

Low Power Investigations of an Energy Regeneration FEL Structure Operating at 3 GHz,
P.A. McINTOSH and M.W. POOLE, CLRC Daresbury Laboratory, Warrington, WA4 4AD, UK - The 3D computer simulation code MAFIA has been used to predict the shunt impedance of a 3 GHz muffin-tin FEL structure. Different operating wavelengths have been studied and certain limitations on the geometry have been identified. This paper highlights the muffin-tin design philosophy and also the optimum geometry parameterisations that have been completed. An aluminium investigative model has been manufactured and low power perturbation measurements have been performed and compared with the simulations.