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Examination of the Feasibility of a Spark Gap - X-Pinch Hybrid for Point-Projection Radiography GILBERT COLLINS, JULIO VALENZUELA, DEREK MARISCAL, FARHAT BEG, UC San Diego Center for Energy Research — We present an investigation into the feasibility of using a simple merging of the spark gap and X-pinch concepts as a substitute for conventional X-pinches for point-projection radiography. We demonstrate formation of an x-ray source between two pointed electrodes. Experiments are conducted on UC San Diego's 80kA peak, 50ns rise time, Marx-driven pulser. The ability to change the material and the spacing of the electrodes allows for control of the x-ray spectrum. Potential advantages include the reusability of the electrodes for successive pulses until the initial apexes of the electrodes are significantly altered due to ablation, and the simplicity of setup and design.

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