Edge poloidal pressure asymmetries can drive large shear flows and $E_r$.

- MHD equilibria with localized poloidal pressure asymmetries necessarily have large shear flows and $E_r$ at the edge.
- Asymmetries above the midplane produce $u_\theta < 0$ and $E_r > 0$ (Figs. (a)-(c)). A positive $E_r$ is unfavorable for confinement; it will increase $P_{LH}$.
- Asymmetries below the midplane produce $u_\theta > 0$ and $E_r < 0$ (Figs. (d)-(f)). A negative $E_r$ is favorable for confinement; it will decrease $P_{LH}$.
- This physics provides a qualitative explanation for the ion $\nabla B$-drift-direction dependence of $P_{LH}$.
- Deliberately-introduced asymmetries can be used to improve or degrade confinement.