Abstract Submitted
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Laser Blow-Off Impurity Injection Experiments at the HSX Stellarator[1] C. CLARK, D.T. ANDERSON, F.S.B. ANDERSON, K.M. LIKIN, J.N. TALMADGE, K. ZHAI, HSX Plasma Lab, Univeristy of Wisconsin, J. LORE, Oak Ridge National Lab — Experiments are under way to measure impurity transport in a quasisymmetric stellarator for the first time. A laser blow-off impurity injection system, which is capable of rapidly depositing a small, controlled quantity of a wide variety of solid impurities into the confinement volume, has been installed and successfully tested. AXUV photodiode arrays equipped with optional soft x-ray filters have also been installed on the machine. The arrays will take time-resolved measurements of the impurity radiation, which will be inverted into radial profile and then interpreted using the transport code, STRAHL and atomic data from ADAS to determine the transport coefficients within the paradigm of a diffusivity and convective velocity. Details of the system and first results will be presented along with PENTA calculations of the neoclassical predicted impurity transport

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Christopher Clark
HSX Plasma Lab, University of Wisconsin

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