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**Interpretation of Fast ECE and Soft X-ray Measurements During High Field Launch Pellet Fueling on DIII-D**<sup>1</sup> G.L. SCHMIDT, E.D. FREDRICKSON, S. JARDIN, PPPL, L.R. BAYLOR, T.C. JERNIGAN, ORNL, M.E. AUSTIN, U. Texas, R.T. SNIDER, General Atomics — Similar to observations on ASDEX-Upgrade,<sup>2</sup> high field launch pellet fuelling experiments on DIII-D have produced a particle source function shifted inward in minor radius toward the plasma core when compared to the local pellet ablation source. High time resolution measurements of electron cyclotron emission (ECE) and soft X-ray emission have been obtained during the initial phase of the ablation process. These measurements reflect changes in the flux surface averaged electron temperature during pellet ablation and provide insight into details of the mass redistribution. Measurements are evaluated using the PPPL Tokamak Simulation Code (TSC) assuming several possible mass redistribution models. The ECE and X-ray measurements are also compared with measurements of ablation light and density for beam heated DIII-D plasmas with weak shear and high edge  $q$ .

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<sup>2</sup>P.T. Lang *et al.*, Phys. Rev. Lett. (1997) 1487-1490.

Prefer Oral Session  
 Prefer Poster Session

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Special instructions: DIII-D Poster Session 1, immediately following P Gohil

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