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Howard S. Cohl* (hcohl@nist.gov), 100 Bureau Drive, National Institute of Standards and Technology, Gaithersburg, MD 20899-8910. *Generalizations and definite integrals for classical orthogonal polynomials*. Preliminary report.

We generalize generating functions for hypergeometric orthogonal polynomials, namely Wilson, Laguerre, Jacobi, Gegenbauer, Chebyshev, and Legendre polynomials. These generalizations of generating functions are accomplished through series rearrangement using connection relations with one free parameter for these polynomials. We also use orthogonality relations to determine definite integrals. (Received September 25, 2012)