### CALENDAR

#### Abbreviations:

AAPT-American Association of Physics Teachers

AAS—American Astronomical Society
ACA—American Crystallographic Assoc.
APS—American Physical Society
ASA—Acoustical Society of America
OSA—Optical Society of America

s of R-Society of Rheology

AEC-US Atomic Energy Commission
AFCRL-Air Force Cambridge Research
Laboratories

ANS-American Nuclear Society

Avs-American Vacuum Society

IAEA—International Atomic Energy Agency

IEEE—Institute of Electrical and Electronics Engineers

The Physical Society

IUPAP—International Union of Pure and Applied Physics

NBS—National Bureau of Standards ORNL—Oak Ridge National Laboratory

#### Coding:

date subject | Host | Location (Contact) [submission deadline] Physics Today ref.

• new listing • new information

Information in the calendar is compiled from a file maintained in the Physics today office. Readers are invited to write or telephone for general calendar information beyond what we print. For complete information concerning an entry, readers are advised to consult the contact. The date at the end of each item refers to the issue of Physics today in which the item is listed with more detail than appears in subsequent issues.

#### JANUARY 1969

- 2-4 Design of Physics Buildings 

  IPPS, ROYAL INSTITUTE OF BRITISH
  ARCHITECTS 
  University of Lancaster (Meetings Officer, IPPS, 47
  Belgrave Sq., London S.W. 1)
  1/69
- 6-10 Polymer Physics | PHYSICS IN INDUSTRY SUBCOMMITTEE, IPPS | University of Manchester (Meetings Officer) 12/68
- 7-9 Conference on Solid State Physics □ IPPS □ University of Manchester (S. F. Edwards) 11/68
- 11-15 Annual Meeting 

  s of R 

  Williamsburg, Va. (J. G. Brodnyan) 6/68
- 13-17 Non-Metallic Crystals ☐ IUPAP ☐ Delhi, India (S. C. Jain) 8/68
- 13-18 Atomic, Molecular and Solid-State Theory and Quantum Biology 
  U. OF FLORIDA, UPP-SALA U. 
  Sanibel Island, Fla. (Winter Institute) 9/68
- 19, 20 Science as a Profession □ SCIEN-

TIFIC WORKERS' ASSOCIATION, SCIENCE AND TECHNOLOGY SOCIETY 

Kanpur, India (P. Krishnaswami, Defence Research Lab., P.O. Box 320, Kanpur, India) 1/69

Topics include national planning and scientific research; staff selection, career planning and facilities for higher education; and working conditions, creativity and efficiency.

22-24 • Fundamental Interactions at High Energy. ☐ UNIVERSITY OF MIAMI CENTER FOR THEORETICAL STUDIES ☐ Miami (F. Blumenfield, University of Miami, P.O. Box 8105, Coral Gables, Fla. 33124) 1/69

Topics include strong, weak, electromagnetic and gravitational interactions.

23, 24 • 

WESTERN SPECTROSCOPY ASSOCIATION 
Asilomar, Calif. (H. Brown, Varian, 611 Hansen Way, Palo Alto, Calif.) 1/69

Topics include self-induced optical transparency; laser studies of molecular energy transfer in gases; solid-state research by far infrared spectroscopy; spectroscopy of planetary atmospheres; multiple-pulse NMR effects; spectroscopy of larger molecules; the Jahn-Teller effect in optical spectra of solids; magnetic circular dichroism; and self-replicating molecules.

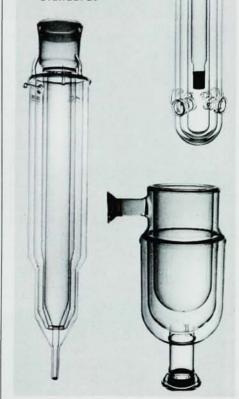
29-31 Health Physics Operational Monitoring 

HEALTH PHYSICS SOCIETY 

Los Angeles (C. A. Willis) [1/69] 9/68

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Options include a Q-switch module to provide up to 2000 pulses per second at up to 7.0 kilowatts per pulse; three interchangeable laser rods (3, 5, and 6.5 mm); choice of open cavity, or closed cavity design for highest output; optics and temperature control module for up-conversion to green laser light, and a recollimating telescope.

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other components are

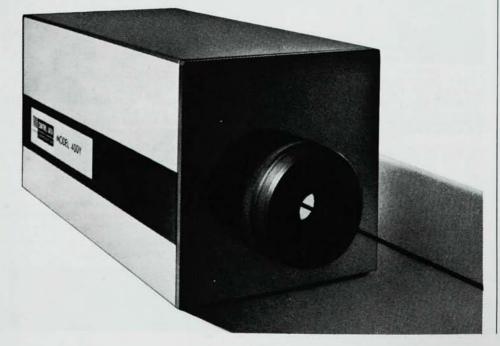
readily accessible without disturbing alignment.

Call or write for detailed information to Control Data Corporation, Melville Space and Defense Systems Division, TRG Laser Products, 535 Broad Hollow Road, Melville, New York 11746. Or phone: (516) 531-6344.

WHAT NEXT IN LASERS? ASK . . .

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SPACE AND DEFENSE SYSTEMS



#### FEBRUARY 1969

- 3–6 Annual Meeting □ AAPT-APS □ New York (APS-W. W. Havens Jr, AAPT-Ronald Geballe) 11/68
- 13, 14 Conference on Electron Probe Microanalysis 

  CROSCOPY AND ANALYSIS GROUP, IPPS 

  London (Meetings Officer) 12/68
- 27-1 Southwest Meeting APS St. Louis, Mo. (R. G. Sachs) 4/68
- 27-1 NMR Experimental Conference

  □ Pittsburgh (J. M. Anderson,
  Dept. of Chemistry & Chemical
  Engineering, University of Illinois, Urbana, Ill. 61801) 1/69

Topics: advances in instrumentation, experimental design and techniques including biochemical applications, superconducting magnets, Fourier-transform methods, nuclei other than <sup>1</sup>H and <sup>19</sup>F, computer applications and pulse techniques.

#### **MARCH 1969**

- ☐ AAPT KENTUCKY SECTION ☐ University of Kentucky (G. K. Miner, Dept. of Physics, Thomas More College, Covington, Ky.) [2/12] 1/69
- 5-7 1969 Particle Accelerator Conference ☐ IEEE ☐ Washington, D. C. (J. A. Martin) 10/68
- 6, 7 Acoustical Holography DOUGLAS ADVANCED RESEARCH LABORATORIES Huntington Beach, Calif. (Secretary, 2nd International Symp. Acoust. Holography) 7/68
- 10-13 1969 Physics Exhibition ☐ IPPS ☐ London (Exhibitions Officer) 10/68
- 11-15 OSA San Diego, Calif. (M. E. Warga) 4/68
- 13-15 Isobaric Spin □ APS □ Pacific Grove, Calif.
- 17-19 Physical Electronics ☐ YALE UNI-VERSITY ☐ New Haven, Conn. (T. E. Fischer) 9/68
- 17–19 Annual Meeting ☐ SOLAR ENERGY SOCIETY (F. E. Edlin) 10/68
- 20-21 Instabilities in Semiconductors □
  APS, 1BM □ Yorktown Heights,
  N. Y. (M. I. Nathan, IBM Thomas
  J. Watson Research Center, P.O.
  Box 218, Yorktown Heights, N. Y.
  10598) 1/69

Topics: bulk instabilities such as Gunn effect; plasma instabilities and acousto-electric effect; impact ionization and other hot carrier effects; current filament formation; instabilities in junctions and thin films; and surface instabilities.

- 23-29 ☐ ACA ☐ Seattle, Wash.
- 24-26 Chemical, High-Polymer and Solid-State Physics Div. 

  Philadelphia, Pa. (W. W. Havens Jr) 5/68
- 24-29 Symposium on the Flow of Fluid-Solid Mixtures 

  Cambridge, England (G. K. Batchelor) by invitation 12/68

25-27 • Lasers and Optoelectronics ☐ IN-STITUTION OF ELECTRONIC AND RADIO ENGINEERS ☐ Southampton, England (Conference Secretary, Institution of Electronic and Radio Engineers, 9 Bedford Sq., London W.C. 1) 1/69

Topics: recent developments in laser theory and materials and in gas, solid-state, liquid and semiconductor lasers; harmonic generation, optical parametric devices, and electroöptical materials; optoëlectronics and new laser techniques.

- 26–28 Elementary Particles 

  PHYSICS SUBCOMMITTEE, IPPS 

  Cambridge, England (Meetings Officer) 11/68
- 27–28 ☐ GERMAN VACUUM SOCIETY—
  SWISS SOCIETY FOR VACUUM PHYSICS AND TECHNOLOGY ☐ Basle,
  Switzerland (Schweizerische
  Gesellschaft für vakuum-Physik
  und-technik, Institut für technik
  Physik, Postfach CH-8049, Zürich, Switzerland) 1/69
- 31–2 Vibrations Conference ☐ AMERICAN SOCIETY OF MECHANICAL ENGINEERS ☐ Philadelphia (E. E. Ungar) 12/68
- 31–3 Molecular Physics ☐ IPPS-ATOMIC
  AND MOLECULAR SUBCOMMITTEE
  ☐ University of Manchester
  (Meetings Officer, IPPS, 47 Belgrave Sq., London S.W. 1) 1/69

Topics include atomic processes for astrophysics, collision problems in plasma physics, photo and autoionizing transitions in ultraviolet spectroscopy, stable and unstable ion formation, theory of autoionizing state of molecules, coherence effects in the interaction of radiation with matter, laser spectroscopy, molecular structure calculation, experimental and theoretical aspects of ionization phenomena and the pressure broadening of spectral lines.

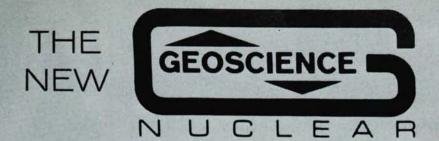
#### **APRIL 1969**

- 8-10 Structure of Charged-Particle
  Tracks In Condensed Media 
  Cambridge, England (J. W. Boag,
  Dept. of Physics, Institute of
  Cancer Research, Clifton Ave.,
  Belmont, Sutton, Surrey, England) 1/69
- 8-11 Inaugural Meeting ☐ EUROPEAN PHYSICAL SOCIETY ☐ Florence, Italy (L. Cohen) 8/68
- 8-11 🗆 ASA 🗆 Philadelphia, Pa.
- 11, 12 Physics Beyond the Solar System

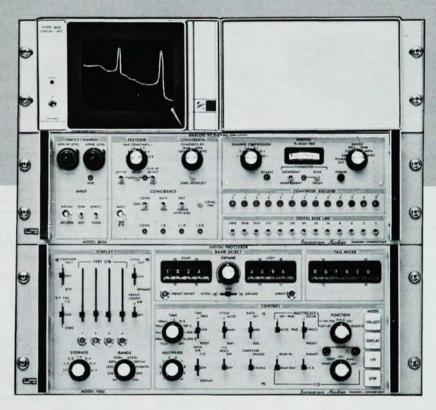
  NEW YORK STATE SECTION-APS
  (S. Raboy) 12/68
- 11, 12 Atomic Physics 

  GLAND SECTION 

  University of Connecticut (F. M. Gardner, United Aircraft Research Labs., East Hartford, Conn. 06108) 1/69
- 15–18 Intermag □ IEEE □ Amsterdam (Th. Holtwijk) 9/68
- 15–18 Conference on the Physics of Liquids □ SOLID STATE PHYSICS SUBCOMMITTEE, IPPS □ Norwich, Norfolk, England (Meetings Officer) 10/68
- 16–18 Geoscience Electronics Symposium ☐ IEEE ☐ Washington, D. C. (M. E. Ringenbach) [1/69] 10/68
- 19 □ AAPT IOWA SECTION □ Uni-



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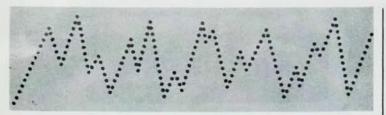
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## 5th Mossbauer Symposium

**New Methodology and New Applications** 

Time: Sunday, Feb. 2, 1969 12 noon-10 P.M. (Day before APS)

Place: Mercury Ballroom — New York Hilton Hotel, New York City, N.Y.

Chairman: Dr. Paul Flinn, Carnegie-Mellon Institute.

Admission is free, pre-registration is requested. Write for program, abstracts and registration forms.



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- versity of Northern Iowa (D. Hutchinson, Loras College, Dubuque, Iowa) 1/69
- 21–25 Fundamental Aspects of Dislocation Theory □ NBS □ Washington, D. C. (R. deWit) by invitation only 8/68
- 21-25 50th Anniversary Meeting 

  AMERICAN GEOPHYSICAL UNION 
  Washington, D. C. (Geophysical Union Headquarters) 8/68
- 21–25 Solid State Chemistry 

  ZONA STATE U. 

  Scottsdale, Ariz. (L. Eyring) 8/68
- 28-30 Surface Science, Effusion and Evaporation □ NEW MEXICO SECTION AVS, LOS ALAMOS SCIENTIFIC LABORATORY □ Los Alamos, N. M. (C. Winkelman) 8/68
- 28-1 Spring Meeting and Nuclear Physics Div. □ APS □ Washington, D. C. (W. W. Havens Jr) 5/68
- 28-2 Thin Films | International CONFERENCE ON THIN FILMS | Boston, Mass. (M. H. Francombe) 6/68
- 30–3 Instrument Conference, Exhibit and Education Symposium □
  INSTRUMENT SOCIETY OF AMERICA
  □ Memphis, Tenn. (D. L. McPherson) 12/68

#### MAY 1969

- 2 ☐ ELECTRON AND ATOMIC PHYSICS DIV.—APS ☐ Washington, D. C. (W. W. Havens Jr) 11/68
- 4-9 Spring Meeting ☐ ELECTRO-CHEMICAL SOCIETY ☐ New York (Electrochemical Society) 8/68
- 5-7 Aerospace Instrumentation Symposium | INSTRUMENT SOCIETY OF AMERICA | Las Vegas, Nevada (D. Limbacher) 12/68
- 6-8 Frequency Control Symposium 

  ELECTRONIC COMPONENTS LABORATORY, US ARMY ELECTRONICS
  COMMAND 
  Fort Monmouth,
  N. J. (Director, Electronic Components Lab.) 12/68
- 6-8 Nuclear Electronics Symposium

  NORTH ITALY SECTION, IEEE 
  Ispra, Italy (Luciano Stanchi)
  [1/69] 12/68
- 7-9 Annual Symposium 
  avssouthwest section (R. P. Fedchenko) 10/68
- 12-15 Symposium on Spectroscopy ☐ CHICAGO SECTION-SOCIETY FOR APPLIED SPECTROSCOPY, CHICAGO GAS CHROMATOGRAPHY GROUP ☐ Chicago (R. L. Terry) [2/1] 12/68
- 14-17 ☐ ISOTOPES AND RADIATION DIV.

  -ANS ☐ San Juan, P. R. (O. J.

  Du Temple)
- 18-23 Mass Spectrometry ☐ AMERICAN SOCIETY FOR TESTING AND MATE-

RIALS 
Dallas (J. M. McCrea, Applied Research (73), U.S. Steel Corp., Monroeville, Pa. 15146) 1/69

Topics include thermal analysis and mass spectrometry, collisions of electronically excited atoms and molecules, ionization cross section data, and applications of mass spectrometry.

- 19–21 Offshore Technology ☐ AMERICAN INSTITUTE OF MINING, METALLURGICAL AND PETROLEUM ENGINEERS ☐ Houston, Tex. (C. Karlson) 8/68
- 26-28 Laser Engineering 
  Washington, D. C. (F. R. Arams) [1/17] 8/16
- 27-30 Annual Meeting 

  CHIMIE PHYSIQUE 

  Paris (Secrétaire Général de la Société de Chimie physique) 10/68

#### **JUNE 1969**

- 8–12 Annual Meeting ☐ HEALTH PHYSICS SOCIETY ☐ Pittsburgh, Pa. (R. F. Cowing) 10/68
- 16, 17 Polymers in High Performance Applications □ London (The Plastics Institute) 12/68
- 16–18 Fluid and Plasma Dynamics ☐

  AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS ☐
  San Francisco (P. A. Libby, Dept.
  of Aerospace and Mechanical Engineering, University of California, San Diego, La Jolla, Calif.
  92037) [1/10] 1/69

Topics include compressible turbulent boundary layers, low density flows, fluid dynamics related to aircraft and space plasmas.

16–18 • Thermophysics Conference ☐

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS ☐
San Francisco (E. R. Streed,
NASA Ames Research Center,
N244-6, Moffett Field, Calif.
94035) 1/69

Topics include properties and mechanisms involved in thermal energy transfer within and between solids and between an object and its environment.

- 16–19 Annual Meeting □ ANS □ Seattle, Wash. (O. J. Du Temple) 11/68
- 17-20 Planning Challenges of the 70's in Space and the Public Domain

  ☐ OPERATIONS RESEARCH SOCIETY OF AMERICA, AMERICAN ASTRONAUTICAL SOCIETY ☐ Denver, Colorado (J. G. Shaffer) [1/69]
  12/68
- 18–20 Summer East Meeting □ APS □ Rochester, N. Y. (W. W. Havens Jr) 6/68
- 23-25 Shock Tubes □ APS □ Toronto
- 23–25 Summer Meeting □ AAPT □ St. Louis, Mo.
- 23–27 Annual Meeting ☐ SOCIETY OF NUCLEAR MEDICINE ☐ New Orleans, La. (S. N. Turiel) 11/68
- 23-27 Conference on Plasma Physics and Controlled Fusion 
  INSTITUTE FOR PLASMA PHYSICS 
  Utrecht, Netherlands (FOM-Institute for Plasma Physics) 11/68

#### NEW LISTING OF SCHOOLS AND SPECIAL CONFERENCES

#### 20-31 JANUARY

Gordon Research Conference ☐ Santa Barbara (A. M. Cruickshank, Gordon Research Conferences, Dept. of Chemistry, University of Rhode Island, Kingston, R. I. 02881)

The purpose of the conference is to stimulate research in universities, foundations and industrial laboratories. The topics are electrochemistry and polymers.

#### 24 FEBRUARY-8 MARCH

Elementary Particles 
INSTITUT FÜR
THEORETISCHE PHYSIK DER UNIVERSITÄT
GRAZ 
Schladming, Austria (R. Baier,
Institut für Theoretische Physik, Universitätsplatz 5, A-8010 Graz, Austria)

#### 16-27 JUNE

Laser Interaction and Related Plasma Phenomena 

RENSSELAER POLYTECHNIC INSTITUTE 

Hartford, Conn. (H. J. Schwarz, Rensselaer Polytechnic Institute, Hartford Graduate Center, East Windsor Hill, Conn. 06087)

This summer course will cover production and dynamics of dense plasmas: interaction effects with magnetic fields; evaporation of solids and utilization of reaction forces in space: mass, emission and Raman spectroscopy; and purity problems of plasmas: also welding and milling with plasma radiation, laser-controlled high-voltage switches and neutron production.

#### 14-26 JULY

Physics of High-Energy Density □ ITALIAN PHYSICAL SOCIETY □ Varenna, Italy (H. Knoepfel, Lab. Gas Ionizzati, C.P. 65, Frascati, Roma, Italy)

This course will cover shock dynamics and structure, equation of state and structure of solids at very high pressures, hydrodynamic cumulation, and interaction of laser pulses with matter and of megagauss fields with electrical conductors.

#### JULY 1969

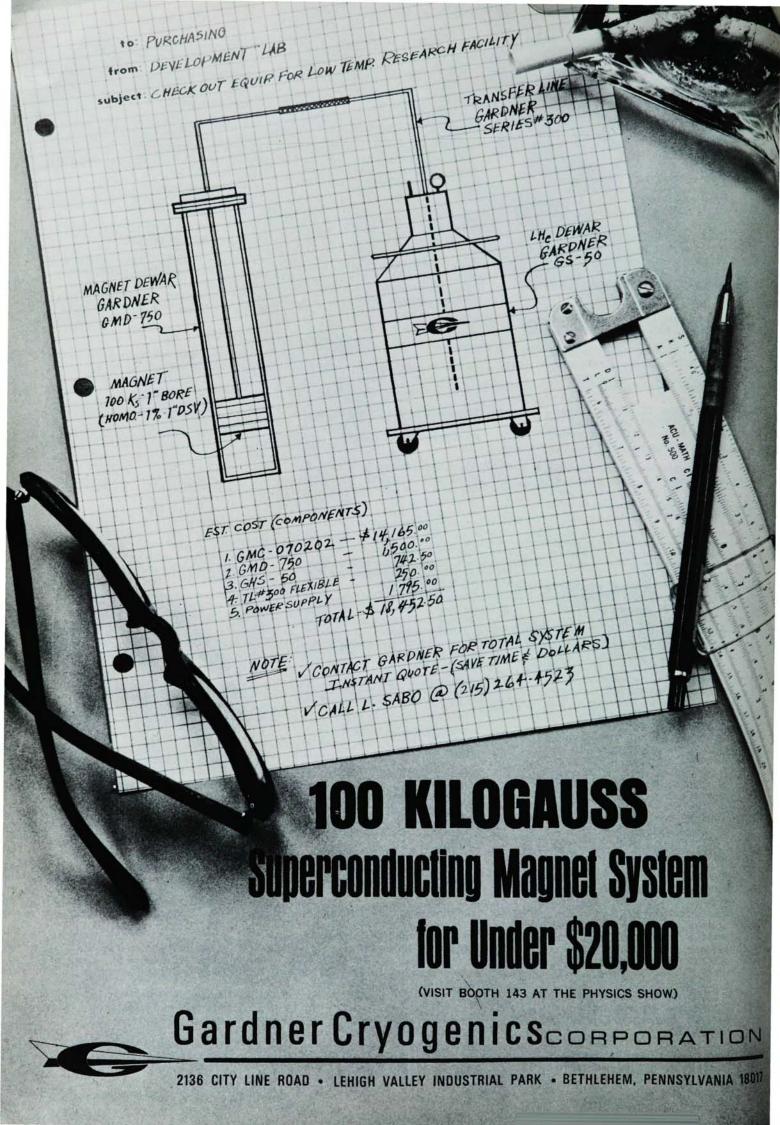
2-4 • Lasers in Medicine ☐ IPPS, ROYAL SOCIETY OF MEDICINE, OPH-THALMOLOGICAL SOCIETY, HOS-PITAL PHYSICISTS ASSOCIATION ☐ London (Meetings Officer, IPPS, 47 Belgrave Sq., London S.W. 1) 1/69

Topics include biological and physical effects of laser irradiation, clinical applications, laser engineering for medical applications, instrumentation and dosimetry and hazards and safety aspects.

- 8-10 Three-Body Problem in Nuclear and Particle Physics 

  Birmingham, England (Administrative Officer, Dept. of Physics, P.O. Box 363, University of Birmingham, Birmingham 15, England) 1/69
- 14-18 Atomic Absorption Spectroscopy

  ☐ IPPS ☐ Sheffield, England
  (AAS Conference Secretary) 8/68
- $\begin{array}{cccc} \textbf{14-18} & \textbf{Conference} & \textbf{on} & \textbf{Physics} & \textbf{and} \\ & \textbf{Chemistry of Fission} & \square & \textbf{IAEA} & (L. \\ & & Agnew) & 11/68 \end{array}$
- 16–18 Electron Microprobe Analysis □
  ELECTRON PROBE ANALYSIS SOCIETY OF AMERICA □ Pasadena,



Calif. (A. A. Chodos, Geology Dept., Cal Tech, Pasadena, Calif. 91109) 1/69

#### AUGUST 1969

- 11-14 Symposium on Electron and Nuclear Magnetic Resonance 
  AUSTRALIAN ACADEMY OF SCIENCE
  Clayton, Victoria, Australia
  (Executive Secretary) 11/68
- 11–15 Medical Physics 

  COMMITTEE FOR MEDICAL PHYSICS, INTERNATIONAL ORGANIZATION FOR MEDICAL PHYSICS 
  Boston (E. W. Webster) 8/68
- 12-15 Conference on Photoconductivity

  ☐ OFFICE OF NAVAL RESEARCH ☐
  Stanford U. (G. S. Picus) [3/15]
  12/68
- 13-21 International Congress ☐ INTERNATIONAL UNION OF CRYSTALLOG-RAPHY ☐ Stony Brook, N. Y. (International Union of Crystallography) 7/68
- 17-24 NMR Symposium ☐ CHEMICAL INSTITUTE OF CANADA, UNIVERSITY OF TORONTO ☐ Toronto (Chemical Institute of Canada, 151 Slater St., Ottawa 4, Ontario) 1/69
- 25-29 Conference on Luminescence 
  IUPAP, APS 
  University of Delaware (F. Williams, Dept. of Physics, University of Delaware, Newark, Del. 19711) [6/15] 1/69

Topics include basic luminescent phenomena of both organic and inorganic materials, with some emphasis on interrelations between properties of these two classes of material and between luminescence and other branches of molecular and solid-state physics.

- 25–30 Conference on Properties of Nuclear States ☐ University of Montreal (G. T. Ewan) 11/68
- 26–28 Computerized Electronics □ CORNELL UNIVERSITY □ Ithaca, N. Y. (H. J. Carlin) 11/68
- 29-3 INTERNATIONAL BIOPHYSICS CON-GRESS □ Cambridge, Mass. (W. Rosenblith) 12/68

#### SEPTEMBER 1969

- 2-4 Summer West Meeting □ APS □ Honolulu
- 7–12 Atomic Collision Phenomena in Solids □ SOLID STATE PHYSICS SUBCOMMITTEE, IPPS □ University of Sussex, Brighton (Meetings Officer) 12/68
- 8-12 Conference on Mass Spectroscopy 

  Mass Spectroscopy Society of Japan 

  (K. Ogata) 12/68
- 17-19 Cyclotron Conference □ Oxford, England (F. J. Stubbs, Chemistry Div., AERE, Harwell, Didcot, Berks., England) [5/15] 1/69
- 24-26 Conference on Nuclear Structure and Elementary Particle Physics

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The Heath/Solartron CD-1400 is more than a portable, general-purpose, true dual-beam oscilloscope: it is a fully modular system of vertical amplifiers and time bases to fill your measuring requirements with unmatched flexibility. The 5" CRT, coated with P31 phosphor, operates at 4 kV to give you high resolution and bright displays. Viewing area of the graticule is 8 by 10 cm. Separate gun assemblies, positioned vertically to minimize geometric distortion, have separate focus and brilliance controls. Available in factory assembled and tested form only.

The CD-1400 shown above with two CX-1441 Wide-Band Amplifiers and a CX-1443 General Time Base and X Amplifier features:

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- Int, Ext, +, —, Normal, Auto, HF Sync Trigger Modes . . . all for just \$774

A sensitivity of 100 uV/cm is available up to 20 kHz, increasing to 1 mV/cm up to 75 kHz by plugging in the CX-1442 High Gain Differential Amplifier.

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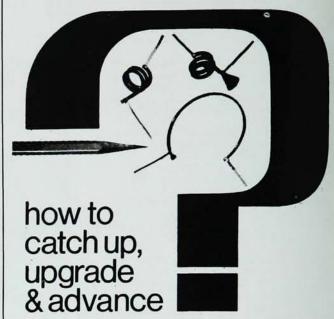
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#### OCTOBER 1969

- 5-10 Fall Meeting ☐ ELECTROCHEMI-CAL SOCIETY ☐ Detroit (Electrochemical Society) 8/68
- 19-21 □ s of R □ St. Paul, Minn.
- 21-24 □ osa □ Chicago
- 28–31 National Symposium □ Avs □ Seattle, Wash. 12/68
- 29-31 Gaseous Electronics □ APS □ Gatlinburg, Tenn.
- 29-31 Nuclear Science Symposium and Exhibition ☐ GROUP ON NUCLEAR SCIENCE—IEEE ☐ San Francisco (Technical Conf. Services) 11/68

#### NOVEMBER 1969

- 4-7 National Meeting □ ASA □ San Diego, Calif.
- 18-21 Magnetism and Magnetic Materials ☐ IEEE, AMERICAN INSTITUTE OF PHYSICS ☐ Philadelphia (J. D. Blades, Franklin Institute Research Labs., Philadelphia, Pa. 19103) [8/11] 1/69

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#### DECEMBER 1969

- 1–4 Winter Meeting □ ANS, ATOMIC INDUSTRIAL FORUM □ San Francisco (O. J. Du Temple) 12/68
- 17-19 ☐ APS ☐ Los Angeles, Calif.

#### JANUARY 1970

26–29 Annual Meeting □ APS-AAPT □ Chicago

#### FEBRUARY 1970

2-7 Conference on Nuclear Data for Reactions □IAEA (L. Agnew) 11/68

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