

# Understanding the Blobby Turbulence in Edge Plasma from Gyrokinetic Simulation

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- Use the total-f gyrokinetic code XGC1
  - A model DIII-D H-mode like plasma profile
  - Turbulence, neoclassical and neutrals together
- Intermittent blobs peak around separatrix
- Blobs are generated at the steepest density gradient region ( $\Psi_N \approx 0.98$ ) and move out radially, following radial variation of the strong mean ExB flows
  - H-mode blobs move out across separatrix well above the outboard midplane
- Anisotropic blob structure in H-mode
  - Correlation length: 1.25 cm radially, 5cm poloidally
- We invite experimental validation

