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Simulation Analysis of Laser-driven Ion Acceleration Experiments with Defocussed Pulses ALEX ROBINSON, STFC Rutherford-Appleton Lab — Recently Brenner et al. (Brenner et al. LPB (2011)) reported on a series of experimental observations of proton emission from 25nm CH foils irradiated by defocussed 40fs 0.65J 800nm laser pulses. Even with 60μm diameter spots and 10^{16}–10^{17}Wcm^{-2} intensities proton spectra that extended up to 2 MeV were observed. We have carried out PIC simulations in order to better understand these observations. Here we we will report on the extent to which these simulations have elucidated the key aspects of the experimental observations.

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