



Figure 57.1: Schematic representation of the topology of instantaneous vorticity fields of turbulent  $\beta$ -plane jets. From top to bottom: (a) disordered jet,  $\mu \ll 1, k \sim 1$ , (b) intermittent jet,  $\mu \sim 1, k \geq 1$ , (c) meandering jet,  $\mu \sim 1, k \leq 1$ , and (d) zonal jet,  $\mu \geq 1, k \ll 1$ . See description in text.