

Abstract Submitted
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Power Law Regression Analysis of Heat Flux Width in Type I ELMs¹ C.D. STEPHENS, Columbia U., M.A. MAKOWSKI, Lawrence Livermore National Laboratory, A.W. LEONARD, T.H. OSBORNE, General Atomics — In this project, a database of Type I ELM characteristics has been assembled and will be used to investigate possible dependencies of the heat flux width on physics and engineering parameters. At the edge near the divertor, high impulsive heat loads are imparted onto the surface. The impact of these ELMs can cause a reduction in divertor lifetime if the heat flux is great enough due to material erosion [1]. A program will be used to analyze data, extract relevant, measurable quantities, and record the quantities in the table. Care is taken to accurately capture the complex space/time structure of the ELM. Then correlations between discharge and equilibrium parameters will be investigated. Power law regression analysis will be used to help determine the dependence of the heat flux width on these various measurable quantities and parameters. This will enable us to better understand the physics of heat flux at the edge.

[1] H. Thomsen et al 2011 Nucl. Fusion **51** 123001

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Robert Pinsker
General Atomics

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