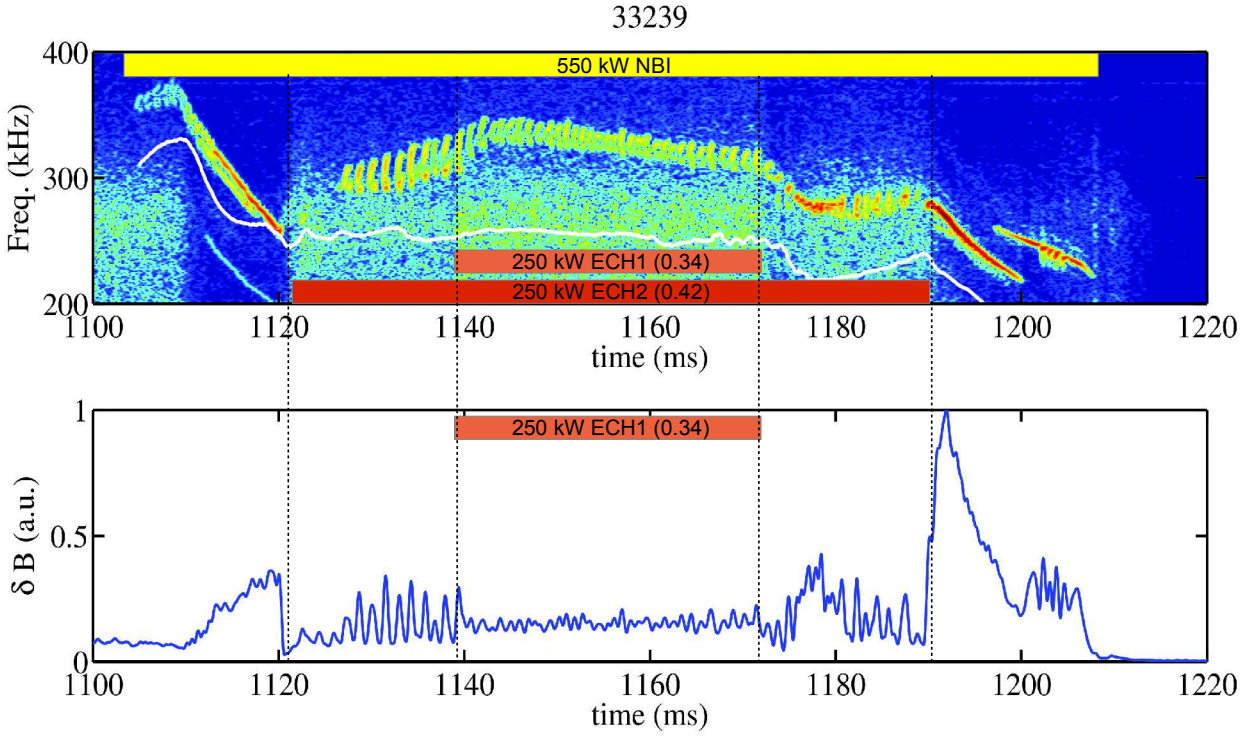
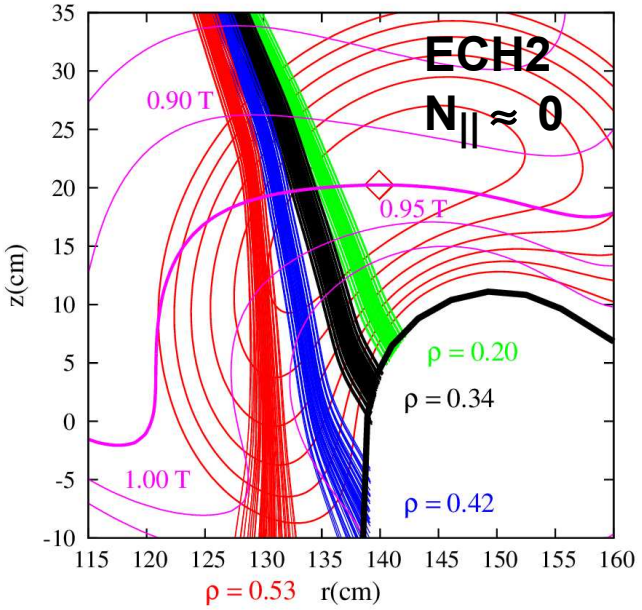
Influence of ECR heating on NBI-driven Alfvén Eigenmodes (AE's) in the TJ-II Stellarator

- **ECRH has a strong influence on the NBI driven Alfvén modes in TJ-II.** Impact of two EC beams on the Alfvén activity driven by a co-directed H_0 sub-Alfvénic beam has been addressed.
- Using the second EC beam (ECH2), large frequency chirping is observed for given power deposition locations off-axis ($\rho \geq 0.42$). For $\rho \leq 0.34$ steady mode is recovered.
- Both steady and chirping modes amplitudes are reduced when ECH1 power at $\rho = 0.34$ is added.





- Neutral flux measured by CNPA increases when ECH is applied.
- Off-axis position for frequency chirping also produces a reversal of the total plasma current (Ip) not attributable to changes in plasma profiles.
- ECH2 off-axis position for maximum chirping amplitude depends on the magnetic configuration.