

Abstract Submitted  
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**Laser driven fast electron collimation in targets with resistivity boundary**<sup>1</sup> BHUVANESH RAMAKRISHNA, Atomic, Molecular and Plasma Physics, University College Dublin, Ireland, SATYABRATA KAR, ALEX ROBINSON, DARRYL ADAMS, KEITH MARKEY, MARK QUINN, XIAOHUI YUAN, PAUL MCKENNA, KATE LANCASTER, JAMES GREEN, PETER NORREYS, ROBBIE SCOTT, JOERG SCHRIEBER, MARCO BORGHESI, MATTHEW ZEPF, ATOMIC, MOLECULAR AND PLASMA PHYSICS, UNIVERSITY COLLEGE DUBLIN, IRELAND COLLABORATION, SCHOOL OF MATHEMATICS AND PHYSICS, QUEEN'S UNIVERSITY OF BELFAST, BELFAST, UK COLLABORATION, SUPA, DEPARTMENT OF PHYSICS, UNIVERSITY OF STRATHCLYDE, UK COLLABORATION, CENTRAL LASER FACILITY, RUTHERFORD APPLETON LABORATORY, CHILTON, OXFORDSHIRE, UK COLLABORATION, BLACKETT LABORATORY, IMPERIAL COLLEGE LONDON, PRINCE CONSORT ROAD, LONDON, UK COLLABORATION — Fast Ignition of inertially confined fusion targets allows high energy gain factors to be achieved for comparably modest total input energy. We will discuss experimental results demonstrating that the relativistic electron beam in a dense plasma can be efficiently confined to  $50\mu\text{m}$  radii and guided in structured targets irradiated by a laser pulse of about 1ps duration at an intensity of  $10^{20}\text{W}/\text{cm}^2$ .

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