

We study relationships between the dipole excitation and the ground state ms radius of a two-body system in the case of local potentials. We recall the inequality obtained long ago by Bertlmann and Martin, and discuss correction factors transforming the inequality in an approximate expression. Connecting the correction factor to the contribution of the lowest dipole state to the sum rule, we get a lower bound to the ms radius. Inverting the relationships yields a bound for the square of the dipole transition matrix element, and thus a bound to the lowest dipole state transition rate