Kinetic neoclassical XGCa modeling shows significant impact of kinetic effects on SOL plasma dynamics

- **Significant SOL parallel ion flows (M_i~0.5)**
  - Experiments show LFS midplane flows near M_i ~ 0.5
  - Key is inclusion of particle drifts and self-consistent E_r calculation
- **Ion pressure has large variation along flux surface in SOL, mainly due to T_i**
  - Peaking near the LFS midplane suggests ion orbit effects
- **Enhanced sheath potentials due to non-Maxwellian features in ions and electrons**