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**Large Turbulent Transport of Alpha Particles in Reactor Plasmas**<sup>1</sup> C. ESTRADA-MILA, University of California, San Diego, J. CANDY, R.E. WALTZ, General Atomics — The study of energetic particle transport in fusion plasmas has been largely confined to processes connected with MHD oscillations, whereas the effect of core microturbulence on alpha particle transport has received little attention. Indeed, the *conventional wisdom* is that fast particles do not interact with small-scale perturbations because of gyroradius and drift averaging effects. In this poster we present a systematic study of the behavior of energetic species in ITER. Using gyrokinetic simulations from the GYRO code [1,2], we found that alpha particles interact strongly with core ITG turbulence. The most surprising finding of this work is that the fluxes per particle of alphas can be stronger than the main ion fluxes counterpart, as opposed to *conventional wisdom* where species with large gyroradii do not interact with the turbulence.

- [1] J. Candy and R.E. Waltz, J. Comput. Phys. **186**, 545 (2003).
- [2] J. Candy and R.E. Waltz, Phys. Rev. Lett. **91**, 45001 (2003).

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C. Estrada-Mila  
University of California, San Diego

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