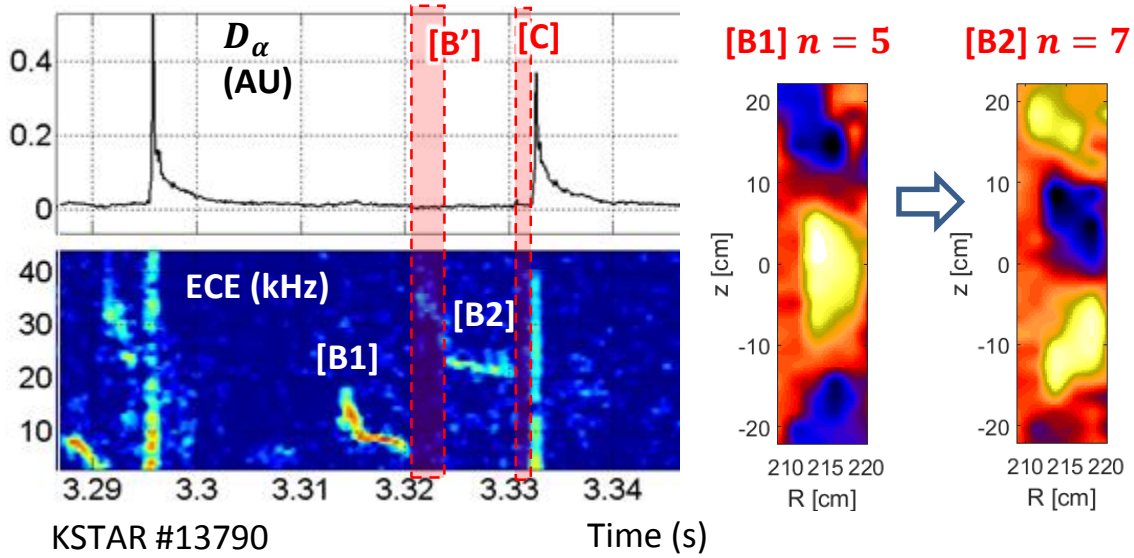
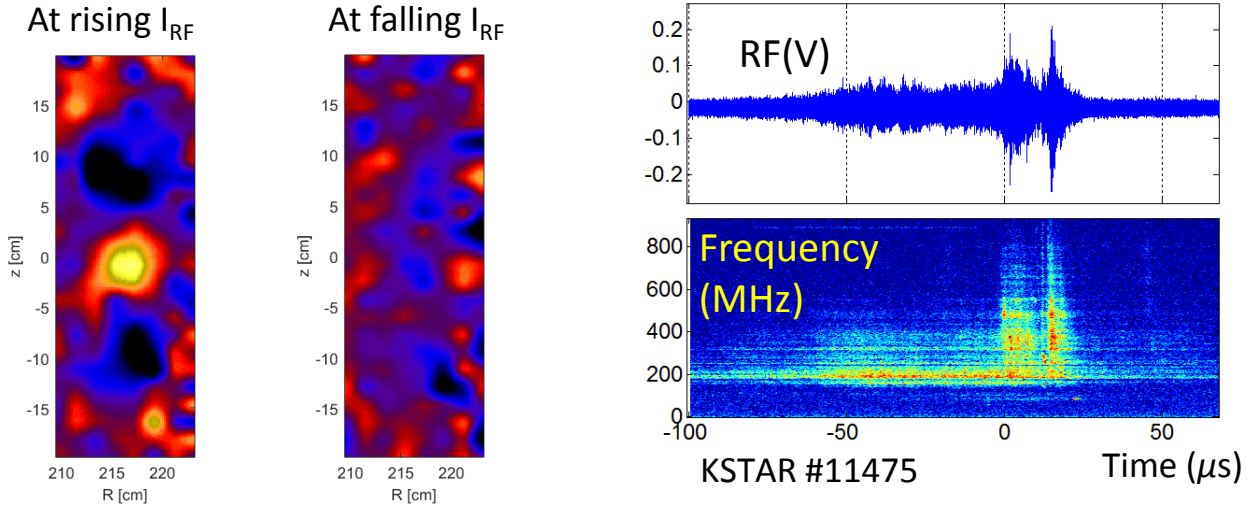
EX/10-3 G.S. Yun (POSTECH) “Edge-localized modes on KSTAR: global structure and distinct evolution stages involving quasi-steady state and phase transitions”

ELM cycle has three distinctive evolution stages:



- ✓ Quasi-steady (QS) filamentary modes and rapid mode transitions
- ✓ Phase transition from QS filament to low-*n* filament
- ✓ Bursts of the low-*n* filament and pedestal collapse

RF emissions are highly linked to the ELM dynamics.



- ✓ Persistent emission around 200 MHz; intensity correlated with QS filament amplitude
- ✓ Ion cyclotron harmonic emissions near the ELM crash
- ✓ Broadband bursts during the crash.