

## **Non-Uniform Poloidal Pressure is Necessary for Detached Tokamak Divertor Operation**

This Comment discusses MHD equilibrium in the tokamak diverted scrape-off layer (SOL) when equilibrium current to the divertor targets is blocked by divertor detachment. It is found that cross-field-static equilibria, wherein the only large plasma flow is parallel to the magnetic field, must have a non uniform poloidal pressure distribution in the upstream (from the detachment region) SOL, a region normally thought to have nearly uniform pressure. This pressure variation is absent from theoretical detached divertor studies to date. Some possible consequences for practical detached operation are drawn.