

ate level. Some teachers lay major stress on experimental techniques; others on the systematization and codification of data; still others are primarily concerned with the (few) basic ideas required to understand most nuclear phenomena. Although these three approaches are usually regarded as representing, in the order stated, three levels of increasing sophistication, there appears to be a growing tendency, at least according to this reviewer's limited observations, in the direction of emphasizing the third approach even as far down as the senior undergraduate level.

However, most elementary textbooks on nuclear physics include, primarily, the first two approaches with some timid and frequently apologetic stabs at embracing some of the more fundamental concepts. Prof. Green's book, intended for a one-year course, departs from convention in the sense that it attempts to separate and to lay equal stress on all three approaches to the field.

The first five chapters are devoted to a more-or-less conventional, although conscientiously up-to-date, review of the history and the techniques. The next four chapters are on the systematics of nuclear reactions, with especial emphasis on the conclusions which may be drawn concerning the shape of the nuclear energy surface. The last five chapters develop a number of the most important aspects of nuclear theory.

Although the book covers practically all subjects which one would want to consider in an elementary course, there is a very large variation, sometimes out of proportion to their intrinsic interest or importance, in the thoroughness of the discussions of different aspects. Thus, the chapters on techniques appear to be rather more detailed than is necessary for a general course, and the discussions of empirical nuclear mass values assume a somewhat disproportionate importance in comparison to the rest of nuclear physics. This last reaction stems in great part from the author's tendency to avoid drawing general conclusions before all of the facts are in; many of the fairly simple and obvious generalizations, which can be drawn at an early stage, would be helpful to the student for following and motivating the more detailed arguments.

The more theoretical chapters, despite some tendency towards formalism, are generally both simple and lucid. The reviewer was especially impressed with the author's demonstration of the general accessibility of almost all aspects of nuclear decay theory (chapter 12).

The usefulness of this volume as a textbook is greatly enhanced by an excellent and varied assortment of problems, adequate references, and index.

Your Career in Physics. By Philip Pollack. 127 pp. E. P. Dutton & Co., Inc., New York, 1955. \$2.75. Reviewed by A. M. Thorndike, Brookhaven National Laboratory.

There are not physicists enough today to cope with the many technical and scientific problems that require their special training. *Your Career in Physics* is an

attempt "designed especially for boys and girls of high school age" to give some idea of the many types of activity involving physicists in our highly industrialized society. Since no prior knowledge of physics is assumed, past and future are brought in with descriptions of mechanical devices constructed by Archimedes and predictions concerning the imminence of interplanetary travel. The style is journalistic, if not downright promotional, and there is not much in the way of specific information on scholarship possibilities, courses of study, job placement procedures, or other steps on the way from high school to professional status. The emphasis is on government and industrial research; teaching physics is virtually unmentioned as a possible career. Despite these lacks *Your Career in Physics* should serve to awaken the interest of some future physicists, and will accomplish a most useful purpose if it does so.

200 Miles Up (2nd Edition). By J. Gordon Vaeth. 261 pp. The Ronald Press Co., New York, 1955. \$5.00. Reviewed by E. P. Martz, Jr., White Sands Proving Ground.

The Second Edition of *200 Miles Up* appears at a very pertinent time, since it contains an interesting and provocative discussion of the recently announced Minimum Earth Satellite project. Primarily, the book reviews the work on firing and instrumentation of V-2, Viking, and Aerobee rockets for high-altitude atmospheric research. In the field of popular description of the high-altitude plastic "Skyhook" balloon it gives a wealth of information not generally known.

200 Miles Up starts with a thorough, and basic, description of the upper atmosphere, the different layers of "The Atmospheric Ocean", and the reasons for further exhaustive research to fill in the wide gaps in our knowledge of this thin layer between Earth and space. Several chapters are then devoted to a rather detailed discussion of certain types of air-born instruments employed in upper-atmosphere research and to a review of the different possible vehicles for carrying these instruments. These vehicles include conventional aircraft, high-altitude balloons, high-altitude rockets, and artificial earth satellites.

Three new chapters have been added: (1) "The Future and the Upper Air", discusses interesting possibilities for upper-atmosphere research in the near future employing high-altitude manned balloon flights to perhaps 100 000-feet altitude and the use of "Rockoon", vertical rocket firings from balloons, as well as "Rock-air", vertical rocket firings from conventional aircraft. (2) "The Minimum Satellite", describes the principles of a small unmanned artificial earth satellite, specifically with regard to Fred Singer's "Mouse" proposal. In this chapter Vaeth includes a very worthwhile explanation of the anticipated research program of the International Geophysical Year (IGY), which has not to date received sufficient popularization. (3) "Beyond the Earth" is an interesting and provocative discussion of the many