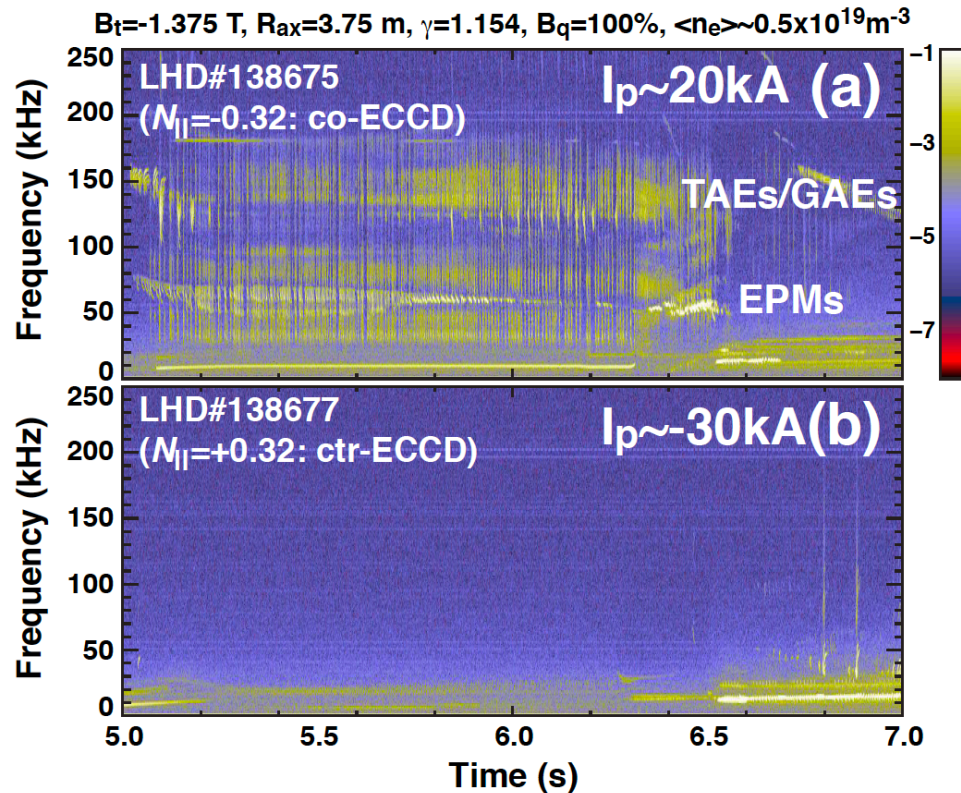
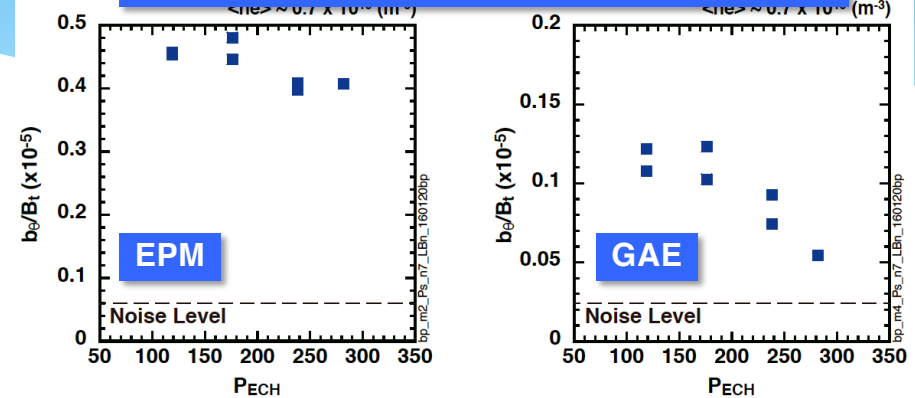


# Impact of ECH/ECCD on Fast-ion-driven MHD Instabilities in Helical Plasmas

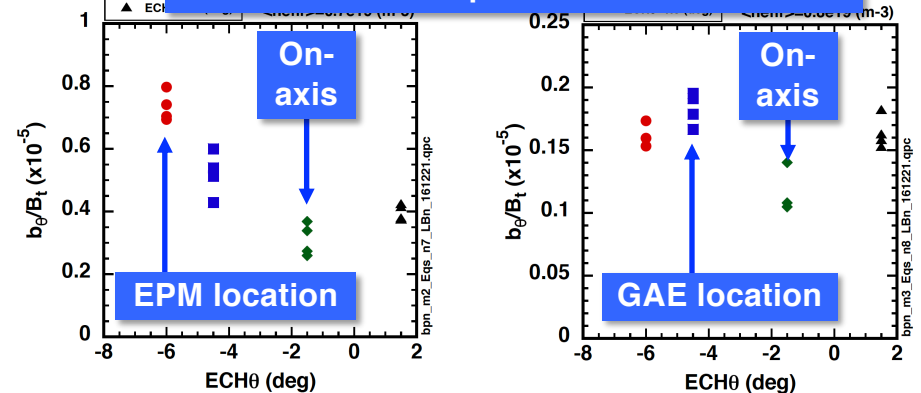
## EC driven $I_p$ mitigates AEs in LHD



## On axis ECH mitigates AEs in Heliotron J



## Effect of ECH deposition in Heliotron J



- ✓ ECCD mitigates/suppress AEs/EPMs through the change of shear Alfvén continua and/or the increase in continuum damping due to the increase in magnetic shear in stellarator/heliotrons.
- ✓ On-axis ECH mitigates AEs/EPMs. Off-axis ECH heating AE location destabilizes mode.
- ✓ Candidates to explain ECH effect are that the change of fast ion beta and/or collisional damping due to fast electron.