

Abstract Submitted  
for the DPP16 Meeting of  
The American Physical Society

**Statistics of fluctuation induced transport in the scrape-off layer of Alcator C-Mod** RALPH KUBE, ODD ERIK GARCIA, AUDUN THEODORSEN, UiT - The Arctic University of Norway, BRIAN LABOMBARD, JAMES TERRY, MIT Plasma Science and Fusion Center — The fluctuation induced transport in the scrape-off layer of Alcator C-Mod is investigated in an ohmically heated lower single-null discharge using Mirror Langmuir Probes. The probes are connected to a horizontal scanning probe which dwells at the outboard mid plane limiter radius and to electrodes in the outer divertor baffle. At the limiter radius the electron density, electron temperature and plasma potential are correlated with linear correlation coefficients  $r$  of approximately  $r=0.8$ . The bursts show a steep rise and a decay on a time scales of approximately 5 and 10 microseconds respectively. Amplitudes of bursts in the density, temperature, and plasma potential time series are correlated with  $r$  approximately 0.7-0.8. Conditionally averaged bursts in the radial particle and heat flux time series are less coherent and less reproducible, their amplitudes are correlated to the amplitude of bursts in the density time series with  $r=0.4$ . Statistics of the fluctuating plasma parameters at the outer divertor baffle are qualitatively similar to those at outboard midplane. Histograms, as well as statistics for level crossings and excess times spent above a given threshold for the time series compare favorably to a stochastic model for time series of scrape-off layer plasmas.

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Date submitted: 14 Jul 2016

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