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Impurity poloidal rotation and other CXRS measurements for 0.1 $< \rho <$ 1.0 in Alcator CMod plasmas.[1] IGOR BESPAMYATNOV, WILLIAM ROWAN, KENNETH GENTLE, The University of Texas at Austin, Fusion Research Center, ROBERT GRANETZ, DEXTER BEALS, MIT Plasma Science and Fusion Center — The new wide-view poloidal CXRS array was installed and successfully tested during the CMod's 2007 experimental campaign. The 19 new poloidal chords traverse the outer half of the CMod plasma allowing measurement of B^{+5} rotation, temperature, and density profiles for $0.1 < \rho < 1.0$. Along with the toroidal flow velocity measured by the toroidal CXRS array, these measurements are sufficient to investigate the validity of neoclassical theory. This work focuses on the top of the plasma pedestal $0.5 < \rho < 0.90$, where neoclassical theory is expected to be applicable and where the maximum CXRS enhancement is observed. Our previous study showed that the region of the plasma edge $0.90 < \rho < 1.0$, contained high density and temperature gradients that vary during the L to H mode transition so that comparison with neoclassical theory is very difficult. Radial electric field profiles will also be presented. The changes of the impurity rotation profiles and E_r evaluation play a role in understanding of the physics of the L to H transition.

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