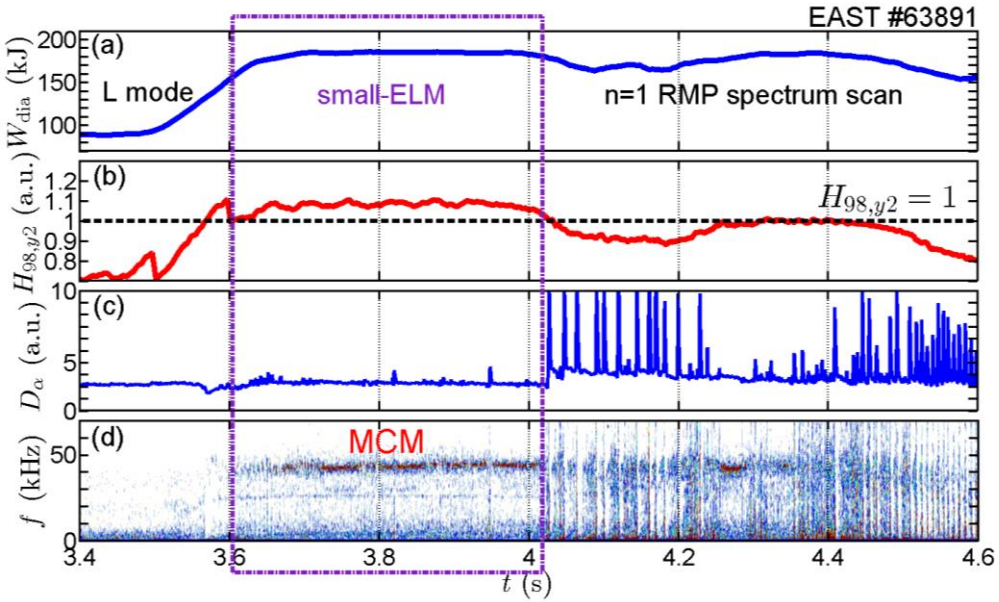
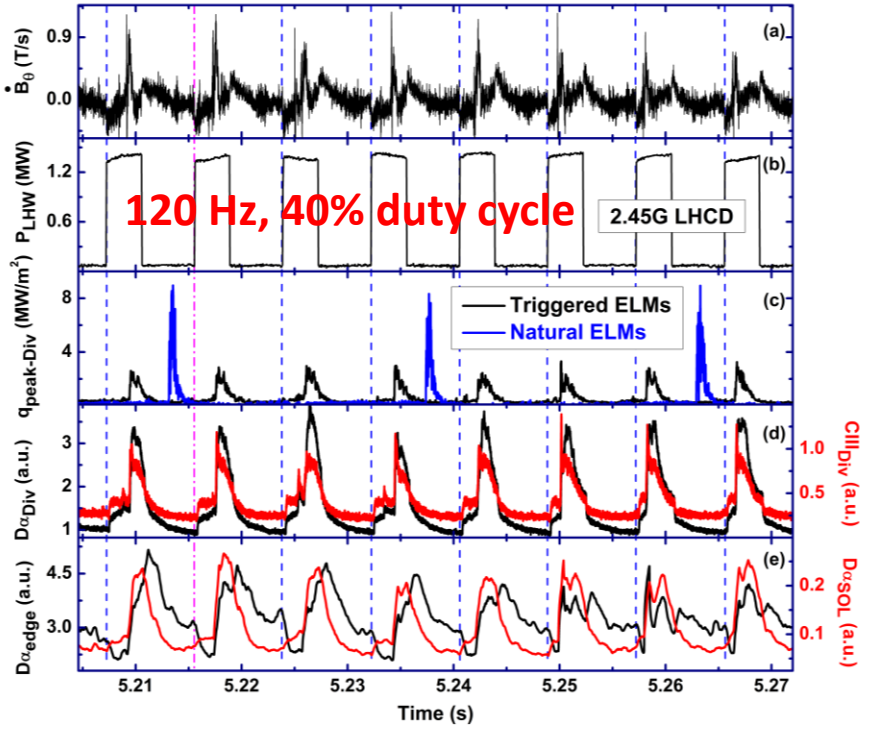
EAST Achieved a New Stationary Small/no ELM H-Mode Regime and Demonstrated a New ELM Pace-Making Technique for Long-pulse

ASIPP





- **A new stationary small/no ELM H-mode regime has been obtained in EAST at low collisionality ($\nu_e^* < 1$) with good energy confinement, $H_{98(y,2)} \gtrsim 1.1$, exhibiting a low-*n* (mostly *n*=1 and sometimes *n*=2) electro-Magnetic Coherent Mode (MCM) at 30-60 kHz in the pedestal region.**
- **The MCM frequency appears to be located at the low frequency boundary of TAE gap near the local trapped-thermal-electron bounce frequency, and scales linearly with the local Alfvén frequency, thus pointing to the possibility of trapped-electron-driven TAE mode.**
- **A new ELM pace-making technique by LHCD power modulation up to 120 Hz has been demonstrated in EAST.**
- **LHCD-induced edge stochastic magnetic field and density-profile modification have been found responsible for the ELM triggering.**

EX/10-2 G.S. Xu