

Appendix 2 (pages 90–91) lists to 6D without differences the real and imaginary parts of $h_1(is)$, $h_2(is)$ and of their s -derivatives $h_1'(is)$, $h_2'(is)$ for $s = 0(0.1)6$. Here h_1 , h_2 are the same functions (related to the Airy integrals) as are tabulated for general complex arguments under the name of modified Hankel functions of order one-third in one of the Harvard volumes [1]. In the latter, however, $h_1'(iy)$, $h_2'(iy)$ denote derivatives with respect to iy (not y), so that the real and imaginary parts of the derivatives are interchanged, with one reversal of sign, compared with the Russian tables. Bearing this point in mind, all the values in Appendix 2 may be found (to two more decimals) in the Harvard volume; a single reading revealed no discrepancy. The Harvard values have to be picked from the top line ($x = 0$) of the Harvard table for each y , so that anyone computing with pure imaginary arguments only will find it convenient to have the values now set out at one opening.

In connection with the appendices, reference is made to earlier work (including tables) by Tumarkin and L. N. Nosova.

The introduction contains analytical details, a number of graphs of the various functions, and references. It also contains (page ix) a table of the integral of the real part of $e_0(is)$, namely

$$Q(s) = \int_0^s R[e_0(is)] ds,$$

to 4D without differences for $s = 0(0.1)8$.

A. F.

1. HARVARD UNIVERSITY COMPUTATION LABORATORY, *Annals*, v. 2, *Tables of the Modified Hankel Functions of Order One-Third and of Their Derivatives*, Harvard University Press, Cambridge, Massachusetts, 1945. (See *MTAC*, v. 2, 1946, p. 176–177, RMT 335.)

95[L, M].—W. T. PIMBLEY & C. W. NELSON, *Table of Values of $2\sqrt{x}F(\sqrt{x})$* , IBM Engineering Publications Dept. No. PTP 773, 1964, Endicott, New York. Copy deposited in the UMT File.

Let $F(w)$ be Dawson's integral:

$$F(w) = e^{-w^2} \int_0^w e^{t^2} dt.$$

In connection with two different physical problems the authors had need of a table of $2\sqrt{x}F(\sqrt{x})$ and they have here computed two tables to 12D. Table 1 gives this function for $x = 0(0.1)9.9$ and Table 2 for $x = 1(1)100$. These were computed by known convergent and asymptotic series. A spot comparison with Rosser's 10D table of $F(w)$ [1] revealed no discrepancies.

A recent paper by Hummer [2] also discussed $F(w)$. In [3] the reviewer had occasion to investigate two functions of Ramanujan and Landau whose ratio, $r(x)/l(x)$, is the function given here with x replaced by $\log x$.

D. S.

1. J. BARKLEY ROSSER, *Theory and Application of $\int_0^x e^{-x^2} dx$ and $\int_0^x e^{-x^2} dy \int_0^y e^{-x^2} dx$* , Mapleton House, Brooklyn, New York, 1948, p. 190–191.

2. DAVID G. HUMMER, "Expansion of Dawson's function in a series of Chebyshev polynomials," *Math. Comp.*, v. 18, 1964, p. 317–319.

3. DANIEL SHANKS, "The second-order term in the asymptotic expansion of $B(x)$," *Math. Comp.*, v. 18, 1964, p. 79–80, 85–86.