

**American Institute of
Electrical Engineers**



**WINTER
GENERAL
MEETING**

Program

*Please retain for use during
entire meeting*

NEW YORK, N. Y.

JAN. 30-FEB. 3

1950

Meeting Headquarters
HOTEL STATLER

Future AIEE Meetings

AIEE Conference on Electric Welding

Detroit, Mich.
April 5-7, 1950

AIEE Textile Conference

Georgia Institute of Technology
Atlanta, Ga.
April 13-14, 1950

AIEE Power Conference (Power Generation and Power Supply for Industrial Plants)

Hotel William Penn, Pittsburgh, Pa.
April 19-20, 1950

AIEE Conference on Electrical Engineering Problems in the Rubber and Plastics Industry

Akron, Ohio
April 1950

North Eastern District Meeting

Sheraton Biltmore Hotel, Providence, R. I.
April 26-28, 1950
(Final date for submitting papers—closed)

AIEE Conference on Improved Electronic Components and Assemblies

Washington, D. C.
May 8-10, 1950

Great Lakes District Meeting

Hotel Hayes, Jackson, Mich.
May 11-12, 1950
(Final date for submitting papers—February 10)

Summer and Pacific General Meeting

Huntington Hotel, Pasadena, Calif.
June 12-16, 1950
(Final date for submitting papers—March 14)

Middle Eastern District Meeting

Lord Baltimore Hotel, Baltimore, Md.
October 3-5, 1950
(Final date for submitting papers—July 5)

Fall General Meeting

Skirvin Hotel, Oklahoma City, Okla.
October 23-27, 1950
(Final date for submitting papers—July 25)

1951 Winter General Meeting

New York, N. Y.
January 22-26, 1951
(Final date for submitting papers—October 24)

GENERAL INFORMATION

The Technical Program, by far the largest in the history of the Institute, is a result of the effort of the 39 technical committees in the five technical groups of the Institute. The program is comprised of 57 technical sessions and conferences presenting a total of 227 papers.

At the General Session, Monday afternoon, we are to be honored with an address by Harold E. Stassen, President of the University of Pennsylvania. The Edison and Hoover Medal presentation ceremonies will take place at the General Session Wednesday evening, at which time the Institute Paper Prizes will be awarded.

A group of inspection trips has also been arranged, closely allied with the subject matter of the technical program. On the social side, there will be a dinner-dance, a smoker, theater tickets for out-of-town members, and special entertainment for the ladies.

REGISTRATION FEES REQUIRED. As instituted last year, a registration fee of \$3.00 has been established for members and \$5.00 for nonmembers. These fees have made the meetings self-supporting and have been largely responsible for postponing the need for raising the annual dues. Enrolled students and the immediate families of members will not be required to pay any fee.

Information on all features may be obtained at the registration desk. Press headquarters will be in Conference Room 8. The Institute rooms and offices on the 10th floor of the Engineering Societies Building are open to all members. Efforts will be made to deliver telegrams and messages promptly. Members who expect to receive mail are asked to collect same promptly at the mail and telegram desk. Please check this desk frequently.

BROADCAST TICKETS have been obtained for many of the principal broadcasts in various evenings during the week. These are available at the entertainment desk. Some prior reservations and theater tickets are still available.

TECHNICAL SESSIONS AND DISCUSSIONS are covered by the "Conduct of Technical Sessions" at the discretion of the presiding officers. Usually 10 minutes will be allowed for the presentation of each paper and 5 minutes for each discussion. To receive consideration for publication, discussions must be left with the chairman or sent to Edward C. Day, AIEE, 33 West 39th Street, New York 18, N. Y., before February 17. Discussions received later will be returned. The original typewritten double-spaced copy, together with original illustrations with photostats or blueprints should be submitted.

Authors and discussers should make their presentations as effective as possible. Remember your audience. Stress the salient features of the paper which are new or novel. When using slides, please turn toward the audience before speaking and raise your voice. Extemporaneous delivery is preferable to reading unless done slowly and emphasis is put in the proper places.

ADVANCE COPIES OF PAPERS may be purchased by members at the registration desk at the uniform price of \$.30 each (\$.60 each to nonmembers). Only numbered papers are available. Conference papers denoted by CP are intended for presentation only and are not available. Mail orders, particularly from out-of-town members, are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Coupon books in \$9.00 denominations are available for those who wish to avoid remittance by check or otherwise. Mail orders should be addressed to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. Most of the papers will ultimately be published as AIEE Proceedings and in the Transactions.

SCHEDULE OF EVENTS

For Entertainment, Inspection Trips and Points of Interest, See Separate Folder

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<p>10:00 A.M. Transformers (Ballroom)</p> <p>Rotating Machinery (Georgian Room)</p> <p>New Electronic Devices, Applications and Techniques (Penn Top North)</p> <p>Electric Heating (Parlor 1)</p> <p>Industrial Control and Feedback-Control Systems (Penn Top South)</p> <p>Developments in Long Tube Fluorescent Lighting (Keystone Room)</p>	<p>9:30 A.M. Transformers and Protective Devices (Ballroom)</p> <p>Rotating Machinery (Georgian Room)</p> <p>Telephone and Telegraph Transmission Systems (Penn Top North)</p> <p>Electrostatic Processes I (Salle Moderne)</p> <p>Large Electronic DC Motor Drives (Penn Top South)</p> <p>Computing Devices (Keystone Room)</p> <p>Industrial Spectroscopy (Parlor 1)</p>	<p>9:30 A.M. Excitation Systems (Georgian Room)</p> <p>Insulated Conductors (Salle Moderne)</p> <p>Mobile Radio (Keystone Room)</p> <p>Sym. on Magnetics II (Penn Top South)</p> <p>Nucleonic Instruments (Parlor 1)</p> <p>Gas Conduction Electron Tubes (Penn Top North)</p> <p>Electric Welding (Parlor 2)</p> <p>Conf. on Education (Ballroom)</p>	<p>9:30 A.M. Transmission and Distribution (Ballroom)</p> <p>Sym. on Relays (Salle Moderne)</p> <p>Broadcasting Facilities (Keystone Room)</p> <p>Electric Batteries (Penn Top South)</p> <p>Instruments and Measurements (Parlor 1)</p> <p>Electron Tubes (Penn Top North)</p> <p>Land Transportation (Parlor 2)</p> <p>General Industries Applications (Georgian Room)</p>	<p>9:30 A.M. Protective Devices (Ballroom)</p> <p>Sym. on Dielectrics (Georgian Room)</p> <p>Electronic Instruments (Parlor 1)</p> <p>Chemical, Electrochemical and Electrothermal Applications (Keystone Room)</p> <p>Domestic and Commercial Applications (Parlor 2)</p>

<p>2:30 P.M. General Session (Ballroom)</p>	<p>2:00 P.M. Sections Committee (Penn Top North)</p> <p>Centralized Station Control (Ballroom)</p> <p>Rotating Machinery (Georgian Room)</p> <p>Telephone Switching (Parlor 2)</p> <p>Sym. on Magnetics I (Penn Top South)</p> <p>Electrostatic Processes II (Salle Moderne)</p> <p>Feedback-Control Systems (Keystone Room)</p> <p>5:30 P.M. The Smoker Hotel Commodore</p>	<p>2:00 P.M. Power Generation (Georgian Room)</p> <p>Switchgear (Salle Moderne)</p> <p>Microwave Communication and Control Systems (Keystone Room)</p> <p>The Electrical Properties of Gases (Penn Top South)</p> <p>Instrument Transformers (Parlor 1)</p> <p>Magnetic Amplifiers (Penn Top North)</p> <p>Electric Welding (Parlor 2)</p> <p>Industrial Control (Ballroom)</p> <p>8:00 P.M. General Session (Ballroom)</p>	<p>2:00 P.M. Conf. on Facsimile (Keystone Room)</p> <p>Operation of Utility Systems at Leading Power Factor (Ballroom)</p> <p>Statistical Analysis as Applied to Electrical Engineering Problems (Penn Top South)</p> <p>High-Frequency Measurements (Georgian Room)</p> <p>Land Transportation (Parlor 2)</p> <p>Latest Developments in the Field of Resuscitation (Penn Top North)</p> <p>7:00 P.M. Dinner Dance Hotel Statler</p>	<p>2:00 P.M. Sym. on Dielectrics (Georgian Room)</p> <p>Sym. on Instruments for Testing Insulating Oils, Oil Conditions in the Field and the Effects of Remedial Measures (Parlor 1)</p> <p>Chemical, Electrochemical and Electrothermal Applications (Keystone Room)</p>
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Monday, January 30

10:00 a.m.—Transformers

Ballroom

J. H. CHILES, JR., Presiding

- 50-8. Audible Noise of Power Transformers. T. D. Gordy, General Electric Co.
- 50-18. Harmonic Index—A Tool for Transformer Audio Noise Investigation. W. H. Mutschler, Jr., T. F. Madden, Allis-Chalmers Mfg. Co.
- 50-19. Audio Noise in Transformers in Residential and Commercial Areas. C. E. Baugh, Pacific Gas and Electric Co.
- CP.** Transformer Sound Level Considerations. A. J. Maslin, Westinghouse Electric Corp.
- CP.** Quiet Transformer Installations—A Problem for Both Equipment and Substation Designers. I. S. Mendenhall, F. L. Taylor, The Detroit Edison Co.

10:00 a.m.—Rotating Machinery

Georgian Room

C. G. VEINOTT, Presiding

- 50-1. Suggested Improvements in the Performance Calculations of Single-Phase Induction Motors. M. S. Thacker, H. V. Gopalakrishna, Indian Institute of Science.
- 50-20. Generator Rating of Induction Motors. Otto J. M. Smith, University of California.
- 50-21. Quick and Accurate Production Testing on Large D-C Apparatus. M. J. Baldwin, H. D. Barnhart, General Electric Co.
- 50-22. Transient Response of Direct Current Dynamos. H. E. Koenig, University of Illinois.
- 50-23. Maximum Short Circuit Current of D-C Motors and Generators. Subcommittee on D-C Machinery. Prepared by A. G. Darling.

10:00 a.m.—New Electronic Devices, Applications and Techniques

Penn Top North

W. C. WHITE, Presiding

- CP.** Magnetic Modulation of Photo-currents and Its Application. H. P. Kalmus, National Bureau of Standards.
- CP.** Magnetic Current Regulators. C. A. Black, H. A. Gauper, General Electric Co.
- CP.** Manufacture of Electron Tube Parts by the Rubber-die Technique. W. J. Bachman, Radio Corp. of America.
- CP.** Optical Contour Follower Control for Machine Tools. T. M. Berry, General Electric Co.

10:00 a.m.—Electric Heating

Parlor 1

L. P. HYNES, Presiding

- CP.** Induction Preheating of Electrolytic Tin Plate for Flow Brightening with High Frequency Rotating Equipment. W. T. Thomas, General Electric Co.
- CP.** Modern Electric Hot-Dip Galvanizing. C. J. Sodergren, F. A. Berwager, Consolidated Gas Electric Light and Power Co. of Baltimore.
- CP.** New Controlled Infrared Heat for Industry. J. E. Kolb, Edwin L. Wiegand Co.

10:00 a.m.—Industrial Control and Feedback-Control Systems

Penn Top South

G. S. BROWN, Presiding

- 50-24. Characteristics of Some Magnetic-Fluid Clutch Servomechanisms. A. J. Parziale, Massachusetts Institute of Technology; P. D. Tilton, Vickers Electric Divn. of Vickers, Inc.

CP.** Speed of Response of Saturable Reactors. H. F. Storm, General Electric Co.

50-25. An Electronic Synchronous Speed Regulator. William J. ACO.* M. Moore, National Research Council.

CP.** Standard Nomenclature for Feedback-Control Systems. Subcommittee on Nomenclature.

10:00 a.m.—Developments in Long Tube Fluorescent Lighting

Keystone Room

E. H. SALTER, Presiding

- CP.** Long Tube Lamp Trends. T. C. Sargent, Sylvania Electric Products, Inc.
- CP.** Ballast Developments for Long Tube Lamps. G. C. Harvey, General Electric Co.
- CP.** Fixture Design as Affected by Long Tube Lamps. H. P. Steele, Benjamin Electric Mfg. Co.
- CP.** The Application and Installation of the Long Tube Lamp. B. F. Greene, New York, N. Y.

2:30 p.m.—General Session

Ballroom

PRESIDENT JAMES F. FAIRMAN, Presiding

"Why Go the Way of Britain," recording of address by Sir Ernest J. P. Benn, Chairman of British publishing house of Benn Brothers Limited.

Honorary Membership presentation to Dr. Vannevar Bush, President, Carnegie Institution of Washington.

Address: Hon. Harold E. Stassen, President, University of Pennsylvania.

THE ETA KAPPA NU DINNER

The Eta Kappa Nu Association will hold its annual Recognition Dinner at the Henry Hudson Hotel, 313 West 57th Street, New York, N. Y., on Monday evening, January 30, 1950. This dinner will be held at 6:30 p.m. in the Tudor Room and the cost will be \$4.00.

At this dinner, Mr. R. C. Cheek, Central Station Engineer, of the Westinghouse Electric Corporation will receive the Eta Kappa Nu Plaque in commemoration of his being chosen the most outstanding young electrical engineer for 1949. Honorable mention certificates will be awarded to Mr. Louis G. Gitzendanner of the General Electric Company and Dr. L. M. Field of Stanford University. These gentlemen were selected from among 56 candidates for the 1949 Recognition by a Jury consisting of: Messrs. R. W. Wilbraham, Chairman; J. H. Foote, N. S. Hibshman, W. B. Kouwenhoven, and C. A. Powel.

Please arrange for your reservation in the registration room of the AIEE Winter General Meeting.

COLUMBIA ENGINEERS DINNER

Columbia Engineers Dinner for Columbia electrical engineers will be held on Wednesday, February 1st, at the Old Timer's Grill, 7 East 40th Street. The dinner is scheduled for 6:15 p.m. Informal.

Tuesday, January 31

9:30 a.m.—Transformers and Protective Devices

Ballroom

J. B. HODTUM, Presiding

- CP.** Control Transformers. J. M. Frank, A. J. Hauck, Hevi Duty Electric Co.
- 50-17. Margins Between Arrester Protective Levels and Transformer Insulation. F. J. Vogel, Illinois Institute of Technology.

- 50-14. Lightning Arresters as a Criterion for Insulation Levels. H. L. Rorden, Bonneville Power Administration.
- 50-26. Application and Handling of Very Large Power Transformers on the System of the Bonneville Power Administration. Richard F. Stevens, Bonneville Power Administration.
- 50-99. Proposed Changes in Transformer Standards—Method of ACO.* Making Temperature Rise Tests. Subcommittee on Methods of Making Heat Runs. Prepared by J. E. Clem.

9:30 a.m.—Rotating Machinery

Georgian Room

J. DeKIEP, Presiding

- 50-27. Light Weight Turbine Generator Rotors. Th. de Koning, ACO.* Philadelphia, Pennsylvania.
- 50-28. Liquid Cooling of A.C. Turbine Generators. II. Carl J. Fechheimer, Milwaukee, Wis.
- 50-29. Surface Heat-Transfer Coefficients for Hydrogen-Cooled Rotating Electric Machines. D. S. Snell, R. H. Norris, Mrs. B. O. Buckland, General Electric Company.
- 50-30. Loading of Hydrogen Cooled Generators at Elevated Gas Pressures. D. S. Snell, General Electric Co.

9:30 a.m.—Telephone and Telegraph Transmission Systems

Penn Top North

H. A. AFFEL, Presiding

- 50-10. A Two-Channel Carrier Telegraph System for Short Submarine Cables. E. L. Newell, C. H. Cramer, Western Union Telegraph Co.
- 50-6. A New Electronic Telegraph Regenerative Repeater. B. Ostendorf, Jr., Bell Telephone Laboratories, Inc.
- 50-101. Magnetic Cores of Thin Tape Insulated by Cathoporesis. ACO.* H. L. B. Gould, Bell Telephone Laboratories, Inc.
- CP.** Companders for Telephone Circuits. P. G. Edwards, Bell Telephone Laboratories, Inc.
- 50-13. A Printing Telegraph Tape-to-Page Translator. A. E. Frost, The Western Union Telegraph Co. Presentation by title only.

9:30 a.m.—Electrostatic Processes I

Salle Moderne

G. W. HEWITT, Presiding

- CP.** Limitations of Conductance Electrostatic Separators. G. W. Penney, Carnegie Institute of Technology; G. W. Hewitt, Westinghouse Electric Corp.
- CP.** A Discussion of Methods for the Measurement of Space Charge Density. W. B. Dodson, American Air Filter Co.
- CP.** Electrical Charging of Dielectric Films Used in Xerography. C. D. Oughton, J. J. Rheinfrank, J. P. Ebert, Battelle Memorial Institute.

9:30 a.m.—Large Electronic DC Motor Drives

Penn Top South

C. C. HERSKIND and G. W. HEUMANN, Presiding

- 50-31. Large Electronic DC Motor Drives in Industry. M. M. ACO.* Morack, General Electric Co.
- 50-32. Control of Large D-C Motors Supplied from Ignitron Rectifiers. O. W. Livingston, General Electric Co.
- 50-33. Rectifier Equipment for Electronic D-C Motor Drives. M. J. Mulhern, S. N. Crawford, General Electric Co.
- 50-34. Application of Electronic Motor Drives to Printing Presses. J. A. Johnson, Times-Mirror Co.; E. M. Stacey, General Electric Co.

9:30 a.m.—Computing Devices

Keystone Room

J. G. BRAINERD, Presiding

- 50-15. Analogue Computer for Multi-Component Fractionation Calculations. G. W. Goelz, J. F. Calvert, Northwestern University.
- 50-47. An Electronic Simulator for Nonlinear Servomechanisms. Charles M. Edwards, E. Calvin Johnson, Jr., Massachusetts Institute of Technology.
- 50-48. A Generalized Analogue Computer for Flight Simulation. Albert C. Hall, Massachusetts Institute of Technology.
- CP.** Technique of Handling Power System Problems on a Modern AC Network Calculator. P. O. Bobo, Westinghouse Electric Corporation.
- 50-85. New Techniques on the Anacom. E. L. Harder, J. T. Carleton, Westinghouse Electric Corp.

9:30 a.m.—Industrial Spectroscopy

Parlor 1

J. H. ENNS, Presiding

2:00 p.m.—Sections Committee

Penn Top North

C. S. PURNELL, Presiding

2:00 p.m.—Centralized Station Control

Ballroom

H. R. HARRIS, Presiding

- CP.** Centralized Station Control. J. M. Drabelle, Iowa Electric Light and Power Co.
- 50-91. Centralized Instrumentation and Controls for Steam Electric Power Stations. B. C. Mallory, Stone and Webster Engineering Corp.
- 50-92. Design and Operation of Central Control Rooms. B. F. Borgel, Pennsylvania Elec. Co.
- CP.** Centralized Control Desirable for Single Boiler-Turbine-Generator Units. J. A. Lind, J. M. Geiger, Buffalo Niagara Electric Corp.

2:00 p.m.—Rotating Machinery

Georgian Room

J. DeKIEP, Presiding

- 50-36. Spring and Damping Coefficients of Synchronous Machines and Their Application. L. A. Kilgore, E. C. Whitney, Westinghouse Electric Corp.
- 50-37. Analysis of Synchronous Machine Short Circuits. Robert D. Camburn, Commonwealth and Southern Corp.; Eric T. B. Gross, Illinois Institute of Technology.
- 50-38. Per Unit Inductances of Synchronous Machines. H. S. Kirschbaum, Ohio State Univ.
- 50-39. Potier Reactance for Salient-Pole Synchronous Machines. Saad L. Mikhail, Cambridge, Mass.
- CP.** Design Calculations for A-C Generators. David Ginsberg, U. S. Engineer Research and Development Laboratories.

2:00 p.m.—Telephone Switching

Parlor 2

R. C. DAVIS, Presiding

- 50-40. Basic Theory Underlying Bell System Facilities Capacity Tables. A. L. Gracey, American Telephone and Telegraph Co.
- 50-41. The No. 5 Crossbar Dial Telephone Switching System. F. A. Korn, James G. Ferguson, Bell Telephone Laboratories, Inc.

50-42. Fundamentals of the Automatic Telephone Message Accounting System. John Meszar, Bell Telephone Laboratories, Inc.

2:00 p.m.—Symposium on Magnetics I

Penn Top South
T. D. YENSEN, Presiding

- CP.** Magnetostriction and its Measurement. J. E. Goldman, Westinghouse Electric Corp.
CP.** Magnetostriction of Single Crystals of Iron-Silicon. W. J. Carr, Westinghouse Electric Corp.
CP.** Magnetostriction of Permanent Magnets and Other Materials. E. A. Neshitt, Bell Telephone Laboratories, Inc.
CP.** Recent Developments in Commercially Available Magnetic Materials. L. C. Hicks, Allegheny Ludlum Steel Corp.
CP.** The Properties of Electrical Sheet for Rotating Machinery. H. F. Shannon, Carnegie-Illinois Steel Co.

2:00 p.m.—Electrostatic Processes II

Salle Moderne
G. W. PENNEY, Presiding

- CP.** Suggested Standards for Electrical Power Supplies Used in Electrostatic Precipitation. W. D. Cockrell, H. V. Nelson, General Electric Co.
CP.** Electrical Precipitators for De-tarring Manufactured Gas. E. A. Blomqvist, A. N. Anderson, Consolidated Edison Company of New York.
CP.** Electrocoating Sandpaper and Textile Fabrics. J. O. Amstuz, Behr-Manning Corp.

2:00 p.m.—Feedback-Control Systems

Keystone Room
S. W. HERWALD, Presiding

- 50-43. An Airborne Synchronized Motion Picture Camera Recording System. Viola J. White, Sidney J. Horwitz, Northwestern University.
50-44. A Frequency-Response Method for Analyzing and Synthesizing Contactor Servomechanisms. R. J. Kochenburger, Massachusetts Institute of Technology.
50-45. Phase Lead for A-C Servo Systems with Compensation for Carrier Frequency Changes. A. P. Notthoff, Jr., Massachusetts Institute of Technology.
50-11. Control System Synthesis by Root Locus Method. W. R. Evans, North American Aviation, Inc.
50-103. Static Accuracy Performance of the Selsyn Generator Control-Transformer System. G. Kronacher, formerly with General Electric Co.
50-46. Improvements in the Characteristics of A-C Lead Networks for Servomechanisms. D. McDonald, University of Michigan. Presentation by title only.

Wednesday, February 1

9:30 a.m.—Excitation Systems

Georgian Room
B. G. A. SKROTZKI, Presiding

- 50-49. Excitation System Performance with Motor-Driven Exciters. A. G. Mellor, M. Temoshok, General Electric Co.
50-50. Design and Test on Electronic Exciter Supplied From Common Shaft Driven Generator. A. P. Colaiaco, A. A. Johnson, J. E. Reilly, Westinghouse Electric Corp.
50-51. Excitation Improvement. A. H. Phillips, Gilbert Associates, Inc.; W. H. Lambert, D. R. Pattison, Pennsylvania Electric Co.

9:30 a.m.—Insulated Conductors

Salle Moderne
HERMAN HALPERIN, Presiding

- 50-52. The Thermal Resistance Between Cables and a Surrounding Pipe or Duct Wall. F. H. Buller, General Electric Co.; J. H. Neher, Philadelphia Electric Co.
50-53. Development of Improved Luminous Sign Cable. L. F. Roehmann, E. W. Greenfield, Anaconda Wire and Cable Co.
50-54. Terminals and Joints for Insulated Power Cables, Electrical Design Considerations. L. F. Roehmann, Anaconda Wire and Cable Co.
50-55. Heat Transfer Study on Power Cable Ducts and Duct Assemblies. Paul Greebler, Johns-Manville; Guy F. Barnett, Philco Radio and Television Corp.

9:30 a.m.—Mobile Radio

Keystone Room
G. T. ROYDEN, Presiding

- CP.** Design of Communication Equipment for Maximum Channel Utilization. L. P. Morris, Galvin Mfg. Corp.
CP.** Frequency Assignment Plan for the Railroad Radio Service. L. E. Kearney, Association of American Railroads.
CP.** Pulse Time Modulation Telemetry Systems for Rocket Application. J. T. Mengel, Naval Research Laboratory.

9:30 a.m.—Symposium on Magnetics II

Penn Top South
T. D. YENSEN, Presiding

- CP.** Growing Oriented Crystals and Their Magnetic Properties. W. Morrill, General Electric Co.
CP.** Magnetic Anisotropy in Single Crystals of Fe-Co Alloys. H. J. Williams, Bell Telephone Company.
CP.** Recording Fluxmeter. P. P. Cioffi, Bell Telephone Laboratories, Inc.
CP.** Magnetic Powders. C. C. Neighbors, Consulting Engineer.

9:30 a.m.—Nucleonic Instruments

Parlor 1
F. J. GAFFNEY, Presiding

- CP.** Pulse Amplitude Discriminators. H. G. Weiss, Raytheon Mfg. Co.
CP.** The Brookhaven Cosmotron. M. G. White, G. K. Green, J. P. Blewett, Brookhaven National Laboratory.
CP.** Nuclear Pulses and Their Amplification. H. E. DeBolt, Westinghouse Electric Corp.
CP.** Equipment for Uranium Prospecting. Frank Stead, U. S. Dept. of the Interior.
CP.** The Control Problems of a Power Producing Nuclear Reactor. J. M. Harrer, Argonne National Laboratory.

9:30 a.m.—Gas Conduction Electron Tubes

Penn Top North
H. C. STEINER, Presiding

- CP.** Clean-up of a Noble Gas in an Arc Discharge. M. J. Redden, U. S. Bureau of Standards.
50-56. Statistical Nature and Physical Concepts of Thyatron Deionization Time. H. A. Romanowitz, University of Kentucky; W. G. Dow, University of Michigan.

CP.** Pulse Test Method for Deionization Time Measurement. H. H. Wittenberg, Radio Corp. of America.

CP.** Commutation Factor Rating of Inert Gas Thyratrons and its Influence on Circuit Design. D. E. Marshall, C. L. Shackelford, Westinghouse Electric Corp.

9:30 a.m.—Electric Welding

Parlor 2

J. H. BLANKENBUEHLER, Presiding

CP.** Electronically Controlled Head for Electrode Testing. Bela Ronay, U. S. Naval Engineering Experiment Station.

CP.** Preheating and Stress Relieving. E. H. Wilhelm, U. S. Naval Engineering Experiment Station.

CP.** Stud Welding. R. C. Singleton, Morton-Gregory Corp.

9:30 a.m.—Conference on Education

Ballroom

A. C. MONTEITH, Presiding

CP.** The Continued Education of the Engineer in Industry. J. C. McKeon, Westinghouse Electric Corp.

CP.** Orientation and Training of the Young Engineer in Industry. Guy Kleis, Westinghouse Electric Corp.; J. S. Crout, Battelle Memorial Institute.

CP.** Professional Registration of the Young Engineer. H. L. Solberg, Purdue University; J. H. Foote, Commonwealth & Southern Corp.

CP.** Self-Appraisal Methods for Valuable Characteristics in Engineering. A. R. Cullimore, F. N. Entwisle, Newark College of Engineering.

CP.** Integrating the Young Engineer Into His Community. K. B. McEachron, General Electric Co.

2:00 p.m.—Power Generation

Georgian Room

J. A. BROOKS, Presiding

50-57. Effect of Buck-Boost Voltage Regulator on Steady State Power Limit. Charles Concordia, General Electric Co.

50-58. Regulation of A-C Generators with Suddenly Applied Loads—II. E. L. Harder, R. C. Check, J. M. Clayton, Westinghouse Electric Corp.

50-59. Bus Transfer Tests on 2300-Volt Station Auxiliary System. A. A. Johnson, Westinghouse Electric Corp.; H. A. Thompson, Duquesne Light Company.

2:00 p.m.—Switchgear

Salle Moderne

F. A. LANE, Presiding

50-4. Outdoor Metal Clad Switchgear. P. R. Pierson, Westinghouse Electric Corp.

50-60. A New Grounding and Testing Device for Metal Clad Switchgear. H. Krida, E. T. McCurry, General Electric Co.

50-12. High Voltage Oil Circuit Breakers for 5,000,000 to 10,000,000 Kva Interrupting Capacity. W. M. Leeds, R. E. Friedrich, Westinghouse Electric Corp.

50-3. Development and Testing of an Improved High Voltage High-Capacity Impulse Breaker. E. B. Rietz, General Electric Co. Presentation by title only.

50-61. A New 69-Kv Oil Blast Circuit Breaker. E. B. Rietz, C. J. Balentine, General Electric Co. Presentation by title only.

CP.** Operation of Bushings in Carbonized Oil. W. R. Wilson, L. Wetherill, General Electric Co.

2:00 p.m.—Microwave Communication and Control Systems

Keystone Room

E. G. PORTS, Presiding

CP.** The Keystone Pipe Line PTM Microwave Link. E. B. Dunn, Keystone Pipe Line Co.; A. J. Finocchi, Federal Telecommunication Laboratories, Inc.

CP.** Power Line Fault Locator Utilizing Pulse Time Modulation Radio Relays. R. W. Hughes, Nelson Weintraub, S. Metzger, Federal Telecommunication Laboratories, Inc.

CP.** Radio Links for Television. E. M. Ostlund, Federal Telecommunication Laboratories, Inc.

2:00 p.m.—The Electrical Properties of Gases

Penn Top South

J. SLEPIAN, Presiding

CP.** Gaseous Conduction Phenomena and their Application in Electrical Engineering. J. D. Cobine, General Electric Research Laboratory.

CP.** Mechanism of the Spark Breakdown. L. H. Fisher, New York University.

CP.** Fundamental Processes in Gaseous Tube Rectifiers. A. W. Hull, General Electric Research Laboratory.

CP.** Microwave Gas Discharges. M. A. Biondi, Westinghouse Electric Corp.

2:00 p.m.—Instrument Transformers

Parlor 1

J. E. CLEM, Presiding

50-62. Orthomagnetic Bushing Current Transformer. J. W. Farr, General Electric Co.

50-63. A Survey of Bushing Type Current Transformers for Metering Purposes. G. Camilli, General Electric Co.

50-64. The Theory of the Current Transducer and Its Application in the Aluminum Industry. T. R. Specht, Westinghouse Electric Corp.; R. N. Wagner, Aluminum Co. of America.

50-65. Application Guide for Grounding of Instrument Transformer ACO.* Secondary Circuits and Cases. Working Group of the Subcommittee on Instrument Transformers.

50-66. A New Dry Type Insulation for Instrument Transformers. R. A. Pfuntner, R. E. Franck, F. R. D'Entremont, General Electric Co.

50-67. A Primary Method of Measuring the Ratio and Phase Angle of Current Transformers. A. L. Brownlee, Commonwealth Edison Co.

2:00 p.m.—Magnetic Amplifiers

Penn Top North

E. L. HARDER, Presiding

50-76. An Analysis of Transients in Magnetic Amplifiers. D. W. VerPlanck, L. A. Finzi, D. C. Beaumariage, Carnegie Institute of Technology. Presentation by title only.

50-94. An Analysis of Transients and Feedback in Magnetic Amplifiers. W. C. Johnson, Princeton University; F. W. Latson, Kellex Corp.

50-93. Magnetic Amplifiers of the Balance Detector Type—Their ACO.* Basic Principles, Characteristics, and Applications. W. A. Geyger, U. S. Naval Ordnance Laboratory.

50-95. A Magnetic Amplifier Frequency Control. L. J. Johnson, H. G. Schafer, Naval Research Laboratory.

CP.** Dimensionless Characteristics of a Magnetic Amplifier. L. A. Finzi, D. C. Beaumariage, Carnegie Institute of Technology.

CP.** A Method of Design and Rating of Saturable Reactors. J. E. Hart, Naval Research Laboratory.

2:00 p.m.—Electric Welding

Parlor 2

J. W. GORE, Presiding

CP.** Unionmelt Automatic Welding Control. J. A. Kratz, The Linde Air Products Co.

CP.** Submerged Arc Welding Control. L. K. Stringham, The Lincoln Electric Co.

CP.** Power Saving Controls. F. H. Varney, D-V Welding Controls.

2:00 p.m.—Industrial Control

Ballroom

G. W. HEUMANN, Presiding

CP.** Control Sequence of D-C Adjustable-Voltage Drives. E. E. Moyer, Rensselaer Polytechnic Institute; M. E. Cummings, Bell Telephone Co.

CP.** The Operating Time of D-C Magnet Brakes. J. E. Ryan, General Electric Co.

CP.** Basis of Rating a Plate Rheostat. L. J. Parkinson, General Electric Co.

CP.** Practical Design of Industrial Regulating Systems. S. L. Burgwin, Westinghouse Electric Corp.

8:00 p.m.—General Session

Ballroom

PRESIDENT JAMES F. FAIRMAN, Presiding

Hoover Medal presentation (Posthumous) to Dr. F. B. Jewett.

Presiding: Scott Turner, Chairman, Hoover Medal Board of Award.

Career Citation: Dr. Gano Dunn, President, J. G. White Engineering Corp.

Edison Medal Presentation to Dr. K. B. McEachron

"The Origin of the Edison Medal": J. B. MacNeill, Chairman, Edison Medal Committee.

Career Citation: Professor D. D. Ewing, Purdue University.

Response: Dr. K. B. McEachron, General Electric Company.

Presentation of Institute Prizes: Professor C. H. Willis, Chairman of the Committee on Award of Institute Prizes.

Thursday, February 2

9:30 a.m.—Transmission and Distribution

Ballroom

I. W. GROSS, Presiding

50-97. Total and Incremental Losses in Power Transmission Networks. J. B. Ward, J. R. Eaton, H. W. Hale, Purdue University.

50-96. Dielectric-Recovery Characteristics of Power Arcs in Large Air Gaps. G. D. McCann, J. E. Conner, H. M. Ellis, California Institute of Technology.

50-98. A Voltage Gradient Meter. R. L. Tremaine, R. C. Cheek, Westinghouse Electric Corp.

9:30 a.m.—Symposium on Relays

Salle Moderne

E. L. MICHAELSON, Presiding

50-7. Combined Phase and Ground Distance Relaying. W. C. New, General Electric Co.

50-16. Consideration of Requirements and Limitations of Relaying and High-Speed Reclosing on Long and Heavily Loaded Transmission Lines. C. E. Parks, Public Service Co. of Indiana, Inc.; W. R. Brownlee, Commonwealth and Southern Corp.

50-68. Relay Protection for Medium Length High Voltage Transmission Lines. J. H. Kinghorn, American Gas and Electric Service Corp.

50-69. Transmission Line Protection of Short Lines of the Metropolitan Area of a Typical System. W. E. Marter, Duquesne Light Co.

50-70. Sensitive Ground Protection. Project Committee of Relay Committee.

9:30 a.m.—Broadcasting Facilities

Keystone Room

W. L. LAWRENCE, Presiding

CP.** A 5 KW Iron Core Coupled Radio Transmitter. L. F. Deise, L. W. Gregory, Westinghouse Electric Corp.

50-71 The Application of Germanium Diodes in High and Ultra ACO.* High Frequency Television Receivers. J. H. Sweeney, General Electric Co.

CP.** WOR-TV Television Station Construction Problems. Charles Singer, Radio Station WOR-TV.

CP.** A Cathode Ray Sweep Transformer with Ceramic Iron Core. C. E. Torsch, General Electric Co.

50-72. Clampers in Video Transmission. S. Doba, Jr., J. W. Rieke, Bell Telephone Laboratories, Inc. Presentation by title only.

9:30 a.m.—Electric Batteries

Penn Top South

L. W. MATSCH, Presiding

CP.** Primary Cells. Charles Clarke, Signal Corps Engineering Laboratories.

CP.** Storage Cells. Hyman Mandell, Signal Corps Engineering Laboratories.

CP.** One-Shot Batteries. Adolph Fishboch, Signal Corps Engineer Laboratories.

9:30 a.m.—Instruments and Measurements

Parlor 1

W. R. CLARK, Presiding

CP.** Equipment for Instrument Calibration. E. A. Gilbert, Radio Frequency Laboratories, Inc.

50-73. Non-Contacting Thickness Gage Using Beta Rays. C. W. Clapp, S. Bernstein, General Electric Co.

50-74. An Improved Method of Measuring Dissipation Factor and Dielectric Constant Using The Susceptance Variation Principle. C. F. Miller, The Johns Hopkins University; F. G. Whelan, Association of American Railroads.

50-75. Three-Phase Measurements of Resistance. L. W. Matsch, ACO.* N. C. Basu, Illinois Institute of Technology; G. R. Horcher, University of Kansas.

CP.** Power Measurement by the Hook-on Method. A. J. Corson, A. L. Nylander, General Electric Co.

50-89. Impulse Measurements by Repeated-Structure Networks. C. L. Dawes, C. H. Thomas, Harvard University; A. B. Drought, Marquette University. Presentation by title only.

50-90. The Irradiation of Spark Gaps for Voltage Measurement. D. R. Hardy, J. D. Craggs, The University of Liverpool. Presentation by title only.

9:30 a.m.—Electron Tubes

Penn Top North

J. T. THWAITES, Presiding

CP.** Microphonism Investigation. Lester Feinstein, Sylvania Electric Products, Inc.

CP.** The Use of Conductance Curves for Pentode Circuit Designs. A. H. Hodge, K. A. Pullen, Aberdeen Proving Ground.

CP.** Arc Drop of Hot Cathode Gas Tubes in Service—Measurement Methods and Data. E. K. Smith, Electrons, Inc.

CP.** A Cold Cathode Counting or Stepping Tube. M. A. Townsend, Bell Telephone Labs., Inc.

9:30 a.m.—Land Transportation

Parlor 2

H. F. BROWN, Presiding

50-77. The Alco-GE 4500-HP Gas-Turbine Electric Locomotive. A. H. Morey, General Electric Co.

50-78. Control System for a 4500-HP Gas-Turbine Electric Locomotive. T. J. Warrick, General Electric Co.

50-79. Rotating Electric Equipment for a Gas-Turbine Electric Locomotive. O. C. Coho, General Electric Co.

9:30 a.m.—General Industry Applications

Georgian Room

J. C. FINK, Presiding

CP.** Explosion Hazards in Industry and Their Relation to Electrical Installations. K. Pinder, E. I. du Pont de Nemours and Co.

CP.** Underwriters Laboratories Classification and Test of Electrical Equipment for Hazardous Locations. A. F. Matson, Underwriters Laboratories, Inc.

CP.** Motor Selection for Hazardous Locations. J. Z. Linsenmeyer, Westinghouse Electric Corp.

CP.** Wiring Equipment and Methods for Hazardous Locations. R. P. Northrup, O. H. Bissell, Crouse-Hinds Co.

50-9. Basic Patterns for Arrangement of Electric Power Systems for Steel Mills. H. J. Finison, General Electric Co. Presentation by title only.

2:00 p.m.—Conference on Facsimile

Keystone Room

W. G. H. FINCH, Presiding

CP.** Radiophoto Practices and Problems. Russell Hammond, RCA Communications, Inc.

CP.** Facsimile Broadcasting. J. V. L. Hogan, Hogan Laboratories.

CP.** An 1800-Cycle Synchronous Motor. A. G. Cooley, Times Facsimile Corp.

CP.** Telegraph Office Desk-Fax Concentrator. A. W. Breyfogel, J. H. Hackenberg, F. G. Hallden, The Western Union Telegraph Co.

CP.** Electronic Flat Scanning Facsimile Applications. W. G. H. Finch, C. R. Jones, Finch Telecommunications, Inc.

2:00 p.m.—Operation of Utility Systems at Leading Power Factor

Ballroom

O. W. MANZ, JR., Presiding

CP.** Introduction and Factors Pointing to Leading Power Factor Operation in a Metropolitan Type System. Earle Wild, Commonwealth Edison Co.

CP.** The Effect of Underexcited Generator Operation on System Stability. C. G. Adams, General Electric Co.

CP.** Synchronous Generator Pull-Out Characteristics. R. F. Lawrence, J. E. Barkle, Westinghouse Electric Corp.

CP.** Operation of Turbine Generators With Low Field Currents. J. H. Carter, General Electric Co.

CP.** Studies of Pull-Out Torques of Steam-Turbine Driven Machines at Various Power Factors. E. L. Kanouse, Dept. of Water and Power, The City of Los Angeles.

CP.** Effect of Voltage Regulating Systems on Leading Power Factor Operation. T. B. Montgomery, Allis-Chalmers Mfg. Co.

CP.** Generator Stability at Leading Power Factor. E. L. Michelson, Commonwealth Edison Co.

CP.** Problems Encountered in Dispatching Kilovars on a 500 Mile Interconnection. C. B. Kelley, J. C. Endahl, The United Light and Railways Service Co.

CP.** Practices in the Niagara Hudson System Relative to Operating Generators at Low Excitation. H. B. Smith, Niagara Hudson Power Corporation.

CP.** Operating Stability of a Unit with Lower Limit Excitations Control. W. E. Caven, Atlantic City Electric Co.; F. S. Rothe, General Electric Co.

CP.** Generator Performance During Light Load Periods on the Consolidated Edison Systems. R. L. Webb, Consolidated Edison Co. of New York, Inc.

2:00 p.m.—Statistical Analysis as Applied to Electrical Engineering Problems

Penn Top South

M. G. MALTI, Presiding

CP.** Introduction. M. G. Malti, Cornell University.

CP.** Random Processes and Prediction Theory; Appraisal by a Non-specialist. Garrett Birkhoff, Harvard University.

CP.** Statistical Inputs for the Investigation of Non-Linear Electrical Systems. Norbert Wiener, Massachusetts Institute of Technology.

CP.** Statistical Prediction with an Infinity of Predicting Variables. M. A. Woodbury, Institute for Advanced Studies.

2:00 p.m.—High-Frequency Measurements

Georgian Room

E. P. FELCH, Presiding

CP.** Television Transient Analyzer. Joseph Fisher, Philco Corp.

CP.** Television Impulse Interference Generator. Jack Fogarty, Philco Corp.

CP.** Unusual Applications for a Resonant Cavity Dielectric Measuring Equipment. S. C. Clark, General Electric Co.

50-80. Automatic Calibration of Oscillator Scales. W. J. Means, ACO.* T. Slonczewski, Bell Telephone Laboratories, Inc.

CP.** Determination of Attenuation from Impedance Measurements. R. W. Beatty, National Bureau of Standards.

CP.** Progress and Development of Crystal Unit Test Oscillators. L. F. Koerner, Bell Telephone Laboratories, Inc.

2:00 p.m.—Land Transportation

Parlor 2

H. F. BROWN, Presiding

- 50-81. Rectifier Type Motive Power for Railroad Electrifications. L. J. Hibbard, C. C. Whittaker, E. W. Ames, Westinghouse Electric Corp.
- 50-100. Solderless Commutator Joints for High Temperature Operation of Railway Traction Armatures. J. R. Reed, National Electric Coil Co. of Columbus, Ohio.
- CP.** Full Power at all Speeds—A Significant Advantage of Modern Locomotive Transmissions. Charles Kerr, Jr., Westinghouse Electric Corp.
(Presentation of this program will be followed by a meeting of the Committee on Land Transportation.)

2:00 p.m.—Latest Developments in the Field of Resuscitation

Penn Top North

W. B. KOUWENHOVEN, Presiding

- 50-2. Electric Fences. C. F. Dalziel, University of California. Presentation by title only.
- 50-104. Electrical Hazards to Farm Stock Prepared for Safety Committee of the American Institute of Electrical Engineers. W. B. Buchanan, The Hydro-Electric Power Comm. of Ontario. Presentation by title only.
- 50-105. Protective Grounding of Electrical Installations on Customer's Premises. A. H. Schirmer, Bell Telephone Laboratories, Inc. Presentation by title only.
- 50-106. Rural Neutral Potentials. J. H. Waghorne, The Hydro-Electric Power Commission of Ontario. Presentation by title only.
- CP.** Artificial Respiration. H. L. Motley, Jefferson Medical College Hospital.
- CP.** Electrophrenic Technique. J. L. Whittenberger, Harvard School of Public Health.
- CP.** Resuscitation Problems. C. K. Drinker, Harvard University.

Friday, February 3

9:30 a.m.—Protective Devices

Ballroom

H. R. STEWART, Presiding

- 50-82. New Lightning Arrester Standard. H. R. Stewart, New England Power Service Co.; F. M. Defandorf, National Bureau of Standards.
- 50-83. Surge Protection of Cable Connected Equipment. R. L. Witzke, T. J. Bliss, Westinghouse Electric Corp.
- CP.** Power System Fault Control. F. R. Longley, Western Massachusetts Electric Co.
(A report by the Committee on Protective Devices.)

9:30 a.m.—Symposium on Dielectrics. I

Georgian Room

J. A. BECKER, Presiding

- CP.** Dielectrics in Electrical Engineering. A. von Hippel, Massachusetts Institute of Technology.
- CP.** Structure and Polarization of Atoms and Molecules. J. C. Slater, Massachusetts Institute of Technology.
- CP.** Relaxation Phenomena in Liquids and Solids. C. P. Smyth, Princeton University.

- CP.** Modern Plastics. H. Mark, T. Alfrey, Polytechnic Institute of Brooklyn.

9:30 a.m.—Electronic Instruments

Parlor 1

W. H. TIDD, Presiding

- 50-5. The Direct Measurement of Bandwidth. C. R. Ammerman, The Pennsylvania State College.
- CP.** An Electron Tube Characteristic Generator. M. L. Kuder, National Bureau of Standards.
- CP.** Thermal Feedback Circuit for Computation and RMS Measurement. R. D. Campbell, Reed Research, Inc.
- CP.** A New Cathode Ray Oscillograph for Impulse Testing. W. G. Fockler, Allen B. DuMont Laboratories, Inc.
- 50-84. The Metrotype System of Digital Recording and Telemetering. G. E. Foster, Metrotype Corp.

9:30 a.m.—Chemical, Electrochemical and Electrothermal Applications

Keystone Room

F. R. BENEDICT, Presiding

- CP.** Cable Insulation for Chemical Plants. C. S. Latham, A. A. Jones, L. L. Carter, Anaconda Wire and Cable Co.
- CP.** Cable Insulation for Chemical Plants. R. B. McKinley, B. J. Mulvey, General Electric Co.
- CP.** Cable Insulation for Chemical Plants. R. C. Graham, Rome Cable Corp.
- CP.** Cable Insulation for Chemical Plants. E. W. Davis, Simplex Wire and Cable Co.

9:30 a.m.—Domestic and Commercial Applications

Parlor 2

C. F. SCOTT, Presiding

- CP.** A Critical Examination of Heat Sources and Sinks for Heat Pumps. C. H. Coogan, University of Connecticut.
- CP.** Some Practical Aspects of the Use of Earth as a Heat Source. G. H. Hickox, University of Tennessee.
- CP.** Heat Pump Design. T. C. Johnson, General Electric Co.
- CP.** Radiant Panel Heating. R. C. Cassidy, U. S. Rubber Co.
- CP.** Radiant Electric Heating. L. N. Roberson, Seattle, Wash.
- 50-35. Flame Detectors for Domestic Fuel Burner Safety Devices. J. A. Deubel, Perfex Corp. Presentation by title only.
- 50-102. Synthetic Load for Testing Rectifiers. C. L. Tetherow, Underwriters Laboratories, Inc. Presentation by title only.

2:00 p.m.—Symposium on Dielectrics II

Georgian Room

J. A. BECKER, Presiding

- CP.** Conduction Phenomena in Gases. J. P. Molnar, Bell Telephone Laboratories, Inc.
- CP.** Conduction in Liquids and Plastics. R. M. Fuoss, Yale University.
- CP.** Fluorescence and Phosphorescence. P. Pringsheim, Atomic Energy Commission.

2:00 p.m.—Symposium on Instruments for Testing Insulating Oils, Oil Conditions in the Field and the Effects of Remedial Measures

Parlor 1

A. E. KNOWLTON, Presiding

2:00 p.m.—Chemical, Electrochemical and Electrothermal Applications

Keystone Room

F. R. BENEDICT, Presiding

- 50-86. Design and Control of Ferro Alloy Furnaces. F. V. Andraea, Southern Ferro Alloys Co. Presentation by title only.
- 50-87. Electrical Equipment and Operation of Graphitizing Furnaces. E. R. Cole, The Dow Chemical Co. Presentation by title only.
- 50-88. Electrode Control and Associated Operating Mechanisms. E. A. Hanff, Swindell-Dressler Corp. Presentation by title only.
- CP.** Cable Insulation for Chemical Plants. H. E. Houck, E. I. duPont de Nemours and Co.
- CP.** Cable Insulation for Chemical Plants. F. S. Glaza, Dow Chemical Co.
- CP.** Cable Insulation for Chemical Plants. J. A. Horacek, Diamond Alkali Co.

**CP. Conference paper; no advance copies are available; not intended for publication in Transactions.

*ACO. Advance copies only available; not intended for publication in Transactions.

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COMMITTEE MEETINGS

Monday, January 30

9:30 a.m.—Planning and Coordination Committee.....Parlor A
9:30 a.m.—Student Branches CommitteeParlor C
10:00 a.m.—Basic Sciences CommitteeParlor B
10:30 a.m.—AIEE-ASME Joint Committee on Steam Turbine
GeneratorsConf. Rm. 7
12:00 noon—Luncheon—D.C. Machinery Subcom.....Room 127
12:00 noon—Luncheon—Electric Heating Committee.....Room 129
4:30 p.m.—Publication CommitteeConf. Rm. 7
5:00 p.m.—Regulators and Feedback Systems Subcom.....Conf. Rm. 3
5:30 p.m.—Sections Com Members Get-Together.....Parlors A & B
8:00 p.m.—Technical Program Committee.....Parlor C

Tuesday, January 31

8:00 a.m.—Test Code SubcommitteeRoom 111
9:30 a.m.—Synchronous Machine Quantities Subcom.-C42
Conf. Rm. 9
9:30 a.m.—Power Generation Committee.....Parlor B
9:30 a.m.—Metallic Rectifiers Committee.....Parlor C
9:30 a.m.—Public Relations CommitteeParlor A
9:30 a.m.—Subcom. on Test Code for Power Measurements
Room 112
10:00 a.m.—Nominating CommitteeConf. Rm. 7
10:00 a.m.—Dielectric Meas. in the Field Subcom.....Conf. Rm. 3
11:00 a.m.—Working Group on Rectifier Switchgear.....Conf. Rm. 127
12:00 noon—Luncheon—Instruments & Measurements Com.....Parlor B
12:00 noon—Luncheon—Industrial Powers Systems Com.....Room 129
12:00 noon—Luncheon—Single-Phase and Fractional-
Horsepower SubcommitteeRoom 111
12:00 noon—Luncheon—Administrative Subcommittee of
Electronic Power Converter Committee.....Room 112
12:15 p.m.—Luncheon—Joint NEMA-AIEE Committee on
Carbon Brush Test CodesRoom 127
1:30 p.m.—Automatics and Supervisory Control Subcom.....Parlor 1
1:30 p.m.—Transmission Substation Subcommittee.....Conf. Rm. 7
2:00 p.m.—Standardization of Limiters Study Committee
*ASME Rm. 1105
2:00 p.m.—Sections CommitteePenn Top North
2:00 p.m.—Computing Devices CommitteeParlor A
2:00 p.m.—Metallic Rectifiers CommitteeParlor C
2:00 p.m.—Mining and Metal Industry Committee.....Conf. Rm. 4
2:00 p.m.—Telegraph Systems CommitteeConf. Rm. 3
2:00 p.m.—Transient Characteristics of Capacitance
Potential Devices Subcommittee.....*AIEE Rm. 1001
3:30 p.m.—Distribution and Conversion Substations Subcom.
Conf. Rm. 7
4:00 p.m.—Science and Electronics Coord. Com.Room 127
4:00 p.m.—Communication Coordinating CommitteeConf. Rm. 9

Wednesday, February 1

8:00 a.m.—Feedback-Control Systems CommitteeParlor A
9:30 a.m.—Finance Committee*AIEE Rm. 1001
9:30 a.m.—Correlation of Standard Temperature Rises
SubcommitteeRoom 112
9:30 a.m.—Substations CommitteeParlor B
9:30 a.m.—Rotating Machinery CommitteeParlor C
9:30 a.m.—Magnetic Amplifiers SubcommitteeConf. Rm. 7
9:30 a.m.—Electronic Power Converter Committee.....Conf. Rm. 3
9:30 a.m.—Production & Application of Light Com.....Room 127
9:30 a.m.—Electronic Precipitation SubcommitteeConf. Rm. 9
9:30 a.m.—Distribution Subcom. of T. & D. Com.....Room 111
10:00 a.m.—Industrial Control CommitteeRoom 129

American Institute of Electrical Engineers

- 12:00 noon—Luncheon—Administration Subcommittee of Insulated Conductor Committee Room 127
 12:00 noon—Luncheon—Industrial Control Committee Room 129
 12:00 noon—Luncheon—Registration of Engineers Com. Room 111
 12:30 p.m.—Luncheon—ASA Sectional Com. on Transformers Room 112
 2:00 p.m.—Management Committee Conf. Rm. 3
 2:00 p.m.—Jt. Subcom. on Application of Probability Methods to Power-System Problems Parlor A
 2:00 p.m.—Membership Committee Conf. Rm. 7
 2:00 p.m.—Education Committee Parlor B
 2:00 p.m.—General Applications Coordinating Com. Parlor C
 2:00 p.m.—Joint Subcommittee on Telemetering... *AIEE Rm. 1001
 2:00 p.m.—Jt. Subcom. on Nucleonic Instruments *ASCE Rm. 1501
 4:00 p.m.—Wire Communications Systems Committee... Conf. Rm. 3
 4:00 p.m.—Relay Committee Conf. Rm. 4
 4:00 p.m.—Radio Communication Systems Committee... Conf. Rm. 9
 4:00 p.m.—Electron Tubes Subcommittee *ASME Rm. 1101
 4:00 p.m.—Special Telemetering Technical Conference Com. *AIEE RM. 1001
 6:30 p.m.—Dinner—Medal Presentation Group Parlor C

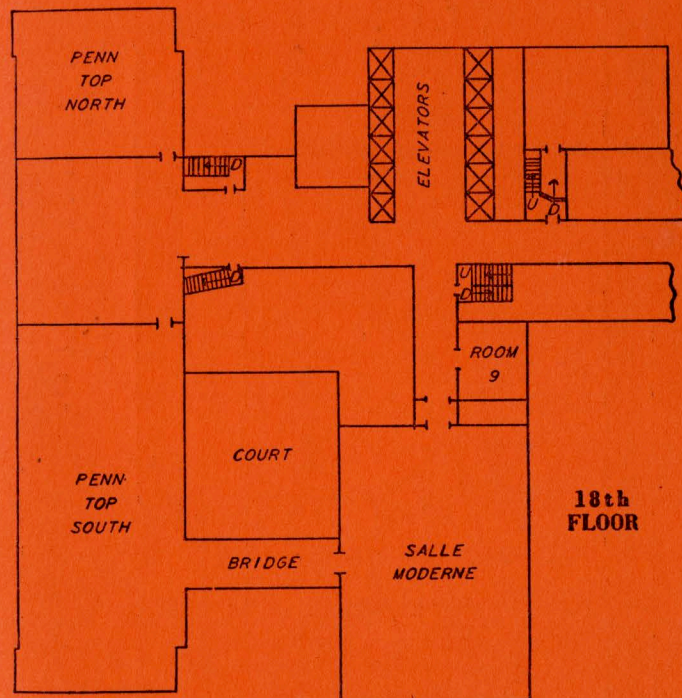
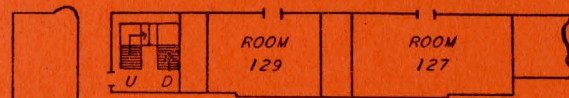
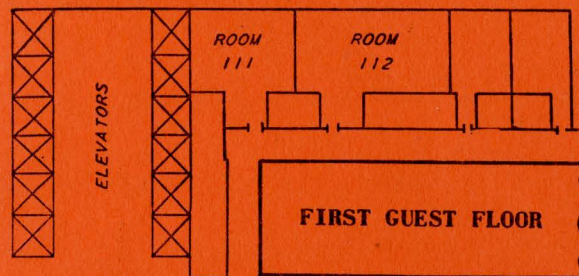
Thursday, February 2

- 9:30 a.m.—Board of Directors *AIEE Rm. 1001
 9:30 a.m.—System Engineering Committee Parlor A
 9:30 a.m.—Electric Welding Committee Conf. Rm. 7
 9:30 a.m.—ASA Com. on Letter Symbols for Servomechanisms Conf. Rm. 9
 9:30 a.m.—Aircraft Electrical Rotating Machinery Subcommittee *ASME Rm. 1105
 9:30 a.m.—Transfers Committee Parlor B
 9:30 a.m.—Nucleonics Committee Room 111
 9:30 a.m.—Lightning Protective Devices Subcom. Room 112
 9:30 a.m.—Excitation Subcommittee Parlor C
 10:00 a.m.—Fault Limiting Devices Subcommittee Room 129
 12:00 noon—Luncheon—General Industry Appl. Com. Room 127
 1:30 p.m.—Relay Test Methods Project Subcom. Conf. Rm. 9
 2:00 p.m.—Aircraft Rotating Machinery Subcom. *ASME Rm. 1105
 2:00 p.m.—Board of Directors *AIEE Rm. 1001
 2:00 p.m.—Industry Coordinating Committee Parlor A
 2:00 p.m.—AIEE-IRE Symposium Parlor B
 2:00 p.m.—Power Supply for Resistance Welding Machines Subcommittee Parlor C
 2:00 p.m.—Protective Devices Committee Conf. Rm. 7
 2:00 p.m.—Safety Committee Penn Top North
 4:00 p.m.—Special Communications Appl. Com. Conf. Rm 3
 4:00 p.m.—Land Transportation Committee Parlor 2

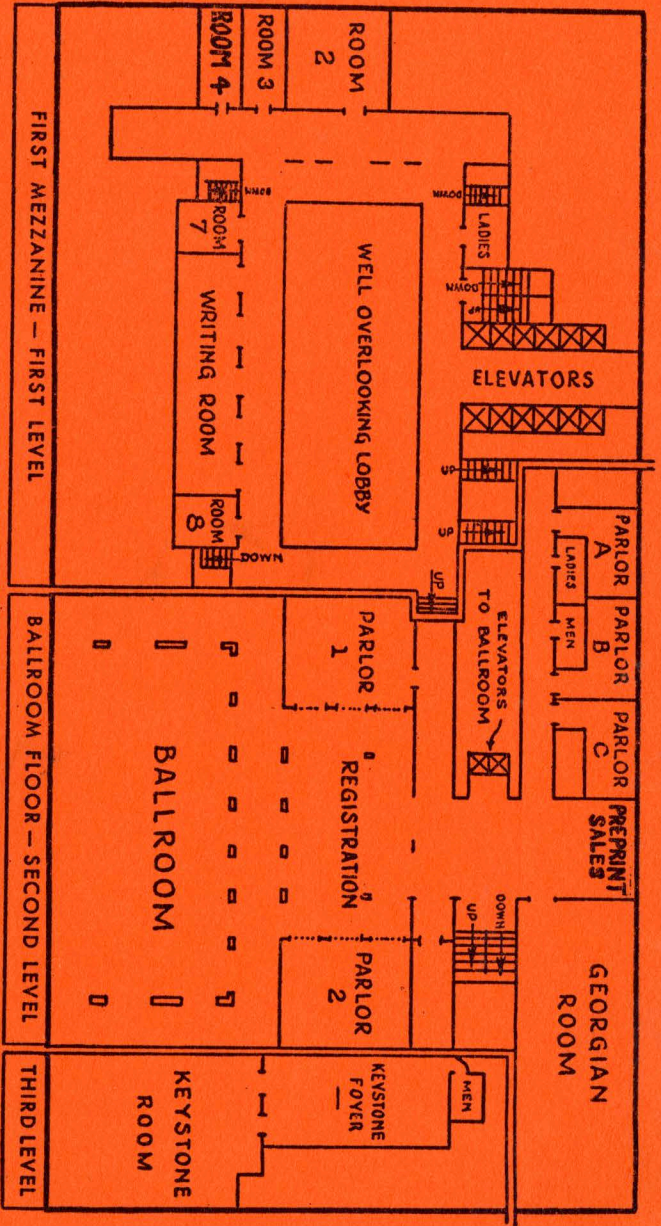
Friday, February 3

- 9:30 a.m.—Magnetization Characteristics of Transformers Subcommittee Parlor B
 10:00 a.m.—Lamme Medal Committee Parlor A
 12:00 noon—Luncheon—Domestic and Commercial Applications Committee Room 127
 12:00 Noon—Luncheon—Power Coordinating Committee... Room 129
 2:00 p.m.—Jt. Subcom. on Electronic Instruments Parlor A
 2:00 p.m.—Electronic Instruments Jt. Subcom. Parlor A

*Indicated Room Assignments at Engineering Societies Building, 33 West 39th Street.



SEVENTH AVENUE



HOTEL STATLER