

Abstract Submitted
for the DPP12 Meeting of
The American Physical Society

Non-local Heat Transport, Rotation Reversals and Up/Down Impurity Density Asymmetries in Alcator C-Mod Ohmic L-mode Plasmas¹
JOHN RICE, CHI GAO, MATT REINKE, MIT PSFC, PATRICK DIAMOND, UCSD CMTFO, NATE HOWARD, MIT PSFC, HONGJUAN SUN, SWIP, ISTVAN CZIEGLER, UCSD CMTFO, AMANDA HUBBARD, YURI PODPALY, MIT PSFC, WILLIAM ROWAN, UT IFS, JIM TERRY, MARK CHILENSKI, MIT PSFC, LUIS DELGADO-APARICIO, PPPL, PAUL ENNEVER, DARIN ERNST, MARTIN GREENWALD, JERRY HUGHES, YUNXING MA, EARL MARMAR, MIKLOS PORKOLAB, STEVE WOLFE, MIT PSFC, MIT PSFC TEAM, CMTFO TEAM, SWIP TEAM, IFS TEAM, PPPL TEAM — Several seemingly unrelated phenomena in Alcator C-Mod Ohmic L-mode plasmas are shown to be closely connected: non-local heat transport, core toroidal rotation reversals, energy confinement saturation, up/down impurity density asymmetries and turbulence changes. These phenomena all abruptly transform at a critical value of the collisionality.

¹Supported by USDoE award DE-FC02-99ER54512.

John Rice
MIT PSFC

Date submitted: 11 Jul 2012

Electronic form version 1.4