

Definition of "effective momentum transfer" by Leanne Pitchford

The cross sections for each species include **EITHER** elastic cross sections **OR** momentum transfer cross sections:

- ***Elastic cross sections***: these correspond to elastic momentum transfer cross sections.
- ***Momentum transfer cross sections***: these correspond to a total momentum transfer or "effective momentum transfer" cross sections.

These include the effects of inelastic collisions as is appropriate for use in the two-term spherical harmonic expansion. See, for example, Baraff and Buchsbaum, Phys. Rev. 130, 1007 (1963) and Sec. IIB of Pitchford and Phelps, Phys. Rev. A 25, 540 (1982). Where data is available, the effective Q_m is set equal to the sum of the inelastic cross sections plus the elastic momentum transfer cross section. This is an approximate relation.