Unique moment set from the order of magnitude method

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The order of magnitude method [Struchtrup, Phys. Fluids 16, 3921-3934 (2004] is used to construct a unique moment set for 1-D radiation transport with scattering. Simply speaking, the method uses a series of first order Chapman-Enskog expansions in the Knudsen number to construct the moments such that the number of moments at a given Chapman-Enskog order is minimal. For isotropic scattering, when one begins with monomials for the moments, the method constructs step by step moments of the Legendre polynomials. For anisotropic scattering, however, it constructs moments of new polynomials relevant for the particular scattering mechanism. All terms in the final moment equations are scaled by powers of the Knudsen number, which gives an easy handle to model reduction.