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OEDGE Modeling of SOL Flow Experiments on DIII-D[1] J.D. ELDER, P.C. STANGEBY, University of Toronto, S.L. ALLEN, M.E. FENSTERMACHER, M. GROTH, LLNL, J.A. BOEDO, D.L. RUDAKOV, UCSD, B.D. BRAY, N.H. BROOKS, A.W. LEONARD, W.P. WEST, General Atomics, J.G. WATKINS, SNL, E.A. UNTERBERG, ORISE — A series of SOL flow experiments was conducted on DIII-D in an upper single-null configuration. The plasma density, temperature and flow were measured at the outer midplane and the crown of the plasma using fast reciprocating probes. Methane was puffed toroidally symmetrically through the lower pumping plenum at a rate which did not perturb the plasma conditions. We present initial OEDGE modeling results of the empirical plasma reconstructions and carbon emissions. Source terms in the empirical reconstruction were imposed to match both the plasma conditions and the flow measurements. This background plasma solution is used as the basis for the carbon emission modeling. The OEDGE code was enhanced for this study by the addition of classical and neoclassical drifts acting on the impurity ions, as well as simultaneous plasma interaction with the divertor targets and sections of the main wall.

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