

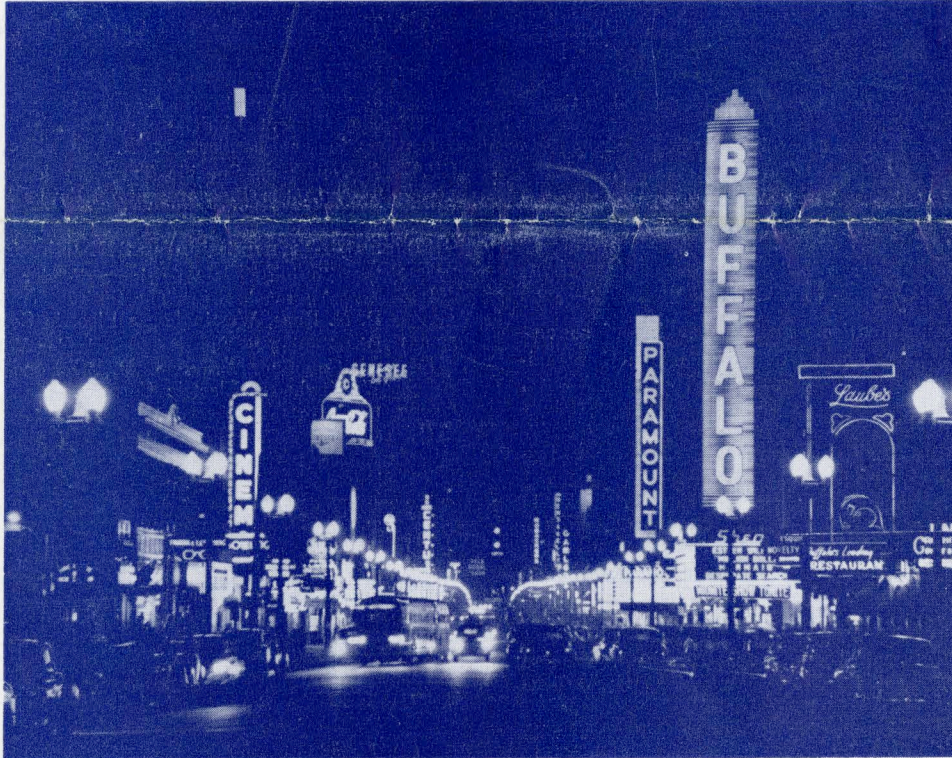


# Summer General Meeting and Air Transportation Conference

June 22-27, 1958

BUFFALO, NEW YORK

Headquarters  
The Statler Hilton



## BUFFALO WELCOMES 1958 SUMMER GENERAL MEETING

Buffalo, Birthplace of Electrical Power, will be the scene of this year's Summer General meeting, June 22nd through June 27th. Headquarters will be at the Statler Hilton Hotel, located in downtown Buffalo.

### HOTEL RESERVATIONS

With regard to hotel reservations, please bear in mind that this is the beginning of a busy summer season in the Niagara Frontier section. We urge everyone who has not already made reservations to do so as soon as possible. Many fine motels are located within metropolitan Buffalo. Information concerning these motels and reservations available can be obtained from the Buffalo Convention & Tourist Bureau, located at 155 Franklin Street, in Buffalo.

Rooms have been set aside for members and their guests at the Statler Hilton Hotel. Reservation cards are enclosed with this announcement, listing the following accommodations:

|                 |       |       |       |       |
|-----------------|-------|-------|-------|-------|
| Room and Bath   | 6.00  | 7.50  | 9.00  | 10.50 |
| for One         | 6.50  | 8.00  | 9.50  | 11.00 |
| Per Day         | 7.00  | 8.50  | 10.00 | 12.50 |
| Double-Bed Room | 9.00  | 10.50 | 12.00 | 13.50 |
| with Bath       | 9.50  | 11.00 | 12.50 | 14.00 |
| For Two—Per Day | 10.00 | 11.50 | 13.00 | 15.50 |
| Twin-Bed Room   | 10.00 | 13.00 | 15.00 | 17.00 |
| with Bath       | 11.00 | 14.00 | 15.50 | 18.00 |
| For Two—Per Day | 12.00 | 14.50 | 16.00 | 20.00 |

More than Two Persons in One Room:

For each additional person in Double or Twin-Bed Room, the extra charge is \$3.00 per day.

|                                      |             |
|--------------------------------------|-------------|
| SUITE—Living Room, Bed Room and Bath |             |
| For One—Per Day                      | 30.00       |
| For Two—Double Bed                   | 33.00       |
| —Twin Beds                           | 38.00 47.00 |

If a room at the rate requested is unavailable, one of the nearest available rate will be reserved.

*RESERVATIONS MUST BE RECEIVED not later than 2 weeks prior to opening date of convention and will be held only until 6 P.M. on day of arrival unless later hour is specified.*

### HOSPITALITY

On Sunday, June 22nd, from 4 p.m. to 6 p.m., a Welcome Tea will be held in the New York Room on the mezzanine floor of the Statler Hilton Hotel. This will give everyone an opportunity to meet old friends and make new acquaintances before the business of the meeting starts. A Ladies' Hospitality Suite will be open throughout the week, providing an opportunity for the ladies to become acquainted with the features provided for them. Here, again, will be found an excellent opportunity for the ladies to meet with old friends and make new acquaintances.

### GENERAL PROGRAM

Registration, ticket and paper sale will begin on June 22nd at 1:00 p.m. on the mezzanine floor. Technical meetings as noted below, are planned from Monday to Friday, inclusive and cover, as may be seen, a variety of subjects. The Opening Ceremony will be held at 2 o'clock on Monday in the Ballroom, officially welcoming members

*Continued on page 8*



**ADVANCED COPIES OF PAPERS**

Members may obtain preprints of numbered papers at the uniform price of 40¢ each (80¢ each to nonmembers), by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, 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 (CP.\*) 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.

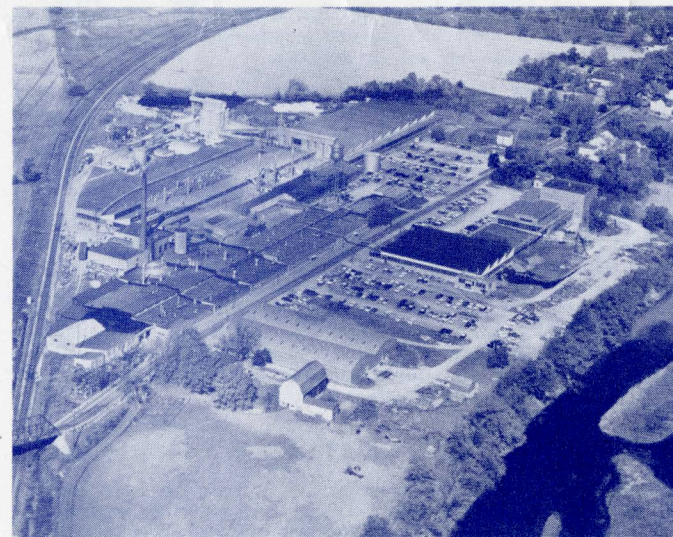
**Monday, June 23**

**9:00 a.m.—Radio Communications and Radar Interference**

- CP.\* Design Characteristics of Some Existing Canadian Communication Systems Using Scatter Propagation. H. J. von Baeyer, Royal Canadian Air Force & F. M. Banks, Bell Telephone Co. of Canada.
- 58-816. Tropospheric Scatter System Design. L. P. Yeh, Westinghouse Electric Co.
- 58-383. Factors Affecting the Use of Over the Horizon Links in Telecommunication Networks. C. A. Parry, Page Communications Engineers, Inc. (Re-presented for discussion.)
- 58-817. Radar Interference to Microwave Communication Services. I R. D. Campbell, American Telephone and Telegraph Co.

**9:00 a.m.—Power Generation**

- 58-794. The Electrical Features of the Sir Adam Beck Niagara Pumping-Generating Station. W. D. Small, The Hydro-Electric Power Commission of Ontario.
- 57-939. Friction and Windage Loss Tests of McNary Generators with Coupled and Uncoupled Turbine. D. R. Cox and R. L. Krahn, U. S. Army Corps of Engineers.
- CP58-876. Electrical Features of the Upper Raquette River Power Project. W. C. Van Dyke, Niagara Mohawk Power Corp.
- CP58-877. The Kelsey Hydro Electric Development on the Nelson River, Manitoba. L. M. Hovey, The Manitoba Hydro-Electric Board.



Lapp Insulator Co., Inc. Le Roy, N. Y.

**9:00 a.m.—Substations**

- CP58-872. Trends In The Welding Of Aluminum Bus Connections. M. Brenner, Penn-Union Electric Corp.
- 58-873. Silver Plated Aluminum Bus Conductors. C. E. Burley, Reynolds Metals Co.
- CP58-874. Method of Comparing Hi-Voltage Substation Diagrams. K. R. Knights & L. M. Gordon, The Hydro-Electric Power Commission of Ontario.
- 58-875. Criteria For Substation Design On The British Columbia Electric System. F. O. Wollaston, M. B. Callander and R. E. Clay, B.C. Engineering Co., Ltd.

**9:00 a.m.—Semiconductor Rectifiers**

- 58-926. Thermal Impedance of Cooling Fins. E. J. Diebold and W. Luft, International Rectifier Corp.
- 58-927. Forward Current Surge Failure in Semiconductor Rectifiers. I F. E. Gentry, General Electric Co.
- 58-928. The Current Limiting Fuse as Fault Protection for Semiconductor Rectifiers. F. W. Gutzwiller, General Electric Co.
- CP.\* A Report on Specific Transient Voltage Problems Encountered in the Development of Power Supplies Using Silicon Rectifiers. P. E. Kolk, Bell Telephone Laboratories.

**9:00 a.m.—Transmission and Distribution**

- 58-824. Distribution System Primary-Feeder Voltage Control—I A New Approach Using The Digital Computer. H. E. Lokay and D. N. Reps, Westinghouse Electric Corp.
- 58-891. Distribution System Primary-Feeder Voltage Control—II Digital Computer Program. D. N. Reps and G. J. Kirk, Jr., Westinghouse Electric Corp.
- 58-827. Distribution System Primary-Feeder Voltage Control—III Computer Program Application. H. K. Amchin, R. J. Bentzel, American Gas & Electric Service Corp., D. N. Reps, Westinghouse Electric Corp.
- CP58-893. The Protection of the Customers' Service Through Isolated Transformers. P. W. Shill, H. G. Acres & Co., Ltd.

**2:00 p.m.—Opening Ceremony**

**2:30 p.m.—Annual Meeting**

1. Report of the President, W. J. Barrett.
2. Report of the Board of Directors.
3. Report of the Treasurer, L. F. Hickernell.
4. Report of the Committee of Tellers on the Vote for Nominees for AIEE offices.
5. (a) Introduction of and presentation of President's badge to L. F. Hickernell.  
(b) Response by Mr. Hickernell.
6. Presentation of the Lamme Medal to Harold S. Black, Research Engineer, Bell Telephone Laboratories.  
(a) The Establishment of the Medal. H. I. Romnes, Chairman, Lamme Medal Committee.  
(b) The Career of the Medalist. M. J. Kelly, President, Bell Telephone Laboratories.  
(c) Presentation of the Medal & Certificate by President W. J. Barrett.
7. Other Business.

**Tuesday, June 24**

**9:00 a.m.—Mobile Radio Systems**

- CP58-813. City-Wide Personal Signaling at Allentown-Bethlehem, Pa. C. R. Kraus, The Bell Telephone Co. of Pa.
- CP58-814. Pagemaster Receiver and Modulation Equipment. J. W. Young, Stromberg-Carlson Co.
- CP.\* Systems Engineering of Personal Radio Signaling Systems. W. Strack, Bell Telephone Labs., Inc.
- 58-815. An Integrated Mobile-Microwave Communications System for the Massachusetts Turnpike. R. F. Lowe, General Electric Co.

**9:00 a.m.—Electric Braking**

- CP.\* History of Dynamic Braking. B. A. Widell, H. H. Hennel, General Electric Co.
- CP.\* Regenerative Braking. A. W. Manser, London Transport Executive.

- CP58-810. The Complementary Role of Air & Dynamic Brakes in Rail Transportation. C. M. Hines, Westinghouse Air Brake Co.

**9:00 a.m.—Industrial Control**

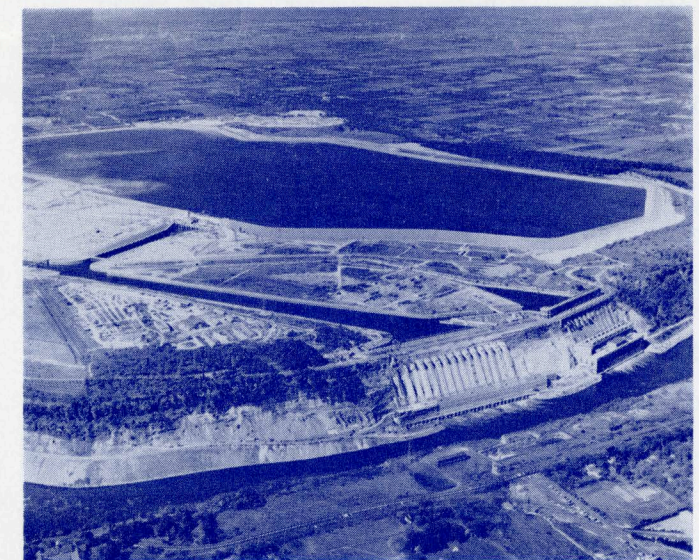
- CP58-807. Static Exciters & Voltage Regulators for Portable Alternators. D. W. Drews, Westinghouse Electric Corp.
- CP.\* A Universal Logic Symbology. E. Boote, Canadian General Electric Co., Ltd.
- CP.\* A Transistorized Static Switching Logic Element. N. L. Carlson, Canadian General Electric Co., Ltd.
- CP58-808. A Comparison of Adjustable Frequency A-C and Synchronous Systems for Synchronized Drives. A. T. Bachelor, Westinghouse Electric Corp.
- 58-809. Temperature of Conducting Ribbon Magnet Coils. J. F. H. II Douglas, Marquette Univ.

**9:00 a.m.—Load-Frequency Control**

- CP58-855. A Unique System For Economic Power Dispatch. J. W. Hoag and G. W. McKnight, Minneapolis-Honeywell Regulator Co.
- CP58-931. Factors To Be Considered In Selecting A Load-Frequency Control System. W. C. Van Dyke, Niagara Mohawk Power Corp.
- CP58-930. Operation Experience With Command Type Load-Frequency Control Equipment. W. D. Wilder, Niagara Mohawk Power Corp.
- 58-932. A Speed-Setting Transducer. N. G. Alvis, Woodward Governor Co.
- 58-847. System Control Aided By Governor Transducer. R. D. Nevison, The Hydro-Electric Power Commission of Ontario.

**9:00 a.m.—Magnetic Amplifiers**

- 58-898. Transistor-Oscillator Induction—Motor Drive. W. H. Card, Univ. of Toronto.
- CP58-899. Progress Report of the Standards Subcommittee of the AIEE Magnetic Amplifier Committee—Presented by F. G. Timmel.
- 57-776. Reactions of BiStable B-H Loops on Magnetic Amplifiers. I R. E. Morgan, General Electric Co. (Re-presented for Discussion.)
- 58-773. A-C Controlled Magnetic Amplifiers. E. W. Lehtonen and E. A. Cronauer, Sperry Gyroscope Co. (Re-presented for Discussion.)
- 58-774. Elimination of Magnetic Amplifier Control Circuit Inductance. D. P. Chandler and R. W. Downing, North American Aviation, Inc. (Re-presented for Discussion.)
- 58-775. High Efficiency Push-Pull Magnetic Amplifier and Its Use as a D-C Shunt Motor Drive. C. L. Boyajian, General Electric Co. (Re-presented for Discussion.)



Ontario Hydro's Sir Adam Beck Generating Stations

**9:00 a.m.—Section Delegates Conference**

**2:00 p.m.—Rapid Transit**

- CP58-811. Semi-Conductor Battery Charging Control System. E. W. Ames, Westinghouse Electric Corp.
- CP58-812. Progress in Control Design For Rapid Transit Subway Cars. G. R. Purifoy, Westinghouse Electric Corp.
- CP.\* Effect of High-Performance Rapid-Transit Cars Upon Traction Substations—An Exploratory Appraisal. E. J. Hogan and J. C. Price, General Electric Co.

**2:00 p.m.—Conversion of Industrial Power Systems from 25 to 60 Cycles**

- CP.\* Problems in Changing a Steel Plant Power System from 25 to 60 Cycles. C. G. Dimitt, U. S. Steel Corp.
- CP.\* The Effect of Frequency Conversion on Expansion and Modernization of the Power System in a Rubber Mill. D. Lees, Goodyear Tire & Rubber Co. of Canada and D. V. Fawcett, Canadian Westinghouse Co., Ltd.
- CP.\* New Thoughts on Industrial Power in the Niagara Frontier. T. J. Brosnan, Niagara Mohawk Power Corp.
- CP.\* Frequency Standardization of Industry in Ontario. F. O. Price, The Hydro-Electric Power Commission of Ontario.

**2:00 p.m.—Indicating and Recording Instruments**

- 58-933. A System For Gaging Plating Thickness. R. G. Myers, Argonne National Lab., and D. L. Waidelich, Univ. of Missouri.
- 58-367. Magnetic Field Strength In Oersted's Near Large Rectangular Conductors. J. H. Miller, Weston Electrical Instrument Corp. (Re-presented for Discussion.)
- 58-934. On The Application of Zener Diodes To Expanded Scale Instruments. A. J. Corson, General Electric Co.
- CP58-935. A New Round Chart Weatherproof Recording Instrument With Sealed Inking System. D. F. Roerty and S. G. Hayter, Westinghouse Electric Corp.
- 58-850. A Triple Action Positioning Controller Using A Magnetic Modulator. C. V. Bullen, Barber-Colman Co.

**2:00 p.m.—System Operation**

- 58-853. 28 Years Operating Experience of America's First Pumped Storage Hydro Plant. C. T. Hughes and C. M. MacWilliam, The Connecticut Light & Power Co.
- 58-866. Twenty-Seven Years of Operating A Hydro Station In Connection With A Water Supply System. A. Ferreira, Western Massachusetts Electric Co.
- 58-867. A Method Of Scheduling Optimum Operation Of Ontario Hydro's Sir Adam Beck-Niagara Generating Station. B. Bernholtz, W. Shelton and O. Kesner, The Hydro-Electric Power Commission of Ontario.
- 58-868. Benefits of Line Capacitors Extended by Remote Automatic Control. E. M. Gordy, W. L. Ridenhour and C. Wasserman, Baltimore Gas And Electric Co.

**2:00 p.m.—Rotating Machinery**

- 58-896. D-C Dynamic Braking of Double-Cage Induction Motors. III O. I. Butler and M. N. Abdel-Hamid, Univ. of Sheffield.
- 55-761. Induction Motor Temperature Characteristics. J. F. Heidebreder, Westinghouse Electric Corp. (Re-presented for Discussion.)
- 58-778. Calculation of Induction Motor Torque and Power. W. H. III Middendorf, Univ. of Cincinnati.
- 58-278. Water Cooling of Turbine-Generator Stator Windings. G. V. III Browning, C. H. Holley and J. F. Quinlan, General Electric Co.

**2:00 p.m.—Magnetic Amplifiers**

- 58-856. Characteristics of Magnetic Amplifiers Utilizing Square Loop Core Material and Square Wave Supply Voltage. H. H. Britten, General Electric Co.
- 58-858. A New Control Amplifier Using a Saturable Current Transformer and a Switching Transistor. R. E. Morgan, General Electric Co.
- 58-897. A Power Method of Measuring the Torque-Producing Output of a Magnetic Amplifier Driving One Phase of a Two-Phase Servo Motor. S. J. Reisman, Westinghouse Electric Corp. and E. H. Bowman, Sandia Corp. (Re-presented for Discussion.)
- 58-776. Triggering in the Reversible Half-Wave Magnetic Amplifier. I D. L. McMurtrie and J. P. Ward, Raytheon Mfg. Co. (Re-presented for Discussion.)



- 58-792. A Comprehensive Study of Magnetic Amplifier Design—  
I Part I, A Practical Design Method. R. M. Hubbard and M. M. Bishop, Boeing Airplane Co. (Re-presented for Discussion.)
- 58-793. A Comprehensive Study of Magnetic Amplifier Design—  
I Part II Toroidal-Core Dimensional-Ratios As a Factor In Magnetic Amplifier Design. R. M. Hubbard and M. M. Bishop, Boeing Airplane Co. (Re-presented for Discussion.)

**2:00 p.m.—Computing Devices**

- 58-929. Magnetic Drum Components for High Storage Density. K. I. Hong, Massachusetts Institute of Technology.
- CP.\* A Medium Speed Data Acquisition System. R. G. Lex, M. Garden, J. J. Hitt, W. G. Kieslich and W. P. West, Leeds & Northrup Co.

**2:00 p.m.—Section Delegates Conference**

**7:30 p.m.—Space Vehicles, Satellites And Missiles**

- CP.\* The Celestial Mechanics of Space Flight—Physical Attributes and Variables of Control. I. M. Levitt, The Franklin Institute.
- CP.\* Control and Instrumentation Problems Associated with the Guidance of Space Flight Vehicles. C. S. Draper, Massachusetts Institute of Technology.
- CP.\* Problems of Dynamic Stabilization in Large Rocket Vehicles. R. Hanna, Douglas Aircraft Co.
- CP.\* Instrumentation Requirements for Altitude Control of Satellites and Space Vehicles. J. Farrior, Army Ballistic Missile Agency.
- CP.\* Inertial Control of Satellite Attitude. R. E. Roberson, North American Aviation, Inc.
- CP.\* Instrumentation of Attitude Control of Satellites and Interplanetary Vehicles. W. E. Frye, Lockheed Missile Systems Division.
- CP.\* Component and System Design for Minimum Weight and Volume, Maximum Accuracy and Reliability. J. L. Bowers, Convair-Astronautics.

**Wednesday, June 25**

**9:00 a.m.—Television and Aural Broadcasting**

- CP.\* Analysis of Compatible Single Sideband System. G. A. Olive, RCA Laboratories.
- CP.\* Design Methods to Improve the Stability of AM Directional Antenna Systems. G. H. Brown, Radio Corp. of America.
- CP.\* Salient Problems in TV Receiver Transistorization. F. Mural, Philco Corp.
- CP.\* A Study of UHF TV Ghostings in a Shadowed Valley And What To Do About It. D. K. Peterson, RCA Laboratories and R. K. Blackburn, WHEC-TV.

**9:00 a.m.—Aircraft—Ground Support and Lighting**

- CP.\* Ground Electrical Power Support. C. B. Graff & Major H. H. Barton, Headquarters, Air Research & Development Command.
- CP58-840. Development and Application Of An Electrical Power System Analyzer. E. L. Clark and A. J. DiStio, Beech Aircraft Corp.

- 57-458. Lighting The Modern Commercial Aircraft. P. E. Massie, II Day-Ray Products, Inc. (Re-presented for Discussion.)

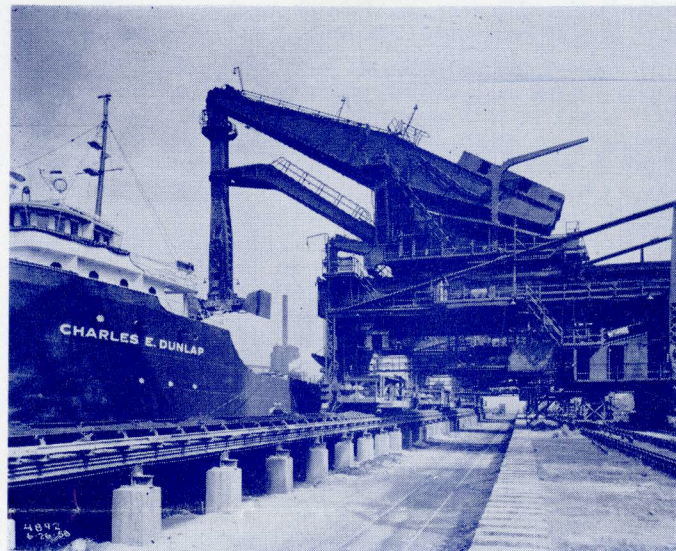
- 58-839. Development of A Dimmable Aircraft Fluorescent Light System. E. W. Banios, Ramo-Woolridge Corp.

**9:00 a.m.—Industrial Plant Power Systems**

- CP.\* Factors in the Design of a Steel Plant Power System. A. J. F. MacQueen, Patterson-Emerson-Comstock, Inc.
- CP.\* Power System for a Plant Using Submerged Arc Furnaces. T. A. Leeds, Electro-Metallurgical Co.
- CP.\* Power Systems for Electrolytic Plants. F. L. Kaestle, General Electric Co.

**9:00 a.m.—Symposium on Maintaining the Accuracy of Watthourmeters in Service**

- CP58-805. Maintaining The Accuracy of Watt-Hour Meters In Service. G. B. M. Robertson, Philadelphia Electric Co.
- 58-425. Evaluation of Single-Phase Metering Practices Based on Meter Performance and Load Characteristics. J. M. Vanderleck, The Hydro-Electric Power Commission of Ontario (Re-presented for Discussion)



Local Ore Unloading Facilities

- CP.\* A Discussion of Sampling Methods as Related to Testing of Watthourmeters. J. A. Morris, American Gas & Electric Service Corp.
- CP58-806. The Application of Statistical Sampling Methods of the Testing of Watthour Meters. C. V. Morey, Consolidated Edison Co. of New York, Inc.
- CP.\* An Approach to a Sampling Plan for Testing Single Phase Watthour Meters. R. D. Bader, Baltimore Gas and Electric Co.

**9:00 a.m.—System Economics**

- 58-865. Economic Operation of Variable Head Hydro Plants. A. F. Glimm and L. K. Kirchmayer, General Electric Co.
- CP.\* Economic Complementary Operation of Hydro Storage and Steam Power in the T.V.A. System. R. N. Brudenell and J. H. Gilbreath, T.V.A.
- CP58-869. The Calculation of Incremental Transmission Losses and the "General Transmission Loss Equation." R. E. Watson and W. O. Stadlin, Leeds & Northrup Co.
- CP58-870. Power System Planning Economics. A. J. Wood, General Electric Co.

**9:00 a.m.—Rotating Machinery**

- 58-900. Ground Fault Protection of Unit Connected Generators. M. N. Rajk, Sanderson & Porter Engineers.
- 58-901. Synchronous Performance of Reluctance Motors By Improved Circle Diagrams. J. F. H. Douglas, Marquette Univ.
- 58-940. The Steinmetz Conception of The Single Phase Squirrel Cage Motor. E. Bretch, Century Electric Co.
- 58-939. The Dilemma of Single-Phase Induction Motor Theory. P. L. Alger, General Electric Co.
- CP58-849. Sources of Electromagnetic Vibration In Single-Phase Induction Motors. L. W. Magyar, General Motors Corp.

**9:00 a.m.—Applied Mathematics**

- 58-777. The Numerical Evaluation of Expressions Involving Complete Elliptic Integrals. F. W. Grover, Union College.
- 58-787. A Generalization of the Calculus of Finite Differences to Non-Uniformly Spaced Variables. G. Kron, General Electric Co.
- 58-854. Reliable Stochastic Sequential Switching Circuits. A. A. Mullin, Univ. of Illinois.
- CP.\* Analysis of Transcendental Nonlinear Systems. A. A. Wolf, Univ. of Pennsylvania.

**9:00 a.m.—Air Transportation—Machine Design**

- 58-791. The Turbonator—Design and Development. J. T. Duane and J. W. Harrison, General Electric Co.
- 58-908. Computer Analysis of A-C Aircraft Generators. J. R. M. Alger, J. T. Duane, E. F. Magnusson and R. T. Smith, General Electric Co.

- 58-772. Effects of Operating Frequency on the Weight and Other Characteristics of Missile Alternators And Transformers. R. E. Turkington, Radio Corp. of America.
- 58-832. Design Of An Aircraft Power-Type Circuit Breaker 600° F Ambient. B. O. Austin, Westinghouse Electric Corp.
- CP58-909. Simulated Altitude Carbon Brush Investigations. W. H. Austray, J. E. Diehl and E. I. Shobert II, Stackpole Carbon Co.

**2:00 p.m.—Television Broadcasting**

- CP.\* Chroma-Key Color Inset System. F. Gaskins and R. Kennedy, National Broadcasting Co.
- CP.\* A New Image Orthicon Color Camera. J. F. Wiggin, General Electric Co.
- CP.\* Recording of Color TV on Magnetic Tape. E. M. Leyton, RCA Laboratories.
- 58-904. A Quadruplexer Allowing the Simultaneous Transmission of Two Complete Television Stations Using a Common Antenna. G. B. MacKimmie, RCA Victor Co., Ltd. (Re-presented for Discussion.)

**2:00 p.m.—Aircraft—Materials and Testing**

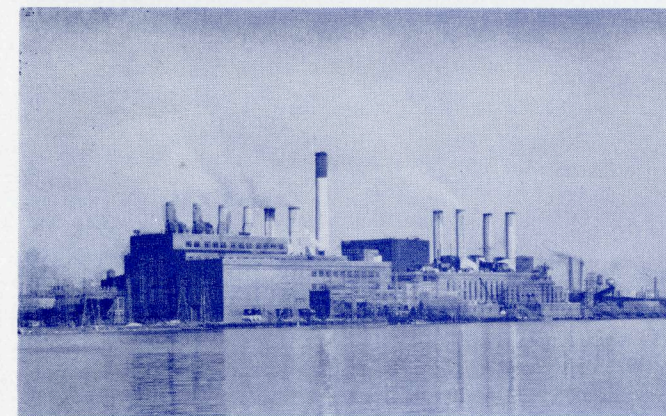
- CP58-843. Materials for Electrical Systems In High Temperature Aircraft. D. K. McIlvaine, Westinghouse Electric Corp.
- CP58-835. High Temperature Electrical Insulation Materials For Missiles And Aircraft. R. N. Evans, WADC.
- 58-845. A Discussion Of D-C High Potential Test Voltage For Aircraft Electrical Insulation. L. B. Kilman and J. P. Dallas, Hughes Tool Co.
- 58-841. Aircraft Switch and Relay Inductive Circuit Test Loads. J. P. Dallas, Hughes Tool Co.
- CP58-912. Statistics Applied To Electrical Laboratory Evaluations. F. Albrecht, The Martin Co.

**2:00 p.m.—Electric Drives In The Metal Industry**

- CP.\* Operation of Rectifiers in Parallel With Existing Generators To Increase Power For Hot Strip Mill Operation. G. Eckenstaler, Allis-Chalmers Mfg. Co.
- CP.\* Tandem Cold Reduction Mill Electric Drive Systems. J. A. McCarthy, Westinghouse Electric Corp.
- CP.\* Analysis of Arc Furnace Control Using Analog Computer. K. G. Black and R. E. Bower, General Electric Co.
- CP58-903. An Automatic Gauge Controller for a 56 Inch Reversing Steel Mill. R. L. Duke and L. R. Hulls, Canadian Westinghouse Co. Ltd.

**2:00 p.m.—Transmission & Distribution**

- CP58-795. Jervis Inlet Overhead Crossing. L. H. J. Cook, B. C. Engineering Co., Ltd. and R. A. McLachlan, Dominion Bridge Co., Ltd.
- 58-886. Superposition of High Voltage Transmission on Existing Medium Voltage Transmission Networks. J. W. Graff, Alabama Power Co.
- 58-885. New Method for Computing Bearing Capacity of Block Foundations in Transmission Lines. O. D. Zetterholm and B. O. Pramborg, Swedish State Power Board.



Niagara Mohawk's Huntley Station

- 58-779. Horizontal Bundle Spacers. R. J. Mather, Bonneville Power Adm. and A. R. Hard, Washington State Institute of Technology.
- CP58-937. Comprehensive Sag-Tension Data for Aluminum Conductors. P. G. Malburg, Aluminum Co. of Canada Ltd. and W. Janischewskyj, Aluminum Laboratories Limited.

**2:00 p.m.—Transformers**

- 58-785. Progress in Routine Testing of High Voltage Bushings. D. L. Johnston, General Electric Co.
- CP58-882. Corona and Withstand Tests in Oil. F. J. Vogel, Allis-Chalmers Mfg. Co.
- 58-780. Characteristics of Thermosiphon Flow in a Model Transformer Oil Circuit. J. J. Kunes, Westinghouse Electric Corp.
- CP58-936. Natural Frequencies in Transformer Windings. I. Johansen, Carnegie Institute of Technology.

**2:00 p.m.—Air Traffic Control Program**

- CP.\* Programming Techniques In Real-Time Data Processing for CAA Air Traffic Control. G. B. Harwell, CAA Indianapolis.
- CP.\* Simulation Programming of Enroute Control Operation. D. C. Lancto, International Business Machines Corp.
- CP.\* Computers and Programming Techniques for Air Traffic Control. R. A. Finkler, General Precision Laboratories Inc.

**2:00 p.m.—Aircraft & Flight Test Instrumentation**

- CP.\* A Digital Air-Ground Data Interchange System. W. W. Fisher and D. E. Wassall, Bendix Aviation Corp.
- CP.\* Use of Telemetry In Temperature Survey Work. E. J. Brown, McDonnell Aircraft Corp.
- CP58-907. Development of Automatic Plotting Equipment for Telemeter Read-Out. W. F. Sullivan, McDonnell Aircraft Corp.

**2:00 p.m.—Air Transportation—General Interest**

- 58-910. The Advantages Of A Pneumatic Electrical Power System For High Mach Number Aircraft. M. A. Slaviv, General Electric Co.
- CP58-911. On The Art of Specification Writing. P. W. Franklin, Leland Electric Co.
- CP58-846. A Transistorized Warning Light System For Aircraft. W. Silbert, The Martin Co.
- 58-836. Conductors And Conductor Protection. R. Steiner, Northrup Aircraft Inc.
- CP.\* Instrumentation For Precise Requirements Of Power Supply Characteristics. C. M. Groves, Royal Radar Establishment of England.
- CP58-938. Sequence Impedances of Airborne Three Phase Power Distribution Cables. D. S. Toffolo, U. S. Naval Research Lab.

**Thursday, June 26**

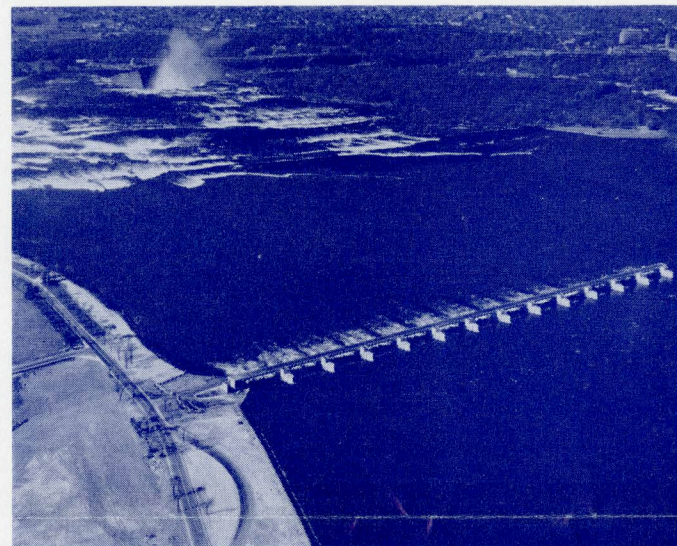
**9:00 a.m.—Wire Communication Systems**

- 58-386. Dial Switching of Toll Circuits in Independent Telephone Co. Areas—Transmission Considerations from the DDD Standpoint. J. N. Petrie, Automatic Electric Co. (Re-presented for Discussion.)
- 58-905. Determination of the Least First Cost of a Cable-Carrier System. R. Krzyckowski, Westinghouse Electric Co.
- 57-1070. Insertion Loss Filter Design Applied to Transistorized Carrier System. T. Winkler, Stromberg-Carlson Co. (Re-presented for Discussion.)
- 58-906. A Transistorized Compandor. J. C. Perkins, Jr., Stromberg-Carlson Co., D. A. Perreault and A. F. Perkins, O'Hara Associates.
- 58-851. Standby Power for Pole-Mounted Equipment. D. F. Jamieson, Stromberg-Carlson Co.

**9:00 a.m.—Aircraft—(Missiles—Satellites—Asteroids)**

- CP58-913. Reliability Evaluation of Aircraft and Missile Equipment I. Theory of Small Sample Methods. B. J. Wilson, U.S. Naval Research Lab.
- CP58-837. Unconventional Electric Power Supplies and The Weapon System. Lt. R. G. Leiby, WADC.
- CP.\* Application of Reserve Batteries in Missiles. W. A. Tynan, The John Hopkins Univ.





Grass Island Pool Control Structure

- CP58-914. High Altitude Performance of Silicon Solar Cells. K. L. Niebauer, Boeing Airplane Co.  
 CP58-915. New Sources of Secondary Power For Satellites and Missiles. H. Oman, Boeing Airplane Co.

**9:00 a.m.—Transmission & Distribution**

- 58-829. The Prestrike Theory and Other Effects in the Lightning Stroke. S. B. Griscom, Westinghouse Electric Corp.  
 58-782. The Influence of the Prestrike on Transmission Line Lightning Performance. S. B. Griscom, J. W. Skooglund and A. R. Hileman, Westinghouse Electric Corp.  
 CP58-887. Anomalous Flashovers: What are Their Fundamental Causes? P. W. Shill, H. G. Acres & Co., Ltd.  
 CP.\* The Insulation Requirements of High-Voltage Transmission Lines for 115KV to 460 KV. P. L. Bellaschi, Portland, Oregon.

**9:00 a.m.—Transformers**

- CP58-883. Phase Angle Control Benefits Power System Interconnection. H. W. Haberl, Quebec Hydro-Electric Commission and C. E. Moorhouse, Canadian Westinghouse Co., Ltd.  
 58-786. Rapid Spot Test Methods for the Evaluation of Used Transformer Oil. R. E. Reinhard, W. E. Elliott and E. P. Schram, Allis-Chalmers Mfg. Co.  
 58-859. Features of the Atmosol Oil Preservation System. D. R. Baldwin, E. J. Sherman and R. J. Ringlee, General Electric Co.  
 CP.\* Transformer Pressure Relief Devices. J. R. Barr, General Electric Co.

**9:00 a.m.—Electrical Insulation Evaluation**

- 57-257. Elongation as a Factor in Evaluating the Thermal Stability of Enameled Wire. D. C. Westervelt and E. J. Croop, Westinghouse Electric Corp. (Re-presented for Discussion.)  
 CP58-401. The Evaluation of Enameled Magnet Wire. H. L. Saums and W. W. Pendleton, Anaconda Wire & Cable Co. (Re-presented for Discussion.)  
 CP58-878. Effects of Neutron and Gamma-Ray Irradiation on the Dielectric Constant and Loss Tangent of Some Plastic Materials. R. A. Weeks and D. Binder, Oak Ridge National Laboratories.  
 CP58-879. On the Anomaly in Residual Polarization of BaTiO Ceramics. Y. Satio and S. Yamanaka, Tokyo Institute of Technology.

**9:00 a.m.—Computers in Electrical Power Systems**

- 58-890. Digital Calculation of Network Functions Used in Loss Formula Studies. R. W. Ferguson, R. W. Long and L. J. Rindt, Westinghouse Electric Corp.  
 58-826. Logic for Applying Topological Methods to Electrical Networks. R. T. Byerly, R. W. Long and C. W. King, Westinghouse Electric Corp.

- 58-892. Digital Computer Aids in Power Pool Operation Studies. III H. M. McIntyre, C. W. Blake and J. S. Clubb, Bonneville Power Adm.

**2:00 p.m.—Aircraft—Unconventional Generators**

- 58-916. A Brushless D-C Generator For Aircraft Use. J. T. Duane, II General Electric Co.  
 58-768. Magnetic Circuit Properties of the Flux Switch Inductor II Alternator. S. E. Rauch, American Machine & Foundry Co.  
 58-831. The Limitations of Induction Generators In Constant Frequency Aircraft Systems. E. Erdelyi, E. E. Kolatorowicz and W. R. Miller, General Electric Co.  
 CP58-917. Energy Conversion Properties of Induction Machines in Variable-Speed Constant-Frequency Generating Systems. M. Riaz, Massachusetts Institute of Technology.

**2:00 p.m.—Sampled Data Control Systems**

- 58-770. Staggered Sampling to Improve Stability of Multiple Sampler II Feedback Systems. R. E. Andeen, Northwestern Univ.  
 CP58-801. Analysis of Sampled-Data Feedback Control Systems With Finite Sampling Duration. J. Tou, Purdue Univ.  
 CP58-802. A Technique for the Time-Domain Synthesis of Sample-Data Systems. H. C. Torng, Cornell Univ.  
 58-803. Analysis of Cyclic Rate Sampled Data Feedback Control II Systems. R. E. Hufnagel, Cornell Univ.  
 CP.\* Transistor Circuits for an Error-Sampled Control System. C. H. Knapp, E. Shapiro and R. A. Thorpe, International Business Machines Corp.

**2:00 p.m.—Transmission & Distribution**

- 58-781. Investigation of Switching Surges Caused by 345-KV Disconnecting Switch Operation. H. L. Rorden, American Gas & Electric Service Corp. J. M. Dils, Indiana & Michigan Electric Co., S. B. Griscom, J. W. Skooglund and E. Beck, Westinghouse Electric Corp.  
 58-784. Analytical Studies of Overvoltages Caused by Disconnecting III Switch Operation. S. B. Griscom, J. W. Skooglund and A. R. Hileman, Westinghouse Electric Corp.  
 CP58-888. A Resistor for Suppressing Overvoltages Caused by Disconnecting Switch Operation. C. W. Upton and C. M. Lane, Westinghouse Electric Corp.  
 CP58-889. Switching Transients by Transient Analyzer Techniques. K. A. Tuttle, Bonneville Power Adm.

**2:00 p.m.—Transformers**

- 58-311. "Insuldur"—Another Milestone in Transformer Insulation III Development. J. G. Ford, M. G. Leonard, J. Swiss and G. C. Gainer, Westinghouse Electric Corp. (Re-presented for Discussion.)  
 58-881. Aluminum and Its Future in Power Transformers. W. W. Orr, III Canadian General Electric Co.  
 58-884. The T-Connected Three-Phase Transformer. E. W. Manning, III General Electric Co.

**2:00 p.m.—Liquid and Gaseous Insulation**

- CP58-880. Liquid Dielectrics in an Electric Field. W. H. Midden-dorf and G. H. Brown, Univ. of Cincinnati.  
 CP.\* Further Experience with the AIEE Subcommittee Test Cell for Gaseous Dielectrics. M. L. Manning, McGraw Electric Co.  
 CP58-326. Properties of Octafluorocyclobutane—A Dielectric Gas. F. W. Blodgett, E. I. du Pont de Nemours and Co. Inc.  
 57-242. The Effect of Space-Charges on the Electric Breakdown of Sulfur Hexafluoride in Nonuniform Fields. D. Berg and C. N. Works, Westinghouse Research Laboratories. (Re-presented for Discussion.)

**2:00 p.m.—Solid-State Devices**

- CP58-820. Magnetic Frequency Dividers. B. W. Glover, The General Electric Co. Ltd. and A. E. Maine, The de Havilland Aircraft Co. of Canada.  
 CP58-821. A Non-Destructive Breakdown Phenomenon in Selenium Rectifiers. A. C. English and W. H. Tobin, General Electric Co.  
 CP.\* Determination of Drift Transistor Physical Parameters. K. Y. Sih, International Business Machines Research Lab.  
 CP58-822. Stability Criteria for Suppressing Thermal Runaway in Transistors. R. B. Hurley, Convair.  
 CP58-941. Recovery Time of Switching Transients in Silicon Diodes. L. G. McPherson, Westinghouse Electric Corp.

Friday, June 27

**9:00 a.m.—Communication Theory**

- 58-538. The Analysis of Redundancy Networks. F. Moskowitz, Rome I Air Development Center (Re-presented for Discussion.)  
 58-575. Operations Research In Communications. B. Harris, A. Hauptschein and L. S. Schwartz, New York Univ. (Re-presented for Discussion.)  
 58-925. On Coding for The Binary Symmetric Channel. A. B. Fontaine, International Business Machines Corp. and W. W. Peterson, Univ. of Florida.  
 CP.\* The Relations Between Coding Formats and Computer Structure. J. H. Waite, Radio Corp. of America.

**9:00 a.m.—Aircraft—AC Systems**

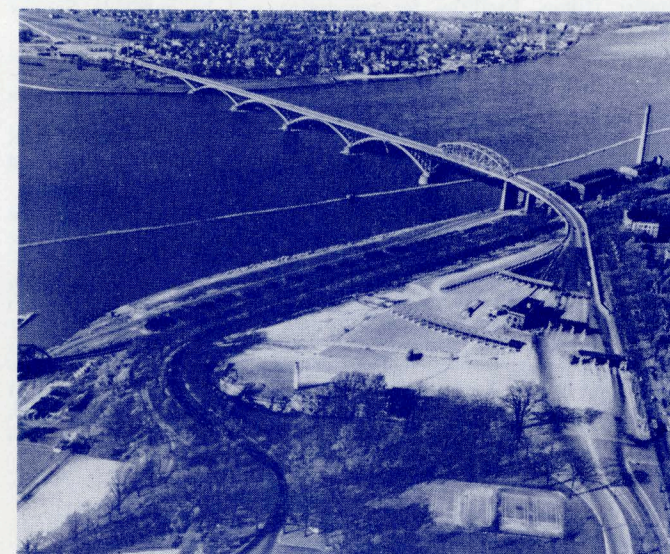
- CP58-842. The Unique Generation System In The CF-100 Mark 5M Aircraft. G. W. Handforth, AVRO Aircraft Ltd.  
 CP58-834. Calculation Of Steady-State Faults, Generator Excitation And Fault Torques For Aircraft Systems By Means Of A Digital Computer. J. B. Annable, H. A. Kahle and L. J. Stratton, Jack & Heintz Inc.  
 58-918. Interrelationships Among Fault Torque, Voltage Unbalance, II Fault Current, And Generator Impedances of Aircraft Electrical Power Systems. N. H. Jensen and R. T. Smith, General Electric Co.  
 58-848. Co-Ordination Of Hydraulic Transmissions And Aircraft A-C II Generators. S. C. Caldwell, T. E. Coppinger and R. T. Smith, General Electric Co.  
 58-788. Frequency Transient Measurements In Power Systems. G. N. II Swanstrom, Sundstrand Machine Tool Co.

**9:00 a.m.—Aircraft—Hi-Temp Design Considerations**

- 58-790. Progress In The Thermal Design of Oil-Cooled Rotating II Electrical Machines. P. B. Richards, Jack & Heintz, Inc.  
 58-919. Prediction Of The Thermal Behavior Of Blast-Cooled Generators By Use Of A Digital Computer. R. M. Moroney, Massachusetts Institute of Technology.  
 58-857. External Heat Transfer From Cylindrical Self-Cooled Electrical Equipment. D. Friedman, U.S. Naval Research Lab.  
 CP58-920. The Electric Analogue For Determining Temperature Distribution In Electrical Components. E. R. G. Eckert, J. P. Hartnett, T. F. Irvine and R. Birkebak, Univ. of Minnesota.

**9:00 a.m.—Hardware & Design of Feedback Control Systems**

- CP58-796. Transfer Functions of Loaded Synchronous Machine. D. Hamdi-Sepen, Technical University of Istanbul.  
 58-797. Synthesis of Control Systems Based on an Approximation to II a Third-Order System. C. R. Hausenbauer, Univ. of Arizona and G. V. Lago, Univ. of Missouri.  
 CP58-798. A 6-Watt Transistor Servo Amplifier for Operation from -55C to +125C. V. Vartanian, Raytheon Mfg. Co.  
 CP58-799. Linear Rate Generator. L. F. Stauder, Univ. of Notre Dame.  
 58-800. The Design of Analog Computer Compensated Control Systems. S. C. Bigelow, Columbia Univ.



Peace Bridge between Canada and the United States

**9:00 a.m.—Insulated Conductors**

- 58-783. The Vancouver 230 KV Oil Filled Cables. F. O. Wollaston III and L. R. Horne, B. C. Engineering Co., Ltd.  
 58-871. Theory and Practice Of Soil Densification. H. F. Winterkorn, III Princeton Univ.

**9:00 a.m.—Switchgear**

- CP.\* The Use of SF6 in High-Voltage Interruption. R. E. Friedrich and G. Bates, Westinghouse Electric Corp.  
 58-902. Impulse System for Arc Recovery Strength Measurements. III J. D. Cobine, E. E. Burger and G. A. Farrall, General Electric Co.  
 58-825. Advanced Interrupter Design for 230 KV and 345 KV Oil III Circuit Breakers. W. R. Wilson and A. L. Streater, General Electric Co.  
 CP.\* Influence of Linkage Flexibility on Dynamic Behavior of High Capacity Outdoor Circuit Breakers. P. Barkan and E. J. Tuohy, General Electric Co.

**2:00 p.m.—Aircraft—Motors and Actuators**

- 58-844. Equivalent Circuits For Three-Phase Four-Wire Induction II Motors Operating On Non-Symmetrical Systems. J. T. Mitchell, Westinghouse Electric Corp.  
 CP58-833. Design Parameters For Airborne Electric Motor Actuators. H. C. Zachmann, The Martin Co.  
 CP58-838. Electric Starting Of Small Aircraft Gas Turbine Engines. C. D. Fearnot, General Electric Co.  
 58-828. Aircraft Switching Type Static Inverter Supplying Rotating III Machines. K. M. Chirgwin, Jack & Heintz, Inc.

**2:00 p.m.—Aircraft—Parallel Systems**

- 58-830. Random Paralleling of Aircraft Alternators. F. P. deMello II and H. M. Rustebakke, General Electric Co.  
 CP58-921. Transistorized Automatic Paralleling Circuit. A. W. Pratt, Jack & Heintz, Inc.  
 58-922. Analog Computer Simulation Of An Aircraft Parallel A-C II Generating System. M. Riaz, Massachusetts Institute of Technology and P. E. Smith, Jr., Convair Corp.  
 CP58-923. Auxiliary Power Plant Operated In Parallel With Main Generators Martin YP6M-1 Seamaster. G. O. Allen and P. J. Brennan, Jr., The Martin Co.  
 CP58-924. The YP6M-1 Seamaster Three Generator Parallel AC System. G. O. Allen, The Martin Co. and M. J. Powell, General Electric Co.

**2:00 p.m.—Nonlinear Feedback Control Systems**

- CP58-804. On the Nonexistence of Finite-Stage Zeroing Procedures for Certain Systems With On-Off Controls. B. A. Fleishman, Rensselaer Polytechnic Institute and B. Friedman, Univ. of California.  
 58-860. Graphical Analysis and Synthesis of Feedback Control Systems—Part I: Theory & Analysis. D. Mitrovic, Univ of Belgrade.  
 58-861. Graphical Analysis and Synthesis of Feedback Control Systems—Part II: Synthesis. D. Mitrovic, Univ. of Belgrade.  
 58-862. Graphical Analysis and Synthesis of Feedback Control Systems—Part III: Sampled-Data Feedback Control Systems. D. Mitrovic, Univ. of Belgrade.  
 58-852. Multi-Variable Control System Synthesis. R. J. Kavanagh, II Univ. of Toronto.  
 58-894. A Novel and Simple Nonlinearized Control System. J. Zaborisky, Washington Univ.  
 58-895. Frequency Response of Nonlinear Closed-Loop Feedback II Control Systems—I, S. L. Mikhail, Univ. of California and G. H. Fett, Univ. of Illinois.  
 58-771. The Describing Function of Backlash Followed By A Dead-II Zone. A. D. Gronner, American Machine & Foundry Co.

**2:00 p.m.—Insulated Conductors**

- CP58-863. Aluminum-Sheathed Paper-Insulated Cables. C. T. Hatcher and F. P. West, Consolidated Edison Co. of N. Y. Inc.  
 CP.\* A Study Of The Effects Of Corona On Polyethylene. E. J. McMahon, D. E. Maloney and J. R. Perkins, E. I. du Pont de Nemours & Co., Inc.  
 CP58-864. An Investigation On Elastic Sheath Pressure Cables. N. Klein, Israel Institute of Technology.

**2:00 p.m.—Protective Relays & Transformers**

- 58-789. Magnetizing-Inrush Phenomena in Transformer Banks. W. K. III Sonnemann, C. L. Wagner and G. D. Rockefeller, Westinghouse Electric Corp.  
 58-818. A Transformer Differential Relay With Second Harmonic III Restraint. R. L. Sharp and W. E. Glassburn, Westinghouse Electric Corp.  
 CP58-819. Protection of Parallel Three-Terminal Transmission Lines. B. C. Hicks and A. B. Sturton, Shawinigan Water & Power Co.



# AIEE SUMMER GENERAL MEETING AND AIR TRANSPORTATION CONFERENCE

attending. The Annual Meeting will be held at 2:30, after the Opening Ceremony. On Tuesday, June 24th, will be held a Section Delegates' Conference at 9:00 a.m. and again at 2:00 p.m. On Wednesday, June 25th, one of the highlights of the social events will be the **Niagara Panorama Trip**, which will include ladies and will be an all-day trip from 9:00 a.m. to 5:00 p.m. Bus transportation will carry visitors across the Peace Bridge to Canada and a luncheon will be provided at the Park Hotel in Niagara Falls, Ontario. This promises to be a well-attended and interesting trip. One of the highlights of the Thursday, June 26th, program will be a noon-day luncheon in the Terrace Room which will be addressed by General Marvin C. Demler, Deputy Commander for Research and Development, Air Research and Development Command of the United States Air Force. This luncheon is particularly recommended for Air Transportation Conference.

## PRESIDENT'S RECEPTION

Thursday, June 26th, features one of the most important events of the meeting. The President's Reception and Banquet will be held in the Ballroom Foyer starting at 6:30, with the Banquet held in the Ballroom at 7:30. The Honorable Donald A. Quarles, Undersecretary of Defense, will be present and the highlight will be the presentation of an Honorary Membership in the AIEE to Dr. Quarles by Mr. Walter J. Barrett, President of AIEE. This will be an informal affair, followed by a period for dancing.

## INSPECTION TRIPS

A program of twelve inspection trips has been arranged to permit delegates to become familiar with engineering work being done in this Niagara Frontier Area, which includes Canada. Two trips to a large **Bethlehem Steel Plant** in Lackawanna, N. Y. have been planned—one for Monday, June 23rd and one for Thursday, June 26th. On Tuesday, June 24th, an all-day inspection trip from 9 o'clock in the morning until 5 o'clock in the afternoon, will be made via bus transportation to the **Lapp Insulator Plant** in LeRoy, N. Y. On this same day, an inspection trip to the **Westinghouse Electric Corporation Motor & Control Division Plant**, in Cheektowaga, N. Y., has been planned from 9 o'clock until noon. An extraordinary opportunity will be provided on Tuesday, June 24th, to attend an inspection trip to the **Nike Base** on Grand Island, N. Y., for a



The U. S. and Canadian Falls on the Niagara River

limited number of delegates. In the afternoon of June 24th, an inspection trip is planned to be made to the **Ford Motor Company Stamping Plant** in Hamburg, N. Y. On Wednesday, June 25th, inspection trips are planned to the **New York Telephone Company** from 9 a.m. until noon, and the **Bell Aircraft Corporation** from 2 p.m. until 5 p.m. This trip to Bell Aircraft will provide some interesting surprises. Also on Wednesday, June 25th, at 2 o'clock, is being planned an inspection trip to the Huntley Steam Generating Station of the **Niagara Mohawk Power Corporation**. This will provide an opportunity to visit one of the largest steam electric stations in the United States. On Thursday, June 26th, an inspection trip is planned to the **Cornell Aeronautical Laboratory** in Cheektowaga, N. Y. It is at this laboratory that much original work is done, solving problems relative to missile development. This trip will be made from 9:00 in the morning until noon. An all-day trip, covering a visit to the **Sir Adam Beck Generating Station** in Canada and including the new **Lewiston Power Project** of the New York State Power Authority, will end with a visit to the **Edward Dean Adams Station**, which provided the first alternating current for system distribution in the United States. This trip, from 9:00 in the morning until 5:00 in the afternoon, will include a talk by Rob Roy Macleod of the Niagara Mohawk Corporation, covering the theme of this Summer Meeting—"The Birthplace of Electrical Power." Also, on Thursday, June 26th, an inspection trip of the Chevrolet Motor Division of **General Motors Corporation**, in Buffalo, will be made from 9:00 a.m. until noon.

## LADIES' ENTERTAINMENT

The Ladies' Entertainment Committee, headed by Mr. and Mrs. Sigmund, is arranging a series of special events for the 1958 Summer General Meeting. Every day, from Monday through Friday, from 9 until 10 a.m., a Ladies' Coffee Hour will be held in the Grover Cleveland Room of the Statler Hilton Hotel. On Monday, from 1:00 until 5:00 p.m., a tour of the world-famous Kittinger Furniture Plant, in Buffalo, will be arranged. One of the highlights of this program for the ladies will be on Tuesday, June 24th, at 12 noon. At this time a ladies' fashion show and luncheon will be held in the Rendezvous Room of the Statler Hilton Hotel. On Thursday, June 26th, at 2 o'clock in the afternoon, a ladies' tour of the General Mills Cereal Plant will be made. As noted above, there will always be available the Ladies' Hospitality Room, where information concerning both the events and Buffalo proper may be easily obtained.

## GENERAL ENTERTAINMENT

Arrangements are completed for bus transportation and availability of tickets for Tuesday, June 24th and Wednesday, June 25th, for attendance at **Melody Fair**. This provides an opportunity to attend a theater-in-the-round presentation of leading Broadway musical comedies. For the sports-minded men, a men's **golf tournament** is being set up to be held at the Country Club of Buffalo. This will be an opportunity of playing on one of the finest links in the area and will undoubtedly be enjoyed by all on Tuesday, June 24th, in the afternoon.

## REGISTRATION

The registration desk will be located on the mezzanine floor of the Statler Hilton. Facilities for registering will be available Sunday afternoon, June 22nd, and continued throughout the meeting.

Members and nonmembers should register in advance by returning the advance registration card sent with this announcement. Registration fees are \$5.00 for members and \$8.00 for nonmembers. Families and student members will not be charged a registration fee.

Please indicate on the advance registration card whether the AIR TRANSPORTATION sessions are your prime reason for attending this meeting.

**Members of the 1958 Summer General Meeting Committee** are: D. J. Munhall, Chairman; B. S. Rice, Vice-Chairman & Secretary; L. J. Murphy, Treasurer; W. F. Rauber, Finance; W. J. Thompson and K. J. Kelly, Public Relations; C. J. Brumbaugh, Printing; W. K. Parks, Hotel Reservations & Accommodations; G. W. Eighmy, Registration; C. Lynn, Hospitality; E. J. Rahill, Programme; J. P. Wood, Technical Papers; W. N. Carlson, Meetings & Properties; R. A. Beuerman, Inspection Trips; C. H. Sullivan, Jr., Transportation; C. Gaylord, Lunches & Dinners; H. B. Vidal, Entertainment; T. J. Brosnan, President's Reception and Banquet; C. M. Fogel, Students; Mr. & Mrs. E. Sigmund, Ladies Program; C. W. King, Special Projects; M. O. Johnson, Air Transportation.

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