

Main aim of this work is calculation of contribution of the selfenergy of electron to atomic spectra. We derive relation for improved Bethe logarithm and perform non-relativistic limit. Then we derive relation for non-relativistic oscillator strengths and recurrence relations for them. This we will use for calculation of Bethe logarithm. Then we derive solution to Dirac equation for electron in Coulomb potential as linear combination of functions whose radial part is similar to non-relativistic hydrogen wave functions. Finally we perform numerical calculation of improved Bethe logarithm for 1s, 2s and 2p states.