Petroleum Engineers, New York, N.Y. (H. N. Appleton, 345 E. 47 St., New York 10017)

18-19. American Otological Soc., San Juan, P.R. (W. H. Bradley, 1100 E. Genessee St., Syracuse, N.Y.)

18-20. Thermodynamics of Ceramic Systems, mtg., London, England. (J. P. Roberts, British Ceramics Soc., Houldsworth School of Applied Science, Univ. of Leeds, Leeds 2, England)

18-20. Technical Microbiology, symp., Berlin, Germany. (S. Windisch, Inst. für Gärungsgewerbe, Seestrasse, 13, 1 Berlin

18-20. Structures and Materials, 7th conf., Cocoa Beach, Fla. (R. W. Leonard, NASA-Langley Research Center, Mail Stop 188C, Langley Station, Hampton, Va.

18-21. Aerospace Medical Assoc., 37th annual scientific mtg., Las Vegas, Nev. (C. A. Berry, Chief of Center Medical Programs, NASA-Manned Spacecraft Center, Houston, Tex. 77058)

18-21. International Scientific Radio Union, U.S. natl. committee, mtg., Washington, D.C. (USNC-URSI, 2101 Constitution Ave, NW, Washington, D.C.)

18-21. **Tectonic Levels** in the Earth's Crust, intern. symp., Neuchatel, Switzerland. (J.-P. Schaer, Dept. of Geology, University, 11 rue Emile Argand, 200 Neuchatel)

18-22. American Assoc. of Corrosion Engineers, 22nd annual mtg., Miami Beach, Fla. (N. E. Hamner, The Association, 980 M&M Bldg., Houston, Tex.)

18-22. Applications of Liquid Fuels,

conf., Torquay, England. (Inst. of Fuel, 18 Devonshire St., Portland Pl., London, W.1, England)

18-22. American College of Physicians, New York, N.Y. (E. C. Rosenow, Jr., 4200 Pine St., Philadelphia 4, Pa.)

19-22. American **Geophysical** Union, 47th annual mtg., Washington, D.C. (W. E. Smith, AGU, 1145 19th St., NW, Washington, 20036)

18-23. International Soc. for Photogrammetry, technical commissions, Munich, Germany. (G. Krauss, Deutsche Gesellschaft für Photogrammetrie, Waasemstr. 19-21, Bad Godesberg, Germany)

19-21. Frequency Control, 20th annual symp., U.S. Army Electronics Command, Atlantic City, N.J. [Director, Electronics Components Laboratory, U.S. Army Electronics Command, Attn: AMSEL-KT-ST (M. F. Timm), Fort Monmouth, N.J. 07703]

19-22 Microwave Communications, 3rd colloquium, Budapest, Hungary. (Valko Peterne, Szabadsag ter 17, Budapest)

19-23. Scientific and Technical Books and Journals, 2nd intern. exhibition, Paris, France. (F. Retailliau, Intern. Exhibition of Scientific and Technical Books and Journals, 117 Blvd. St. Germain, Paris 6)

20-22. Institute of Electrical and Electronics Engineers, southwestern conf., Dallas, Tex. (R. Carrel, Collins Radio Co., Dallas 75207)

20-22. American Laryngological, Rhinological, and Otological Assoc., San Juan, P.R. (V. R. Alfaro, 917 20th St., NW, Washington, D.C. 20006)

20-22. Magnetics, 4th intern. conf. (INTERMAG), Stuttgart, Germany. (E. W. Pugh, I.B.M. Corp., 1000 Westchester Ave., White Plains, N.Y.)

20-23. Application of Physicochemical Methods in Chemical Analysis, conf., Budapest, Hungary. (M. K. Egyesülete, Szabadsag ter 17, Budapest 5)

20-23. Solar Energy Soc., 2nd annual mtg., Boston, Mass. (F. Edlin, Solar Energy Soc., Arizona State Univ., Tempe 85281)

21–22. Space Navigation, natl. mtg., Boston, Mass. (E. S. Keats, Westinghouse Electric Corp., Box 1897, Baltimore, Md. 21203)

21-23. Ohio Acad. of Science, 75th annual mtg., Columbus. (J. H. Melvin, 505 King Ave., Columbus 43201)

21-23. Southwestern **Psychological** Assoc., 13th annual conv., Arlington, Tex. (C. Cleland, 2104 Meadowbrook Dr., Austin, Tex.)

21-23. West Virginia Acad. of Science, Institute. (J. B. Hickman, West Virginia Univ., Morgantown 26506)

22. Computer Aided Basic Research, symp., Hoboken, N.J. (I. Flores, Electrical Engineering Dept., Stevens Inst., Hoboken 07030)

22. Illinois Acad. of Science, Illinois State Univ., Normal. (N. D. Levine, Univ. of Illinois, Urbana)

22-23. National Council of **Teachers of Mathematics**, Greeley, Colo. (J. D. Gates, 1201 16th St., NW, Washington, D.C. 20036)

23-24. American Laryngological Assoc., San Juan, P.R. (L. Richards, 12 Clovelly Rd., Wellesley Hills, Mass.)

24. Society for Clinical Ecology, 1st annual mtg., Chicago, Ill. (T. G. Randolph, Human Ecology Research Foundation, 720 N. Michigan Ave., Chicago 11, Ill.) 24-26. American Assoc. of Colleges of

Pharmacy, Dallas, Tex. (C. W. Bliven, 1507 M St., NW, Washington, D.C. 20005)

24-27. American Soc. of Abdominal Surgeons, Chicago, Ill. (B. F. Alfano, 663 Main St., Melrose 76, Mass.)
24-27. American Oil Chemists' Soc.,

24–27. American Oil Chemists' Soc., Los Angeles, Calif. (C. H. Hauber, The Society, 35 E. Wacker Dr., Chicago, Ill. 60601)

24-28. Infectious Pathology, 4th intern. congr., Stuttgart, Germany. (G. Hoffman Hugstetterstr. 55, 78 Frieburg im Briesgau, Germany)

24-29. American College of Allergists, 22nd annual congr., Chicago, Ill. (J. D. Gillespie, 2141 14th St., Boulder, Colo-80302)

24-29. American Soc. of Hospital Pharmacists, annual mtg., Dallas, Tex. (J. A. Oddis, 2215 Constitution Ave., NW-Washington, D.C. 20037)

24-29. American Pharmaceutical Assoc. Dallas, Tex. (W. S. Apple, 2215 Constitution Ave., NW, Washington, D.C. 20037

25-27. Antidepressant Drugs, symp-Milan, Italy. (S. Garattini, Inst. di Ri cherche Farmacologiche "Mario Negri, Via Eritrea, 62, Milan)

25-27. National Acad. of Sciences, 103rd annual mtg., Washington, D.C. (Home Secretary, NAS, 2101 Constitution Ave., NW, Washington, D.C. 20418.



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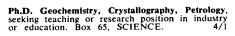
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### ENVIRONMENTAL VARIABLES IN ORAL DISEASE

Editors, Seymour J. Kreshover and F. J. McClure 328 pp., illus., bibliog., index, February 1966. Price: \$8.75. AAAS members' cash orders: \$7.75.

Recent research on the role of environmental factors in oral disease is reported in this collection of papers from a symposium held at the AAAS meeting in Montreal, December 1964.

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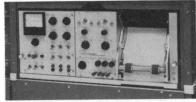


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### ANALYTICAL ULTRACENTRIFUGE

As investigations delve ever more deeply into molecular structure and function, the need for and development of advanced accessories for the Model E is inevitable. Several such accessories are briefly described here.

#### The Photoelectric Scanner



The Scanner looks at the analytical cell through the absorption optical system during centrifugation and, almost instantaneously, translates measures of optical density into chart-recorded curves. Integral and derivative curves are recorded simultaneously, and calibration steps are traced out before each scan. Thus the investigator is freed from the camera, and the developing and handling of film-and has the advantage of seeing what is happening in the cell as it happens.

Since the Scanner utilizes the splitbeam photometry principle, double as well as single sector cells can be used with precise results, and the Scanner can also automatically subtract solvent reading in one sector from sample-solvent reading in the other sector to obviate baseline runs. Wavelengths are selectable from 440

 $m\mu$  to 236  $m\mu$  and may be changed during a run.

Several applications of direct scanning were reported last year; in one, an association-dissociation study by Gerhart and Schachman (Biochemistry 4, 1054), the authors were able to distinguish the catalytic and regulatory protein subunits of aspartate transcarbamylase. Direct scanning was used to follow the binding of 5-bromocytidine triphosphate to separated subunits of the enzyme and the reconstituted enzyme of the same sample.

### The Monochromator and **High Intensity Lightsource**



essential to operation of the Scanner, they can also be utilized independently to add to the versatility of the highly discriminating absorption optical system. The Monochromator provides a selection of wavelengths from 440 m $\mu$  to 265 m $\mu$  and permits changes in wavelength during a run. It is therefore possible to use lower concentrations, through choice of an appropriate wavelength, and to de-

tect components in the sample whose absorption peaks

are at different wavelengths. In itself the Monochromator is primarily for sedimentation equilibrium work. The High Intensity Lightsource provides much more intense monochromatic light to reduce exposure times and facilitate sedimentation velocity studies. It also extends the range of usable wavelengths down to 236 mu.

### The Titanium Rotor

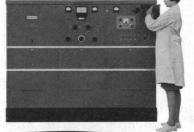


An-H rotor is identical in configuration to the aluminum An-D, but because of the greater strength-to-weight ratio of the titanium, it can be taken to 68,000 rpm to generate 372,000 g at the bottom of the cell, 336,000 g at the cell center. Using the stronger forces, Nelson (J. Biol. Chem. 239, 3737, 1964) found that multiple peaks too diffused to be recognized with

any certainty at previously available speeds became clearly apparent when run at the titanium rotor's maximum speed, and the presence of a third component in the sample could be detected-suggesting another area of usefulness for the rotor.

For additional information on any of these new accessories or on the Model E, itself, please write to Spinco

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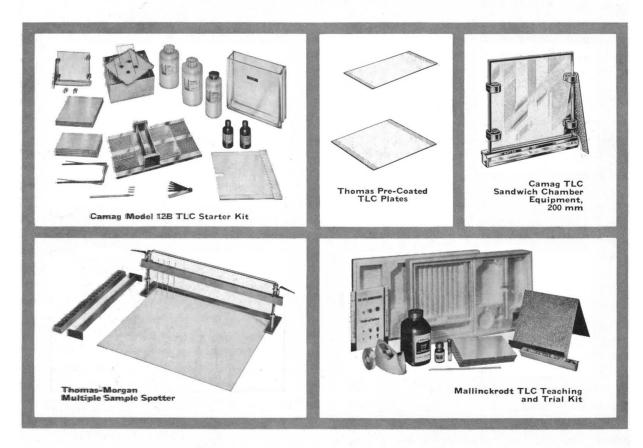
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