

Abstract Submitted
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Velocity measurements from the pedestal-viewing CXRS system on Alcator C-Mod¹ KENNETH MARR, BRUCE LIPSCHULTZ, RACHAEL MCDERMOTT, Plasma Science and Fusion Center — The evolution of velocity profiles can be used to study the toroidal momentum transport and shear that purportedly play an important role in the formation and intensity of the H-mode. For the 2007 run campaign the charge-exchange spectroscopy diagnostic has been upgraded for better spatial and temporal resolution of the pedestal region of the plasma. The ‘pedestal’ is the area near the separatrix where the density forms a steep gradient during H-mode. The diagnostic utilizes injected neutrals at both the high- and low-field edges of the plasma to spatially localize the measurement of toroidal and poloidal velocities at the intersection of the line of sight with the beam of injected neutrals. The upgrade added more views of the plasma, including background (away from the injection) views, and new spectrometers. Measured velocities trend as expected; increasing in magnitude into H-mode and into the core. These results are compared to similar diagnostics on Alcator C-Mod and their relation to momentum transport is discussed. Specific focus will be on v and T_i profile evolution during the transition from L- to H-mode.

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