

the drift current of positive ions at the sheath edge. The high-frequency impedance of a plasma was discussed by K. S. W. Champion and S. C. Brown.

A cocktail party and banquet were enjoyed by a large company on Friday evening. Guest speakers were T. E. Allibone of Associated Electrical Industries in England, who discussed work in gaseous electronics being done in England, and W. Finkelburg of Siemens-Schuckert at Erlangen, who discussed similar work in Germany. The conference committee this year consisted of W. P. Allis, M. A. Biondi, S. Githens, W. R. Gruner, H. D. Hagstrum, E. O. Johnson, and L. H. Fisher, who as secretary, and as the New York University representative, was in large measure responsible for the excellent facilities and smooth working of the conference generally. To the extent that they are available, copies of the book of abstracts of contributed papers at one dollar each may be obtained on request from Professor L. H. Fisher, New York University, New York 53, New York. The conference for next year is to be planned by a committee under the continued chairmanship of W. P. Allis. The committee will also include J. D. Cobine, L. H. Fisher, H. Margenau, A. V. Phelps, and D. J. Rose.

Homer D. Hagstrum
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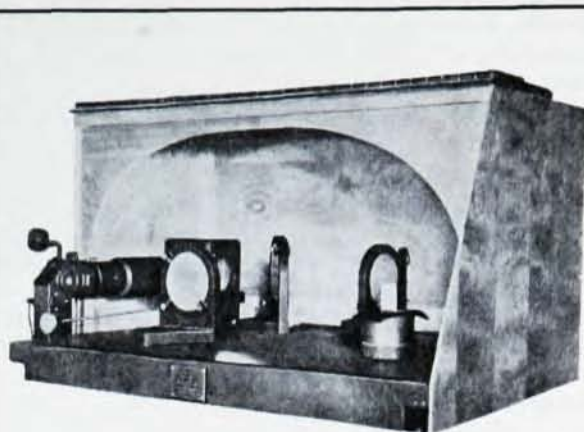
AAPT Summer Meeting

The 1954 summer meeting of the American Association of Physics Teachers was held on the University of Minnesota campus on June 28-30. In addition to the excellent series of papers, demonstrations, and panel discussions appearing on the program, the association witnessed the total eclipse of the sun, which occurred on the morning of June 30.

The morning meeting on Monday was devoted to the topics of effective demonstrations in physics and to laboratory testing. C. N. Wall, of the University of Minnesota, was chairman. It was pointed out in discussion and demonstrations by F. E. Christenson, St. Olaf College, that showmanship, careful planning, and time provided for students to reflect are essential co-requisites if demonstrations in physics are to be effective. Furthermore, demonstrations should be free from complicated components and should be direct. Use may be made of an oscilloscope, amplifier, or other units without explaining how they work, but stating that the units must be used in showing the demonstration. The materials should be stored so as to be easily available and in units as nearly ready to go as possible.

Haym Kruglak, University of Minnesota, compared performance, essay, and multiple choice tests in laboratory testing. He reported the performance test as the easier, the essay as the harder, and the multiple choice test as the least desirable for laboratory testing.

J. W. Buchta, University of Minnesota, presented a film strip giving the results of a very unique experiment in which he showed that phase velocity is greater than group velocity in a dispersive medium. This film



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strip may soon become available through one of the scientific apparatus companies. This was followed by the showing of several AAPT classroom films by V. E. Eaton of Wesleyan University.

On Monday afternoon AAPT met jointly with the American Physical Society, APS Vice President R. T. Birge of the University of California presiding. A group of very interesting and timely papers on astronomy and astrophysics was given with each speaker summarizing his field and giving the most recent information pertaining to his subject. The topics and speakers were: "Galactic Magnetic Fields" by W. A. Hiltner, Yerkes Observatory; "White Dwarfs and Degenerate Stars" by W. J. Luyten, University of Minnesota; "The Probable Age of the Earth" by T. L. Collins, University of Minnesota; "Radio Astronomy" by F. Graham Smith, Cambridge University.

Following the very interesting informative evening lecture, by Ed Ney, University of Minnesota, in which he summarized the work in cosmic rays to the present date, the societies attended the department of physics open house. The cosmic-ray, thermal diffusion, mass spectroscopy, biophysics, general physics, and x-ray laboratories were open. The Van de Graaff generator room and the 68 Mev proton linear accelerator building were also visited.

Tuesday morning was given over to ten-minute papers with Frank Verbrugge, Carleton College, presiding. Marsh W. White, president of AAPT, acted as moderator for a round-table discussion on methods of accomplishing the function and mission of AAPT. The objectives of the Association as set out in the constitution were read and studied with the viewpoint of finding means to augment them. Suggestions of methods for encouraging physics students, definite programs for the training of physics teachers, research in the teaching of physics, and cooperative efforts to encourage more high school students to study mathematics and physics were among the ideas discussed. Thomas H. Osgood, AAPT *Journal* editor, set forth the aim of the *Journal* as bringing out articles that have one or more of the following six purposes: educational, informative, pedagogical, reportorial, professional, and inspirational. It was suggested that certain people be invited, through the pages of the *Journal*, to explain how they teach particular areas of physics, also that the Association send literature and invited lecturers to institutions to help acquaint more students with physics and with the opportunities in the field of physics.

R. F. Paton, secretary of AAPT, presiding, introduced the symposium report of the Urbana ASEE Symposium on Physics in Engineering Education. The report was presented by J. G. Potter, A and M College of Texas.

Richard Sutton, Haverford College, presented a very informative and lucid demonstration lecture on "Tomorrow's Total Eclipse" at the dinner meeting on Tuesday evening, Marsh W. White presiding. This was followed by a lecture on "Processing Minnesota Taconite", by E. C. Davis, University of Minnesota.

The early risers on Wednesday morning witnessed the launching of the cosmic ray "Skyhook" balloon by General Mills Corporation. The process of filling the balloon and preparing it for ascension was found by many to be very educational. The sunrise was witnessed by all with enthusiastic anticipation for what was to follow in less than one hour. As 5:08 A.M. approached, the moon moved across the face of the sun. From partial eclipse to Bailey's beads, to the brilliant diamond-ring effect, and to totality formed a series of events that all who saw it can never forget. The beautiful pearly-gray pastel coloring of the corona with the coronal streamers stretching millions of miles from each side of the sun's equator and the coronal spikes at the sun's poles were clearly visible in the cloudless sky. A prominence was visible to the unaided eye at the 7 o'clock position during totality. The brilliant diamond-ring effect appeared again as the moon moved away from totality.

The association reconvened at nine o'clock for a round-table discussion on "The Preparation of College Physics Teachers", J. W. Buchta of the University of Minnesota as moderator. Participants on the panel were Russell M. Cooper (University of Minnesota), Thomas H. Osgood (Michigan State College), George Pake (Washington University), and Frank Verbrugge (Carleton College). This was followed by a report of the Northwestern University Conference on the Training of Graduate Student Assistants, presented by C. J. Overbeck, Northwestern University, with J. G. Winans, University of Wisconsin, presiding. The requirements and qualities of a good teacher that were stressed were knowledge of subject, enthusiasm for teaching, adequate time and inclination to accomplish the above, lucidity, and creativity. It was emphasized that the training of a teacher should not differ from the training of a research specialist. It was also pointed out that more concern must be placed upon giving guidance to the graduate assistant in his teaching program.

At the executive committee meeting T. H. Osgood was appointed on the U.S.A. National Committee of the International Union of Pure and Applied Physics. Interest was also shown in a plan to encourage conferences between engineers and physicists on the place of physics in engineering education. The association plans to hold the 1955 summer meeting of AAPT in June at Pennsylvania State University in conjunction with ASEE.

Glenn Q. Lefler

Eastern Illinois State College

IRE Nuclear Science Group

The Institute of Radio Engineers Professional Group on Nuclear Science held its First National Annual Meeting on October 6 and 7 at the Sherman Hotel in Chicago. More than two hundred registrants heard nineteen submitted and invited papers during the two-day meeting.

Highlight of the meeting was an address by L. R. Hafstad, director of reactor development for the AEC,