

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Rotation averaged one-particle-exchange potential in Light Front time-ordered perturbation theory¹ ZIYUE LI, CHUENG-RYONG JI, North Carolina State University — We present a rotation average of the lowest order two-body interaction diagram in the Light Front time-ordered perturbation theory. By taking advantage of the boost invariance of the Light Front Formulation, and taking an additional rotational average, we restored the complete Lorentz invariance for each individual time-ordered diagram in the Light Front formulation. We show that appropriate expansion of the kernel before taking the rotation average can generate good analytical approximation to the complete Lorentz invariant kernel in a controlled way. The obtained kernel can be used in two body interaction model calculations.

¹JSA/JLab Graduate Fellowship

Ziyue Li
North Carolina State University

Date submitted: 09 Jan 2013

Electronic form version 1.4