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**Heavy Impurity Entrainment in the Parallel Flows of CSDX** JORDAN GOSSELIN, SAIKAT THAKUR, GEORGE TYNAN, Univ of California - San Diego — The lifetime of the plasma facing components (PFCs) in a tokamak, governed primarily by material erosion and redeposition, has been identified as a crucial research topic. While some work has been done that shows evidence of the entrainment of impurities in linear machines and in tokamaks, detailed controlled studies of entrainment in plasma flows are harder to come by. Recently, experiments in CSDX have shown increasing parallel ion velocity positively correlated with increasing magnetic field. In an effort to study the effects of the background flow on impurity transport, a laser blow off apparatus was installed on the Controlled Shear Decorelation eXperiment (a 3m long linear helicon source operated plasma machine). Results are shown for parallel entrainment of Bismuth impurities in a relatively light background Ar plasma (5.2 mass ratio).

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