planning to include the laser in his cancer armamentarium.

The reader's optimism should, however, be tempered somewhat by a review of the bibliography. One quarter of the 99 references are to publications by the author, nearly all dealing with clinical experimentation. A review of many of the other references suggests that much is left to be learned before this innovation in biomedical research should be made available to every clinician who can afford to buy it.

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For Statisticians and Students

The **CRC Handbook of Tables for Probability and Statistics** (Chemical Rubber Company, Cleveland, Ohio, 1966), edited by William H. Beyer, appears in a "Professional Edition" (518 pp., illus. $15) and a "Student Edition" (378 pp., illus. $5).

The professional edition consists of 13 sections, the first section giving background material on probability and statistics, and the remaining sections containing 77 tables and charts under such headings as the normal distribution; chi-square, t, and F distributions; discrete distributions; order statistics; range; correlation coefficient; nonparametric statistics; quality control; and miscellany. The first section, which comprises more than one-fifth of the book, summarizes some of the basic concepts in probability and statistics and includes topics such as the general linear model, plans for design of experiments, and analysis-of-variance tables. Preceding almost every table is a brief introduction which defines and discusses the function being tabulated. This edition includes almost every table that a practicing statistician is likely to need in his daily work.

The student edition, which appears in a smaller page size, omits five of the tables and most of the background material included in the professional edition. Unfortunately, there is nothing on the title page of the student edition to distinguish it from the professional edition, and both have been given the same Library of Congress card number. Only in the publisher's advertisements does one find the labels "professional" and "student" editions.

Although this handbook contains a highly useful collection of tables, it has a number of shortcomings. In the preface it is stated that the tables "were collected from many sources, to which due credit is given." I noted, however, a number of omissions and one error in the acknowledgments. No credit, for example, is given to W. J. Dixon's article in *Biometrics* (1953) as the source of the table of critical values for testing outliers.

In checking some of the tables in this handbook against other published tables, I found a number of nontrivial errors. These will be listed in the errata section of the journal *Mathematics of Computation*. Three of the errors in the t table could have been avoided if the latest edition of *Statistical Tables for Biological, Agricultural and Medical Research* by Fisher and Yates had been consulted instead of the first (1938) edition. In the student edition the first few lines of the "general linear model" appear at the bottom of page 20, but the rest of this 21-page section was omitted. The introduction to the table of binomial coefficients tells how to obtain values missing from the table, but there is no remedy for the omission of a whole page from this table. The table gives $({}_nC_m)$ for $n \leq 50$, with m covered only for $m \leq 11$, whereas the source table covers $m \leq 25$ and is thus complete.

In the table of critical values of Spearman's rank correlation coefficient, r_s, there is an unexpected lack of monotonicity in the column headed $\gamma = .01$. I found that this is due to the fact that most of the table is based on approximations, but no statement to this effect is given.

One thing lacking in the book is a bibliography of related tables to assist the reader who sometimes needs more extensive tables than those given here. The index is adequate except for being set in unusually small type.

These two books will be useful if the prospective user gets hold of the right edition and is aware of its shortcomings.

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Crystallography: Exploring Polytypism

Polymorphism and Polytypism in Crystals (Wiley, New York, 1966. 361 pp., illus. $12.75), by Ajit Ram Verma and P. Krishna, is the first book in Wiley's Monographs in Crystallography series, edited by Martin J. Buerger.

Polymorphism is the crystallization of the same chemical substance in more than one structure. Polytypism is a special case of polymorphism involving "the ability of a substance to crystallize into a number of different modifications, in all of which two dimensions of the unit cell are the same while the third is a variable integral multiple of a common unit." One would judge from the title of Verma and Krishna's book that an equally thorough treatment is afforded both subjects. However, polymorphism is treated "more to facilitate a fuller understanding of polytypism" and is discussed in two chapters (phase and structural aspects), whereas the more specialized topic occupies over 80 percent of the text. The authors discuss polytypism from its beginnings as a crystallographic curiosity in 1915 to its current recognition as a widespread phenomenon bearing on the fundamentals of crystal growth. The coverage includes a description of polytypic structures (especially SiC and CdI_2), polytype structure determination, dislocations and spiral growth, theories of polytypism, and recent observations. In weighing collected experimental data against the various postulated mechanisms, the authors dwell at length upon Frank's nonthermodynamic, screw-dislocation theory and Jagodzinski's thermodynamic, layer-transposition mechanism. Neither of these best-available theories, however, is completely satisfactory, and the dilemma of polytypism persists: what is the ordering mechanism in materials such as SiC (47 modifications; unit cells up to 594 layers, $\sim$ 1500 Å) and CdI_2 (64 structures)?

There are a number of typographic and other errors and contradictions. The more important ones include: page 25, b.c.c.'s and f.c.c.'s are interchanged in the discussion on Fe (compare page 11); pages 81 and 93 are contradictory with respect to the natural occurrence of SiC (it *is* a mineral); pages 81 and 92 differ as to who first obtained SiC; entry 42 in Table 3, page 108, should be 123R;