in two principal subject areas: solid-propellant combustion and electromagnetic properties of high-temperature gases. Papers on topics of general interest to the Institute will also be presented.

For further information, write to the secretary of the Western States Section, Mr. Gilbert S. Bahn, 16902 Bollinger Drive, Pacific Palisades, Calif.

Ultrasonics

The 1962 Ultrasonics Symposium, sponsored by the Institute of Radio Engineers' Professional Group on Ultrasonics Engineering, will be held November 28–30 on the campus of Columbia University in New York City. The symposium committee has planned a program intended to cover both current developments and future trends in the field. A partial list of invited speakers and their papers appears below.

E. A. Hiedemann, Optical Effects of Ultrasonic Waves; A. Kiis, F. G. Hahneman, D. Hornbostel, and B. Small, A High-Frequency Ultrasonic Spectrum Analyzer; S. W. Tehon, Development and Application of Dispersive Ultrasonic Delay Lines; H. E. Bommel and K. Dransfeld, Microwave and Ultrasonic Absorption in Solids; R. C. LeCraw, High-Frequency Acoustic Losses in Ferromagnetic Insulators; H. Matthews and R. C. LeCraw, Acoustic Wave Rotation and Magnetoelastic Coupling; R. T. Denton and E. G. Spencer, Microwave Acoustic Measurements in Garnets; M. H. Seavey, Jr., Microwave Phonon Generation by Thin Magnetic Films; N. S. Shiren, Detection of Microwave Ultrasonics by Phonon-Photon Double Quantum Transitions; E. H. Jacobsen, Anomalous Dispersion of Ultrasonic Waves by Electron Spins; E. B. Tucker, Interactions between Microwave Phonons and Electron Spins in Solids; A. R. Hutson, Prospects for Active Ultrasonic Devices; and D. L. White, Ultrasonic Traveling-Wave Amplifier.

Inquiries concerning the conference should be sent to R. N. Thurston, Bell Telephone Laboratories, Murray Hill, N. J.

Radiation Measurement

A symposium on neutron detection, dosimetry, and standardization will take place December 10–14 in England at the Rutherford High Energy Laboratory, Harwell, under the sponsorship of the International Atomic Energy Agency. It will undertake a reconsideration and thorough investigation of parts of the subject matter of the IAEA's 1960 symposium in Vienna on selected topics in radiation dosimetry. Because of the rapid increase in the number of reactors and accelerators in the world, instrumentation and dosimetry techniques have required increasingly complex developmental work, and many new applications of radiation detection methods have been introduced in recent years.

The subjects for discussion will include problems of measurement of neutron field characteristics, neutron spectrometry (in connection with dosimetric problems), detection and dosimetry of neutron and mixed neutron-gamma radiation, neutron-source standardization, and calibration of measuring instruments.

Further information can be obtained from the International Atomic Energy Agency, Room 2265, United Nations, New York 17, N. Y.

Mass Spectrometry

A one-day meeting on mass spectrometry will be held at Imperial College in London on December 19. Arranged by the British Institute of Physics and Physical Society, the meeting will feature invited talks and discussions on the following subjects: new instrumental techniques of isotope analysis, field-emission and ionization studies, ions and radicals in flames, the application of high-resolution techniques in mass spectrometry, and the theory of mass spectra.

Further information and application forms are available from the Administration Assistant, The Institute of Physics and The Physical Society, 47 Belgrave Square, London, S.W. 1, England.

APS to Meet in California

Stanford University will be host to the American Physical Society's 1962 Winter Meeting in the West, to be held from December 27 to 29. A joint session has been scheduled with the American Geophysical Union, which will hold its meetings at Stanford during the same period. Papers are invited for sessions on nuclear structure, high-energy physics, electron scattering, accelerator design, solid-state physics, low-temperature physics, masers and spectroscopy, plasma physics, and radio astronomy.

Requests for further information and abstracts of contributed papers (to be received before October 19) should be sent to Prof. W. A. Nierenberg, Department of Physics, University of California, Berkeley 4, Calif.

Ultra-High-Energy Nuclear Physics

Nuclear interactions at ultra-high energies will be the subject of a conference to be held January 7 and 8, 1963, in the H. H. Wills Physical Laboratory of the University of Bristol, England. The meeting is sponsored by the (British) Institute of Physics and Physical Society and will have as its main theme strong interactions at energies above 100 BeV observed in the cosmic radiation. Recent results from the CERN and Brookhaven accelerators will also be included where relevant.

The program is expected to include discussions of the following topics: (1) observations of high-energy cosmic-ray collisions with emulsions and ionization calorimeters, (2) particle production in 20–30-BeV accelerators, (3) the muon component and its interrelation with the characteristics of high-energy collisions, (4) extensive air showers and their propagation through the atmosphere, (5) phenomenological models

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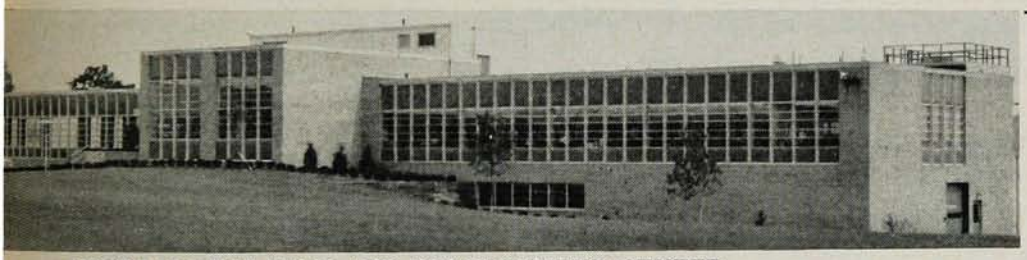

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of the interactions, and (6) field theoretical interpretation of high-energy nuclear collisions. These subjects will be reviewed in approximately nine invited papers, and ample time will be available for discussion and short contributed papers.

Those wishing to contribute papers should communicate with the Conference Secretary, D. H. Perkins, H. H. Wills Physical Laboratory, Royal Fort, Bristol 8, England. Requests for additional information should be sent to the Administration Assistant, The Institute of Physics and The Physical Society, 47 Belgrave Square, London, S.W. 1, England.

Microwave Theory and Techniques

The Institute of Radio Engineers has announced plans for a millimeter and submillimeter conference to be held January 8–10 in Orlando, Fla., under the sponsorship of the local IRE section, with the assistance of the Orlando chapter of the IRE Professional Group on Microwave Theory and Techniques.

The three-day meeting will be divided into eleven sessions: (1) millimeter and submillimeter transmission lines; (2) quasi-optical techniques; (3) millimeter sources and stability considerations; (4) resonant structures; (5) components and power measurements; (6) receivers; (7) harmonic generation and detection techniques; (8) millimeter spectroscopy; (9) millimeter masers (including optical pumping with millimeter outputs and multiple quantum transitions); (10) panel discussions on millimeter pulse work, plasmas, measurements and instrumentation, phase locking and frequency control; and (11) open discussions on current work and future trends in the field.

Requests for additional details with regard to the meeting should be addressed to J. W. Dees, Martin Co., MP-172, P. O. Box 5837, Orlando, Fla.

Solid-State Circuits

The Tenth annual International Solid-State Circuits Conference, sponsored jointly by the Institute of Radio Engineers, the American Institute of Electrical Engineers, and the University of Pennsylvania, will meet February 20–23, 1963, on the campus of the University and at the Sheraton Hotel in Philadelphia. The meeting is expected to deal with the following areas: (1) solid-state microwave amplification, oscillation, and conversion; (2) solid-state data storage and logic; (3) significant circuit developments providing improvements in bandwidth, gain, noise figure, stability, or reliability; (4) solid-state devices performing an integrated circuit function; (5) microcircuit techniques for improved system performance and reliability; (6) new devices and device characterization; (7) solid-state techniques for adaptive systems; (8) quantum electronics, including maser and optical-maser techniques; (9) cryogenics; and (10) optoelectronics.

Short (35-word) abstracts and summaries (300–500 words) of contributed papers must be submitted by