of astronomers will cause no dismay either to them or to the knowing reader. This is a splendid book for the general reader and also the specialist, and in the author's words portrays "the slow strengthening of Man's intellectual grasp on the Universe in which he lives, the philosophical implications of the main discoveries".

Acoustical Engineering. By Harry F. Olson. 718 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1957. $13.50. *Reviewed by Robert T. Beyer, Brown University.*

To review an edition of any book of higher order than the first presents its special problems, especially when the book has been altered mainly by the addition of sections of new material, rather than by a complete revision. All the good points have already been praised, and the bad points have been damned, and the reviewer is tempted to limit his comments to the additional material, rather than to the work as a whole.

While the present volume does not bear the caption of a third edition, it is in fact, as pointed out by the author in the preface, the expanded follow-up of *Elements of Acoustical Engineering* which Dr. Olson published in 1940 and 1947, and which has been a standard work on the subject since it first appeared.

The contributions of Dr. Olson to the field of acoustical engineering have given him a vantage point from which to survey the field, and that he has done. However, the area of his contributions is also reflected in the choice of subject matter. One half the book is devoted to microphones, loudspeakers, and other airborne transducers, and to testing procedures involving them. In this field, the wealth of subject matter, sectional views of instruments, graphs, and equivalent circuits, make the book an invaluable tool.

The same is true for the sections on sound recording and reproduction, and on the use of dynamical analogies.

On the other hand, the amount of material on the ever-growing field of noise and noise control is very slight, while the chapter devoted to ultrasonics is little more than a list of ultrasonic engineering topics with nearly 100 references to bolster the section.

So far as the third edition is concerned, there is some new material in virtually every chapter, but the chief additions have been in the chapters on loudspeakers, microphones, and sound reproducing systems.

To the extent that acoustical engineering is a study of sound reproducing systems in air, with all the associated problems, this book is a complete text of acoustical engineering.

Theories of Nuclear Moments. By R. J. Blin-Stoyle. 89 pp. Oxford U. Press, New York, 1957. Paperbound $1.40. *Reviewed by M. E. Rose, Oak Ridge National Laboratory.*

With the exception of minor additions this book is identical with the very fine *Reviews of Modern Physics* article on nuclear moments by the author which ap-

peared recently. The main emphasis is, of course, on magnetic dipole moments since both the experimental data and the theoretical literature pertaining thereto are considerably more extensive than that concerned with electric quadrupole moments. Of course, the latter receives adequate attention as well. As the title indicates, the discussion is primarily concerned with efforts to account for the measured moments in terms of nuclear models. This discussion is quite complete but, like the review article, is confined to qualitative descriptions of the models and their pertinence for the problem of calculating nuclear moments. For the reader who wants to learn, with a minimum of effort, what has been accomplished and how it has been done, this treatment of this subject is recommended without qualification. The material is very well organized and clearly presented. For the reader who approaches the subject for the first time, it may be necessary in some cases to fill in the author's discussion, which is rather terse in spots, by references to the original literature. In this connection it may be noted that the bibliography is entirely adequate if not complete.

Quite properly the major part of the discussion is concerned with the individual particle model including extensions thereof (intermediate coupling and configurational mixing) and the unified model. Attention is given to exchange effects and velocity dependent forces in proportion to their importance in current theories. The table of moments for odd mass nuclei given in an appendix should be very useful. On the other hand, the discussion of angular momentum theory, given in another appendix, is perhaps too concise to be very illuminating. It is understandable that this section should be so brief in view of the fact that an adequate treatment of the subject would entail a discussion as long and as detailed as that comprising the main body of the book.

Without any doubt this monograph is a welcome addition to the library of nuclear structure and it is recommended to the attention of all those interested in that field.

Elements of Gasdynamics. By H. W. Liepmann and A. Roshko. 439 pp. John Wiley & Sons, Inc., New York, 1957. $11.00 (College Edition $9.25). *Reviewed by R. B. Lindsay, Brown University.*

One of the interesting developments of modern high-speed aerodynamics is the increased preoccupation of the aeronautical engineers with the flow of compressible fluids in the neighborhood of solid bodies. Problems of similar nature are encountered by the missile builders and by those who study the effects of large-scale explosions. It is therefore not surprising that during the past twenty years there has been a rebirth of interest in those parts of the theory of the flow of fluids originally stressed in Rayleigh's *Theory of Sound*. This subject has now been rechristened gasdynamics.

The present volume (one of the well known GALCIT Aeronautical Series) is an outgrowth of the *Introduc-*