of general principles to specific situations. The book is not limited to classical electricity and magnetism but devotes some attention to relatively recent developments, such as semiconductors, wave guides, and transistors.

A serious drawback from the textbook viewpoint is that no problems for student solution are included. The most serious omission of subject matter is that of the thermoelectric phenomena. The reader is left with the impression that the treatment of electricity is broad rather than deep and that, in fact, the discussion of many topics is superficial. This is an expected consequence of the attempt at covering such a wide range of topics.

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The World of Learning, 1956. Europa Publications, London, ed. 7, 1956. 1064 pp. $18.50.

This widely useful reference volume gives information on educational, technological, and cultural institutions in more than 80 countries. For each country, information is given about learned societies and research institutions (names, addresses, publications, principal officers, number of members, and sometimes names of members); libraries, museums, and art galleries (names, addresses, size and nature of collections, publications, names of officers, and sometimes brief historical descriptions); colleges and universities (names, locations, chief officers, enrollment, and sometimes names of professors.

As is inevitable in a book of such scope and for which the information had to be collected from so many sources, the information varies from entry to entry and is not always complete. The new, seventh, edition is, however, more complete than its predecessors. It also includes an introductory section on international agencies—UNESCO, the International Council of Scientific Unions, and others. The book is an excellent reference source on the world of learning, particularly for countries other than one's own.—D. W.

Rayonnements de Particules Atomiques, Electrons et Photons. Andre Berthelot. Masson, Paris, 1956. 192 pp. Illus. F. 1800, paper.

A book reviewer usually gets some help when he starts to write his review from the author himself. It is customary to start a book with some kind of foreword written by the author himself or, at least, a preface written by somebody else. None of these is given here and, therefore, the reviewer has to start from scratch. However, on opening the volume, the first page indicates that it is obviously a textbook, a textbook designed primarily for a graduate course. Its title covers a rather wide range, and a possible English equivalent could be *Introduction to Scattering Phenomena.* In trying to find some similar book in the American literature, I looked in vain. It would correspond to something like an introduction to atomic collisions, or an introduction to nuclear physics, or a cross between the two.

In 12 compact chapters there is an amazing amount of material, some of it perhaps even too condensed, but nevertheless it offers us a very interesting introduction into the subject. The chapter headings are as follows and in this order: "Review of some generalities"; "Theory of elastic corpuscular collisions"; "Generalities on atoms in movement"; "Variations of the state of charge of light atoms in movement"; "Slowing down of light atomic particles"; "Ionization produced by atomic particles in movement"; "Range of light atomic particles"; "Coulomb interaction of light atomic particles with nuclei"; "Slowing down of fission fragments"; "The electrons: general considerations and theoretical results"; "The electrons: experimental aspects"; "The photons."

The treatment is essentially experimental. There are a certain number of theoretical expressions given but without any derivations. The experimental material is illustrated very amply with many curves and other illustrated material. This illustrated material is more often than not limited to the presentation of the results with relatively little indication about the method used for achieving the results.

More often than not the student who wishes to find out how the results have been achieved will have to find it from the literature which is reasonably well quoted in the references at the end of the chapters. The words "reasonably well" indicate that not all chapters have references; some chapters which are relatively long do not have references at all. The best documented chapters are those on the slowing down of light atomic particles and the two chapters on the electrons. These three chapters take up two-thirds of all the references. Five chapters have distributed among them another third of the references, whereas four chapters do not have any references at all. The choice of the references is somewhat uneven. In areas with which the author is quite familiar, they are quite up to date and well chosen. In other areas with which the author is probably less familiar, they are sometimes surprisingly old references, and no attempt is made to make an up-to-date review.

Nevertheless, the book is a very interesting attempt at an introduction into collision physics, and I am sure it will be useful not only to the French graduate student but also to the American student who is willing to work on his French and get, in spite of the language barrier, a quick introduction into this field. In fact, it may be worth while to recommend this book as a useful source material for qualifying French language examinations for Ph.D. students. The format of the book is excellent; typesetting and the presentation of the figures are very well done.

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Books Reviewed in The Scientific Monthly, January

The Exploration of Mars, W. Ley and W. von Braun (Viking). Reviewed by T. S. Gardner.

Earth, Sky and Sea, A. Piccard (Oxford Univ. Press). Reviewed by I. E. Wallen.

Diseases of the Endocrine Glands, L. J. Soffer (Lea and Febiger). Reviewed by J. T. Velardo.

Stratigraphical Palaeontology, E. Neaverson (Clarendon Press). Reviewed by E. W. Berry.

The Human Heredity Handbook, A. Scheingeld (Lippincott). Reviewed by H. H. Smith.

Surgical Treatment of Penetrating Wounds of the Heart, Pericardium and Mediastinum, N. I. Grigor'ev (State Publishing House of Medical Literature, Moscow). Reviewed by S. A. Corson.

The Psychology of Occupations, A. Roe (Wiley; Chapman and Hall). Reviewed by L. E. Tyler.

A Scientific Sampler, R. Stevens, H. F. Hamacher, A. A. Smith, Eds. (Van Nostrand).

Proceedings of the Third Berkeley Symposium on Mathematical Statistics and Probability, vol. V, J. Neyman, Ed. (University of California Press). Reviewed by K. A. Brownlee.

Varieties of Human Value, C. Morris (University of Chicago Press). Reviewed by W. F. Dukes.

How to Make and Use a Telescope, H. P. Wilkins and P. Moore (Norton). Reviewed by F. K. Edmondson.

New Books

Indian Students on an American Campus. Richard D. Lambert and Marvin Bressler. University of Minnesota Press, Minneapolis, 1956. 122 pp. $3.

Beiträge zur Geschichte der Erkenntnis des Erdmagnetismus. Heinz Balmer. Sauerlander, Aarau, Switzerland, 1956. 892 pp. F. 31.10.

Separation and Purification. vol. III, pt. 1 of *Technique of Organic Chemistry.* Arnold Weissberger, Ed. Interscience, New York, ed. 2, 1956. 873 pp. $17.50.

The Land Called Me. An autobiography. E. John Russell. Allen & Unwin, London, 1956. 286 pp. $5.75.