BOOK REVIEWS

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

Reflections of a Physicist

Author Anatole Abragam

Publisher Oxford University Press, New York (1986)

Pages 159

Price $22.95

Reviewer Mary G. White

The collection of essays by Anatole Abragam, entitled *Reflections of a Physicist*, contains not only remarks made by a remarkable scientist, but also a group of statements and questions concerning why the technical mechanics of science work the way they do. His purpose in the collection of these particular essays and papers was to respond to a colleague's suggestion; the documents are mostly general in nature for less technical readers. We should be most grateful for the publication of this collection. It is a powerful, small volume loaded with philosophical questions and provoking discussions on subjects such as the primary difference between fundamental and applied research being the "intent" of the work of the scientist, i.e., the choice of the problem to be addressed (whether the aim is to understand the laws of nature or eventually to produce a useful device); Big Science versus Little Science, including a discussion of the role of computers; issues concerning trusting scientists with the "management" of science; the vast publications explosion and problems created; questions related to whether scientific research should be a lifetime job; and other problems due to the rapid development of science. Also included in Abragam's book are his "sketches" of other physicists and two interesting documents he authored on NMR (nuclear magnetism), his special research field.

Abragam discusses the integration of physics in cultural and educational aspects of life, the requirement for training and talent in research, the use of French in scientific communication, whether science should be planned, and "more power to imagination" writings that are fascinating and enervating. One is at once profoundly respectful of his ideas and yet frustrated by how to relate to such suggestions and philosophies in the present-day funding arenas.

The general nature of most of the material in the volume makes it valuable reading for students and researchers of all scientific disciplines who are interested in the philosophical issues pertaining to scientific research and the role of certain physicists who have participated in extending the barriers of "known" science to new regions.

Mary G. White recently completed a 30-year career of federal service, most recently serving as technical measurements and quality assurance manager for the uranium mill tailings project of the U.S. Department of Energy (DOE). She also held positions as DOE program manager for the DOE Technical Measurements Center, the Grand Junction Remedial Action Program, and the Formerly Utilized Sites Remedial Action Program. She has served on national program Blue Ribbon advisory panels and has chaired DOE technical task forces. White recently was appointed a senior research associate in the nuclear and energy engineering department, University of Arizona, Tucson.

Radwaste '86, Proceedings Volume of a Conference on the Treatment and Containment of Radioactive Waste and Its Disposal in Arid Environments

Editor L. C. Ainslie

Publisher Atomic Energy Corporation of South Africa, Ltd., P.O. Box 582, Pretoria, 0001, Republic of South Africa (1986)

Pages 1043

Price $25.00

Reviewer Konrad B. Krauskopf

This huge volume contains papers presented at South Africa's first international conference on the disposal of radioactive waste. The development of nuclear energy in South Africa has followed a sequence different from that in most countries; a general area for the disposal of waste was