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Theory     Experiment

**Measurements of Temperature, Density, and Flows on the Inboard Side Scrape-off Layer of DIII-D Plasmas Using the Swing-Probes,\*** C.K. Tsui, J.D. Elder, P.C. Stangeby, *UTIAS*; S.L. Allen, *LLNL*; J.A. Boedo, *UCSD*; A.W. Leonard, *GA*; A.G. McLean, *ORNL*; J.G. Watkins, *SNL* – Measurements of temperature, density, and parallel flow velocity have been made in the inboard, high-field side scrape-off layer (SOL) from the wall to the separatrix using new swing-probes, one at the entrance of each divertor. Prior to their installation, the inboard SOL could only be measured using passive spectroscopic techniques in most plasma shapes. Edge codes can now be fully constrained across the whole SOL. Swing-probe data taken over a density scan of L-mode and H-mode plasmas are presented and compared with those from other diagnostics. In L-mode plasmas, the Langmuir characteristic curves are quite quiescent suggesting that turbulence is largely absent from the inboard SOL.  $n_e$  increases linearly with  $\bar{n}_e$  at first, then saturates and rolls over. This is the standard feature of detachment observed by probes installed in divertor targets, indicating the spatial extent of the region of momentum loss and/or volume recombination.

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