EX/P8-13: Measurement of apparent poloidal rotation of ion-scale turbulence with the KSTAR microwave imaging reflectometer (MIR)

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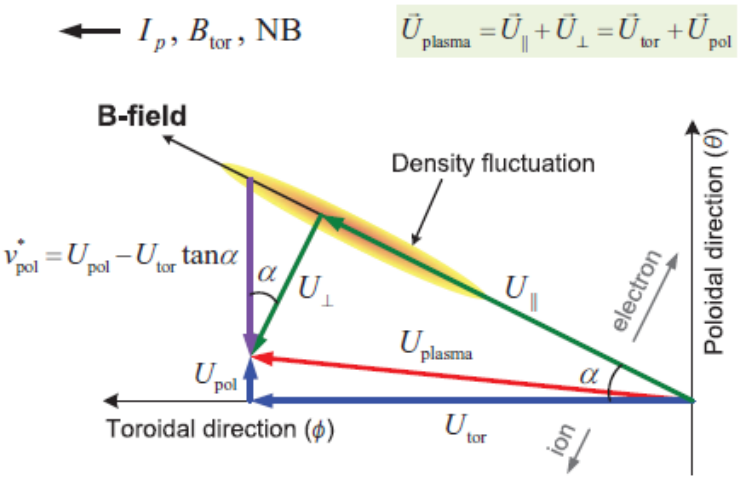
- Ion-scale density fluctuations ($k_{pol}\,\rho_i < 0.6$) have been measured with the MIR system in KSTAR
- Mean apparent poloidal velocity of fluctuation in the laboratory frame (V_{pol}^*) is obtained
  - 1 - 2 km/s at r/a ~ 0.5 in electron direction for ohmic plasmas
  - 5 - 10 km/s at r/a ~ 0.6 in ion direction for NB heated L-mode plasmas
- Difference between V_{pol}^* and the poloidally projected plasma toroidal velocity ($-U_{tor}\tan\alpha$) is 1-3 km/s in some NB heated L-mode plasmas.



Apparent poloidal velocity is induced by the plasma toroidal and poloidal motion.

- There are measurement errors in V_{pol}^* (MIR) and U_{tor} (CES), and errors in equilibrium reconstruction (EFIT) for the magnetic field pitch angle (α).
- Considering assumed measurement and calculation errors, the difference is expected to the plasma poloidal velocity.