

Abstract Submitted  
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**Edge turbulence flows at two different poloidal angles in Alcator C-Mod** STEWART ZWEBEN, PPPL, JAMES TERRY, MIT, MATTEO AGOSTINI, ENEA, WILLIAM DAVIS, PPPL, OLAF GRULKE, Greifswald, JERRY HUGHES, BRIAN LABOMBARD, MATT LANDREMAN, YUNXING MA, DAVID PACE, MIT, BRUCE SCOTT, Garching — High resolution edge turbulence movies have been obtained simultaneously at both the outer midplane and near the lower X-point region of C-Mod, using gas puff imaging (GPI) with two high speed cameras at 400,000 frames/sec. The time-resolved turbulence flow speeds at the outer midplane GPI view was previously estimated using a time-resolved cross-correlation technique [1], but previous results also showed a significantly different turbulence structure in these two regions [2]. Preliminary results indicate that the poloidal turbulence flows are not necessarily the same at these two poloidal angles. For instance, in one shot there is a strong time-averaged poloidal flow near the X-region toward the outer midplane, but mainly poloidally-fluctuating flows at the outer midplane. Examples of these flow measurements will be shown for plasmas with and without ICRH and in L-mode and H-mode plasmas. Evidence for fluctuating zonal flows preceding the L-H transition will be assessed. This work is supported in part by DOE Contracts DE-AC02-09CH11466 and DE-FC02-99ER5412.

- [1] S.J. Zweben, J.L. Terry et al, Plasma Phys. Cont. Fusion 54 (2012) 025008  
[2] J.L. Terry, S.J. Zweben et al, J. Nucl. Mat. 390-291 (2009) 339

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