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The effect of breakdown phase on the reproducibility of a 10 kJ dense plasma focus[1] DAVID HOUSLEY, FABIO CONTI, JEFF NARKIS, VLADIMIR FADEEV, ALEJANDRO BAEZ, APSARA WILLIAMS, FARHAT BEG, University of California, San Diego, CENTER FOR ENERGY RESEARCH TEAM — The dense plasma focus (DPF) is capable of producing intense bursts of X-rays and neutrons. However, reproducibility in DPF's is one of the challenging issues. To address this issue, a 10 kJ DPF with 300 kA peak current and 2 μs rise time has recently been constructed at the University of California, San Diego to study the effect of plasma breakdown phase on reproducibility. A variety of insulator materials have been employed to investigate the effect on breakdown reproducibility and subsequently its effect on the pinch phase. Results from spectroscopic and optical probing techniques will be presented.

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