

Abstract Submitted  
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**Progress on Stereoscopic Imaging of Ablating Lithium Pellets in Alcator C-mod**<sup>1</sup> B. BOSE, E. MARMAR, Alcator C-Mod, ALCATOR C-MOD TEAM — Ultra high speed imaging (max frame rate = 500 kHz) of injected Li pellets into Alcator C-Mod during previous campaigns identified the presence of poloidally moving striations in the pellet's ablation cloud. The behavior of these striations is remarkably different in L-mode and H-mode plasmas. In L-mode plasmas, the velocity of the striations tend to change direction on a length scale of the order of tens of gyro-radii, ranging from +/- 3000 m/s. In H-mode plasmas the striations currently have only been observed to move in the direction of the ion diamagnetic drift, with velocities that range up to 4000 m/s. During the 2005-2006 campaign a stereoscopic imaging system was installed and tested on Alcator C-mod to observe the ultra-short time scale ( $< 2 \mu\text{s}$ ) ablation dynamics in three dimensions, to determine the cause for both the formation and evolution of these striations. Presented here are experimental observations of the ablation process and possible explanations in terms of ablation dynamics and radial electric fields in the tokamak plasma.

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