19 [L, M, S, T].—JAMES A. BIERLEIN, "Gouy diffractometry in thermal diffusion," *The Journal of Chemical Physics*, v. 36, 1962, p. 2793–2802.

This paper contains (on p. 2797–2799) a 4D table of zeros and turning points of the incomplete Airy integral

$$\mathrm{Ai}(A, x) = \frac{1}{\pi} \int_0^A \cos\left(\frac{u^3}{3} + xu\right) du,$$

corresponding to $A = 0\,(\pm 0.25) \pm 5\,(\pm 0.5) \pm 6$. For each listed value of A, a total of from 28 to 33 interlacing zeros and turning points are tabulated.

Included also are corresponding data for the complete Airy integral, given by $\lim \mathrm{Ai}(A, x)$ as $A \to \infty$, and for the ratio $\lim \mathrm{Ai}(A, x)/A$, as $A \to 0$. The latter appears erroneously in the column heading as Ai/x.

The associated maximum and minimum values of these integrals are given to 5 or 6D.

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20 [L, P].—GUSTAV DOETSCH, *Guide to the Applications of Laplace Transforms*, D. Van Nostrand Co., Ltd., London, 1961, 255 p., 24 cm. Price $9.75.

This book, by the well-known author of standard books on the Laplace Transformation, is intended to aid engineers in their use of this transformation. Theorems are carefully stated and the reader is referred for the proofs of the more involved of these to the author's book *Theorie und Anwendung der Laplace-Transformation*. Common pitfalls are indicated by a special warning sign printed in the margin. In addition to the usual treatment of linear differential equations with constant coefficients, a problem in automatic control involving a nonlinear differential equation is discussed. A chapter is devoted to difference equations and sampled data systems. A short account of the application of the Laplace Transformation to partial differential equations, treating the heat conduction equation and the equations of a twin conductor line with distributed constants, is given. The book closes with a chapter on the asymptotic behavior of functions and an appendix listing 256 Laplace transforms. The translation into English from the second edition of the original German book is well done and the printing is excellent. Translations of the first edition into Russian, French, and Japanese have previously appeared.

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21 [M, X].—V. I. KRYLOV, V. V. LUGIN & L. A. IANOVICH, *Tables for the Numerical Integration of Functions with Power Singularities*, Izdat. Akad. Nauk BSSR, Minsk, 1963 (Russian), 434 p. Price 1r. 45k.

This book contains tables of Gauss-Jacobi quadrature formulas of the form

$$\int_0^1 x^\beta (1 - x)^\alpha f(x) \, dx \simeq \sum_{i=1}^n A_i f(x_i),$$