

certificate plan. If the rates are granted it is hoped that everyone who travels by rail will get a certificate when purchasing his ticket whether or not he intends to make use of the reduced fare. By getting a certificate he will help make up the 250 certificates necessary to obtain the reduction for those who wish to take advantage of it.

The general arrangements for this meeting are being made under the direction of the Coordinating Committee of the Northeastern District of the A. I. E. E. which is as follows: H. B. Smith, Vice-President in Northeastern District; A. C. Stevens, Secretary; J. R. Craighead, E. D. Dickinson, J. A. Johnson, A. E. Soderholm and A. W. Underhill, Jr. The local arrangements are in charge of a committee of which J. A. Johnson is chairman.

TENTATIVE PROGRAM OF NIAGARA FALLS REGIONAL MEETING MAY 26-28, 1926.

WEDNESDAY MORNING AND AFTERNOON, MAY 26

Technical Session—Symposium on Dielectrics and Power-Factor Measurements.

The Power Factor of Dielectrics and Insulation, by J. B. Whitehead, Johns Hopkins University.

The Mechanism of Breakdown of Dielectrics, by P. L. Hoover, Harvard University.

Standards for Measuring Power Factor of Dielectrics, by H. L. Curtis, Electrical Testing Laboratories.

The Significance of Errors in Dielectric-Loss Measurements, by C. F. Hanson, Habirshaw Electric Cable Co.

Use of Dynamometer Wattmeter for Measuring Dielectric Power Loss, E. S. Lee, General Electric Co.

Commercial Dielectric-Loss Measurements, by R. E. Marbury, Westinghouse Elec. & Mfg. Co.

Three Methods of Measuring Dielectric Power Loss and Power Factor, by C. D. Doyle and E. H. Salter, Electrical Testing Laboratories.

Compensation for Errors of the Quadrant Electrometer, by D. M. Simons, Standard Underground Cable Co.

The Dielectric-Loss-Measurement Problem, by B. W. St. Clair, General Electric Co.

Zero Method of Measuring Power with a Quadrant Electrometer, by W. B. Kouwenhoven and P. L. Betz, Johns Hopkins University.

WEDNESDAY AFTERNOON AND EVENING

Special cars will leave for Lewiston following the afternoon technical session, for the steamer trip on Lake Ontario. Executive committee and other committee meetings will be held on the boat.

THURSDAY MORNING

Technical Session

Rectifiers and Their Auxiliary Devices, by O. K. Marti, Cornell University.

Rectifier Voltage Control, by D. C. Prince, General Electric Co.

Radio-Wave Propagation, by E. F. W. Alexanderson, General Electric Co.

Circulation of Harmonics in Transformer Circuits, by T. C. Lennox, General Electric Co.

A Flux-Voltmeter for Magnetic Tests, by G. Camilli, General Electric Co.

THURSDAY AFTERNOON

Scenic Trip in the Gorge and Inspections of Power Plants

THURSDAY, 6:30 P. M.

Convention Dinner

THURSDAY EVENING

After the dinner will come the lecture "Modern Reproduction of Sound" and following the lecture the special illumination of Niagara Falls.

FRIDAY MORNING

Technical Session

Variable Armature Leakage Reactance, by V. Karapetoff, Cornell University.

Fire Protection for A. C. Generators, by J. A. Johnson, Niagara Falls Power Co. and E. J. Burnham, General Electric Co.

Automatic and Supervisory Control of Hydroelectric Generating Stations, by F. V. Smith, Westinghouse Elec. & Mfg. Co.

Tests on Niagara Falls Hydroelectric Units, by J. A. Johnson, Niagara Falls Power Co.

Speed Measurements of Rotating Machines, by P. A. Borden, F. K. Dalton and H. S. Baker, all of the Hydro-Electric Power Commission of Ontario.

FRIDAY AFTERNOON

Technical Session on Power Transmission

Interconnection and Superpower, by S. Q. Hayes, Westinghouse Elec. & Mfg. Co.

European Transmission Practises, by G. F. Chellis, Whitehall Securities Corp.

Lightning and Other Experience on 132-Kv. Transmission Lines, by M. L. Sindeband and P. S. Sporn, American Gas and Electric Co.

Notes on the Vibration of Transmission-Line Conductors, by Theodore Varney, Aluminum Co. of America.

Transmission-Line Sag Calculations, by H. B. Dwight, Massachusetts Institute of Technology.

FRIDAY EVENING

Piano Recital, Vladimir Karapetoff

Lecture on the *Power Development of the Niagara Falls*, illustrated with motion pictures.

April 13th Meeting of I. E. C. to be Addressed by Prominent European Engineers

On the evening of the first day of the coming plenary session of the International Electrotechnical Commission which is to be held in New York, April 13th to 22nd, a general meeting is scheduled for the Auditorium, Engineering Societies Bldg., 33 West 39th St., New York, which should prove of great interest to all engineers. The program for the evening calls for the opening of the meeting by Dr. C. O. Mailloux, Honorary President of the I. E. C. He will then introduce Dr. Clayton H. Sharp, President of the United States Committee. Dr. Sharp will turn the meeting over to John W. Lieb, Chairman of the Reception Committee who will call upon Professor Elihu Thomson to make the address of welcome to the foreign delegates. There will be a brief response by Colonel R. E. Crompton, C. B., Honorary Secretary of the Commission. Brief address will be given by representatives of France, Poland, Germany, Scandinavia and Japan. The principal address of the evening will be made by Guido Semenza of Milan, Italy, President of the International Electrotechnical Commission on "The Accomplishments and Aims of the International Electrotechnical Commission."

An outline of the program for the entire week was given in the March JOURNAL, page 297.

Doctor R. A. Millikan to Speak on "High-Frequency Cosmic Rays"

The members of the New York Section of the A. I. E. E. and the New York Electrical Society are to have the wonderful opportunity of again listening to an address by Dr. R. A. Millikan, Director, Norman Bridge Laboratory, California Institute of Technology. Dr. Millikan will describe his recent work in

the detection of "High-Frequency Cosmic Rays," carried on at Lake Muir at the summit of Mt. Whitney and Arrowhead Lake in the San Bernardino mountains, also on Pike's Peak in which he determined that these rays, at first called "penetrating radiation" of the atmosphere, come definitely from above. The shortest wave length determined corresponds to a frequency 10,000,000 times higher than that of visible light and that the computed frequencies correspond closely to the energy involved in the simple capture of an electron by a positive nucleus.

Dr. Millikan, as those who have had the pleasure of listening to his previous talks know, can present an intricate and difficult subject in a way which all can understand. He has been the recipient of, among numerous other awards, the Edison Medal in 1922 and the Nobel Prize of the Swedish Academy in 1923.

The meeting will be held in the Auditorium, Engineering Societies Building, 33 West 39th Street, New York, at 8 p. m., on Saturday evening, April 10, 1926.

New York Section to Hold Student Convention

The New York Section will hold its first Student Convention on Friday, April 23, 1926. The plans for this convention have been under way for some time, through conferences of N. Y. Section officers and a committee representing the student body of the eight colleges within the New York Section territory, as follows: College City of New York, Columbia, Cooper Union, New York University, Newark College of Engineering, Polytechnic Institute of Brooklyn, Rutgers University and Stevens Institute of Technology.

The morning of April 23rd will be devoted to inspection trips to the G. E. Lamp Works at Harrison, N. J.; the Bell Laboratories, and the I. R. T. repair shops. An afternoon session in Room 1, Fifth Floor, Engineering Societies Building, 33 West 39th St., New York, will start at 2:30 p. m. with one student speaker from each of the eight colleges. President Pupin will give a short address. A get-together supper will follow at the Fraternity Club. Tickets to be sold at \$1.50 each.

The evening program is being arranged by the New York Section officers and is to be of particular interest to students. The session will be held in the Auditorium at 8:15 p. m. Definite announcement of speakers will be made later.

Future Section Meetings

Baltimore

Talk by a Member of the Local Section. Engineers' Club.
April 16, 8:15 P. M.

Induction Interference, by H. S. Phelps. Engineers' Club.
May 21, 8:15 P. M.

Cincinnati

Electrical Control Equipment, by Mr. Wilms, Allen-Bradley Co.
April 8.

Connecticut

Bay of Fundy. New Haven. April 9.

Radio. Bridgeport. April 29.

Detroit Ann Arbor

Motors, Power Factor and Power-Factor Rates, by E. L. Bailey, Cleveland Electric Motor Co. April 23.

Lehigh Valley

Oil Switches, by G. A. Burnham, Condit Electric Mfg. Co., and *Horsepower*, by J. J. Johnson, Westinghouse Electric & Mfg. Co. Hazleton. April 23.

St. Louis

Automatic Stations, by C. A. Butcher, Westinghouse Electric & Mfg. Co. April 21.

Automatic Telephoning in St. Louis. May 19.

Spring Meeting of the American Society of Civil Engineers

On April 14th, at Kansas City, Mo., the American Society of Civil Engineers will open the program of its Spring Meeting with the subject on the Relation of the Railroads to Modern Highway and Urban Traffic. This will be followed on Wednesday by an important session on the question of Urban and Interurban Buses, and on Thursday, April 15th, the Technical Divisions will hold sessions in their various fields. Programs have been arranged by the City Planning, Construction and Sanitary Engineering Divisions, with the presentation of two important papers and discussion thereon. In addition to the comprehensive technical program, a number of delightful social events and sightseeing and inspection trips are planned. The dinner dance will be held in the roof garden and ball room of the Kansas City Athletic Club. The Official program is now available to any wishing to review a copy.

Important Meeting of New England Engineers

With all New England engineering interests joining heartily in the support and promotion of its success, the program of the Providence Sections of the American Society of Mechanical Engineers is being completed for a gigantic gathering of professional interests May 3-6, 1926. The opening session of the meeting will have for its subject Industrial Education, followed, Tuesday morning, by a session on Small Parts Manufacture, Industrial Power and Wood Industries; Wednesday morning's sessions will be devoted to Cold-working of Metals, Central Power Stations Problems and Textiles. Some features for which arrangements have already been consummated include visits to the Narraganset Electric Lighting Company, Brown & Sharpe Mfg. Co., the Providence Gas Company and selected textile and rubber plants. Entertainments will be a reception Monday evening, a men's luncheon Tuesday, a Rhode Island Clam Bake Tuesday evening and an informal dinner Wednesday. On Thursday, the party will visit the Newport Torpedo Station and will be afforded the unusual opportunity of seeing the torpedoes launched and visiting will also include an inspection of the shops, training station, the old battleship, Constellation and Newport itself.

Student Convention at Swarthmore

The second annual student convention of the Philadelphia Section of the A. I. E. E., held at Swarthmore College on Monday, March 8th, was an eminently successful continuation of last year's pioneer event. Two hundred and twenty-nine students of electrical engineering, from Delaware, Drexel, Haverford, Lafayette, Lehigh, Pennsylvania, Princetown, Swarthmore and Villa Nova, met for a convention run by themselves on lines quite like those of regular A. I. E. E.

After inspection of the laboratories, the morning sessions were opened by an address of welcome by Dr. Lewis Fussell, Professor of Electrical Engineering, who immediately turned the session over to E. D. Gailey, '26, Chairman of the Swarthmore College Branch. A varied program of four papers drew forth a lively discussion and absorbed the attention of all. This morning session comprised the following papers:

Recent Developments in Power Plants, Herbert Estrade, University of Pennsylvania, 1926

Electricity in Motion-Picture Theatres, F. G. Kear, Lehigh University, 1926

Electron Theory as Applied to the Discharge Tube, Irvin A. Travis, Drexel Institute, 1926

Some Recent Developments in the Incandescent-Lamp Industry, Homer A. Blake, University of Delaware, 1926.

Luncheon, as guests of Swarthmore, was followed by inspections