

Abstract Submitted  
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**Heat Flux Characterization in the NSTX**<sup>1</sup> JONATHAN SURANY,  
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of the heat flux profile is critically important in spherical tokamaks because they  
are high power density systems. More specifically, peak heat fluxes as high as 10  
MW/m<sup>2</sup> have been measured in the National Spherical Torus Experiment (NSTX).  
Infrared cameras placed to view the upper and lower divertors on the NSTX are used  
to measure the tile temperature and to calculate the heat flux profiles. In this study,  
we present the dependence of the heat flux profile on neutral beam injected power,  
plasma current, magnetic balance and magnetic flux expansion, and triangularity.  
For example, peak heat flux increases linearly with increases in neutral beam injected  
power, and varies inversely with magnetic flux expansion. These trends follow their  
basic theoretical expectations.

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