

David M. Riser

RESEARCH ASSISTANT

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Who Am I?

My name is David Riser, and I am a 3rd year Ph.D. student at the University of Connecticut. I completed my general course-work and examinations in August of 2015. Following this, I joined the experimental nuclear physics group lead by Prof. Kyungseon Joo. Our group operates in experimental Hall-B of Thomas Jefferson National Lab in Newport News, Virginia.

Hall-B is home to the CEBAF Large Acceptance Spectrometer (CLAS), which is ideally suited to measurements of processes with several particles in the final state. I have an interest in all the fascinating areas of Nuclear physics, and my thesis topic will be in nucleon structure.

The goal of my thesis work is to calculate the absolute cross section for Semi-Inclusive Deep Inelastic Scattering (SIDIS) π^0 events at Q^2 in the range $2 - 4 \text{ GeV}^2/c^2$. This cross section will allow the extraction of some of the Transverse Momentum Distribution functions (TMDs), a generalization of 1-dimensional structure functions.

Why NNPSS?

I want to attend the Nation Nuclear Physics Summer School in 2016 because I feel it would complement my growth as a young scientist. Working at JLAB, I have acquired skills in software development, and hardware construction/calibration.

The NNPSS would strengthen my theoretical knowledge of my subfield in nuclear physics, as well as giving me a larger breadth of knowledge about the field as an entire entity.

Thank you,

David M. Riser