anomalous skin-effect. The phenomenon of superconductivity is brought up in the discussion of electron-lattice interaction at various stages of the article but is not discussed in detail.

There are few fields of physical research in which the observations are so critically dependent on the precise state and composition of the subject material as the "Thermal conductivity of solids at low temperatures," the topic handled in this volume by P. G. Klemens in a monumental treatise. As the author so aptly states at one point, "these observations yield a conflicting picture. . . ."! But this is not to disparage the article, which, although lengthy (more than 80 pages) and hard to digest at one sitting, is rendered so mainly by the complicated nature of the subject. The latter is graphically demonstrated.

Methods of measurement are disposed of rapidly in a brief introduction. The theoretical coverage is much more extensive than is the case for the companion chapters, and most (if not all) of the available experimental data are brought into the subsequent discussion. Separate sections are devoted to dielectric solids, the electronic component and the lattice component for metals and alloys, and superconductors. In the dielectrics section, the discussion ranges over lattice waves and the phonon gas, anharmonicity effects, scattering by static imperfections, paramagnetic solids, and liquids. For the metallic state, the major difficulty lies in the separation of the electronic and lattice contributions, each component playing a dual role of carrying and scattering agent. The author ably demonstrates both the substantial advances that have been made toward, and the difficulties that remain to limit, a full understanding of the problem. Although the situation for superconductors appears at first sight to involve only additional complications, it is probable that experiments in this area will go some way toward providing a means of achieving the desirable separation of factors.

The value of the references has been enhanced by a subject title for each one. This has been carried a stage further, namely, by supplying a brief abstract, in the "General references" at the end of the ensuing article by P. H. Keesom and N. Pearlman on "Low temperature heat capacity of solids." These authors favor the alternative style (also adopted by MacDonald) of achieving greater "readability" through less detailed (but quite adequate) coverage of theory and greater over-all brevity. (A full theoretical discussion appears in volume VII of the *Handbuch.*)

A useful section on experimental techniques precedes that on experimental results, which constitutes the major portion of the article. The lattice and electronic specific heats of the elements are dealt with in the framework of the groups of the Periodic Table, including a short discussion of the transition metals and their alloys. A section on "other sources of heat capacity" deals with superconductivity (fairly detailed), excitation modes (Schottky anomalies), cooperative phenomena, and size effects (surface contribution).

The volume as a whole will be of great value to all physicists engaged in solid-state research, and it is therefore most unfortunate that the price (about $18) is so prohibitively—even unreasonably—high. One hopes, too, that the many typographic errors will be eliminated from subsequent printings. If the long-suffering English language is subjected to occasional violations throughout, this is only the modern expectation. At least one new word—*definitory*—has been boldly invented; its discovery we leave as an exercise for the reader.

R. P. HUDSON
National Bureau of Standards

Eléments de Mécanique Quantique. Ph. Pluvinage. Masson, Paris, 1955. 547 pp. Illus. Cloth, F. 4600; paper, F. 4000.

This is a first course in quantum mechanics, which might be compared with a recent American book like Schiff's or one of more ancient vintage, such as Pauling and Wilson. The author does not go into any detailed exposition of the more fundamental and more philosophic aspects of quantum theory such as might be found in Bohm's book. His intent is rather to present the formal and technical aspects of the theory as clearly as possible.

On the whole, the treatment is traditional and does not contain many of the more recent methodological developments, although there is a short section on effective range theory and the Schwartz theory of the delta function. On the other hand, every discussion does contain nontrivial physical examples of modern interest. Each new area to be considered is prefaced by a discussion of its classical limit, a technique that makes for a very clear exposition.

The material covered includes one-dimensional motion, wherein the usual concepts of quantum theory, such as energy levels and reflection coefficients, are introduced and applied to the traditional examples—that is, harmonic oscillator, square well, and so on. Matrix methods and approximate procedures then follow. Three-dimensional problems involve energy-level problems, such as the hydrogen atom and scattering problems, spin, and the Zeeman effect. The final sections of the book are devoted to the many-body problem, being devoted principally to the theory of atomic spectra and diatomic molecules. The last chapter discusses radiative effects determined by correspondence-principle methods.

HERMAN FESHBACH
Massachusetts Institute of Technology

Faster, Faster. A simple description of a giant electronic calculator and the problems it solves. W. J. Eckert and Rebecca Jones. McGraw-Hill, New York, 1955. 160 pp. Illus. $3.75.

This excellent book which, as its subtitle states, is "a simple description of a giant electronic calculator and the problems it solves" should be of interest both to those familiar with computers and to those who would like to learn something about them. It describes the Naval Ordnance Research Calculator at Dahlgren, Virginia, in detail and in terms that should be understandable even to those not in the computer field. The book describes the logical and arithmetic structure of the NORC, its auxiliary units, built-in mathematical checks, maintenance, and how to program for it; there is also an excellent chapter on why such large and fast computers are needed.

The authors only once used the generally preferred word *computer* instead of *calculator* in referring to "the first large-capacity electronic computer" as the SSEC instead of the ENIAC! A second minor flaw is the omission of a bibliography for those who become interested in learning more about electronic computers.

WILLIAM W. YOUDEN
National Bureau of Standards

Cryptococcosis. Torulosis or European blastomycosis. M. L. Littman and Lorenz E. Zimmerman. Grune & Stratton, New York and London, 1956. 205 pp. Illus. $8.50.

This is a comprehensive review of what is known about cryptococcosis and its etiologic agent. The carefully edited text covers in a very readable manner all aspects of the disease in man and animals, with special emphasis on clinical matters and pathology. Also, the cultural and morphologic characteristics of the fungus, *Cryptococcus neoformans,* are presented in detail, with a clear treatment of laboratory identification and differentiation of the pathologic species.