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Correlation of divertor heat flux widths with upstream SOL profiles in DIII-D[1] JEREMY MATEJA, Purdue University, ANTHONY LEONARD, General Atomics, FILIPPO SCOTTI, Lawrence Livermore National Laboratory — Measurements of divertor target heat flux profiles are compared to upstream Scrape-Off-Layer (SOL) profiles to test models of SOL energy transport. Determination of the heat flux width from upstream profiles is important for scaling dissipative divertor solutions to future devices. The divertor target heat flux width is characterized by IR camera measurements and tested for consistency with data from target Langmuir probes and divertor Thomson scattering. Midplane SOL profiles are measured with Thomson scattering for electron density and temperature and CER for ion temperature. The assumption of parallel electron thermal conduction is tested by comparing the upstream profiles with the divertor target measurements. This correlation is compared for variation in the assumed role of heat flux transport via convection.

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Jeremy Mateja
Purdue University

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