Abstract Submitted
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Colliding supersonic plasma jets on the MAGPIE pulsed-power generator[1] F. SUZUKI-VIDAL, S.V. LEBEDEV, L.A. PICKWORTH, J. SKIDMORE, G.F. SWADLING, G. BURDIAK, M. BENNETT, S.N. BLAND, J.P. CHITTENDEN, P. DE GROUCHY, G.N. HALL, J. MUSIC, S. PATANKAR, R.A. SMITH, L. SUTTLE, Imperial College London — The dynamics of the interaction of supersonic, radiatively cooled plasma jets with applications to laboratory astrophysics are under study on the MAGPIE generator. Latest experiments focus on the interaction of jets with solid targets and counter-streaming jet collisions. In both cases the interaction is characterised by the formation of a "static" shock in which the magnetic field advected with the plasma flow seems to be playing a crucial role. The dynamics are studied by the means of time-resolved, fast-framing optical imaging, laser probing at 532 and 355 nm and Thomson scattering diagnostics. The experimental results are also compared with 3-D MHD simulations using the code GORGON.

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