Abstract Submitted
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Using Adversarial Networks for Data Processing in the Hall B Drift Chamber[1] ANDREW HOYLE, Davidson College, JOSE CRUZ, Central Piedmont Community College, GAGIK GAVALIAN, Jefferson Lab, MICHELLE KUCHERA, RAGHU RAMANUJAN, Davidson College — The image to image translation software Pix2Pix was used to format track data produced by the drift chamber at Hall B at Jefferson Lab. This track data came in the form of images containing particle trajectories from different drift chamber channels. While Pix2Pix is typically used to generate realistic images of objects based on sketches, we trained the model to eliminate unwanted noise data from within each event. This was done using a training dataset containing pairs of track images, one containing all data recorded by the detector in one event, and one containing only the desired track. We explore the most effective architecture and tuning parameters to give the desired results. Results will be presented alongside metrics showing how accurate generated images are to the desired output.

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