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Effects of short wavelength turbulence associated with inhomogeneous electron temperature modes[1] KEVIN TAKASAKI, BRUNO COPPI, CHRIS CRABTREE, VADIM ROYTERSHTEYN, MIT — The background short wavelength turbulence that is generated by modes associated with the combined effects of magnetic field and electron temperature gradient is shown to be relevant to three important physical issues. First, due to an enhanced "thermal resistivity" along the magnetic field lines, drift-tearing modes may become unstable in weakly collisional or collisionless plasmas. Second, in the central region of the plasma column the short wavelength modes can produce a particle inflow, which in the outer region of the plasma column can be explained by the finite electron collisional thermal conductivity [1]. Finally, the influence of the different topologies that the considered modes can have on magnetic reconnection at the microscopic scale is pointed out. [1] B. Coppi and C. Spight, *Phys. Rev. Lett.* **41**, 551 (1978).

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