

# 3D Fields for RMP-ELM Suppression Can Lead to Significant Energetic Particle Losses from Edge

EX / 10-2

- Up to factor of two decrease in edge Fast Ion D-alpha (FIDA) measured when n=3 RMP turns-on
  - Short 50ms n=3 off periods used to diagnose impact of n=3
  - ELM suppression maintained throughout
- Measurements consistent with SPIRAL +M3D-C1 full orbit simulations showing
  - Large loss of fast ions from  $\rho > 0.7$
  - Majority of losses to divertor region

