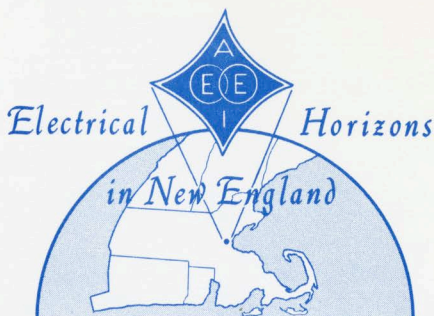
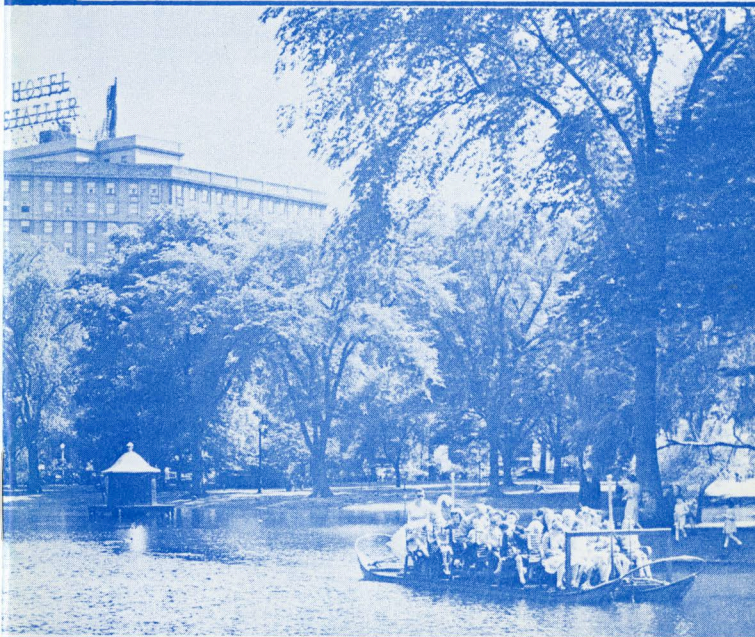


American Institute of Electrical Engineers



NORTHEASTERN DISTRICT MEETING



MAY 9-10-11, 1962

Statler Hilton Hotel

BOSTON, MASS.

NORTHEASTERN DISTRICT MEETING

MAY 9-11, 1962

BOSTON

Electrical Horizons in New England

The **AIEE Northeastern District Meeting** will be held at the Statler Hilton Hotel in Boston, Massachusetts, on Wednesday, Thursday and Friday, May 9, 10, 11, 1962.

The Northeast District Program will include **technical papers** and **inspection tours** covering the electrical frontiers of today.

This program of electrical horizons includes

- Particle Accelerators
- Direct Generation of Electricity
- Computer Applications and Design
- Nuclear Power
- Magnet Research
- Aerospace Power, Instrumentation and Navigation
- Solid State Electronics
- Space Communications
- EHV Transmission
- Static Rectifiers
- High Power Plasma
- Reliability Techniques
- Insulated Conductors
- Magnetohydrodynamics
- Education

The atmosphere and setting for these themes will be greater Boston with its many talents and facilities that are at the fore in the electrical world.

At the **Opening Luncheon** on Wednesday noon greetings will be extended by the Governor of the Commonwealth and the Mayor of Boston. At this time the winner of the Student Prize Paper Competition from the morning will be announced. The Guest Speaker will be Mr. Henry R. Kurth, Vice-President of Boston Edison Company.

At the **President's Luncheon** on Thursday, May 10, 1962, Mr. Warren H. Chase, President of the American Institute of Electrical Engineers, will be the speaker.

Other social events include a night at the **Boston Pops** on Wednesday evening and a **Banquet** with entertainment and dancing on Thursday evening.

The highlight of the technical program will be the **General Session** on Thursday morning at which well-known scientists and engineers will bring us up to date on the state of the art of Magnetohydrodynamics.

REGISTRATION

Fill out your **Registration Card** at once and return it in the mail. This will help you at the registration desk and assist your committee in planning for your arrival.

The **Registration Desk** will be open on the mezzanine near Georgian Room from 2:00 p.m. to 5:00 p.m. Tuesday, May 8, 1962, the day preceding the meeting. It will be open all during the meeting starting at 8:00 a.m. Wednesday. Registration fees are \$4.00 for members, \$7.00 for non-members, \$2.00 for ladies; student members are free.

HOTEL RESERVATIONS

A block of rooms has been set aside at The Statler Hilton Hotel in Park Square at Arlington Street, Boston 17, Massachusetts, for members and guests attending the meeting. **Requests For Reservations** should be sent to the hotel in care of the "Front Office Manager", specifically referring to the AIEE meeting in your letter. The enclosed business reply card may be used for this purpose. Please do not contact more than one hotel. If your request cannot be honored, The Statler Hilton will automatically obtain a similar reservation at another nearby hotel and confirm such a reservation.

Reservations should be made as early as possible to obtain the best accommodations and must be made at least two weeks before May 9, 1962.

The following daily rates apply at The Statler Hilton Hotel, Headquarters for the Northeastern District Meeting:

Single Rooms	\$10.00 to \$15.50
Double-Bed Rooms	16.00 to 20.00
Twin-Bed Rooms	17.50 to 21.00
Suites, Living Room, Bed Room, and bath for one or two persons	\$33.50 to \$43.50
All above rooms have private bath. Special Student Rate of \$4 for dormitory style room.	

For additional information, address your inquiry to Mr. R. R. Peatfield, *Chairman*, Hotel Arrangements Committee, c/o Stone & Webster Engineering Corporation, 49 Federal Street, Boston 7, Massachusetts.

LUNCHEONS

OPENING LUNCHEON

Time: Wednesday, May 9, at 12:15 p.m.
Place: **Georgian Room**, Hotel Statler Hilton
Program: Greetings from the State, City and Boston Section
Award of Student Paper Prizes
Address by Mr. Henry R. Kurth, Vice-President
of Boston Edison Company
Price: \$5.00 per person

PRESIDENT'S LUNCHEON

Time: Thursday, May 10, at 12:15 p.m.
Place: **Bay State Room**, Hotel Statler Hilton
Program: Greetings from District Vice-President
Award of District Paper Prizes
Address by Mr. Warren H. Chase,
President of A. I. E. E.
Price: \$5.00 per person

EVENING AFFAIRS

WEDNESDAY

A night at the **Boston Pops**. Arthur Fiedler will conduct the world famous Boston Pops Orchestra at Symphony Hall commencing at 8:30 p.m. Tickets will be \$3.00 and \$3.50, per person, available on the hotel mezzanine.

THURSDAY

A **social hour** in Parlor A from 6:30 p.m. to 7:30 p.m. will precede the **Banquet** at 7:30 p.m. in the Georgian Room. Dress will be informal. After the Banquet there will be a program of several acts of professional entertainment followed by dancing.

Tickets will be \$7.50 per person available on the hotel mezzanine.

LADIES' PROGRAM

An interesting program has been planned by the Ladies' Entertainment Committee for the ladies attending the 1962 Northeastern District Meeting in the Statler-Hilton Hotel, Boston.

There will be a **Coffee Hour** on Wednesday, Thursday and Friday mornings in the Hancock Room. On Wednesday morning a handwriting analyst will entertain the ladies by analyzing samples of their handwriting. In the afternoon a well-known artist will give a talk and painting demonstration using as his subject the New England coast. A tour followed by **luncheon** in the Ballroom of Longfellow's famous "Wayside Inn" is scheduled for Thursday. Following the **Coffee Hour** on Friday there will be an opportunity to see a Silk Screen demonstration, the subject of which will be "Flowers—East and West." This will conclude the Ladies' Activities.

WEDNESDAY

9:00 to 10:00 a.m.—Coffee Hour—Hancock Room
10:30 a.m. to 12:00 noon—Grapho-Analyst—Hancock Room
12:15 p.m.—Luncheon with men in Georgian Room
3:00 p.m. to 4:30 p.m.—Painting Demonstration—Hancock Room
8:30 p.m.—A Night at the Boston Pops

THURSDAY

9:00 to 10:00 a.m.—Coffee Hour—Hancock Room
10:30 a.m.—Tour and Luncheon at Longfellow's "Wayside Inn"
6:30 p.m.—Social Hour
7:30 p.m.—Banquet and Dance

FRIDAY

9:00 to 10:00 a.m.—Coffee Hour—Hancock Room
10:30 a.m. to 12:00—Silk Screen Demonstration—Hancock Room

STUDENT ACTIVITIES

No registration fees are required for students. The formal student program is scheduled for Wednesday, May 9, 1962. Students will serve as monitors for the three day meetings.

The counselors and students will be the guests of the District at a breakfast meeting from 7:30 to 8:30 a.m. on Wednesday in the Hancock Room.

The student prize papers will be presented from 9:00 a.m. to 12:00 noon in Parlor A.

All counselors, branch chairmen and contestants will be guests at the Wednesday luncheon at 12:15 p.m. where the student awards will be presented. Other students are invited to attend.

Branch Officers' Conference will take place on Wednesday from 2:00 to 5:00 p.m. at M.I.T. They will leave the hotel together, after lunch. After a short meeting of student officers, they will take a guided tour of the various facilities of the Institute. All activities should terminate before 5:00 p.m.

Special rates are available to the students in the Statler Hilton Hotel only (see registration information).

BRANCH COUNSELORS

Branch Counselors will attend the session on Educational Topics from 2:00 to 5:00 p.m. in the Georgian Room.

NORTHEASTERN DISTRICT 12 EXECUTIVE COMMITTEE MEETING

Hancock Room, Friday, 2:00 p.m.

**COMPLETE PROGRAM FOR
NORTHEASTERN DISTRICT MEETING
TUESDAY, MAY 8, 1962**

9:00-5:00 p.m.—Registration—Mezzanine

WEDNESDAY, MAY 9, 1962

7:30 a.m.—Student Breakfast—Hancock Room

8:00 a.m.—Registration—Mezzanine

9:00 a.m.—Particle Accelerators **Georgian Room**

**Presiding Officer: Dr. M. S. Livingston
Cambridge Electron Accelerator**

- DP* Introductory Remarks: Dr. M. S. Livingston, Cambridge Electron Accelerator.
- DP* The Tandem Van de Graaff Accelerator. J. L. Danforth, High Voltage Engineering Corporation.
- DP* Resonant A.C. Magnet Power System, Dr. L. A. Young, Cambridge Electron Accelerator.
- DP* The Radiofrequency System of the Cambridge Electron Accelerator. Dr. J. R. Rees, Harvard University.
- DP* A 500 Liter Liquid Hydrogen Bubble Chamber. I. A. Pless, Massachusetts Institute of Technology.

9:00 a.m.—Direct Generation of Electricity **Parlor B**

**Presiding Officer: Professor D. C. White
Massachusetts Institute of Technology**

- DP* Fuel Cells. H. P. Meissner, Massachusetts Institute of Technology.
- DP* Photovoltaic Energy Conversion. Dr. J. Blair, Massachusetts Institute of Technology.
- DP* Approximate Analysis of the Operation of Thermo-Electric Generators With Temperature Dependent Parameters. J. M. Borrego, Massachusetts Institute of Technology.
- DP* Capabilities & Limitations of Thermo-Electric Cooling and Heat-Pumping Devices. Dr. P. E. Gray, Massachusetts Institute of Technology.

9:00 a.m.—Computer Applications—Management Decisions **Parlor C.**

**Presiding Officer: R. B. Wilcox
Radio Corporation of America**

- DP* Dynamic Analysis and Simulation of Management Control Functions. R. B. Wilcox, Radio Corporation of America.
- DP* Management Simulation of Large Scale Technological Networks. E. E. Sweezy, Department of the Army.
- DP* ICON, An Integrated Information System for Management Control. N. B. Solomon, Sylvania Electric Products, Inc.
- DP* Applications of a Long-range System Planning Program, H. H. Mochon, Hartford Electric Light Co., and A. P. Sternberg, Connecticut Light & Power Co.

WEDNESDAY, MAY 9, 1962 (continued)

9:00 a.m.—Nuclear Power Today **Parlors D & E**

**Presiding Officer: H. E. Vann
Jackson and Moreland, Inc.**

- DP* Trends in Fossil and Nuclear Plant Economics. P. Gorman and H. E. Vann, Jackson and Moreland, Inc.
- DP* AEC Nuclear Superheat Program. A. Mravca, United States Atomic Energy Commission.
- DP* Reactor Operating Experience in the Army Nuclear Power Program. L. J. Misenheimer and A. J. Vandenberg, United States Army Engineer Reactor Group.
- DP* Boiling Water Reactors Today and Tomorrow. R. Freeman, General Electric Co.

9:00 a.m.—Student Paper Contest **Parlor A**

**Presiding Officer: Professor H. M. Luce
University of Connecticut**

12:15 p.m.—Opening Luncheon—Georgian Room

2:00 p.m.—Inspection Trip—Cambridge Electron Accelerator at Harvard University and High-Voltage Engineering Corporation's Plant in Burlington

This is a "particle accelerator" trip with one hour spent at each of the two locations. The Cambridge Electron Accelerator at Harvard University is the world's most powerful (six billion electron volts). It creates all known types of strange particles and anti-particles and possibly others yet undetected. The particle orbit is 750 feet long. Electrons completing the course weigh 12000 times their original mass. The \$11,000,000 facility is financed by the Atomic Energy Commission and is managed by Harvard University and Massachusetts Institute of Technology.

The High Voltage Engineering Corporation tour includes a 12 million electron volt tandem Van de Graaff positive-ion accelerator in process of construction, a 600 KV D.C. 30 m.a. insulated core transformer power supply installation for research and high voltage testing, electrostatic power generators for space vehicle propulsion, and vaults for electron-beam irradiation of materials such as for the cross linking of wire and cable insulation.

Bus leaves Statler-Hilton 2 p.m., returns 5 p.m.
Trip limited to 50 people.



CAMBRIDGE ELECTRON ACCELERATOR

WEDNESDAY, MAY 9 (continued)

2:00 p.m.—National Magnet Laboratory Parlor A

**Presiding Officer: C. G. Adams
Jackson and Moreland, Inc.**

- DP* High Magnetic Field Programs. Dr. F. Bitter, Massachusetts Institute of Technology.
- DP* High Magnetic Fields in Solid State Research. Dr. D. T. Stevenson, National Magnet Laboratory.
- DP* The MIT National Magnet Laboratory Facility. F. Smith, National Magnet Laboratory.
- DP* High Accuracy Control System for Large Motor Generator Sets. H. Gibson, General Electric Co.
- DP* Design features of a 250 Kilogauss Magnet for Continuous Operation. B. Montgomery, National Magnet Laboratory.
- DP* Novel Designs for High Field Magnets. Dr. H. H. Kolm, National Magnet Laboratory.

2:00 p.m.—Aerospace Instrumentation Parlor B

**Presiding Officer: Dr. S. Silverman
Air Force Cambridge Research Laboratories**

- DP62-888 Upper Atmosphere Research with Rockets and Satellites. Dr. C. Stergis, Air Force Cambridge Research Laboratories.
- DP* Sounding Rockets. P. Gustafson, Air Force Cambridge Research Laboratories.
- DP62-890 Problems of Instrumentation in Space Research. L. J. Nardone and B. L. Cochrun, Northeastern University.
- DP62-891 Data Processing of Telemetered Data. D. Brzezinski, Wolf Research and Development Corp.

2:00 p.m.—Computer Applications Parlor C

**Presiding Officer: J. Lienesch
The Foxboro Company**

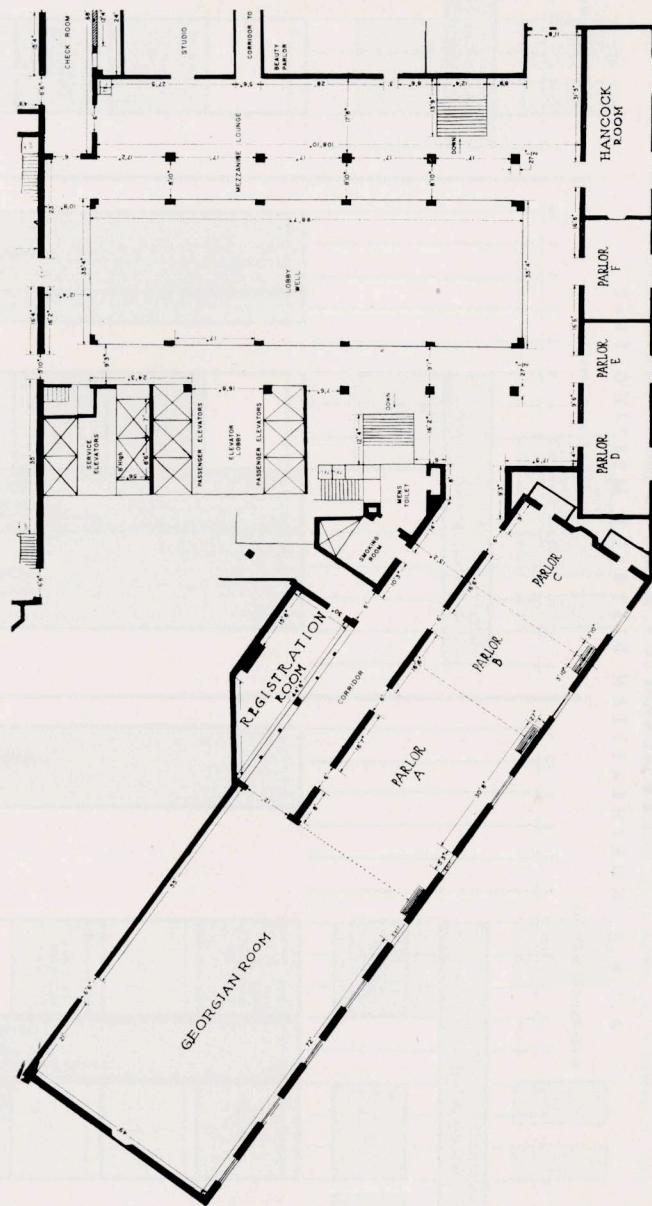
- DP* Developments in Electronic Instruments for the Fluid Process Industries. W. H. Howe, The Foxboro Co.
- DP* Automatic Controls and Systems in the Petroleum Industry. E. J. Hathaway, Portland Pipeline Corp.
- DP* The Place and the Character of Numerically Controlled Machine Tools in Manufacturing. D. N. Smith, Arthur D. Little, Inc.

2:00 p.m.—Branch Officers' Conference—M.I.T.

2:00 p.m.—Educational Topics Georgian Room

**Presiding Officer: L. J. Weed
Boston Edison Co.**

8:30 p.m.—Boston Pops Concert—Symphony Hall



**PLAN OF MEZZANINE
STATLER HILTON HOTEL • BOSTON**

SEQUENCE OF EVENTS
A. I. E. E. NORTHEASTERN DISTRICT MEETING 1962

	WEDNESDAY, MAY 9th							THURSDAY, MAY 10th							FRIDAY, MAY 11th						
DESKS	MEZZANINE REGISTRATION, PAPER SALES & EVENTS							MEZZANINE REGISTRATION, PAPER SALES & EVENTS							MEZZANINE REGISTRATION, PAPER SALES & EVENTS						
STUDENTS	BREAKFAST		M.I.T. BRANCH OFFICERS CONFERENCE					GENERAL SESSION MAGNETOHYDRODYNAMICS							COMPUTER DESIGN						
TECHNICAL	PARTICLE ACCELERATORS		NATIONAL MAGNET LAB.					PRESIDENT'S LUNCHEON AWARD OF DISTRICT PAPER PRIZES SPEAKER: MR. WARREN H. CHASE, PRES. OF A.I.E.E.							SPACE COMMUNICATIONS						
SESSIONS	MAGNETIC FIELDS		AEROSPACE INSULATION					BANQUET AND DANCE							HIGH POWER PLASMA						
INSPECTION TRIPS	M.I.T. CAMBRIDGE ACCELERATOR & HIGH VOLTAGE ENGINEERING		COMPUTER APPLICATIONS					M.I.T. LABORATORIES AVCO WILBRINGTON							INSULATED CONDUCTORS						
LADIES ACTIVITIES	COFFEE HOUR		PAINTING DEMONSTRATION					TOUR AND LUNCHEON AT "SEAWAYS INN"							EXEC. COMM. MEETING 12th DISTRICT						
	GRAPHS ANALYST		EDUCATIONAL TOPICS					COFFEE HOUR							COFFEE HOUR						
	SILK SCREEN DEMONSTRATION														SILK SCREEN DEMONSTRATION						
															BOSTON NAVAL SHIPYARD MUSEUM OF SCIENCE						

KEY: "A" PARLOR A - "B" PARLOR B - "C" PARLOR C - "D" PARLOR D - "E" PARLOR E - "G" GEORGIAN ROOM - "H" HANCOCK ROOM

8:00 a.m.—Registration—Mezzanine

**9:00 a.m.—General Technical Session—Magnetohydrodynamics
Georgian Room**

**Presiding Officer: Dr. A. R. Kantrowitz
Avco-Everett Research Laboratory**

- DP* Introductory Remarks: Dr. A. R. Kantrowitz, Avco-Everett Research Laboratory.
- DP* MHD Generators. Dr. R. J. Rosa, Avco-Everett Research Laboratory.
- DP* Magnetohydrodynamics Plasma Propulsion for Spacecraft. Dr. R. G. Meyerand, Jr., United Aircraft Corporation Research Laboratories.
- DP* Power Generation From a Thermo-Nuclear Plasma. Dr. H. Grad, New York University.
- DP* Interplanetary Plasma. Dr. B. B. Rossi, Massachusetts Institute of Technology.

12:15 p.m.—President's Luncheon—Bay State Room

2:00 p.m.—Inspection Trip—Avco Corporation's Research and Advanced Development Division at Wilmington, Mass.

Avco Corporation holds U. S. Air Force contracts for research and development on re-entry vehicles (nose cones) for the A.F.'s intercontinental ballistic missiles, the Atlas, Titan, and Minuteman. The environmental laboratories required for the testing of these devices as well as for space flight and re-entry both manned and unmanned cover the fields of shock, acceleration, vibration, acoustic noise, radio noise, temperature, and altitude—everything except sustained weightlessness. For example, to simulate nose cone re-entry temperature conditions at 15,000 miles an hour, 50 miles above the earth requires a heat blast of more than 20,000 degrees. This is accomplished by Avco-developed electric arc plasma generators to provide such an atmosphere and working at a level of 10 to 15 MW. Also on display will be test equipment for plotting space-craft antenna patterns in any flight attitude.

Bus leaves Statler-Hilton at 2 p.m., returns at 5 p.m.
Trip limited to 50 people.

2:00 p.m.—Inspection Trip—Massachusetts Institute of Technology Plasma and Fusion Research, Magnet Laboratory, and Nuclear Reactor

In connection with plasma and fusion research, equipment for the study of injection and containment of plasmas for fusion reactors will be described and demonstrated, a large-volume superconducting magnet will be shown, and an arc plasma useful as a source of highly ionized plasma for research will be described and demonstrated. At the Magnet Laboratory, the equipment for supplying and controlling 1.7 MW of power to magnet stations will be shown, and the construction details of high intensity magnets which have created continuous fields up to a record-breaking 126,000 gauss will be described and shown. D. C. currents up to 10,000 amperes are brought into these magnets. At the Nuclear Reactor, its construction and functions will be described. The reactor is of the heavy-water moderated type and is rated at 2 M.W. thermal. It is enclosed in a welded gas-tight steel and concrete structure 70 feet in diameter with a dome 50 feet above

ground level. The reactor is used primarily for the production of neutrons as a tool in education, reactor research, modification of materials by bombardment, and medical research.

Bus leaves Statler-Hilton 2 p.m., returns 5 p.m.

Trip limited to 50 people.

2:00 p.m.—Solid-State Electronics Parlor A

**Presiding Officer: Dr. W. C. Dunlap, Jr.
Raytheon Co.**

- DP* Transistorization in the Telephone Industry. Dr. F. K. Blecher, Bell Telephone Laboratories.
- DP* Superconductive Devices. A. E. Slade, A. D. Little, Inc.
- DP* The Laser and Its Application. I. Goldstein, Raytheon Co.
- DP* Same Aspects of Solid State Electronics Research at AFCRL. C. W. Ryan, Air Force Cambridge Research Laboratories.
- DP* Microwave Solid-State Devices. Dr. R. W. Damon, Microwave Associates.

2:00 p.m.—Space Navigation Parlor B

**Presiding Officer: Professor W. Wrigley
Massachusetts Institute of Technology**

- DP* A Guidance System for a Variable Drag Entry Vehicle. J. L. Nevins and A. Koso, M.I.T. Instrumentation Laboratory, A. Webber, Formerly of M.I.T. Instrumentation Laboratory.
- DP* A Methodology for Determining Space Vehicle Trajectory. J. C. Devolites, Dr. M. J. Kirby, and C. L. Paterson, Sperry Gyroscope Co.

2:00 p.m.—Computer Applications—Electric Power Systems Parlor C

**Presiding Officer: C. H. Didriksen
Stone and Webster Engineering Corp.**

- DP* Recent Developments in Digital Programs for Electric Utility Engineering Problems. C. C. Young and F. J. Maginniss, General Electric Co.
- DP* Computer Application for Station Automation. G. Barney, Stone and Webster Engineering Corp.
- DP62-892 Application Guides for Digital Computer Studies. J. F. Fairman and W. H. Ferguson, Westinghouse Electric Corp.
- DP* An Operational Cost Simulator. J. B. Vieaux, I.B.M. Corp.

6:30 p.m.—Social Hour—Parlor A

7:30 p.m.—Banquet and Dance—Georgian Room

8:00 a.m.—Registration—Mezzanine

9:00 a.m.—Inspection Trip—Massachusetts Institute of Technology Computation Center and New England Electric System IBM 1620 Computer

M.I.T.'s Computation Center in Cambridge is newly equipped with an I.B.M. #7090 solid state computer and two off-line I.B.M. #1401's, set up with special attention to handling visitors. The #7090 averages 35,000 multiplications or divisions per second. It is used around the clock by M.I.T. and thirty-nine participating New England colleges. Over 800 students and faculty each month are actually solving problems on the 7090. In most cases, users do their own programming for the computer. This is one of the largest computer installations in the country with about \$4,500,000 worth of computer equipment alone. All M.I.T. departments use the 7090 in solving problems in highway design, radio astronomy, circuit design, teaching machines, structural analysis, orbit calculations, and economic simulations. The trip will continue with a demonstration of public utility problem solutions on the IBM 1620 Computer at New England Electric System, New England's largest electric utility, in Boston.

Bus leaves Statler-Hilton at 9 a.m., returns 12 Noon.

Trip limited to 50 people.

9:00 a.m.—Inspection Trip—Raytheon Company—Wayland Plant

This trip will cover demonstrations of two developments of great current interest. The first is a new system of air traffic control to supersede the present system. The demonstration equipment includes receiver, transmitter, and display consoles. The Raytheon Radar Bright Display System affords a bright presentation of data in a well-lit room. Past and present target data are shown in the form of visible trails on the scope. The Federal Aeronautics Administration has adopted the Bright Display System for installation in many of its air traffic control radar systems. The other demonstration is the optical maser. The optical maser, or laser, has excited scientists and engineers since it represents the first available method of generating coherent electromagnetic radiation in the optical region of the spectrum. The device opens up many possibilities for radar and communications use, as well as medical and industrial applications, since it permits the rigidly controlled focussing of great amounts of energy in extremely small target areas, and affords a greatly increased number of channels as compared to a microwave installation. The Raytheon laser was the first to be packaged and sold commercially.

Bus leaves Statler-Hilton at 9 a.m., returns 12 Noon.

Trip limited to 50 people.

9:00 a.m.—Computer Design Georgian Room
Presiding Officer: T. C. Stockebrand
M.I.T. Lincoln Laboratory

- DP* Computer Timing—Some Straightforward Ideas. B. Gurley, Digital Equipment Corp.
- DP62-886 High Speed Computer Bulk Storage. Dr. A. Gabor, Potter Instrument Co., Inc.
- DP* Why Do Computers Cost So Much? Dr. J. J. Eachus, Minneapolis-Honeywell Regulator Co.
- DP* FX-1—A Small 50-Megapulse Test Computer. J. Laynor, M.I.T. Lincoln Laboratory.

9:00 a.m.—Space Communication Parlor A
Presiding Officer: Dr. M. D. Grossi
Raytheon Co.

- DP* Digital Television for Space Applications. Dr. W. F. Schreiber, Massachusetts Institute of Technology.
- DP* Electromagnetic Generation of an Ionized Cloud in the Upper Atmosphere. Dr. P. P. Lombardini, University of Pennsylvania.
- DP* Baker-Nunn Satellite Tracking Camera Timing Requirements. C. W. Hage, Smithsonian Astrophysical Observatory.
- DP* Satellites as a Logical Extension of the Existing Global Communication Network. J. E. Guillemette, New England Tel. and Tel. Co.

9:00 a.m.—EHV Transmission Parlor B
Presiding Officer: F. W. Warburton
New England Power Service Co.

- DP* Radio Influence Voltage—Radio Influence Field Ratios for 500-KV Line. J. J. LaForest and E. A. Whepley, General Electric Co.
- DP* Radio Frequency Propagation on Polyphase Lines. L. O. Barthold, General Electric Co.
- DP* High Voltage D-C Transmission, Some Characteristics and Its Role in a Power System. Dr. U. Lamm, ASEA.

9:00 a.m.—Static Rectifiers and Controls Parlor C
Presiding Officer: Professor A. Kusko
Massachusetts Institute of Technology

- DP* Precision Regulated 80KV DC Power Supply. H. R. Kinner and C. A. Ramsbottom, Cambridge Products Corp.
- DP* Semiconductor Controlled Rectifiers and Associated Semiconductors in Industrial Applications. E. E. Von Zastrow, General Electric Co.
- DP* Semiconductors in Adjustable Speed Drives. J. T. Carroll and J. H. Bredberg, Allis-Chalmers Manufacturing Co.
- DP* Trinistor Controlled Rectifier Application to Navy Controllers. F. Henrikson, General Dynamics Corp., J. J. Marum and A. S. Nadrowski, Westinghouse Electric Corp.

2:00 p.m.—Northeastern District 12 Executive Committee Meeting—Hancock Room

2:00 p.m.—Inspection Trip—Boston Museum of Science, Theatre of Electricity and Planetarium

This will be a trip of general as well as technical interest, couched in terms which will be attractive to the ladies as well as the men. A 40-minute lecture in the new "Theatre of Electricity" will demonstrate high voltage and arc phenomena, to be followed by a 40-minute planetarium program featuring man-made satellites. Several additional electrical exhibits are also on view including communication and development of lighting, and for those interested in wild-life there are many exhibits of that nature.

Bus leaves Statler-Hilton 2 p.m., returns 4:30 p.m.

2:00 p.m.—Inspection Trip—Boston Naval Shipyard

A visit to a Navy vessel is always of great interest. In view of uncertainties of schedule at time of going to press, definite description is not practical in this announcement. Inquiry should be made at the Inspection Trips Ticket Desk for final details.

Bus leaves Statler-Hilton at 2 P.M., returns 4:30 P.M.

Trip limited to U. S. Citizens.

2:00 p.m.—High Power Plasma—Electron Beam Metallurgy Parlor A
Presiding Officer: M. Hablanian
National Research Corp.

- DP* Application of the Electron Beam for Melting and Welding. C. B. Sibley, NRC Equipment Corp.
- DP* The Electron Beam, a Versatile Tool in Microelectronics. Dr. D. J. Garibotti, United Aircraft Corp.
- DP* The Use of Electron Beam Heating in Materials Evaluation. D. J. Fritch, Lessells and Associates, Inc.
- DP* Modes of Operation of/and Applications for High Energy Plasmas. J. W. Poole, Thermal Dynamics Corp.

2:00 p.m.—Reliability Techniques Georgian Room
 (Jointly Sponsored by IRE Professional Group on Reliability and Quality Control)
Presiding Officer: H. E. Blanton
Raytheon Co.

Film . . . "AGREE in Action."

- DP* Correlation of AGREE Testing with Operational Reliability. G. W. Lindsay, Avionics Division AFSC.
- DP* Potential Application of Reliability Techniques in Communications Product Lines. R. M. Jacobs,sylvania Electric Products Co.
- DP* How Failure Indicators Can Improve Reliability. W. B. Bishop, Air Force Cambridge Research Laboratories.

2:00 p.m.—Power While in Space Parlor B
Presiding Officer: Dr. W. Nottingham
Massachusetts Institute of Technology

- DP* Thermionic Nuclear Reactors. Dr. E. P. Gyftopoulos and G. N. Hatsopoulos, Massachusetts Institute of Technology.
- DP* Future Electric Rocket Power Requirements. Dr. M. A. Hoffman, Massachusetts Institute of Technology and Capt. R. J. Hayes, U.S.A.F.

2:00 p.m.—Insulated Conductors Parlor C
Presiding Officer: A. F. Corry, Jr.
Boston Edison Co.

- DP62-889 High Voltage Testing of Polyethylene-Insulated Cable. M. J. Koulopoulos, Simplex Wire & Cable Co.
- DP* A-C Tests on Cable Installations in the Field. E. H. Povey and A. L. Rickley, Doble Engineering Co.
- DP62-887 A Simple Method of Determining Cable Operating Temperatures. V. S. McFarlin, Boston Edison Co.
- DP* Cello-Flex Electrical Insulating Paper Development. T. H. Proglor, Allis-Chalmers Manufacturing Co.

ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 50¢ each (\$1.00 each to nonmembers), by sending enclosed order form and remittance to the AIEE Order Department, 345 East 47th Street, New York 17, N. Y. 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 \$10 denominations are available for those who wish to avoid remittance by check or otherwise. The Transactions Papers will also be published in the bimonthly publications.

Note: Unnumbered Conference Papers (DP*) may be available at or after the meeting, if copies are provided by the author. They are not intended for publication in the Transactions and are not presently scheduled for reproduction in any form by the Institute.

Note: The TRANSACTIONS papers will be printed in the bimonthly publications as follows:

- I COMMUNICATIONS AND ELECTRONICS.
 II APPLICATIONS AND INDUSTRY.
 III POWER APPARATUS AND SYSTEMS.

Issued by
NORTHEASTERN DISTRICT 12 STEERING COMMITTEE
AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS



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