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Meetings

Gaseous Electronics Conference

The Gaseous Electronics Conference, which now has developed into something of an institution, was held in Schenectady, October 20–22, 1955. This was the Eighth Annual Conference in this by now classical field and it was this time sponsored by the American Physical Society with the Research Laboratory of the General Electric Company as host and co-sponsor.

The field of gaseous electronics developed into a distinct discipline of physics around the turn of the century and was given quite a large prominence by men like J. J. Thomson and J. S. Townsend. That the field is not yet exhausted from a physicists' point of view was evidenced by the number of papers presented at this conference. The main reason is perhaps that with the rapid progress of today's technology in, for example, vacuum technique and electronics, new and more efficient tools are put into the hands of the physicists and more detailed and thorough investigations of various aspects of the gaseous electronics can be made.

At the conference were represented 30 universities (27 from the US and 3 from foreign countries), 35 industries (32 from the US and 3 foreign) while 14 US government agencies had sent their representatives. The total number of registrants was 268, the largest attendance to this conference as yet. Of the foreign guests should be mentioned Dr. Elenbaas from the Netherlands and Professors Sayers and von Engel from England. The number of presented papers seems to increase from conference to conference and this year 48 papers were contributed.

Quite a number of subjects were discussed and there is hardly space in an article of this kind to mention all of them. Abstracts of the presented papers have been published in *The Physical Review* (November 15, 1955).

The symposia on breakdown phenomenon held at previous conferences seemed to have stimulated some interest in that particular phase of the field, as evidenced by the number of contributed papers dealing with breakdown mechanisms. Among the more noted contributors were L. H. Fisher and his associates at New York University and L. B. Loeb and his group from the University of California. Elastic collisions and mobilities of electrons and ions were the subjects of a fair number of the papers. Typical for the present day trend to leave as little as possible to the assumptions was the scrutiny that Biondi and Holstein (Westinghouse) had devoted to the reliability of Blanc's law

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for mobilities of ions in gas mixtures. It was rather consoling to find that for all practical purposes Blanc's law is quite reliable.

Excitations and phenomena in the afterglow have always interested the gaseous electronics physicist. The prominent contributor in this part of the field was J. Sayers, who was invited to talk about his ionic studies in the afterglow. No Gaseous Electronics Conference would be considered complete unless the subject of arcs was included. A. von Engel introduced that subject by talking about past and present ideas about cold arcs. The other noted speaker in this field was W. Elenbaas, Philips Research Laboratories, the Netherlands, who talked about the high-pressure xenon-mercury discharge.

J. Slepian (Westinghouse) made one of his rare appearances in recent years at this Conference and introduced the subject of magnetic field effects by talking about isotopic separation by magneto-ionic expansion. The last part of the conference was devoted to papers relating to the general aspects of the positive column and electron-ion plasmas.

The traditional cocktail-hour and banquet on Friday evening had an unusually large attendance which perhaps reflected the promise of a good after-dinner talk. The banquet speaker was W. H. Bennett from the Naval Research Laboratory, who gave a very interesting and stimulating account, illustrated with a movie, of his model experiments relating to auroral streamers in the magnetic field of the earth.

The chairman of the committee, who has been guiding this conference since its birth, was W. P. Allis. Also belonging to the committee, which can take quite a large credit for a well-organized meeting were L. H. Fisher, H. Margenau, A. V. Phelps, D. J. Rose, and last but not least the executive secretary, J. D. Cobine.

The new committee, elected to care for next year's conference, is W. P. Allis (Chairman), S. C. Brown, J. D. Cobine, L. Goldstein, H. Margenau, D. J. Rose, and A. V. Phelps (executive secretary). Next year's conference is planned to be held in Pittsburgh (Westinghouse).

Abstracts of the contributed papers can be had by submitting requests to J. D. Cobine, Research Laboratory, P. O. Box 1088, Schenectady, New York.

K. B. Persson
General Electric Research Laboratory

Molecular Quantum Mechanics

A Conference on Molecular Quantum Mechanics sponsored by the National Science Foundation and certain Texas industries was held at the University of Texas in Austin, December 7-9, 1955.

The principle subjects discussed were simple molecules (Griffing, Hjalmar, Kotani, Matsen, Pitzer, Sahni); computer and computer technics (Barnett, Nesbet, Roothaan, Scherr); intermolecular forces (Hirschfelder, Jansen, Kilpatrick, Mason); general theory