

calendar

JULY 1984

- 2-4 2nd Int Symp on Applications of Laser Anemometry to Fluid Mechanics Lisbon, Portugal 7/83
- 2-5 Conf on the Phys of Highly Ionised Atoms Oxford, UK 5/84
- 2-6 1984 Nuclear EMP Mtg Baltimore, MD 9/83
- 2-6 3rd Trieste IUPAP Semiconductor Symp: High Excitation and Short Pulse Phenomena Trieste, Italy 1/84
- 2-6 Conf on Theoretical Biology & Biomath New London, NH 5/84
- 2-13 Applied Optics Summer Course London 3/84
- 3-6 Int Conf on Crystal Growth and Characterization of Polytype Structures Marseilles, France 1/84
- 5-6 2nd Symp on Plasma Double Layers and Related Topics Innsbruck, Austria 3/84
- 7-13 • 96th Sci Mtg of Astronomical Soc of the Pacific Santa Cruz, CA (A. Fraknoi, Astronomical Soc of the Pacific, 1290 24th Ave., San Francisco, CA 94122; 415-661-8660) note changed date
- 8-11 4th Int Conf on Mechanics in Medicine and Biology Buffalo, NY 9/83

- 8-13 Ann Review of Progress in Quantitative Nondestructive Evaluation San Diego, CA 3/84
- 8-21 1984 Summer Sem in Applied Mathematics Sante Fe, NM 1/84
- 9-12 IAU Colloq Properties and Interactions of Interplanetary Dust Marseille, France 1/84
- 9-13 7th Eur Symp on Antiproton Interactions Durham, UK 9/83
- 9-13 Int Conf on the Effects of Modes of Formation on the Structure of Glasses Nashville, TN 11/83
- 9-13 Short Course on Fiber and Integrated Optics San Diego, CA 3/84
- 9-13 UV and X-Ray Emission from Active Galactic Nuclei Garching, FRG 3/84
- 9-13 Course on Laser Fundamentals and Systems Washington, DC 5/84
- 9-13 Plasma Processing for Microelectronic Fabrication Cambridge, MA 5/84
- 9-13 3rd Int Symp on Small Particles and Inorganic Clusters Berlin 5/84
- 9-13 Conf on Lasers in Medicine & Bio Meriden, NH 5/84
- 9-13 Conf on Nuclear Structure Phys Tilton, NH 5/84
- 9-13 Conf on Particle-Solid Interactions Plymouth, NH 5/84

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 The 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 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

PLAN NOW
TO ATTEND!

LABCON central84

Fourth Annual Laboratory Instrument and Equipment Conference and Exhibition

September 25-27, 1984
O'Hare Exposition Center
Rosemont, Illinois

Over 175 displays of the latest and most advanced equipment, supplies and services for the scientific research laboratory.

An expanded Conference Program featuring:

- Biotechnology I: Biosensors
- Mass Spectrometry
- Atomic Absorption/Emission Spectroscopy
- Applications for Particle Enumeration
- NIR Spectroscopy
- Biotechnology II: Process Control
- Ion Chromatography
- Computer Applications
- Particle Characterization
- NMR Spectroscopy
- The Microscopy Approach to Product Defect and Failure Analysis
- Liquid Chromatography — I
- Atomic Emission Spectroscopy — I
- Thermal Analysis
- Toxicology
- Cosmetic Analysis
- Liquid Chromatography — II
- Atomic Emission Spectroscopy — II
- Forensic Chemistry
- Hazardous Waste Analysis
- Pharmaceutical Analysis — I
- Gas Chromatography — I
- Computerised Spectroscopy (IR, UV, FL) — I
- Surface Characterization
- Biomedical and Clinical Chemistry
- Pharmaceutical Analysis — II
- Gas Chromatography — II
- Computerised Spectroscopy (IR, UV, FL) — II
- Asbestos: Monitoring and Measurement
- Science in Art and Art Conservation

Workshops

- Elemental Determination Via Direct Current Plasma Emission Spectroscopy
- Powder Surface Area and Porosity
- Introductory Workshop on XRF Analysis
- Inside Your NMR System
- Basic HPLC
- Basic Infrared Spectroscopy

For more information on attending or exhibiting in this dynamic industry event, call or write the show organizer.



Tower Conference Management Co.
Dept. PT
331 W. Wesley St.
Wheaton, IL 60187
(312) 668-8100

Circle number 39 on Reader Service Card

- 9-13 **Conf on Chem and Phys of Microstructure Fabrication** Wolfeboro, NH 5/84
- 9-14 **Short Course in Design and Analysis of Scientific Experiments** Cambridge, MA 3/84
- 9-20 **Summer Session on Lasers and Optics for Applications** Cambridge, MA 5/84
- 9-3 **Summer Workshop in Condensed Matter Res** Houghton, MI 5/84
- 10-20 **Course on Frontiers in Physical Acoustics** Varenna, Italy 5/84
- 15-19 **5th World Hydrogen Energy Conf** Toronto 5/83
- 15-19 **1st Inter-Am Mtg on Medical Phys** Chicago, IL 5/84
- 15-21 **Ann Mtg of AAPM** Chicago 9/83
- 15-28 **NATO Advanced Study Inst on Electronic Structure, Dynamics and Quantum Structural Properties** Antwerpen, Belgium 3/84
- 16-20 **3rd Int Conf on EXAFS** Stanford Synchrotron Radiation Lab Stanford, CA 1/84
- 16-20 **Int Cont on Ion Beam Modification of Materials** Ithaca, NY 1/84
- 16-20 **36th Symp on Light and Electron Microscopy** Chicago, IL 5/84
- 16-20 **Conf on Polymer Phys** Andover, NH 5/84
- 16-20 **Conf on Electron Spectroscopy** Wolfeboro, NH 5/84
- 16-20 **Conf on Photonic Nuclear Reactions** Plymouth, NH 5/84
- 16-20 → **Short Course on Large Scale Applications of Superconductivity** [Plasma Fusion Ctr. MIT] Cambridge, MA (B. Keesler, Plasma Fusion Center, Room NW 16-146, MIT, Cambridge, MA 02139)
- 16-27 **Course on Optical Metrology** Vianna Do Castelo, Portugal 5/84
- 16-3 **Nonlinear Phenomena in Phys** Santiago, Chile 3/84
- 17-27 **10th Int School on Disarmament and Research on Conflicts** Venice, Italy 1/84
- 22-25 **Course and Conf on Radiation Effects** Colorado Springs, CO 5/84
- 22-28 **AAPM Summer School: Recent Developments in Digital Imaging** South Bend, IN 7/83
- 23-25 **1984 Summer Computer Simulation Conf** Boston, MA 11/83
- 23-25 **21st Ann Conf on Nuclear and Space Radiation Effects** Colorado Springs, CO 5/84
- 23-27 **4th Int Conf on Clustering Aspects of Nuclear Structure and Nuclear Reactions** Chester, UK 5/83
- 23-27 **3rd Int Conf on Infrared Phys** Zurich 1/84
- 23-27 **Short Course on Applied Molecular Spectroscopy: Infrared** Tempe, AZ 3/84
- 23-27 **Summer Conf on Synthetic Aperture Radar Technology and Applications** Ann Arbor, MI 5/84
- 23-3 **1984 SLAC Summer Inst on Particle Phys** Stanford, CA 1/84
- 24-27 **8th IEEE Int Conf on Conduction and Breakdown in Dielectric Liquids** Pavia, Italy 7/83
- 24-3 **Course on Theory of Reliability** Varenna, Italy 5/84
- 28-11 **NATO Advanced Study Institute on Improved Methods for Examining the Submicron World** Nova Scotia, Canada 5/84
- 29-3 **Ann Mtg of the National Conf on Weights and Measures** Boston, MA 5/84
- 29-4 **8th Int Biophysics Cong** Bristol, UK 1/84
- 30-1 **Workshop on the Use of Supercomputers in Theoretical Science** Antwerp, Belgium 5/84
- 30-2 **10th Int Conf on Particles and Nuclei** Heidelberg, FRG 5/84
- 30-3 **Conf on Studies in Solid State Ceramics** New London, NH 5/84
- 30-3 **Conf on Modeling of Flow in Permeable Media** Andover, NH 5/84
- 30-3 **Optical Propagation, Detection, and Communication** Cambridge, MA 3/84
- 30-3 **Conf on Dielectric Phenomena** Plymouth, NH 5/84
- 30-3 **Conf on Atomic & Molecular Interactions** Wolfeboro, NH 5/84
- 30-10 **Short Course on the Phys of Plasma Wall Interaction Processes in Controlled Fusion** Val-Morin, Quebec, Can. 3/84
- AUGUST 1984**
- 1-3 **The Phys of VLSI** Palo Alto, CA 1/84
- 1-3 **2nd Workshop on Hadronic Mechanics** Villa Olma, Como, Italy 3/84
- 1-4 **Top Conf on Optical Effects in Amorphous Semiconductors** Salt Lake City, UT 7/83
- 1-4 **3rd Int Conf on Molecular Beam Epitaxy** San Francisco 3/84
- 1-7 **Les Houches 43: Critical Phenomena, Random Systems, Gauge Theories** Les Houches, France 1/84
- 2-13 **Advanced Study Inst on Techniques and Concepts of High Energy Phys** St. Croix, US Virgin Islands 11/83
- 4-8 → **Fourth Topical Meeting on Photoacoustic, Thermal and Related Sciences** Quebec, Canada (L. Bertrand, Department de genie physique, Ecole Polytechnique, Campus de l'Universite de Montreal, P.O. Box 6079, Succursale "A", Montreal, Canada H3C 3A7 [514-344-4732])
- 4-14 **27th Int Geological Cong** Moscow 1/84
- 5-8 **4th Workshop on Maximum Entropy and Bayesian Methods in Applied Statistics: Maximum Entropy Methods in Inversion** Calgary, Alberta, Canada 5/84
- 5-9 **NMR Symp** Denver, CO 3/84
- 5-9 **7th Int EPR Symp** Denver, CO 3/84
- 5-10 **Space Shuttle Experiment and Environment Workshop** Henniker, NH 5/84
- 6-10 **Int Conf on the Phys of Semiconductors** San Francisco 7/83
- 6-10 **Summer Program on Industrial Rheology: Principles and Practice** Cambridge, MA 5/84
- 6-10 **Course on Non-Ionizing Radiations: Biophys and Biological Basis, Applications, and Hazards in Medicine and Industry** Cambridge, MA 5/84
- 6-10 **Conf on Chem & Phys of Water & Aqueous Solutions** New Hampton, NH 5/84
- 6-10 **Conf on Magnetic Resonance in Medicine & Bio** Tilton, NH 5/84
- 6-17 **NATO Adv Study Inst: Stability of the Solar System and Its Minor Natural Artificial Bodies** Austin, TX 1/84
- 6-17 **Modern Industrial Spectroscopy** Tempe, AZ 3/84
- 7-10 **9th IEEE Int Semiconductor Laser Conf** Rio de Janeiro, Brazil 3/84
- 9-18 **Int Union of Crystallographers 13th Cong** Hamburg, FRG 7/83
- 10-12 → **Tesla Centennial Symposium** [IEEE, Tesla Memorial Society] Colorado Springs (Tesla Symposium, P. O. Box 38445, Colorado Springs, CO 80937)
- 12-17 **2nd Int Symp on Diffuse Reflectance Spectroscopy** Chambersburg, PA 5/84
- 12-17 **13th Int Conf on Defects in Semiconductors** Coronado, CA 5/84
- 12-1 **Summer School in High Energy Phys: Fundamental Forces** St. Andrews, Scotland 3/84
- 12-17 **Mtg of the Electron Microscopy Soc of America** Detroit 1/84
- 13-14 **Top Mtg on Industrial Applications of Computer Tomography and NMR Imaging** Manitoba, Can. 1/84
- 13-16 **1st Int Conf on the Structure of Surfaces** Berkeley, CA 11/83
- 13-16 **Int Conf on Superlattices, Microstructures and Microdevices** Champaign-Urbana, IL 1/84
- 13-17 **6th Int Conf on Thin Films** Stockholm 7/83
- 13-17 **Int Conf on Luminescence** Madison, WI 7/83
- 13-17 **12th Int Laser Radar Conf** Aix-en-Provence, France 1/84
- 13-17 **IUPAC Conf on Chem Thermodynamics/39th Ann Calorimetry Conf** Hamilton, Ontario 1/84
- 13-17 **Short Course on Fiber Optic Communication Systems** Santa Barbara, CA 5/84
- 13-17 **Conf on Dynamics of Simple Systems in Chem & Phys** Wolfeboro, NH 5/84
- 13-17 **Conf on Electron Donor Acceptor Interactions** Plymouth, NH
- 13-17 → **Short Course on Modern Radiometric and Photometric Measurements** [Laser Institute of America] Boston, MA (Education Director, Laser Institute of America, 5151 Monroe Street, Ste. 118W, Toledo, OH 43623 [419-882-8706])
- 13-18 **8th Eur Cong on Electron Microscopy** Budapest, Hungary 1/84

- 13-24 **Summer School on High-Energy Particle Accelerators** Batavia, IL 5/84
- 14-16 **Short Course on Laser/Fiber Communications** Denver, CO (Engineering Technology, Inc., P.O. Box 8859, Waco, TX 76714-8859 [817-772-0082])
- 15-17 **1984 Int Conf on Information Processing in Optics** Christchurch, New Zealand 1/84
- 15-17 **Int Conf on Progress in Optical Physics** Melbourne, Australia 1/84
- 15-22 **17th Int Conf on Low Temperature Phys** Karlsruhe, FRG 9/83
- 19-24 **SPIE 28th Ann Int Tech Symp on Optics and Electro-Optics and Instrument Display** San Diego, CA 5/84
- 20-23 **Conf on Thinking** Cambridge 5/84
- 20-24 **Conf on Precision Electromagnetic Measurements** Delft, The Netherlands 7/83
- 20-24 **5th Int Symp on Gas Flow and Chem Lasers** Oxford, UK 7/83
- 20-24 **Int Conf on Defects in Insulating Crystals** Salt Lake City, UT 9/83
- 20-24 **13th Conf of the Int Comm for Optics** Sapporo, Japan 1/84
- 20-24 **7th IUPAC Conf on Phys Organic Chem** Auckland, New Zealand 1/84
- 20-24 **Int Symp on Synthetic Membranes** Midland, MI 3/84
- 20-24 **Short Course on Detection of Infrared Radiation** Santa Barbara, CA 5/84
- 20-24 **Conf on Vibrational Spectroscopy** Wolfeboro, NH 5/84
- 20-25 **Conf on Phys Education** Utrecht, The Netherlands 7/83
- 20-25 **Int Conf on X-Ray and Inner-Shell Processes in Atoms, Molecules and Solids** Leipzig, GDR 9/83
- 20-25 **13th Int Conf on Differential Geometric Methods in Theoretical Physics** Shumen, Bulgaria 5/84
- 21-24 **Phys in Collision IV** Santa Cruz, CA 1/84
- 21-24 **Short Course on Rheological Measurements: Applications to Polymers Suspensions and Processing** University of Minnesota (J. S. Vollum, 222 Nolte Center, 315 Pillsbury Drive SE, University of Minnesota, Minneapolis, MN 55455 [612-373-3157])
- 26-29 **Int Top Mtg on Fuel Reprocessing and Waste Management** Jackson Hole, WY 9/83
- 27-29 **8th Int Colloquium on Extreme UV and X-ray Spectroscopy of Astrophysical & Laboratory Plasmas** Washington, DC 9/83
- 27-31 **Symp on Transport Processes in Membranes and Epithelia: Osmotic and Ionic Regulation** Liege, Belgium 9/83
- 27-31 **3rd Int Conf on Solid Films and Surfaces** Sydney, Australia 11/83
- 27-31 **6th Gen Conf of the Eur Phys Soc** Prague, Czech 1/84
- 27-31 **Australian Inst of Phys 6th Nat Cong** Brisbane, Queensland 1/84

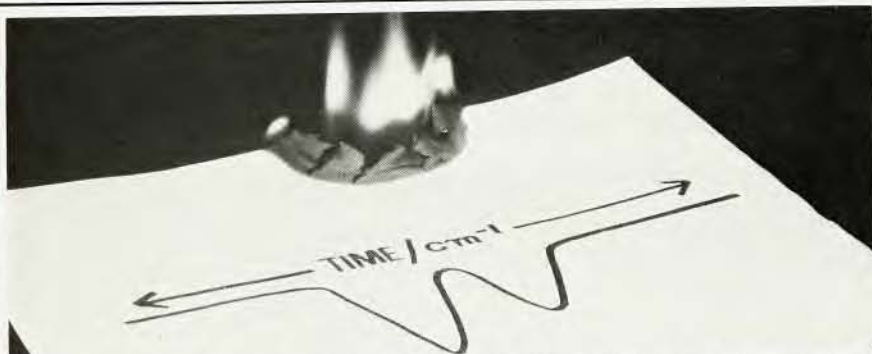
MODEL 5500 MICROPROCESSOR BASED CRYOGENIC TEMPERATURE CONTROLLER



Optimum controllability is achieved utilizing a Proportional, Integral and Derivative polynomial equation. The temperature set point is digitally controlled by the microprocessor unit. The digital word that is sent to the heater control circuit is precise, repeatable and exact. This is true DIGITAL control and the most pronounced feature of Scientific Instruments' Model 5500 cryogenic controller.

For complete specifications contact:
Scientific Instruments, Inc.
1101 25th Street, West Palm Beach, FL 33407
(305) 659-5885 • TELEX: 51 3474

Circle number 40 on Reader Service Card



LINESHAPE SPECTROSCOPY AT HIGHEST TEMPERATURES?

No other technique even comes close to Laser Analytics' TDL – or pays off faster! Get fraction-of-a-millisecond

measurements in lineshape spectroscopy at shockwave-induced temperatures of gases such as

CO. Our TDL is revolutionizing infrared spectroscopy and doing so in every application! It is unmatched in speed, range,

sensitivity, and high resolution.

In day-by-day economy, it is gratifying to operating budgets.

To check on its potential for your own research, to talk with Laser Analytics on both the science and practicability of TDL, phone 617/275-2650!

The
Laser Analytics
Letter.

Please write or send business card to receive copies of "THE LASER ANALYTICS LETTER" reporting new developments in IR Tunable Diode Laser technology R&D applications, industrial case histories, and other informative data.

Laser Analytics Division

SCIENTIST-MANUFACTURERS OF ADVANCED
IR TUNABLE DIODE LASER SYSTEMS
A Spectra-Physics Company



25 Wiggins Avenue
Bedford, MA 01730
617/275-2650/Telex 92-3324

Circle number 41 on Reader Service Card



The Digital R/G Bridge from Quantum Design

Temperature Control from Quantum

- Four sensor channels and two 15 watt control outputs in a single instrument.
- 16-bit resolution for both sensor readout and feedback control signals.
- Resistance and conductance modes provide expanded dynamic range with ultra-low excitation powers.
- Full computer control via the IEEE-488 standard.

Quantum Design's new R/G Bridge offers precision measurement and control capability for all types of ohmic sensors and experimental environments.



QUANTUM DESIGN

11568 Sorrento Valley Road, Suite 15
San Diego, CA 92121 (619) 457-0248

Circle number 51 on Reader Service Card

Precision PMT HIGH VOLTAGE Power Supply Modules

- 0.001% regulation
- Remote programming and monitoring
- Short circuit and arc protected

MODEL	OUTPUT	RIPPLE pk-pk
PMT-05A	0 to 500V @ 8mA	5mV
PMT-10A	0 to 1000V @ 4mA	4mV
PMT-20A	0 to 2000V @ 2mA	2mV
PMT-50A	0 to 5000V @ 0.5mA	10mV

The PMT models are high performance, compact modular power supplies, applicable for OEM and laboratory applications. Positive and negative output polarity units are available that can be operated from a variety of dc input voltages.

Send for our catalog describing the most complete line of precision high voltage supplies to 50 kV.



BERTAN ASSOCIATES, Inc.

121 New South Road, Hicksville, NY 11801 • (516) 433-3110 • TWX 510-221-2144

Circle No. 52 for Immediate Application

Circle No. 53 for Literature Only

- 27-31 **Conf on Fundamentals of Cybernetics** New Hampton, NH 5/84
- 27-6 **21st Gen Assembly of Int Union of Radio Science** Florence, Italy 1/84
- 27-8 **NATO Advanced Study Inst on Nonequilibrium Phonon Dynamics** Les Arcs, France 1/84
- 28-6 **Dynamical Systems: Renewal of Mechanism** Peyresq, France 1/84
- 28-7 **Int School of Plasma Phys—Plasma Astrophysics** Varenna, Italy 7/83

SEPTEMBER 1984

- 3-6 **10th Eur Conf of Optical Communication** Stuttgart, FRG 1/84
- 3-7 **5th Int Conf on Rapidly Quenched Metals** Würzburg, FRG 9/83
- 3-7 **Course on Observational and Theoretical Aspects of Relativistic Astrophysics and Cosmology** Santander, Spain 5/84
- 3-7 → **Charge Density Waves in Solids [IUPAP]** Budapest, Hungary (G. Huttiray, Central Research Institute for Physics, P.O. Box 49, Budapest 1525, Hungary)
- 5-11 → **International Conference on Multiphoton Processes III** Iraklion, Crete, Greece (P. Lambropoulos, Univ. of Southern California, Los Angeles, CA 90089-1341)
- 6-7 **2nd Int Conf on Optical Fiber Sensors** Stuttgart, FRG 11/83
- 6-7 **8th Int Macromolecular Symp: Macromolecules: Interdisciplinary Developments** Interlaken, Switz. 1/84
- 6-8 **Workshop on Personal Computer and STD Computer Interfacing for Scientific Instrument Automation** Washington, DC 5/84
- 9-13 **5th ANS/ENS Int Mtg on Thermal Reactor Safety** Karlsruhe, FRG 3/84
- 9-13 **Applied Superconductivity Conf** San Diego, CA 3/84
- 9-15 **Workshop on Electricity** Germany 5/84
- 10-12 **Int Sem on ORC-Tech: New Working Fluids for Energy Eng Alternative Heat Power Processes** Zürich, Switz. 11/83
- 10-14 **5th Int Symp on Capture Gamma-Ray Spectroscopy and Related Topics** Knoxville, TN 3/84
- 10-14 → **Short Course on Fundamentals and Applications of Lasers [Laser Institute of America]** Orlando, FL (Education Director, Laser Institute of America, 5151 Monroe St., Ste. 118W, Toledo, OH 43623 [419-882-8706])
- 10-14 → **2nd International Workshop on Atomic Physics for Ion Fusion** Rutherford Appleton Laboratory, Great Britain (J. H. Aram, Building R63, Rutherford Appleton Laboratory, Chilton, Didcot, Oxfordshire OX11 0QX, Great Britain)
- 10-14 → **Stochastic Processes Applied to Physics [IUPAP]** Santander, Spain (E. Santos, or L. Pesquera, Dpto.

Fisica Teorica, Facultad de Ciencias, Avda. Las Castros s/n, Santander, Spain)

OCTOBER 1984

- 10-21 **NATO Advanced Study Institute in Fundamental Processes in Atomic Collision Physics** Palermo, Italy 5/84
- 11-12 **Conf on Reliability Aspects: From Devices to Systems** Surrey, UK 5/84
- 11-14 **8th Int Conf on Noise in Physical Systems—3rd Int Conf on 1/f Noise** Rome 3/84
- 12-19 **6th Int Symp on High Energy Spin Phys** Marseille, France 3/84
- 13-14 **Kinetics and Mass Transport of Silicate & Oxide Systems** London, UK 1/84
- 16-20 **5th Top Conf on High Temperature Plasma Diagnostics** Tahoe City, CA 5/84
- 17-19 **Advances in Reactor Phys and Radiation Protection and Shielding** Chicago, IL 3/84
- 17-21 **9th Eur Conf on Thermophysical Properties** Manchester, UK 7/83
- 17-21 **7th Int Conf on Textures of Materials** The Netherlands 9/83
- 17-21 **Short Course on Modern Surface Spectroscopy Techniques—AES, ESCA, SIMS, UPS Applied to Problems in Materials and Chemistry** Austin, TX 3/84
- 17-21 → **Short Course on Laser Safety: Hazard, Inspection and Control** [Laser Institute of America] Cincinnati, OH (Education Director, Laser Institute of America, 5151 Monroe St., Ste. 118W, Toledo, OH 43623 [419-882-8706])
- 17-21 → **Short Course on Tunable Lasers** [Laser Institute of America] Washington, D C (Education Director, 5151 Monroe St., Ste. 118W, Toledo, OH 43623 [419-882-8706])
- 20-21 **Workshop on Stopping Power for Low-Energy Ions** Linz, Austria 5/84
- 21-24 **Int Mtg on Photophysics and Photochemistry above 6 eV** Bombannes, France 11/83
- 23-5 **Phys and Engineering of Medical Imaging** Maratea, Italy 3/84
- 23-5 → **Advanced Course on Physics and Engineering of Medical Imaging** [NATO Advanced Study Institute] Maratea, Italy (R. Guzzardi, C.N.R. Clinical Physiology Institute, Via P. Savi, 8, 56100 PISA, Italy) [6/15/84]
- 24-26 → **13th Ann Conf North American Thermal Analysis Society** Philadelphia (H. Ferrari, Publicity Chairman, Lederle Laboratories, Pearl River, NY 10965 [914-735-5000 X3443])
- 24-28 **11th Int Symp on Discharges and Electrical Insulation in Vacuum** Berlin, GDR 11/83
- 24-28 **3rd Latin Am Symp on Surface Phys** San Jose, Costa Rica 5/84
- 26-26 → **NASA Symposium on Productivity and Quality** [NASA] Washington, D.C. (P. Edwards, AIAA, 1633 Broadway, New York, NY 10019 [212-581-4300])
- 25-28 **Energy Pulse Modification of Semiconductors and Related Materials** Dresden, GDR 11/83
- 1-3 **9th Biennial Symp on Turbulence** Rolla, MO 5/84
- 2-3 **Symp on Optical Fiber Measurements** Boulder, CO 3/84
- 8-12 **108th ASA Mtg** Minneapolis, MN 7/83
- 8-13 **9th Int Cong on Rheology** Acapulco, Mex. 7/83
- 9-12 **37th Gaseous Electronics Conf** Boulder, CO 7/83
- 9-12 → **16th Annual Meeting of the Division of Planetary Sciences AAS** Kailua-Kona, Hawaii (D. Morrison, Institute for Astronomy, University of Hawaii, 2680 Woodlawn Drive, Honolulu, Hawaii 96822)
- 12-13 **Mtg of APS Ohio Sec** Cleveland, OH 5/84
- 15-17 **Workshop on Nuclear Phys with Stored Cooled Beams** Bloomington, IN 11/83
- 15-17 **16th Ann Symp on Optical Materials for High Power Lasers** Boulder, CO 5/84
- 16-18 **Symp on Viscoelasticity and Rheology** Madison, WI 5/84
- 18-20 **APS Nuclear Phys Div** Nashville, TN 7/83
- 21-26 **5th Int Mtg on Radiation Processing** San Diego, CA 9/83
- 21-27 **Cambridge Symp on Optical and Electro-Optical Engineering** Cambridge, MA 5/84
- 22-26 **9th Int Conf on Infrared & Millimeter Waves** Takarazuka, Osaka, Japan 1/84
- 22-26 **1st Int Conf Exhibition & Workshop on Text Processing Systems** Dublin, Ireland 5/84
- 25-27 **Mtg of APS Southeastern Sec** Memphis, TN 5/84
- 26-27 → **23rd Eastern Theoretical Physics Conference** Univ. Park, PA (G. N. Fleming, Davey Lab., Penna. State Univ., Univ. Park, PA 16802)
- 28-1 → **Second International Congress on Computers in Science** Washington, D C (R. R. Charles, Scherago Associates, Inc., 1515 Broadway, New York, NY 10036 [212-730-1050])
- 29-31 **1984 SERI Photovoltaic R&D 6th Ann Review** Denver, CO 1/84
- 29-31 → **Polymer Research at Synchrotron Light Sources** [DOE] Brookhaven, NY (A. Goland, Department of Applied Science, Brookhaven National Laboratory Associated, Universities, Upton, L.I., NY 11973 [516-282-3819])
- 29-2 **APS Plasma Phys Div** Boston 7/83
- 29-2 **OSA Ann Mtg** San Diego, CA 7/83
- 29-2 **Mtg of APS Div of Plasma Phys** Boston, MA 5/84
- 30-31 **7th Ann Newport Conf on Fiber-optic Markets** Newport, RI 1/84
- 31-3 **Mtg of APS Div of Particles and Fields** Santa Fe, NM 5/84

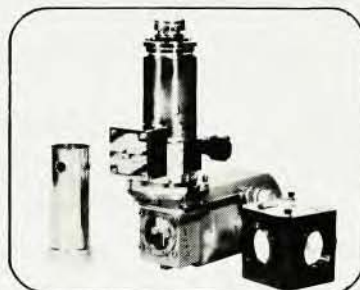
CRYOSYSTEMS

Your CRYOGENIC CONNECTION

announces a

15K to 600K Continuous Operational Range with a Cryosystems LTS Closed Cycle Refrigerator System

Typical Applications include: Deep Level Transient Spectroscopy. Resistivity Measurements. Optical Measurements. Hall Measurements.



Model LTS-21-H, Temp.

Features:

- <15K to 600K
- Convertible to <10K System
- Small Size
- System Flexibility
- Operate Two Cold Heads from One Compressor
- Long Maintenance Interval

Also Available — FTIR, VSM, Mossbauer and Special IR Systems. We Custom Engineer to Your Needs.

To learn more about your CRYOGENIC CONNECTION write or call:

In Europe: CRYOPHYSICS

Oxford, England Versailles, France
(993) 73681 (3) 9560066

Darmstadt, W. Germany Geneva, Switzerland
(6151) 74081 (22) 329520

In Japan
Niki Glass Co., Ltd. (03)5032787

CRYOSYSTEMS INC.

190 Heatherdown Dr. • Westerville, OH
43081 • 614/882-2796 • TELEX: 24-1334

Circle number 42 on Reader Service Card

NOVEMBER 1984

- 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 (R. Bakish, Conference Chairman, Bakish Materials Corporation, P. O. Box 148, 171 Sherwood Place, Englewood, N.J. 07631 [201-567-5873]) [4/15/84]
- 12-14 • **8th Conf on the Application of Accelerators in Research and Industry** Denton, TX (J. L. Duggan, Dept. of Phys., North TX State Univ., Denton, TX 76203) **note changed date**
- 11-16 **ANS/ENS Int Mtg** Washington, DC 3/84
- 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
- 27-30 **30th Ann Conf on Magnetism and Magnetic Materials** San Diego, CA 3/84

DECEMBER 1984

- 4-7 **31st National Vacuum Symp** Reno, NV 9/83
- 4-10 **6th Int Conf on Fracture** New Delhi, India 9/83
- 11-14 **Phys Expo** Paris 3/84
- 14-15 **Symp on Dielectric Phenomena in Honor of the 70th Birthday of R. H. Cole** Providence, RI 3/84

JANUARY 1985

- 6-11 **7th Int Conf on Positron Annihilation** New Delhi, India 5/84
- 13-16 **165th AAS Mtg** Tucson, AZ 11/83
- 15-18 **Top Mtg on Optical Remote Sensing of the Atmosphere** Lake Tahoe, NV 3/84
- 20-25 → **Third Int Conf Optical Mass Data Storage** [SPIE] Los Angeles, CA (SPIE Technical Program Committee/LA '85, P.O. Box 10, Bellingham, WA 98227-0010 [206-676-3290]) [8/20/84]
- 21-24 **APS/AAPT Gen Mtg** Toronto 9/83

FEBRUARY 1985

- 4-6 **Top Mtg on the Microphys of**

Surfaces, Beams, and Adsorbates Santa Fe, NM 3/84

- 11-13 **Top Mtg on Optical Fiber Communication** [OSA, IEEE] San Diego, CA 11/83
- 24-27 → **Eighth Annual Meeting, The Adhesion Society** Savannah, GA (D. Rahrig or B. F. Goodrich, R&D Center, 9921 Brecksville Rd., Brecksville, OH 44141 [216-447-5531])
- 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

MARCH 1985

- 7-9 **Mtg of Texas Sec of AAPT** 5/84
- 18-20 **Top Mtg on Optical Computing** Lake Tahoe, NV 3/84
- 20-22 • **Top Mtg on Machine Vision** Lake Tahoe, NV **note changed date**
- 18-21 → **Conference on Antinucleon and Nucleon-Nucleus Interactions** Telluride, Colorado (G. E. Walker, Physics Dept., Indiana University, Bloomington, IN 47401 [812-335-0303])
- 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
- 25-28 **Symp on Semiclassical Descriptions of Atomic and Nuclear Collisions** Copenhagen, Denmark 5/84
- 25-29 **APS Gen Mtg** Baltimore 11/83

APRIL 1985

- 8-12 **109th Ann Mtg of ASA** Austin, TX 11/83
- 22-26 **14th Int Symp on Acoustical Imaging** The Hague, The Netherlands 11/83
- 25-27 **APS Spring Mtg** Washington, DC 11/83

MAY 1985

- 13-17 **Int Conf on Nuclear Data for Basic and Applied Sci** Los Alamos, NM 1/84
- 21-24 **Conf on Lasers and Electro Optics** [OSA, IEEE] Baltimore 11/83
- 23-28 **AAAS Ann Mtg** Los Angeles 11/83
- 24-6 **Conf on Determination & Interpretation of Small Structural Differences** Erice, Italy 1/84

JUNE 1985

- 9-12 **166th Mtg of AAS** Charlottesville, VA 5/84
- 9-14 **ANS Ann Mtg** Boston, MA 3/84
- 10-14 **2nd Int Conf on Nucleus-Nucleus Collisions** Sweden 5/84
- 16-20 → **A Symposium on the Foundations of Modern Physics: 50 years of the Einstein-Podolsky-Rosen Gedankenexperiment** University of Joensuu, Finland (P. Lahti, Dept. of Physical Sciences, University of Turku, SF-20500 Turku 50, Finland)
- 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
- 24-27 **9th Symp on Thermophys Properties** Boulder, CO
- 24-28 → **Seventh International Conference on Laser Spectroscopy** Maui, Hawaii (T. W. Hansch, Phys. Dept., Stanford University, Stanford, CA 94305)
- 24-29 **Int Conf on Fourier and Computerized Infrared Spectroscopy** Ottawa, Ontario 5/84
- 24-6 **Summer School on Theory of Nuclear Structure and Reactions** La Rabida, Spain 5/84

JULY 1985

- 1-4 → **Second International Conference on Langmuir-Blodgett Films** Schenectady, NY (G. L. Gaines, Jr., General Electric, R&D Center, P.O. Box 8, Schenectady, NY 12301) [2/1/85]
- 1-6 → **11th Europhysics Conference on "Intermediate Energy Nuclear Physics with Electromagnetic Probes"** Paris (DPH/He, C.E.N. Saclay, 91191 Gif-sur-Yvette Cédex, France)
- 14-19 **Conf on the Dynamics of Molecular Collisions** Snowbird, UT 1/84
- 15-19 → **Eight International Symposium on Detonation** [ONR, NSWC, LANL] Albuquerque, NM (J. M. Short, Code R12, Naval Surface Weapons Center, White Oak, Silver Springs, MD 20910) [9/14/84]
- 22-25 → **1985 International Symposium on Microwave Technology in Industrial Development** [Brazilian Microwave Society] Campinas, Brazil (A. J. Giarola, INICAMP-CCPG (Reitoria), CP 1170, 13100 Campinas, SP, Brazil)
- 23-25 **Physical Interactions and Energy Exchange at the Gas-Solid Interface** Hamilton, Ontario, Can. 3/84
- 24-30 **14th Int Conf on the Phys of Electronic and Atomic Collisions** Palo Alto, CA 3/84

AUGUST 1985

- 4-9 → **10th Int Colloq Dynamics of Explosions and Reactive Systems** Berkeley, CA (J. R. Bowen, College

of Engineering, University of Washington, Seattle, WA 98195) [1/15/85]

- 11-15 **27th Ann Mtg of AAPM** Seattle, WA 11/83
- 26-30 **Int Conf on Magnetism** San Francisco, CA 5/84
- 26-30 → **6th Int Symp Polarization Phenomena in Nuclear Physics** [IUPAP] Isaka (H. Sakai RCNP, Osaka University, (Suita Campus) Mihogaoka, Ibaraki Osaka 567, Japan)
- 26-3 **Course and Workshop on Basic Physical Processes in Fusion Plasmas** Varenna, Italy 3/84

SEPTEMBER 1985

- 2-5 **Biennial Conf of IOP Microscopy and Analysis Group** Newcastle upon Tyne, UK 5/84
- 2-6 **11th Int Conf on Amorphous and Liquid Semiconductors** Rome, Italy 5/84
- 5-14 **Course and Workshop on Applications of RF Waves to Tokamak Devices** Varenna, Italy 3/84
- 10-12 **2nd Conf and Exhibition on Sensors and Their Applications** Southampton, UK 5/84

OCTOBER 1985

- 13-18 **12th Eur Conf on the Phys and Chem of Complex Nuclear Reactions** Neve Ilan, Israel 5/84
- 15-18 **OSA Ann Mtg** Washington, DC 3/84

NOVEMBER 1985

- 4-8 **110th Ann Mtg of ASA** Nashville, TN 11/83
- 7-9 **Mtg of Texas Sec of AAPT** College Station, TX 5/84
- 18-22 **32nd Nat Vacuum Symp** Houston, TX 1/84

DECEMBER 1985

- 9-13 **10th Int Conf on Infrared & Millimeter Waves** Orlando, FL 5/84

JANUARY 1986

- 5-8 **167th Mtg of AAS** Houston, TX 5/84
- 27-30 **APS/AAPT Mtg** Atlanta, GA 1/84

MARCH 1986

- 24-29 **APS Mtg** San Diego 1/84

MAY 1986

- 12-16 **111th ASA Mtg** Cleveland, OH 1/84

SEPTEMBER 1986

- 8-11 → **16th Eur Solid State Device Res Conf** Cambridge, UK (Meetings Officer, IOP, 47 Belgrave Sq., London, UK SW1X 8QX)

OCTOBER 1986

- 26-31 **33rd AVS Nat Vacuum Symp** Baltimore, MD 1/84

MAY 1987

- 11-15 → **113th ASA Mtg** Indianapolis, IN (B. Goodfriend, 335 E. 45 St., NY, NY 10017)

OCTOBER 1987

- 27-30 **34th AVS Nat Vacuum Symp** San Diego, CA 1/84

NOVEMBER 1987

- 16-20 → **114th ASA Mtg** Miami, FL (B. Goodfriend, 335 E. 45 St., New York, NY 10017)

MAY 1988

- 16-20 → **115th ASA Mtg** Seattle, WA (B. Goodfriend, ASA, 335 E. 45 St., New York, NY 10017)

OCTOBER 1988

- 2-7 → **35th AVS Nat Vacuum Symp** Atlanta, GA (N. Hammond, 335 E. 45 St., New York, NY 10017)

NOVEMBER 1988

- 14-18 → **116th ASA Mtg** Honolulu, HI (B. Goodfriend, ASA, 225 E. 45 St., New York, NY 10017)

NOVEMBER 1989

- 7-10 → **36th AVS Nat Vacuum Symp** Phoenix, AZ (N. Hammond, 335 E. 45 St., New York, NY 10017) □



Here is a new PMT housing that is the ultimate in compactness and versatility.

Will accommodate all side window PMT tubes and will fit to virtually any instrument that requires the use of a PMT.

It is small enough to fit into your hand, yet, contains high voltage and line voltage power supplies, or even a pre-amplifier (optional).

The price resembles the size and not the versatility.

Another fine product from

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 43 on Reader Service Card