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HONORS PROFILE: NII-BOI QUARTEY

APPLIED PHYSICS MAJOR GAINS HANDS-ON NUCLEAR RESEARCH EXPERIENCE AT JEFFERSON LAB.

by [Jane Heeter](#) | November 23, 2020*Read time: less than a minute*

Nii-Boi Quartey '21 conducted research at nearby Thomas Jefferson National Accelerator Facility (JLab) to help scientists better understand the lab's particle accelerator, one of the world's most advanced. The vast, high-energy machine is used by scientists – including Christopher Newport faculty and students – to probe the nucleus of the atom.

Quartey, an [applied physics](#) major and [mathematics](#) minor, used his skills to verify that elements such as nitrogen, oxygen and carbon improve the efficiency of accelerating machines at JLab.

“This is important because when small amounts of these elements are put on an accelerating cavity, the cavity allows the accelerating machines to run more efficiently and with less energy,” said Quartey.

Quartey, a member of the [Honors Program](#), spent his internship calculating diffusion rates for the various elements, reading research papers and working in the Mathematica coding language. He completed a research paper, presentation and poster, and presented his findings to JLab mentors, professors and other student interns.