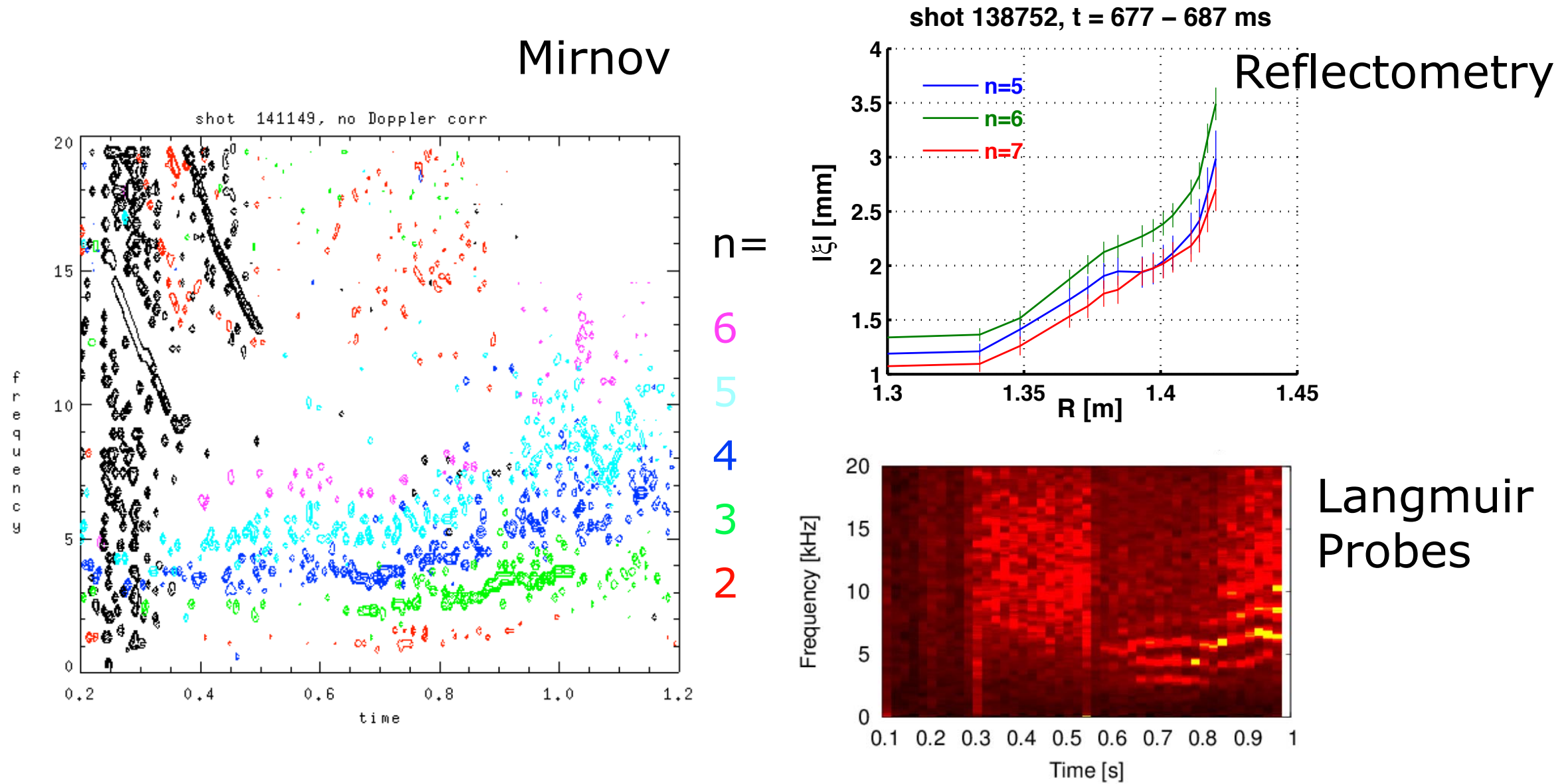


EHO Scoping Study

Rob Goldston, Eric Fredrickson

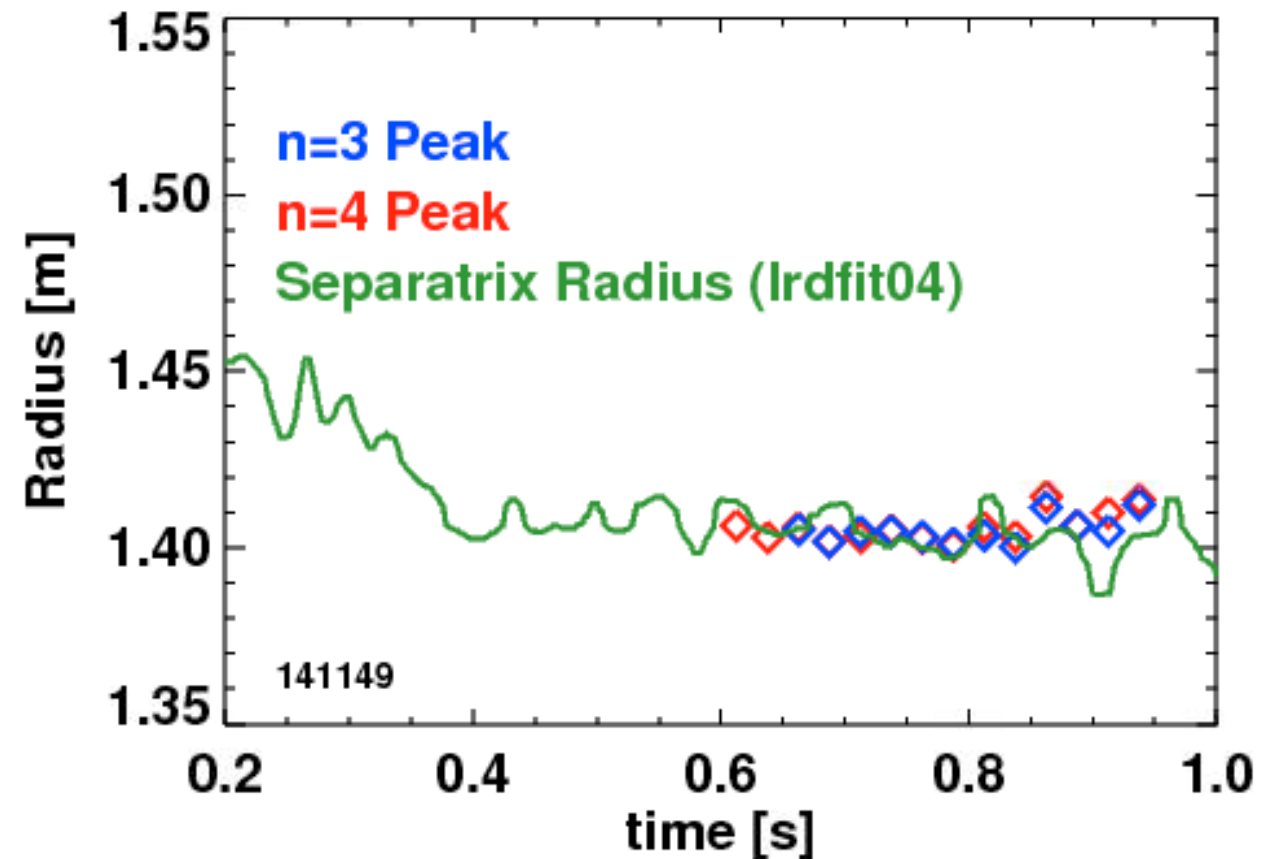
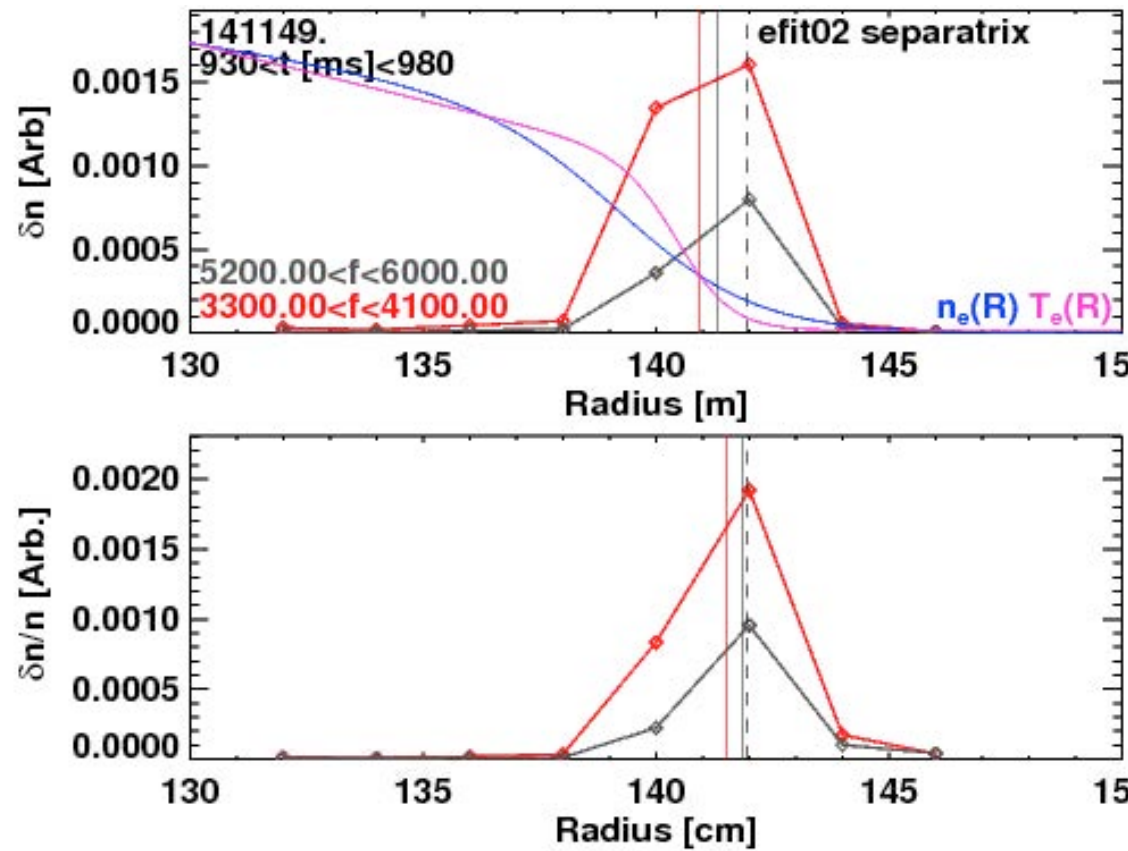


$n =$
6
5
4
3
2

Observed on NSTX at ~ 800 kA, 2 beams,
ELM-free lithiated conditions,
Low core MHD

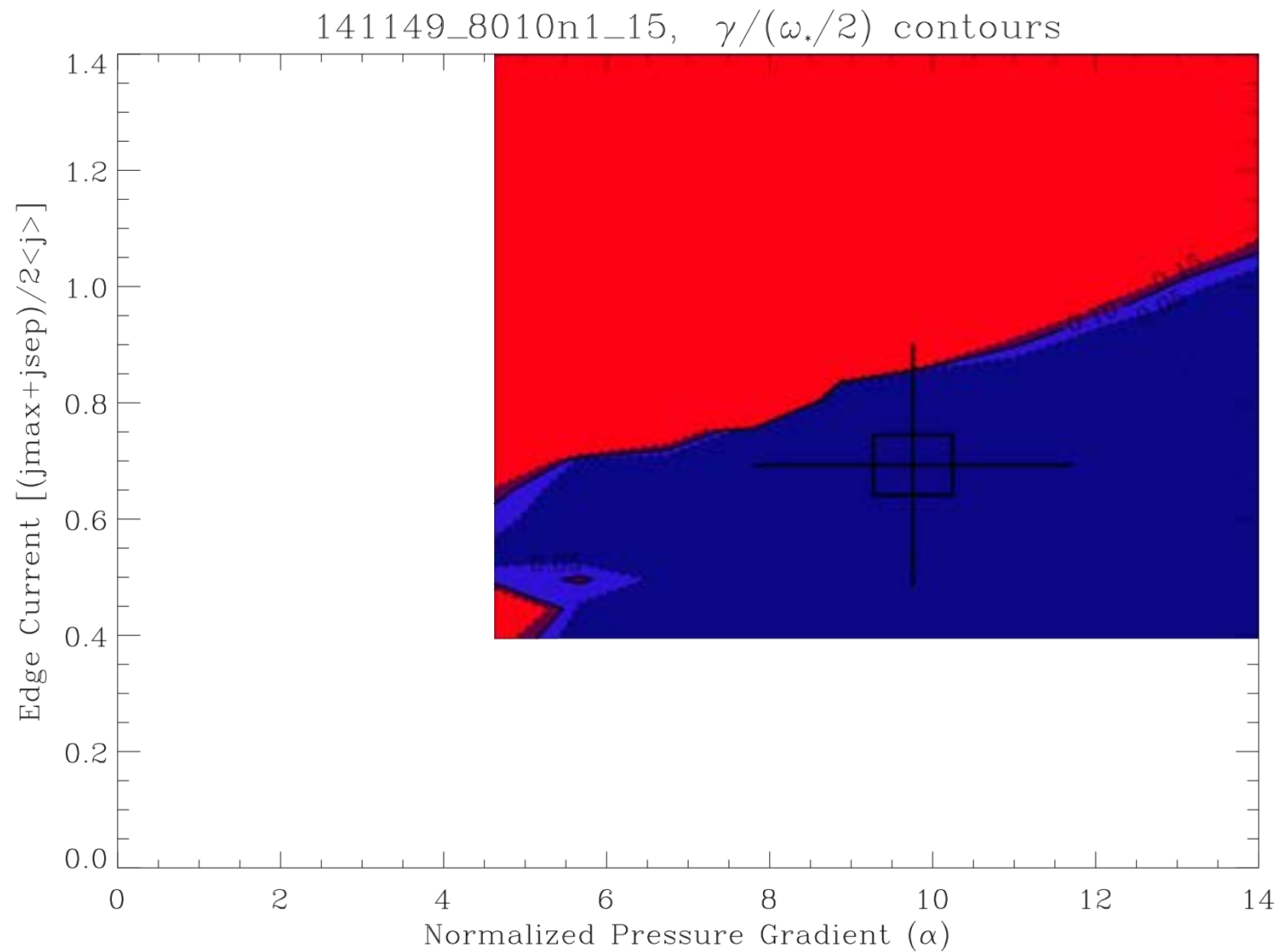
EHO's Located Close to Separatrix

BES



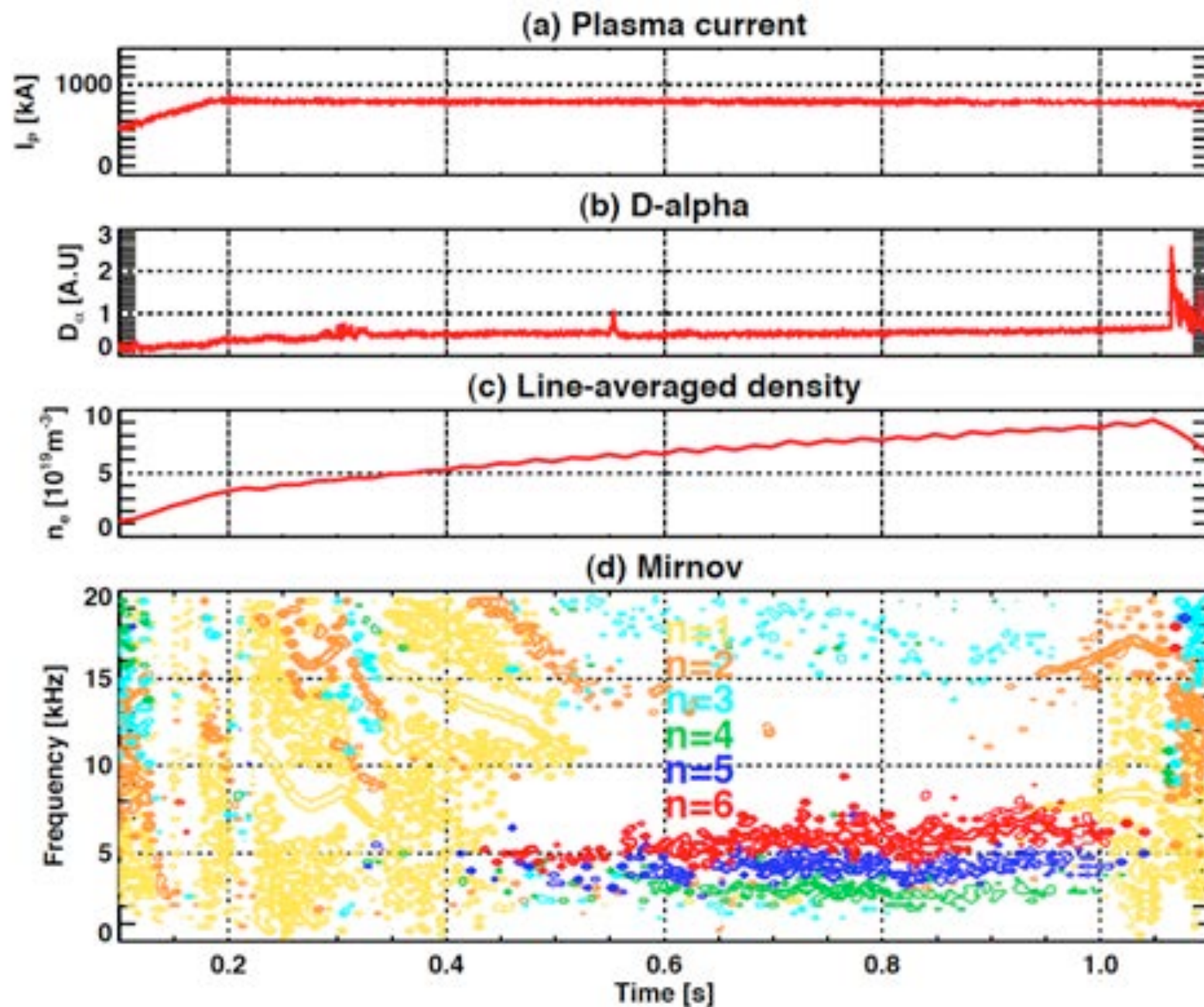
Like in DIII-D QH Modes – Maybe even further out?

Close to Peeling Stability Boundary



Like DIII-D QH Modes

Does not Limit Density Rise



Unlike DIII-D QH Modes

Proposal

We propose to look for EHOs in NSTX-U in piggyback mode, but then use ~ 1 run day to explore the boundaries of their operational region (including beam aiming angle), and their effects on particle confinement over this region.

Since the best performance of DIII-D with co-injection involves edge braking with non-axisymmetric coils for strong edge rotation shear, we propose to apply $n=3$ edge braking to a case with clear EHOs and to observe if this amplifies them and if it has an effect on particle confinement.

Collaboration in a wider EHO initiative is highly welcome.