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Total Photon Absorption Cross Section Measurements for ^{12}C and ^{28}Si Nuclear Targets[1] URSULA SALAMONOWICZ, North Carolina A&T University, PRIMEX COLLABORATION — Absorption of high-energy photons in nuclear matter takes place predominately through the following fundamental processes: photoelectric effect, Compton scattering, and e+e- pair production. At the GeV energy range, pair production is the dominating process. The total absorption cross sections for photons interacting with ^{12}C and ^{28}Si nuclear targets have been measured in the energy range of 4.4 GeV to 5.2 GeV with high statistics. These measurements were performed during the PrimEx-II experiment in Hall B at Jefferson Laboratory. Hall B high-resolution photon tagging facility was used together with the PrimEx Pair Spectrometer magnet and Total Absorption Counter. Preliminary results for these measurements will be presented in this talk and compared with previous experimental results.

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