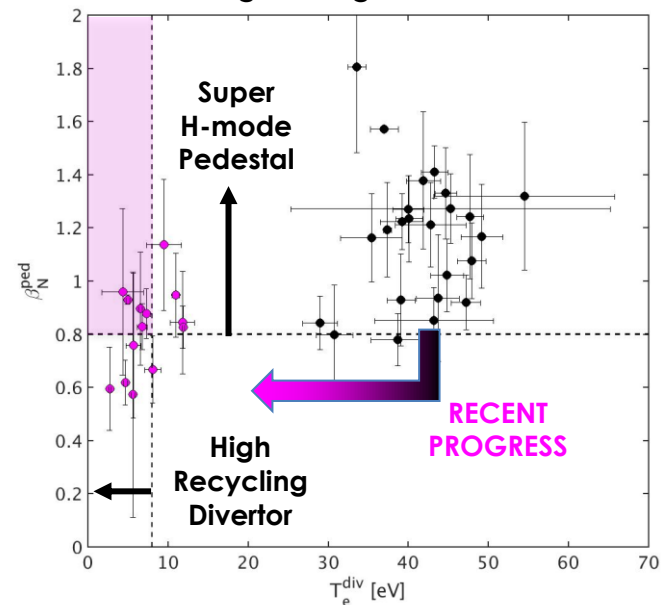


# Super H-mode has potential to integrate a high performance core, pedestal and divertor

- **The Super H-mode regime provides a platform for understanding trade-offs in core edge integration**
  - Leverages peeling physics to operate at high density and high pressure
  - Advanced control algorithms for density and radiated power are enabling tools
  - Combination of nitrogen seeding and deuterium fueling lead to high performance pedestals and low divertor temperatures
- **Robust access to Super H-mode channel at modest triangularity shown both in DIII-D experiments and EPED simulations**
  - EPED simulations show access to Super H-mode channel for JET and ITER
  - Small changes in plasma triangularity in JET-similar conditions lead to SH access on DIII-D and potentially a factor of 2 increase in achievable pedestal pressure

Core Edge Integration on DIII-D



EPED Predictions Compared to DIII-D Experiment

