calendar

JANUARY 1978

- 11-13 3rd APS Topical Conf on Radio Frequency Plasma Heating Pasadena, Cal. 7/77
- 11–14 AAS Dynamical Astronomy Div Meeting Austin, Tex. 9/77
- 16-18 IEEE/OSA Meeting on Integrated and Guided Wave Optics Salt Lake City, Utah [10/20/77] 7/77
- Practical Infrared Optics [Soc of Photo-optical Instrumentation Engineers] Los Angeles, Cal. (*Technical* Programs Committee, SPIE Nat'l Offices, P. O. Box 10, Bellingham, Wash. 98225) [12/1/77]
- 16–19 Health Physics Soc 11th Midyear Topical Symp—Radiation Instrumentation San Diego, Cal. 7/77
- 19–20 Workshop on Women in Science and Technology [Essex Community College] Baltimore County, Md. 11/77
- 22–26 Joint Annual Meeting—APS/AAPT San Francisco, Cal. 3/77
- 24–26 5th Annual Conf on Physics of Compound Semiconductor Interfaces Los Angeles, Cal. 11/77
- 24–28 Symp on Use of Ultrasonic Arrays for Imaging in Industry and Medicine [Amer. Soc for Testing and Materials] Fort Lauderdale, Fla. 11/77
- 26–28 Laser Energy Conversion [NASA] Moffett Field, Cal. (K. W. Billman, NASA Ames Research Ctr, MS 230-3, Moffett Field, Cal. 94035)

FEBRUARY 1978

- 7-9 CLEOS 78/OSA Topical Meeting on Inertial Confinement Fusion San Diego, Cal. 11/77
- 12-17 Annual Meeting of Amer. Assoc for the Adv of Science Wash., D.C. 7/77
- Aerospace and Electronic Systems Winter Convention Los Angeles, Cal. (M. T. Weiss, Aerospace Corp. P. O. Box 92957, Los Angeles, Cal.
- 15-17 Int Solid State Circuit Conf San Francisco, Cal. (M. R. Barber, Bell Labs, 600 Mountain Ave, Murray Hill, N.J. 07974)
- 17th Int School of Nuclear Physics Graz, Austria (17th Internationale Universitätswochen, Institut fur Theoretical Physik, Universität Graz, Universitätsplatz 5, A-8010 Graz, Austria) [2/7/78]
- 7th Austin Symp on Gas Phase

 Molecular Structure [Univ of Tex. Ctr
 for Structural Studies] Austin, Tex. (J.
 E. Boggs, Chemistry Dept, Univ of Tex.,
 Austin, Tex. 78712)
- German Physical Soc Meeting— Atomic, Short-time, Molecular, Plasma and Gas Discharge Physics, Surface Sci, Mass Spectr, Thin Layers and Quantum Optics München, Fed. Rep. of Germany (S. Witkowski, Max-Planck-Gesellschaft, Projektgruppe für Laserforschung, Institusgelände, D-8046 Garching, Fed. Rep. Germany)

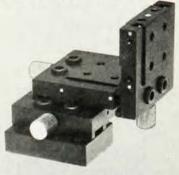
Coding: date subject [Sponsor] Location (Contact) [abstract deadline] Physics Today reference • new listing □ new or revised information

Please Note: follow-up listings give italicized reference date specifying Physics Today issue in which further information can be found.

| Abbreviations: | | ASME | American Society of Mechanical |
|----------------|---------------------------------------|-------|---|
| AAPM | American Association of Physicists in | | Engineers |
| | Medicine | ASTM | American Society for Testing and Mate- |
| AAPT | American Association of Physics | | rials |
| | Teachers | EPS | European Physical Society |
| AAS | American Astronomical Society | ERDA | Energy Research and Development Ad- |
| ACA | American Crystallographic Association | | ministration |
| APS | American Physical Society | IAEA | International Atomic Energy Agency |
| ASA | Acoustical Society of America | IEEE | Institute of Electrical and Electronics |
| AVS | American Vacuum Society | | Engineers |
| OSA | Optical Society of America | IOP | The Institute of Physics |
| SPS | Society of Physics Students | IUPAP | International Union of Pure and Applied |
| SofR | Society of Rheology | | Physics |
| | | NAS | National Academy of Sciences |
| AAAS | American Association for the Advance- | NBS | National Bureau of Standards |
| | ment of Science | NRC | Nuclear Regulatory Commission |
| AGU | American Geophysical Union | NSF | National Science Foundation |
| ANS | American Nuclear Society | ORNL | Oak Ridge National Laboratory |
| | | | |

This is a complete listing of physics-related meetings known to us. A complete calendar will appear in alternate months (no calendar in other months). Those wishing to submit items should send complete information at least *three months* before the notice should appear.

From the company that makes the best optical tables



NEW MINI-STAGE

One of 16 versions we offer, the Model 450 is the smallest translation stage available — only 1.5" x 1.5" x 0.38". It has a 40-pitch drive screw and travels 1/4". Made of steel, with precision ball bearings riding on hardened rods, stages can be compounded for X-Y and X-Y-Z axes. Mount with 8-32 screws or use optional adaptor for 1/4-20 mounting. Delivery from stock, at \$64 per stage.



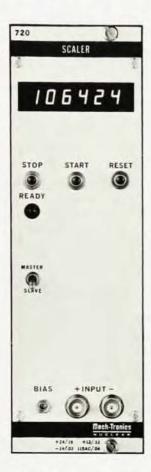


This greatly expanded catalog is packed with useful design information and application notes. Product categories include optical, mechanical and electronic components/instruments for electro-optics, laser and holographic applications. Write NRC, 18235 Mt. Baldy Circle, Fountain Valley, CA. 92708 or call 714-963-9811.

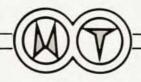


Circle No. 71 on Reader Service Card

50 MHz BASIC SCALER



Model 720 \$395.00



- Six Digit, Seven Segment Display
- Six Decades
- 50 MHz Negative Input, 20 MHz Positive Discriminator Input

Mech-Tronics

NUCLEAR

430A Kay Ave., Addison, II. 60101

For more information WRITE OR CALL COLLECT (312) 543-9304

Booth #131 Physics Show Circle No. 72 on Reader Service Card 27–3 1978 Pittsburgh Conf—Analytical Chemistry and Applied Spectroscopy Cleveland, Ohio [8/29/77] 9/77

MARCH 1978

- 1-3
 100th Anniversary of Liquefaction of Air/Adv in Refrig at Lowest Temps Conf [Int Inst of Refrigeration] Zurich, Switz. 7/77
- High Temperature Plasma Diagnostics—APS Topical Conf [ERDA Magnetic Fusion Energy Div; LASL]
 Santa Fe, N.M. (F. C. Jahoda, Los Alamos Scientific Lab, MS 639, Los Alamos, N.M. 87545) [1/13/78]
- 6-10 Semiconductors, Magnetism, Metal Physics, Thermodynamics, Low Temp Solid State and Statistical Mechs Freudenstadt, Fed. Rep. of Germany (H. Hinsch, Inst f Angew, Physik II, Universität, Albert-Oberle-Str, 3/5, D-6900 Heidelberg, Fed. Rep. of Germany)
- 6-10 Energy Generation Corrosion Problems: Corrosion '78 [Nat'l Assoc of Corrosion Engineers] Houston, Tex. (NACE, P.O. Box 986, Katy, Tex. 77450)
- 6-10 IAEA Symp on Export of Nuclear Power Plants Vienna, Austria [9/ 15/77] 9/77
- 6–18 Sanibel Symp Palm Coast, Fla. Topics: quantum mech methods; quantum biology and pharmacology; atomic, molecular and solid-state theory; collision phenomena; quantum statistics; computational methods 11/77
- 7-9 Int Spacecraft Contamination Conf [NASA; USAF] Colorado Springs, Colo. [9/30/77] 11/77
- 9-11 Int Symp on Superheavy Elements
 Lubbock, Tex. (M. A. K. Lodhi, Physics
 Dept, Tex. Tech Univ, Lubbock, Tex.
 79409) [2/1/78]
- 10–12 Nat'l Conf on Solar Energy Wash., D.C. (S. Slack, Meeting Mangmt, 6900 Grove Rd, Thorofare, N.J. 08086)
- Nuclear and High Energy Physics Heidelberg, Fed. Rep. of Germany (H. V. Klapdor, MPI für Kernphysik, Postfach 1039810, D-6900 Heidelberg, Fed. Rep. of Germany)
- 14–16 Acoustics: DAGA '78 Bochum, Fed. Rep. of Germany (R. Schier, VDE-Zentrale Tagungen, Stresemannallee 21, 6000 Frankfurt 70, Fed. Rep. of Germany)
- Teaching of Physics/Session of Working Group for Engineers Gissen, Fed. Rep. of Germany (W. Kuhn, Karl-Glockner-Strase 21, Haus C, D-6300 Gissen, Fed. Rep. of Germany)
- 15-17 11th Annual Simulation Symp Tampa, Fla. (V. P. Boyd, US Postal Service, 2009 Powhatan St, Falls Church, Va. 22043)
- 2nd Nat'l Passive Solar Conf [Dept of Energy, Conservation and Solar Applications Passive Systems Development Program; Passive Div of American Sect of Int Solar Energy Soc] Phila., Pa. (Mid-Atlantic Solar Energy Assoc, Dept of Architecture, Graduate School of Fine Arts, Univ of Pa., Phila., Pa. 19104) [12/15/77]
- 19-24 ACA Oklahoma Meeting/Karchner Symp on Structural Aspects of Ho-

- mogeneous, Heterogeneous and Biological Catalysis Norman, Okla. 7/77
- Computer Films for Research in Physics and Chemistry [APS Div of Electron and Atomic Physics; ACS Divs of Physical Chemistry and Computer Chemistry] Boulder, Colo. (J. H. Eberly, Joint Inst for Laboratory Astrophysics, Univ of Colo., Boulder, Colo. 80309) [2/1/78]
- Industrial Applications of Microprocessors Phila., Pa. (W. W. Koepsel, Electronic Engineering Dept, Seaton Hall, Kansas State Univ, Manhattan, Kansas 66506)
- Vehicular Technology Conf Denver, Colo. (J. J. Tary, US Dept of Commerce, OT/ITS, 325 Broadway, Boulder, Colo. 80302)
- 22-24 APS Topical Conf on Physics of SiO₂ and its Interfaces Yorktown Heights, N.Y. [11/28/77] 7/77
- Bio-engineering—6th New England Conf Kingston, R.I. (D. Jaron, Biomedical Engineering, Electrical Engineering Dept, Univ of R.I., Kingston, R.I. 02881)
- 27-29 17th Symp on Engineering Aspects of Magnetohydrodynamics [Stanford Univ] Stanford, Cal. [12/5/77]
- 27–30 ☐ APS General Meeting/High Polymer Physics Div/Biophysical Soc Meeting Wash., D.C., (E. Helfand, rm 1A-361, Bell Labs, Murray Hill, N.J. 07974) [12/23/77]
- Int Conf on Integrated Science Education Worldwide Nijmegen, The Netherlands (F. Dekkers, Faculty of Science, Univ of Nijmegen, The Netherlands)
- 29-1 Submillimeter Waves—3rd Int Conf [OSA; IEEE; IOP] Guildford, UK [10/ 1/77] 9/77

APRIL 1978

- 8th Annual Symp—Emerging Patterns in Automatic Imagery Pattern Recognition [Electronic Industries Assoc; NBS] Gaithersburg, Md. (L. Santacroce, Electronic Industries Assoc, 2001 Eye St. N.W., Wash., D.C. 20006) [11/15/77]
- Workshop on X-ray Instrumentation for Synchrotron Radiation Research [Stanford Synch Rad Lab] Stanford, Cal. (G. Brown, SSRL, P. O. Box 4349, Stanford, Cal. 94305) [11/30/77]
- 3-5 APS Topical Conf on Atomic Scale Structure of Amorphous Solids Yorktown Heights, N.Y. [12/16/77]
- 3–5 Heterogeneous Combustion in Engines [Central States Sect of Combustion Inst of Amer.] West Lafayette, Ind. [12/16/77] 11/77
- 3–5 IOP Vacuum Group Biennial Conf Oxford, UK 11/77
- 3-7 Int Conf on Metallurgical Coatings
 [AVS Thin Films Div and Vacuum
 Metallurgy Div] San Francisco, Cal.
 11/77
- 3-7 3rd Int Conf on Plasma Surface Interactions in Controlled Fusion Devices Abington, UK 3/77
- 4–6 ☐ 1st European Conf on Optical Systems and Applications [IOP; IEE;

EPS; German DGaO; Italian GNEQP; AEI; USSR Academy of Sciences; IEEE] Brighton, UK (Meetings Ofcr, IOP, 47 Belgrave Sq, London SW1X 8QX, UK) [12/1/77]

- 5-6 48th Annual Research and Technology Conf of Textile Research Inst Atlanta, Ga. 11/77
- 5-7 IOP Nuclear Physics Sub-committee Meeting Edinburgh, UK 9/77
- 10-12 IEEE Int Conf on Acoustics, Speech, Signal Processing Tulsa, Okla. [9/ 22/77] 7/77
- 10-13 9th Materials Research Symp: Trace Organic Analysis [NBS] Gaithersburg, Md. [9/15/77] 9/77
- Microcircuit Engineering '78 [IOP; IEE] Cambridge, UK (H. Ahmed, Engineering Dept, Trumpington St, Cambridge CB2 1PZ, UK) [1/15/78]

SHORT COURSES

9-10 JANUARY 1978

Thin Layer Chromatography [Academic Ctr] E Brunswick, N.J. (Ctr for Professional Advancement, P.O. Box H, E Brunswick, N.J. 08816)

9-11 JANUARY 1978

Chromatographic Identification and Control Methods [Academic Ctr] E Brunswick, N.J. (Ctr for Professional Advancement, P.O. Box H, E Brunswick, N.J. 08816)

11-13 JANUARY 1978

Gas-liquid Chromatography [Academic Ctr] E Brunswick, N.J. (Ctr for Professional Advancement, P.O. Box H, E Brunswick, N.J. 08816)

16-20 JANUARY 1978

Radar Systems and Tech [George Washington Univ] Wash., D.C. (Continuing Engineering Educ, GWU, Wash., D.C. 20052)

18-20 JANUARY 1978

Thermoanalytical Methods [Academic Ctr] E Brunswick, N.J. (Ctr for Professional Advancement, P.O. Box H, E Brunswick, N.J. 08816)

23-25 JANUARY 1978

Microencapsulation [Academic Ctr] E Brunswick, N.J. (Ctr for Professional Advancement, P.O. Box H, E Brunswick, N.J. 08816)

23-25 JANUARY 1978

Scanning Electron Microscopy [Academic Ctr] E Brunswick, N.J. (Ctr for Professional Advancement, P.O. Box H, E Brunswick, N.J. 08816)

6-10 FEBRUARY 1978

Sonar Signal Processing [George Washington Univ] Wash., D.C. (Continuing Engineering Educ, GWU, Wash., D.C. 20052)

13-14 FEBRUARY 1978

Laser Tech—Fundamentals and Applications [N.Y. Univ] Atlanta, Ga. (N.Y. Univ, School of Continuing Educ, 360 Lexington Ave, N.Y., N.Y. 10017) To be repeated 10–11 April in Los Angeles, Cal. and 12–13 June in Chicago, III.

27-28 FEBRUARY 1978

Doing R&D Business with the Federal Gov't [Univ of Chicago Ctr for Continuing Educ] Wash., D.C. (H. E. Kaplan, Dept 14NR, N.Y. Management Ctr, 360 Lexington Ave, N.Y., N.Y. 10017) To be repeated 13–14 April in Los Angeles, Cal., 21–22 June in Chicago, Ill. and 17–18 August in N.Y., N.Y.

6-10 MARCH 1978

Diagnostic Radiology [Univ of Cal.—San Francisco] San Francisco, Cal. (School of Medicine, Extended Programs, Univ of Cal., San Francisco, Cal. 94143)

11-12 MARCH 1978

Practical Course in B-scan Ultrasound [Univ of Cal.—San Francisco] San Francisco, Cal. (School of Medicine, Univ of Cal., San Francisco, Cal. 94143)

25-26 MARCH 1978

Special Topics in Polymer Physics [APS Div of High Polymer Physics] Wash., D.C. (W. J. MacKnight, Polymer Science and Engineering Dept, Graduate Res Ctr., rm 701, Univ of Mass., Amherst, Mass. 01003) To be held in conjunction with the APS General Meeting.

29-31 MARCH 1978

Professional Career Development [APS Committee on Professional Concerns] Wash., D.C. (M. Yagodka, Ofc of Personnel Development, Mass. Inst of Tech, E18-320, Cambridge, Mass. 02139) To be held in conjunction with the APS General Meeting.

9-11 APRIL 1978

Developments in Semiconductor Microlithography [Soc of Photo-Optical Instr Engineers; N Cal. Microphotomask/ Masking Work Group] San Jose, Cal. (SPIE Technical Programs Committee, P.O. Box 10, Bellingham, Wash. 98225)

5-16 JUNE 1978

15th Annual Short Course in X-ray Spectrometry [State Univ of N.Y. at Albany] Albany, N.Y. (H. Chessin, Physics Dept, SUNY at Albany, 1400 Washington Ave, Albany, N.Y. 12222)

17-24 JUNE 1978

Advanced Microcomputer Interfacing and Programming Workshop—Carribean Cruise [Va. Polytech and State Univ] Departing from Miami, Fla. (Adult Registrar, Donaldson Brown Ctr for Continuing Educ, Va. Polytech and State Univ, Blacksburg, Va. 24061)

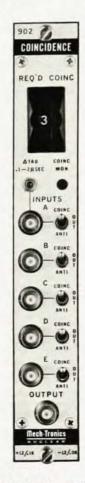
19-7 JUNE 1978

Energy Production and the Environment [US Dept of Energy] Oak Ridge, Tenn. (Professional Training Programs, Manpower Educ, Res and Training Div, Oak Ridge Associated Univs, P.O. Box 117, Oak Ridge, Tenn. 37830)

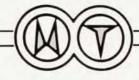
10-21 JULY 1978

Energy Options for the Future [US Dept of Energy] Oak Ridge, Tenn. (Professional Training Programs, Manpower Educ, Res and Training Div, Oak Ridge Associated Univs, P.O. Box 117, Oak Ridge, Tenn. 37830)

UNIVERSAL COINCIDENCE



\$350.00



- Variable Resolving Time
- · Five d-c Coupled Inputs
- Selectable Coincidence Requirement
- Selectable Input Mode

Mech-Tronics

NUCLEAR

430A Kay Ave., Addison, II. 60101

For more information WRITE OR CALL COLLECT (312) 543-9304

Booth #131 Physics Show

Circle No. 73 on Reader Service Card

PHYSICS TODAY / JANUARY 1978

QUEEN MARY COLLEGE

University of London

POSTDOCTORAL FELLOW-SHIP in Theoretical High Energy Physics for research program on gauge field theory and quantum gravity. Further details obtainable from Dr. J. M. Charap, Physics Department. Applicants please send resume, list of publications and names of 2 referees to The Registrar, Queen Mary College, Mile End Road, London E1 4NS.

University of London

READERSHIP IN APPLIED MATHEMATICS AT KING'S COLLEGE

The Senate invites applications for the above Readership tenable at King's College from 1 October 1978. Salary scale £6,443 to £7,951 plus £450 London Allowance. Applications (10 copies) should be received not later than 15 February 1978 by the Academic Registrar, (PT) University of London, Senate House, London WC1E 7HU, from whom further particulars should first be obtained.

- 16-18 IEEE Region 5 Annual Conf: Energy '78 Tulsa, Okla. [12/16/77] 9/77
- 17-18 Appl of Catastrophe Theory in Mechanics [Soc for Natural Philos] Williamsburg, Va. 11/77
- 17–20 ANS Topical Conf on Computers in Activation Analysis and Gamma-ray Spectroscopy [NBS; Amer. Chemical Soc; ANS; ERDA; Univ of Puerto Rico; Puerto Rico Nuclear Ctr] Mayaguez, Puerto Rico 11/77
- 17-20 10th Nat'l Atomic and Molecular Physics Conf [Atomic and Molecular Physics Group, IOP] Egham, UK 5/77
- 12th Int Symp on Remote Sensing of Environment [Environmental Res Inst of Mich.; Natural Resources Management Ctr; Univ of Mich. Extension Service] Manila, Philippines (Univ of Mich. Ext Serv, 412 Maynard St, Ann Arbor, Mich. 48109) [12/1/77]
- Spring Meeting—lowa Section AAPT Cedar Falls, lowa (E. Puduska, Kirkwood Community College, Cedar Rapids, lowa 52406)
- 23–28 **3rd Int Symp on Natural Radiation Environment** [Univ of Texas; ERDA]
 Houston, Tex. [9/30/77] 5/77
- 23-29 6th Engineering Found Conf on Automated Cytology Schloss Elmau, Fed. Rep. of Germany [1/31/78] 9/77
- 24–26

 2nd Int Conf on Neutron Transmutation Doped Semiconductors [Res Reactor Facility, Univ of Mo.; Monsanto Corp; ONR; Air Force Ofc of Sci Res] Columbia, Mo. (J. M. Meese, Res Reactor Facility, Univ of Mo., Columbia, Mo. 6520 1)
- 24-27 APS Spring Meeting Wash., D.C.
- 25–27 Int Conf on Molecular Beam Epitaxy
 [Instruments SA, Riber Div] Paris,
 France (C. E. Badgett, Marketing
 Manager, Riber Div, Instruments SA,
 173 Essex Ave, Metuchen, N.J.
 08840)
- 9th Annual Pittsburgh Conf on Modeling and Simulation [Univ of Pittsburgh, School of Engineering; IEEE; Systems, Man and Cybernetics Soc; Instrument Soc of Amer.; Soc for Computer Simulation; Int Assoc for Math and Computers in Simulation] Pittsburgh, Pa. (W. G. Vogt, Modeling and Simulation Conf., 348 Benedum Engineering Hall, Univ of Pittsburgh, Pa. 15261) [1/27/78]
- 28-2 Int Conf on Neutrino Physics and Neutrino Astrophysics West Lafayette, Ind. [Attendance by invitation] 11/77
- 30-5 Soc of Photographic Scientists and Engineers—31st Annual Conf Wash., D.C. 11/77

MAY 1978

- 1-3 Midland Macromolecular Inst Symp on Silyated Surfaces Midland, Mich. [11/1/77] 11/77
- 6-11 80th Annual Meeting and Exposition—Amer. Ceramic Soc, Basic Science Div Detroit, Mich. [12/1/77]
- 7–12 Electrochemical Soc Meeting and Symp Seattle, Wash. Topics: solidstate chemical sensors 9/77
- 8-10 Symp on Real-time Radiographic Imaging [NBS; ASTM] Gaithersburg, Md. 11/77

- 9-11 Int Trade Fair for the Transfer of Technology Utrecht, The Netherlands (Royal Netherlands Industries Fair, P. O. Box 8500, 3503 RM Utrecht, The Netherlands)
- 9-11 Electrical-electronics Conf and Expo Cleveland, Ohio (V. R. Lalli, Lewis Res Ctr, MS 500-211, 21000 Brookpark Rd, Cleveland, Ohio 44135)
- 9-12 INTERMAG '78 [IEEE Magnetics Soc; Assoc Elettrotecnica Italiana; Soc di Fisical] Florence, Italy [12/15/77] 9/77
- 15–17 **IEEE Int Conf on Plasma Sci M**onterey, Cal. [2/1/78] 11/77
- Aerospace and Electronics Conf Dayton, Ohio (NAECON, 140 E Monument Ave, Dayton, Ohio 45402)
- 16-19 ASA Spring Meeting Providence, R.I. 5/77
- 22-25 6th Int CODATA Conf [Int Council of Scientific Unions] Taormina, Italy 9/77
- 22-26 IAEA Int Symp on Nuclear Activation Techniques in the Life Sciences Vienna, Austria [11/15/77] 11/77
- 23–25 Electro '78 [IEEE Region 1] Boston, Mass. (W. C. Weber, Jr., 31 Channing St, Newton, Mass. 02158)
- 24–26 OSA Topical Meeting on Picosecond Phenomena Hilton Head, S.C. 9/77
- 24-26 Spring Meeting—Soc for Industrial and Applied Math Madison, Wisc. (H. B. Hair, SIAM, 33 South 17th St, Phila., Pa. 19103)
- 28-2
 26th Annual Conf on Mass Spectrometry and Allied Topics [Amer. Soc for Mass Spectroscopy] St. Louis, Mo. (K. E. McCulloh, Secr., ASMS, NBS, Chemistry A145, Wash., D.C. 20234)
- 28-11 21st COSPAR Plenary Meeting and Symp [Committee on Space Research of Int Council of Scientific Unions] Innsbruck, Austria 11/77
- 10th Int Quantum Electronics Conf [IEEE; AIP; JCQE] Atlanta, Ga. (J. Giordmaine, Bell Labs, 600 Mountain Ave, Murray Hill, N.J. 07974)
- 29-7 Int Electronics Production Conf Moscow, USSR (Industrial and Scientific Conf Management, Inc. 222 W Adams St. Chicago, III. 60606)
- 12th Annual June Inst of Modern Astronomy and Astrophysics [Univ of Toronto] Toronto, Canada (J. R. Percy, Astronomy Dept, Univ of Toronto, Toronto, Canada M5S 1A7)
- 8th Int Symp on Acoustical Imaging [Univ of Cal., Irvine; Amer. Inst of Ultrasound in Medicine] Key Biscayne, Fla. (A. F. Metherell, UCI Medical Ctr, 101 City Dr South, Orange, Cal. 92668) [2/14/78]
- 31-2
 32nd Annual Frequency Control Symp [US Army Electronics Tech and Devices Lab] Atlantic City, N.J. (J. R. Vig. DRSEL-TL-MF, US Army Electronics Command, Fort Monmouth, N.J. 07703) [1/20/78]

JUNE 1978

- 13th Photovoltaic Specialists Conf Wash., D.C. (J. Goldsmith, MS 169/ 422, Jet Propulsion Lab, 4800 Oak Grove Dr., Pasadena, Cal. 91103)
- 7-9 Math and Computational Aspects

- of Atomic Scattering Theory Conf London, Canada (J. Nuttall, Physics Dept, Univ of Western Ontario, London, Ontario N6A 3K7, Canada)
- Microcomputer-based Instrumentation Symp [NBS; IEEE Computer Soc and Group on Instrumentation and Measurement] Gaithersburg, Md. (J. Evans, NBS, Rm A-130 Technology, Wash., D.C. 20234) [11/31/77]
- Annual Cong of Canadian Assoc of Physicists London, Canada (M. L. Jento, Suite 930, 151 Slater, Ottawa, Ontario K1P 5H3, Canada) [3/20/78]
- 4th Int Symp and Exhibition on Miniand Microcomputers and Their Applications [Int Soc of Miniand Microcomputers] Zurich, Switz. (Secr MIMI '78, Interconvention, Swissair Postfach, 8058 Zurich, Switz.) [2/1/78]
- 12-16 33rd Annual Symp on Molecular Spectroscopy [The Ohio State Univ] Columbus, Ohio 11/77
- Large-scale Characteristics of the Galaxy—Int Astronomical Union Symp 84 College Park, Md. (F. J. Kerr, Astronomy Program, Univ of Md., College Park, Md. 20742)
- Passive Radiometry of the Ocean [Int Union of Radio Sciences; Int Union of Geodesy and Geophysics] Victoria, Canada (J. F. R. Gower, Inst of Ocean Sciences, Patricia Bay, 9860 W Saanich Rd, P. O. Box 5000, Sidney, British Columbia V8L 4B2, Canada)
- 19-21 Physical Electronics Conf—APS Solid-state and Electron and Atomic Physics Divs Gatlinburg, Tenn. [4/ 21/78] 11/77
- 19-23 3rd Int Conf on Clustering Aspects of Nuclear Structure and Nuclear Reactions [IUPAP; UNESCO; NRC of Canada; Atomic Energy of Canada, Ltd; Canadian Assoc of Physicists; APS; Univ of Manitoba] Winnipeg, Canada 11/77
- 20-22 Int Symp on Electromagnetic Compatibility Atlanta, Ga. (J. C. Toler, Engineering Experiment Station, Georgia Tech, Atlanta, Ga. 30332)
- 20-26 Int Cong of Photographic Scientists [SPSE] Rochester, N.Y. 11/77
- 26-29 Precision Electromagnetic Measurements Conf [IEEE; US Nat'l Committee of Int Union of Radio Science; NBS] Ottawa, Canada 11/77
- 26–30 8th US Nat'l Cong of Applied Mechanics [US Nat'l Committee on Theor and Appl Mech] Los Angeles, Cal. [12/31/77] 9/77
- 26–30 Amer. Conf on Theoretical Chemistry Boulder, Colo. 11/77
- Int Microwave Symp Ottawa, Canada (A. L. VanKoughnett, Communications Res Ctr., P. O. Box 11490, Station, Ottawa, Ontario K2H 8S2, Canada)
- 27–30 3rd Int Workshop on Rare-earth-cobalt Permanent Magnets and Their Applications Univs of Dayton and Cal. at San Diego LaJolla, Cal. [12/1/77] 11/77

JULY 1978

- 3-7 Heating of Toroidal Plasmas: Joint Verenna—Grenoble Int Symp Grenoble, France 5/77
- 3-7 4th Int Meeting on Nuclear Magnetic

PHYSICISTS

Make the most of your background in computer applications.

Contact Kearfott.

Did you ever consider a future in software engineering? That's the direction your career can take with Kearfott, a steadily expanding leader in the aerospace industry.

We're seeking Physicists with computer software experience for assignments in the Guidance, Navigation & Control field. These computer programming positions provide an opportunity to enter the field of software engineering which is well-suited to your general background in the Physical Sciences. Current programs include applying computer technology to one or more of the following:

- · Simulate GN&C systems
- · Control airborne GN&C systems in real time
- · Perform automatic testing of avionic subsystems
- · Support airborne computer products

All positions offer fully commensurate salaries, excellent benefits and the potential for continuing professional growth. ON-SITE MASTER'S PROGRAM IN COMPUTER SCIENCE AVAILABLE.

Please send resume with salary history in strict confidence to: Mr. J. DeGennaro, Singer Co., 1150 McBride Avenue, Little Falls, New Jersey 07424.

Kearfott

a division of The SINGER Company

An equal opportunity employer, m/f who creates opportunities

Research Associateships are available for

Theoretical Nuclear Physicists

to join the Theory Group at Daresbury whose fields of interest are nuclear, solid state and atomic and molecular processes.

At the Laboratory a major nuclear structure facility is under construction, based on a 30 MV tandem Van der Graaf, and work will soon begin on a purpose-built x-ray and ultraviolet source. An IBM 370/165 computer is installed at the Laboratory, and a computational science group has recently been established working mainly on the quantum chemistry area.

The successful applicants will be appointed at salaries between £2901 and £5155, the level at which an associate is appointed depending on age, ability and experience. There are also pay supplements of (a) £313.20 per annum and (b) 5% of total salary subject to a minimum of £130.50 per annum and a maximum of £208.80 per annum. Posts are normally available for a fixed term of three years and are superannuable.

Applicants, male or female, should possess a Ph.D degree in theoretical nuclear physics, or expect to obtain one during 1978.

Closing date: 1 February 1978

Please write enclosing curriculum vitae, the addresses of two referees and quoting reference number DL/606/BB to:



DARESBURY LABORATORY

Personnel Officer Science Research Council Daresbury Laboratory Daresbury Warrington WA4 4AD

PLASMA PHYSICS At TRW

TRW's Redondo Beach, California laboratories have a broad and growing program in Plasma and Fusion Physics. Career opportunities for highly qualified theoretical and experimental Plasma Physicists exist at all levels.

For further information including detailed description of current programs, contact:

> Dr. Don Arnush Building R1/2036

One Space Park
Redondo Beach, Calif. 90278
An Equal Opportunity Employer M.F. H.



los alamos

LIMITED TERM APPOINTMENT LOS ALAMOS MESON PHYSICS FACILITY

Los Alamos Scientific Laboratory, a multi-faceted national R & D facility, is seeking a physicist to work for one to two years in its Meson Physics Facility (LAMPF). The incumbent will be expected to make important contributions to the conception, organization, running, and analysis of experiments in the LAMPF program. The experiments will deal with nuclear structure, nuclear reactions, and fundamental aspects of sub-nuclear physics. Although limited-term, this appointment will carry the same privileges and responsibilities as unlimited-term employment.

The position requires a Ph.D. in physics, four years' experience in medium energy experimental physics or a closely-related field, and recent publications demonstrating broad understanding and lively interests in nuclear structure and reactions and sub-nuclear physics. The successful candidate must have demonstrable familiarity with most or all of the following techniques: particle detection, fast logics, data acquisition and reduction, experiment planning and data analysis. The ability to work efficiently with LAMPF-staff and users is essential.

The Laboratory provides excellent working conditions and benefits, such as 24 days' annual vacation, ample sick leave, and various professional growth opportunities. Its location in the mountains of northern New Mexico offers a pleasing life-style in a setting of great natural beauty: a healthy environment; abundant recreation opportunities; and uncrowded casual living.

Send complete resume, in confidence, to

James Trout Los Alamos Scientific Laboratory Division 78-1 P.O. Box 1663 Los Alamos, New Mexico 87545



AN AFFIRNATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER WOMEN, MINORITIES, HANDICAPPED, AND VETERANS ARE URGED TO APPLY

- Resonance Spectroscopy York, UK 7/77 11th Int Symp on Rarefied Gas Dy-
- 4-7 7th Int Cryogenic Engineering Conf and Exhibition [Int Cryogenic Engineering Committee] London, UK

3-8

5/77

- 6-8 Int Conf on Solid Films and Surfaces
 [Japan Soc of Applied Physics, Thin
 Film and Surface Physics Div] Tokyo,
 Japan [12/31/77] 9/77
- 9–13
 4th Int Conf on Vapor Growth and Epitaxy Nagoya, Japan (T. Arizumi, Communication Engineering Dept, Univ of Electro-communications, Chofugaoka 1-5-1, Chofu-shi, Tokyo 182, Japan)
- 10-14 10th Conf on Atomic Spectroscopy
 [European Group for Atomic Spectr]
 Garching, Fed. Rep. of Germany (H.
 Walther, Sektion Physik, Univ Munchen, 8046 Garching b Munchen, Am
 Coulombwall I, Fed. Rep. of Germany)
- 12–14 Int Solar Energy Forum [German Solar Energy Soc] Hamburg, Fed. Rep. of Germany (DGS-Geschaeftsstelle, Postfach 20 0604, D-8000 Munchen 2, Fed. Rep. of Germany) [2/28/78]
- 16-20 4th Nat'l Conf of Amer. Assoc for Crystal Growth Wash., D.C. 7/77
- 19–28 3rd Latin Amer. Symp on Magnetic Resonance and Hyperfine Interactions Caracas, Venezuela (3rd Symp on MRHI, Apt 59102, Los Chaguaramos, Caracas 104, Venezuela)
- 23–27 INTER/MICRO '78 [McCrone Res Inst] Chicago, III. 9/77
- 30-1 Symp on Crystal Chemistry [ACA] Dymaczewo, Poland 11/77
- 4th Int Conf on Spectral Line Shapes Windsor, Canada (4th ICSLS, Physics Dept, Univ of Windsor, Windsor, Ont., Canada N9B 3P4) [6/9/78]

AUGUST 1978

- 1-9 9th Int Cong on Electron Microscopy Toronto, Canada 7/77
- 3–12 11th Cong of Crystallography [ACA] Warsaw, Poland 11/77
- 19th Symp on Metal-Non-metal Transition in Disordered Systems St Andrews, Scotland (D. P. Tunstall, Physics Dept, Univ of St Andrews, St Andrews, KY16 9SS, UK) [3/1/78]
- 7-11 6th Int Heat Transfer Conf Toronto, Canada 9/77
- 10-12 Photopion Nuclear Physics—Int Symp [APS Nuclear Physics Div] Troy, N.Y. (P. Stoler, Physics Dept, Rensselaer Polytechnic Inst, Troy, N.Y. 12181)
- 13-17 Conf on Applied Crystallography [ACA] Kozubnik, Poland 11/77
- 14-15 Diffraction Profile Analysis Conf [ACA] Cracow, Poland 11/77
- 14-17 Symp on Crystal Structure and Bonding in Metal Complexes and Compounds [ACA] Wroclaw, Poland 11/77
- 14–17 World Conf and Exhibition on Energy From Biomass and Waste [Inst of Gas Tech] Wash., D.C. 5/77
- 20–25 3rd Euroanalysis Conf Dublin, Ireland Topics: atomic spectroscopy, x-ray techniques, computers in analytical chemistry 11/77
- 20-25 17th Int Symp on Combustion Com-

- bustion Inst] Leeds, UK [12/15/77] 9/77
- 22-25 Australian Conf on Electron Spectroscopy [Austr Inst of Physics; Austr Chemical Inst] Melbourne, Australia 9/77
- 23–29 15th Int Conf on Low Temp Physics—Grenoble '78 Grenoble, France [4/1/78 for articles] 11/77
- 23–30 IAEA 7th Int Conf on Plasma Physics and Controlled Nuclear Fusion Res Innsbruck, Austria [4/10/78] 11/77
- 24–30 8th Int Conf on Few Body Systems and Nuclear Forces Graz, Austria 9/77
- Physics of Plasmas Close to Thermonuclear Conditions—Int School of Plasma Physics Workshop Varenna, Italy (E. Sindoni, Inst di Fisica, Via Celoria, 16 Milano, Italy)
- Annual Meeting of Amer. Section of Int Solar Energy Soc Denver, Colo. (Amer. Sect of Int Solar Energy Soc, Inc., 300 State Rd 401, Cape Canaveral, Fla. 32920)
- 28-1 8th Int Conf on Appl of Mossbauer Effect Kyoto, Japan 11/77
- 30-1 ☐ Int Conf on Recombination in Semiconductors [IUPAP; IOP; Royal Soc] Southampton, UK (A. F. W. Wiloughby, Engineering Materials Labs, The Univ, Southampton, S09 5NH, UK) [2/1/78]
- 30-2 Conf on Physics of Metallic Rare-earth and Actinides Saint Pierre de Chartreuse, France 9/77

SEPTEMBER 1978

- 3–9 6th Int Biophysics Cong Kyoto, Japan 11/77
- 5th Nat'l Systems Conf Ludhiana, India (R. K. Varshney, Electrical Engineering Dept, PAU Ludhiana, 141004 India) [5/31/78]
- 14th Int Conf on the Physics of Semiconductors [IUPAP] Edinburgh, UK (Meetings Ofcr, IOP, 47 Belgrave Sq, London SW1X 8QX, UK)
- 10-17 Int Commission for Optics—11th Meeting, Madrid, Spain 9/77
- 11–14 Int Conf on Defects and Radiation Effects in Semiconductors Nice, France 9/77
- 11-15 4th Int Thin Films Cong: Thin Film Properties in Relation to Structure [IOP] Loughborough, UK 9/77
- 11–15 Application of High Magnetic Fields in Semiconductor Physics Oxford, UK (P. A. Hudson, Clarendon Lab, Oxford 0X1 3PU, UK)
- 12–14

 AAS High Energy Astrophysics Div.

 Meeting La Jolla, Cal. 9/77
- 12–15 Computational Atomic and Molecular Physics Conf [European Physical Soc] Nottingham, UK 11/77
- 18-22 3rd Int Symp on Neutron Capture Gamma-ray Spectroscopy and Related Topics [Brookhaven Nat'l Lab] Upton, N.Y. 9/77
- 18-22
 10th Materials Research Symp: Characterization of High Temp Vapors and Gases [NBS Inst for Materials Research] Gaithersburg, Md. (R. B. Johnson, Materials Bldg B-348, NBS, Wash., D.C. 20234)
- Synthetic and Biological Macromolecules—Common Structural Aspects [European Phys Soc Macromolecular Phys Div] Bristol, UK (E. D. T. Atkins, H. H. Wills Physics Lab, Tyndall

Ave, Bristol, BS8 1TL, UK)

- The Physics and Chemistry of Laser Induced Processes in Molecules [European Phys Soc] Edinburgh, UK (R. G. HARRISON= Heriot-Watt Univ, Edinburgh EH14 4AS, UK)
- 25–29 4th Genrl Conf of European Physical Society [EPS; IOP] York, UK Topics: modern optics, surface physics, phase transitions, nuclear astrophysics, hot plasmas, quarks 9/77

OCTOBER 1978

- 2–6 IAEA Int Symp on Nuclear Material Safeguards Vienna, Austria [3/15/78]
- Int Workshop on Electric Charges in Dielectrics Kyoto, Japan (Y. Wada, Applied Physics Dept. Faculty of Engineering, Univ of Tokyo, Bunkyo-ku, Tokyo 113, Japan) [3/31/78]
- 13-14 APS Sectional Meeting [Ohio Sect] Columbus, Ohio 9/77
- 26-28 APS Sectional Meeting [SE Sect] Blacksburg, Va. 9/77
- Fall Meeting of Soc for Industrial and Applied Math Knoxville, Tenn. (H. B. Hair, SIAM, 33 South 17th St, Phila., Pa. 19103) [7/28/78]
- 30–3 Annual Meeting—OSA San Francisco, Cal. 9/77

NOVEMBER 1978

- 20-22 APS Fluid Dynamics Div Meeting Los Angeles, Cal. 9/77
- 26-1 ASA Fall Meeting Honolulu, Hawaii 5/77
- Annual Meeting of Amer. Vacuum Soc San Francisco Cal. (N. Hammond, AVS, 335 E 45th St, N.Y., N.Y. 10017)

JANUARY 1979

29–1 • APS General Meeting N.Y., N.Y. (W. W. Havens, Jr, APS, 335 E 45th St, N.Y., N.Y. 10017) [11/10/78]

MARCH 1979

26–29 • APS General Meeting Chicago, III. (W. W. Havens, Jr, APS, 335 E 45th St, N.Y., N.Y. 10017) [1/5/79]

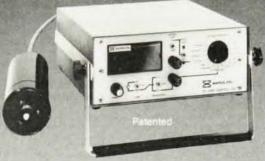
APRIL 1979

- 17–20 Electrostatics '79 [IOP Static Electrification Group] Oxford, UK 11/77
- 23–26 APS General Meeting Wash., D.C. (W. W. Havens, Jr, APS, 335 E 45th St, N.Y., N.Y. 10017) [2/2/79]
- Workshop on Solar-terrestrial Predictions [NOAA Environmental Research Labs] Boulder, Colo. (R. F. Donnelly, STP/P-W Program, Space Environment Lab, NOAA ERL, Boulder, Colo. 80302) [11/1/78]

DECEMBER 1979

10–15 4th Int Conf on Submillimeter Waves [IEEE; MTT; Int Union of Radio Science] Florida [8/1/79] 11/77

The all-new Radiation Source for Calibration of your Spectrometer



Now...it takes only a matter of minutes to measure the response of your vacuum spectrometer with Xonics' Rare Gas Continuum Standard Radiation Source.

- Quickly and easily attached to vacuum systems with a simple flange available from Xonics.
- · Lightweight, compact flashlight size for ease of handling.
- Long term intensity stability to better than ±5% over hundreds of hours of operation.

Other sources of ultraviolet radiation also available.

For complete technical information call or write Dr. Bob Young or Dan Esau, Director of Marketing.



Xonics, Inc.

Environmental Systems Division

6862 Hayvenhurst Avenue, Van Nuys, CA 91406 (213) 787-7380 TWX (910) 495-1725

Circle No. 75 on Reader Service Card

Solid State Device R&D

The Honeywell Electro-Optics Center is expanding its R&D efforts in modern solid state quantum and thermal infrared detectors. Scientists and engineers with a PhD or its equivalent in solid state physics or electrical engineering are needed to join groups performing both fundamental and applied investigations of Hg_{1-x} Cd_xTe photodiodes, GaP photodiodes and JFETs, pyroelectric detectors, and LPE growth of Hg_{1-x} Cd_xTe crystals.

Located in Lexington, Massachusetts, the Honeywell Electro-Optics Center (formerly the Honeywell Radiation Center) has maintained its leadership in Hg _{1-x} Cd _xTe infrared quantum detector science and technology through continued emphasis on Hg _{1-x} Cd _xTe material science, semi-conductor physics, and device processing. Individuals who wish to develop their professional careers in the furtherance of modern solid state detector science and technology should contact Mr. H.W. Roberts, Professional Staffing, Honeywell Electro-Optics Center, 2 Forbes Road, Lexington, Massachusetts 02173.

Honeywell

ELECTRO-OPTICS CENTER

An Equal Opportunity Employer