

Abstract Submitted
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Sea Quark Contribution to the Nucleon Spin FATIHA BENMOKHTAR, Duquesne University — The widespread belief is that proton and neutron, commonly known as nucleons, are each composed of three elementary particles called quarks. But in the last two decades experiments showed that the mass, momentum, spin and electromagnetic properties of the three quarks do not add up to the known properties of the nucleon. Theory predicts that a “sea” of virtual pairs of quarks and anti-quarks, along with the strong force carrier particles called gluons, should account for the difference. I will present ongoing work on the preparation of an experiment to isolate the contributions of the sea to the nucleon spin using semi-inclusive deep inelastic scattering technique at the Thomas Jefferson National Accelerator Facility.

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