

Abstract Submitted
for the DPP10 Meeting of
The American Physical Society

Investigations into beam-plasma interactions¹ M. KING, R. BRYSON, S.L. MCCONVILLE, K. RONALD, D.C. SPEIRS, K.M. GILLESPIE, D.A. CONSTABLE, K. MATHESON, A.D.R. PHELPS, R. BINGHAM, A.W. CROSS, C.G. WHYTE, University of Strathclyde, R.A. CAIRNS, I. VORGUL, University of St Andrews, B.J. KELLETT, R. TRINES, STFC Rutherford Appleton Laboratory — The interactions of plasmas with non-thermal electron populations can result in instabilities that are of importance in a number of applications and phenomena. Such instabilities include the anomalous Doppler instability that may occur in magnetic confinement fusion, the two-stream instability which is of importance to fast ignition inertial confinement fusion and cyclotron maser emission which can be found in auroral kilometric radiation and chorus. Numerical simulations of these instabilities, particularly the anomalous Doppler and two-stream instabilities, have been undertaken to provide a design and benchmark for the controlled, low temperature, low density experimental studies to follow.

¹The authors would like to thank the EPSRC for funding this project.

M. King
University of Strathclyde

Date submitted: 13 Jul 2010

Electronic form version 1.4