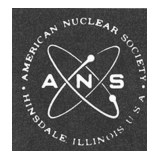


BOOK REVIEWS

Selection of books for review is based on the editors' opinions regarding possible reader interest and on the availability of the book to the editors. Occasional selections may include books on topics somewhat peripheral to the subject matter ordinarily considered acceptable.



UNIQUE AND COMMANDING

Title Radioisotopes for Aerospace, Part 1: Advances and Techniques

Editors John C. Dempsey and Paul Polishuk

Publisher Plenum Press, 1966

Pages xxx + 439

Price \$20.00

Reviewer S. H. Turkel

As the authors state in the Foreword, this book is a result of the growing conviction that the advances in isotope technology and the rapid expansion of isotope applications in aerospace merited the bringing together, for perhaps the first time, the basic essentials of this subject with the important sources, people, and potentials of this relatively new industry. This book, the Proceedings of a Symposium on Radioisotope Applications in Aerospace is, I believe, unique and commanding for its faithfulness in reproduction, its clarity and comprehensiveness in treatment and coverage, and its forecasting of the significant and critical elements of this vast subject.

This volume contains 26 papers surveying recent advances and techniques applicable to radioisotope applications in aerospace. Part 2 (to be published) will contain papers on systems and applications. Part 1 surveys the latest developments in detectors, electronics, radioisotope sources, and nondestructive testing, and the applications of radioisotopes to measurement problems and in advanced research and development work. The first group of papers gives a comprehensive look at the

state-of-the-art in nuclear detectors with emphasis on devices rugged enough for aerospace use, such as semiconductor detectors and a high temperature photomultiplier tube. An important paper on radiological health problems is included with papers covering radioactive sources, compact flash x-ray systems, several ways of measuring wear and corrosion with isotopes, and some techniques useful for planetary analysis.

As nuclear energy produced an inspiring breakthrough barely a generation ago, so this symposium and its remarkable account also represent a pioneering "first," comprehensively covering the basic principles, techniques, and applications of the use of nuclear radiation in aerospace. Previous attention had focused mainly on radiation effects upon materials, but here a new industry, still in its infancy, is admirably described and thoroughly treated. The care and clarity in writing of all the contributors have produced a fine report. It is to be highly recommended for reading by those individuals already in some aspect of the radioisotope industry, and those unacquainted with but interested in the techniques and applications of radioisotopes and the industrial operations of aerospace organizations utilizing them.

S. H. Turkel (MS Physics CCNY, 1934) is a Technical Assistant at North American Aviation Company, Autonetics Division, Anaheim, California. At ANL (1943-46) he worked on reactor and neutron physics, experimental physics, and the determination of cross sections and other physical constants. Other broad experience was acquired at Oak Ridge, Johns Hopkins, Northrop, General Electric, Hughes Aircraft, and Aerospace Corporation.

MISLEADING TITLE?

Title Physics of Industrial Radiology

Editor R. Halmshaw

Publisher American Elsevier Publishing Company, Inc., 1966

Pages viii + 498

Price \$20.00

Reviewer Jere Austin

It would be unfortunate if this book should miss its intended audience in the United States because of the word *Radiology* in the title. Though technically correct, as the author points out, and he is backed up by our own unabridged dictionaries, United States custom seems to limit the word "Radiology" to the uses of radiation in diagnoses and cure of diseases. Industrial techniques of radiography, fluorography, xerography, etc., are, properly, branches of the science of radiology which can be divided into industrial and medical radiology. We in the United States would do well to adopt this nomenclature for the sake of clarity in communication and for possible benefits to be derived in information retrieval. One can visualize this title being indexed under *Radiology* and thus being overlooked by humans or machines searching for *Radiography*. Meanwhile, it is to be hoped that the word *Industrial* in the title will be sufficient to catch the notice of those whose business is industrial radiography in its various forms, for it will be a valuable addition to the radiographer's shelf.

Mr. Halmshaw is a well-known contributor to US journals. He is listed as Editor, though it is obvious that he has written the largest part of the book. His other writers are