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Simulation comparisons between Geant4 and MCNPX[1] JEROMY TOMPKINS, GRAYSON RICH, CHARLES ARNOLD, UNC-Chapel Hill and TUNL — Geant4 and MCNPX are mainstream Monte Carlo simulation packages that are heavily used in nuclear physics research. These are tools to optimize the design of experiments and to complement the analysis of the measured data. Both codes have been utilized to model the response of a neutron counter composed of 18 ^{3}He proportional counting tubes embedded in a polyethylene moderator. This work is integral to the results of neutron counting experiments conducted at the Triangle Universities Nuclear Laboratory (TUNL) in nuclear astrophysics, nuclear structure, and applied nuclear physics. The output of these simulations comparing the two packages will be discussed.

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