range of current solid-state physics—and one on phase transformations in metals which well indicate the extreme complexity of real matter, and both the interest and the challenge of systems that are not ideally simple.

The introductory chapter, by Harvey Brooks, is particularly commendable, and supports the view that neither the pure scientist studying ideally simple materials nor the technologist with real complexities can be self-sufficient. What is now needed is another symposium with the interest reversed, to produce a book in which the engineer, *qua* engineer, writes for education of the physicist!

Microwave Principles. By H. J. Reich, J. G. Skalnik, P. F. Ordung, H. L. Krauss. 427 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1957. $8.75. *Reviewed by Charles Süsskind, University of California.*

This is an abridgement of *Microwave Theory and Techniques,* which the same authors published in 1954. A year after the original version appeared, this reviewer made a survey ("Microwave engineering: How a new course is adopted", *Journal of Engineering Education* **46**: 838–841, 1956) in which the book was shown to be one of the top three then used in American engineering schools offering courses in ultra-high-frequency engineering. (The other two were *Fields and Waves in Modern Radio* by Ramo and Whinnery and *Theory and Application of Microwaves* by Brownwell and Beam.) Nevertheless, the original version does not seem to have sold briskly enough to suit the publishers or the authors, and they have now issued a smaller book intended for use as a one-semester text for seniors, or as a quick review for practicing engineers, experimental physicists, and the like. According to the authors' own statement, the condensation has been accomplished largely by the elimination of mathematical details and the rewriting of waveguide equations and other vector relationships in scalar form. On the other hand, an appendix containing fifteen experiments developed at Yale over the years has been added, and there is some other new matrial. The resulting more compact book is sure to prove very popular with those among the large number of engineering schools (more than half) that the above-mentioned survey showed to offer no specific courses in microwave engineering at all, but which would like to include such a topic in their curriculum. The book will also serve as an excellent reference for any physicist, biologist, or chemist who would like to gain a general understanding of basic microwave techniques without necessarily mastering the detailed theory.

Elastic Waves in Layered Media (Lamont Geological Observatory Contribution No. 189). By W. M. Ewing, W. S. Jardetzky, F. Press. 380 pp. McGraw-Hill Book Co., Inc., New York, 1957. $10.00. *Reviewed by Arthur Beiser, New York University.*

Very often the experimental and theoretical methods of approaching a complicated problem start from differ-