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Quasilinear critical gradient model for the intermittency of Alfven eigenmode transport of energetic particles[1] RONALD WALTZ, General Atomics, ERIC BASS, UCSD, CAMI COLLINS, General Atomics — The critical gradient model (CGM) for the time-average transport of energetic particles (EP) by Alfven eigenmodes (AEs) has been verified by local nonlinear GYRO gyrokinetic simulations [1], validated by DIII-D experiments [2], and used to predict ITER EP confinement loss [3]. High intermittency of even low time-average EP transport loses at the edge of ITER could cause significant wall erosion. Here we explore the nature of intermittent AE-EP transport with a simplified quasilinear critical gradient model (QLCGM) using the time dependent EP density transport code ALPHA [3]. In agreement with DIII-D experiments [4] the intermittency is found to increase with the EP source strength.

[1] E. M. Bass and R. E. Waltz, *Phys. Plasmas* **17**, 112319 (2010)

[2] R.E. Waltz, E.M. Bass, W.W. Heidbrink, and M.A. VanZeeland, *Nucl. Fusion* **55** 123012 (2015)

[3] R. E. Waltz and E. M. Bass, *Nucl. Fusion* **54**, 104006 (2014)

[4] C. S. Collins et al, *Phys. Rev. Lett.* **116**, 095001 (2016)

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