# Gyrokinetic study of edge blobs and divertor heat-load footprint

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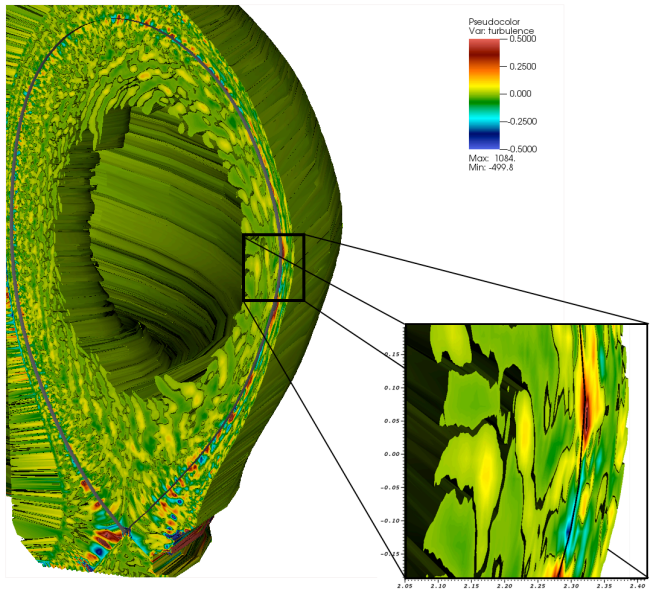
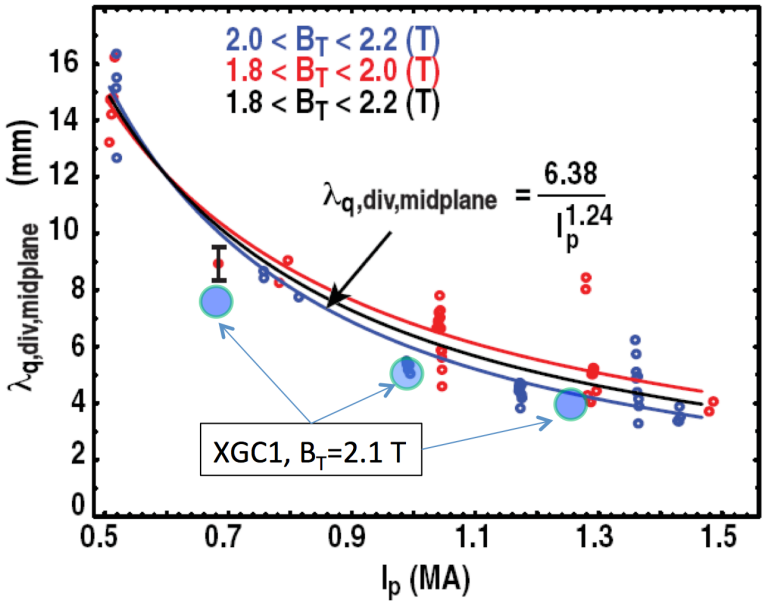
- Heat-load footprint has been measured in the full-f gyrokinetic code XGC1
  - DIII-D H-mode shot #096333 in realistic diverted magnetic geometry
- Effect of electrostatic blobby edge turbulence has been accounted for self-consistently
- Gyro-kinetic ions, drift-kinetic electrons and Monte Carlo neutral particles are included




- The heat-load width and the $I_P$ scaling from XGC1 are similar to experiment
  - XGC1: $\lambda_q$ (midplane) $\propto 1/I_P$
- Neoclassical orbit excursion appears to dominate $\lambda_q$ in this plasma
- Spreading of $\lambda_q$ by blobs is expected to become important in ITER: meso-scale $(\rho_i a)^{1/2}$ ~similar, while $\Delta_{banana}$ ↘