

In an effort to make this report self-contained, the authors have included a number of formulas and expansions for both the angular and prolate spheroidal functions, following the notation and normalization adopted by Flammer [1]. The various methods used in calculating these tables are also described.

This introductory explanatory text of 21 pages, which includes an enumeration of the diverse fields of application of spheroidal functions, is followed by a list of 15 references. Inadvertently omitted from the list (although referenced in the introduction) is the treatise of Morse & Feshbach [5].

Unfortunately, the photographic reproduction of these elaborate tables has left much to be desired; in fact, on approximately 75 pages of the review copy an appreciable number of the tabular entries are only partially legible. This serious defect in the reproduction of these important tables naturally impairs their usefulness.

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1. C. FLAMMER, *Spheroidal Wave Functions*, Stanford Univ. Press, Stanford, Calif., 1957. (See *MTAC*, v. 13, 1959, pp. 129–130, RMT 20.)

2. D. SLEPIAN, "Asymptotic expansions of prolate spheroidal wave functions," *J. Math. and Phys.*, v. 44, 1965, pp. 99–140.

3. D. SLEPIAN & E. SONNENBLICK, "Eigenvalues associated with prolate spheroidal wave functions of zero order," *Bell System Tech. J.*, v. 44, 1965, pp. 1745–1759.

4. H. E. HUNTER, D. B. KIRK, T. B. A. SENIOR & H. R. WITTENBERG, *Tables of Spheroidal Functions for  $m = 0$* , Vols. I & II, Radiation Laboratory, University of Michigan, Ann Arbor, Michigan, 1965.

5. P. M. MORSE & H. FESHBACH, *Methods of Theoretical Physics*, Parts I & II, McGraw-Hill Book Co., New York, 1953. (See *MTAC*, v. 12, 1958, pp. 221–225, RMT 87.)

**93[M, X].**—CARL H. LOVE, *Abscissas and Weights for Gaussian Quadrature for  $N = 2$  to 100, and  $N = 125, 150, 175, 200$* , NBS Monograph 98, U. S. Department of Commerce, 1966, iii + 88 pp., 26 cm. Price \$.55. Paperbound.

The abscissas  $X_k$  and weights  $H_k$  are given to 24D and 23D, respectively, for the Gaussian formula:

$$\int_{-1}^1 F(X)dx \approx \sum_{k=1}^n H_k F(X_k)$$

for  $n = 2(1)100(25)200$ .

There is, therefore, much overlap here with Table 1 of [1], which gives these numbers to 30S for  $n = 2(1)64(4)96(8)168, 256, 384, 512$ . Clearly, however, that table and this each give some  $n$  not given by the other.

The present monograph has an introduction and six references. The recent treatise [1]—see our review RMT 14, *Math. Comp.*, v. 21, 1967, pp. 125–126—is not mentioned, as such. The introduction here does make the misleading statement: "A. H. Stroud is working on tables for  $N = 2, 64, 96, 168, 256, 384, \text{ and } 512$  but he has not published them at the present time." The omission of the argument differences: (1), (4), etc. changes the meaning entirely.

The nominal cost of the present tables is less than the fractional part of that of [1]—which costs \$14.95—but, of course, they really can't be compared.

D. S.

1. A. H. STROUD & DON SECREST, *Gaussian Quadrature Formulas*, Prentice-Hall, Englewood Cliffs, N. J., 1966.