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The role of high-density clusters in the quark structure of nuclei¹

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Given the extremely dense environment of a nucleus and the complex nature of QCD, there is no a priori reason to expect that this many-quark system should simply look like a collection of quasi-free nucleons. But to a very high degree, this is exactly what is observed in nature. Nonetheless, there are indications that at the quark level, there may be small changes to the internal structure of nucleons inside the dense nuclear environment. Recent measurements of the EMC effect suggest that the nuclear modification may be related to short distance structures in nuclei, implying that two-body effects drive a significant part of the effect. I will present these results, their potential implications, and future plans aimed at testing this idea.

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