Abstract Submitted
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Overview and New Directions in the HSX Program[1] F.S.B. ANDERSON, HSX Plasma Laboratory, University of Wisconsin, Madison, HSX TEAM — Large intrinsic flows have been measured by CHERS in the direction of quasisymmetry. Impurity transport experiments have begun using laser blow-off. Edge probe measurements show the Reynolds stress may play an important role in the edge poloidal momentum balance. Improved H-alpha diagnostics and fueling systems are being installed to better understand neutral transport. This is carried out with comparisons between DEGAS and EMC3-EIRENE. These codes are being applied to guide new experimental studies of the divertor structure in HSX. Efforts are underway to determine and possibly test elements in the magnetic structure critical for energetic particle confinement. Previous equilibrium reconstruction and fluctuation studies are being extended through optimized diagnostics. A second ECRH system with beam steering and modulation is now operational and being used for heat pulse propagation studies. The GNET 5D Fokker-Planck code is being used to study both confinement of energetic ions produced by ICRH heating, and non-Maxwellian distribution function effects on SX and ECE measurements with high power density ECRH.

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Joseph Talmadge
HSX Plasma Laboratory, University of Wisconsin, Madison

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