

Area Seminar

Title Breit interaction effects in many electron atoms

Date and Time 03/07/2012 16:00:00

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Area Theoretical Physics

Venue Room No. 469

Abstract For high accuracy atomic calculations we need to go beyond the Coulomb interaction between two electrons. The next order of interaction is the Breit interaction, which is due to the exchange of transverse photons between two electrons. In this talk I shall discuss about the matrix elements of Breit interaction and the self consistent treatment of the frequency independent Breit interaction in many electron atoms. I will also present some results of Breit contribution at the correlation energy of closed shell atoms based on the many body perturbation theory calculations. At the end I will discuss about the implementation of Breit interaction in the relativistic coupled-cluster theory.