Abstract Submitted
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High-Z Tile Arrays in the DIII-D Divertor Region for Studying SOL/Edge Transport and Material Migration[1] E.A. UNTERBERG, ORNL, P.G. STANGEBY, U. of Toronto, D.A. BUCHENAUR, SNL, E.M. HOLLMANN, UCSD, H.Y. GUO, D.M. THOMAS, A.W. LEONARD, GA — Understanding the compatibility of high-Z plasma facing components (PFCs) in the divertor region with high performance (H-mode) tokamak (e.g. AT) operation is still an open issue in fusion research. Specifically with respect to high-Z, it is desirable to determine: (i) impurity transport in the edge plasma and (ii) migration across PFC surfaces as both these mechanisms can in-turn contaminate the confined plasma and limit performance. To address this uncertainty, complete toroidal rows of high-Z metal-coated carbon tiles will be installed at several poloidal locations in the DIII-D divertor. This effort will aid in the identification and characterization of high-Z: (i) source location and (ii) migration pathways. Particularly, experiments will be carried out using matched plasma conditions with/without ELM control to identify the role of ELMs.

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