Assessment of pumping capability is a critical issue for comparison of lithium coatings and LLD

- This year – last opportunity to do measurements with lithium coatings on graphite. Do we understand it?

- How to assess pumping capability η_p? Global divertor recycling R?
  - Run UEDGE model, match measured edge and divertor parameters, conclude η_p, R, …
  - Use simple 0D (or TRANSP) particle balance model and $dN/dt=0$ discharges

- Propose to do pumping capability assessment XP
  - Use several LITER rates and SGI fueling
  - Can use high-δ shape and LLD shape
  - Derive global η_p, τ_p^*, etc using pulsed SGI fueling

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SGI-fueled LITER-conditioned H-mode discharges demonstrate that N_i is controlled and N_e rise is due to carbon

- Used modest LITER rate (9 mg/min)

- Nearly ELM-free

- Gas fueling (LFS + SGI) during first 200 ms

- NBI fueling ~ 8 x 10^{20} s^{-1}

- Deutron inventory constant

- Can vary constant N_d

- Electron inventory is rising due to 1) carbon source increasing? 2) confinement?

- Observed only in LITER discharges