

Abstract Submitted  
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**Two jet production at large  $x$  as a probe of superfast quarks in nuclei**<sup>1</sup> ADAM FREESE, MISAK SARGSIAN, Florida International University, MARK STRIKMAN, Penn State University — We have developed a theoretical framework for the calculation of two jet production in p-A scattering at LHC energies which allows us to probe a nuclear partonic distributions at moderate to large Bjorken  $x$ . Due to the large invariant momentum transfer involved in the reaction, the QCD evolution of partonic distributions is sensitive to the nuclear quarks with very large initial momentum fractions. Based on the few-nucleon short range correlation model of the nuclear wave function, we estimated the cross section of the reaction and the sensitivity of the measured process to a possible transition from hadronic to quark-gluon degrees of freedom in the nucleus.

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