

An Examination of Extended x-Rescaling Model

YAN Zhan-Yuan,^{1,3} DUAN Chun-Gui^{1,2} and HE Zhen-Min^{1,2}

¹ Physics Department, Hebei Teachers' University, Shijiazhuang 050016, China

² CCAST (World Laboratory), P.O. Box 8730, Beijing 100080, China

³ Physics Department, Northchina Electric Power University, Baoding 071003, China

(Received: 2000-12-18; Revised: 2001-3-23)

Abstract: The extended x-rescaling model can explain the quark's nuclear effect very well. Whether it can also explain the gluon's nuclear effect should be investigated further. Associated J/ψ and γ production with large P_T is a very clean channel to probe the gluon distribution in proton or nucleus. In this paper, using the extended x-rescaling model, the P_T distribution of the nuclear effect factors of $p+Fe \rightarrow J/\psi + \gamma + X$ process is calculated and discussed. Comparing our theoretical results with the future experimental data, the extended x-rescaling model can be examined.

PACS: 12.39.Jh, 13.85.Ni, 21.60.-n

Key words: extended x-rescaling model, color-octet, nuclear effect

[\[Full text: PDF\]](#)

Close