

What is Causing ELM Suppression?

- **It does not appear to be island overlap.**
 - The Chirikov overlap criterion does not depend sensitively on q_{95} .
 - The strong rotation at the edge would suppress islands.
 - The strong radial field at the edge is inconsistent with islands.
- **An alternative explanation is non-ambipolar transport due to ripple**
 - Ripple is due to in-out excursions coupled with $B \sim 1/R$.
 - Should be greatest when a strong resonance is just outside the plasma. Excursion goes as $(\delta B/B)^{1/2}$ vs. $(\delta B/B)$ for non-resonance.
 - Data on DIII-D suggest that the E_r well is moved to being centered around $E_r = 0$, and weakened with ELM suppression.
- **An issue for tests on NSTX:**
 - It seems that the biggest H-mode effect is density pedestal, which is drained to the DIII-D pump by RMP.
 - Moving strike point away from pump opening cancels ELM suppression on DIII-D. (Pump is on the other side on ITER!)