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Probe nucleon mass inside nuclei TAOFENG WANG, Beihang University, CLAS COLLABORATION — Nucleon masses in the nucleus are believed less than those in free space due to the binding in nuclear medium, particularly in the Short-Range Correlation (SRC). Extraction of nucleon mass inside nucleus, especially depending on its initial momentum, is a long-standing problem for both nuclear experimental and theoretical fundamental studies. High-energy electron quasi-elastic scattering associated with a knock-out proton by the virtual photon in (e,e'p) reaction is an appropriate way to probe the mass of the partner neutron in a SRC pair from missing mass spectra. The results of mass decrease with momentum will be shown not only in mean-field but also in SRC region, which are analyzed from light nucleus and heavier ones. The intrinsic features reflected are the modifications of quark dynamical characteristics when the confinement space of nucleon located inside nucleus, especially in high local density environment of SRC.

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