

Abstract Submitted  
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**DiMES Tests of W Leading Edge Power Loading in DIII-D<sup>1</sup>** R.E. NYGREN, J.G. WATKINS, SNL, D.L. RUDAKOV, UCSD, C.J. LASNIER, LLNL, R.A. PITTS, ITER, P.C. STANGEBY, UTIAS — In a transient melt experiment in JET, the power to a  $\sim 1$ -mm-high leading edge on a W lamella in the bulk-W outer divertor was lower than expected from the geometry by factors of 5 and 2 for L-mode and H-mode discharges, respectively. We checked this surprising result in DIII-D with 3 W blocks (10 mm square) mounted radially side-by-side in DiMES with leading edges of 0.0, 0.3, 1.0 mm, single null L-mode plasmas, OSP just outside “0.0” block, limited scans (NBI+ECH), B-field incident at  $1.5^\circ$  or  $2.5^\circ$ , and viewed, as in JET, from above with 0.2mm/pixel resolution IRTV. Langmuir probes measured parallel power to the target. We compared probe and IR data with a detailed thermal model of the blocks and concluded provisionally that we did not reproduce the power deficit found in JET. Blurred IR images complicated fitting of temperature distributions from the thermal model. We plan an experiment with both L- and H-mode He plasmas before the APS meeting.

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