

Abstract Submitted
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Effect of bound nucleon internal structure change on nuclear structure functions KAZUO TSUSHIMA¹, Physics Division, NCTS, Taipei, KOICHI SAITO, Tokyo University of Science, FERNANDO STEFFENS, IFT, UNESP and Mackenzie University — Effect of bound nucleon internal structure change on nuclear structure functions is investigated based on local quark-hadron duality. The bound nucleon structure functions calculated for charged-lepton and (anti)neutrino scattering are all enhanced in symmetric nuclear matter at large Bjorken- x ($x \gtrsim 0.85$) relative to those in a free nucleon. This implies that a part of the enhancement observed in the nuclear structure function F_2 (in the resonance region) at large Bjorken- x (the EMC effect) is due to the effect of the bound nucleon internal structure change. However, the x dependence for the charged-lepton and (anti)neutrino scattering is different. The former [latter] is enhanced [quenched] in the region $0.8 \lesssim x \lesssim 0.9$ [$0.7 \lesssim x \lesssim 0.85$] due to the difference of the contribution from axial vector form factor. Because of these differences charge symmetry breaking in parton distributions will be enhanced in nuclei.

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