Frequency Arrays. By H. E. Soper. Cambridge, University Press, 1922. 48 pp.

This booklet gives a very condensed treatise upon the advantages to be gained in the use of "symbols bearing an objective or logical significance" in the study of statistical and other distributions. No attempt has been made to establish any new results, but any knowledge of the mass of results treated here, and the fact that the treatment is restricted to less than fifty pages, should produce faith in anyone in the power and possible conciseness of the method of attack recommended by the author.

No one is advised to try to read this booklet who is not already familiar with most of the work and results of Pearson and his disciples, for it contents itself for the most part with the very concise reproduction of most of the most important results of Pearson and others, with practically no explanation of those results. This is no criticism, of course, because the book is designed for the use of the advanced student who is interested in research in statistics and who desires a very concise method of attack. The book then will be of little or no use in any undergraduate course in statistics, even as a reference book. For this reason it would perhaps be well for the reviewer to limit further account to a mere list of some of the most important topics included:

Moment arrays.

Binomial, Poisson, Gaussian, exponential and gamma types of frequencies; including the simple, multiple and general Gaussian distributions, the correlation surface, multiple correlation, Gaussian derivatives, Thiele derivatives, tetrachoric functions.

Sampling without replacement and partitioning a limited population.

Hypergeometric and kindred frequencies; including moments of hypergeometrical frequencies and of the double hypergeometrical series of frequencies.

Geometrical distributions; Samples of vectors; Random migration; including polar symbols in two dimensional distributions, circular distributions and vector sampling, moments of tensors of circular distributions, the symmetrical Gaussian, circular area, uneven distribution of points on a circle, single points, non-circular distributions and vector sampling, polar symbols in three dimensional distributions, spherical distributions and vector sampling, fortuities of resultant tensor when n randomly selected tensors are set in random directions in a space of s dimensions.

C. H. FORSYTH

Atomes et Électrons. Institut International de Physique Solvay. Rapports et discussions du Conseil de Physique tenu à Bruxelles du 1er au 6 avril 1921. Paris, Gauthier-Villars, 1923. 8 + 273 pp.

The International Institute of Physics was founded in 1912 by Ernest Solvay for the object of encouraging physical research. One of the means of accomplishing this object was the organization of international congresses, with a limited number of participants, meeting at Brussels from time to time.