Abstract Submitted
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First Measurements of Total Flow Vector in the C-Mod High-Field Side SOL[1] NOAH SMICK, BRIAN LABOMBARD, MIT PSFC, ALCATOR C-MOD TEAM — A new four-electrode scanning Langmuir probe has been installed and operated on the high-field side of Alcator C-Mod. The *WASP* (Wall-Actuated Scanning Probe) has the ability to take data as deep as a few mm inside the LCFS and to measure the total flow vector (parallel and cross-field) as well as fluctuation-induced fluxes using a tungsten-tipped Gundestrup probe. The WASP has verified many of the plasma flow results reported previously using a single-electrode scanning probe [1], as well as adding some important new observations. Near-sonic parallel flows are observed in the far SOL which reverse direction when the topology is reversed. However, their behavior near the separatrix is different. Parallel flows near the separatrix appear to be clamped near zero in LSN but remain high in USN for normal field direction. Cross-field flows show a region of high shear at the radial location of steep pressure gradients, a feature that is also seen on C-Mod's low-field side scanning probes. These and other new results from the WASP will be presented.
[1] B. LaBombard et al., Nucl. Fusion **44** (2004) 1047.

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Noah Smick
MIT PSFC

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