

Abstract Submitted  
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**Edge and Scrape-off Layer Diagnostics for the NSTX Liquid Lithium Divertor**<sup>1</sup> J. KALLMAN, PPPL, R. KAITA, H. KUGEL, R. ELLIS, S. GERHARDT, PPPL, M.A. JAWORSKI, University of Illinois at Urbana-Champaign, A.L. ROQUEMORE, S. ZWEBEN, PPPL — A Liquid Lithium Divertor (LLD) is being installed in NSTX to provide particle pumping for density control in the divertor region. The design includes four toroidal breaks where we plan to place several diagnostics to monitor the LLD's effects on the edge plasma. A large radial Langmuir probe array will be constructed at one of these locations to straddle the LLD and the carbon tiles beyond its innermost edge. This array will consist of approximately 40 sets of triple probes whose close spacing ( $\sim 0.5$  mm) will enable instantaneous electron temperature and density measurements with sufficient radial resolution to cover a full strike point heat flux profile width. Sensors in the tiles at the other LLD toroidal breaks will also be described.

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