EIGHTH
SCINTILLATION
AND SEMICONDUCTOR
COUNTER SYMPOSIUM

SHOREHAM HOTEL
Calvert Street and Connecticut Avenue, N. W.
Washington, D. C.
March 1 - 3, 1962

Sponsored Jointly by
ATOMIC ENERGY COMMISSION
INSTITUTE OF RADIO ENGINEERS
NATIONAL BUREAU OF STANDARDS
AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
THURSDAY, MARCH 1, 1962
8:30 A.M. REGISTRATION—Terrace Banquet Room
Room Lobby
9:30 A.M. SESSION I—Terrace Banquet Room
SCINTILLATORS
Chairman: R. Hofstadter
Stanford University
1. Recent Developments in Alkali Halide Scintillators (20 min.)
W. L. Managan, Harshwell Chemical Co.
2. The Scintillation Bubble Chamber (15 min.)
Richard H. Milburn, Tufts University
3. Response of NaI(Tl) to X-Rays and Low Energy Gamma Rays (10 min.)
COFFEE BREAK
4. Studies of the Scintillation Process in CsI(Tl) (10 min.)
R. Gwinn and R. B. Murray, Oak Ridge National Laboratory
5. Effects of Delta Rays on the Response of Inorganic Scintillators to Heavy Ions (10 min.)
R. B. Murray and A. Meyer, Oak Ridge National Laboratory
6. Resolution and Line Shape in Scintillation Counters (10 min.)
J. B. Prescott and P. S. Talchar, University of British Columbia
7. The Effect of Dissolution Density on the Energy Resolution of Sodium Iodide Scintillators (10 min.)
I. Cooke and D. L. Reid, University of Manitoba
THURSDAY, MARCH 1, 1962
2:00 P.M. SESSION II—Terrace Banquet Room
PHOTOMULTIPLIERS AND IMAGE TUBES
Chairman: L. Costrell
National Bureau of Standards
1. Progress on Photomultiplier Tubes at EMI Electronics, Ltd. (15 min.)
J. Sharpe, EMI Electronics, Ltd., Hoyes, Middlesex, England
2. Progress in Photomultiplier Tubes for Scintillation Counting and Nuclear Physics (15 min.)
G. Pleitr, Laboratoires D’Electrotechnique et de Physique Appliquées, Paris
3. Some Recent Developments in Photomultipliers for Scintillation Counting (15 min.)
R. M. Matheson, RCA, Lancaster
4. What’s New at DuMont (15 min.)
J. G. Koosman, Allan B. DuMont Laboratory
COFFEE BREAK
5. New Developments in Photoconductive Tubes (15 min.)
F. W. Schenkel, CBS Laboratories
6. Development of ASCOP Photomultipliers (10 min.)
J. P. Causer, Electro-Mechanical Research, Inc.
7. Field Enhanced Transmission Secondary Emitters for High Speed Counting (10 min.)
E. J. Sternglass and G. W. Goetz, Westinghouse Research Laboratory
8. The Further Development of a Transmission Type Image Intensifier by 20th Century Electronics, Ltd. (10 min.)
9. Electron Multiplication Utilizing Continuous Surfaces (10 min.)
W. C. Wiley and F. C. Hendee, Bendix Research Laboratory
10. Photomultiplier Single-Electron Statistics (10 min.)
R. F. Tulsing, Q. A. Kerns, and H. K. Knudsen, Lawrence Radiation Laboratory, Berkeley
THURSDAY, MARCH 1, 1962
7:15 P.M. DINNER SESSION—West Ballroom
Chairman: G. A. Morton
Radio Corporation of America, Princeton
After Dinner Speaker: L. J. Haworth, Commissioner, Atomic Energy Commission
After Dr. Haworth’s talk there will be an open discussion period for those who wish to join in. Questions from the floor on any germane subject directed at large or to any member of the Symposium will be in order and encouraged.
The advance registration fee for the dinner session is $4.00. (If accommodations are still available tickets may be sold at registration desk for actual cost of $6.00.)
The hotel will make available bar service from 6:00-7:00 P.M. in the registration foyer.
FRIDAY, MARCH 2, 1962
9:00 A.M. SESSION III—Terrace Banquet Room
COUNTER SYSTEMS AND APPLICATIONS
Chairman: W. A. Higinbotham
Brookhaven National Laboratory
1. Recent Developments in Multichannel Pulse Height Analysis (15 min.)
R. L. Chase, Brookhaven National Laboratory
2. Survey of Nonoscillatory Techniques (15 min.)
A. L. Whetstone, University of Pennsylvania
3. Particle Type Discrimination by Phosphor Decay (15 min.)
R. B. Owen, Atomic Energy Research Establishment, Harwell, England
4. Gamma Ray Scintillation Spectrometry—A Report on Recent Developments (15 min.)
R. L. Heath, Phillips Petroleum, Idaho Falls
COFFEE BREAK
5. Nuclear Instrumentation for Scintillation and Semiconductor Spectroscopy (10 min.)
T. L. Emmer, Oak Ridge National Laboratory
6. Time Resolution of a Scintillation Counter System (10 min.)
A. K. Bjerke, Q. A. Kerns, and T. A. Nanneker, Lawrence Radiation Laboratory, Berkeley
7. Rejection of Background Radiation Pulses in Hanawak’s Beta Counter (10 min.)
A. Devolpi and K. Porges, Argonne National Laboratory
8. A Fast Pulse Voltage Multiplier for Particle Identification (10 min.)
C. H. Vincent, United Kingdom Atomic Energy Authority, England
9. The Application of Automatic Testing to Complex Nuclear Physics Experiments (10 min.)
E. A. Kirsten, Lawrence Radiation Laboratory, Berkeley
10. B+ Diffused Junction Detectors in N-Type Silicon (10 min.)
H. M. Mann and F. J. Janarek, Argonne National Laboratory
11. Response of Silicon Surface Barrier Detectors to Hydrogen Ions of Energies 25 to 250 kev (10 min.)
R. L. Ewing, Sandia Laboratory
12. Silicon Surface Barrier Detectors with High Reverse Breakdown Voltages (10 min.)
R. J. Fox and C. J. Borkowski, Oak Ridge National Laboratory
13. Solid State Particle Detectors—Some Methods and Techniques (10 min.)
N. H. Humes, Argonne National Laboratory
* Presented by title only. To be published in Proceedings of Symposium.
SATURDAY, MARCH 3, 1962

9:00 A.M. SESSION V—North Room
TRACK IMAGING AND SPARK CHAMBERS
Chairman: George T. Reynolds
Princeton University
1. The Status of the Scintillation Chamber (20 min.)
   Martin L. Perl, University of Michigan
2. Review of Spark Chambers (20 min.)
   James W. Cronin, Princeton University
3. Some Measurements of the Efficiency for Observing Photoelectrons in Image Intensifiers (10 min.)
   J. R. Waters, G. T. Reynolds, D. B. Scarl, and R. A. Zdanis, Princeton University

COFFEE BREAK

4. Observation of the Focussed Ring of Cerenkov Light from a Single Particle Using Image Intensifiers (10 min.)
   S. K. Poulteny and J. R. Waters, Princeton University
5. Ionization Density Effects in Spark Chambers (10 min.)
   E. Engels, D. Roth, J. W. Cronin, and M. Pyka, Princeton University
6. Spark Chamber for Electronic Data Retrieval (10 min.)
   Michael Neumann and Herrick Sherrard, University of Chicago
7. The Reduction of Delay Between Particle Passage and Spark Chamber HV Pulse (10 min.)
   Joachim Fischer and Gus T. Zorn, Brookhaven National Laboratory
8. A New Technique for Recording Heavy Primary Cosmic Radiation and Nuclear Processes by Dislocation Decoration in Silver Chloride Single Crystals (10 min.)
   C. B. Childs, N.A.S.A., Goddard Space Flight Center and Lawrence Sifkin, University of North Carolina

SATURDAY, MARCH 3, 1962

9:00 A.M. SESSION VI—Terrace Banquet Room
SPACE APPLICATIONS
Chairman: F. B. McDonald
N.A.S.A., Goddard Space Flight Center
1. Nuclear Particle Spectrometers for Satellites and Space Probes (15 min.)
   E. L. Hubbard, University of Chicago
2. Practical Aspects of a Scintillation Spectrometer System (10 min.)
   John Gilroy, Argonne National Laboratory
3. A Double Gamma-Ray Spectrometer to Search for Positrons in Space (10 min.)
   T. L. Cline, E. W. Hones, Jr., and P. Serfemisios, N.A.S.A., Goddard Space Flight Center
4. Scintillation Counter Telescope for Charge and Mass Identification of Primary Cosmic Rays (10 min.)
   D. A. Bryant and F. B. McDonald, N.A.S.A., Goddard Space Flight Center

COFFEE BREAK

5. Detector for Low Energy Gamma Ray Astronomy Experiment (10 min.)
   K. J. Frost and E. D. Rothe, N.A.S.A., Goddard Space Flight Center
6. Use of Scintillation Counters for Space Radiation Measurements (10 min.)
   R. V. Smith, J. B. Reagan, and R. A. Alber, Lockheed Missiles and Space Company
7. Application of Nuclear Semiconductor Detectors for Proton Spectrometry in Space Applications (10 min.)
   S. S. Friedland, F. P. Ziemba, R. M. Olson, and H. DeLyser, Solid State Radiations, Inc.
8. High Energy Gamma Ray Satellite Experiment (10 min.)
   C. F. Leavitt, University of New Mexico
9. Lunar Composition by Scintillation Spectroscopy (10 min.)
   M. A. Van Dilla, E. C. Anderson, and A. E. Metzger, Los Alamos Scientific Laboratory

SYMPOSIUM REGISTRATION
Registration will begin at 8:30 A.M., March 1, 1962, at the Terrace Banquet Room Lobby, Shoreham Hotel. Registration fee is $8.00.

ADVANCE REGISTRATION
Advance registration will minimize delays. The advance registration fee for dinner session is $4.00. (If dinner accommodations are still available tickets will be sold at registration desk for actual cost of $6.00.) Note saving available by advance registration. Upon request, full refunds on unused advance registrations for both the Symposium and dinner will be made. Mail your registration with remittance to the 8th SSCS, P. O. Box 101, Germantown, Maryland. Make all remittances payable to "8th SSCS."

Note: Extra Registration Forms
Extra registration forms and programs may be obtained by writing to the above address.

PROCEEDINGS OF THE SYMPOSIUM
The fee of $8.00 for the Symposium includes the published Proceedings of the Symposium. These proceedings will be published by the Professional Group on Nuclear Science of IRE and will be mailed at no additional cost to the registrants. The address (please make it legible) appearing on your registration card will be that to which the proceedings will be mailed.

HOTEL RESERVATIONS
A limited number of rooms at reduced rates have been set aside for members of the Symposium at the Shoreham Hotel. Make reservations early to assure accommodations. To take advantage of the reduced rates you must notify the Shoreham Hotel that you are attending the Scintillation and Semiconductor Counter Symposium. A hotel card is enclosed for your convenience.

EXHIBITS
Exhibits pertinent to the Symposium will be found in the foyer to the right of the banquet room and along the Bird Cage Walk.

Exhibits will be open:
Thursday—10:00 A.M.—6:45 P.M.
Friday —10:00 A.M.—9:00 P.M.
Saturday—9:00 A.M.—1:00 P.M.

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