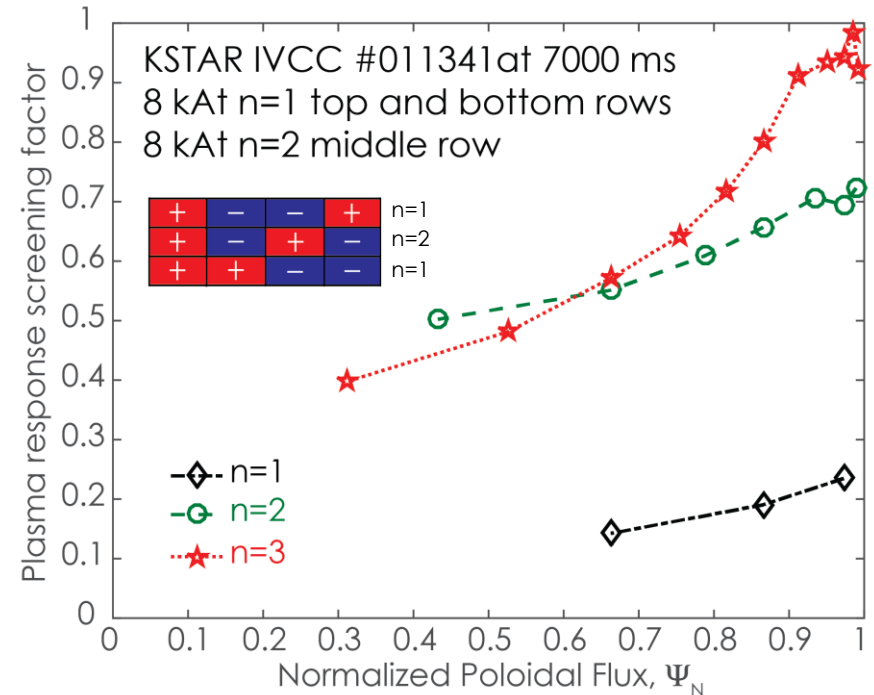


KSTAR n=3 Sideband Fields Strongly Resonant with Edge Plasma when n=1 Square Wave applied

D. M. Orlov, et al. EX/P3-19

- Application of n=1 “square” perturbation using the KSTAR in-vessel control coils (IVCC) leads to modest levels of n=3 sidebands
 - n=3 sidebands comparable to the first harmonic n=1 when M3D-C1 plasma response is included
 - this is due to the low level of screening of the rational-surface-resonant n=3 component
 - n=1 fields are more effectively screened
- There is experimental and numerical evidence that toroidal sidebands help to achieve ELM suppression in both DIII-D and KSTAR



Number of ELM coils in ITER should be preserved to maintain the highest margin for success