

Abstract Submitted
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Suppression of Edge and Blob-Filament Turbulence on HBT-EP¹ I.G. STEWART, J.W. BROOKS, J.P. LEVESQUE, M.E. MAUEL, G.A. NAVRATIL, Columbia University — Recent work has shown that the ion temperature gradient mode (ITG) dominates the edge turbulence on HBT-EP, while blob-filament turbulence is present in the scrape-off layer (SOL). Measurements of the radial wavenumber spectrum of floating potentials at the edge show that the ITG turbulence intensity decreases with increasing shift in the spectrum average $\langle k_r \rangle$ when increasing amounts of bias probe voltage (and increasing amounts of flow shear) is applied. These measurements extend previous findings on EAST and TCABR, which support the spectral shift model proposed by Staebler et al.² for turbulence suppression via sheared flow. In addition, abrupt suppression of blob-filament turbulence in the SOL occurs at lower electrode voltages and currents than that required for the L-H transition. The SOL turbulence also remains low throughout dithering transitions, despite the modulation of turbulence levels in the nearby edge. In this way, the SOL turbulence “decouples” from the edge turbulence.

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²Staebler G. M. et al. 2013 *Phys. Rev. Lett.* **110** 055003

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