

to be an intelligible introduction to basic methods in modern mathematical analysis as well as to the classic theory of convergence of series.

RALPH P. AGNEW

Miscellaneous physical tables. Planck's radiation functions and electronic functions. New York, Work Projects Administration, 1941. 7+61 pp. \$1.50.

In the first part of this volume of the well known W.P.A. series, values are given for the spectral radiancy of a black body, the rate of photon emission, and the indefinite integrals (from 0 to λ in wavelength) of the functions. These are tabulated at constant intervals of $\lambda \cdot T$ (wavelength multiplied by Kelvin temperature), the size of the intervals changing occasionally. Auxiliary tables give values of some of the preceding quantities as tabular functions of wavelength alone at a few definite temperatures.

The second part tabulates relativistically correct values of the following properties of an electron, as functions of its velocity (entered with constant intervals in fractions of c , the velocity of light): the energy, in units of the electron rest energy m_0c^2 ; the momentum, in units of m_0c ; the energy in electron-kilovolts; and the $H \cdot \rho$ values (ρ is the radius of a circle in which the electron would move if projected with the tabulated velocity normal to a magnetic field of H oersteds).

Each part of the volume was inspired by suggestions of well known scientists, as stated in the introductory discussions. The first part has been published previously in the February 1940 number of the *Journal of the Optical Society of America*. The introduction contains brief descriptions of the functions, examples illustrating use of and interpolation in the tables, a summary of the methods used in assembling or computing the entries, and a bibliography. In the major tables of the first part, first differences and second central differences are given for greater ease and accuracy in interpolation. A complication not met in purely mathematical tables exists here due to the fact that all the functions tabulated depend on measured physical constants: the velocity of light, Planck's constant, and electronic properties. The tables were based on the present best values of these constants, but are carried to extra figures. Directions are given for making corrections in case these are necessitated by newer values of the basic physical constants.

The tables are in the usual format of the W.P.A. series. They