Abstract Submitted
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Dependence of Turbulence Spatial Correlation Lengths on Plasma Rotation[1] JASON PARISI, Yale University, MICHAEL BARNES, FELIX I. PARRA, University of Oxford, Culham Centre for Fusion Energy, COLIN M. ROACH, Culham Centre for Fusion Energy — We present the results from nonlinear gyrokinetic simulations in GS2 to investigate the parallel and perpendicular correlation lengths of electrostatic turbulence in tokamak plasmas with rotation. These correlation lengths are characterised for a range of parameters, including the E $\times$ B shear, γ_E. We observe that the correlation lengths decrease as γ_E increases. Simulation results are compared against scaling laws deduced from the critical balance conjecture, which states that nonlinear perpendicular decorrelation times and parallel streaming times are comparable at all spatial scales.

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