

Calendar

Material for inclusion in the calendar and meeting sections should be received 6 weeks prior to the date of the issue in which it is to appear. Further information can be obtained by writing to the addresses indicated in parentheses.

April

- 17 Physics Club of Chicago (Organic Semiconductors by D. Fox), Younker's Restaurant, Chicago (E. L. Buswell, *The Welch Scientific Co.*, 1515 Sedgwick St., Chicago 10, Ill.)
- 18 **OSA Rochester Section** (Contemporary Problems in Colorimetry by G. Wyszecski), Rochester Museum of Arts & Sciences (J. H. Altman, Kodak Research Lab, Rochester 4, N. Y.)
- 18-19 Organic Semiconductors, conf. spon's'd by Armour Research Found. & Electronics mag., at Morrison Hotel, Chicago (J. J. Brophy, ARF, 10 W. 35 St., Chicago 16, Ill.) (See Feb. PT, p. 96)
- 18-20 Chemical Reactions in the Lower & Upper Atmosphere Symp., spon's'd by Stanford Research Inst., at Mark Hopkins Hotel, San Francisco (R. D. Cadle, SRI, Menlo Park, Calif.) (See Aug. '60 PT, p. 62)
- 19 Welding Res. Council, Ann. University Res. Conf., Hotel Commodore, NYC (WRC, 29 W. 39 St., New York 18, N. Y.)
- 20-21 British Soc. of Rheology mtg. on Theoretical Rheology, Reading, England (M. F. Culpin, *3 The Broadway*, Pontypool, Monmouth, Wales)
- 20-22 Am. Meteorological Soc. with Am. Geophysical Union, Washington, D. C. (K. C. Spengler, 45 Beacon St., Boston 8, Mass.)
- 20-22 Ohio Academy of Science, U. of Cincinnati in Cincinnati (K. B. Hobbs, 505 King Ave., Columbus 1, Ohio)
- 21-22 **APS Ohio Section**, U. of Cincinnati, Cincinnati (L. E. Smith, Denison U., Granville, Ohio)
- 24-26 Nat'l Academy of Sciences, ann. mtg., Washington, D. C. (NAS, 2101 Constitution Ave., Washington 25, D. C.)
- 24-27 **American Physical Society**, Sheraton-Park Hotel, Washington, D. C. (K. K. Darrow, 538 W. 120 St., New York 27, N. Y.)
- 26-27 High-Temperature Materials, technical conf. spon's'd by Metallurgical Soc. of AIME, Carter Hotel, Cleveland, Ohio (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18, N. Y.)
- 26-28 Propellants, Combustion & Liquid Rockets, Am. Rocket Soc. mtg., Palm Beach Biltmore, Palm Beach, Fla. (R. Hohl, ARS, 500 Fifth Ave., New York 36, N. Y.)
- 30-4 Nat'l Aero-Space Instrumentation Symp., Adolphus Hotel, Dallas (W. J. Gabriel, Convair Div., General Dynamics Corp., Ft. Worth, Tex.)
- 30-4 The Electrochem. Soc., Claypool Hotel, Indianapolis, Ind. (Electrochem. Soc., 1860 Broadway, New York 23, N. Y.)
- ? Radiofrequency Spectroscopy Group, conf. on Free Radicals & Nuclear Magnetic Resonance, St. Andrews (F. A. Rushworth, St. Salvator's Col., U. of St. Andrews, St. Andrews, Scotland)

May

- 3-5 Nuclear Applications in Space, Am. Rocket Soc.-Oak Ridge Nat'l Lab conf., Gatlinburg, Tenn. (R. Hohl, ARS, 500 Fifth Ave., New York 36, N. Y.)
- 3-10 Detection & Use of Tritium in the Physical & Biological Sciences, IAEA symp., Vienna (IAEA, 11 Kärntner Ring, Vienna 1, Austria)
- 4-5 Human Factors in Electronics, symp. spon's'd by PGHFE of IRE, Marriott-Twin Bridges Motor Hotel, Arlington, Va. (H. P. Birmingham, US Naval Res. Lab, Washington 25, D. C.)
- 6 Graph Theory Workshop, U. of Ill., Urbana (M. E. Van Valkenburg, U. of Ill., Urbana, Ill.)
- 7-12 Soc. of Motion Picture & TV Engineers, conv. & equipment exhibit, Toronto, Canada (SMPTE, 55 W. 42 St., New York 36, N. Y.)
- 8 **OSA Rochester Sect.** (Physics via Classroom & TV by H. White), Rochester (J. H. Altman, Kodak Research Labs, Rochester 4, N. Y.)
- 8-9 Topology in Circuit Theory, 5th Midwest Symp. at Allerton Pk. in Monticello, & U. of Ill. in Urbana (M. E. Van Valkenburg, U. of Ill., Urbana, Ill.) (See May '60 PT, p. 73)
- 8-9 Titrimetric Methods of Analysis Symp. spon's'd by Chem. Inst. of Canada Analytical Chem. Div. in Cornwall, Ont. (J. R. McCallum, c/o Courtaulds Ltd., Cornwall, Ont., Canada)
- 8-10 Nat'l Aerospace Electronics Conf. (NAECON), Biltmore & Miami Hotels, Dayton (Inst. of Radio Engineers, 1 E. 79 St., New York 21, N. Y.) (See Mar. PT, p. 102)
- 9 SAS New York Sect. & Del. Valley Sect. mtg. on Infrared & Raman Spectra of Steroids & Other Natural Products, Princeton Inn, Princeton, N. J. (P. Lublin, General Telephone & Electronics Labs, Bayside, N. Y.)
- 9-17 Measurement, Control, Regulation, & Automation, internat'l exhibition & congress, Paris (MESUCORA, 40, rue du Colisée, Paris 8, France)
- 11-13 **Acoustical Society of America**, Bellevue-Stratford Hotel, Philadelphia, Pa. (M. E. Hawley, RCA, Moorestown, N. J.)
- 11-21 Nuclear Electronics, IAEA exhibition & conf. (May 15-20), Belgrade, Yugoslavia (IAEA, 11 Kärntner Ring, Vienna 1, Austria)
- 12-13 Midwest Theoretical Physics Conf., U. of Minn. (W. B. Cheston, U. of Minn., Minneapolis 14, Minn.)
- 15-17 Radiation Research Soc., ann. mtg., Sheraton-Park Hotel, Washington, D. C. (E. L. Powers, Argonne Nat'l Lab, Argonne, Ill.)
- 15-17 IRE Prof. Group on Microwave Theory & Techniques, Sheraton-Park Hotel, Washington, D. C. (IRE, 1 E. 79 St., New York 21, N. Y.) (See Oct. PT, p. 86)

- 15-18 Spectroscopy Symp. of SAS Chicago Sect., Conrad Hilton Hotel, Chicago (W. Ashby, Continental Can Co., Inc., 7622 S. Racine Ave., Chicago 20, Ill.) (See Dec. '60 PT, p. 80)
- 22-24 Nat'l Telemetering Conf., spon's'd by AIEE, ARS, IAS, IRE, ISA at Sheraton Towers Hotel, Chicago, Ill. (J. Becker, Dept. 32-29, AC Spark Plug Div., General Motors Corp., Milwaukee 1, Wisc.) (See Feb. PT, p. 96)
- 22-24 Global Communications, nat'l symp. spon's'd by AIEE & PGCS of IRE, Hotel Sherman, Chicago (D. C. Campbell, ITT-Kellogg, 5959 S. Harlem Ave., Chicago 38, Ill.)
- 23-25 Large Capacity Memory Techniques for Computing Systems, symp. spon's'd by ONR Information Systems Branch, in Dept. of Interior Auditorium, Washington, D. C. (Miss J. Leno, Code 430A, Office of Naval Research, Washington 25, D. C.)
- 29-2 Effects of Ionizing Radiation at the Molecular Level, IAEA symp., Brno, Czechoslovakia (Internat'l Atomic Energy Agency, 11 Kärntner Ring, Vienna 1, Austria)
- 29-2 Property Changes in Reactor Materials & Radiation Damage Conf., Bristol (A. T. Churchman, Berkeley Nuclear Labs, 7 St. Stephen's Ave., Bristol 1, England)
- ? Biophysical Cong., 1st, Tatranská Lomnica (V. Slouka, Czechoslovak Medical Soc., Juan Evangelista, Biophys. Sect., Prague, Czechoslovakia)

June

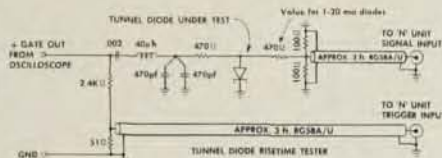
- 4-9 ASTM Comm. E-14 on Mass Spectrometry, Chicago, Ill. (G. Crable, Gulf Research Center, P. O. Box 2038, Pittsburgh 30, Pa.) (See Dec. '60 PT, p. 80 & Mar. '61 PT, p. 102)
- 5-10 Spectroscopy, internat'l conf., Lyons (Groupement pour l'Avancement des Méthodes Spectrographiques, 1, rue Gaston-Boissier, Paris 15, France)
- 7-10 Canadian Assoc. of Physicists, ann. cong., Sir George Williams U., Montreal (G. D. Scott, U. of Toronto, Toronto 5, Ont., Canada)
- 12- (through Sept. 1) Gordon Research Confs. in N. H. (W. G. Parks, U. of R. I., Kingston, R. I.)
- 12-15 Physics of Electronic & Atomic Collisions, internat'l conf., U. of Colo., Boulder (B. Bederson, New York U., New York 53, N. Y.) (See July '60 PT, p. 75)
- 12-16 Molecular Structure & Spectroscopy Symp., Dept. of Physics & Astronomy, Ohio State U. (R. A. Oetjen, Ohio State U., Columbus 10, Ohio) (See Mar. PT, p. 104)
- 13-16 Whole Body Counting, IAEA symp., Vienna (IAEA, 11 Kärntner Ring, Vienna 1, Austria)
- 13-16 Inst. of the Aerospace Sciences & Am. Rocket Soc., joint mtg. Hotel Ambassador, Los Angeles (J. W. Wechsler, 7660 Beverly Blvd., Los Angeles 36, Calif.)
- 14-16 Semiconducting Compounds Conf. spon's'd by AFOSR & GE Res. Lab at GE Res. Lab, Schenectady (H. Ehrenreich, GE Res. Lab, P. O. Box 1088, Schenectady, N. Y.) (See Mar. PT, p. 104)
- 14-16 Theory of Weak & Strong Interactions Conf. spon's'd by IUPAP, NSF, ONR at U. of Calif. at La Jolla (K. A. Brueckner, U. of Calif., La Jolla, Calif.)
- 18-21 **American Astronomical Society**, Nantucket (A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)

- 19-23 Carbon Conf., biennial, spons'd by Am. Carbon Comm. & Penn State U. at Penn State U. (D. S. Coleman, Penn State U., University Park, Pa.) (See Jan. PT, p. 110)
- 19-30 Holloman Summer Scientific Seminars on Astrophysics spons'd by AF Missile Dev. Center & U. of N. M., in Cloudcroft (J. R. Foote, P. O. Box 1053, Holloman AFB, N. M.)
- 20-22 Am. Meteorological Soc. with AAAS Pacific Div., Davis, Calif. (K. C. Spengler, 45 Beacon St., Boston 8, Mass.)
- 20-24 Vacuum Techniques, internat'l cong., Paris (Mme. J. Mainier, 147, ter A. baul, de Strasbourg, Nogent-sur Marne (Seine), France)
- 22-23 Computers & Data Processing, ann. symp. of Denver Res. Inst., Elkhorn Lodge, Estes Park (W. H. Eichelberger, Denver Res. Inst., U. of Denver, Denver 10, Colo.)
- 22-24 American Physical Society, U. of Mexico, Mexico City (K. K. Darrow, 538 W. 120 St., New York 27, N. Y.)
- 26-27 Vacuum Metallurgy, ann. conf. spons'd by Am. Vacuum Soc. & New York U. at NYU University Heights Campus (R. F. Bunshah, NYU, New York 53, N. Y.) (See Feb. PT, p. 96)
- 26-28 European Symp. on Space Technology, at Federation of British Industries, London (British Interplanetary Soc., 12 Bessborough Gardens, London S. W. 1, England)
- 26-30 Soc. of Physical Chemistry, ann. mtg., Col. de Voza, Haute-Savoie (G. Emschwiller, Soc. de Chimie Physique, 10, rue Vauquelin, Paris 5, France)
- 26-1 Internat'l Measurement Conf. (IM EKO) in Eng. Soc. Bldg., Budapest (G. Striker, P. O. Box 3, Budapest 5) & June 25-July 4, Internat'l Measurement & Instruments Show (IMS) at Budapest Industrial Fair Exhibition Halls (Budapest Fair Bur., Budapest 14, Városliget, Hungary)
- 27-29 Analytical Astrodynamics, internat'l symp. spons'd by GE Space Sciences Lab & AFOSR Mechanics Div., Santa Barbara, Calif. (J. L. Gilbert, AFO SR, Washington 25, D. C.)
- 29-1 American Association of Physics Teachers, Stanford U., Palo Alto, Calif. (F. Verbrugge, U. of Minnesota, Minneapolis 14, Minn.)
- ? Earth Satellites & Re-entry Trajectories, internat'l symp., Paris (A. R. Weiller, Internat'l Academy of Astronautics, 12, rue de Gramont, Paris 2, France)

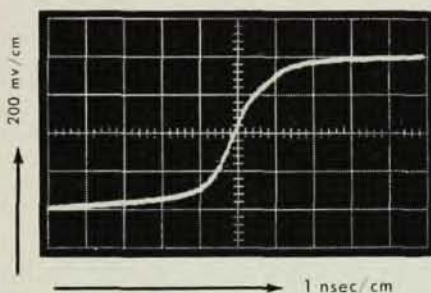
July

- 5-8 Optical Materials, Internat'l Comm. for Optics mtg., Paris (A. Maréchal, Institut d'Optique, 3, Blvd. Pasteur, Paris 15, France) (See Jan. PT, p. 110)
- 6-7 Free Radicals, internat'l symp., Uppsala (Symp. Secretariat, c/o Inst. of Phys. Chem., Uppsala, Sweden)
- 10-14 Optical Instruments & Techniques Conf., arranged by British Nat'l Comm. for Physics under auspices of Internat'l Commission for Optics, London (K. J. Habell, Nat'l Physical Lab, Teddington, Middlesex, England)
- 16-21 Internat'l Conf. on Medical Electronics & Ann. Conf. on Electrical Techniques in Medicine & Biology spons'd by ISA, IFME, AIEE, IRE, at Waldorf-Astoria, NYC (J. T. Farrar, Veterans Administration Hospital, 1st Ave. & 24 St., New York, N. Y.) (See Feb. PT, p. 99)
- 18-21 Inorganic Polymers, internat'l symp., Nottingham (Gen. Sec'y, Chemical Soc., Burlington House, London W. 1, England)

TUNNEL DIODE SWITCHING TIME MEASUREMENT



A convenient low-cost method of testing tunnel (Esaki) diodes with nanosecond switching speeds is shown above. A Tektronix Plug-In Oscilloscope provides both the current ramp source for the tunnel diode and the pretrigger for the Type N Unit. The N Unit is set up in the usual way—however, the oscilloscope main sweep generator is allowed to free run at 1 μ sec/cm. The + GATE OUT not only triggers the N Unit but also provides a delayed current ramp with a low rate of change—which allows the tunnel diode to switch at essentially its own rate.



Typical waveform of gallium arsenide tunnel diode in Tektronix Tunnel Diode Risetime Tester (part number 013-029).

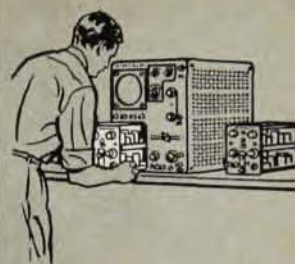
This is only one of the pulse-sampling applications your Tektronix Plug-In Oscilloscope can perform with the new Type N Unit plugged into its vertical channel. Only the Type N is needed—in addition to the oscilloscope—if the repetitive signal has a 45 to 200 nanosecond pretrigger, or a repetition rate from 10 to 50 megacycles.

For applications that require auxiliary equipment, Tektronix manufactures a Pulse Generator and Trigger Take-off, a Pretrigger Pulse Generator, a Delay Cable, and many accessory items. If you have one of the dozen Tektronix Oscilloscope Types that accepts Type A to Z



TEKTRONIX FIELD OFFICES: Albuquerque, N. Mex. • Atlanta, Ga. • Baltimore (Towson), Md. • Boston (Lexington) Mass. • Buffalo, N.Y. • Chicago (Park Ridge) Ill. • Cleveland, Ohio • Dallas, Texas • Dayton, Ohio • Denver, Colo. • Detroit (Lathrup Village) Mich. • Endicott (Endwell) N.Y. • Greensboro, N.C. • Houston, Texas • Indianapolis, Ind. • Kansas City (Mission) Kan. • Los Angeles, Calif. Area (East L.A. • Encino • West L.A.) • Minneapolis, Minn. • Montreal, Quebec, Canada • New York City Area (Albertson, L.I., N.Y. • Stamford, Conn. • Union, N.J.) • Orlando, Fla. • Philadelphia, Pa. • Phoenix (Scottsdale) Ariz. • Poughkeepsie, N.Y. • San Diego, Calif. • San Francisco (Palo Alto) Calif. • St. Petersburg, Fla. • Syracuse, N.Y. • Toronto (Willowdale) Ont., Canada • Washington, D.C. (Annandale, Va.)

TEKTRONIX ENGINEERING REPRESENTATIVES: Hawthorne Electronics, Portland, Oregon • Seattle, Washington. Tektronix is represented in twenty overseas countries by qualified engineering organizations. In Europe please write Tektronix Inc., Victoria Ave., St. Sampsons, Guernsey G.I., for the address of the Tektronix Representative in your country.



New Type N Unit converts your Tektronix Plug-In Oscilloscope to a Pulse-Sampling Scope with a risetime of 0.6 nanosecond.



Plug-In Units, you already have the main component of your pulse-sampling system . . . a system that can be as simple or as formidable as your pulse-analyzing problems.

Your Tektronix Field Engineer is prepared to demonstrate the Type N Unit in your application. Call him soon.

Type N Sampling Plug-In Unit . . . \$600

Tunnel Diode Risetime Tester (013-029) . . . 50

f. o. b. factory

A twelve-page booklet of specifications and applications is available from your Tektronix Field Office.

Tektronix, Inc.

P. O. Box 500 • Beaverton, Oregon

Phone Mitchell 4-0161 • TWX—BEAV 311 • Cable: TEKTRONIX

POSITIONS OPEN

QUEEN'S UNIVERSITY KINGSTON, ONTARIO, CANADA DEPARTMENT OF PHYSICS

Applications are invited from experimental and theoretical physicists for two positions from September 1, 1961 in the Department of Physics. Staff is being increased to 15 full-time members. New appointments normally become permanent after two years. Duties will be primarily teaching undergraduate and graduate students, but fundamental research is expected and encouraged. Present research program includes experimental and theoretical atomic and nuclear physics, solid state physics, and radio astronomy. New physics building has been approved and will be constructed in the immediate future.

Salary and rank will depend upon qualifications which should include a Ph.D. degree. Teaching or research experience will be valued. Positions will be in the ranks of Lecturer or Assistant Professor and within the salary range \$6,600-\$8,500 per annum.

Applications and inquiries should be addressed to the head of the department.

Assistant professorship open in Physics Department at Fresno State College. Ph.D. required. Salary depends on experience. Apply F. A. Scott, Head of Physical Science Division, Fresno State College, Fresno 26, California.

COLLEGE TEACHING POSITION OPEN

Hobart and William Smith Colleges, Geneva, New York. Assistant Professorship, Preferably Ph.D. but will consider experienced M.A. Salary open. Undergraduate teaching. Research opportunities will expand with completion of new Science Centre. Write: Dr. Alfred Haussmann, Chairman, Department of Physics, Hobart and William Smith Colleges, Geneva, N. Y.

University located 25 minutes from New York City requires Physics Instructors for September, 1961. Positions open at all levels. Research opportunities are available. Contact Chairman, Physics Department, Fairleigh Dickinson University, Teaneck, N.J.

FELLOWSHIPS AND ASSISTANTSHIPS:

Advanced degree students in physical metallurgy. Emphasis on phase equilibria, crystal imperfections, plastic deformation in alloys, ceramics, and intermetallics. Applicants with degrees in the physical sciences or engineering will be considered. Fulltime summer research employment available. Contact: Department of Metallurgy, University of Denver, Denver 10, Colorado.

POSITIONS OPEN

TEMPLE UNIVERSITY in Philadelphia has two openings in the Physics Department combining teaching and research. The department activities include a Ph.D. program. Research space, classrooms and offices are located in a modern air-conditioned building. Ph.D. required and some teaching experience preferred. Rank commensurate with qualifications and experience. Write to the Chairman of the Physics Department, Professor J. Lloyd Bohn, Temple University, Philadelphia 22, Pennsylvania.

PROCESS ANALYSIS Senior Engineer, preferably with advanced degree in physics, mechanical, or chemical engineering to conduct research on the analysis and control of glass container manufacturing processes. Excellent working conditions in new research center just completed near Plainfield, Illinois, 35 miles southwest of Chicago. Write to: R. P. Eichhorn; Research & Development Department, Hazel-Atlas Glass Division, Continental Can Co., Inc., Plainfield, Illinois.

Opening in Physics in a midwestern College with a strong program in Engineering and Physical Sciences. Ph.D. preferred. Rank and Salary open. Will employ qualified candidate when available. Please write E. M. McKown, Dean, Evansville College, Evansville 4, Indiana.

GRADUATE RESEARCH ASSISTANTSHIPS paying room, board, tuition plus \$80 to \$125 monthly year-round and permitting full graduate load in program leading to M.S. in physics or Ph.D. in biophysics. Research in Kramer effect, molecular structure, biophysical chemistry, and chemisorption. Director, Institute of Scientific Research, New Mexico Highlands University, Las Vegas, New Mexico.

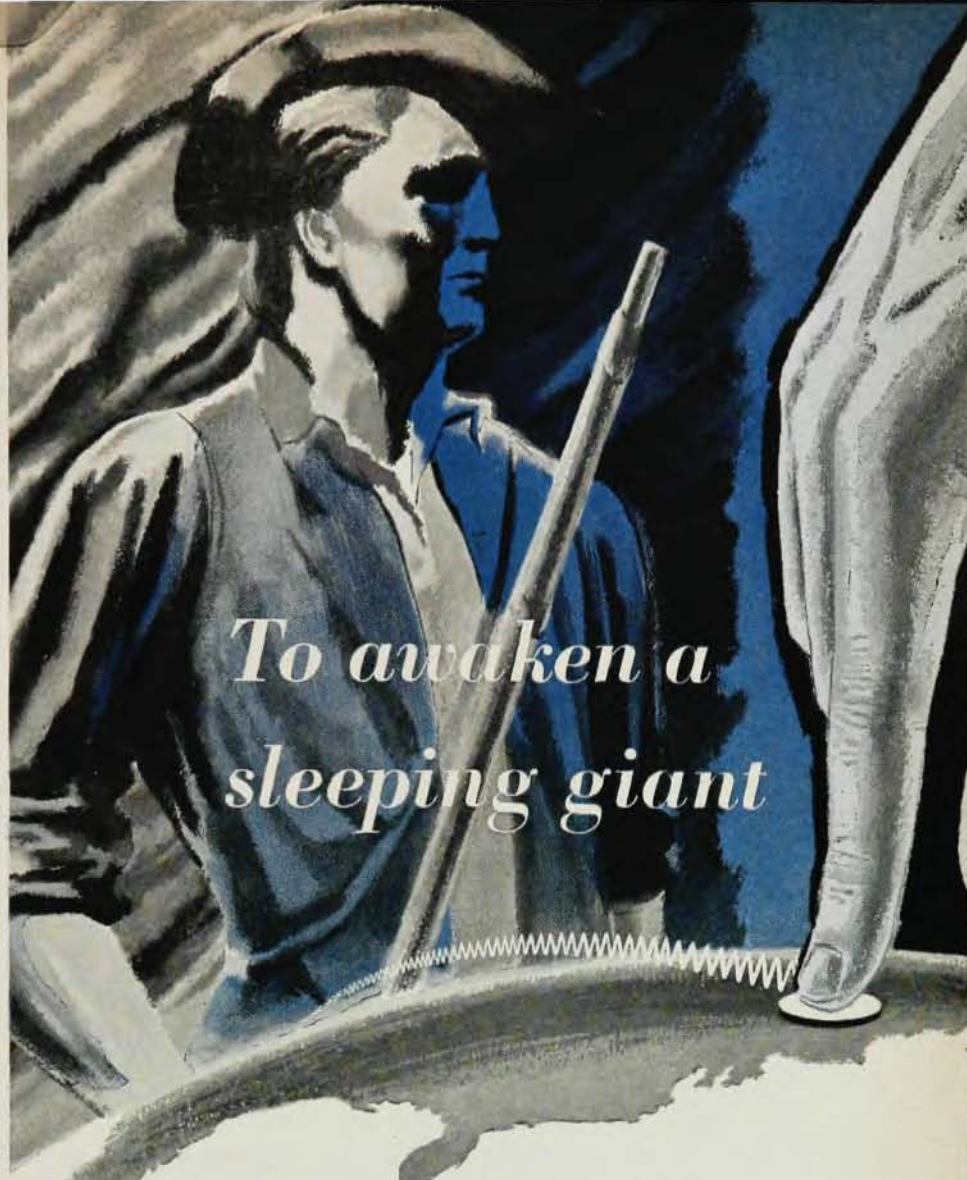
Assistant Professor in Physics, Ph.D., Long Beach State College, Long Beach 4, California. Teaching assignment in bachelors or masters program. Current faculty research in Low Temperature Physics (thermal conductivity), Semiconductors, Plasma Physics and Theoretical Physics. Location: 30 minutes from Los Angeles. Salary approximately \$7,000 and up per 9 month academic year. Apply to C. A. Roberts, Physics Department.

1961

- 27-1 Macromolecular Chemistry, internat'l symp., Queen Elizabeth Hotel, Montreal (*Organizing Comm., Internat'l Symp. on Macromolecular Chem., P. O. Box 816, Sarnia, Ont., Canada*) (See Nov. PT, p. 78)
- 31-4 American Crystallographic Association, U. of Colorado, Boulder (*W. M. Macintyre, U. of Colo., Boulder, Colo.*)
- 31-4 Internat'l Congress of Biophysics, Stockholm (*B. Lindström, Karolinska Institutet, Stockholm 60, Sweden*) (See Oct. '60 PT, p. 88)
- 31-4 Differential Equations & Nonlinear Mechanics Symp. spons'd by AFOSR & RIAS at AF Academy, Colorado Springs, Colo. (*OSR-RIAS Symp., Math. Dept., 7212 Bellona Ave., Baltimore 12, Md.*) (See Aug. '60 PT, p. 62)

August

- 2-12 Aug. 2-5, IUPAC Conf. (*R. Morf, Hoffmann-La Roche, S.A., Grenzacherstr. 124, Basel 2, Switzerland*); Aug. 6-12, Internat'l Congress of Pure & Applied Chem. (*L. Marion, Nat'l Research Council, Ottawa 2, Ont., Canada*) & High Temperature Chem. & Thermodynamics Symp. (*N. F. H. Bright, NRC, Ottawa 2, Ont.*) in Montreal, Canada
- 6-26 Nuclear Physics Summer Course spons'd by Italian Physical Soc., at Varenna (*G. Polvani, Via Saldini 50, Milan, Italy*)
- 14-17 Internat'l Calorimetry Conf., Ottawa, Canada (*J. E. Kunzler, Bell Telephone Labs, Murray Hill, N. J.*)
- 15-26 Aug. 15-24, Internat'l Astronomical Union gen. assembly in Berkeley & Aug. 24-26, Symp. on The Solar Corona at Sacramento Peak, Calif. (*D. H. Sadler, Royal Greenwich Observatory, Herstmonceux Castle, Sussex, England*)
- 16-18 Hypersonics, internat'l conf., Mass. Inst. of Technology, Cambridge, Mass. (*R. Hohl, Am. Rocket Soc., 500 Fifth Ave., New York 36, N. Y.*)
- 21-24 Photoconductivity, internat'l conf., spons'd by IUPAP, APS, ONR, at Cornell U., Ithaca, N. Y. (*A. R. Hutson, Bell Telephone Labs, Murray Hill, N. J.*) (Feb. PT, p. 99)
- 21-31 New (Nonnuclear) Energy Sources, UN conf. (*A. G. Katzin, United Nations, N. Y.*) and Equipment & Services Exhibition (*Rassegna Internazionale Eletttronica, Via della Scrofa 14, Rome, Italy*) in Rome, Italy (See Mar. PT, p. 104)
- 23-25 Gas Dynamics Symp. spons'd by Am. Rocket Soc. & Northwestern U. Gas Dynamics Lab at Northwestern U. (*Gas Dynamics Symp., Mech. Eng. Dept., Northwestern U., Evanston, Ill.*)
- 23-26 Electron Microscope Soc. of Am., Pittsburgh Hilton Hotel, Pittsburgh, Pa.; send abstracts by May 1 to A. R. Taylor (*A. R. Taylor, Parke, Davis & Co., Detroit 32, Mich.*) (See Feb. PT, p. 101)
- 28-30 University Use of Subcritical Assemblies, ORINS symp. spons'd by ANS, ORNL, AEC, in Gatlinburg (*Symp. Office, University Relations Div., Oak Ridge Inst. of Nuclear Studies, Box 117, Oak Ridge, Tenn.*)
- 28-31 Chemical Physics of Nonmetallic Crystals, internat'l symp. spons'd by APS Div. of Chem. Phys. & Solid-State Phys. and ACS Div. of Phys. Chem., at Northwestern U., Evanston; send abstracts by May 1 to W. J. Moore, Indiana U., Bloomington, Ind. (*O. C. Simpson, Argonne Nat'l Lab, 9700 S. Cass Ave., Argonne, Ill.*)



To awaken a sleeping giant

the newest communications assignment at Amherst Laboratories

In the event of attack...an electronic klaxon will interrupt the lonely vigil of tomorrow's retaliatory force. The Air Force's Minuteman will erupt from underground silos and streak toward enemy targets...at a moment's notice. The fire command will originate from a remotely located control-launch center and be carried by a jam-resistant signal.

New techniques in Electronic Communications must be developed and converted to practicality. This is just one of the many advanced Ground, Air and Space Communications assignments at Amherst Laboratories.

PROFESSIONAL STAFF AND MANAGEMENT OPPORTUNITIES
are unlimited for Physicists, Mathematicians and Electronics Engineers with advanced degrees and creative desire.

You are invited to direct inquiries in confidence to Mr. Daine C. Maxwell,
AMHERST LABORATORIES • 1184 WEHRLE DRIVE • WILLIAMSVILLE, NEW YORK

April 1961

SYLVANIA ELECTRONIC SYSTEMS

Government Systems Management
for **GENERAL TELEPHONE & ELECTRONICS**



POSITIONS OPEN

PHYSICISTS FOR RESEARCH

in new type permanent magnet materials

APPLICATION ENGINEERS

for new permanent magnet types

A new division of an established company is desirous of expanding its magnetics division. Here is an outstanding opportunity to improve the position of yourself and your family by joining an aggressive sales-minded company with a vigorous program already under way.

Send educational and business history to:

**Magnetics Division
Leyman Corporation
5178 Crookshank Rd.
Cincinnati 38, Ohio**

RESEARCH METALLURGISTS: Challenging opportunities in combined contract research—teaching assignments in physical, nuclear and structural metallurgy and ceramics. Ph.D.'s desirable, but outstanding M.S. individual will be considered. Salaries open. Resumes should give academic and professional experience in detail. Send to Metallurgy Division, University of Denver, Denver 10, Colorado.

POSITIONS in the NUCLEAR FIELD

Write us first! Use our Application, No Resume Required. Our national coverage and technical experience in the nuclear field offers the maximum opportunity to achieve your goals. Confidential handling. Employer Pays Fee. Write Arthur L. Krasnow . . .

ATOMIC PERSONNEL, INC.

An Employment Agency for the Nuclear Field

Suite 1207M, 1518 Walnut St. Phila. 2, Pa.

For September 1961. Professorship in Physics. Ph.D. interested in teaching upper undergraduate and master's level courses. Research of a nature to be continued without extensive research equipment. New facilities by 1962. Write Mr. B. J. Seawell, State University College of Education, Plattsburgh, New York.

POSITIONS OPEN

TEACHING—RESEARCH PHYSICIST

Liberal Physicist-Mathematician needed for research and teaching in the following: Dynamics, statics including theories on elasticity and viscoelasticity, heat and thermodynamics, electricity, physical optics, "modern physics." Please make inquiry or send resumé to:

**THE DIRECTOR OF PERSONNEL
THE INSTITUTE OF PAPER
CHEMISTRY
APPLETON, WISCONSIN**

Full Professor and Chairman of Physics Department at University of Bridgeport. New Science Building an opportunity to develop a new major. Salary; \$10,000.00 to \$12,000.00 for twelve months. For further information write Dr. C. D. L. Ropp, Dean, College of Arts and Science, University of Bridgeport, Bridgeport 4, Connecticut.

SCIENTIST-TRANSLATORS

Russian to English

Supplement your income while you keep abreast of latest Soviet research in your field. **GUARANTEED** steady flow of translation in your specialty. Must have graduate study and experience in Physics (atomic, plasma, solid state), Crystallography, Instrumentation, Automation. Native command of English necessary. Chinese-English scientist-translators also wanted.

CONSULTANTS BUREAU, 227 W. 17 St., N. Y. 11, N. Y.

ASTRONOMER OR ASTROPHYSICIST

The Department of Physics of the University of North Carolina invites applications from Ph.D. astronomers or physicists with an interest in teaching elementary astronomy courses. Research in physics or astronomy would be encouraged. Large electronic computer available. Salaries competitive and commensurate with rank and experience. Please address inquiries to P. Shearin, Department of Physics, University of North Carolina, Box 1079, Chapel Hill, North Carolina.

MONMOUTH COLLEGE (a liberal arts college) needs a teacher of undergraduate physics. Ph.D. required. Salary \$7,000-\$8,000 for nine months. Permanent position with good chance for advancement. Apply to Lyle W. Finley, Head, Department of Physics, Monmouth College, Monmouth, Illinois.

1961

- 28-31 Spectral Line Shape & Molecular Interactions Conf., Rehovoth (J. H. Jaffe, Weizmann Inst., Rehovoth, Israel)
- 28-1 Ionization Phenomena in Gases, internat'l conf., Munich (Conf. Secretariat, P. O. Box 463, Munich 1, Germany) (See Mar. PT, p. 106)

September

- 4-7 Electric & Magnetic Properties of Thin Metallic Layers, symp. spons'd by IUPAP & Flemish Academy, Louvain (A. Van Isterbeek, Naamsestraat, 61, Louvain, Belgium)
- 4-8 Plasma Physics & Controlled Nuclear Fusion Research, IAEA Conf., Salzburg (Internat'l Atomic Energy Agency, 11 Kärntner Ring, Vienna 1, Austria)
- 4-9 Low-Energy Nuclear Physics, internat'l IUPAP conf., Manchester (B. H. Flowers, Manchester U., Manchester 13, England)
- 4-15 Internat'l Conf. on Cosmic Rays & the Earth Storm spons'd by IUGG, URSI, IAU, IUPAP, incl.: Sept. 4-6, Internat'l Symp. on the Earth Storm (R. Nagata, Science Council of Japan, Ueno Park, Tokyo, Japan); Sept. 11-15, Internat'l Conf. on Cosmic Rays (Y. Sekido, Science Council of Japan, Ueno Park); & Sept. 7-9, joint sessions, all in Kyoto, Japan
- 6-8 Midwestern Conf. on Fluid Mechanics & Solid Mechanics, Michigan State U. (J. E. Lay, Michigan State U., East Lansing, Mich.)
- 11-21 Cloud Physics Conf., internat'l, spons'd by Australian Acad. of Sciences & CSIRO in Canberra & Sydney (E. G. Bowen, CSIRO, University Grounds, Sydney, Australia) (See Mar. PT, p. 108)
- 14-20 Aix-en-Provence Internat'l Conf. on Elementary Particles at Aix-en-Provence, France (Miss E. W. D. Steel, CERN, Geneva 23, Switzerland)
- 24-27 Rare Earth Conf. spons'd by U. of Denver Res. Inst. at Colo. Hotel, Glenwood Springs; submit mss. by June 1 to J. F. Nachman (J. F. Nachman, Denver Res. Inst., U. of Denver, Denver 10, Colo.)
- 25-30 Magnetism, internat'l IUPAP conf. & Electron & Neutron Diffraction, internat'l IUCr symp., Kaikan Assembly Center, Kyoto (T. Nagamiya, Science Council of Japan, Ueno Park, Tokyo, Japan) (See Oct. '60 PT, p. 90)

October

- 9-13 Luminescence of Inorganic & Organic Systems, internat'l conf., New York U. (Grace M. Spruch, NYU, Washington Sq., New York 3, N. Y.)
- 11-13 Gaseous Electronics Conf., ann. spons'd by APS Div. of Electron Physics at GE Research Lab, Schenectady (C. J. Gallagher, GE Research Lab, P. O. Box 1088, Schenectady, N. Y.)
- 16-19 Internat'l Congress on Vacuum Science & Technology in connection with Internat'l Organization for Vacuum Science & Technology gen. mtg., Washington, D. C. (W. M. Welch, 1515 Sedgwick St., Chicago 10, Ill.) and Am. Vacuum Soc. mtg. (AVS, Box 1282, Boston 9, Mass.)
- 18-20 Optical Society of America, Biltmore Hotel, Los Angeles, Calif. (Mary Waga, 1155 16th St., N. W., Washington 6, D. C.)
- 29-31 Photoelasticity, internat'l symp., Ill. Inst. of Technology (P. D. Flynn, Ill. Inst. of Technology, Chicago 16, Ill.)
- 30-1 Society of Rheology, ann. mtg., U. of Wisc., Madison (J. D. Ferry, U. of Wisc., Madison 6, Wisc.)

April 1961



7-C-12 Evaporator system, 360 liter/sec. capacity; available with glass or metal chamber

Ultek ELECTRONIC high-vacuum SYSTEMS

clean vacuum—no fluids, no contaminants

high vacuum— 10^{-5} through 10^{-9} mm Hg and below, chamber volumes from 0.001 to 100 cubic feet

low-cost operation — UlteVac ionic pumps need minimum maintenance, operate unattended for months
System completely self-contained and movable
No water lines or plumbing connections
Requires only an AC outlet

high-vacuum applications . . .

- vacuum tube processing
- space simulation
- thin film deposition
- environmental testing
- general physics research

complete vacuum line . . .

- standard and custom systems, with pumps from 5 to 2000 liters/sec.
- sorption roughing pumps
- high-vacuum valves
- vacuum chamber feed-throughs and view ports
- metal-sealed fittings
- ambient foreline traps

Write Today —

FREE Reprint of technical article, "Ionic Vacuum Pumps," by Dr. Lewis D. Hall

U L T E K
CORP.

920-P Commercial St., Palo Alto, Calif. • DA 1-4117

ULTEK SALES ENGINEERING OFFICES:
BOSTON • CLEVELAND • PHILADELPHIA

Ultek vacuum station designed for experimental tube processing

