

Abstract Submitted
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Probing the sea with Kaon SIDIS¹ FATIHA BENMOKHTAR,
Duquesne University — Precise evaluation of the sea contribution to the proton spin is of a big importance in the understanding of the dynamics inside the nuclear matter. In particular, the strange sea is an unsolved puzzle and needs a proper experimental attention. To this end, the E12-09007 experiment in CLAS12 of Hall B at Jefferson lab will run electron beams on both polarized and unpolarized hydrogen and deuterium targets and will cover the x-range from 0.05 to 0.7. As a result, this experiment will measure the x-dependence of the strange parton distribution function (PDF) and will help constrain the global fits used to obtain the fragmentation functions (FF). In addition this data will allow the extraction of the individual contributions of quarks and anti-quarks to the nucleon spin. Part of the unpolarized measurements has been already achieved and preparations for the polarized measurements are underway. The experiment requires the use of a Ring Imaging Cherenkov (RICH) detector for a successful charged kaon identification in the 3 to 8 GeV/c momentum range. One RICH detector is built and is fully unctional while a second one is under construction.

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