. (Janos Bolyai Mathematical Soc., Reáltanoda-ut. 13-15, Budapest)

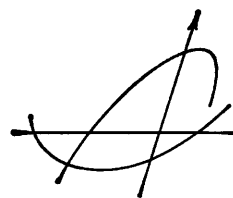
31-9. **Soil Science**, 8th intern. congr., Bucharest, Rumania. (N. Cernescu, Geological Inst., Sosceaua Kiseleff 55, Bucharest)

#### August 1964 (dates unknown)

**Erythrocytes**, 4th intern. symp., East German Soc. for Experimental Medicine, Berlin, East Germany. (Dr. Faulhaber, Sekretariat, Gesellschaft für Experimentelle Medizin der DDR, Littenstr. 78, Berlin C.2)

**International Assoc. of Geodesy and Geophysics**, Sofia, Bulgaria. (Bulgarian Acad. of Sciences, 7th November St. 1, Sofia)

Applied  
Mathematicians  
Operations Analysts  
Applied Physicists



## Sophistication

Sophistication in approach, diversity in programs... these are the first, and lasting, impressions of Booz-Allen Applied Research received by the new professional staff member. If he is the type of person stimulated by the chance to participate in broad interdisciplinary applied research assignments, he finds us a remarkably good place to work. Challenge follows challenge, and growth is swift.

Right now is an opportune time for the creative mathematician, statistician, operations researcher, physicist or engineer to consider a career appointment at Booz-Allen Applied Research. Our record of achievement in the advanced reaches of astronautics, communications, transportation, computer technology and naval warfare—to cite just a few—has generated growth, opening up broad new avenues of career opportunity. Investigate them; write Mr. Robert Flint, Director of Professional Appointments.

**BOOZ • ALLEN**

**APPLIED RESEARCH Inc.**

4815 Rugby Avenue  
Bethesda, Maryland 20014  
Washington • Cleveland  
Chicago • Los Angeles

An equal opportunity employer