1067-81-1500   **Scott A. Yost*** (`scott.yost@citadel.edu`), Department of Physics, The Citadel, 171 Moultrie St., Charleston, SC 29409, and **Vladimir V. Bytev**, **Mikhail Yu. Kalmykov**, **Bernd A. Kniehl** and **B. F. L. Ward**. *The Hypergeometric Representation of Feynman Diagrams and Construction of the Epsilon Expansion.*

We present results on hypergeometric function representations of Feynman diagrams. Following a review of these representations and some examples, we discuss the reduction of Feynman diagrams to master integrals, and compare integration-by-parts methods to differential reduction of hypergeometric functions. We describe the problem of constructing higher-order terms in the epsilon expansion, and characterize the functions generated in such expansions. (Received September 21, 2010)