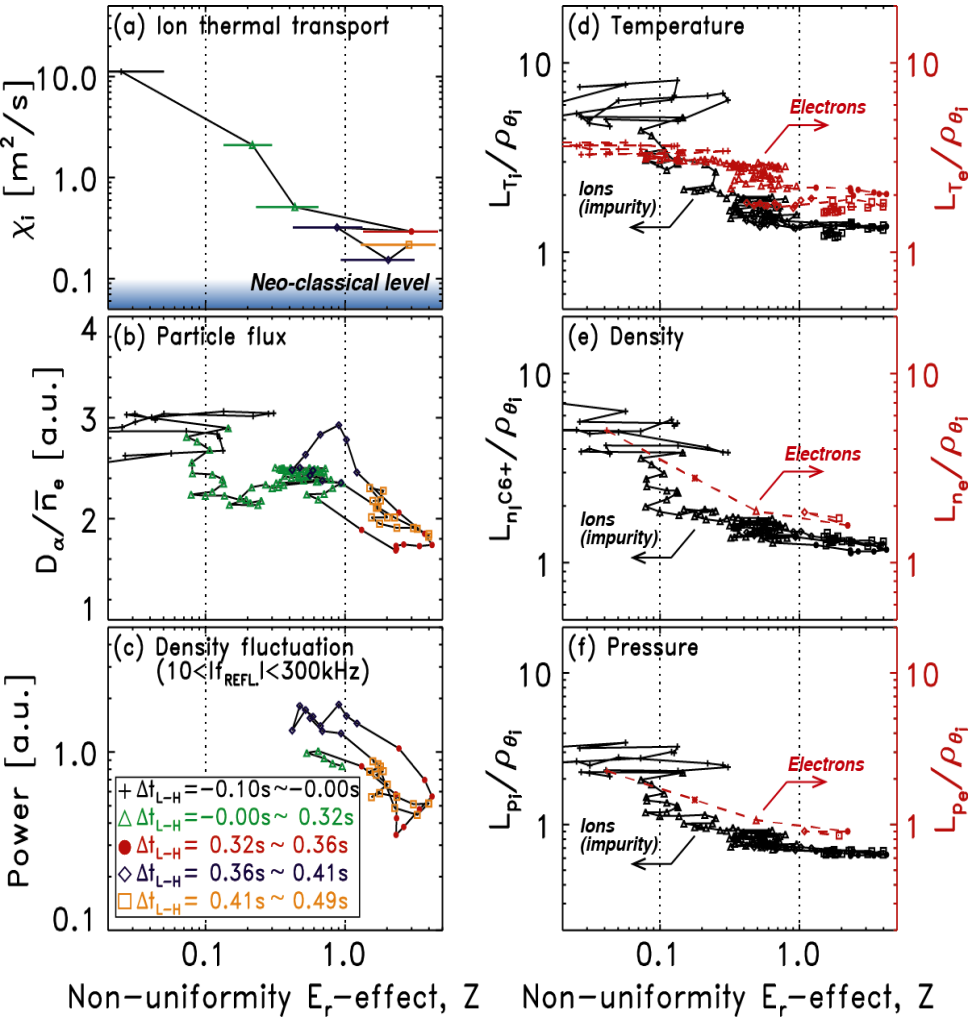
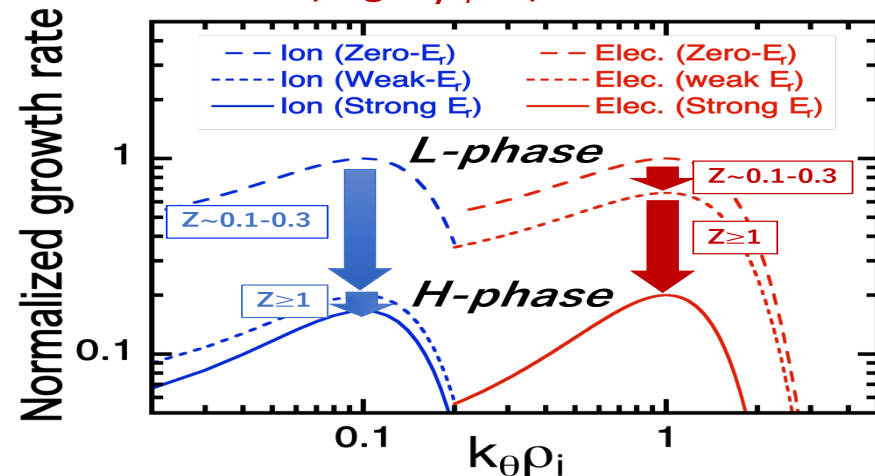


# A new model of criterion for turbulence suppression: $[(k\rho_i)^{-2}Z \geq 1]$ will lead to a better understanding of how the $E_r$ regulates the system for each transport channel.



- ①  $Z \sim 0.1$  regime: the anomalous transport of ion energy (e.g.  $k\rho_i \sim 0.1-0.3$ ) is suppressed.
- ② Intermediate  $Z$  (up to  $\sim 1$ ) regime: the electrons one stays unchanged (or becomes large).
- ③  $Z \geq 1$  regime: Effective in enhancing particle and electron energy transport, having higher wave numbers (e.g.  $k\rho_i \geq 1$ ).



$$Z \equiv \rho_i^2 \left( \frac{1}{V_d B} \frac{dE_r}{dr} \right)^2 - \rho_i^2 \left( \frac{1}{V_d B} E_r \right) \left( \frac{1}{V_d B} \frac{d^2 E_r}{dr^2} \right)$$