The approach in most parts involves brief, cogent discussions and probably too little mathematics. However, the attempt is to establish a basic understanding and the discussions appear to be well designed for this. The early audio sections are followed by considerable emphasis on oscillators, amplitude modulation, frequency modulation, and television. Rounding out the ever present applications aspect, the final pages touch on transit time of and noise generation by electron motion.

The transistor treatment is to be commended on at least two features—the clear discussion of conduction in semiconductors (as accurate as quantum concepts without mathematical support allow) and the arrangement of transistor and vacuum-tube sections together under the several circuit types.

The author may be correct in suggesting that this book will be looked back at "with amusement" in twenty years. However by then the book's explanations will have contributed well to that difficult task—the transmission of technical concepts and of some understanding of them.

Atoms and Energy. By H. S. W. Massey. 174 pp. Philosophical Library, Inc., New York, 1956. $4.75. *Reviewed by Norman H. Nachtrieb, Institute for the Study of Metals.*

Written in 1953, this little volume was not published until three years later. One is inclined to wonder at the delay, since the useful life of a "popular science" book is usually brief. This may be the fate of Professor Massey's *Atoms and Energy;* well written, it nevertheless has a topical flavor. The recent discoveries of the anti-proton and the neutrino have already dated it, thanks particularly to the considerable speculation it devotes to the existence of the latter.

It is addressed to the layman, for whom it attempts to develop the basic concepts of the equivalence of mass and energy, nuclear forces, and elementary particles without resort to mathematics. In this it is remarkably successful.

An ambitious effort, it ranges over a much wider subject than its title implies. From a very excellent description of fundamental nuclear particles and nuclear binding energies it proceeds in logical fashion to a discussion of the energy release accompanying nuclear fission and fusion. The principles underlying slow and fast neutron piles are well described.

The fifth of its six chapters departs from the otherwise fundamental character of the book; its miscellany of topics includes the industrial, therapeutic, and diagnostic uses of radioisotopes, the commercial power potentialities of nuclear energy, and efforts at international control of nuclear weapons. A tendency to border on the political and moral aspects of nuclear military weapons seems out of context, however understandable and urgent. The bewildering state of high-energy physics with its plethora of mesons is the substance of the last chapter.