resultant complexities have stubbornly resisted solution. The theories expounded by the experts in this field are, therefore, surrounded by a haze of speculation, accompanied by far too little quantitative confirmation. Since the war there has been a rebirth of interest in these problems. Such a situation naturally calls for a conference.

Brookhaven National Laboratory served as host to over two hundred people for such a conference on October 27 to 29, 1948. With perfect autumn weather and the very excellent facilities provided by Brookhaven, the conference proved both pleasant and stimulating. Many fundamental problems of gas discharge were brought into clearer focus both in the discussions and in a review paper by L. B. Loeb. H. D. Hagstrum, in another review paper, discussed the ionization and dissociation of molecules by electron impact.

While no striking discovery was announced, solid researches, reported in the thirty-three contributed papers, covered the whole range of gas discharge phenomena, including streamer mechanism of spark breakdown, radio-frequency breakdown and discharges, the diffusion of electrons, ions, and metastable atoms, flash spectra, corona discharges, and so forth.

Much of the work reported in the conference employed pulse techniques and oscilloscopic observations, frequently in the microsecond range. These new tools offer great promise of identifying active processes in a given discharge, since the motions of electrons, ions, photons, and metastable atoms are usually characterized by a certain velocity. There seems to be a need for greater cleanliness in electrode surfaces. Too many phenomena can be ascribed to a "layer of oxygen." Greater purity in gases is also in order. Finally there is need for more clean-cut experiments in which one phenomenon or one process can be isolated from the many.

Physicists working in the gas discharge field have all suffered from the non-single-valued definition of "gas discharge." In order to remedy this situation and provide a more graphic term describing this field, L. B. Loeb suggested that the name *gaseous electronics* be adopted instead, and this was well received by the conference. The name implies that electrons and gases are involved, thus well characterizing the scope of the field. It is hoped that the high vacuum electronicists will not object to this encroachment. If they do, we need only to remind them of the major role played by gas rectifiers, thyratrons, and VR tubes in their circuits.

A program committee was appointed for a similar meeting next year, and announcement of its time and place will be made later in Physics Today. A copy of the manuscript of Professor Loeb's review paper as well as abstracts of the contributed papers may be obtained by writing to the Publication Department, Brookhaven National Laboratory, Upton, Long Island, New York. There is a fee of twenty-five cents. J.P.M.

## Loyalty

The Federation of American Scientists has announced the formation within its organization of a "Scientists' Committee on Loyalty Problems," with offices in Princeton, New Jersey, to help and advise individual scientists whose loyalty is under official investigation and to clarify issues underlying security and clearance problems.

"The committee," the announcement said, "will not 'defend' scientists under investigation, but will seek to obtain full and fair hearings by government agencies and Congressional committees, and fair treatment in the press."

W. A. Higinbotham is chairman of the committee, A. S. Wightman is secretary, and D. R. Hamilton treasurer. Other members are D. Bohm, R. Britten, R. R. Bush, Albert Einstein, L. P. Eisenhart, S. A. Goudsmit, M. S. Livingston, Stuart Mudd, H. D. Smyth, Lyman Spitzer, Jr., Oswald Veblen, and Irving Wolff.

The new committee's prospectus states that: "The problem of secrecy will be with us until we solve the problem of lasting peace. As long as the present state of international suspicion continues, there can be no simple solution to the problem of our security and there can be no full freedom of science. In particular, some scientific and technical information must be classified and protected from falling into the hands of unauthorized persons. The well-known activities of the Canadian spy ring exemplify the need for such protection. However, the fact that scientists are involved in 'sensitive security areas' makes them particularly vulnerable to unnecessary and unreasoned attacks on the basis of their loyalty. Since this problem of scientists is only part of a much broader problem, the assurance of justice to scientists now may help to assure similar fair treatment to other individuals or groups which will become similarly involved. . . . The elimination of . . . injustices will in no way jeopardize national security and will, in fact, increase it by removing the atmosphere of dread which smothers work, drives scientists from government research, and destroys much of the vitality of science."

## RDB Committees

Three new committees have been appointed by the Research and Development Board of the National Military Establishment. The first, the Special Committee on Technical Information, to promote effective exchange of research and development information among NME departments, is headed by Detlev W. Bronk and also includes John E. Burchard, Herman Henkle, F. L. Walker, Jr., W. H. Leahy, Bernard A. Schriever, and Norman T. Ball, executive director. The second is the Scientific and Synthetic Analysis Committee, whose duties are to examine all aspects of military activity to determine where scientific methods, particularly those using high speed computers, can be employed to improve present procedures. Robert L. Stearns was named chairman. Luis de Florez and L. K. Marshall also serve on the committee and representatives of the Army, Navy, and Air Force are to be appointed. The third, the Committee on Plans for Mobilizing Science, will study the problem of organizing scientific resources in the event of a national emergency. Its chairman is Irvin Stewart and its membership includes James Phinney Baxter, John T. Connor, and Willard Machle.