

Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Light Impurity Transport Studies in Alcator C-Mod¹ IGOR BE-SPAMYATNOV, WILLIAM ROWAN, KENNETH GENTLE, PERRY PHILLIPS, Fusion Research Center, The University of Texas at Austin, CATHERINE FIORE, ROBERT GRANETZ, Plasma Science and Fusion Center, MIT — Time-dependent profiles of fully stripped light impurity are measured on Alcator C-Mod using CXRS and used for impurity transport studies. Experiments are proposed to further understanding. Boron profiles were measured for L-, H-mode and ITB plasmas. Profile analysis reveals outward convection for some H-mode plasmas and strong inward convection for ITB plasmas. TRANSP will be used to compare particle and impurity transport. Measurements of radial electric field are used to study turbulent transport. Shear suppression estimates coupled with ITG growth rate prediction in linear GS2 runs provide clues as to the important turbulent modes. Quasilinear estimates for impurity transport fluxes were recently developed, and quantitative comparisons with experiment are in fair agreement. Since the impurity source for existing measurements is time-independent, there are limitations on the transport measurements. Removal of these limitations with modulated or pulsed sources will be discussed.

¹Supported by USDoE Awards DE-FG03-96ER54373 and DE-FC02-99-ER54512.

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Date submitted: 19 Jul 2008

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