

Abstract Submitted  
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**Divertor Target Plate Measurements With the New DIII-D Langmuir Probe Array**<sup>1</sup> J.G. WATKINS, SNL, D.A. TAUSSIG, R.L. BOIVIN, T.E. EVANS, T.W. PETRIE, M.A. MAHDAVI, GA, A. NELSON, U. St. Thomas, I. JOSEPH, R.A. MOYER, UCSD, C.J. LASNIER, M.E. FENSTERMACHER, M. GROTH, LLNL — A new Langmuir probe array with higher power handling capability was installed in the DIII-D lower divertor. The new pyrolytic graphite probes have 100X larger mass than the previous design that increases the total energy capacity for longer plasma pulses, a fixed 12.5 degree surface angle for more uniform heat flux, and a symmetric “rooftop” design to allow operation with reversed toroidal field. The 4 mm wide probes are located 1.5 cm apart near the pumping baffle entrance for improved spatial resolution and 3 cm apart on the shelf above the pump. Target plate profiles, of  $n_e$ ,  $T_e$ , and  $I_{sat}$  at high spatial resolution during radiative divertor and ELM suppression experiments, which use strong divertor pumping, will be shown.

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