

atomic physics, and a description of the static properties of nuclei. In Chapter 3 are the major types of particle accelerators. The characteristics of a typical machine of each variety are tabulated. Chapters 4 and 5 are devoted to experimental instruments and methods. This is a very complete summary. One minor objection to this section is the inclusion of rather complex diagrams of apparatus from the literature without sufficient accompanying explanations. The next two chapters are an introduction to radioactivity and nuclear reactions. Chapter 8 is a discussion of systematics and the general characteristics of nuclear forces. A chapter then is devoted to the liquid-drop model and fission.

Before the development of nuclear theory, there is an introduction to quantum mechanics that should prove helpful to the student at this point. Some of the topics in nuclear theory that are then included are the major models, nuclear moments, radiative transitions, alpha and beta decay. The last two chapters are devoted to the theory of nuclear reactions and nuclear forces.

Perhaps the most outstanding feature of the book is its completeness. The arrangement of material is, for the most part, very good. There is a set of problems at the end of each chapter that are designated according to their complexity. The book in general is well referenced, and a list of these references is included at the end of each chapter.

In summary, *Nuclear Physics* should be welcomed by those teaching a course in the subject, since there are few textbooks written at this level that are so comprehensive and lucid. Others involved in nuclear physics should be equally pleased to have this as a reference book, since it brings together a vast amount of up-to-date information on the subject.

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Books Reviewed in

The Scientific Monthly

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Exploring Mars, Robert S. Richardson (McGraw-Hill). Reviewed by Thomas S. Gardner.

Soil, G. V. Jacks (Philosophical Library). Reviewed by C. E. Millar.

The Origins of Psychoanalysis, Marie Bonaparte, Anna Freud, and Ernst Kris, Eds. (Basic Books). Revised by Robert R. Holt.

Public Education under Criticism, C. Winfield Scott and Clyde M. Hill, Eds. (Prentice-Hall). Reviewed by John R. Mayor.

Suicide and Homicide, Andrew F. Henry and James F. Short, Jr. (Free Press). Reviewed by Dorothy S. Thomas.

Cryptogamic Botany, Gilbert M. Smith (McGraw-Hill). Reviewed by H. L. Blomquist.

Forest Entomology in Hawaii, Otto H. Swezey (Bernice P. Bishop Museum). Reviewed by F. R. Fosberg.

Polio-myelitis, World Health Organization (WHO). Reviewed by Robert Ward.

The Nihilism of John Dewey, Paul K. Crosser (Philosophical Library). Reviewed by James P. Warbasse.

50 Jahre Arzneimittel Forschung, C. L. Lautenschläger (Thieme). Reviewed by Glenn L. Jenkins.

A Field Guide to Animal Tracks, Olaus J. Murie (Houghton Mifflin). Reviewed by Frank A. Pitelka.

How to Know the Minerals and Rocks, Richard M. Pearl (McGraw-Hill). Reviewed by Victor T. Allen.

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Aspects of Deep Sea Biology, N. B. Marshall (Philosophical Library). Reviewed by Joel W. Hedgpeth.

The Micmac Indians of Eastern Canada, Wilson D. Wallis and Ruth Sawtell Wallis (Univ. of Minnesota Press). Reviewed by Matthew W. Stirling.

Laboratory Instrumentation in Psychology, William W. Grings (National Press). Reviewed by Lester N. Recktenwald.

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Man's Mastery of Malaria, Paul F. Russell. Oxford Univ. Press, New York-London, 1955. 308 pp. \$6.

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Applied Thermodynamics. Formerly *Heat Power*. Earle B. Norris, Eric Therkelsen, and Clarence E. Trent. McGraw-Hill, New York-London, ed. 3, 1955. 490 pp. \$7.50.

The Structural Relations of Natural Products. Being the First Weizmann Memorial Lectures, December, 1953. Robert Robinson. Oxford Univ. Press, New York-London, 1955. 150 pp. \$4.

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Blutgerinnungsfaktoren. Band I. Erwin Deutsch. Deuticke, Wien, 1955. 298 pp. DM. 42.

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European Firearms. J. F. Hayward. Philosophical Library, New York, 1955. 53 pp. \$7.50.

Merchant Ships: World Built. 1955 volume. De Graff, New York, 1955. 264 pp. \$5.

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publishers or agency sponsoring the publication.)

Annual Report, 1954, of the Twentieth Century Fund. The Fund, New York, 1955. 62 pp.

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