

MARCH 1991

- **20-30 NATO Adv Study Inst: The Infrared and Submillimeter Sky after COBE** Les Houches, France *Contact:* Monique Signore [Fax: 33 1 45873489] Ecole Normale Supérieure, 24 rue Lhomond, 75231 Paris Cedex 05, France
- 25-27 Models of Non-Classical Chemical-Reaction Rates** Bethesda, MD *See issue:* 7/90
- 25-28 7th Oxford Conf on Microscopy of Semiconducting Materials** Oxford, UK *See issue:* 9/90
- 25-29 Wksp on the Relationship Between Active Galactic Nuclei and Starburst Galaxies** Taipei, Taiwan *See issue:* 1/91
- 27-5 Winter School on Cosmology and Elementary Particles** Río Piedras, Puerto Rico *See issue:* 11/90
- **28-30 Wksp on Squeezed States and Uncertainty Relations** College Park, MD *Contact:* D. Han [Tel. (301) 286-9414] Goddard Space Flight Ctr, Greenbelt, MD 20771

APRIL 1991

- 1-5 Tech Symp on Optics, Electro-Optics and Sensors** Orlando, FL *See issue:* 3/90
- 2-12 Spontaneous Formation of Space-Time Structures and Criticality** Geilo, Norway *See issue:* 11/90
- 3-4 27th Ann Mtg of the Natl Council on Radiation Protection and Measurements** Washington, DC *See issue:* 1/91
- 3-5 3rd Symp on Integrated Ferro-electrics** Colorado Springs, CO *See issue:* 11/90
- 3-5 19th Intl Symp on Acoustical Imaging** Bochum, FRG *See issue:* 5/90
- 4-6 Mtg of AAS Division on Dynamical Astron** Coconut Grove, FL *See issue:* 1/91
- 4-6 Chautauqua Course on Dynamical Systems: Chaos, Fractals and Catastrophes** Stony Brook, NY *See issue:* 11/90
- 7-11 32nd Experimental NMR Conf** St. Louis, MO *See issue:* 11/90
- 8-9 OSA Topical Mtg on Gradient Index Optical Systems** Monterey, CA *See issue:* 11/90
- 8-10 OSA Topical Mtg on Short Wavelength Coherent Radiation: Generation and App** Monterey, CA *See issue:* 1/91
- 8-10 Chautauqua Course on Historical Consideration as a Tool in Teaching Modern Science** Stony Brook, NY *See issue:* 11/90
- 8-11 Global Warming—A Call for International Coordination** Chicago, IL *See issue:* 11/90
- 8-12 7th Intl Conf on the Numerical Analysis of Semiconductor Devices and Integrated Circuits** Copper Mountain, CO *See issue:* 7/90

8-12 Ann Mtg of the Eur Phys Soc Condensed Matter Div Devon, UK *See issue:* 3/90

9-11 Mtg of AAS Solar Phys Division Huntsville, AL *See issue:* 1/91

9-11 Topical Mtg on Integrated Photonics Rsch Monterey, CA *See issue:* 1/91

10-12 OSA Topical Mtg on Soft X-Ray Projection Lithography Monterey, CA *See issue:* 11/90

10-12 Scanning Microscopy Conf Atlantic City, NJ *See issue:* 9/90

12-13 Modeling Complex Phenomena San Jose, CA *See issue:* 11/90

● **14-18 NATO Adv Rsch Wksp on Inverse Problems in Scattering and Imaging** Cape Cod, MA *Contact:* Mario Bertero [Tel. (39) (10) 5993221] Dipartimento di Fisica, V. DODECANESO 33, I-16146 Genova, ITALY

● **15-17 Course on Polycrystalline Silicon Technology: Deposition, Properties, Apps, Rapid Thermal Processing** San Francisco, CA *Contact:* Continuing Education in Engineering [Tel. (415) 642-4151] University Extension, Univ of California, 2223 Fulton St, Berkeley, CA 94720

15-17 Frontiers of Tribology Stratford Upon Avon, UK *See issue:* 9/89

16-19 Intl Conf on Lightning and Static Electricity Cocoa Beach, FL *See issue:* 11/90

● **17-18 Short Course on Multilevel Metallization for VLS** San Francisco, CA *Contact:* Continuing Education in Engineering [Tel. (415) 642-4151] University Extension, Univ of California, 2223 Fulton St, Berkeley, CA 94720.

17-19 Course on Plasma Etching Washington, DC *See issue:* 1/91

21-24 6th European Conf on Molecular-Beam Epitaxy and Related Growth Methods Tampere, Finland *See issue:* 5/90

22-24 3rd ESO/ST-ECF Data Analysis Wksp Garching, FRG *See issue:* 1/91

22-25 APS Spring Mtg Washington, DC *See issue:* 7/90

22-26 XVI Genl Assembly of the Eur Geophys Soc Wiesbaden, FRG *See issue:* 3/90

25-27 Chautauqua Course on Origins of the Solar System Stony Brook, NY *See issue:* 11/90

28-3 121st Mtg ASA Baltimore, MD *See issue:* 3/90

29-3 Instruments Soc of Amer Spring Symp Edmonton, Alberta, Canada *See issue:* 1/91

29-3 MRS Spring Mtg Anaheim, CA *See issue:* 7/90

29-4 Intl Wksp on Methods of Structure Analysis of Modulated Structures and Quasi-Crystals Lekeitio-Bilbao, Spain *See issue:* 9/90

Please note: Complete information is given only for new listings (marked ●) or for newly revised listings (marked ○). All items previously listed indicate the issue of PHYSICS TODAY that carries the complete listing. The complete listings are coded as follows:
date title location [sponsor] contact [abstract deadline]
 § indicates financial aid may be available for some to attend the meeting.

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	IEEE	Institute of Electrical and Electronics Engineers
AAPM	American Association of Physicists in Medicine	IOP	Institute of Physics (London)
AAPT	American Association of Physics Teachers	IUPAC	International Union of Pure and Applied Chemistry
AAS	American Astronomical Society	IUPAP	International Union of Pure and Applied Physics
ACA	American Crystallographic Association	LBL	Lawrence Berkeley Laboratory
AGU	American Geophysical Union	LLNL	Lawrence Livermore National Laboratory
ANS	American Nuclear Society	MRS	Materials Research Society
APS	American Physical Society	NAS	National Academy of Sciences
ASA	Acoustical Society of America	NIST	National Institute of Standards and Technology
AVS	American Vacuum Society	NRC	Nuclear Regulatory Commission
BNL	Brookhaven National Laboratory	NRL	Naval Research Laboratory
CNRS	Centre National de la Recherche Scientifique	NSF	National Science Foundation
DOE	Department of Energy	ORNL	Oak Ridge National Laboratory
DPG	Deutsche Physikalische Gesellschaft	OSA	Optical Society of America
EPS	European Physical Society	S of R	Society of Rheology
IAEA	International Atomic Energy Agency	SPIE	International Society for Optical Engineering
IAU	International Astronomical Union	SPS	Society of Physics Students
ICTP	International Centre for Theoretical Physics		

- **30-3 Wksp on Basic Space Science: Astronomy** Bangalore, India *Contact:* UN Outer Space Div [Tel. (212) 963-6570] Rm S-3260B, United Nations, New York, NY 10017

MAY 1991

- 1-3 Intl Symp on Analogies in Optics and Microelectronics** Eindhoven, The Netherlands *See issue:* 1/91
- 2-3 22nd Ann Pittsburgh Conf on Modeling and Simulation** Pittsburgh, PA *See issue:* 11/90
- 2-4 Chautauqua Course on Teaching Introductory Physics—Current Situation and Modern Perspectives** Stony Brook, NY *See issue:* 11/90
- 5-11 3rd Eur Conf on Crystal Growth** Budapest, Hungary *See issue:* 9/89
- 6-9 Particle Accel Conf** San Francisco, CA *See issue:* 9/89
- **6-10 37th Ann Technical Mtg and Equipment Exposition of the Inst of Environmental Sciences** San Diego, CA *Contact:* IES Headquarters [Tel. (708) 255-1561] 940 E Northwest Hwy, Mt Prospect, IL 60056
- 6-10 3rd Intl Conf on the Formation of Semiconductor Interfaces** Rome, Italy *See issue:* 7/90
- 12-17 44th Ann Conf of the Soc for Imaging Sci and Tech** St Paul, MN *See issue:* 9/90
- 13-17 Conf on Lasers and Electro-optics; Quantum Electronics and Laser Sci Conf** Baltimore, MD *See issue:* 9/90
- **13-17 New Mexico State Univ Short Courses in Applied Optics** Las Cruces, NM *Contact:* Paul Nachman [Tel. (505) 646-1935] Phys Dept, Campus Box 3D, New Mexico State Univ, Las Cruces, NM 88003
- 20-22 Recent Advances in Underwater Acoustics** Weymouth, England *See issue:* 1/91
- 20-24 Intl Symp on Nanostructures and Mesoscopic Systems** Santa Fe, NM *See issue:* 1/91
- 20-24 Short Course on X-Ray Powder Diffractometry and Spectrometry** Austin, TX *See issue:* 7/90
- 20-25 Strings and Symmetries 1991** Stony Brook, NY *See issue:* 1/91
- **21-22 Spectral Irradiance Measurements and Ultraviolet Radiometry** Gaithersburg, MD *Contact:* Klaus D. Mielenz [Tel. (301) 975-2316] NIST, B306/220, Gaithersburg, MD 20899
- 21-24 8th Intl Conf on Ion- and Plasma-Assisted Techniques** Brussels, Belgium *See issue:* 1/91
- 21-25 10th Intl Conf on Solid Compounds of Transition Elements** Münster, FRG *See issue:* 9/90
- 22-24 13th Intl Conf on Advances in Stabilization and Controlled Degradation of Polymers** Lucerne, Switzerland *See issue:* 1/91
- 22-27 Intl Space Development Conf** San Antonio, TX *See issue:* 1/91
- **24-29 4th Conf on the Intersections Between Particle and Nuclear Phys** Tucson, AZ *Contact:* Elaine Zukowski [Tel. (516) 282-3866] Brookhaven Natl Lab, Upton, Long Island, NY 11973-5000

26-30 178th Mtg AAS Seattle, WA *See issue:* 3/90

26-1 Wksp on Electromechanical Coupling of the Solar Atmosphere Capri, Italy *See issue:* 1/91

- **27-31 Intl Conf on Progress and Apps of Plasma Focus Rsch** Hoboken, NJ *Contact:* C. Powell [Tel. (201) 420-5640] Phys Dept, Stevens Inst of Tech, Castle Point on the Hudson, Hoboken, NJ 07030

28-31 Intl Symp on Electron, Ion and Photon Beams Seattle, WA *See issue:* 1/91

28-31 NATO Wksp on Computation of Transport Properties in the Dilute Gas Region Porto Carras, Greece *See issue:* 1/91

28-1 AGU Spring Mtg Baltimore, MD *See issue:* 3/90

29-31 45th Ann Symp on Frequency Control Los Angeles, CA *See issue:* 1/91

- **30-9 Static, Kinematic and Dynamic Aspects of Crystal and Molecular Structure** Erice, Trapani, Italy *Contact:* L. Riva di Sanseverino, Dipartimento di Scienze Mineralogiche, Piazza Porta San Donato 1, I-40126 Bologna, Italy

JUNE 1991

2-6 Ann Mtg of the Amer Nuclear Soc Orlando, FL *See issue:* 7/90

2-29 4th Ann Complex Systems Summer School Santa Fe, NM *See issue:* 11/90

- **3-5 18th IEEE Intl Conf on Plasma Sci** Williamsburg, VA [IEEE/NPSS] *Contact:* Karl H. Schoenbach [Tel. (804) 683-3741] Physical Electronics Rsch Inst, Old Dominion Univ, Norfolk, VA 23529-0246 *Note revised dates, title and contact address*

- **3-5 Wksp on New Results on the Space Distribution of Quasars** Victoria, Canada *Contact:* D. Crampton [Fax: (604) 388-0045] DAO, RR5, Victoria, BC, Canada V8X 4M6

3-7 Intensive Course on Electrical Contacts Raleigh, NC *See issue:* 1/91

3-7 Phys of Active Galactic Nuclei Heidelberg, Germany *See issue:* 1/91

3-7 18th Eur Conf on Controlled Fusion and Plasma Phys Berlin, Germany *See issue:* 3/90

- **4-6 Coherent Nonlinear Structures in Physics and Biology** Dijon, France *Contact:* M. Peyrard [Tel. (33) 80396043] Laboratoire Ondes et Structures Cohérentes, Université de Bourgogne, 6 Bd Gabriel, 21100 Dijon, France

4-14 31st Cracow School of Theoretical Phys: Particle Phys at High Energy Zakopane, Poland *See issue:* 1/91

- **10-12 Short Course on Semiconductor Material and Device Characterization** Sunnyvale, CA *Contact:* Ctr for Professional Development [Tel. (602) 965-1740] College of Eng and Appl Sci, Arizona State Univ, Tempe, AZ 85287-7506

- **10-12 Short Course on Fiber-Optic Communications** Sunnyvale, CA *Contact:* Ctr for Professional Development [Tel. (602) 965-1740] College of Eng and Appl Sci, Arizona State Univ, Tempe, AZ 85287-7506

- **10-14 Summer School on Nonlinear Optics** Rochester, NY *Contact:* Theresa Calcagno [Tel. (716) 275-4800] Inst of

Optics, Univ of Rochester, Rochester, NY 14627

- **10-14 Physics Computing '91** San Jose, CA [APS Topical Group on Computational Physics, *Computers in Physics* magazine] *Contact:* AIP, Special Programs Dept [Tel. (516) 349-7800 ext 567] 335 E 45th St, New York, NY 10017

- **10-14 Summer School on Optical Thin Film Coating Tech** Rochester, NY *Contact:* Theresa Calcagno [Tel. (716) 275-4800] Inst of Optics, Univ of Rochester, Rochester, NY 14627

10-14 Chapman Conf on Continental Isotopic Indicators of Climate Jackson Hole, WY *See issue:* 11/90

10-14 Image Understanding for Aerospace Apps, Optical Space Communication Munich, FRG *See issue:* 9/90

10-14 4th Intl Conf on Nucleus-Nucleus Collisions Kanazawa, Japan *See issue:* 7/90

10-14 5th Intl Symp on Radiation Phys Dubrovnik, Yugoslavia *See issue:* 3/90

- **10-21 Summer School on Contemporary Optics** Rochester, NY *Contact:* Theresa Calcagno [Tel. (716) 275-4800] Inst of Optics, Univ of Rochester, Rochester, NY 14627

10-28 Aspen Astrophys Wksp on the Phys of Galaxy Formation Aspen, CO *See issue:* 1/91

11-13 Colorimetry: An Intensive Short Course for Scientists and Engineers Rochester, NY *See issue:* 1/91

11-14 Principles of Microlithography Rochester, NY *See issue:* 11/90

11-14 Cryogenic Eng Conf and Intl Cryogenic Materials Conf Huntsville, AL *See issue:* 11/90

11-21 NATO Advanced Study Inst on Structure and Dynamics of Supramolecular Aggregates and Strongly Interacting Colloids Acquafredda di Maratea, Italy *See issue:* 1/91

12-15 Dynamics Days Berlin Berlin, Germany *See issue:* 11/90

13-17 Infrared Astron and the ISO Mission Les Houches, France *See issue:* 11/90

- **16-29 39th Scottish Universities Summer School in Phys: High-Temp Superconductivity—Materials, Mechanisms and Devices** St. Andrews, Scotland *Contact:* J. T. S. Irvine [Tel. (44) 224 272894] Sctry sussp 39, Dept of Chem, Meston Walk, Univ of Aberdeen, Old Aberdeen, AB9 2UE, UK

16-29 NATO Adv Study Inst: The Sun—Laboratory for Astrophysics Crieff, Scotland *See issue:* 11/90

16-30 NATO Adv Study Inst on Optical Properties of Excited States in Solids Erice, Italy *See issue:* 11/90

- **17-21 Summer School on Lens Design** Rochester, NY *Contact:* Theresa Calcagno [Tel. (716) 275-4800] Inst of Optics, Univ of Rochester, Rochester, NY 14627

18-21 Magnetism and Magnetic Materials—Intermag, 5th Joint Conf Pittsburgh, PA *See issue:* 1/91

18-29 NATO Adv Study Inst on Flow and Dynamic Modeling of the Earth and Planets Fairbanks, AK *See issue:* 11/90

- **19-21 Colloquium on Recent Advances in the Uses of Light in Physics, Chemistry and Medicine** New York, NY *Contact:* Ronald H. Brown [Tel. (212) 650-6953] Ctr for Analysis of Structures and Interfaces, CASI, Dept of Chem, The City College of New York, 138th and Convent Ave, New York, NY 10031

19-29 7th Wksp on Nonlinear Evolution Equations and Dynamical Systems Gallipoli, Italy *See issue:* 11/90

21-23 Robotic Telescopes in the 1990s Laramie, WY *See issue:* 1/91

21-27 103rd Ann Mtg of the Astron Soc of the Pacific Laramie, WY *See issue:* 1/91

- **22-23 Natl Wksp on Teaching Astron in Grades 3-12** Laramie, WY *Contact:* Astronomical Society of the Pacific, Teachers' Wksp Info [Tel. (415) 337-1100] 390 Ashton Ave, San Francisco, CA 94112

22-28 Course on Advanced Techniques in Magnetic-Resonance Imaging Kiawah Island, SC *See issue:* 1/91

23-28 Intl Conf on Metals in Solution Aussois, France *See issue:* 11/90

23-29 6th Marcel Grossmann Mtg on General Relativity Kyoto, Japan *See issue:* 11/90

24-28 Cambridge Wksp in Theoretical Geoplasma Phys—Nonlinear Phenomena and Active Experiments Cambridge, MA *See issue:* 11/90

24-28 Intl Conf on Asteroids, Comets and Meteors Flagstaff, AZ *See issue:* 7/90

24-28 Real-Time Computer Apps in Nuclear, Particle and Plasma Phys FRG *See issue:* 9/90

24-29 AAPT Summer Mtg Vancouver, BC, Canada *See issue:* 7/90

25-27 Intl Superconductive Electronics Conf Glasgow, Scotland *See issue:* 7/90

25-28 2nd Intl Conf on Surface X-Ray and Neutron Scattering Bad Honnef, Germany *See issue:* 11/90

JULY 1991

1-4 Ultrasonics Intl '91 Le Touquet, France *See issue:* 9/90

- **6-11 Intl Symp on Hydromechanics and Heat/Mass Transfer in Microgravity** Kama River, USSR *Contact:* ESA-HQ, Microgravity Office 8-10, rue Mario-Nikis, F-75738 Paris Cedex 15, France [1 Jan 91]

8-11 OSA Coherent Laser Radar Topical Mtg Snowmass, CO *See issue:* 1/91

8-11 6th Intl Wksp on Critical Currents Cambridge, UK *See issue:* 1/91

8-12 Rsch Amateur Astron Symp La Paz, Baja California Sur, Mexico *See issue:* 1/91

8-12 Intl Conf on Phenomena in Ionized Gases Barga, Italy *See issue:* 9/90

8-12 9th Intl Conf on Electronic Properties of Two-Dimensional Systems Nara, Japan *See issue:* 9/90

- **10-13 Charge Transfer in Restricted Geometries** Rochester, NY *Contact:* NSF Ctr on Photoinduced Charge Transfer [Tel.

(716) 275-8286] Dept of Chem, Univ of Rochester, Rochester, NY 14627

14-16 Natl Conf on Noise Control Eng Tarrytown, NY *See issue:* 1/91

14-19 19th Rare Earth Rsch Conf Lexington, KY *See issue:* 7/90

14-20 4th Intl Conf on Synchrotron Radiation Instrumentation Chester, UK *See issue:* 5/90

- **15-17 Asian and Pacific Conf on Medical Phys** Guangzhou, China *Contact:* Raymond K. Wu [Tel. (804) 628-2075] Radiation Oncology Dept, Eastern Virginia Medical School, 600 Gresham Dr, Norfolk, VA 23507

15-19 Chaos, Resonance and Collective Dynamical Phenomena in the Solar System Angra dos eil, Brazil *See issue:* 1/91

15-19 AAPM Summer School: Specifications, Acceptance Testing and Quality Assurance of Diagnostic X-Ray Imaging Equipment Arcata, CA *See issue:* 11/90

15-19 28th Ann Intl Conf on Nuclear and Space Radiation Effects San Diego, CA *See issue:* 11/90

16-20 2nd Intl Wigner Symp Goslar, FRG *See issue:* 9/90

21-25 Mathematical Aspects of Classical Field Theory Seattle, WA *See issue:* 1/91

21-25 Ann Mtg AAPM San Francisco, CA *See issue:* 3/90

21-26 35th Ann Intl Tech Symp on Optical and Optoelectronic Appl Sci and Eng San Diego, CA *See issue:* 3/90

21-26 Ann Mtg ACA Toledo, OH *See issue:* 3/90

- **22-26 Course on Non-Ionizing Radiations: Health Phys and Radiation Protection** Cambridge, MA *Contact:* Director of Summer Sessions, Room E19-356, MIT, Cambridge, MA 02139

22-26 Gordon Rsch Conf: QCD in Nuclear Phys Tilton, NH *See issue:* 1/91

22-26 Gordon Rsch Conf on Nonlinear Optics and Lasers Wolfeboro, NH *See issue:* 11/90

22-26 13th IMACS World Cong on Computation and Appl Math Dublin, Ireland *See issue:* 3/90

22-26 11th Intl Conf on Molecular Energy Transfer Nijmegen, The Netherlands *See issue:* 3/90

- **22-2 NATO Adv Study Inst on Methods in Computational Molecular Phys** Bad Windsheim, Germany *Contact:* S. Wilson, Rutherford Appleton Lab, Chilton, Didcot, Oxon, OX11 0QX, UK

23-1 21st Genl Assembly of the Intl Astron Union Buenos Aires, Argentina *See issue:* 1/91

24-26 Topical Mtg on Optical Amplifiers and Their Apps Snowmass, CO *See issue:* 1/91

28-1 14th Intl Electron Paramagnetic Resonance Symp Denver, CO *See issue:* 1/91

29-31 OSA Topical Mtg on Photorefractive Materials, Effects and Devices Beverly, MA *See issue:* 1/91

29-1 Intl Conf on Point Defects in Glasses Riga, Latvia *See issue:* 11/90

AUGUST 1991

3-7 IAU Symp 150: The Astrochemistry of Cosmic Phenomena Campaós de Jordao, Brazil *See issue:* 1/91

4-9 21st Intl Symp on Free Radicals Williamstown, MA *See issue:* 11/90

4-9 10th Intl Symp on Plasma Chem Jerusalem, Israel *See issue:* 11/90

5-8 IAU Symp 151: Evolutionary Processes in Interacting Binary Stars Cordoba, Argentina *See issue:* 1/91

5-9 IAU Symp 149: The Stellar Population of Galaxies Angra dos Reis, Brazil *See issue:* 11/90

- **5-9 Summer Course on Hadron Spectroscopy** College Park, MD *Contact:* Dept of Phys and Astron [Tel. (301) 405-6065] Univ of Maryland, College Park, MD 20742

- **5-10 Nuclear Phys Conf on Hadronic Structure and Electroweak Interactions** Amsterdam, The Netherlands *Contact:* J. H. Koch [Fax: (31)(20) 5922165] Postbus 41882, 1009 DB Amsterdam, The Netherlands

- **7-20 Mt. Wilson Summer Program for Undergraduates in Astron and Astrophys** Los Angeles, CA *Contact:* Joseph L. Snider, Dept of Phys, Oberlin College, Oberlin, OH 44074

11-14 Statistical Challenges in Modern Astron University Park, PA *See issue:* 1/91

- **11-23 22nd Intl Cosmic-Ray Conf** Dublin, Ireland *Contact:* Secretariat of 22nd ICRC [Fax: 353 1 682003] Dublin Inst for Advanced Studies, 5 Merrion Square, Dublin 2, Ireland

- **12-16 4th Intl Conf on Hadron Spectroscopy** College Park, MD *Contact:* Dept of Phys and Astron [Tel. (301) 405-6065] Univ of Maryland, College Park, MD 20742

- **12-16 Pacific Intl Congress on X-Ray Analytical Methods** Honolulu, HI *Contact:* Lynne Bonno, PICXAM Conf Scty, Dept of Engineering, Univ of Denver, Denver, CO 80208

12-16 6th Intl Conf on Scanning Tunneling Microscopy and Related Techniques Interlaken, Switzerland *See issue:* 5/90

17-24 1991 Solar World Cong Denver, CO *See issue:* 9/90

18-22 Particles and Fields '91 Vancouver, British Columbia, Canada *See issue:* 11/90

18-31 NATO Adv Study Inst: Phys and Materials Sci of High-Temp Superconductors Corfu Island, Greece *See issue:* 9/90

20-22 Conf on Materials for Electronic Packaging Buffalo, NY *See issue:* 9/90

- **20-24 Intl Conf on Polytypes, Modulated Structures and Quasicrystals** Balantonszeplak, Hungary *Contact:* Roland Eotvos, Physical Society, PO Box 433, H-1371 Budapest, Hungary

- **25-30 13th European Crystallographic Mtg** Ljubljana, Yugoslavia *Contact:* L. Gollic, Dept of Chem and Chemical Technology, E. Kardelj University, 61001 Ljubljana, PO Box 537, Yugoslavia

26-30 Symp on the Interp of Time Series from Nonlinear Mechanical Sys Coventry, UK See issue: 7/90

26-30 12th Intl Mass Spectrometry Conf Amsterdam, The Netherlands See issue: 3/90

27-30 8th Intl Conf on Dynamical Processes in Excited States of Solids Leiden, The Netherlands See issue: 1/91

27-30 European Quantum Electronics Conf Edinburgh, Scotland See issue: 5/90

27-30 Intl Conf on Neutron Scattering Oxford, UK See issue: 5/90

27-30 Topical Mtg on Atmospheric, Volume and Surface Scattering and Propagation Florence, Italy See issue: 1/91

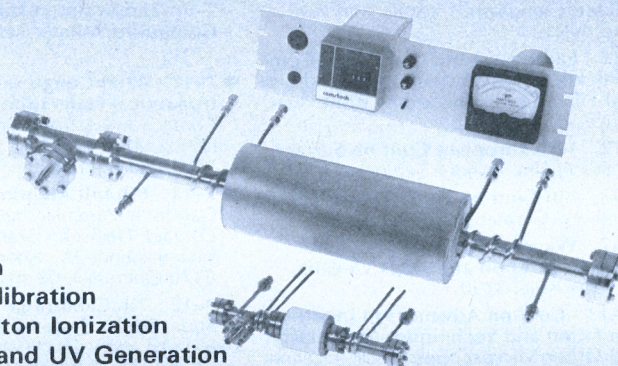
27-6 Wksp on Diagnostics for Contemporary Fusion Experiments Varenna, Italy See issue: 3/90

- **31-2 Biomolecular Structures and Dynamics** Otocec, Yugoslavia Contact: B. Kojic-Prodic, Institute "Ruder Boskovic", YU-41001 Zagreb, PO Box 1016, Yugoslavia

SEPTEMBER 1991

- **1-7 Sagamore Conf: Charge, Spin and Momentum Densities** Konstanz, Germany Contact: W. Weyrich, Fakultat fur Chemie, Universitat Konstanz, Postfach 7733, D-7750 Konstanz 1, Germany
- 1-7 Intl Conf on Magnetism** Edinburgh, Scotland See issue: 3/90
- **2-3 Synchrotron Radiation in Crystallography** Trieste, Italy Contact: L. Randaccio, Dipartimento di Scienze Chimiche, Universita di Trieste, Piazzale Europa 1, I-34127 Trieste, Italy
- **2-4 Crystalline Structures and Defects in Ceramics** Ljubljana, Yugoslavia Contact: M. Drofenik, Institute "Jozef Stefan", YU-61001 Ljubljana, PO Box 100, Yugoslavia
- 2-4 OSA Topical Mtg on Nonlinear Guided-Wave Phenomena** Cambridge, UK See issue: 11/90
- 2-6 Intl Conf on Polymer-Solid Interfaces** Namur, Belgium See issue: 1/91
- **2-6 5th Intl Conf on the Structure of Non-Crystalline Materials** Akiu Spa Sendai, Japan Contact: Kenji Suzuki, Inst for Materials Research, Tohoku University, Katahira 2-1-1, Aoba, Sendai 980, Japan
- **2-6 2nd European Conf on Diamond, Diamond-Like and Related Coatings** Nice, France Contact: Secretariat, COMST [Tel. (41)(21) 234886] Avenue de la Gare 52, PO Box 415, 1001 Lausanne 1, Switzerland [19 Apr 91]
- **2-7 4th Intl Oberjoch Mtg on Pion Nuclear Phys** Oberjoch, Germany Contact: G. J. Wagner [Tel. (07071) 296267] Universitat Tübingen, Physikalisches Institut, Auf der Morgenstelle 14, D-7400 Tübingen, Germany
- 3-6 Conf on the Renormalization Group** Dubna, USSR See issue: 1/91
- 3-6 OE/FIBERS 91** Boston, MA See issue: 3/90
- 3-7 European Conf on Accelerators in Applied Rsch and Tech** Frankfurt, FRG See issue: 11/90
- 4-6 Polymer Degradation Discussion Group Ann Mtg** Birmingham, UK See issue: 1/91

ionization cells and heat-pipes



- Research
- Laser Calibration
- Multiphoton Ionization
- Infrared and UV Generation

We offer a range of stainless steel and custom-specified heat-pipes and ionization cells equipped with current collectors and your choice of windows. Shown are HP-801 and HP-802 heat-pipes with HPC-800G power supply with pressure gauge and digital temperature indicator. Call us to discuss your laser research needs.

comstock

1005 ALVIN WEINBERG DRIVE OAK RIDGE, TN 37830 USA
TEL: 615-483-7690 FAX: 615-481-3884
West Germany: Heribert Lehner GmbH Wiemersdorf 04192/5007-0
Japan: Science Laboratories, Inc. Tokyo 03-813-2771

Circle number 71 on Reader Service Card

3 AXIS FLUXGATE MAGNETOMETERS

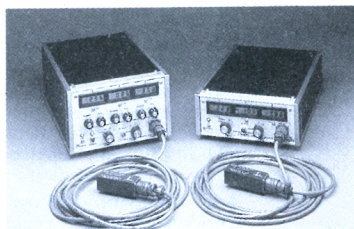
Sensitive - Noise level of 2×10^{-11} T.

Wide Dynamic Range - Measure signals from noise level up to $\pm 1 \times 10^{-4}$ T.

Reliable - Ask our satisfied customers!

Small Probe Size - 3 orthogonal axes in probe size of $1'' \times 1'' \times 3\frac{1}{2}''$.

Economical - Starting at only \$4,800.



APS520A

APS520

OFFSET CAPABILITY: The APS520A also has precision 3 axis offset capability with a full scale range of $\pm 1 \times 10^{-4}$ T.

Call us to discuss your applications!

APPLIED PHYSICS SYSTEMS

415-965-0500

897 Independence Ave.
Mountain View, CA 94043

Circle number 62 on Reader Service Card

● **9-11 Topical Conf on Time-Dependent Positioning: Model Crystal Deformation** Annapolis, MD *Contact:* AGU [Tel. (202) 462-6903] 2000 Florida Ave NW, Washington, DC 20009

9-12 Conf on Gallium Arsenide and Related Compounds Seattle, WA *See issue:* 1/91

9-12 European Conf on Optical Communications/Integrated Optics and Optical-Fiber Communications Conf Paris, France *See issue:* 1/91

9-12 12th European Conf on Surface Sci Stockholm, Sweden *See issue:* 1/91

9-13 Intl Conf on Gravitational Lenses Hamburg, Germany *See issue:* 1/91

9-17 Wksp on High-Power Microwave Generation and Apps Varenna, Italy *See issue:* 3/90

● **10-13 Conf on Advances in Instrumentation and Techniques for Electron and Other Microscopes** Bristol, England *Contact:* Meetings Office, The Institute of Physics, 47 Belgrave Square, London SW1X, England

15-20 Symp on Microelectronic Interconnect and Integrated Processing San Jose, CA *See issue:* 3/90

● **18-29 Summer School on Neutron Scattering** Oxford, England *Contact:* B. T. M. Willis, Chemical Crystallography Lab, Univ of Oxford, 9 Parks Rd, Oxford OX1 3PD, England

22-17 The Theory of Sunspots Cambridge, England *See issue:* 1/91

22-25 5th Conf on Sensors and Apps Edinburgh, Scotland *See issue:* 3/90

● **22-26 7th Interdisciplinary Laser Sci Conf** Monterey, CA *Contact:* Michael Scanlan [Tel. (212) 682-7341] APS, 335 E 45th St, New York, NY 10017

23-26 Course on Modern Microwave Techniques San Diego, CA *See issue:* 1/91

23-27 3rd European Vacuum Conf Vienna, Austria *See issue:* 1/91

29-4 4th Topical Mtg on Tritium Technology in Fission, Fusion and Isotopic Apps Albuquerque, NM *See issue:* 1/91

30-2 3rd Intl Symp on Aerogels Würzburg, Germany *See issue:* 1/91

30-2 Speciality Polymers '91 Mainz, FRG *See issue:* 3/90

● **30-3 Symp on Fusion Engineering** San Diego, CA *Contact:* Richard W. Callis [Tel. (619) 455-4190] General Atomics, Fusion Division, PO Box 85608, San Diego, CA 92160-5608

30-4 Intl Conf on Ion Sources Bensheim, Germany *See issue:* 1/91

OCTOBER 1991

● **1-4 Sacramento Peak Summer Wksp** Sunspot, NM *Contact:* K. Harvey [Tel. (602) 325-9334] Natl Solar Observatory, PO Box 26732, Tucson, AZ 85726-6732

● **2-5 Computational Phys in the Undergraduate Curriculum** Davidson, NC *Contact:* Wolfgang Christian [Tel. (704) 892-2000] Phys Dept, Davidson College, Davidson, NC 28036

6-9 37th IEEE-Holm Conf on Electrical Contacts Chicago, IL *See issue:* 11/90

● **7-9 Short Course on Fiber-Optic Communications** Tempe, AZ *Contact:* Ctr for Professional Development [Tel. (602) 965-1740] College of Eng and Appl Sci, Arizona State Univ, Tempe, AZ 85287-7506

7-9 2nd Symp on High-Performance Computing Montpellier, France *See issue:* 1/91

● **7-11 42nd Congress of the Intl Astronautical Federation** Montreal, Canada *Contact:* Intl Astronautical Federation [Tel. (33) (1) 45674260] 3-5 Rue Mario-Nikis, 75015 Paris, France

● **7-11 6th Intl Aluminum-Lithium Conf** Garmisch-Partenkirchen, Germany *Contact:* Deutsche Gesellschaft für Materialkunde EV, Adenauerallee, 21 D-6370 Oberursel, Germany

9-12 7th Cambridge Wksp on Cool Stars, Stellar Systems and the Sun Tucson, AZ *See issue:* 1/91

14-18 Mtg of the AAS Division of Planetary Sciences Palo Alto, CA *See issue:* 1/91

14-18 4th Eur Conf on Apps of Surface and Interface Analysis Budapest, Hungary *See issue:* 3/90

15-18 High-Resolution Imaging by Interferometry II Garching, FRG *See issue:* 9/90

20-24 63rd Ann Mtg S of R Rochester, NY *See issue:* 3/90

● **23-25 23rd Ann Boulder Damage Symp on Optical Materials for High-Power Lasers** Boulder, CO *Contact:* Donna Wilson [Tel. (407) 658-6834] CREOL, 12424 Research Pkwy, Orlando, FL 32826 [16 Aug 91]

24-25 3rd Micro-Optics Conf Yokohama, Japan *See issue:* 1/91

● **28-30 Short Course on Semiconductor Material and Device Characterization** Tempe, AZ *Contact:* Ctr for Professional Development [Tel. (602) 965-1740] College of Eng and Appl Sci, Arizona State Univ, Tempe, AZ 85287-7506

NOVEMBER 1991

● **1-2 Joint Mtg of the Texas Sections of AAPT and APS** Denton, TX *Contact:* Bruce West [Tel. (817) 565-2626] Phys Dept, Univ of North Texas, Denton, TX 76203

2-8 Nuclear Sci Symp Santa Fe, NM *See issue:* 9/90

3-8 OSA Ann Mtg San Jose, CA *See issue:* 9/90

● **4-8 23rd Ann Mtg of the AAS Div for Planetary Sciences** Palo Alto, CA *Contact:* Christopher P. McKay [Tel. (415) 694-5499] Space Sciences Div, NASA Ames Rsch Ctr, Moffett Field, CA 94035

4-8 Intl Symp on Slow Dynamics in Condensed Matter Fukuoka, Japan *See issue:* 1/91

4-8 Mtg of APS Div of Plasma Phys Tampa, FL *See issue:* 3/90

4-8 122nd Mtg ASA Houston, TX *See issue:* 3/90

● **5-7 OPTCON '91** San Jose, CA *Contact:* OSA [Tel. (202) 223-8130] 2010 Massachusetts Ave NW, Washington, DC 20036

● **5-9 Nuclear Sci Symp/Medical Imaging Conf** Santa Fe, NM *Contact:* Roger A.

Gearhart [Tel. (415) 926-2709] SLAC, PO Box 4349, Bin 20, Stanford, CA 94309

6-8 Conf on Astronomical Data Analysis: Software and Systems Tucson, AZ *See issue:* 1/91

10-13 Optical Fibres in Astron II Sydney, Australia *See issue:* 1/91

10-13 Visual Communications and Image Processing '91 Boston, MA *See issue:* 9/90

10-15 Winter Mtg of the Amer Nuclear Soc San Francisco, CA *See issue:* 9/90

11-13 Mtg of the Southeastern Section of APS Durham, NC *See issue:* 9/90

● **11-15 10th Intl Wksp on Laser Interaction and Related Plasma Phenomena** Monterey, CA *Contact:* George H. Miley, Fusion Studies Lab, Univ of Illinois, 103 S Goodwin Ave, Urbana, IL 61801

11-15 9th Intl Conf on Ultra-Relativistic Nucleus-Nucleus Collisions—Quark Matter '91 Gatlinburg, TN *See issue:* 1/91

11-15 38th Natl AVS Symp Seattle, WA *See issue:* 3/90

18-21 OSA Topical Mtg on Optical Remote Sensing of the Atmosphere Williamsburg, VA *See issue:* 1/91

18-22 Symp on Fusion Eng San Diego, CA *See issue:* 9/90

● **18-22 Supercomputing '91** Albuquerque, NM *Contact:* Raymond L. Elliott [Tel. (505) 667-1449] Computing and Communications Div, MS B260, Los Alamos Natl Lab, Los Alamos, NM 87545

24-27 11th Intl Conf on Noise in Physical Systems and 1/f Fluctuations Kyoto, Japan *See issue:* 9/90

24-28 AAPM—Radiological Soc of North Amer Joint Mtg Chicago, IL *See issue:* 11/90

DECEMBER 1991

2-7 MRS Fall Mtg Boston, MA *See issue:* 9/90

● **9-12 Intl Symp on Hypernuclear and Strange Particle Phys** Shimoda, Japan *Contact:* Osamu Morimatsu [Fax: 0424-62-0763] Inst for Nuclear Study, Univ of Tokyo, 3-2-1 Midori-cho, Tanashi, Tokyo 188, Japan

9-13 AGU Fall Mtg San Francisco, CA *See issue:* 3/90

15-19 2nd Intl Conf on Molecular Electronics Sci and Tech St Thomas, US Virgin Islands *See issue:* 1/91

18-20 Intl Conf on Emerging Optoelectronics Technologies Bangalore, India *See issue:* 1/91

29-5 Intl Wksp: Ordering Disorder—Prospect and Retrospect in Condensed-Matter Phys Hyderabad, India *See issue:* 1/91

JANUARY 1992

5-9 179th Mtg of AAS Atlanta, GA *See issue:* 1/91

6-9 AAPT Winter Mtg Orlando, FL *See issue:* 9/90

6-11 Winter Conf on Plasma Spectrochemistry San Diego, CA *See issue:* 1/91

27-29 Intl Topical Conf on New Ideas in Tokamak Confinement La Jolla, CA *See issue:* 11/90

CALENDAR

FEBRUARY 1992

3-7 Optical Fiber Communication
Conf San Jose, CA See issue: 1/91

MARCH 1992

- 6-7 Joint Mtg of the Texas Sections of AAPT and APS San Marcos, TX Contact: James Crawford [Tel. (512) 245-2131] Phys Dept, Southwest Texas State Univ, San Marcos, TX 78666
- 12-16 Intl Wksp on Dynamical Fluctuations and Correlations in Nuclear Collisions Aussois, France Contact: Eric Surraud, GANIL BP 5027, F-14021 CAEN CEDEX, France
- 16-20 APS March Mtg Indianapolis, IN See issue: 3/90
- 30-3 10th Intl Conf on Plasma-Surface Interactions in Controlled Fusion Devices Monterey, CA Contact: Walter Bauer [Tel. (415) 294-2994] Sandia Natl Lab, Dept 8340, PO Box 969, Livermore, CA 94551-0969

APRIL 1992

- 6-10 XVII Genl Assembly of the Eur Geophys Soc Edinburgh, Scotland See issue: 3/90
- 12-16 APS Spring Mtg Washington, DC See issue: 9/90
- 27-30 Progress in Telescope and Instrumentation Technologies Garching, FRG See issue: 9/90
- 27-2 MRS Spring Mtg San Francisco, CA See issue: 9/90

MAY 1992

- 11-15 AGU Spring Mtg Montreal, Canada See issue: 9/90
- 11-15 123rd Mtg ASA Salt Lake City, UT See issue: 3/90
- 11-15 Quantum Electronics and Laser Science Conf/Conf on Lasers and Electro-Optics Anaheim, CA See issue: 1/91

JUNE 1992

- 1-3 Conf on Plasma Sci Tampa, FL See issue: 3/90
- 7-11 180th Mtg AAS Columbus, OH See issue: 9/90
- 7-12 Ann Mtg of the Amer Nuclear Soc Boston, MA See issue: 9/90
- 14-19 Intl Quantum Electronics Conf Vienna, Austria See issue: 1/91
- 24-27 3rd Mtg on the History of Particle Phys Palo Alto, CA See issue: 1/91
- 28-4 13th Intl Conf in General Relativity and Gravitation Córdoba, Argentina See issue: 11/90
- 29-5 19th Intl Colloquium on Group-Theoretical Methods in Phys Salamanca, Spain Contact: Luis J. Boya [Fax: (34)(76) 567920] Depto. Física Teórica, University of Zaragoza, 50.009 Zaragoza, Spain

JULY 1992

- 5-10 3rd Teton Summer School: Galaxy Evolution—Environment and Ecology Grand Teton National Park, WY See issue: 1/91



SCIENTIFIC WORD PROCESSING SYSTEM

"T3 is at the top of the heap in PC scientific word processing" PC Magazine Editor's Choice 1986 1988

What you see on your screen is what you get! No preview mode or mark up language used

"T3 makes very difficult, complex typing very easy to accomplish." Jessie Stuyvesant, Secretary Science Applications International Corp.

Call for a free demo disk today!

THE T³ SCIENTIFIC WORD PROCESSING SYSTEM
An advanced solution for all word processing needs

Mathematics:

$$\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}$$

$$\prod_{j=1}^n \left(\sum_{k=1}^m a_{jk} x^k \right) = \sum_{k_1, k_2, \dots, k_n} \left(\sum_{j=1}^n a_{jk_1} a_{jk_2} \dots a_{jk_n} \right) x^{k_1 + k_2 + \dots + k_n}$$

Chemistry:

benzanthracene

Hydroxycoumarin

Languages: Будучи программой, что в фактически плоскости использования оптического системы наблюдателя смена пространственно-временных сигналов $E(x, y, z, t)$ в пространстве x, y, z, t . Обозначим, что оптический сигнал E представляет собой однородную сферическую дифференциальную и криволинейную функцию переменных x, y, z, t и $n(x, y, z, t)$ — гауссовский процесс типа белого шума с нулевым средним.

All the Capabilities

T³ is the solution for any word processing task, including the most challenging scientific or technical work. Special expressions such as the π -symbols above are produced with T³ and printed on your dot matrix or laser printer.

Graphics Import

T³ is furnished with everything you need to create professional quality output with type.

set appearance. Graphics files can be integrated with text when documents are printed.

Actual page image



Up to 25 levels for subscripts, superscripts and special symbols

Advanced page layout and graphics import capabilities

WordPerfect and T_EX conversion



SOFTWARE RESEARCH, INC.

1190 Foster Road • Las Cruces, New Mexico 88001 USA • Phone: (800) 874-2383 or (505) 522-4600 • Fax: (505) 522-0118 • Telex: 317629

Circle number 55 on Reader Service Card

1991 Bower Awards

The Benjamin Franklin National Memorial of The Franklin Institute proudly announces the second year of its distinguished Bower Awards for achievement in science and business.

The science award, with a cash prize of \$300,000, will be presented in 1991 to that scientist whose brilliant discovery has significantly advanced a field of science and made a humanitarian impact on society.

The business award will be presented to that business leader who has made the greatest contribution to the advancement of economic and social interests of any business while adhering to the highest ethical standards.

Inaugural recipients in 1990 were:

—Prof. Paul Christian Lauterbur, University of Illinois at Champaign-Urbana—magnetic resonance imaging.

—James Edward Burke, Chairman, Partnership for a Drug Free America, and Retired CEO of Johnson & Johnson—health related technological developments, and leadership in the war on drugs.

Awards will be announced in September and conferred in December in a major convocation. Nominations for both awards must be postmarked by April 17, 1991. For guidelines and official nomination forms please contact:

Dr. Larry E. Tise, Executive Director
Benjamin Franklin National Memorial
The Franklin Institute
Benjamin Franklin Parkway and 20th Street
Philadelphia, PA 19103
Phone 215-448-1329
Fax 215-448-1364



THE BENJAMIN FRANKLIN NATIONAL MEMORIAL

Circle number 56 on Reader Service Card