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MEETINGS

X-ray spectra

A conference on research problems in the physics of x-ray spectra will be held June 22-24 at Cornell University. Sponsored by the Atomic Energy Commission, the National Science Foundation, the Office of Naval Research, and Cornell's Laboratory of Atomic and Solid State Physics, the meeting will cover recent experimental developments, theoretical interpretations, and promising attacks on the major problems in the field. The abstracts (deadline June 1) of contributed papers will be published in the *Bulletin of the American Physical Society* and must conform to the rules for abstracts contained in every issue.

Both abstracts and requests for further information should be sent to Herbert W. Schnopper, Laboratory of Atomic and Solid State Physics, Rockefeller Hall, Cornell University, Ithaca, N. Y.

Communications

The Institute of Electrical and Electronics Engineers is holding the first of a projected series of annual communications conventions in Boulder from July 7 to 9. Covering all aspects of communications technology, the convention will consist of general sessions, sponsored by various IEEE committees and technical groups; Globecom VII, a symposium on channel characterization and adaptive communication techniques; and an information-theory symposium on time-varying channels.

Inquiries should be addressed to W. R. Hinchman, Publicity and Publications Chairman, IEEE Communications Convention, National Bureau of Standards, Boulder, Colo.

Meteors

The Smithsonian Astrophysical Observatory will celebrate its 75th anniversary and the 200th anniversary of the birth of James Smithson by holding an international symposium on meteor orbits and dust from August 9 to 13. Sessions are planned

on the following topics: photographic meteor orbits; radio meteor orbits and/or flux; theoretical studies of meteor orbits; the Zodiacal light; and dust in space, the atmosphere, and on earth.

Requests for invitations should be sent to Dr. G. S. Hawkins, Smithsonian Astrophysical Observatory, 60 Garden Street, Cambridge, Mass.

Opto-electronics

An unclassified meeting on opto-electronic components and devices will be held September 6-9 in Paris by the Avionics Panel of NATO's Advisory Group for Aeronautical Research and Development. An opto-electronic device is defined as a device having an electronic input and output using photons in an intermediate state for coupling, logic-processing, memory, amplification, etc. An opto-electronic component is that portion of the device where the electrical-optical or optical-electrical transformation and optical processing occur and whose physics will be of primary interest. The meeting will include papers on techniques for optical computing and other unusual uses of optics in possible components of opto-electronic devices or systems.

Attendance at the meeting is limited to citizens of NATO countries and is by invitation from the appropriate national delegates to AGARD. Requests for invitations or information can be sent to Lt. Col. E. F. Dukes, Executive, Avionics Panel, AGARD, 64 rue de Varenne, Paris 7, France.

Thin films

The physical properties of continuous nonmetallic thin films will be the subject of a conference to be held September 23 and 24 at the Chelsea College of Science and Technology in London. Sponsored by the British Institute of Physics and the Physical Society, the meeting is expected to cover formation of thin films, electronic structure, electrical conduction, electron emission, and electronic applications, especially in active devices.

Abstracts, about 300 words, should be sent by June 15 to Dr. A. K.

Physics and IDA



Washington is the decision-making center of the free world. In that center, IDA functions as a scientific adviser to the Department of Defense. Our working environment is the gray area of those major national problems where too little is known and too much is at risk to hazard an intuitive decision. IDA provides responsible DOD decision-makers with the scientific/technical input required to eliminate or lessen the areas of uncertainty.

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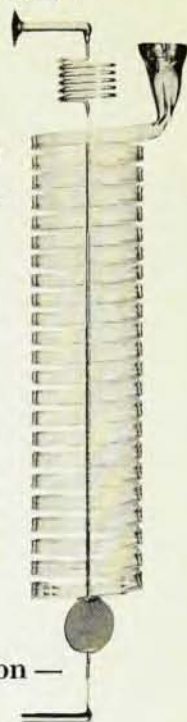
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Jonscher, Physics Department, Chelsea College of Science and Technology, London SW 3. Application forms will be available in July from the Meetings Officer, Institute of Physics and the Physical Society, 47 Belgrave Square, London SW 1, England.

Vacuum

Experimental and theoretical papers on the production, measurement, and application of vacuum are solicited for the 12th National Vacuum Symposium to be held September 29 to October 1 at the Statler-Hilton Hotel in New York City. The American Vacuum Society's program committee lists the following topics as particularly welcome: fundamental aspects of vacuum, including the behavior of materials and surfaces in a vacuum environment; new or improved components and systems; space-related problems; electron-microscope inspection of microcircuits; and thin films.

In addition, on the day preceding the conference, the AVS Thin Film Division will hold a special symposium of invited papers on such topics as nucleation and growth, dislocations, and low-energy electron diffraction studies.

Abstracts, limited to 150 words, double-spaced in a single paragraph, should be sent in triplicate by July 5 to R. L. Jepsen, Varian Associates, 611 Hansen Way, Palo Alto, Calif. Address inquiries to H. W. Schleuning, Polytechnic Institute of Brooklyn, 333 Jay Street, Brooklyn, N. Y.

Nuclear science

The Institute of Electrical and Electronics Engineers will hold its 12th nuclear science symposium in San Francisco from October 18 to 20.

Papers are invited on nuclear detectors, instruments, on-line data processing and control for high-energy and space physics, space power and propulsion development, and power and research reactor operation. Abstracts, 100 to 300 words, must be sent by July 1 to J. M. Harrer, Argonne National Laboratory, Argonne, Ill. Other correspondence should be addressed to J. J. Kennedy, General Electric Company, Mis-

sile and Space Division, Valley Forge Space Technology Center, PO Box 8555, Philadelphia, Pa.

Engineering science

Manuscripts describing theoretical and experimental research in the various fields of engineering science—physics, chemistry, and mathematics—are being solicited for the third technical meeting of the Society of Engineering Science. To be held November 3 to 5 at the University of California's Davis campus, the meeting will emphasize significant interdisciplinary studies, but due consideration will also be given to work in highly specialized fields.

The deadline for submission of manuscripts, which should conform to the format specified in the *International Journal of Engineering Sciences* is July 1. Three copies should be sent to Professor A. C. Eringen, School of Aeronautics, Astronautics, and Engineering Sciences, Purdue University, Lafayette, Ind. Additional information regarding the meeting can be obtained from Dr. Edward Teller, Department of Applied Science, University of California, Davis.

Reliability

The fourth annual symposium on the physics of failure in electronics will meet November 16 to 18 in Chicago under the joint auspices of the Rome Air Development Center and IIT Research Institute.

The emphasis of the meeting will be on the identification of the fundamental physical and chemical processes contributing to the degradation of electronic parts and materials, and their interpretation and application to device reliability. The technical sessions will cover such topics as principles and applications, test analysis and correlation, surface effects, effects in films, bulk effects, etc. June 25 is the deadline for abstracts of contributed papers.

Information regarding the submission of abstracts and attendance at the symposium can be obtained from Morton E. Goldberg, IIT Research Institute, 10 West 35th Street, Chicago, Ill.