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## Detailed modeling of DPF on HAWK generator

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Dense Plasma Focus (DPF) experiment on the HAWK pulsed power generator (640 kV, 665 kA peak current) in Naval Research Laboratory had been recently modified to include hollow anode and on-axis gas puff. The increased neutron yield, up to  $3.6 \times 10^{10}$ , of the new configuration deserves precise modeling, which was the goal of the reported work. We simulate the gas puff, the plasma injection and the dynamics after the voltage is applied to compare with available measurements, which include current and voltage on the device, the measurement of line density along the axis as a function of time, as well as the integrated X-ray images. This modeling allow us to narrow down unknowns present in the injection physics and obtain more robust estimates of the plasma and magnetic field state during the pinch. We use these parameters to further study potential non-MHD mechanisms of acceleration, such as electric field introduced by current disruption.

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