

Abstract Submitted
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End-On Optical Interferometry of Precursor formation in Cylindrical Wire Array Z-Pinches¹ GEORGE SWADLING, SERGEY LEBEDEV, SIMON BLAND, GARETH HALL, FRANCISCO SUZUKI-VIDAL, ADAM HARVEY-THOMPSON, GUY BURDIAK, NICOLAS NIASSE, LOUISSA PICKWORTH, ESSA KHOORY, PHILIP DE GROUCHY, JONATHAN SKIDMORE, Imperial College — A laser probing diagnostic system has been developed for applications on the MAGPIE pulsed power generator. This system is used to probe along the axis of wire arrays. This is a benefit as there is no requirement for Abel inversion in order to extract relevant information. This system has been used for both CW time resolved and pulsed spatially resolved Interferometry. Time resolve measurements were made using a Quadrature Interferometer system, using a CW 532nm Diode pump laser. The imaging system uses a sheared Mach-Zender scheme, powered by a pulse diode pumped laser of the same wavelength. Initial experiments were conducted using the well understood cylindrical wire array configuration. Initial data from these diagnostics will be presented along with comparisons to simple models and the results from 3D simulations using the GORGON MHD code.

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