of how he describes a disease will be helpful to those who want to write adequate and readable descriptions of medical entities. The chapter on therapy emphasizes the need for detailed instruction of patients and for a definite order to discontinue all previous medications. The sections on contact dermatitis, the medicolegal aspects of occupational dermatoses, and the treatment of dermatitis venenata are particularly well done. Especially instructive is a hypothetical case presentation that sets forth in detail an interview in which the nature of the dermatitic process is explained to the patient and the latter's cooperation is enlisted in ferreting out the contact irritant.

Insofar as possible, the former dermatological classification based on type of cutaneous manifestation has been replaced by one based on causative agent. The coverage of metabolic skin diseases is six times as extensive as that in the initial printing of the tenth edition in 1939. The doubling of space devoted to embryology of the skin accords with the interest manifested in this subject at the annual meetings of the American Academy of Dermatology and Syphilology in December 1956.

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Beiträge zur Geschichte der Erkenntnis des Erdmagnetismus. Heinz Balmer. Sauerländer, Aarau, Switzerland, 1956. 892 pp. Illus. DM. 30.

Even before starting his studies at the University of Berne, Switzerland, the author was interested in old scientific illustrations and in biographies of scientists. He selected geography as his major field, the history of Switzerland and physics as his minor fields. A first version of the present book was accepted in 1953 as his Ph.D. thesis.

In the first part of the book (pp. 27–230), the author presents highlights of writings on terrestrial magnetism, starting with selected items from Chinese writings of about 2000 years ago and ending with publications of about 100 years ago. In this section he includes a discussion of the history of technical terms and instruments related to terrestrial magnetism—for example, magnets, the compass and the directions marked on it, and magnetic declination and inclination. The last 16 pages of this section contain historical information related to observations of changes in the direction of the magnetic needle in space and time and to suspected effects of auroras and of oxygen in the atmosphere.

In the second part of the book (pp. 231–520), the author gives extensive selections from writings by Galilei, Mercator, Kepler, William Gilbert, A. von Humboldt, and others. He uses German translations if the originals are in a different language. The third section (pp. 521–579) deals with three special subjects: the myth of the magnetic mountain; ideas which, at the time of Galilei, foreshadowed the magnetic telegraph; and publications on terrestrial magnetism written in Switzerland between about 1500 and 1850. This section includes historic information on sundials. Finally, the author gives a detailed bibliography and biographies of persons mentioned in the text. An author index and a subject index conclude the book.

This book is recommended reading for anyone interested in the history of natural sciences. The 45 illustrations include reproductions of old cuts showing magnetic instruments, especially compasses, and old maps related to problems of terrestrial magnetism—for example, a map by von Humboldt indicating the earth's magnetic field for 1600, 1700, 1800, and 1830, and one by Halley for 1702. Frequently the author includes short discussions of problems which are only distantly related to terrestrial magnetism. Extensive parts of the book are of greater interest to historians than to students of terrestrial magnetism. For example, the author points out that Columbus, on his first voyage, realized, from comparing the direction given by the compass with that obtained from star observations, that they show a difference which changes gradually between Europe and the West Indies; on his second voyage he used this information to determine the approximate position of his ships. On the other hand, of interest to students of terrestrial magnetism are detailed reports on the changes of the earth's magnetic field in course of time, and historic information on attempts to locate the magnetic poles.

The book contains a large amount of historical information, but no modern concepts are discussed. Although probably few will want to read it from cover to cover, everyone interested in the history of science will find interesting sections in it. Typography and reproduction of figures are good.

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Progress in Cosmic Ray Physics. vol. III. J. G. Wilson, Ed. North-Holland, Amsterdam; Interscience, New York, 1956. 420 pp. Illus. $10.50.

The study of cosmic rays has advanced so rapidly in the last decade that it has become impossible even for the specialist to keep up with the many papers published in physics journals in various countries. Also the subject of cosmic rays has now been subdivided into many specialized aspects, some of them dealing with the nuclear physics problems of high-energy particles, some with the origin of cosmic rays and their distribution near the earth and in the universe. Inevitably this has involved an ever-increasing group of physicists in the cosmic-ray field,—on the one hand, nuclear physicists working on new types of elementary particles with high-energy accelerators, and, on the other hand, astrophysicists and astronomers who are concerned about the phenomena that occur in the atmosphere of stars and in the interstellar space where acceleration of cosmic rays probably takes place.

The need has therefore been great for review articles which summarize the current state of knowledge in a certain field of cosmic-ray investigations. Under the capable editorship of J. G. Wilson of the University of Leeds, several volumes have been published containing contributions by outstanding specialists which summarize the state of research in their field. The present volume, the third in this series, contains four chapters. K. Greisen of Cornell University discusses experiments, their interpretation, and the theory of the so-called "extensive air showers," phenomena which are produced by cosmic rays of extremely high energies, between 10^{14} and 10^{18} electron volts. In complicated nuclear and electromagnetic interactions the original particle produces at lower altitudes in the atmosphere often millions of secondary particles which will hit the earth like a shower over an area of about 100 yards' radius; hence, the name.

The second chapter, written by H. S. Bridge of Massachusetts Institute of Technology, summarizes present knowledge of unstable elementary particles with mass between the electron and the proton (the mesons) and with mass greater than that of the proton (the hyperons). These particles are all produced in high-energy nuclear interactions of cosmic rays, either with atoms in the atmosphere or, in this case, with atoms in photographic plates which are used to detect these events. It is thought that the problem of nuclear forces is closely tied up with the nature of these particles.

The third chapter by R. W. Thompson of Indiana University discusses yet another group of unstable particles observed in cosmic radiation, namely, those carrying no charge. They too play an important part in the theory of nuclear forces.

The last chapter by G. Puppi of the University of Bologna considers the problem of cosmic rays in the atmosphere and investigates what happens to the cosmic-ray energy which enters at the top of the atmosphere. Puppi shows that a certain fraction of the energy goes to