working fact about which we should be thoroughly informed and which we should try to understand.

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Graphic Methods in Structural Geology. William L. Donn and John A. Shimer. Appleton-Century-Crofts, New York, 1958. viii + 180 pp. Illus. + plates. $4.

Thinking in terms of three dimensions is an essential skill for geologists, and graphic representation ranks with words and numbers as a means of transmitting geological thought. Therefore Donn and Shimer's subject is important. Their book is a convenient manual of those common graphic methods which should be mastered not only by students but by geologists engaged in practical work. The authors assume no previous experience and little knowledge on the part of the reader. They "lead the student by the hand" from extremely simple to more advanced material.

Although the emphasis of the book is upon graphic methods of solving problems, elementary means of geologic representation are also included. Geologic sections and block diagrams are introduced in a paragraph or two for beginners but are not fully discussed. Geologic maps are given more attention, particularly with respect to relations between structure, topography, and areal distribution patterns of rock units. This treatment could be readily understood by students who are just beginning structural geology, and some of it could be understood by liberal arts students or persevering laymen.

The greater part of the book is devoted to graphic methods of obtaining quantitative solutions to structural problems and is not intended to enthrall the nontechnical reader. Orthographic projection is completely described—from true and apparent dip to advanced fault problems in which inclined faults have oblique net slip. One of the ingredients of many solutions is the arbitrarily chosen structure contour, and the authors wisely introduce this conspicuously, early in the game.

Stereographic projection is explained briefly and well. The relative advantages of stereographic and orthographic methods are indicated. Stereographic solutions are developed for apparent dip, strike and dip from vertical drill-core data, intersecting surfaces, plunge, pitch, and certain fault displacements. In addition, there is an explanation of the procedure of rotating the sphere of projection about a horizontal or inclined axis to solve "two tilt" and other important problems which are almost uniquely amenable to stereographic treatment. The use of stereonets in structural petrology is not specifically described, but the basic principles are adequately covered.

The degree of accuracy of the presentation appears to be good, and only a few probable errors were noted. Several illustrations in the first 50 pages are rather crudely drawn, but the great majority of the 103 figures are clearly executed.

The authors and readers should be well satisfied with this book. It will be particularly useful to geology students who have not had courses in descriptive geometry and to those who wish to understand stereographic methods. Other, more complete, treatments are available, but many of these deal only with one segment of the subject matter which Donn and Shimer have compiled so compactly.

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Physics. Erich Hausmann and Edgar P. Slack. Van Nostrand, Princeton, N.J., ed. 4, 1957. x + 722 pp. Illus. $8.

Fundamentals of Physics. Henry Semat. Rinehart, New York, ed. 3, 1957. 914 pp. Illus. $8. (Also available in two vols.)

Physics. A textbook for colleges. Oscar M. Stewart. Sixth edition by Newell S. Gingrich. Ginn, Boston, ed. 6, 1957. viii + 756 pp. Illus. $6.50.

These three current revisions of well-known texts for a one-year course in college physics are evolutionary rather than revolutionary versions of earlier editions. In each there are refinements such as upgrading of the paper stock, re-drawing of figures with greater use of shading or perspective to make diagrams clearer, changes in the order of topics and chapters, and the omission or abbreviation of certain topics to make space for new material, with no significant change in over-all length or character of the work.

All three continue to adhere to the classical division of physics into mechanics, heat, sound, electricity and magnetism, light, and atomic physics, and in essentially this order. *Hausmann-Slack* has 26 pages on radiation and atomic structure and 17 pages on solid-state electronics; *Semat* has 104 pages on atomics and nucleonics and about a page on transistors and semiconductors. *Stewart-Gingrich* has 25 pages on atomic physics and makes little mention of modern solid-state theory. An effort has been made in each book to solve the problems of units—a matter of great concern to many physics teachers. The trend from centimeter-gram-second units to meter-kilogram-second units is clear, but the transition is not complete. Particularly in electricity, it would seem better for both *Semat* and *Stewart-Gingrich* to work with only one (meter-kilogram-second) system of units.

Hausmann-Slack, clearly a text for engineering students or science majors, uses a considerable amount of mathematical background and some calculus. The discussions are brief and to the point, and satisfactorily rigorous. Perhaps the best feature of the new edition is the inclusion of new problems—problems which are varied, interesting, and challenging and which involve many up-to-the-minute situations. *Semat* uses no calculus, some trigonometry. It should be sufficiently rigorous and complete for students majoring in sciences but not too difficult for nonscience majors. The discussions are particularly clear and accurate, and the problems are varied and not too difficult. The discussion questions at the end of each chapter (they are not merely review questions) offer a particularly valuable supplement to the more usual problems. Probably all science courses should require students more frequently to analyze situations clearly and accurately in words and symbols, in addition to learning to solve problems for numerical answers. *Stewart-Gingrich* is designed for a general college physics course for students with no special mathematical background. It uses a rather standard, classical approach. While some sections are extremely well written, it tends more often than the other two books to give oversimplified, and occasionally inaccurate, statements and underived or unexplained formulas. Most chapters conclude with a brief, factual summary.

All three books have been used and liked by teachers for some years; the new editions will continue to serve in essentially the same types of courses and for the same types of teaching.

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Biochemical Preparations. vol. 5. David Shemin, Ed. Wiley, New York; Chapman and Hall, London, 1957. viii + 115 pp. $4.75.

Biochemical Preparations is designed to provide reliable procedures for the preparation of substances of biochemical interest and to illustrate valuable techniques and methods. It presents information about stability, properties, purification, and assay of the compounds included. This series may be warmly recommended to teachers, students, and research workers in biochemistry and related fields.

Two years have elapsed since the publication of the preceding volume. The editors hope subsequent issues may