1. NATIONAL PHYSICAL LABORATORY, *Tables of Weber Parabolic Cylinder Functions*, Computed by Scientific Computing Service Limited, Mathematical Introduction by J. C. P. Miller, Editor. Her Majesty's Stationery Office, London, 1955. (See *MTAC*, v. 10, 1956, pp. 245–246, RMT **101**.)

73[7].—A. R. KERTIS, *Volnovye Funk͡tsii Kulona* (A. R. CURTIS, *Coulomb Wave Functions*), Computing Center, Acad. Sci. USSR, Moscow, 1969, li + 209 pp., 27 cm. Price 2.23 rubles.

This is a translation into Russian of the Royal Society Mathematical Tables of Coulomb wave functions [1]. The original has been reviewed in this journal (v. 19, 1965, pp. 341–342, RMT **46**).

The tables, as well as all formulas and mathematical characters contained in the preface, appear to have been reproduced photographically from the original. A few minor blemishes in the original printing have been corrected. According to the editor, all tabular entries were checked by differencing, and no errors were found.

The translator, M. K. Kerimov, has added a supplementary section in which he gives further relationships for the Coulomb wave functions (in the notation of the NBS tables [2]) and a comprehensive survey of published tables in the field.

W. G.

1. A. R. CURTIS, *Coulomb Wave Functions*, Royal Society Mathematical Tables, Volume 11, Cambridge Univ. Press, New York, 1964.
2. NATIONAL BUREAU OF STANDARDS, *Tables of Coulomb Wave Functions*, Volume I, Applied Mathematics Series, No. 17, U. S. Government Printing Office, Washington, D. C., 1952.

74[7].—ANNE E. RUSSON & J. M. BLAIR, *Rational Function Minimax Approximations for the Bessel Functions $K_0(x)$ and $K_1(x)$*, Report AECL-3461, 1969, Atomic Energy of Canada Limited, Chalk River, Ontario. Price $1.50.

Consider

$$x^{-r}\left[K_r(x) + (-1)^r \ln x I_r(x) - \frac{r}{x}\right] = F_r(x^2),$$
$$x^{-r} I_r(x) = G_r(x^2),$$
$$x^{1/2} e^x K_r(x) = H_r(z), \qquad z = x^{-1},$$

where $r = 0$ or 1. Let $F_r(x^2)$ and $G_r(x^2)$ be approximated by $P_n(x^2)/Q_m(x^2)$ where $P_n(x^2)$ and $Q_m(x^2)$ are polynomials in x^2 of degree n and m respectively. For the range $0 \leqq x \leqq 1$, the coefficients in these polynomials corresponding to the 'best' approximation in the Chebyshev sense are tabulated for $m = 0$, $n = 1(1)8$, $m = 1$, $n = 2(1)6$ and $m = 3$, $n = 3,4$. Define precision as $P = -\log |\text{maximum error in the range}|$. Then P ranges from about 3 to 23. Similarly coefficients for the 'best' Chebyshev approximation for $H_r(x)$ in the form $P_n(z)/Q_m(z)$ are given for the range $0 \leqq z \leqq 1$, where $m = 1(1)12$, $n = m - 1$ and $n = m$ if $r = 0$; and where $m = 1(1)12$, $n = m$ and $n = m + 1$ if $r = 1$. Again P ranges from about 3 to 23.

Y. L. L.