

calendar

NOVEMBER 1984

- 2-3 → **32nd Midwest Solid-State Phys Conf** Univ. of Nebraska, Lincoln, NE (John A. Woollam, Department of Physics and Astronomy, University of Nebraska, Lincoln, NE 68588 [402-472-2770])
- 4-10 **Intelligent Robots and Computer Vision Thermosense VII-Int Conf on Thermal Infrared Sensing for Diagnostics and Control** Cambridge, MA 5/84
- 7-9 **Electron Beam Melting and Refining—State of the Art 1984** Reno Nevada 7/84
- 8-9 → **Lect Ser on Physical Sciences in the Eighties** National Research Council of Canada Ottawa, Canada (J.K.G. Watson, National Research Council of Canada, Ottawa, Canada K1A 0R6)
- 11-16 **ANS/ENS Int Mtg** Washington, DC 3/84
- 12-14 **8th Conf on the Application of Accelerators in Research and Industry** Denton, TX 7/84.
- 13-15 **Int Conf on the Applications of Lasers and Electro-Optics** Boston, MA 5/84
- 15-17 **Mtg of the Texas Sec of AAPT** Houston, TX 5/84
- 18-20 **APS Fluid Dynamics Mtg** Providence, RI 9/83
- 25-30 **Joint AAPM—Radiological Soc of N Amer Mtg** Washington, DC 9/83

- 26-30 **Fall Mtg of the Materials Research Soc** Boston, MA 5/84
- 26-30 **7th Int Conf on Lasers & Applications** San Francisco, CA 9/84
- 27-30 **30th Ann Conf on Magnetism & Magnetic Materials** San Diego, CA 3/84
- 29-1 **Wksp on Composite Models in Particle Phys** Irvine, CA 5/84

DECEMBER 1984

- 3-7 **Educatec Exhibition for Teaching and Training Equipment, Material and Techniques** Paris 9/84
- 4-7 **31st National Vacuum Symp** Reno, NV 9/83
- 4-10 **6th Int Conf on Fracture** New Delhi, India 9/83
- 9-12 **1984 IEEE Int Electron Devices Mtg** San Francisco 9/84
- 10-14 → **5th Intersociety Cryogenics Symp** New Orleans, LA (P. J. Kerney, CTI-CRYOGENICS, 266 Second Ave., Waltham, MA 02254 [617-890-9400])
- 11-14 **Phys Expo** Paris 3/84
- 17-21 **12th Texas Symp on Relativistic Astrophysics** Jerusalem, Israel 9/84

JANUARY 1985

- 6-10 → **18th Midyear Symp on Environmental Radiation** [Health Phys.]

Please note: Complete information is only given in new (→) or revised (●) listings. All other entries end with the date of the PHYSICS TODAY issue containing the following information: date title [sponsor] location (contact) [abstract deadline]

This calendar appears in alternate (odd-numbered) months. Notices should be sent to: Calendar, PHYSICS TODAY, 335 East 45th Street, New York, NY 10017 at least three months in advance.

AAAS American Association for the Advancement of Science
AAPM American Association of Physicists in Medicine
AAPT American Association of Physics Teachers
AAS American Astronomical Society
ACA American Crystallographic Association
AGU American Geophysical Union
ANS American Nuclear Society
APS American Physical Society
ASA Acoustical Society of America
AVS American Vacuum Society
BNL Brookhaven National Laboratory
CNRS Centre National de la Recherche Scientifique
DOE Department of Energy
DPG Deutsche Physikalische Gesellschaft
IAEA International Atomic Energy Agency

IEEE Institute of Electrical and Electronics Engineers
IOP Institute of Physics (London)
IUPAC International Union of Pure and Applied Chemistry
IUPAP International Union of Pure and Applied Physics
LBL Lawrence Berkeley Laboratory
LLNL Lawrence Livermore National Laboratory
NAS National Academy of Sciences
NBS National Bureau of Standards
NRC Nuclear Regulatory Commission
NRL Naval Research Laboratory
NSF National Science Foundation
ORNL Oak Ridge National Laboratory
OSA Optical Society of America
S of R Society of Rheology
SPS Society of Physics Students



For a price of less than \$1,000.⁰⁰ you can have an optical chopper with variable frequencies from 5 to 4,000 Hz and exposure times of 125 μ s to 100 ms.

The chopper is convenient to use, actual frequencies and exposure times can be read directly from a digital display. Frequency control can also be direct, remote or external.

Opto-electronic frequency regulation and control allows for accuracy of 1 Hz over entire frequency range.

One can also use the chopper controller as a counter for external frequencies from 1 Hz to 1 MHz, or a timer from 0.1 μ s to 100 ms. Actually when one buys our PTIOC 4000 chopper, one is receiving three instruments in one.

PHOTON TECHNOLOGY INTERNATIONAL INC.

U.S.:

P. O. Box AA
 Princeton, N.J. 08542 USA
 Telephone: (609) 921-0705
 Telex: 238818 RCA

European Headquarters:

Gärtnerweg 49
 D-2082 Tornesch, West-Germany
 Telephone: (04122) 5 10 61
 Telex: 218500

Circle number 66 on Reader Service Card

Soc.] Colorado Springs, Colorado (Steve Brown, Central Rocky Mountain Chapter, HPS, P.O. Box 5031, Littleton, CO 80123 [303-430-2891])

6-11 **7th Int Conf on Positron Annihilation** New Delhi, India 5/84

7-11 **High-Resolution Electron Microscopy** [Center for Solid State Science, Arizona State University] Tempe, Arizona (Nancy Higgins, Center for Solid State Science, Arizona State University, Tempe, Arizona 85287 [602-965-4544])

7-18 **Short Course on Optical Science and Engineering** Tucson, AZ 9/84

10-12 **The Galaxy and the Solar System** Tucson, Arizona (M. Matthews, Lunar and Planetary Laboratory, Univ. of Arizona, Tucson, Arizona 85721)

13-17 **165th AAS Mtg** Tucson, AZ (P. Boyce, AAS, 1816 Jefferson Pl. NW, Washington, DC 20036) **note changed date**

14-15 **Symp on Dielectric Phenomena in Honor of the 70th Birthday of R. H. Cole** Providence, RI 9/84

15-18 **Top Mtg on Optical Remote Sensing of the Atmosphere** Lake Tahoe, NV 3/84

20-24 **9th Ann Conf on Composites and Advanced Ceramic Materials** [The Ceramic-Metal Sys Div of the Amer Ceramic Soc] Cocoa Beach, FL (Frank D. Gac, Univ. of Washington, Dept. of Materials Science and Engineering, Roberts Hall, FB-10, Seattle, WA 98195 [206-543-2615])

20-25 **SPIE 1985 Los Angeles Tech Symp on Optical & Electro-Optical Engineering and Instrument Exhibit** Los Angeles, CA 9/84

21-24 **APS/AAPT Gen Mtg** Toronto 9/83

28-1 **9th Ann Symp on Energy from Biomass and Wastes** [Inst of Gas Technology] Lake Buena Vista, Florida (Marianne MacDonald, 3424 South State Street, Chicago, Illinois 60616 [312-567-3881])

30-1 **32nd Ann Conf of the Western Spectroscopy Assoc** Pacific Grove, CA (D. Saperstein, IBM Instruments, 40 West Brokaw Rd., San Jose, CA 95110)

FEBRUARY 1985

3-6 **Application of Optical Instrumentation in Medicine XIII** [SPIE] Newport Beach, California (SPIE Technical Program Committee-MED. XIII, P.O. Box 10, Bellingham, Washington 98227-0010 [206-676-3290])

4-6 **Top Mtg on the Microphys of Surfaces, Beams, and Adsorbates** Santa Fe, NM 3/84

4-8 **7th NUPP Sum Sch on Nuclear and Particle Phys** Canberra, Australia 9/84

11-13 **Top Mtg on Optical Fiber Communication** [OSA, IEEE] San Diego, CA 11/83

11-14 **Int Symp Polymer 85: Characterization and Analysis of Polymers** Melbourne, Australia 9/84

13-14 **OFS'85** [IEEE, OSA] San Diego, California (Optical Society of America, 1816 Jefferson Place, N.W., Washington, D.C. 20036)

13-15 **IEEE Int Solid-State Circuits Conf** New York 9/84

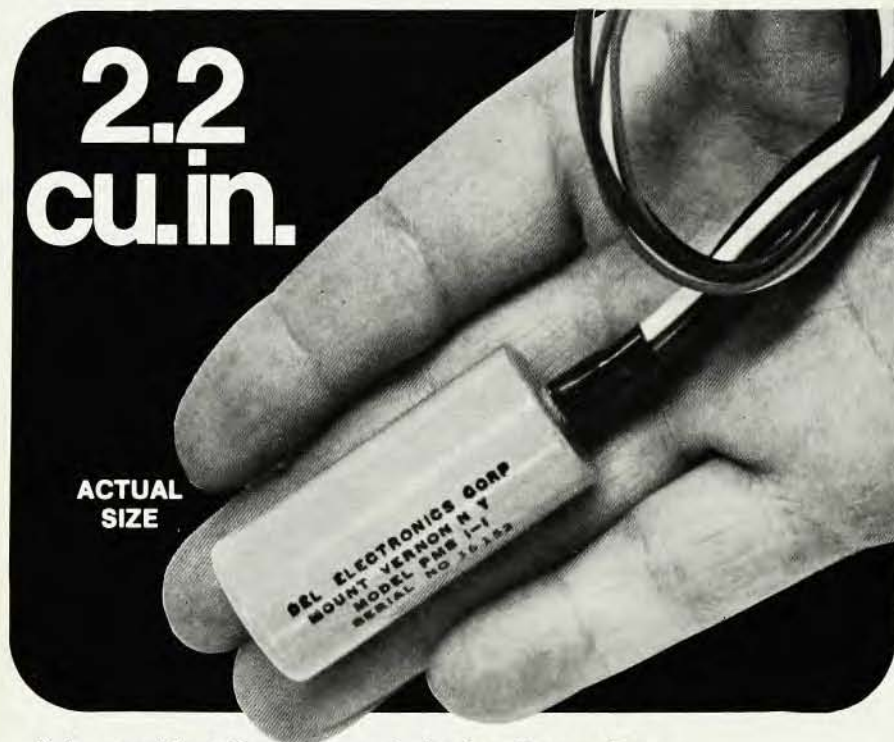
20-22 **Int Conf on the Phys and Tech of Compensated Semiconductors** Madras, India (ICPTCS, Physics Department, Indian Institute of Technology, Madras: 600 036: India)

24-27 **8th Ann Mtg, The Adhesion Soc** Blacksburg, Virginia (D. Rahrig or B. F. Goodrich, R&D Center, 9921 Brecksville Rd., Brecksville, OH 44141 [216-447-5531]) **note changed location**

24-28 **56th Ann Mtg of SOR** Williamsburg, VA 5/84

25-28 **5th Top Conf on Atomic Processes in High Temperature Plasmas** Pacific Grove, CA 5/84

26-8 **Winter Session on Disordered Systems and Biological Organization** Les Houches (Centre de Physique Theorique, 74310 Les Houches, France)



Now, that's a high density photomultiplier power supply!

This is the smallest of DEL's compact PMS Series of rugged DC to DC proportional converter power supplies for photomultipliers and other high voltage applications.

- Over 21 models from 300-1500V to 3KV-10KV
- Output isolated from input
- Output proportional to input
- Output momentary short circuit protected
- All models offer high density compact profiles

All PMS models are isolated for full output voltage to case. 0°-60°C operating temperatures with a coefficient of .02%/C typical. Many units have reversible polarity with any combination of input/output polarity vs. ground.



Write or phone today for full details and prices on DEL's PMS Series...

DEL ELECTRONICS CORP.

250 East Sandford Boulevard
Mount Vernon, NY 10550
Phone: 914/699-2000 TWX: 710/562-0130

Circle number 67 on Reader Service Card

QUALITY AND INNOVATION IN UHV TECHNOLOGY



- * ALL-METAL ISOLATION VALVES
- * ALL-METAL VARIABLE LEAK VALVES
- * QUALITY VITON® SEAL VALVES
- * LINEAR MOTION DRIVES
- * ROTARY MOTION DRIVES
- * VIEWPORTS AND ELEC. FEEDTHROUGHS
- * STANDARD FITTINGS AND FLANGES
- * PRESSURE MEASUREMENT
- * HPT SERIES XYZ MANIPULATORS
COMPLETE WITH SAMPLE MOUNTS
AND HEAT/COOL ACCESSORIES
- * ALL-METAL SAMPLE/SUBSTRATE
FAST ENTRY LOCK - TRANSFER DEVICES
- * THE BEST UHV FABRICATION AVAILABLE.

STAINLESS STEEL SPECIMEN AT 1000°C

Standard SM2 specimen mount (Part of HPT/RD2S X.Y.Z. rotation-azimuthal manipulator assembly) Fitted with combined electron beam-liquid nitrogen heat/cool accessory complete with all-metal WS75PG remote specimen handling wobble stick in foreground.

FOR FULL UHV PRODUCT GUIDE/PRICE LIST CONTACT EXCLUSIVE U.S. DISTRIBUTOR:

KURT J. LESKER COMPANY

5635 HORNING ROAD • PITTSBURGH, PA 15236
TOLL-FREE: 800-245-1656 • IN PA: 800-242-0599



... Vacuum Science Is Our Business

31st NATIONAL VAC SYMPOSIUM
WOM GRAND HOTEL
PHILADELPHIA, PENNSYLVANIA
BOOTH NUMBERS: 813, 814 EXHIBIT DATES:
NOV. 30 - DEC. 1, 1994

- 7-9 **Mtg of Texas Sec of AAPT** 5/84
- 13-15 **Top Mtg on Picosecond Electronics and Optoelectronics** Incline Village, Nevada 9/84
- 18-20 **Top Mtg on Optical Computing** Lake Tahoe, NV 3/84
- 18-21 **Conf on Antinucleon and Nucleon-Nucleus Interactions** Telluride, Colorado 7/84
- 18-21 **Integral Methods in Science and Engineering** [Univ. of Texas at Ar-

lington] Arlington, Texas (Fred R. Payne, UTA Box 19018, University of Texas at Arlington, Arlington, TX 76019 [817-273-2074])

- 18-22 **Short Course: Numerical Methods for Partial Differential Equations** Univ. of Tennessee Space Institute (S. Shankle, The University of Tennessee Space Inst., Tullahoma, TN 37388 [615-455-0631])
- 18-25 **Int Rare Earth Conf: Materials and Chem** Zurich, Switz. 3/84
- 19-20 **Top Mtg on Non-Invasive Assessment of Visual Function** Lake Tahoe, NV 3/84

- 20-22 **Top Mtg on Machine Vision** [OSA] Lake Tahoe, NV (OSA, 1816 Jefferson Pl. NW, Washington, DC 20036) **note changed date**
- 24-29 **1985 Eastern Simulation Conf** Williamsburg, Virginia (Charles A. Pratt, The Society for Computer Simulation, P.O. Box 2228, La Jolla, CA 92038-2228)
- 25-27 **4th Oxford Conf on Microscopy of Semiconducting Materials** Oxford, UK 9/84
- 25-27 **Conf on Nuc Structure Phys** [Nuc Phys Sub-Comm of the Inst of Phys] University of Surrey, England (The Inst. of Phys., 47 Belgrave Square, London, SW1X 8QX)
- 25-28 **Symp on Semiclassical Descriptions of Atomic and Nuclear Collisions** Copenhagen, Denmark 5/84
- 25-29 **APS Gen Mtg** Baltimore 11/83

SHE MODEL 1000



COMPUTER CONTROLLABLE POTENTIOMETRIC CONDUCTANCE BRIDGE/CONTROLLER

SHE's new Model 1000 combines a potentiometric conductance bridge and an automatic temperature controller into one unique instrument. Both functions are computer or manually controllable. Resistance thermometers can be supplied to form a complete temperature measurement and control system capable of long-term temperature stability of 1 μ Kelvin at cryogenic temperatures.

S.H.E. Corporation

4174 Sorrento Valley Blvd.
San Diego, CA 92121
Telex 697903
Telephone [619] 453-6300

In Europe:

S.H.E. GmbH
Grüner Weg 83
D-5100 Aachen WEST GERMANY
Telex 8329453
Telephone [0241] 155037

With crystal controlled 27 Hz excitation [10 μ V to 300 μ V], auto-ranging [400 μ Mho to 4 Mho full scale] and a 40,000 count display, the model 1000 provides an exciting combination of range, resolution, accuracy, and ease of use. Its versatile Proportional — Integral — Differential temperature controller has output powers ranging from 0.3 μ W to 1 Watt.

Temperature control and computer interface functions are provided by plug in circuit board cards. The Model 1000 can be supplied without these cards for economical, manual operation of the bridge section alone.

In Japan:

Niki Glass Co., Ltd.
P.O. Box 33, Takanawa
Tokyo 108, JAPAN
Telex 242 3475
Telephone [03] 456-4700

Circle number 69 on Reader Service Card

APRIL 1985

- 8-12 **109th Ann Mtg of ASA** Austin, TX 11/83
- 15-18 **2nd Spring Mtg of the Materials Research Society** San Francisco 9/84
- 15-19 **2nd Eur Conf on Atomic and Molecular Phys** Amsterdam 9/84
- 17-24 **Research and Technology '85 Exhibition** Hannover, West Germany (Hannover Fairs Information Center, P.O. Box 338, Whitehouse, NJ 08888 [201-534-9044])
- 18-20 **6th Wksp on Grand Unification** Minneapolis, Minnesota (S. Rudoz, School of Physics and Astronomy, University of Minnesota, Minneapolis, MN 55455)
- 22-26 **14th Int Symp on Acoustical Imaging** The Hague, The Netherlands 11/83
- 25-27 **APS Spring Mtg** Washington, DC 11/83
- 27-28 **APS FORUM's Short Course on Physics and Technology of Energy Conservation** San Luis Obispo, CA (David Hafemeister, 553 Serrano, San Luis Obispo, CA 93401 [805-544-5096])
- 29-2 **23rd Int Magnetics Conf** St. Paul, Min. (INTERMAG '85, c/o Courtesy Associates, Inc., 655 15th St. NW, Suite 300, Washington, DC 20005) [12/7/84]
- 30-2 **Amer Nuc Soc Top Mtg on Tritium Tech in Fission, Fusion and Isotopic Applications** [ANS, Canad Nuc Soc] Dayton, Ohio (Harold F. Anderson, Monsanto Research Corp., Mound Facility, P.O. Box 32, Miamisburg, Ohio 45342 [513-865-3062])

MAY 1985

- 6-8 **Rate Processes and First Passage Times in Chem Phys** Bethesda, MD (G. H. Weiss, National Institutes of Health, Bldg. 12A, Room 2007, Bethesda, MD 20205)
- 12-17 **Symp on Chem and Phys of Composite Media** [Electrochemical Society] Toronto, Canada (M. Tomkiewicz, Department of Physics, Brooklyn College of CUNY, Brook-

A revolution in nuclear spectroscopy

ADCAM & THE IBM PC GIVE YOU MAGICAL NEW POWERS.

The ADCAM™ System is the first truly modular approach to nuclear spectroscopy with functions optimized for unprecedented performance, flexibility, simplicity and value.

The heart of the ADCAM System is the Multichannel Buffer (MCB)—a complete, stand-alone, computer-controlled MCA without a keyboard or display. The ADCAM MCB and our exclusive MCA Emulation Software with semi-quantitative data reduction and live, dynamic spectral display turn the IBM PC into a "Magical New MCA."

ADCAM software updates keep your MCA's magic "new" and the wizardry of the computer industry lets you do quantitative analysis using the power of your PC—

easier and less expensively than on a mainframe.

ADCAM is fully compatible with your in-place detectors, electronics, and computer. Or order a complete EG&G Ortec system from the broadest selection of nuclear spectroscopy systems available anywhere. Either way, you get increased productivity, efficiency, and system throughput. And, you can use your computer for business or laboratory needs while simultaneously acquiring data from many sources.

Join the nuclear spectroscopy revolution today by calling your EG&G Ortec Sales Engineer or local office. Ask for "ADCAM".

It will make you believe in magic again.

ADCAM System



IBM PC & ADCAM Software



100 Midland Road, Oak Ridge, TN 37830
Phone: 1-800-251-9750 or 615-482-4411
TELEX: 55-7450

Circle number 70 on Reader Service Card

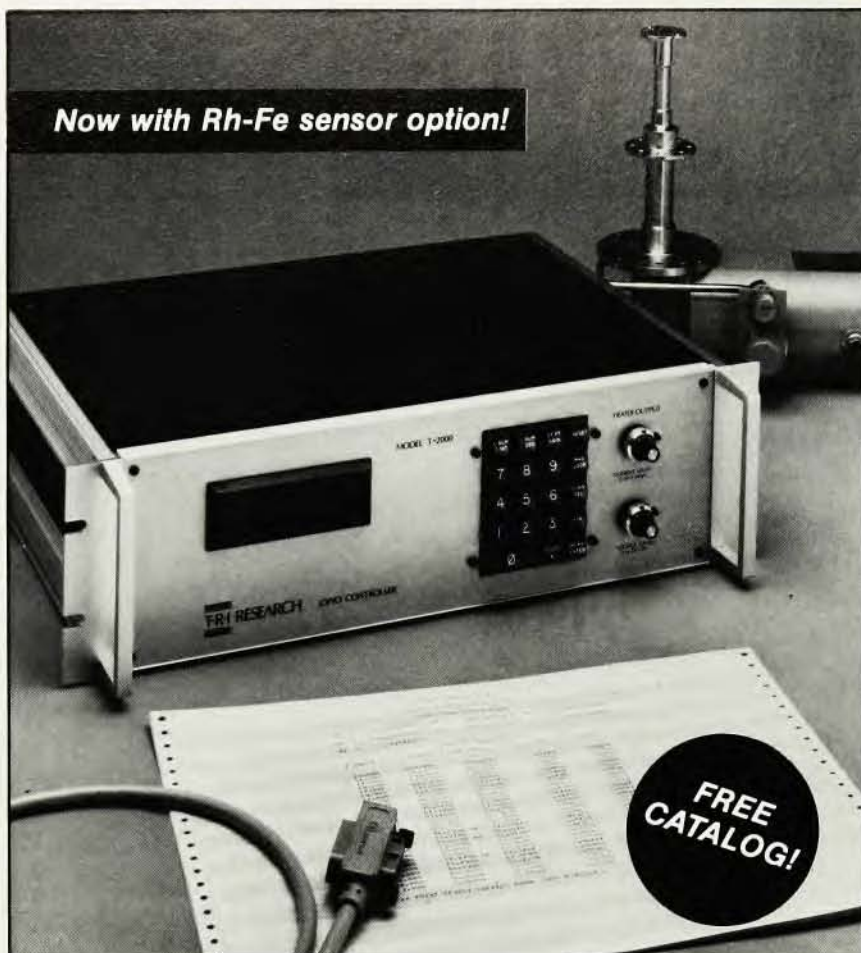


NIM Electronics & MCB



Detector

Now with Rh-Fe sensor option!



T-2000 Cryo Controller

The most accurate, stable and dependable cryogenic temperature controller of its type. Extremely easy to use with readout and control directly in temperature for all sensor types and continuously adjustable heater power range. Full IEEE-488 compatibility and four sensor inputs facilitate complete automation.

Compare:

	TRI Research*	Lake Shore*
Model	T-2000-IEEE	DRC-82C
Accuracy, electronics	0.1 K, typ.	??**
Compatible sensor types**	4	2
Displayed temperature	11th order fit	Linear approx.
Sensor inputs	4	2
Digital PID control?	Yes	No
Price, with IEEE-488, R.M.	\$2945	\$3025
Price, without IEEE-488	\$2495	N/A

* Manufacturer's published specifications.

** Diode; Pt RTD, Cryo Carbon, Rhodium-Iron optional.

*** Actually there is no accuracy specification, except at three isolated points.

Our products are in use at virtually every major center of cryogenic activity in the world. Contact TRI Research and let us help you turn your next idea into a result.

Write or call collect:
TRI Research, Inc.
2459 University Avenue
Saint Paul, MN 55114 USA
TELEX: 955439
INTL DIV; ATTN: TRI
Phone: 612/645-7193



RESEARCH

AUTOMATED CRYOGENIC SYSTEMS

lyn, NY 11210 [212-780-5357] [12/1/84]

- 13-17 **Int Conf on Nuclear Data for Basic and Applied Sci** Los Alamos, NM 1/84
- 14-16 **Int Conf on Ion & Plasma Assisted Techniques** Munich, West Germany (IPAT Secreatiat, CEP Consultants Ltd., 26 Albany Street, Edinburgh EH1 3QH, UK)
- 21-23 **6th Symp on x and γ Ray Sources and Applications** Univ. of Mich. Ann. Arbor, Michigan (Martin A. Ludington, Department of Physics, Albion College, Albion, Michigan 49224)
- 21-24 **Conf on Lasers and Electro Optics [OSA, IEEE]** Baltimore 11/83
- 24-6 **Conf on Determination & Interpretation of Small Structural Differences** Erice, Italy 1/84
- 26-31 **AAAS Ann Mtg** Los Angeles (AAAS, 1776 Massachusetts Ave. NW, Washington, DC 20036) note changed date

JUNE 1985

- 3-6 **Int Conf on the Theory of the Structures of Non-Crystalline Solids** [APS, ACS, IUPAC] Bloomfield Hills, Michigan (Martin C. Steele, Institute for Amorphous Studies, 1050 East Square Lake Rd., Bloomfield Hills, Michigan 48013 [313-540-0102]) [1/15/85]
- 3-7 **10th Int Symp on Mol Beams** Cannes, France (F. M. Devienne, Laboratoire de Physique Moleculaire, des Hautes Energies, B.P. 2. - F- 06530 Peymeinade)
- 9-12 **166th Mtg of AAS** Charlottesville, VA 5/84
- 9-14 **ANS Ann Mtg** Boston, MA 3/84
- 10-12 **IEEE 5th Pulsed Power Conf** Washington, DC 9/84
- 10-14 **2nd Int Conf on Nucleus-Nucleus Collisions** Sweden 5/84
- 12-14 **Spring Conf on Applied Optics [OSA]** Cherry Hill, New Jersey (Optical Society of America, 1816 Jefferson Place, NW, Washington, DC 20036 [202-223-0920]) [3/1/85]
- 16-20 **Symp on Foundations of Modern Physics: 50 years of the Einstein-Podolsky-Rosen Gedankenexperiment** University of Joensuu, Finland 7/84
- 16-21 **17th Biennial Conf on Carbon** Lexington, KY (Dr. P. J. Reucroft, College of Engineering, Univ. of Kentucky, Lexington, KY 40506) [10/1/84]
- 16-30 **Spectroscopy of Solid State Laser-Type Materials** Erice, Italy 9/84
- 17-21 **AAPT Mtg** Flagstaff, AZ 11/83
- 19-21 **4th Int Conf on the Numerical Analysis of Semiconductor Devices and Integrated Circuits** Dublin, Ireland 5/84
- 20-5 **3rd Wksp on Nonlinear Evolution Equations and Dynamical Systems** Baia Verde, Gallipoli (Italy) 9/84
- 20-30 **Int Sch for Intermediate Energy Nuc Phys** Verona, Italy (Carlo Schaerf, Dipartimento di Fisica, Università degli Studi di Roma, 'La Sapienza,' 00185—Roma, Italy) note changed date

Circle number 71 on Reader Service Card