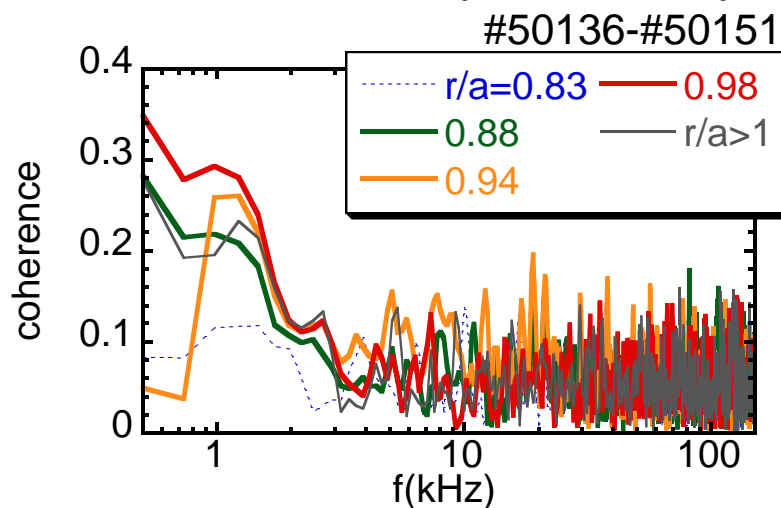
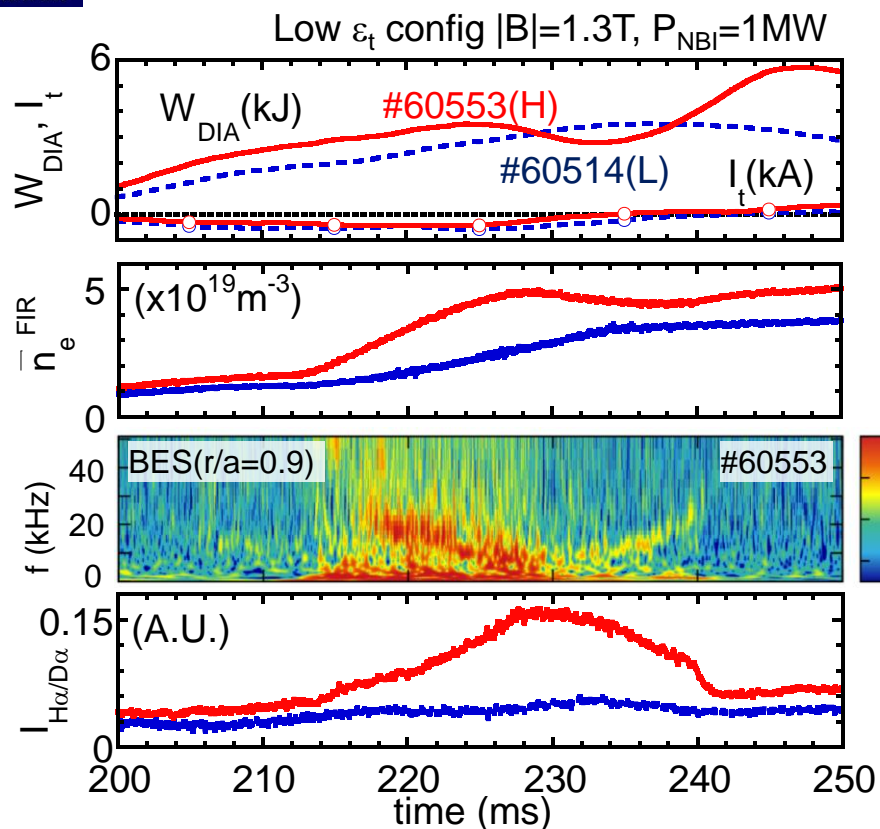




# Study of H-mode transition triggered by high-intensity gas puffing in NBI plasmas of Heliotron J



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- ✓ H-mode transition is triggered by high intensity gas puffing (HIGP) from **inboard side**.
- ✓ Before transition,
  1.  $n = 2$  bursting mode (4-30kHz)
  2. Low- $f$  fluctuation (<3kHz), which causes **particle exhaust** are observed.

- ✓ Appearance of low- $f$  fluctuation has correlation to formation of steep density gradient after transition.
- ✓ Envelope analysis shows possibility of **non-linear coupling between low- $f$  and high- $f$  (> 40kHz) fluctuations**.
- Using careful particle fueling by HIGP, H-mode plasmas are produced along with the formation of steep density gradient in Heliotron J.