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Particle and Energy Transport in the SOL of DIII-D and NSTX<sup>1</sup> JOSE BOEDO, DMITRY RUDAKOV, UCSD, A. ROQUEMORE, H. KUGEL, PPPL, R. MAINGI, ORNL, J. WATKINS, SNL, W. WEST, GA, S. ZWEBEN, PPPL, NSTX TEAM, DIII-D TEAM — While intermittent transport is the only SOL radial transport vehicle in L-mode, knowing the relative importance of inter-ELM vs ELM particle flux in H-mode is crucial. Density scans in DIII-D show that ELMs account for  $\sim 90\%$  of the wall particle flux at low Greenwald fraction  $(f_q \sim 0.4)$ , decreasing to  $\sim 30\%$  at  $f_q \sim 1.0$ . Both intermittent transport and ELMs are comprised of filaments of hot, dense plasma ( $n_e \sim 1 \times 10^{13} \text{ cm}^{-3}$ ,  $T_e \sim 100 \text{ eV}$ ) originating at the pedestal and convective in nature, leaving the pedestal region at speeds of  $\sim 0.5$ -1 Km/s and losing heat and particles by parallel transport as they travel through the SOL. The intermittency and ELM heat is quickly lost, resulting in temperature radial decay lengths  $\sim$ 1-2 cm, but the particles are not, resulting in radial density decay lengths  $\sim$ 4-13 cm that increase inversely with SOL collisionality. In DIII-D the intermittency decays in both intensity and frequency in H-mode while it only decays in frequency in NSTX.

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