The case $s = 1$ has been treated by H. Salzer. (See "Orthogonal polynomials arising in the numerical evaluation of Laplace transforms," *MTAC*, v. 9, 1955, p. 164–177, and "Additional formulas and tables for orthogonal polynomials originating from inversion integrals," *J. Math. Phys.*, v. 40, 1961, p. 72–86.) These latter sources give the zeros and weights to 15D for $n = 1(1)15$. Note that Salzer's quadrature formula is exact if $g(p)$ is a polynomial in $1/p$ of degree $2n$ such that $g(\infty) = 0$. In the booklet under review, the quadrature formula is exact if $g(p)$ is of degree $(2n - 1)$, but $g(\infty)$ need not vanish. Thus the Christoffel numbers in Salzer's work differ from those of the present author. However, the zeros are the same. Twice the negatives of the zeros of $P_n(x)$ have been tabulated mostly to 5 D by V. N. Kublanovskaia and T. N. Smirnova. (See "Zeros of Hänkel functions and some related functions," *Trudy. Mat. Inst. AN*, USSR No. 53, 1959, p. 186–192. This is also available as Electronic Research Directorate, Air Force Cambridge Research Laboratories Report AFCRL-TN 60-1128, October 1960.)

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16[M, X].—E. L. Albasiny, R. J. Bell & J. R. A. Cooper, *A Table for the Evaluation of Slater Coefficients and Integrals of Triple Products of Spherical Harmonics*, National Physical Laboratory Mathematics Division Report No. 49, 1963, xi + 163 pages.

This is a table of integrals

$$\int_{-1}^{+1} \Theta_{l_1}^{m_1}(x)\Theta_{l_2}^{m_2}(x)\Theta_{l_3}^{m_3}(x)\, dx$$

where

$$\Theta_l^m(x) = (-1)^m \left[\frac{(2l+1)}{2}\frac{(l-m)!}{(l+m)!}\right]^{1/2} \frac{(1-x^2)^{m/2}}{l!2^l}\frac{d^{l+m}}{dx^{l+m}}(x^2-1)^l,$$

$$0 \leqq m \leqq l$$

is an associated Lengendre function. These integrals are closely related to integrals which occur in molecular structure calculations (see, for example, [1]).

Values of the above integrals are tabulated to 12 decimal places for (m_i, l_i integers)

$$m_1 \pm m_2 \pm m_3 = 0,$$

$$l_1 \leqq l_2 \leqq l_3,$$

$$l_1 + l_2 + l_3 \text{ even},$$

$$|l_1 - l_2| \leqq l_3 \leqq l_1 + l_2,$$

$$l_1, l_2 \leqq 12, l_3 \leqq 24.$$

Under these conditions the integrand is a polynomial of degree $\leqq 48$, and thus can be calculated exactly, using an n-point Gauss-Legendre quadrature formula [3, p. 107–111] for $n \geqq 25$. The tables were computed using the 25-point formula tabulated by Gawlik [2] and recomputed as a check using the 26-point formula. The calculations were carried out on the ACE computer, which has a 46-bit floatingpoint mantissa. The tabulated values are exact to within two units in the last place.

The above integrals are also known in closed form [4]. However, the expressions for them are not as convenient for computations as the quadrature formulas.

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1. A. R. EDMONDS, *Angular Momenta in Quantum Mechanics*, Princeton Univ. Press, Princeton, N. J., 1957, Chapters 3, 4.
2. H. J. GAWLIK, *Zeros of Legendre Polynomials of Orders 2-64 and Weight Coefficients of Gauss Quadrature Formulae*, Armament Research and Development Establishment Memorandum (B) 77/58, 1958. [See *Math. Comp.*, v. 14, 1960, p. 77, RMT 4.]
3. V. I. KRYLOV, *Approximate Calculation of Integrals*, Macmillan, New York, 1962.
4. J. MILLER, "Formulas for integrals of products of associated Legendre or Laguerre functions," *Math Comp.*, v. 17, 1963, p. 84–87.

17[M, X].—L. KRUGLIKOVA, *Tables for Numerical Fourier Transformations*, Academy of Sciences of USSR, Moscow, 1964, 30 p., 22 cm. Paperback. Price 13 kopecks.

This pamphlet contains Gaussian quadrature formulas of the form

$$\int_0^\infty (1 + \sin x) f(x)\, dx \cong \sum_{k=1}^n A_k f(x_k),$$

$$\int_0^\infty (1 + \cos x) f(x)\, dx \cong \sum_{k=1}^n A_k f(x_k),$$

which are exact whenever

$$f(x) = (1 + x)^{-s-i}, \qquad i = 0, 1, \cdots, 2n - 1.$$

Values of x_k and A_k are given for $n = 1, \cdots, 8$ for the following values of the parameter s:

$$s = \tfrac{5}{4}, \tfrac{4}{3}, \tfrac{3}{2}, \tfrac{5}{3}, \tfrac{7}{4}, 2, \tfrac{9}{4}, \tfrac{7}{3}, \tfrac{5}{2}, \tfrac{8}{3}, \tfrac{11}{4}, 3, \tfrac{13}{4}, \tfrac{10}{3}, \tfrac{7}{2}, \tfrac{11}{3}, \tfrac{15}{4}, 4.$$

The x_k are given to between 8 and 10 significant figures and the A_k to between 5 and 11.

These formulas can also be used to approximate integrals of the form

$$\int_0^\infty f(x) \sin \alpha x\, dx, \qquad \int_0^\infty f(x) \cos \alpha x\, dx.$$

This is done by writing these as

$$\int_0^\infty \phi(y) \sin y\, dy, \qquad \int_0^\infty \phi(y) \cos y\, dy,$$

$$\alpha x = y, \qquad \phi(y) = \frac{1}{\alpha} f\left(\frac{y}{\alpha}\right),$$

and approximating