

Ezekiel (Zeke) Wertz, College of William & Mary

Biographical Sketch:

- Graduate Research Assistant, William & Mary, 2020-Present
- Teaching Assistant for Introductory Physics Laboratory, William & Mary, 2018-2020
- PhD Graduate Student, William & Mary, 2020-Present
- M.Sc. Physics, William & Mary, 2020
- B.Sc. Physics, Lebanon Valley College, 2018

Additional Activities:

- William & Mary Graduate Student Association, Parliamentarian, 2020-Present
- William & Mary Graduate Council, Arts & Sciences Representative, 2020-Present
- William & Mary Physics Department Diversity Advisory Committee, Graduate Representative, 2019-2020

Research Interests:

I began my graduate research studies during the summer of 2019 by taking data collection shifts, and contributing ROOT code to the prompt data analyzer for the Lead Radius Experiment Two (PREx-II) in Hall. I subsequently took data collection shifts, during both run periods in 2020, for the Calcium Radius Experiment (CREx) in Hall A. After the completion of the second CREx run period during the fall of 2020, I joined the Super BigBite Spectrometer (SBS) Collaboration in Hall A and began working on commissioning Gas Electron Multiplier (GEM) tracking detectors, originally manufactured by collaborators from Istituto Nazionale Fisica Nucleare (INFN). The INFN GEMs will be used in many SBS experiments, primarily those of the first run period:  $G_M^n$ ,  $G_E^n$ -RP, nTPE, and WAPP, the former three experiments are focused on measuring form-factors of the neutron and the latter pertains to pion-photoproduction measured at wide angles. My current research is focused on the commissioning of INFN GEMs for the SBS experiments and my thesis topic will pertain to data analysis of one of the experiments in the first run period.

Candidate Statement:

Jefferson Lab has provided me with a unique environment to learn crucial skills as a physicist, particularly, complex problem-solving techniques from my detector hardware experience and methods for collaborating and communicating on nuclear physics experiments. I have gained this experience by interacting and learning from people (Users, Staff Scientists, Professors, other Graduate Students, etc.) who value the knowledge transfer and the education of graduate students. By serving on the Jefferson Lab Users Organization Board of Directors I would be able to advocate for the concerns and needs of my fellow graduate student users, thereby continuing or developing the supportive experience of graduate students at Jefferson Lab.