

A combination of Simpson's rule and four-point Gauss quadrature was used to obtain the data in Table I corresponding to the interval $0 \leq \rho \leq 0.95$; the remaining entries of Table I and all those in Table II were computed by 16-point Gauss quadrature. The authors state that the tabular data are accurate to within 1 or 2 units in the least significant place, except for those entries in Table I corresponding to $1 < \rho \leq 35.5$, where the uncertainty ranges from 1 to 5 units in the last place.

Explanatory text consists of sections devoted to: computational procedures; solid angle contour integrals and related formulas, series, and approximations; illustrations of the use of these tables; and a list of 20 references supplementing those given in the Oak Ridge report.

J. W. W.

26[M, S].—V. VANAGAS, J. GLEMOCKIJ, & K. UŠPALIS, *Tables of Radial Integrals of Atomic Spectra Theory*, Computing Centre, Academy of Science of the USSR, Moscow, 1960, xiii + 380 p., 26 cm.

The preface and the introduction to these extensive specialized tables are clearly written in Russian and English in parallel columns. Since it requires only seven pages of introductory text to describe the use of 380 pages of tables, the employment of two languages was only a minor burden on the editors, yet it opens the tables to a wide group of scientists. Other table-compilers should follow suit and also prepare bilingual introductory material.

The tables are designed to permit the numerical evaluation of the atomic radial integrals denoted by Slater [1] as $F^k(nl, n'l')$ and $G^k(nl, n'l')$ in cases where the individual electron radial integrals are approximated in the form:

$$R_{nl}(r) = \sum_i A_i r^{a_i} e^{-\alpha_i r}.$$

The functions actually tabulated are

$$V(ab; \gamma) = \log_{10} \left\{ \int_0^\infty r^a e^{-\gamma r} \int_r^\infty r'^b e^{-\gamma r'} dr' dr \right\},$$

and

$$W(ab; \gamma) = \log_{10} \left\{ \gamma^{b+1} \int_0^\infty r^a e^{-\gamma r} \int_r^\infty r'^b e^{-\gamma r'} dr' dr \right\},$$

from which the radial integrals in question can be calculated by methods described in the introduction. The functions V and W are tabulated for all nonnegative integer values of a and b in the range $0 \leq a + b \leq 16$, for $\gamma = 0.000(0.002)1.000$. The logarithms are given to six decimal places throughout.

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1. JOHN C. SLATER, *Quantum Theory of Atomic Structure*, McGraw-Hill, New York, 1960, v. 1, p. 311.

27[P, Z].—MITCHELL P. MARCUS, *Switching Circuits for Engineers*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1962, ix + 296 p., 23.5 cm. Price \$12.00.

As the title indicates, this is a book on switching circuits written for engineers. In particular, it is written for engineers with little or no background in the subject