one has only 387 pages of what is usually considered to be the proper content of handbooks, data of various kinds, equations, and similar information. The remaining one third of the book is a very comprehensive glossary of terms used in the whole field of missiles, including such slang expressions as "beeper" and technical terms such as "Schuler pendulum". The glossary could be interesting reading to a specialist in part of the field who wishes to learn the use of terms in other specialties. This reviewer, being an aerodynamicist, found most aerodynamic terms pretty well defined, but in a few cases there is vagueness, such as in the definition of "dynamic pressure", or omissions, such as "Bernoulli's theorem", which is defined as the theorem of probability but not of fluid dynamics.

The book is a difficult one to evaluate; it has excellent tables and charts such as those on the atmosphere, shock and vibration of airborne equipment, reliability of missiles, properties of materials of especial interest to the missile designer, vibration design, and structural formulae. Yet the sections on aerodynamics, electronics, propulsion, and space-flight data are too brief to cover anything more than the obvious and most elementary information. Some of the tables are self-explanatory but others are not. (For example, the one for apparent gravity, a term which is nowhere defined.) The limitations and reliability of the data is not mentioned. This paucity of explanation and lack of discussion will limit the use of this handbook to those in the know, who are apparently familiar with the special lingo of missile engineers. However, it is only for such people that the book is intended anyway.

Le Volcanisme Lunaire et Terrestre: Origine des Continents, des Océans et des Atmosphères, l'Energie géothermique. By Alexandre Dauvillier. 300 pp. Editions Albin Michel, Paris, France, 1958. Paperbound 1.200 fr. *Reviewed by S. A. Korff, New York University.*

In this book, Alexandre Dauvillier, professor at the College de France, discusses the volcanic history of the earth and moon. He starts out with a description of the fission of the earth-moon system, which resulted in a moon with no iron core but made of the material of the earth's mantle and crust. He then discusses the formation of craters on the moon, the vast majority of which he states to be volcanic rather than meteoric in origin. Owing to the absence of erosion agents, the present surface of the moon is that to which it cooled very long ago. He discusses the differences between the forms of the craters on the moon and that formed by a meteor in Arizona. The depression of the crater floor he attributes to subsidence.

Dauvillier discusses at some length the problems of geochemistry and the role played by what he calls the "salt cycle" and the cycle of superheated water. He believes that water is necessary for the development of volcanic action, and points out that virtually all continental volcanos are now extinct. He devotes paragraphs

to such matters as the amount of CO_2, the production of oxygen, the heat content of the earth, its probable internal temperature distribution, the effects of convective cells in the liquid core in producing a fairly uniform temperature, and the transmission of heat to the surface by conduction through the crustal layers. He points out the role of radioactivity in maintaining the interior of the earth at a high temperature. In the last chapters he deals with the relations of volcanic activity and orogenesis, and related problems.

The book is well written, and brings out many interesting points. It should certainly be read by all persons interested in the subject. Needless to say, it contains many controversial ideas, and many professional geophysicists will disagree with various interpretations. His point of view differs quite radically, for example, with that developed by Urey both about the origin and also about the subsequent physical-chemical history of the moon. Likewise his analysis of geomagnetic effects differs from that of Chapman. But his arguments are stimulating and interesting to follow, and this is a subject which is very new so that there does not exist a great body of data whose interpretation has met with widespread agreement.

1958 Heat Transfer and Fluid Mechanics Institute: Preprints of papers (U. of California, Berkeley, June 1958). 264 pp. Stanford U. Press, Stanford, Calif. $8.50. *Reviewed by C. M. Ablow, Stanford Research Institute.*

As is pointed out in the preface, this group of preprints is only to be considered a basis for discussion with final versions of the papers appearing in appropriate journals. However, the quality of the individual papers is uniformly high and their reproduction, by a photographic process, is clean and legible so that the volume presents an attractive collection of the latest work in its field.

Two of the papers are listed as survey articles. That of R. K. Landshoff gives a short but comprehensive coverage of the subject matter, theoretical and experimental tools, and fields of application of magnetohydrodynamics. The article serves best as an index to its extensive but well-selected bibliography.

The paper on the "Drag of a Sphere Moving in a Conducting Fluid in the Presence of a Magnetic Field" by K. P. Chopra and S. F. Singer exemplifies the use of dimensional analysis in magnetohydrodynamics, for various cases of conducting or magnetized spheres moving in a plasma are tractable when the equations can be simplified because some nondimensional groupings may be very large or small.

The partial differential equations of motion in a magnetic laminar boundary layer are shown to be reducible to ordinary equations in a similarity parameter in the paper by P. S. Lykoudis under rather severe assumptions on the nature of the fluid and its flow. The three magnetohydrodynamic papers do show the analytic side of the subject to be very difficult with