

Abstract Submitted
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Simulations of the MJOLNIR Dense Plasma Focus¹ ANTHONY LINK, A. POVILUS, R. ANAYA, M. G. ANDERSON, J. R. ANGUS, S. CHAPMAN, C. M. COOPER, C. GOYON, D. P. HIGGINSON, I. HOLOD, Lawrence Livermore Natl Lab, D. MAX, Mission Support and Test Services, M. MCMAHON, Y. A. PODPALY, A. E. SCHMIDT, Lawrence Livermore Natl Lab — Dense plasma focus (DPF) Z-pinches are compact pulse power driven devices with coaxial electrodes. The discharge of a DPF consists of three distinct phases: generation of a plasma sheath, a plasma rail gun phase where the sheath is accelerated down the electrodes, and finally an implosion phase where the plasma stagnates into a z-pinch geometry. During the z-pinch phase, DPFs can produce MeV ion beams, x-rays and neutrons. The MegaJoule Neutron Imaging Radiography (MJOLNIR) DPF was brought online at the end of 2018 and currently delivers greater than 2 MA to the load. Kinetic simulations using the code Chicago (C. Thoma, Phys. Plasmas 24, 062707 (2017)) and results from a reduced physics model will be presented for shots from the commissioning campaign. LLNL-ABS-780277

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