though the present book constitutes a good introduction to the short-range problems, it gives me the impression the long-range problems, for the time being at least, are almost a monopoly of the science-fiction writers.

° ° °

L. Marton is an electron physicist with the National Bureau of Standards. He is engaged in the international relations aspects of science.

Nature of the physical world

THE CHANGELESS ORDER: THE PHYSICS OF SPACE, TIME AND MOTION. Arnold Koslow, ed. 328 pp. George Braziller, New York, 1967. $7.50

by EUGENIE V. MIELCZAREK

The changeless order, the nature of the physical world, has fascinated Man since his emergence from a lower form. Central to the development from fascination into physical science has been Man's attempt to define and relate the concepts of space, time and motion. In this book Arnold Koslow, a member of the philosophy faculty at Brooklyn College, traces the development of ideas central to mechanics, electromagnetism, quantum theory and the more general problem of the development of conservation laws. The contents are organized into two parts: Space, Time and Motion, and Conservation. The reader progresses from the Greek investigations, through the observations of Galileo and Issac Newton, to Mach's innovations, to our present understanding and its limitations as represented by Albert Einstein, Eugene Wigner and others.

Part I commences with selections from Plato on space and Aristotle's discussion of motion and time. Excerpts from Galileo and Newton and Koslow's introductions focus the reader's attention on the concept of inertia. Gottfried Wilhelm Leibniz, Immanuel Kant and Leonhard Euler are also included. Ernst Mach's rebuttal of Newton's discussion of absolute rotation is followed by excerpts from Einstein and Sciama. The coherence of this first part is excellent and the reader's understanding is heightened by prefaces by Koslow, who ably demonstrates his knowledge and enjoyment of physics. Part II, Conservation, includes James Joule, on the mechanical equivalent of heat; Michael Faraday, on conservation of charge, and Einstein, on conservation of mass. The concept of inertia reappears in a discussion by Von Laue on the inertia of energy. The climax of the book comes with two articles by Gerald Feinberg and Maurice Goldhaber, and Wigner on current attempts to formulate symmetry laws.

The book is good. Certainly, educated men will find it profitable and fascinating reading. It might also provide a basis for an undergraduate course on the history and philosophy of physics. However, the nonphysicist will probably be disappointed if he is unable to fully comprehend the last group of articles on current attempts to formulate symmetry laws. A phrase such as "four vector momenta" and a nonfootnoted figure in Wigner's article are not meaningful to the uninitiated.

The obvious solution is that we should do a more thorough job of explaining physics to nonphysicists; however, this is a task incumbent upon us and not upon those like Koslow who record and appreciate.

° ° °

The reviewer is an associate professor of physics at the George Mason College of the University of Virginia.

Planetary physics and our long-neglected satellite

AN INTRODUCTION TO THE STUDY OF THE MOON. By Zdeněk Kopal. 450 pp. Gordon and Breach, New York, 1966. $27.50

by S. FRED SINGER

The study of the moon has become a major national goal supported by multi-billion-dollar budgets; a great many people, including some scientists, are now beginning to pay attention to our long-neglected satellite. This volume represents an excellent approach to the study of the moon. Although the title is misleading; the book is much more than an introduction. Furthermore much of the material is oriented towards planetary bodies generally, with the moon merely as an example. By emphasizing basic methods and not just phenomena and facts, the author

NASA

GOCLENIUS CRATER. An unusual feature of this crater is the prominent rille that crosses its rim. This 40-mile-diameter crater is located at 10°S latitude and 45°E longitude. The three clustered craters, upper left, are Magelhaens, Magelhaenes A and Colombo A. This photograph was taken during the Apollo 8 flight.