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[ ] Theory [x] Experiment

Power Deposition on the DIII-D Inner Wall Limiter,* P.C. Stangeby, C.K. Tsui, J.D. Elder, *U. Toronto*; C.J. Lasnier, A.G. McLean, *LLNL*; A.W. Leonard, *GA*; J.A. Boedo, D.L. Rudakov, *UCSD*; M. Kocan, R.A. Pitts, *ITER* – Power deposition on the inner wall limiter (IWL) of DIII-D was measured by infrared (IR) thermography and calculated from plasma profiles measured by an inner column Swing-Probe for 6 ohmic discharges. In some cases clear evidence was found for a narrow feature with λ_{short} ~ ion poloidal gyro-radius ~ a few mm, and of strength $q_{\|0\_short}/q_{\|0\_long} \sim 0.5$ ± a factor of 5, where $q_{\|}$ is the parallel power flux density. The objective of the experiment was to check the assumptions made in defining the shape of the ITER IWL, in particular to see if the radial gradient of $q_{\|}$ increases near the last closed flux surface on DIII-D in agreement with observations in other tokamaks [JET, COMPASS, TCV, C-Mod]. On the basis of the results from the IWL experiments done on the 5 tokamaks, ITER decided in April 2014 to re-design the limiter shape to accommodate a narrow power feature.

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