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A Jet Production Experiment using the ASTRA Laser¹ JONATHAN WAUGH, University of York, ERIK BRAMBRINK, CHRIS GREGORY, MICHEL KOENIG, LULI, Ecole Polytechnique, YASUHIRO KURAMITSU, Institute of Laser Engineering, Osaka, BERENICE LOUPIAS, LULI, Ecole Polytechnique, YOUICHI SAKAWA, Institute of Laser Engineering, Osaka, LUCY WILSON, NIGEL WOOLSEY, University of York — Plasma jets were produced by the ablation of material with an intense short pulse laser from conical and groove shaped impressions in targets. The use of a high repetition rate laser allowed the use of a variety of jet materials, background gases and gas pressures. Plasma jets coming from plastic, Al, Cu and Au targets were observed and propagation of these stagnating plasmas into background He, N2 and Xe gases was studied. Interferometry data is used to infer the time dependent density of the stagnating region and the launch and propagation of shocks into the background gas. Here, the first analysed results from this experiment are presented.

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Jonathan Waugh University of York

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