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Effect of the Edge Radial Electric Field on Neutral Particle Measurements[1] C. GULDI, W.W. HEIDBRINK, T.A. BEITZEL, University of California, Irvine, K.H. BURRELL, General Atomics — Neutral particle measurements in ASDEX were originally interpreted as evidence that the edge radial electric field $E_{\rm r}$ changes gradually at the L-H transition.[2] We have relocated an analyzer to an orientation similar to the ASDEX analyzer: at the outer midplane viewing perpendicular ions midway between toroidal field coils. The electric field is measured by charge-exchange recombination and motional stark effect diagnostics. The passive charge exchange signal from the relocated analyzer is usually undetectable but, in discharges with large $E_{\rm r}$, the flux of 5 keV neutrals can resemble ASDEX signals. The combined effects of ripple trapping and $E_{\rm r} \times B_\phi$ drifts[3] may explain the results.

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[2]W. Herrmann *et al.*, Phys. Rev. Lett. **75** (1995) 4401.
[3]J.A. Heikkinen *et al.*, Plasma Phys. Contr. Fusion **40** (1998) 679.

☐ Prefer Oral Session
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