48[L].—A. H. HEATLEY, *Tables of the Confluent Hypergeometric Function and the Toronto Function*, University of Waterloo, Waterloo, Ontario, Canada, October 1964, one typewritten sheet and four computer sheets deposited in UMT File.

In these tables the functions $e^{-x}M(\alpha, \gamma, x)$ and $T(m, n, r)$ are tabulated to 9S in floating-point form, based upon calculations performed to at least 12S on an IBM 1620 system [1].

For the confluent hypergeometric function, the ranges of parameters are:

$$\alpha = \tfrac{1}{4}(\tfrac{1}{4})1, \quad \gamma = -\tfrac{1}{2}, \tfrac{1}{2}(\tfrac{1}{2})3; \quad \alpha = \tfrac{9}{4}(\tfrac{1}{4})3, \quad \gamma = 3; \quad \alpha = \tfrac{5}{4}(\tfrac{1}{4})2, \quad \gamma = 2.$$

The values of x are such that $x^{1/2} = 0(0.2)4, 5$; except that when $\alpha = 1, \gamma = -\frac{1}{2}, \frac{1}{2}(\frac{1}{2})3$, we find $x^{1/2} = 0(0.1)3$.

For the Toronto function, the corresponding ranges are:

$$m = -\tfrac{1}{2}(\tfrac{1}{2})\tfrac{1}{2}, \quad n = -2(\tfrac{1}{2})2, \quad r = 0(0.2)4(1)6, 10, 25, 50; \text{ and}$$

$$m = 1, \quad n = -2(\tfrac{1}{2})2, \quad r = 0(0.1)3.$$

J. W. W.

1. *Math. Comp.*, v. 18, 1964, pp. 687–688, MTE **361**.

49[L].—J. R. JOHNSTON, *Tables of Values and Zeros of the Confluent Hypergeometric Function*, Report 31901, Aircraft Division, Douglas Aircraft Company, Inc., Long Beach, Calif., August 1964, 4 pp., 28 cm.

This report briefly describes the computational procedure followed in evaluating the confluent hypergeometric function ${}_1F_1(A, B, X)$ and its zeros by a FORTRAN IV program prepared for use on an IBM 7094 system.

Computation of the function and its zeros was carried to 7D precision for $A = -5(0.25) - 0.25$, $B = 0.25(0.25)4$, $X = 0.05, 0.1(0.1)1(0.2)10(0.5)20$, and for $A = -20(0.5)1$, $B = 2$, $X = 0.05, 0.1(0.1)1(0.2)20(0.5)50$. These internally computed values for each of these two ranges were rounded to 4S and written as separate files on a special output tape, of which a copy can be obtained upon request from the Technical Library, Aircraft Division, Dept. C-250, Douglas Aircraft Company, Inc.

No printed output is available except for an abbreviated table of zeros to 4S that appears on the last page of this report. The range represented therein is $A = -20(1) - 1$, $B = 2$, and, with a few exceptions corresponding to $A = -4(1) - 1$, the first five positive zeros are tabulated.

For a list of related tables the reader is referred to the publication of Slater [1].

J. W. W.

1. L. J. SLATER, *Confluent Hypergeometric Functions*, Cambridge Univ. Press, New York, 1960. [See *Math. Comp.*, v. 15, 1961, pp. 98–99, RMT **22**.]

50[L].—SIU-KAY LUKE & STANLEY WEISSMAN, *Bessel Functions of Imaginary Order and Imaginary Argument*, University of Maryland, Institute for Molecular Physics, Report DA-ARO(D)-31-124-G466 No. 1, 1964, College Park, Md.

This report gives a rather extensive tabulation of

$$G_q(v) = K_{iq}(v) = \frac{1}{2}\pi \frac{I_{iq}(v) - I_{-iq}(v)}{\sinh q\pi}, \qquad v = e^x,$$