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The Fermilab E-906 Drell-Yan Experiment[1] BENJAMIN MILLER, Abilene Christian University, FERMILAB E-906 COLLABORATION — Fermilab E-906 will use the Drell-Yan process to improve our knowledge of the structure of the nucleon. This experiment will determine the anti-down to anti-up quark asymmetry to a much larger Bjorken-x than was attained by its predecessor, E- 866/NuSea. At its highest x measurements, E-866/NuSea hints at very interesting behavior for this ratio. E-906 will extend the light anti-quark asymmetry to x $\sim$ 0.5. In addition, E-906 will use nuclear targets to measure partonic energy loss in cold nuclear matter and study anti-shadowing. E-906 will use the Fermilab 120 GeV/c Main Injector to collide protons with targets of liquid hydrogen, liquid deuterium and solid nuclear targets. The detector under construction is a two-magnet, focusing spectrometer consisting of four detector stations, similar to the E866/NuSea spectrometer. A fast level one trigger will come from eight hodoscope planes. Wire and drift chambers will be used to reconstruct particle trajectories to separate events originating in the target from those originating from the internal beam dump.

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